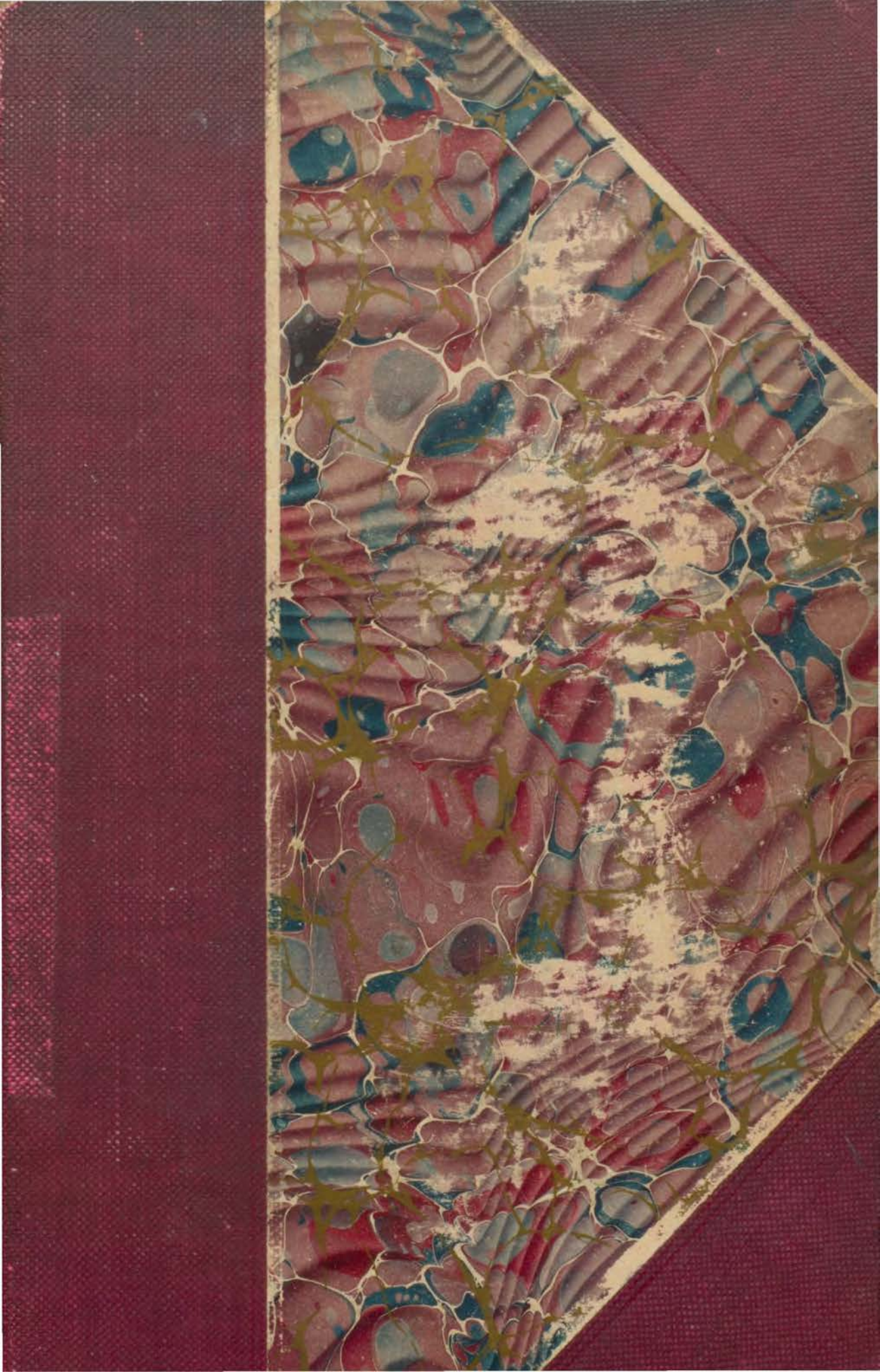

THE NAUTILUS

VOL. 6. NO. 1.
NOVEMBER 1902

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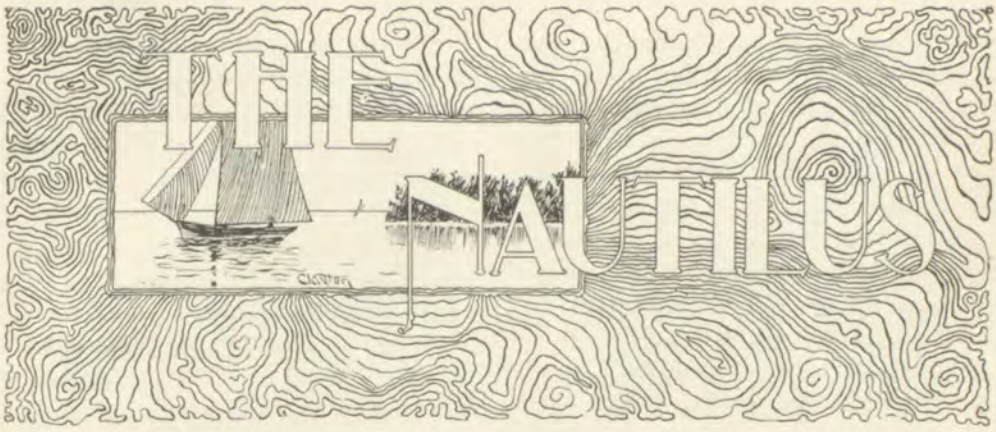

VOL. VI. KANSAS CITY, MO., NOVEMBER, 1902. NO. 1

THE CAKE THAT WALKED.

We were sitting in the kitchen, Ruth, Max and I, for it was a rainy Saturday and we were making candy, or rather Mammy was making candy and we were giving advice. But, before I go any farther, I must tell you about Mammy. Just now she was in her element, even her shining ebony face sent forth rays of contentment. She wore a plaid gown of brilliant hues, for Mammy's taste was loud, and the bright colors seemed to add to her proportions, Mammy was the center of attraction in many ways. She always said she did not like to have us "messin' round her kitchen," but she entered into the spirit of a candy-pull. So when the candy was on we begged for a story.

"Me tell a story!—Don't yo know I's a chu'ch membah?" she always said this. "Well, did you evah heah 'bout the weddin dat I 'tended when I wuz a gal? I spose I'll hab to tell you 'bout dat."

"Well, once pon a time, when I wuz a gal (you Ruth, keep out dat lasses), my Ole Miss sold de whole plantation an' all ob us to de meanest ole lady I evah come cross befo' or since de wah. An' thar wuz one daughtah, the laziest, no countest gal I evah did see. She wuz so lazy she wouldn't get up in de mawnin; (Alice, to me, I's gwine to do you de same way ef you don't larn to get up bettah). Well, de good lookin man, he came long an' wanted dat gal to go riding' with him, but she wa'nt up yet an' I tole him so, an' I tole him she nevah did get up befo' noon, an' he laughed an' nevah did come back. But when I tole dat to Miss Ca'line she had me whoped, but I didn't care kase I'd done saved dat man from su'ah destruction.

"Wall, after while, dis gal wuz agoin' ter get married an' sich bakin' I ain't nevah seen befo' ner since de wah. (Max, you's a gwine git some dat lasses on yo' hands! Keep out thar! If you ain't de interruptenest chilluns I evah did see!) Wall, ez I wuz a sayin, they wuz a bakin' an' a stewin' an' a fryin'. Hit wuz in Novembah. I wuz Miss Ca'line's special maid an' wore a white cap an' ap'on. I tell you, I wuz mighty spry and good lookin' in dose days; so I didn't have much

to do wid dose good things to eat, 'cept once in er while when thar wuz an extry supply of company. Thar wuz three dozen chickens fried if thar wuz one, an' thar wuz tu'key an' geese an' chicken salad an' sally lunn an' ice cream, which wuz sca'ce in dose days, an' thar wuz stacks an' stacks ob cakes, an' evahthin' good yo' can think ob. I helped Miss Ca'line dress an' she looked like one of de Lawd's own angels. She wore a white satin dress with a train mighty nigh a mile long, an' lace on it what Ole Miss tole me cost a hundred dollahs a ya'd. An' evah one sent dat gal somethin'. Thar wuz china an' glass an' chains an mo' things than I can tell. (Huh, I knows mo' bout dat lasses dan you, chile, I made lasses candy twenty yeahs befo' you wuz bawn. Don't yo' try teach yo' grandmother how to set hens). Well, to go on wid de tale, de house had all roses en evahthin' in it, and while de ole ministah was a tyin' de knot, I slipped in de dinin' room, fo' de cullud folks had had a meetin' an' we knowed we wouldn't get a taste ob de good things t. eat, so we jest cided to take some when dey wuz a chanst, an' I wuz pinted on de cake committee. Den I went to de table whar all dose cakes wuz an' I put seben ob dem in my ap'on, dey wuzen't no ways the bestest, kase I had too much consideration fo' de bride. But, Lawdy Massy, I hea'd some one a comin' and I tell yo' I wuz de sca'dest pusson, black or white, I evah did see, an' de only place I saw to hide wuz undah de table, an I crawled undah just as Ole Miss come in. She wuz a callin' Ole Sam, an Sam he come in an' den dey talked erbout de cakes an dey wuz a huntin' for de bride's cake an' couldn't fin' it nowhar. Den it come to me all ob a suddint dat maybe one ob dose cakes I had wuz hit. I wuz sca'ed befo', but sho'! I put dose cakes down in a hurry and it wuzent a minute too soon, kase Ole Miss she stepped on my dress an I hollered.

"Den she said, 'Who's thar?' an I sez, 'Its only me, Missis, and I'se undah heah kase I don't want no one to see me a cryin',' an I come out wid my ap'on to my eyes. An' Ole Miss she wuz teched an' 'menced to hollah too, den I went out a hollahin' as loud as she wuz. Wall, aftah Ole Miss wuz gone an' evahthin' wuz still, I slipped in agin an' fished out dem cakes, kase I wuz'nt goin' ter neglect my duty on dat committee. An' den we all went inter de ole tabakah bahn an——— hits time to take off dat lasses! Heah, you Max, put yo' plate down, ladies fust! Heah, Ruth, dats nough fer yo'! Alice, dat's all yo's goin' to git! Now, Max, yo's waited like a gentleman, sah!"

"But what did you do in the tobacco barn, Mammy? Did you find the ring in the cake?" said I, when we were comfortably seated, pulling the threads.

"Law, chile, we had de time ob our libes, we danced an' Ole Sam he played de fiddle, an' I wuz always in demand. An sho' nuff, when we cut dat cake, thar wuz de ring and yo' nevah saw a sca'deh set ob people den we wuz. Sam he sez, 'Lets throw hit away,' an I sez, 'yo' don't ketch dis chicken doin' no such trick, lets bury it. Why if dey'd find it, dey'd kill us all su'ah!' So we buried it by de branch an' hits thar yet, ef no one hasn't teched hit. Is you thru, Maxie, yo' begun last' an' yo's done furst. Yo's a sma't boy, suh."

MARY PAXTON, '04.

VENICE.

The moon had just risen, and was casting her silvery beams over castle, tower, and prison-wall. They flitted over gable and pillar; they danced on canal and lagoon. The whole city seemed to be afloat. Beautiful, marvelously beautiful, was the "Queen of the Adriatic."

"How calm it is to-night!" remarked my host as we leaned on the bridge and looked over the fair city. "It hardly seems possible that, but a few short years ago, our city was filled with strife; the very canals flowed blood. You remember how all those powerful nations quarreled over us. Austria wanted us. Germany wanted us, so did Italy; but France is our master now. Ah, me!" He sighed deeply and lapsed into silence.

"Withal, ours is a history to be proud of," he resumed. "No true Venetian can ever forget how for a thousand years, this little city out on its hundred islands, was a factor in the world; how by a few men fleeing from the terrible Huns was laid the foundation of a most powerful nation. Yes, a very powerful nation."

"Come!" cried my host suddenly. "There is my gondola, I will show you Venice in her rarest mood."

Gently we glided along. The lights from the palaces along the canal were reflected in the water. From within, the sound of music and of merry voices was heard. Coal-black gondolas, hung with many colored lights, darted here and there through the water-streets. This was the "Dream city of the Sea."

"Look!" exclaimed my host, pointing toward a palace gaily decorated and brilliant with lights. "That was the home of the beautiful Desdemona. Notice the quaint carvings and odd ornaments. These buildings must seem very strange to you, who are accustomed to such severely plain and matter-of-fact architecture. But all Venice is like this; all different from any other city; all beautiful."

While he was speaking, we had been floating on and had been passing innumerable beautiful buildings. "What house is this?" I asked, as we came to one decorated with extremely fantastic figures. "That is where Lord Byron lived, while in Venice. It was when he was living here that he had himself let down into one of those awful dungeon-wells at the public prison and spent a whole night there." We both shivered and the gondolier crossed himself.

By this time we had come to the great canal and were slowly drifting down it. Glancing above us, I saw what appeared to be a great building extending over the canal. "And what is this we are passing under?" I asked. "This?" queried my host in surprise. "This is the Rialto, the largest bridge in this city of bridges. It is built of solid marble; the carvings are exquisite, even the shops along the sides have marble walls. Here the most important business of the city is transacted; here the first newspaper was sold; here the first bank was established; here Shylock lent his money, and Antonia awaited news of his ships."

Before we had gone much farther he called my attention to a large square, almost surrounded by impos-

ing buildings. "This is the Plaza. Let us land and walk through it," he said. Picking our way through the merry-makers, who crowded the square, we came to the great fountain in the center. From there we could look about us. On one side was a large, dark building with, in front of it, a broad stair case surmounted by two great statues. "That is the 'Doge's Palace' of which you hear so much. Yes, it is a fine building; ordinary visitors are not allowed to go up the golden stair to the top of it. All the government offices are here now. Across a canal back of the palace is a dark, gloomy building connected with the palace by a narrow, covered bridge. The building is the prison; the bridge, the 'Bridge of Sights.' On this was Byron when he sang:

"I stood in Venice, on the Bridge of Sights;
A palace and a prison on each hand:
I saw from out the wave her structures rise
As from the stroke of the enchanter's wand:
A thousand years their cloudy wings expand
Around me, and a dying Glory smiles
O'er the fartimes when many a subject land
Looked to the winged Lion's marble piles,
Where Venice sate in state, throned on her
hundred isles!"

Thoughtful, we stood for a moment. Then he turned and pointing toward a great building on whose innumerable domes the moonlight gleamed, said, "That is San Marco, our most beautiful cathedral. See those splendid bronze horses over the door-way. They are trophies brought home from Constantinople; inside there are thousands of other spoils of war."

Through the great doors we went into the building. Quiet and dim it was, save where candles burned before the image of some saint. In the far distance, the choir was chanting an anthem. Every one, everything, had an air of perfect devotion. Wonderingly, I looked about me at the splendid frescoes on ceiling and wall, the rich mosaics, the quaintly carved pillars, the old tapestries, and the precious panels. Almost in a dream, I wandered about until I felt the night breeze and found myself once more on the public square.

"Did you notice," asked my host, "those beautiful vases? They are a fair sample of the splendid work in glass, which is done here in Venice. It is truly wonderful what beautiful articles are made? and the lace on the priests robes—was it not rich and beautiful? Venitian lace cannot be surpassed anywhere."

Again we entered our gondola and soon were mounting the steps of his mansion.

ELSIE WADELL, '03.

WORK.

The work is little that each can do,
In this great world of ours.
Many a trial and a danger, too,
Oft' o'er our pathway towers.

Some lives make bright a gloomy way,
And some a shadow cast,
O! make not dark a sunny day
For night comes on too fast.

When you knock at the gate one by one,
The Master will say to you:
"'Tis not how much, but how well you've done,
The work you had to do."

So if you seek the heavenly goal
And hope for rest at last,
Then do your little with heart and soul;
For each day brings its task.

C. A. '03.

AUTUMN'S STORY.

The seasons had been having a long talk. Father Time had just given them some new rules and instructions. Their re-union was nearly over, but before they parted it was agreed that each should tell a story and this is the story that Autumn told.

"As I enter upon my short reign each year, I, as you, decorate the palaces to suit my own fancy. I dress my attendants in rich yellow and brown, with dashes of royal red. My carpets are purple asters, and my frescoing is feathery goldenrod. I love an atmosphere of rich warmth and comfort. And this is why, as a last token of my affection for the people of the earth, I leave in their memory my greatest holiday, 'Thanksgiving.' I have watched with great interest the way the day is anticipated and enjoyed, and my story is of one Thanksgiving day.

"It was not a typical one. If it had been I probably should not have remembered it. The Warner family had spent the summer months so far North, that Virginia said they had not had any summer at all. She loved the woods and suggested making Thanksgiving a picnic day. At first it seemed absurd. Her brother scorned the idea of eating Thanksgiving dinner out of baskets, and her father protested that November was not the time of year for a picnic. But Virginia and her girl friends insisted that it was a great plan to combine Thanksgiving with a nutting party. More than this, they intended to have a Queen who would rival any Princess of May ever crowned. At last it was decided that if the day was pleasant, the families of five young girls would break the old, and time honored customs and go to the woods. Margaret Weston was to be their Queen and was to keep the numerous brothers from disturbing the cooks. Elizabeth Baker and Myrtle Stanford were to hold these responsible positions, Ruth Hill was to be an errand girl, and Virginia was to be a director. Most of her work was done before they left home."

"The day was as warm and beautiful as I could make it. The jolly party left home, their hearts filled with delight. Really, for a short time, it seemed as if Thanksgiving day could not be understood by them. They had had no grief, no worry, no disappointment, and so were always glad, as a matter of course. To Jack Warner, for instance, Thanksgiving meant little, or nothing, more than a good dinner. But, as I said before, they were happy and enthusiastic. They made the halls of my castle ring with laughter. Margaret, with her crown of red and gold, was all the word Queen implies. And she bade her subjects go in search of a place to camp. Jack Warner and Ruth Hill soon returned triumphantly to conduct the party to the spot they had chosen. 'Isn't this the best, Howard?' said Ruth to Elizabeth's brother. 'Of course,' he answered, 'you chose it.' It may be well to say that although Margaret, owing to her dignity, was Queen, 'little Ruth Hill,' as this winsome pretty brunette was called, was the favorite of the young people at Merryville. When they reached the beautiful little spot, Elizabeth cried, 'Oh Myrtle, let's set our table now and get everything ready before we

join the others.' 'You might as well go with Howard, Ruth, we won't need you until we have a fire to watch.' So the party separated. Elizabeth and Myrtle stayed behind and Mrs. Weston and Mrs. Stanford helped them set their table. They decorated every possible place with their royal colors, and worked harder than if they had been at home. 'Girls, you have done enough,' said Mrs. Stanford, 'you ought to be gathering nuts, too. Oh, we won't touch the dinner,' as the girls protested, 'but bring Ruth with you when you come back.' Then they heard Virginia calling, and running through the leaves they came to a little clearing where all the nuts had been brought and placed in different piles. The one who gathered the fewest was to pay any forfeit demanded by the rest, explained Raymond Weston. 'Such a silly game,' said Elizabeth, but when the girls made an allowance for their late beginning, she and Myrtle entered into nut gathering as eagerly as the rest. 'Nothing like competition,' said Jack, 'I haven't worked so hard for a long time,' and he threw a hat full on his pile. 'My, isn't our time nearly up, Queen Margaret? I have gotten all I want.' 'I am glad you have for once, Jack Warner. We ought to do something to make you remember the fact. Well, when the rest come we will see who lost.' 'Here they come!' With some difficulty they counted the nuts in the two smallest piles and found, that in spite of Virginia and Ruth's generosity, the forfeit fell to Elizabeth. The sun was every moment mounting higher and the appetite of the boys growing keener, so taking advantage of the situation, they cried, 'Dinner, Elizabeth, dinner, you must not forget it is Thanksgiving.' At this, Myrtle, Elizabeth, and Ruth left to get their feast ready. They had all the good things which usually accompany a Thanksgiving dinner. But they had to build a fire. For they might have any number of palatable dainties, but it would not be like Thanksgiving unless the dishes were steaming. As the odor of turkey reached Queen Margaret, the boys, and Virginia, they grew impatient for the call that finally came. They did not form ranks and follow their Queen but came running and shouting to do honor to the dinner. But they would not begin until little Ruth came, even if they had no dinner. They were waiting for her to bring the plate of turkey and join them, when a cry of terror reached their ears. Jumping from their places, they rushed to Ruth, who looked like one mass of flame. Their action was simultaneous. They all closed around her and smothered the fire not knowing, at the time, how much or little she was burned. They fell back long enough to see that she was safe, and then, for joy, they enclosed her again and hoisting her on their shoulders carried her back to the abandoned table. In that one short moment, Thanksgiving had had changed from a day of fun, to one of true thanks. Margaret's crown was crushed, the turkey was in the leaves, the boys hands were burned, but who cared? Ruth was still a member of their party and explaining how a spark blew upon her apron. They continued their real Thanksgiving feast and toasted Virginia, their Queen, their cooks, and last, but not least, their little favorite. Finally, they said good-by to the scenes of the day's pleasure and were on their way home. They were still happy and en-

thusiastic. To be sure, they had had no worry, no grief, no disappointment, but Ruth's accident, and the possibilities it awakened in every heart, had filled their minds with more serious thoughts concerning what Thanksgiving day is for and they felt now it applied to them.

And, as the sun set on my golden hills that night, I was glad that they had learned this: 'It is good to want good things; it is better to have good things, but that it is best to appreciate good things.' "

JEAN MORRISON, '04.

MY SPECTRAL RIVAL.

I am not a superstitious man, on the contrary, I consider myself a very practical one. People who had seen ghosts, or imagined they had, were once the especial objects of my derision. But all this was changed by what I am about to relate.

My father had left me a comfortable fortune, and I had lately spent a part of it for an old colonial house that I had often passed in my rambles about the country.

The old Catherwood house had belonged to the government since the war. There was no one to look longingly at its closed doors and wish he was back in the home of his ancestors, for the last of the family had been killed in one of the battles about Richmond. The house stood some distance back from the road and was hardly visible from the gate on account of the trees about it. What had once been a beautiful garden lay around the house, and the old dwelling itself wore an air of proud and haughty delapidation. I had often stopped in my walks to look through the cracks of its boarded windows and think of the festivities that had been reflected in its gilded mirrors.

The old house had always possessed a peculiar charm for me, but I had never thought of becoming its owner as I was perfectly satisfied with my own home. It was while visiting in Richmond that the idea of possession first occurred to me. It was during this visit that I met Miss Sallie Langford, a reigning belle and the most charming girl I had ever known. She had heard of the old Catherwood house in the days of its glory from her mother, who had enjoyed its stately hospitality before the war; and she declared that of all places in the world except her own home she would rather live in the Catherwood house.

She had seen it but once when she had visited the neighborhood several years before at a time when, unfortunately for me, I was absent. A party of young people had broken into the house and enjoyed a dance on the waxed floors that had last felt the nails of a soldier's boot. She had never gotten over the feeling of veneration and awe cast over her by the faded granduer of the old house.

You may be sure that after hearing these sentiments from the most beautiful lips in the world, my interest in the old place was much increased. It was now that it occurred to me that if I could buy it Miss Langford might be induced to bestow upon its owner some of the affection she felt for the old house. This idea had no sooner entered my mind than I opened negotiations with Washing-

ton, and in a few weeks was the owner of the Catherwood house.

The silence of the old mansion was now broken by the noise of workmen, and in a few months was ready for occupancy. My aunt had been my housekeeper for years and now it pleased me to see how perfectly she harmonized with the old house. With her snowy puffed hair and dress of anti-bellum style she made as stately a figure as any Catherwood dame.

We had been comfortably settled for several weeks when a most extraordinary thing happened. I had decided to give a house party and to make the old mansion again the scene of festivities. I was sitting one evening in my library reading over some of the answers to my invitations. I was lingering over Miss Langford's letter telling me that she would be delighted to see again the old Catherwood house, and especially amid scenes that would recall its by-gone gayeties, when suddenly I was aroused by a slight cough behind me. Turning with a start I saw sitting before the fire, a young man in the dress of a past generation. Startled as I was, I noticed what a handsome and debonair figure he made as he sat resting his feet on the fender with an air of proprietorship that immediately aroused my ire.

With a jaunty wave of his hand he said—"Sorry to disturb you, but it's a long time since I have enjoyed a fire in this room."

His manner was so familiar that I replied rather testily—"Disturb me! you put it very mildly. I don't object to your enjoying my fire, but I do object to your creeping in like a spy."

"Sir," cried the stranger fiercely, "I object to your language, I am—"

"Well," I cut in sharply. "I object to your presence. No gentleman would intrude as you have."

At this the stranger sprang up and advanced threateningly towards me crying, "No man shall use such words to me without defending them."

I was now thoroughly angry, and when he rushed at me I met him with a blow on the chest. Imagine my horror when my fist passed completely through his body. When I realized that my visitor was a ghost, my blood ran cold. I had no fear of something I could strike, but I instinctively shrank from a ghost I could put my hand through.

After I had somewhat recovered from my shock, on perceiving the nature of my visitor, I said, with a great show of courage, which I by no means felt—"Well sir, what in Hudotus do you mean by this behavior?"

My spectral visitor raised his head with all the jauntyness gone from him and said with tears in his voice—"Before I died, sir, no man dared to speak to me so. I am the ghost of Blessington Catherwood. In my time I was the best shot in all Virginia." Here he somewhat recovered his gayety and said after a ghost of a chuckle—"I was quite a beau in my time and I could aim a dart, and hit the heart quite as well as I could aim a bullet and hit the gullet." Here young Blessington laughed very immoderately in view of the poorness of his joke.

After his laugh had somewhat subsided the ghost added with a knowing smile,—"Ah! I was a gay one, not a petticoat could withstand my charms." His impudence angered me so that I should have thrown something at him, had I not reflected that I would only damage my own property

I mastered my ire enough to say contemptuously—"Your manners may have been pleasing to a past generation but I doubt very much if anyone would admire them now."

"I am not so sure of that," cried the specter. "I hear you are to give a house party. I promise you I shall be on hand if there are any pretty girls." And before I could expostulate he had vanished.

That night ghosts of young beaux flitted through my dreams, and I arose next morning unrefreshed from my sleep. When after my morning walk, around the garden, I saw no signs of my guest of last night, I began to hope that his visit was only a dream. But I was not to escape so easily.

No sooner had I taken my seat at the breakfast table than young Blessington came swaggering into the room.

"Good morning," he said with a mocking bow, and took his seat beside Aunt Charlott. "Fine old lady"! he said with a wink, "with her permission I will breakfast with you."

I glared at the intruder, and forgetting Aunt Charlott's presence, cried angrily, "I wish you would leave this place, I have had quite enough of you."

Aunt Charlott looked as if she thought I had taken leave of my senses, and, rising haughtily, passed out of the room, stopping at the door to say, "Have the goodness to order the carriage in an hour, I shall be ready then to leave your house."

I was too chagrined at my blunder to pay any heed to the cause of the trouble, but rushed after my aunt to explain my unfortunate speech. In a short time I convinced her that I had been speaking to a tramp whom I had seen loitering about the grounds for several days,and whom I fancied I had seen just then passing the window.

After an interval of time had passed and I saw no further sign of the ghost, I began to hope he was satisfied with the mischief he had come so near making, and would trouble me no more.

In the meantime preparations for the house party went merily on.

Soon the old house was again filled with the sound of music and laughter. The days went gaily on and my ghostly visitor had not yet made his threatened appearance; although I fancied I saw him one evening lurking on the landing of the stairs.

One morning I had been called away on business and had been prevented from joining my guests in a picnic planned for that day. After my return I walked into my library feeling rather blue, when to my surprise and delight, I found Miss Langford looking over some of my rare books. A headache had kept her from joining the party.

I had a very valuable collection of crystals in my room which I thought might interest her. On returning with them, imagine my feelings when I saw the specter ardently making love to her. To me it seemed that she was receiving his advances with favor.

I should have liked to rush in and strangled him, had there been any thing to strangle. As it was evident she did not think of his being a ghost, any rudeness to him would have offended her. So I put down the case and waited till the specter should take his leave. I saw Miss Langford look anxiously at the clock and say something to young Blessington which he did not seem to relish. He arose,

looked at her reproachfully, walked to window and sprang lightly out.

"Well," said Miss Langford as I came into the room, "I thought you had forgotten your errand." I had not intended to speak of having noticed the presence of the ghost, but now I decided to do so, and said with seeming carelessness.

"I saw that you had a friend with you, so I would not intrude."

At this Miss Langford blushed so deeply that all my fears were confirmed. I wished to continue and tell her the nature of her admirer, but she began hurriedly to talk about the crystals, and when we had finished examining them, she made her headache an excuse for leaving the room.

As I sat thinking over the unpleasant scene I had witnessed, the cause of it came in again and took a seat opposite me.

"You seem sad," he said.

I sat silent, paying no attention to him.

"Yes," I finally exclaimed, "I shall tell her you are a ghost, and then——."

"She won't believe it," he interrupted, "she will only think you are jealous. And how can you prove that I am a ghost and how do you know you're not a ghost," he concluded triumphantly looking with evident admiration at himself in the mirror.

"Yes," I replied contemptuously, standing up beside him,—"I look like a ghost, don't I?" and I struck my chest proudly to show that I was flesh and bone.

Young Blessington laughed derisively, "I said you were a ghost and I shall prove it."

"At this he struck me, and in the mirror I saw his hand pass through my body. I must have fainted from the shock, for the next thing I remembered, Miss Langford was bending over me bathing my face."

"Oh, Sallie," I gurgled as the water trickled down my throat, "if you love me, tell me I'm not a ghost."

"Certainly Charles," she said with a blush, "certainly, you are not a ghost."

When a few minutes later Sallie and I had come to a happy understanding, I said:—

"Sallie, how do you account for my ghostly appearance in the mirror?"

"Well, you know, Charles," she sagely replied, "that the reflection caused by the mercury behind the glass is reversed, therefore you looked ghostly and he did not. As for the specter himself, I love him just as I love the old house and its old pictures."

A long groan told us that the specter had heard this last speech.

The evening after my guests had departed, I was wandering about the garden, thinking of my happiness, when I was suddenly awakened from my reverie by the voice of the ghost beside me. Looking at me sorrowfully, he said:—

"Sir, I have come to bid you good by. I cannot remain in a place where I am regarded in the same light as a house or a picture. She was the first to withstand my charms," and the ghost of two tears ran down his cheeks. "I suppose I belong to a past generation," he said mournfully, and with this he began to vanish; his feet first, till finally, with a ghost of a sigh, his head faded away. This was the last I ever saw of Blessington Catherwood.

I was glad enough to have him go but Sallie often expressed regret.

"He was such a beautiful ghost," she said, "and the possession of a ghost, you know, adds so much distinction to a family."

LOUIS EDMUND SILLS, '02.

Entered at the Kansas City Postoffice as Second Class Matter

NOTICE: THE NAUTILUS is published once every two months in the general interest of the Manual Training High School, at Kansas City, Mo.
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HAIL FRESHMEN! WE SALUTE THEE!

"He is oft the wisest man
Who is not wise at all."

Since the first issue of the Nautilus, six years ago, it has been the custom for each staff to dedicate the annual to the Seniors. This year the staff has decided to add to the custom and dedicate its first number to the Freshmen. The class which has joined us this year is the largest that Manual has ever seen. We may even go a little farther and say that it is one of the best that has ever entered our school. Now, we would have liked, had we had the time, to have had this excellent body more fully represented in the paper which we dedicate to them. But they seem so shy and bashful that the editors have had great difficulty in getting articles from them in the required time. Indeed, the class this year is so diffident that it shuns even the subscription clerk, who is eager to see them at all times in the office. However, we hope that even if we have not encased this in the Freshmen color—green, nor filled it with fairy tales, nor "Mother Goose Rhymes," nor rules and regulations for playing hop-scotch or marbles, the Freshmen will look kindly upon our offer and appreciate our labor.

It may be that some Freshmen reading this article will want some other reason for our dedication. Here it is. We like him because he is green *and can grow.* Although you may laugh at this you will find that it is true. As Sophomores you must have grown if you are still respected. As Juniors you are honored in proportion as you are growing, and as Seniors you will be *revered,* because in your own estimation, at least, you can grow no more. What is more you will find that what you do here you must do

well. Even though you come to idle, you will find that you must be an extremely expert idler to get any satisfaction whatever from any of our faculty.

In conclusion we will say that not only the Nautilus staff and the faculty, but the whole school, extends a hearty welcome to our new teachers and pupils. They will find among us the true Manual atmosphere,—an atmosphere in which jealousy and ill-will can not thrive. But where, more than any place that can be found, everyone is everybody else's friend and all do as they would be done by.

Before the present staff was elected we often wondered at the number of articles, appearing in the Nautilus, which were written by society members. There always seemed to be so many more publications from societies than from the school at large that we often wondered if the editors were not accused of partiality. When articles began to come in this fall, however, we at once saw the reason for our doubts and judging that, perhaps, someone was liable to think as we had thought, we wish to give a few facts which we hope will be carefully looked over.

In the first place, the school, as a whole, is woefully ignorant concerning its school paper. Many of the pupils do not know when it is published nor how it is kept up. Nearly every society member is a subscriber of the Nautilus, while on the other hand only about one-third of the members of the school at large do their part towards supporting the paper. At the annual election of the staff, society members are always present; but the school at large is represented by a very few. Then comes the very important matter of the publication of articles. For this issue only 25 per cent of the articles received were from members of the school at large. Now, while 90 per cent of these articles were published only 60 per cent of the articles from society members went to the press. We wish the school would arouse and send in at least 50 per cent of the articles for next issue. What we wish is that everyone should understand that we are acting entirely without prejudice. The best articles get the place no matter who writes them. Judging by its past record and insomuch as the Nautilus represents Manual we think that there is no article too good to be published in it. In this we think that all who are loyal to their school and possess the true school spirit will agree with us, even though the article was written by the greatest in the land.

There is another institution in this school about which there is a deplorable ignorance,—it is the school orchestra. No body among us has done better work and no body has been less rewarded. Even before school began this year the members met, organized and began to practice. Each member has been a faithful worker and we believe that were more attention given to their efforts everyone would be surprised at what they have accomplished in the face of so many difficulties. Last year they were directed by Miss Russell, who contributed her services during the whole year, and to this lady the school should extend its most hearty thanks. This year they have obtained many new members and some of the faculty even have joined. It seems then that the

school should try to show the members of the orchestra that their efforts are appreciated and that the time they spend is not lost, but is spent in making every member of our school enjoy himself. May be they are not entirely equal to some famous paid orchestra, still they work for love and do their best. "If they *were angels* they could do no better."

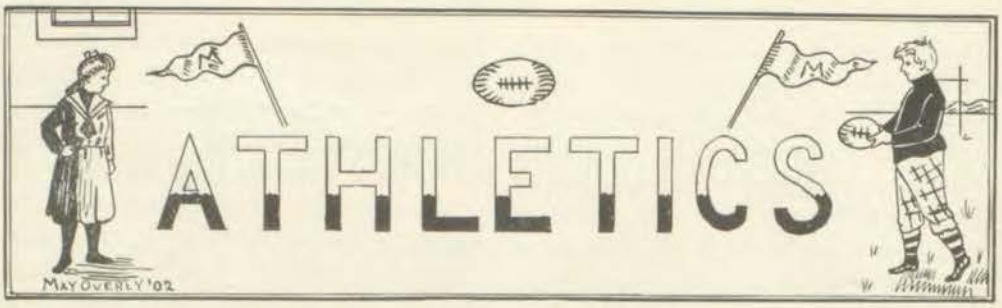
OUR FRIDAY MORNING PROGRAMS.

One of the many pleasant features of school life is our weekly entertainments. They not only afford us a pleasant recreation but give us an opportunity of coming in contact with the best lecturers and musical talent of the city. We are grateful to the faculty for permitting these enjoyable entertainments, and especially do we wish to extend to Mr. Phillips our heartiest thanks for his untiring efforts in arranging them. Mr. Phillips has provided many treats for us, both literary and musical, in the four years he has had charge of the programs.

On Sept. 26th a delightful program was given under the direction of Mrs. Grace Mackenzie-Wood. She has entertained us before and this last program was appreciated no less than the others. Miss Maude Russel sang "May Day"and DeKoven's "Rosalie." Miss Lou Bennet a'so sang one of DeKoven's pieces, and "Spring is Here." Miss Bennett has a melodious voice and when she sang with Miss Russell, Compana's "I Live and Love Thee," the applause called for an encore, which was cheerfully given.

The short, though excellent program, Oct. 3, opened with a vocal solo by one of our pupils, Miss Nora Sullivan. We are always glad when the school talent is brought out and especially when it reflects so much credit upon the school as did Miss Sullivan's singing. Mrs. I. M. Ridge also gave a vocal solo. She has a soprano voice and rendered her difficult selection with ease. Her singing delighted the audience, as was indicated by the hearty applause. Mrs. Ridge was kind enough to respond with an encore.

The program Oct. 17th was one of the best we have ever had. It was a musical treat given by the pupils of Prof. Rudolf King, assisted by Mrs. J. W. Hamm. Mr. King is well known in the musical circles of Kansas City as an excellent musician. The first number was a piano solo by Miss Elva Fuller, who certainly reflects credit upon her instructor. Mrs. Ethel B. Norris then played Chaminada's "Autumn." Mrs. J. W. Hamm sang Rodney's beautiful ballad, "My Dream of You." The pupils were delighted with her clear soprano voice which is of a superior quality. Mrs. Edith Reid played "Air de Ballet" remarkably well, and the program closed with a piano solo by Miss Fay Anderson.



On Friday, Oct. 17th., Manual met and defeated K. C. K. in a very interesting game by the score of 11 to 0. Manual was out-weighed considerably, K. C. K. having three 200-lb. men in their line. This was Manual's first game, and though they were outweighed they showed what two weeks of good coaching did for them. K. C. K. had been in the field for five weeks and played two previous games. Shawn, Shoop, Confer, Stone and Montague did the ground-gaining for Manual.

The line-up:

MANUAL.		K. C. K.
Brotemarkle	R. E.	Mercer
Confer	R. T.	Swarts
Langworthy	R. G.	Hutchings
Hallam	C.	Tricket
Hellman	L. G.	Reed
Pierce	L. T.	Bridenthal
Harnden	L. E.	Phenneger
Shawn	R. H.	Speck
Shoop	F.	Sigler
Stone, Montague	L. H.	Braddock
Bone	Q.	Greenman

On Friday, October 24th, Manual met defeat at the hands of her old rival, Westport, the score being Westport 12, Manual 6. The first half was Westport's half, while Manual took charge of the ball during the last half of the game. In the first half Westport scored a touch-down after twelve minutes of play, and with but one minute to play in that half, Manual allowed her to push the ball over the line for a second touch-down. Westport kicked goal both times. In the second half the tables were turned. Manual pierced Westport's line just as readily as Westport had plowed our line in the first half. It took Manual just twelve minutes to make a touch-down, and it was only a question of time whether or not they would tie the score, but time was called with the ball on Westport's ten-yard line.

On Saturday, October 25th, though bruised from the game with Westport, Manual played Independence. The game only lasted one half, as Independence refused to pay Manual's expenses. Manual was then called off the field. The final score was Manual 6, Independence 6.

On Saturday, November 1st, Manual journeyed to Leavenworth with a body of supporters seventy-five strong. Though the score stood in favor of the Kansas boys, Manual did well in holding them down as much as she did. It even looked as if Manual would score in the early part of the game, but the weight of the Leavenworth boys and the length of the halves soon told on Manual's light line. Leavenworth scored one touch-down in the first half and two in the second. The final score was Leavenworth 18, Manual 0. Montague, Manual's left half, sustained an injury which will

probably keep him out of the game for the rest of the year.

On November 8th, Manual met Lee's Summit. It was the same old story of being out-weighed. That we received rough treatment at their hands is shown by the fact that two of their players were put out for slugging. The final score stood: Lee's Summit 16; Manual 6.

The Kansas City, Kans., High School foot ball team defeated Manual in a hotly contested game Friday afternoon, November 14th, by a score of 6 to 5. The field was knee deep in mud, making fast play impossible, and fumbling was frequent. The Kansans had a little the best of us in weight, but in playing ability the teams were evenly matched. After fifteen minutes of hard playing Siglar carried the ball over Manuals' line for a touchdown, and kicked goal. During the rest of the half the ball remained near the center of the field. In the beginning of the second half Manual started with a rush and the Kansans were unable to withstand their determined attacks, Stone being sent across the line for a touchdown twelve minutes after the half began.

Owing to the condition of the field end plays were attempted but seldom and long gains were few, both teams using line bucks, and as both were strong on the defense the ball changed hands many times. Stone, Shoop and Shawn did the ground gaining for Manual.

This makes the fourth straight defeat for Manual and we sincerely hope that they will take a brace and win their two last games. R. D. B.

Manual's athletic outlook this year was indeed sorrowful. It was even doubtful whether or not we were to have a foot-ball team. The faculty's objection was that last year's foot ball candidates were delinquents. But by the efforts of a few of the boys an "Athletic Association," was organized, which is to govern all of Manual's athletic contests, field-meets, etc. On certain conditions, made by the faculty, the boys were allowed a foot-ball team, a little late in the season, but we hope, under the coaching of Mr. Hall, that it will uphold the almost clean record of last year's team. Mr. Hall is a man who knows every department of the game, and if the team does not come up to the standard it will not be for the lack of good coaching. He has erected a tackling dummy which should develop some sure and fearless tacklers. Manual's schedule is not as yet complete, as the doubtful condition would not allow the setting of dates; but we can depend on Manager Peters to furnish plenty of good games.

We hope the school will help the team in their struggles by turning out in full force to witness every game.

Freshmen! Sophomores! join the athletic association as it will govern all athletic contests and it is you to whom Manual will look for the upholding of the school on the field.

L. Helms.

The Athletic has been reorganized this year under a new charter from the schools. The rules and conditions are about the same with the important exception that members must now be elected in much the same way as they are in the societies.

At a regular meeting the following officers were elected:

Montague, Pres. and Chairman.
Shoop, Vice-President.
Langworthy, Secretary.
Bone, Treasurer.
Stone, Sergeant-at-arms.
Shawn, Harndon, Hallam, } Names Committee.

THE GYMNASIUM.

There has been much said in praise of the right man in the right place. In the boys Physical Culture department we have a good illustration in the person of Edward M. Hall, its instructor.

In September, 1901, the gymnasium contained as apparatus, one horizontal bar, parallel bars, dumb bells, Indian clubs and three dilapidated mats.

By the liberality of the Board of Education a fine vaulting horse and medicine balls were added. We were in sore need of mats, those who used the apparatus received many a bruise for lack of them; these were procured by a class subscription. The contribution of the crack team's large mat was a great addition to the gynasium

This year there have been added an excellent vaulting buck and material for a triple spiral ladder and a hand-over-hand ladder. These materials, by the willing hands of the class, have been made up into apparatus as good as factory made.

Every boy should use this opportunity, for it is not only a great health preserver but is a fine method of keeping in form between the fall and the spring athletic contest.

H. Love.

THE THANKSGIVING DAY'S GAME.

"There are two schools of great renown,
And they have rival foot-ball teams,
The eleven from the Kansas town
Have oft dispelled Missouri's dreams.
They meet each year, Thanksgiving Day,
To play the game on neutral ground;
Then hearts are light and streets are gay,
The air with college yells resound."

"Our city on the Kaw's the place,
And we delight to do them proud,
The interest felt will fill each space
And always guarantee a crowd.
The colors bright will cheer the eye,
While hope is high in every breast;
And whether clear or gray the sky
The game sees undiminished zest."

"But when the evening shadows fall,
There's only one victorious side,
And gloom has settled like a pall
On those who lost, tho' hard they tried.
Before the game is played again,
I'll whisper low, 'Don't make a noise,
Nor tell it round, K. U. will win,
Because she has the Manual boys.' "

R. Ridgway. '04.

GIRL'S ATHLETICS.

FENCING.

Fencing is one of the most interesting forms of exercise and amusement; for around it clings much romance. It dates as far back as the earliest gladiatorial contests of the Romans. Then it is we first read of the fearful combats with sword and shield. This was the form of fencing employed until in the sixteenth century when this warlike science was further developed in Italy. From there it spread to Spain and thence to France. In all these Countries it was always studied with the intention of finally becoming proficient enough to kill one's adversary. It was not many years ago that the idea of duels was abandoned. Fencing is still taught, however, in all military schools as a means of general warfare.

This wonderful science has now a place in the department at Manual for girl's physical culture, for while it demands no violent straining of the muscles it develops to an extraordinary degree the whole physique and imparts the most perfect delicacy of touch with steadiness and lightness of hand.

That is why a class has been formed and during third hour of a day about twenty-two girls may be seen, if you are a girl, armed with foils each facing an opponent ready to lunge or parry at the word of command.

The girls have learned about ten different ways in which to make an attack, and also six parries. They are very fond of the sport and hope soon to be more proficient.

It is one of the greatest proofs of our high civilization that fencing, through which many a man has lost his life, should finally become only a pleasant exercise to make our girls more graceful, quicker and healthier.

M. S. '04.

BEFORE AND AFTER.

"No, I don't believe I want to watch the girls at basket ball. You know, Miss Barstand, I don't approve of the game, in fact, I decidedly object to it," said the spinster emphatically. "I have heard that it is very wild and rough—"

"But you have never seen a game, Miss Winston. Do come out and watch the girls for a few miuutes and then you can judge for yourself. Why, our girls aren't the least bit wild or rough; it is only beginners that tend a little that way. If you only knew how the girls enjoy this sport, how they look forward to it all week, what a diversion it is from the monotony of their studies! Yet these are not our best reasons for allowing the game. It makes the girls active, both in body and mind. Then, the exercise is so good for them."

"I'm afraid it will tend to alter my views, but still, to please you, I'll go out for a few minutes." Surely, she mused, if Miss Barstand approved

of the game, Miss Barstand, the principal of the M— Girls' Seminary, the one whom all adored, there must be some good in it. So in a few moments they were walking to the grounds which were quite near the college building. They secured chairs for themselves at a place where they had an excellent view of the game.

As the game progressed, Miss Winston became more and more interested and excited. She forgot her surroundings entirely and gave undivided attention to the game. She could see no roughness. Miss Barstand was right. How glad she was that she had come! She noticed especially the activity, the alertness of the girls. Where is the ball now? Oh, yes! The captain on the right has caught it. She throws it to one of her players. What is that? The enemy's guard has jumped for the ball. She has it! No, she has dropped it, but the other guard, in the twinkling of an eye, obtains the ball and throws it over to her own side. One of her own players catches it, but in the excitement of the moment takes a step. "Foul," cries Miss Winston, jumping up with eyes ablaze. She looks around and sees Miss Barstand smiling at her. Then she sits down and laughs, laughs till the tears roll down her cheeks. That she should so forget herself! Stately, severe Miss Winston! Fie, fie on you!

Yet in leaving she said to her friend, "How I long to be a girl again and romp and play as your girls do."

"Come and join us, then, once in a while," said the triumphant teacher.

"I certainly shall," she answered smilingly, and so she did.

SELMA ETTLINGER, '04.

GIRL'S ATHLETIC ASSOCIATION.

The Girl's Athletic Association has re-organized under the school charter. This will not affect the association in the least except that all new members will be elected and that the yearly dues will be ten cents. This will be used for buying more materials for the basket ball equipment.

Under this organization we expect to add many new members and to reinstate all of our old ones. Last year our girls won every game at basket ball and this year they intend to do likewise. This can only be accomplished by members taking most active interest in practise games.

The object of this association has always been to promote interest in athletics. We hope the girls will succeed better this year than ever before in the history of the association.

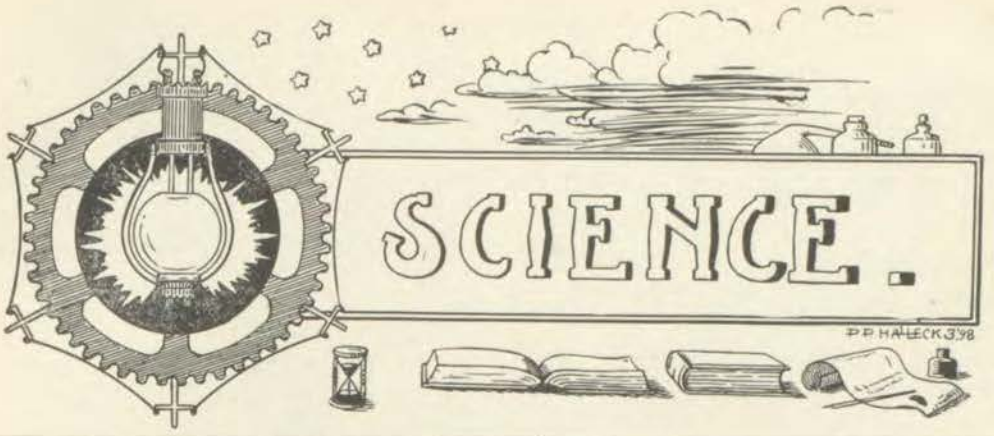
There are two teams chosen every year by Miss Hoernig. The first plays all the match games, the second substitutes.

At the meeting of the Girls' Association on Oct. 21, 1902, the following officers were elected:

President ..... Burtie Haar
Vice-President ..... Grace Slocomb
Secretary ..... Julia Simms
Treasurer ..... Nellie Hewitt
Seargent-at-Arms ..... Edna O'Reilly
Business Manager ..... Dottie Hewitt

Under the new constitution the membership is limited to fifty and we hope that all wishing to join will do so at once.

BURTIE HAAR, '02.



ABOUT WHITE ANTS.

White ants, or Termites as they are more properly called, because they are not true ants, generally live in the tropics, but a few species are found in temperate regions. In the North they do very little harm and really do some good by eating up decayed wood; but in the tropics they are great pests. In the tropics they bore into furniture. When they have gained entrance to a house, they eat the wood, only leaving a thin shell which would be crushed if much weight was put upon it. Such are the tropical and best known species.

The most common northern species (Termes flavipes) is the kind in which we are most interested as we have the chance to see these and to study them if we are so fortunate as to find an inhabited nest. The nests of this species are not very common but when a colony is found it furnishes a most interesting study.

Each colony of Termites is grouped into four classes, the kings, queens, soldiers and workers, the latter two being blind. The kings and queens are exempt from all work. They are the rulers and are treated with every respect possible but are imprisoned. The workers and soldiers are of a dirty white color, the body of the latter growing darker as it nears the anterior portion, until it becomes black. The soldiers have very large heads as indicated by the drawing to the left in Fig. 1, and their duty is to defend the colony.

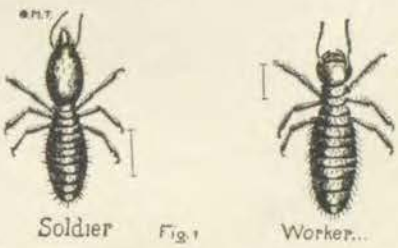


Fig. 1

The workers (see drawing to the right in Fig. 1) do all the work; construct nests, wait upon the king and queen, feed the young, etc. As soon as the eggs are laid by the queen, they are taken by the workers to cells which have been prepared for them. The workers then keep watch over them and feed them as soon as they are hatched.

For a year or so there has been a small colony—not so very small either, as there are several hundred, probably, in the colony—in room six in the basement of this school building. Their nests and passageways differ very greatly from those built by the large

colonies in the tropics. The nests of the tropical species are of enormous size, often as much as twelve feet high and fifty feet in circumference at the base. They are conical in shape and are composed of particles of clay, which, when dry, are said to be as hard and durable as rock. The northern species, however, seem to build their nests upon the side of some vertical object, such as the wall of a house or a telephone pole or some such object. The main nest is composed of several galleries and rooms and has galleries leading up to it. The nests are built both in cracks and between some object and the wall, or on the bare wall. The nest consists of tiny particles of clay or other kinds of dirt, very round and smooth. These particles are first broken off from the dirt bank or wherever the material is gotten from, by the workers and then mixed with their saliva and moulded into a tiny round ball. These are damp at first and can therefore be moulded and stuck together, but after they have been left for a few days they become dry.

Termites are dark-loving insects and are rarely seen in the light. They build covered passageways wherever they want to go. There are some passageways like these down in room six. They have been erected to lead from a hole in the wall, where they appear to have entered the room, to their nest behind a picture. These passageways are about one quarter of an inch wide and one-sixteenth of an inch from their outer side to the wall.

One of these passageways is shown in Fig. 2, the length of the part drawn being twenty-six and one-half inches. This was erected in four days. Another one was built diagonally upward a distance of four inches (A. to

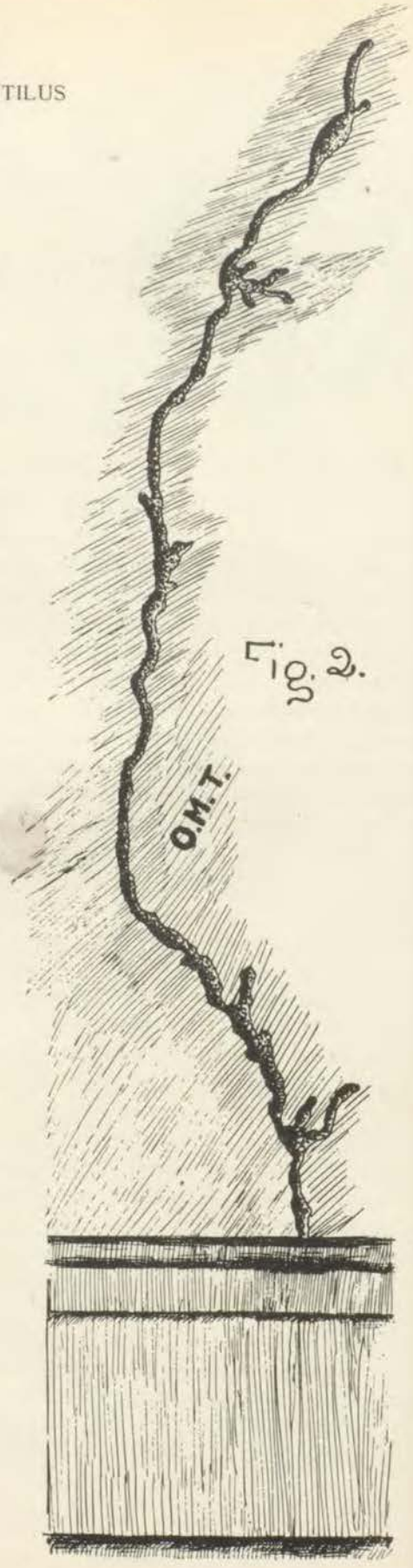


Fig. 2.

B. in Fig. 3) in twenty-four hours, most of it having been done in the night. This was built from point A. after the frame, behind which the nest was, had been removed. Breaks were made in one of these passages and they were repaired immediately, but I could not tell whether one worker did the repairing and the others carried the material to it or whether each worker deposited the material that it brought. These passages have no dirt floor and are constructed with the end always closed. The ants seem to deposit quite a number of these particles of dirt at the end of the passageway and when a sufficient amount has been accumulated, they appear to shove forward and outward on the mass, thereby lengthening the passage. These galleries are rough and granular on the outside and smooth on the inside, having been moulded smooth on the inside by the ants.

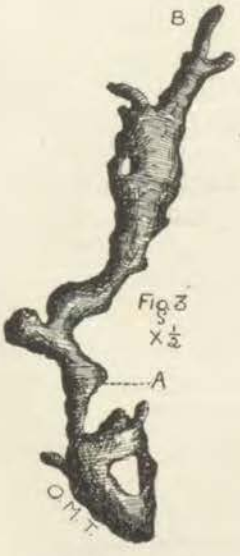


Fig. 3 X ½

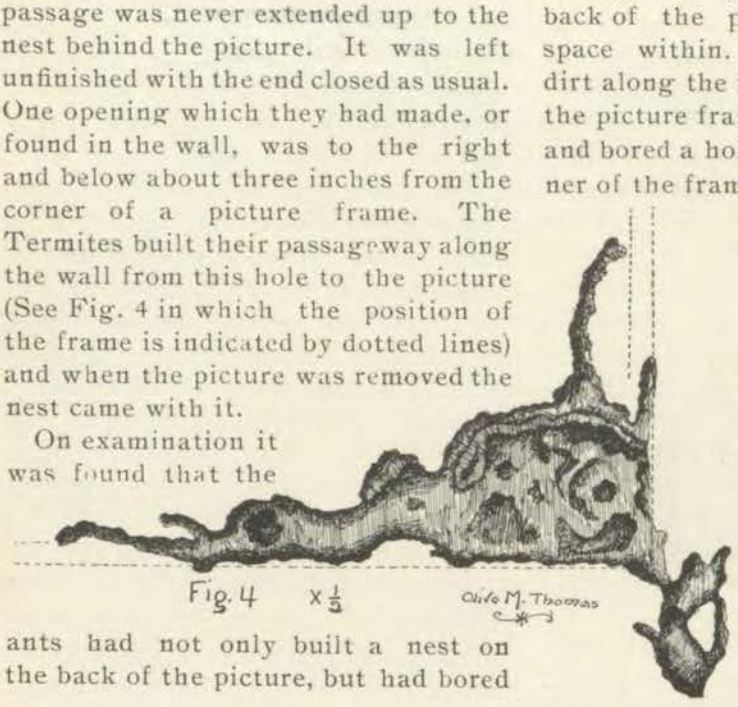
Along these lines or covered ways, are small holes in the stone wall of the building. The entrances to these are worn and are somewhat larger than an ant's body. These appear to be connections with the outside of the building and probably are, since if these were made every two feet, say, along the line, they would greatly shorten the distance which the dirt would have to be carried.

The east wall of the "Manual" engine-room (the wall through which these little entrances were made) is thirty-two inches thick and is made of nearly regular blocks of stone. There is plaster on the inside which varies from three-quarters of an inch to three inches in thickness. Now it is not possible that ants could bore through blocks of solid stone, but supposing that these small holes do lead to the earth outside, the ants would probably bore through the mortar between the blocks of stone in the same manner they bore through the plaster on the inside taking advantage of any cracks or passages already in the mortar. These little holes if bored straight through the wall cannot begin out in the air but under the ground, as their entrance is below the level of the ground.

The base-board does not fit very tightly to the wall. All along this are scattered particles of dirt—a probable indication that there is a nest of some kind lower down back of the base-board. It is from this crack between the base-board and the plaster, that the passageways extend upward, forming shapes which slightly resemble coral. Sometimes there are branches a few inches in length, extending from the main passage like a branch from the trunk of a tree. Other times the passage is double—that is, two of them running alongside each other with one dividing wall between. When they want work done in a hurry, this double passage might help them, as more ants can be working at one

time. But for some reason this double passage was never extended up to the nest behind the picture. It was left unfinished with the end closed as usual. One opening which they had made, or found in the wall, was to the right and below about three inches from the corner of a picture frame. The Termites built their passageway along the wall from this hole to the picture (See Fig. 4 in which the position of the frame is indicated by dotted lines) and when the picture was removed the nest came with it.

On examination it was found that the ants had not only built a nest on the back of the picture, but had bored through the paper pasted over the back of the picture, into a hollow space within. They had scattered dirt along the inside of the bottom of the picture frame and had gone farther and bored a hole through another corner of the frame to get out again. It could be seen that the wood had been slightly gnawed by the ants. After this picture had been removed, it lay on a desk without being disturbed for a few days. Sometime later a dozen or more dead ants were found scattered over the desk and the picture, and from that time to this they have worked no more on their galleries and nests.



HOWARD PARET, '05.

THE RECENT ECLIPSE OF THE MOON.

On reading, at several times, that a total eclipse of the moon was to take place on October 16–17, I decided to try to take a photograph of it. I did not expect very good results, but thinking such a picture would be a valuable one to have, I thought I would try it.

The heavens on the evening of the 16th were very clear and I thought it would be a good night to take such a picture, so I fixed my camera, filled my plate holders and waited for the Eclipse to come on. When it was time for the eclipse to begin the sky was cloudy and it looked very unsatisfactory. At intervals the sky would clear for a short time and then again clouds would obscure the view.

The eclipse was visible to North and South America, and the moon entered the earth's shadow at seventeen minutes past ten o'clock, central time, on the evening of the 16th. The eclipse was total at nineteen minutes past eleven o'clock and ended at forty-eight minutes past twelve o'clock on the morning of the 17th.

The Cyclone camera, with which I took the picture, is not a high priced camera, but has good lens and takes a picture on a plate 3½x3½. I used one of M. A. Seed's No. 27 Gilt Edge plates in taking the picture.

I sat out on the steps for about forty-five minutes before I could get a good view of the moon. When it did come out from under a large cloud I snapped my camera for a time exposure and held it open until the clouds again shut off the view, which was about seventy-three seconds. The night being cloudy I did not expectgood results but when I developed theplate next day, the picture came out very clear and distinct. As the plate after being developed was rather dense, it took almost an hour to print the picture, but when it did print I was surprised at the result.

A photograph may also be taken of the sun in the same manner by the use of a piece of smoked glass placed over the lens of the camera. There are to be no more eclipses visible to America this year, but next year there will probably be some, and for the amateur it is an interesting piece of work to get such a picture. BLAKE CHESNEY, '05.

A FEW WORDS CONCERNING BIRDS.

The renewing of the fashion of having hats decorated with birds is a timely reminder that the lives of the rarest of our cheerful feathered friends are in great danger. If we would pause long enough to consider what birds do for us; we would be ashamed of our ingratitude and the cruel custom would soon cease to be practiced. A bird that has been caught in a trap will become tame in little over ten days under good treatment. This shows that if we would return friendship for friendship; the birds would soon cease to fear us. Too often the impressions which birds receive from us are those of a savage instinct to kill, therefore they are fearful and on their guard. In desert places and on islands where the birds have not been molested by man, one can gently lift a bird off her nest, examine her eggs, and replace her, without her being much alarmed. This is another proof that we can establish the same relations with birds out-of-doors as we do with those in confinement, if we only will it to be so.

We not only make the birds victims of our vanity, but we also make them sufferers of the camera craze. The enthusiastic hunter of snap-shots of bird's home life, unconsciously defeats his aim. He finds a thrush's nest in a secluded, shady bower, and in his efforts to get a picture, he finds there is not enough light. He immediately goes to cutting away the protecting branches and twigs, and when he gets enough light to take the picture, the view is incomplete; for the framing which gave the charm, is removed. Besides the young are exposed to the sun's rays and perhaps drowned in a shower; when it chances that the mother bird is away. If steps were taken to attract the birds instead of killing them, we would not have to try every means to rid our orchards of the insect pests which invade them at the present time.

LECTURE ON LIQUID AIR.

The Kansas State University at Lawrence has, within the last year, put into the chemistry building a machine for the manufacture of liquid air. Taking advantage of this fact and our proximity to Lawrence, the Kansas City branch of the American Chemical Society recently held a meeting at the University, to which were invited those persons of Kansas City who were interested in chemistry.

It was an excellent opportunity to see the University, as well as to hear an interesting talk on a thoroughly up-to-date subject, so about fifty of us accepted the invitation. Starting shortly before noon we arrived there soon after one o'clock, giving us plenty of time for inspecting things in general.

The lecture took place in the physics building and was scheduled for seven o'clock, so arriving as we did, several hours early, we spent our time examining the premises, and especially the liquid air machine itself.

It is a neat, compact little apparatus, and by manifesting a little interest we received a detailed explanation of its workings from the time the air is taken into it until it issues dripping into the receiver, having passed through successive compressions and coolings; and being finally subjected to a pressure of twenty-five hundred pounds to the square inch.

As our informant finished his explanation he drew off about an inch of the finished product into a glass beaker and gave it to us to play with.

We found that it was very cold, forming a coating of frost on the outside of the glass almost immediately; and that a dandelion flower dipped into it became hard and brittle, crushing like spun glass. We were told that if we cared to put our fingers into the liquid they also would become hard and brittle and could be readily snapped off like pipe-stems, (by striking against some hard substance.) Upon this point, however, we were perfectly content to take our informant's word.

As seven o'clock drew near, we went to the physics building and at seven the talk began.

The lecturer was Dr. Franklin, the teacher of chemistry there, and he commenced by telling us, as introduction, that during the early part of the last century, Michael Faraday, experimenting in chemistry, accidentally liquefied chlorine gas. Up to this time it had been a foregone conclusion that all gases were gases, hopelessly gases. But here was a scientist who had reduced a gas to a liquid, and the scientifiic world was given something to think about. The liquefaction was accomplished by means of a small bent tube, closed at both ends. Into one end had been sealed compounds which, when heated, evolved chlorine gas. Thus, by heating, a considerable amount of heat was produced within the tube, and liquid chlorine was the result. This tube has since been known as the Faraday tube. After many experiments, and incidentally many explosions, Faraday succeeded in producing liquid carbon dioxide, which is now so extensively used for various purposes. This liquid carbon dioxide is transported and kept in strong cylinders under a high pressnre. One of these cylinders Dr. Franklin had to show us.

After these explanations the lecturer proceeded to draw off some of the liquid carbon dioxide into a muslin bag. This bag being very porous and allowing a great deal of evaporation, so reduced the temperature of that part of the liquid remaining in the sack that it was

reduced to a solid state, producing carbon dioxide snow. Dr. Franklin held up the sack for our inspection, explained the process whereby the change was wrought; then deposited the contents into a square vessel, and passed it around, telling us to help ourselves. As there was nearly a quart of the snow, we did not hesitate to do as we were directed. We found the substance to be very cold, 110 degrees below zero, centigrade, Dr. Franklin told us, and very much resembling ordinary snow, save that it did not appear to be crystalized in star shapes.

By experiment we learned that if held for a short time in contact with the flesh, the snow produces a sensation of pain similar to a burn; and that our lumps soon disappeared by evaporation without passing through the liquid state.

After these preliminaries, Dr. Franklin proceeded to the liquid air proper. He explained to us that air is composed principally of two gases. These gases are oxygen and nitrogen, mixed in the proportion of about four parts of nitrogen to one part of oxygen. The liquefaction was accomplished by subjecting the gases to a very high pressure accompanied by a lowering of the temperature. This reduction of the temperature is accomplished by expansion of some of the compressed air. It is an established fact in physics that all compressions evolve heat, while all expansions produce cold. This fact is taken advantage of in the liquefaction of air. During the first compressions of the air, the heat generated is removed by passing the compressed air into chambers surrounded by running water. After the final compression, when the pressure is twenty-five hundred pounds to the square inch, a part of the compressed air is allowed to escape through a valve, and surrounds the coil containing the rest of the air. This sudden expansion produces intense cold and liquefies the air in the coil. The operation requires about fifteen minutes of time.

At 119 degrees below zero, centigrade, if the pressure is sufficient, the liquefaction occurs. Above this point, no matter how great the pressure, the change cannot be effected. Hence this temperature is called the critical temperature. The boiling point of liquid air is 181 degrees below zero, centigrade.

Here Dr. Franklin drew off some of the liquid from a receiver at hand, into a beaker, taking care to continually rotate the beaker so that the cooling should be uniform and the glass should not be cracked. When he had a sufficient quantity for the purpose, he let it stand for several minutes, and the gases, being only in mechanical mixture, separated, the more volatile, nitrogen, passing off, and leaving almost pure liquid oxygen. He here performed several very showy experiments, such as burning steel in the oxygen. Also he showed us by means of a powerful electro-magnet, that liquid oxygen is magnetic.

Then followed a series of experiments, showing the effect of liquid air upon various substances, such as a piece of elastic rubber, which, when immersed in the liquid, becomes hard and brittle; Also a steel spring under the effect of the intense cold, becomes very inelastic, stretching like a coil of lead. Mercury and alcohol are frozen solid, and may be used as hammers.

Soon the atmosphere about our heads was disturbed by flying fragments of frozen apples, beefsteak, and similar articles, for our lecturer recognized the fact that one likes to feel, as well as see and hear.

Owing to the difference in temperature between the liquid air and the atmosphere, the liquid was constantly boiling; and when a little was poured on the table it immediately vaporized and the vapor, rolling along the table, dripped to the floor, because it was heavier than air. DOTTIE HEWITT, '03.

AN EXAMPLE OF PLANT ADAPTATION.

A very interesting study in plant adaptation is the Cholla of Southern Arizona. What it has to battle with in its fight for existence are long periods of drouth, piercing sun rays, and a loose sandy soil; but in each case nature has made due provision for its protection. The branches of the Cholla are thick, short stems. These stems are provided with receptacles for the storing of a large quantity of water, and after a rainy season this cactus may contain as high as ninety-two per cent of moisture in its stems. It has such a retentive power that in the dryest seasons it barely gives off any moisture. This power is due to the comparatively small surface exposed to the dry air, the remarkably thick surface covering, and the dense spine covering of the branches. These spines reflect the sun's rays in such a way that their full force does not penetrate to the plant. The roots spread out near the earth's surface so that, when it rains, they gather up as much moisture as possible. This characteristic is absolutely necessary, for the rainfall rarely exceeds one inch. The fruit of the Cholla grows out on the ends of the stems in rich clusters, unprotected by spines. This fruit is very tempting to the range cattle, and when stems are broken off by the cattle endeavoring to get it, the stems cling to their heavy coats. Nature has provided that the spines will only cling in a position so that when dropped the sprig is ready to take root. Since the Cholla retains moisture so well; it will live for months after it has been plucked from the main stalk; and it has spread very rapidly since range cattle have been so numerous in its natural locality.

CAUSE OF LIGHTNING.

The Annual Report of the United States Weather Bureau states that condensation has a great deal to do with the production of lightning. When small, feebly charged particles of mist come together and form into raindrops, a high tension is easily developed. The potential always increases as the square of the mass. Then ten drops, each charged with one thousand volts, will produce one drop charged with one hundred thousand volts. When drops begin to form, at the beginning of a storm, the relatively small tension of the atmospheric charges soon become greatly multiplied and heavy discharges of lightning are the result.

In connection with the above it is interesting to note some experiments recently performed by Prof. John Trowbridge, of Harvard. In these he proved that lightning will not strike water. With a battery of twenty thousand cells, he produced six million volts. This current could at least be compared with lightning, and thus he was able to reach his conclusions. With this battery he obtained a spark about seven feet long, but instead of striking water, a spark of about the same length would jump to some adjacent object. It was found that a spark of a few inches will strike water, but that cannot be compared with lightning. As the voltage mounts higher and higher above a million, the resistance of the atmosphere is less and less, thus shunting the current through the air to some adjacent object, rather than letting it strike the water.

A COUNTRY GIRL.

There she stood at the great gate with the wild roses clambering over it, looking far down the wide road that wound itself in and out among the tall trees and hedges of a Kansas farm. She was still fanning herself almost impatiently, with her small white apron; her face was flushed to a deep pink and the burn on her little finger hurt terribly and her hair was exceedingly disorderly for such a trim little miss, but what of that? Had she not done her *very* best for the sake of Brother Jonn and father.

Everything was all ready and she knew that dear brother John could not find anything to criticise tonight, although he was such a tease, for the cake had browned beautifully and even if it had been a little uneven at first, she had pressed it down real hard when she turned it over, and now it was just as lovely as could be. The custard was alright, too. Somehow it had been contrary about sticking to the bottom of the pan, and she had become very angry with it and had scraped some of the skin off her finger, but no one could possibly have said anything against it after it had been poured into the tall, slender glasses. The biscuit, too, were a beautiful delicate brown. Ah, yes, there could not be anyone in Kansas, she thought to herself, that would have a better supper than their's tonight.

To Mildred, to be a good housewife was certainly part of every girl's mission in life and how hard she had striven to be one herself. Ever since the little mother had gone to the mountains to "build-up," she had worked with all the vigor of her young nature to please the "men folks" as she termed them. But John was always bringing a chum home to whom he was indebted and father would just have a "friend or two drop in," but tonight they had promised to bring no one and just to have a cosy dinner all to themselves.

At last the sound of wheels! Mildred brushed back her stray locks and smoothed down her apron and a look of satisfaction came over her small round face. She was not far past sixteen after all, and she made quite a picture as she stood nodding and smiling to the occupants of the buggy.

The roses made a pretty foreground for her pale blue ruffles and her thick, light brown hair that fell in two long braids over her shoulders. Her large, clear blue eyes were very expressive and the folds of lace and the cameo at her throat added a rare touch of picturesqueness.

But horrors! Who was that in the buggy with John? A very critical looking college prefessor with glasses and a turn-up mustache! John had not kept his promise at all! But then the supper

was all right, so why should she worry? And John's whispered "couldn't help it siss" brought forgiveness right away. So while they were in the garden, she brought the dinner in and announced it.

Everything was getting along splendid ly until John's sniffing in the air made her realize that something,—well, to tell the truth, something smelt very scorched and that the corn tasted very accordingly but, worst of all, the young professor was actually *neglecting* his corn.

So she passed him the biscuit but somehow the light brown color did not seem to agree with them for they were —yes, they *were* very wet inside. Mildred's face flushed a deep pink, but she went on bravely and helped her guest to some steak that she just then remembered had not been salted.

But he surely must have been rather nice after all, for all at once she noticed a twinkle in his eyes and he did not stop till he had eaten five wet biscuits and had been helped twice to some very flat tasting steak. And now the dessert! Mildred tried to do everything just as she was sure mother would have done it, but all at once she noticed that the custard had what looked like little lumps in it and the cake, although it was even, was just like the biscuit. Her heart sank with despair, but her hopes rose a little when that obliging professor actually helped himself to cake three times and the twinkle in his eyes increased.

But it was awful to be patronized just because a guest wished to keep one from being embarrassed and the more she thought it over, the worse it seemed so that evening she and father and John talked it all over, for such things had happened a very sad number of times before.

The result of this family conference was that Mildred was to be allowed to go to Kansas City to the school she had so long thought of as her ideal school where one might learn how to do things just so with a pleasant-faced teacher who wouldn't laugh at mistakes.

It was arranged that within a week she should go, and enter as a junior. She never forgot her first day at that big high school; for, tucked away among the hills on the ranch, she had always been praised for her slightest accomplishment and as for system and planning time; the pampered and demure little country girl had never once thought of it.

So the first few days were very long and irksome, but the cooking room—it was just as she had longed for it to be and it even surpassed her expectations. The teacher was just as lovely as she had hoped, but the country girl herself won many friends with her winsome ways and she had already invited some girl friends to go back to the ranch with her that summer.

She was surprised to find that a few boys took cooking also but she acknowledged that they looked very smart in their white caps and aprons. But everything was so new and wonderfully ideal in the sewing room that she looked forward to the hours there as much as anywhere else when the tucks and ruffles went flying across the machine under her enthsiastic fingers.

At last the year's work was done, and Mildred had several things on exhibition. After the dear good-bye's were said, Mildred was impatient to try her skill at home. When she started the old routine, it was no longer cuts and burns, but dainty pies and light biscuit and cakes that were no longer sad. To John, it was a perfect paradise to bring some one home every day to dinner and when mother arrived, she found a housekeeper quite as able as herself, for after the departure of her girl friends Mildred did the summer sewing.

But the strangest part is yet to come, for the professor continued to eat Mildred's biscuit and seemed to enjoy them, too, and finally Mildred was often seen standing at the gate looking down the wide road over the roses.

And although it is still a great secret, I will tell it to you now—Mildred will soon be making biscuit for the professor in a cozy little white house that can be seen on a distant hill slope from the gate where the wild roses are and you can see it now if you wish; for the fare from here is just forty cents.

MARIE PHILLIPS, '04.

LACE MAKING.

"Needlework Sublime."—*Cowper.*

The productions of the needle are many and varied, but lace is one of the most beautiful things made by it. Lace is defined as a plain or ornamental network, wrought of fine threads of gold, silver, silk, flax, or cotton, interwoven.

It is not known exactly when the making of lace began, but one can trace its production as far back as the fourteenth century. At that time the swampy state of the country made roads well-nigh impassable, and the deficiency of out-door amusement caused the ladies to while away their time indoors as best they could, and needle work became their chief occupation. So lace was either the invention of one of these "ladies of leisure," or that of a nun. The authorities on the subject are inclined to believe that lace making originated in a convent, for it was there the finest needle work of the age was done. In the early part of the fourteenth century lace making was termed nun's work, and in parts of Scotland today ancient lace is called by that name.

At first, lace was made after formal and geometrical designs, but soon the patterns became more difficult and varied. It is interesting to note the difference in lace patterns made by Christain hands and those made by Mohammedans. In the latter animals were never used, as it was forbidden by their religion.

It is uncertain where this art at first originated, as both Italy and Flanders claim the honor. But wherever invented, it spread quickly over Europe and soon nearly every country produced its own lace, the patterns being as different as the countries in which they were produced.

Point lace is the oldest of all laces, and Venice was celebrated for its production. The Venetian "points" are all of the most exquisite workmanship, but they baffle description. It is said a young girl made a lace pattern in imitation of a piece of coral which her sweetheart, a sailor, had brought her. Soon this pattern became the choice of all Europe. Venice jealously preserved the secret of her "point in relief," and for a long time she had the monopoly of it.

Italy, however, is not the only country noted for point lace, as Spain produced some of about equal quality. It is interesting for Americans to know that from there in 1723 the art was brought to America.

Flanders, also, was noted for its beautiful laces, and it possessed an advantage over all other nations in having the far-famed Haarlem thread. From Flanders, lace making was introduced

into England. It is said that Queen Katherine, of Aragon, encouraged this art, even going so far as to destroy all her lace when trade was dull, and then ordered new. Of course the ladies of her court followed her example, and thus the lace trade was revived. In the different counties of England, different kinds of laces were made.

At first royal ladies made lace, but soon the patterns became so difficult, and exacted such rigid application, that these ladies abandoned it to a great extent. Then the production fell upon the peasant women and girls, and the convents, which were under the patronage of wealthy persons. During the sixteenth century sympathy with industrial prosperity caused some ministers of state to organize centers of lace making.

After the French Revolution, the making of lace by hand began to die out. In the early part of the nineteenth century, about 1809, lace began to be manufactured. The making of lace by machinery has been very successful and has nearly driven out the hand-made lace industry. Ireland still produces, in modern patterns, hand-made lace as lovely as that made centuries ago.

At the present day, there has been a revival of hand-made lace by those who admire the art. So we find many exquisite patterns in Battenburg, English point, and other kinds of lace. These, however, are not so beautiful as the ancient hand-made lace, perhaps because they lack the quaintness and charm which age adds to every beautiful object.

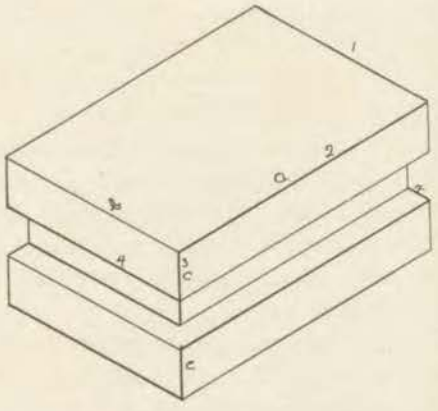
LILLIAN M. CARNES, '03.

ISOMETRIC DRAWING.

The Juniors this year have come to some work which is altogether new to them, but which they like very much. This is Isometric Drawing.

The object of an isometric drawing is to give the workman a better idea of what he is trying to make. It gives him almost the same picture that an artist would make of the finished article. But there is this difference, that the drawing is accurately made, so that dimensions *might* be taken from it, although a regular plan, end and side elevations with dimensions marked would probably accompany it.

The cut attached represents a block with a groove on the front and one side. Here we notice that all vertical lines remain vertical while the horizontal lines become 30° ones. The lines a, b, and c are called the isometric axes of the drawing. Since these represent respectively the length, breadth and thickness of the block, all measurements upon any parts of the block parallel to the top, side, or end, must be made upon lines parallel to one of these three. Thus, the edge of the groove being parallel to the



top, the line, x, representing the thickness of this edge, is drawn in the same direction as b. Remembering all this and by the exercise of a little thought,

almost any known object may be drawn in isometric.

The shading of an isometric drawing is also of interest. It has been found impracticable to shade the dark side as heretofore. So an altogether different method has been adopted. In this particular case the block would be considered as if it had been cut through twice, the middle part cut down, and then all fastened together again, making three separate parts, each to be shaded separately. Taking the upper part, let us consider the method of shading it. This is the same as in all other drawings, the farthest upper line, 1, representing breadth, the nearest upper line, 2, representing length, the nearest line, 3, of thickness, and the nearest lower line, 4, of breadth again. Shading the other two parts, what may be seen of them, in the same manner, we soon have the block, as a whole, shaded.

This work is intensely interesting and makes the boys notice the fine points of what they are doing.

C. D. M.

THE FORGE SHOP.

No more have we the Mt. Pelees. The experiments of the first few days in the forge shop are past. But instead we are thinking of "Veni, Vidi, Vici."

The work in the shop is as popular as ever and every pupil is working as accurately as he can to complete the twenty-four exercises, of which fourteen are iron and ten are steel. The exercises are not for us to construct something showy but to instruct us in the fundamental principles of forging and teach the hand to obey the mind. The first exercises teach us the elementary principles of forging while the ten steel exercises are tools to be used in the machine shop.

Most of the students have the first three exercises finished. The first exercise consists of squaring, drawing and bending. The second is an exercise in forming, and the third is an exercise in bending and forming.

A practical blacksmith would not think a student could learn much of his art in nine working days of ten hours each, but the results of our school prove differently; for the average pupil obtains a very fair apprehension of the mechanical skill of forging.

We are to have many improvements in the shop. The anvils are to be fastened to the floor. The tool drawers to have locks and any person wanting one for his private drawer may have it for the asking. We also have a complete new set of aprons furnished by the school.

HAL R. LEBRECHT.

THE BEGINNERS IN TURNING.

When a person enters Room 29, the turning shop, he is in one of the best equipped shops in any school in the country. Only such universities as Cornell and Chicago surpass Manual in this respect. This is not always realized by those taking turning, but nevertheless it is true, and is a source of pride to many members of the faculty.

There are twenty-four lathes in the

room, a band saw, and two grindstones. The latter are kept running all the time that the boys are at work. Everything receives its power from a motor kept in the room.

Mr. Arrowsmith, the instructor, is very careful in explaining everything connected with the lathes, so that the boys will understand the working of all the parts. The knowledge of all these things enables a boy to work better.

The first real lesson is at the grindstones. There the instructor shows the boys how to grind their tools. A great deal of stress is laid on this part of the work, because good work cannot be done unless the tools are sharpened properly.

Then the boys practice turning out a cylinder so as to get acquainted with the work, and to learn how to hold the tools in the proper positions. The first exercise is to turn out a cylinder eight inches in length and one and one-half inches in diameter. Mr. Arrowsmith first turns out one, which serves as a model for the beginners. The second exercise is a little more difficult than the first. It has concave and "V" cuts in it.

From this on the beginners show their ability to do the work, and slips of the chisel and accidents are less frequent. The work is laid out from drawings, thus co-relating the work of the drawing department with that of the turning.

CARSON CHILES.

JOINERY.

Joinery is the making or putting together of different kinds of joints. It is the work of the first year students. Nearly all boys like this kind of work, therefore take great interest in it and soon learn to do pretty good work. Mr. Myles and Mr. Knaus are the instructors, Mr. Myles being a graduate from the Manual Training High School. The first exercise is to plane a piece of wood one and one-half inches square and eight inches long. To one who has never used a plane this is more difficult than one would think. The work is only accepted by the teacher when found to be straight and true.

The next exercise is an angle-board, which, when completed, is a piece of wood about three-fourths of an inch thick, six inches long, and four inches wide, with angles of different degrees marked on the flat surface. This angle-board is used to set a "T" bevel to get any angle desired.

Sometimes the boys are allowed to do extra work, such as making desks and stools. Sawing exercises are given also the first year, which teaches the pupil to saw to a line, so that mortice joints can be made to fit into each other and together.

The Freshman class is very large this year, consequently all classes are full. Mr. Myles teaches second, fourth and fifth hours, and Mr. Knaus teaches first, third and fifth, each teacher having a fifth hour class; Mr. Knaus has a class in the turning room while Mr. Myles has one in the bench work room. There will be no extra work this year outside of regular exercises.

D. S.

Last time we noticed our pile of exchanges its size had increased perceptibly, indeed, very perceptibly. It was then ten inches wide, four feet high and about seven feet long. That measurement was taken in a rather superficial manner, after we had done a very rash thing. We had read the "humorous" column of one of those self-same magazines. Now it is known why allowance must be made for the veracity of this statement. Was not our irresponsibility at the time excuse sufficient for exagerating a partical at present? If you had gone through such an awe inspiring page of nothing your answer would quickly be given. But happy to say, comparatively few of our exchanges tend to promote a condition of habitual ennui.

The cover of a magazine is sure to attract attention. It is deplorable that some of our exchanges must of necessity be the objects of unfavorable criticism in this respect.

Professor—Describe the battle of Princeton?

Freshy—Ten to six in favor of Yale.

—*C. M. C. Bulletin.*

Lives of great men all remind us
We, too, can be shining lamps,
And, departing, leave behind us
Other heads for postage stamps.

—*Ex.*

Hobo Ken—I heard a fellow say onct, "if yer tell me what yer eat, I can tell yer what yer wuz."

Sleepy Hollow—All right, I live on champagney watear, pattide jaws grass, terrapi a la—

Hobo Ken—Dat's easy; you're a liar.

—*Ex.*

Prof. in Chemistry:—"Is that all you know about sulphur?"

Flunky.—"Yes, sir."

Prof.—"A time is coming when you will know more on the subject."

Flunky.—"I will recite to you then."

—*Midland.*

Mr. Martin—You have not returned your report yet, Bonhajo.

Bonhajo (confused by sudden appearance of Miss W———n)—I haven't signed it yet.

—*Old Hughes.*

Professor—Why, Abbot, when George Washington was your age he was first in his class.

Abbot—Yes, sir; and when he was your age he was President.

—*Old Hughes.*

If you want to be well informed, take a paper. Even a paper of pins will give you some points.—*Ex.*

"'Tis better to have loafed and flunked than never to have loafed at all."—*High School Forum.*

If you want something done, don't ask the person that hasn't got anything to do for he will not have time.—*High School Forum.*

"Is your son at college getting a liberal education, Mr.——?"

"Wall, I d'know. Strikes me I'm gettin' most o' the lessons in lib'rality.

—*Oracle.*

Teacher (German)—"What is the rule about feminines in the singular?"

Pupil—"They get married."

—*H. S. Messenger.*

Author—"I am troubled with insomnia. I lie awake at night hour after hour thinking about my literary work."

Friend—"How very silly! Why don't you get up and read some of it?"

—*Ex.*

Dan Cupid is a marksman poor,
Dispite his loves and kisses,
For while he always hits the mark
He's always making Mrs.—*Ex.*

"Shall I brain him?" cried a hazer,
And the victim's courage fled.
"You can't, it is a Freshman,
Just hit him on the head." —*Ex.*

The self made man was speaking. He said: "My father was a raiser of hogs. There was a large family of us"——and then his voice was drowned by applause.

—*H. S. Messenger.*

A—(to a Soph.) "How did you get on in Greek today?"

Soph—"All right."

A—"How's that?"

Soph—"I didn't get called on."

—*Washburn Review.*

"What did the deacon say when you sent him the brandied peaches?"

"He said he didn't care so much for the peaches as he did the spirit in which they were sent."—*Ex.*

1. He who knows not, and knows not he knows not—he is a Freshman. Shun him.

2.—He who knows not, and knows he knows not—he is a Sophmore. Honor him.

3.—He who knows, and knows not he knows—he is a Junior. Pity him.

4.—He who knows and knows he knows—he is a Senior. Reverence him.

—*Ex.*

How is it that the gas bill is so low?
Because sister is engaged.—*Ex.*

A Freshman stood on the burning deck,
So far as we could learn,
Stood there in perfect safety,
He was too green to burn.—*Ex.*

You can drive your horse to water,
But you cannot make him drink;
You can ride your Latin pony,
But you cannot make him think.

—*Ex.*

Mr. Richardson (in Economics class:) "Walter Horak, what does it mean if I borrow $100 at 6 per cent?"

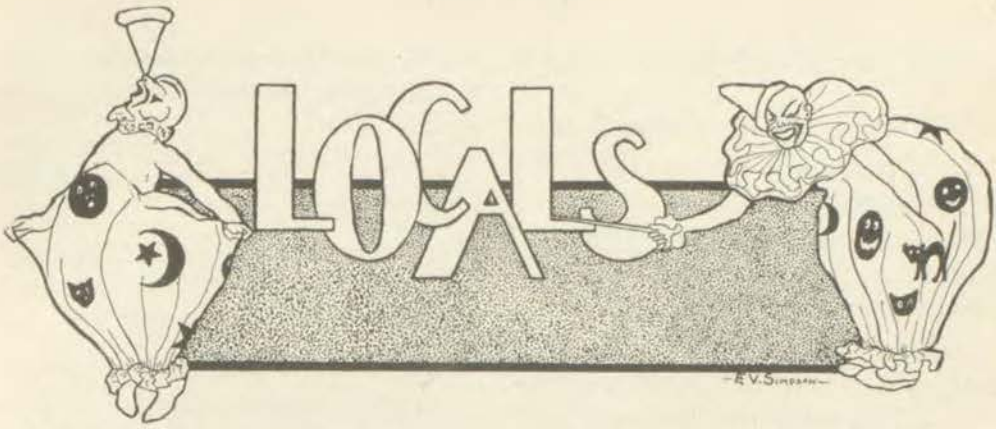
Walter: "It means that you need it."

—*Ex.*

There are meters of accent;
And meters of tone;
But the best of meters
Is to met her alone.—*Ex.*

"We're in a pickle now," said a man in a crowd. "A regular jam," said another. "Heaven preserve," said an old lady. } With apologies to the Ancients.

You can't tell how much juice there is in a lemon until you get it into a squeezer. You can't tell how much energy there is in a man until you get him in a pinch.—*College Life.*



Heard on a Ninth Street Car.
"How's Barry getting along?"
"Alright."
"Married Yet?"
"Yes."
Poor fellow!

Allen Elston was asked if a certain young lady was an "O. Z. O."

"Oh, no," exclaimed Allen, "I know the O. Z. O's. by heart.

Miss Lake was told to solve a hard proposition. She immediately invested in one of those famous lunch room pies.

Mr. Stadler, (opening A. L. S. meeting):—"Order in the Court."

Heard in the halls:—Mr. Birrells jokes are *so* stale. You hear the same old ones every time you meet him.

Does Arnold Shawn use a curling iron?

The only silent man in the Gym. —the tackling Dummy.

Edith:—"I wonder what we will have in 'ell (elocution) to-day?"

A Freshman in history:—The Egyptians had a fine system of irritation.

Florence Scott, speaking to Roy Kendall:—"What's the matter, baby?"

7:30 p. m.—Hello, is this Egbert Schenck's?

"Yes."

"Is Egbert there?"

"Yes, but he's in bed."

A Freshman entering a room where Edith was talking to two of her friends exclaimed, "Oh, excuse me, I didn't know this was a society meeting."

Mr. Woodville Smith, a second Horace Hamm.

Girl:—Is that the exponent?
Mr. Moorse:—O, dear,—— no!!!

Mr. Arrowsmith, (to pupil) "Please hand me a parting tool." Someone laughed when a comb was produced.

Miss Gilday:—Why is an agitator like an alligator? Because he has a big mouth and little brains.

The subject of a paper read in an I. O. N. meeting was like this:—"How to tell an Aztec from a Debator."

Some one suggested in Glee Club meeting that a collection be taken up to buy Mr. Smith a razor.

1st. I. O. N.—"I think Niccolls would make a good sargeant-at-arms."
2nd. I. O. N.—"Why?"
1st. I. O. N.—"Because he would have possession of the Bes(t)s Key."

Miss Cook:—(Reading from Child Harold,)
Roll on ——— Oh, Mr. Cowan, I can't.

Miss Orerly:—(in millinery) "Look, Bertha, how I hold my beau."

Miss Crohn said she had just thought and dreamed of having her picture in the Nautilus!!

Richard M:—(Seeing some girls tripping down the hall.) "Oh, all the girls at Manual are in love with me!"

Study-hall teacher:—(to Egbert Schenck) "Come and sit up here, *little* boy."

The lunch department of our school serves Granuts and milk. What other kind of granulated cobble stones will they be giving us?

Freshie:—Opening door of English department. "Is this the sewing class?"

When we see her starting toward us
Then our lips we closely seal,
For we know the slightest whisper
Can be heard by our Miss Steele.

Miss Schultz:—(To class of about 30 girls and 4 *small* boys.) "Boys, don't talk, your noise is worse than all the girls together, such a grumbling sound."

Pupil in room 13:—"When you hang a man ——" Mrs. Elston:—"Oh, but I don't hang men."

Found on a Freshman's examination paper:—"Jerusalem is in Babylonia, on the Nile."

Alfred:—"Come on and walk home with me, Egbert."

Egbert:—"I can't, I've got to walk down town. I bought 5c worth of cakes and put them in the literary editor's drawer. Now they are stolen and I have neither cakes nor car fare."

Mr. Phillips says that you can't charge the orchestra with having any BRASS now.

The new Study Hall teacher has a metal eye. (Steele.)

A young lady seeing Mr. Montague coming down the hall exclaimed: "Killarney"!! Guess why.

Why does little Miss Schreiber look so sad and lonesome this year? Grow B(ig.)

Mrs. Schultz:—"Edith, walk up front like a man."

Why don't Miss Jenkins bring an admit for tardiness in the French class?

Mr. McCurdy says that most of us grow when we're young. (We understand that he has a good example of this at home.)

Edith:—(taking a glass of lemonade off a mat in the Cooking Room.) "I need something cool."

Marion:—"That was on the mat for hot things."

Miss Campbell asked one of her classes to take up a collection and give her the result.

Problem in Geometry.

Given:- Two people that know each other.

Required to Prove:—How far apart from each other Miss Steele would place them in Study Hall. The correct answer to this will be reported in the next issue of the Nautilus.

Theodore Quadlandersoprano:—(in music.)

"I can't sing alto Mrs. Schultz."

Mrs. S:—"Then sing soprano."

Theo. etc:—"I can't, I'm 'fraid of the girls."

Visitor to Pupil:—"Can you direct me to the kindergarden department please?"

Pupil:—"Why, we havn't any such department."

V.—"Well, what department do these little tots belong to, then?"

P. "Oh, they're just Freshies."—

If a pupil meet the teacher
In the Study Hall,
Need a pupil fear the teacher
In the Study Hall?
But should the teacher know the pupil
She with heart of Steel(e)
Will turn and squelch that little pupil
With a great and mighty zeal.

Mr. Phillips says that he needs an introduction to himself every day. How strange that he should forget himself.

Mr. Page:—"In the entire year I have to look over 5,000 experiment papers."

Brilliant pupil (aside):—"He's got a long neck, he ought to be able to look over more than that."

Miss Jenkins (to boy reciting in American Literature:—"You're on the right trail, now chase that idea a little farther."

Boy (after a pause):—"I can't catch it."

Marion says she likes boys who change girls often, because she thinks her turn is coming.

Mr. Page:—"I will have to find some way to get you quiet."

Pupil:—"Wait until the music starts, 'Music hath charms, etc.,' and and it will save the expense of soothing syrup."

The pie we had last week in the *Poor* Food department tasted as if the apples had been suspended and their shadow allowed to fall upon the crust.

Miss Carnes says she prefers quality to quantity, when it comes to boys.

Miss Van Meter:—"What think you, Miss ——— ?"

Pupil:—"*Think I thusly*, Miss Van Meter."

Pupil—:"Force is muscular energy, or that which produces the same effect."

Mr. Page:—"That sounds more like a definition of health food."

Botany pupil to another:—"What tree is it that bears no fruit?"

Other pupil:—"Ge-ome-try."

Senior girl (speaking of Mr. Fulton):—"Aren't married men cranky?"

Miss Dickey to Mable, in cooking:—"You have an extra spoon, Mable."

Mable:—"Yes, I am rather spooney."

Mr. Bowman:—"Oh, mamma! I can't go out tonight."

Mamma (in surprise):—"Why, son?"

Mr. B.:—Because it is going to be a total eclipse tonight and it will be too dark."

Mr. Lee:—"My opponent said——"

President:—"Please address me as an honorable gentleman."

Mr. Lee:—"Mr. President, I cannot tell a lie."

Miss P.:—"I don't see why anybody wouldn't feel complimented when compared with Watermann Stone."

Upon examination the pocketbook of an O. Z. O. was found to contain:

One ten-cent piece.

Two checks for five cents in trade at Jesse & Billy's.

One check for one dollar's worth of lemon phosphate.

One pair of dice.

One Mexican penny.

One Canadian dime.

One miniature of Heinz's pickles.

And a perforated cent with a ribbon through it.

Gertrude still has her dolls to play with.

Miss P. (seeing a man-hole in a lot):—"Oh, is that a spring?"

Mary's father said her face was getting serious. Since when?

Whose little wootsie is Watermann?

Selma (at ball game):—"Oh, Manuals have got the kick down."

Ask Ralph Ettlinger if he thought he was eating candy when he took a stick of sulphur in chemistry.

Mr. Stewart deserves a brass button. Why? He made Mr. Shields laugh the other day.

Mr. Page:—"This thread is entirely too coarse for the experiment."
Pupil:—"It must be the thread of discourse."

Mr. Phillips said that he was going to look at the eclipse of the moon through a smoked glass. He must have been afraid of being moonstruck.

Miss Sterns was so absent-minded the other day that she handed the conductor a roll of test papers instead of her car-fare. Absent-mindedness is a bad sign, Miss Sterns.

Some of Mr. Phillips' poetry:

Please, Mr. Small,
Step into the hall.

Miss Gilday says that teaching history is missionary work. We must draw the conclusion then, that all of her pupils are heathens.

People call the I. O. N.'s the onion society. Is this on account of their strength?

Rachel:—"Oh, our maid is so smart. She knows ever so much more than I do."

Sh! what is this silent assembly? Is it a prayer meeting?

Oh, no! this is a class in psychology during a very interesting part of their work. But why do they sit so silent and medative? They are philosophers and are watching the evolution of an idea. But are they not bored? Oh, no! they like it, for they are now making up for sleep lost the previous night. Sh!

Teacher in History:—"What was the Hebrews' purpose in life?"
Freshman:—"The Hebrews' purpose in life was to find grass and water for their sheep."

"Wow! wow!" The I. O. N.'s pass-word.

There was a young man from Cologne,
His name was Watermann Stone,
He walked down the hall
In garments football,
And scared all the girls to the bogne.

Where did the I. O. N.'s find their name? From L(ION)el.

Rachel is so full of geometry that she proves everything.

Belle:—"I'm not in love with anyone now, I'm just looking around."

The O. Z. O.'s have discovered a new use for shoulder-pads in our football players.

A Manual boy and his young lady friend were on their way to the K. C. K. vs. Manual football game, when they passed the workhouse gang in a wagon. The following conversation ensued:
Young lady:—"What are all those men doing in that wagon?"
Manual boy:—Oh! those are only Debaters going to the game in their tally-ho."

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THE CURSE OF THE HOUSE OF McRATH

Late one autumn two of my school friends and myself were taking a wheeling trip through the highlands of northern Scotland. We had ridden hard all day, and just at its close, one of us was unfortunate enough to puncture his tire. It was impossible to mend it, because of the rapidly approaching darkness; besides, one of the fierce, sudden storms so peculiar to the Scottish highlands was upon us.

The vicinity in which we found ourselves was as desolate and weird as could be imagined. The level ground of the moor stretched for miles on every hand. Its dull monotony was broken here and there by huge boulders that were scattered around, until one fancied it were the scene of some struggle of giants, which had taken place in the remote ages. These boulders seemed welded into queer, fantastical shapes, casting magical, distorted shadows in the lurid light of the setting sun.

Our plan had been to reach the little town of Glenmore before night, and if our calculations were correct, and we had not punctured the tire, we would easily have done so. But now, with night fast approaching, I began to think that we had missed our way.

We had no time to reflect, however, as the gale was momentarily increasing, a wild herald of its master, the approaching storm. No habitation was in sight; we were lost, and caught in a furious storm.

I turned, compelled as it were by some unseen hand, to look towards the setting sun, just sinking below the horizon. I had often noticed the peculiar reddish-green light which always precedes a storm, but the weird glow cast upon that moor was awful. It seemed to blight everything it fell upon. And while I stood in that lurid light, for one instant I saw, outlined in what resembled a sea of blood, the ruins of an immense castle. Just then the sun disappeared, and the light literally went out. It actually seemed as though it had been put out, as you would snuff a candle.

I said nothing to my companions of the strange vision or apparition of the castle, which I had seen; I knew if I did I would only be laughed at for my pains. If the castle were there, why had we not seen it long before, while it was light? Why should I have been the only one to see it? And why should I have caught only that

fleeting glance of it in the light of the setting sun, a silhouette in that awful shade of crimson? Yet in my own mind I knew that, whether it was there in reality or not, I had seen that castle.

We stumbled on in the darkness, making our way as best we could against the fury of the wind. At last, far in the distance, we saw the glimmer of a light in a window. We hurried forward, and soon saw that the house was a little inn.

Just as we got inside the door the storm broke with redoubled fury; the wind howled and shrieked in derisive menace to all mankind, or other weak and puny creatures of the earth. The lightning lit up the place in intermittent flashes, fitly revealing the wild desolation of the scene, while the rain fell in icy torrents.

We had hardly seated ourselves and "made ourselevs at home" before the door was again violently thrown open, and another traveled stumbled in. He spoke no greeting, but stalked moodily to the fire to warm and dry himself. When he had warmed himself sufficiently to take his seat with us at the table, he accepted our invitation to drink a cup of the Scotch ale which the landlord brought to us in a large bowl, steaming hot, and as invigorating as the fabled Elixir of Life.

We soon engaged in a desultory conversation, in which our unknown friend and guest took part, speaking politely and quietly. His conversation showed him to be a man of education and refinement. One thing we especially noticed: although he appeared to be in the prime of life, his hair was as white as snow. He appeared ill at ease and acted as though something which he feared, yet expected, was about to take place. I wanted very much to ask him why he seemed so worried, but I thought that would be too great a familiarity with so new an acquaintance. Soon, however, I was glad I had not, for he voluntarily told me the story of his life.

"Gentlemen," he began, "I suppose you wonder why it is that a man, comparatively young, should have such a white head of hair. Listen, and I will tell you. But let me go back to the beginning of my story.

"In the first place, my name is Hugh McRath. Some two or three generations ago my family and the family of Lochlan lived close together. The two families got into an altercation over a narrow strip of land which stretched between the two manor houses, the grounds being close together, adjoining but for that narrow strip of ill-fated land. In itself it was valueless; but neither family would relinquish its claim.

"But, to be brief, the upshot of the whole matter was that one morning old Lord Lochlan was found in a dying condition in his bed, a horrible gash extending across his throat. Just before he died he rallied suddenly, staggered to his feet, and holding one clenched hand toward heaven, and with a voice choked by the blood in his throat, cursed the house of McRath, vowing he would be avenged upon his murderer to the last of his descendants. As he uttered the curse he fell dead, and as he died he laughed the most horrible, unearthly laugh that ever blasted mortal ears. And, gentlemen, that curse has been, I believe, fulfilled to the last of the McRaths, and I am he!" He paused, overpowered by an over-mastering fear that seemed to grip at his very heart. Never before had I seen such abject, cringing fear. His face blanched to almost a marble whiteness, and he cast startled glances about him, like a caged animal. Finally he recovered himself and went on with his story:

"Of course, my great grandfather, old Hugh McRath, was tried for Lord Lochlan's murder, but as nothing definite could

be proven against him, he was acquitted. Soon afterwards he was found stone dead, with a look of heart-rending terror upon his face; he had been frightened to death by some horrible vision!" Again he stopped and shivered, swallowed at a lump in his throat two or three times, and continued:

"And, my friends, there is one strange thing, call it what you will, coincidence or fate, all of old Hugh McRath's descendants have died of fear! Some were attacked by disease and other natural causes of death, but that awful, fearful Something, like a nemesis, was with them at the end. All had stamped upon their faces that look of fear. Strange to relate, they all died upon the anniversary of Hugh's death, and just five years apart. My brother died five years ago; I am the last of the family!

"Some time ago I came into possession of quite a little fortune, due to luck in business investments and speculation. I always had longed to own a home in Scotland, my birthplace. So I bought an old castle which was situated on this very moor. Soon afterwards I came over to see it for the first time. I was delighted with the place—the old feudal architecture moss grown and grey, the ponderous portcullis and stagnant moat, it really breathed the air of the glorious days of knighthood, far in the dim, distant past. As the sun was setting on my wanderings of that first day in my new home, I found in a secluded corner an old strong box. Its lock was blackened and rusted, so I broke it open with a stone. In it I found papers which proved to me, conclusively, that the castle was the ancient manor house of the Lochlans! Moreover, it was just ninety-five years since that awful night of Lord Lochlan's tragic death.

"That night I slept but ill. About midnight I woke, with a benumbing feeling of dread. As I opened my eyes, I saw, in one corner of the room, the face of an old man; it seemed of vivid green, the eyes were set in a straight, fixed stare, and upon its neck there shone in phosphoric incandescence a great long gash.

"With a shriek I sprang up, knocking over the night lamp which was burning upon a table at my bedside. I fled into the stormy night, and as I ran horrid shrieks of laughter sprang from that ghastly, gruesome head. On and on I fled into the night. After a time, wearied and exhausted, I looked around, to see my newly bought home, my castle, wrapped in flames. To me it seemed to be outlined in blood."

He stopped, and like an electric shock came the recollection of that phantom castle I had seen a few hours before upon the moor.

"Then as I ran on again," the half crazed man continued, "the winds seemed to be filled with the shrieking and whistling of that horrid laughter. I ran until I fell, fainting from exhaustion. When I awoke it was morning, every trace of the castle had disappeared and my hair was as you see it now."

He grew strangely silent for awhile and shivered violently with fear. "That was—" he broke out all at once:

"Just five years ago, the anniversary of Lochlan's death, the ninety-fifth anniversary and— and—," he was panting for breath now, "it is—just—twelve o'clock—midnight," his voice rose to a shriek, "and I am—the—last——"

He did not finish, but springing suddenly to his feet, grew rigid and stared over my shoulder, through the window into the darkness outside. With terror stamped indelibly on his features, he turned towards the door. It suddenly flew open, propelled by unseen hands; McRath whirled around, took one step, and fell dead! Then upon the gust of wind that swept in through the open door there was borne to our startled ears peal after peal of demonical laughter.

E. Trice Bryant, '03.

LETTER FROM MISS MURPHY

The following is an extract from a letter written by Miss Alice Murphy to Mr. Morrison, and may be interesting to the readers of The Nautilus:

103 Blv. Montparnasse, Paris.

My Dear Friends:—A New Year's greeting to you all. . . . My work is most interesting and my trip abroad is most inspiring, profitable and fascinating. I have learned and enjoyed so much and I have had occasion to think of Manual and its workers many times—of the Science Department when the whales came out to see who were crossing their territory—of the Machinery Department, as the big wheels turned and the smokestacks looked so dark against the blue horizon; of the English Department, as the people sat on decks, wrapped in their steamer blankets, reading Grant Allen's books of "travels," Mark Twain's "Innocents Abroad," or perhaps a nice red Baedeker—of the Department of Business, as the passengers were instructed in the Italian money with the purser as instructor, and a jolly one he was; of the Mathematical Department, as we went each day to post our log books; and of the Musical Department, when the concert singers, from Philadelphia, entertained us so splendidly with their singing. Of the Chemistry room as I looked at the many blue bottles here and there filled with—well, no doubt, some nicely perfumed liquid to extinguish a fire. Of the History Department, as we sailed in the Mediterranean, past Gibraltar's great rock, and saw Africa's shores peeping at us in the distance: of the Language teachers when the German girl asked me our word for the animal "Mit langen Ohren und geht so," (making the bounding motion of a rabbit), and when I informed her that that was a rabbit, she said, "Rapid? Well, that is a good word for him." Yes, and four times a day (the custom on shipboard) I had pleasure in thinking of the Cooking Department—not four times in one day, but four times a day for fourteen days. I am speaking for myself now, and not everyone on board. Of the Gymnastic classes, as we played shuffle board while the waves dashed overboard and washed out our lines. Then of the director of all the departments when the captain calls, "All is well."

The Bay of Naples is all, and more, than has ever been said, written or painted, with its bluish, greenish violet, and soft rose-colored waters; with its tiny white villas high on its banks, hiding behind grey-green olive trees; old Vesuvius smoking away, the Italians with their yellow, red, blue and green costumes coming to meet us in their little boats, each rowing faster than his neighbor in order to be the first to sing their songs, sell their fruits and flowers, or to cry, "Hotels." And then the landing! Passing the customs and having all our tobacco and salt taken away from us; and then the beggars; priests with their long brown robes and hoods and girdles fastened so gracefully about their waists, sandals and tiny round caps, ready with their tin boxes—for the rich Americans, beautiful children, picturesque in their rags, to whom it was a real pleasure to toss a few sous, in order to see their black eyes sparkle and hear their musical Italian blessings. Some times we would make the boys run after us, letting them turn their somersaults over and over in the dust, before we would toss the coin; one boy swam about in the bay (before we

landed) and caught the coppers in his mouth; if he missed any he would dive for them. Oh! Naples is lovely, and Pompeii far more beautiful than I had dreamed, and Capri: oh! Capri is glorious, and that blue grotto is surely the entrance to Paradise. Then Rome, and beautiful Florence, and that wonderful gallery of the Pitti Palace; Fiesole and Venice, with those lovely old faded houses, vines falling over greyish-pink walls to the water below, with water for a front yard and tiny crabs playing on the front steps; with a day of sketching and then a row to Lido and a bath in the Adriatic; with a morning with Titian and Tintoretto and an afternoon at the glass factory and Browning's home; meeting Shylocks and roguish eyed Jessicas on the way. We left Venice on Friday and the following Sunday the Campanile fell. And then Como and the tour of the Italian Lakes, our stage rides over the Simplon and Grimsel Pass, of our Rhone glacier climb and almost freezing in the snow banks. My stay in Hainhaussen, near Munich, where we lived with the oxen and where I painted with Herr Buttersack and learned much; Nurenberg, down the Danube to Vienna, to see that splendid gallery; interesting Prague, Dresden, and Berlin; Wittenberg to see Luther town, and Weiman to see Goethe and Schiller and Liszt; Darmstadt for the art colony; Dusseedorf for the exhibition, the Rhine trip, on to my winter's work in gay, sad, brilliant, dismal, beautiful, interesting Paris. Pictures, Nature all summer long, Art, and then some more Art—oh! it is fine, and I am so happy to be able to see all these things and study in the midst of such works as these. The hardest thing to do in Paris is to know what is best to do of so many good things and to keep from over-doing.

My living arrangements are most comfortable, for which I am very thankful, in this place, where conveniences are very poor, rooms cold, poor stoves, with gas escaping, etc. Some of the students look as thin as rails and are losing their appetites; but I have been very sensible and have my work arranged so that every afternoon I can take a walk—go to the Louvre and other galleries and exhibitions and thus be rested for my night class work. How I wish all of you could be here to see the Xmas things and go to the Xmas market, see the Xmas flowers, and such holly as we never have in America, a peculiar kind with so many berries. . . . But I must stop, for it is late. Watch very carefully and do not let Death pick the fairest flowers in our garden. I am heart-broken that such a sweet, talented one as Frieda Wulfing should be taken. We need such in the field of Art. And now, wishing you a most pleasant 1903, I am,

Most sincerely your friend,

ALICE MURPHY.

STORIES OF OLDEN DAYS

Who does not love to read of heroes and heroic deeds? It is good to know of the many brave men that have played their parts in the world. And when their deeds are well and ably told the story gives us pure delight. If they are men of our own land, we study our country's history in reading of their lives. If they belong to the world of fiction, we gain perhaps a knowledge of other manners and customs besides our own.

When Ivanhoe fights in the tournament, we enjoy the story of the combat, we thrill with every stroke of the battle-

axe, we gaze with Rebecca's eager eyes and feel her delight in the champion's victory. For the time we are thinking the thoughts and living the lives of the subjects of Richard the Lion. We know the despised Jew, the haughty Norman, the oppressed Saxon. No history ever gave us that sense of acquaintance, that intimate knowledge of their point of view, that we gain from Walter Scott.

Time passed, and the Hundred Years' War came to weld Norman and Saxon into Englishmen. No man long holds enmity against a comrade who shares his hardships and fights gallantly by his side. Turn to Conan Doyle's "White Company," and read how the stirring note of the war trumpet brought the bright shimmer of arms to every hillside, the clang of steel to the castle, as men hastened to play their parts in "that world old game whose stake is death." The Anglo-Saxon craving for adventure, the delight in struggle and danger, the love of the fight for fighting's sake—we rejoice in it all. It is good to leave a world of business and commerce, of wisdom and books, and get back to one where stout blows are struck and true men deal them. And the old bowmen talk their battles over, and we hear of Crecy and Poitiers, and see again John of France on his fatal field, his banner down, his knights taken or slain, fierce English faces around him, while his young son Philip shouts warning, "Father, 'ware right; 'ware left!"

Bertrand du Guesclin, most valiant of Bretons, sees as yet no shadow of the hour when he lies cold and silent on his bier before the gates of a besieged city, while its governor, at the head of the garrison, marches to the dead warrior's side, and kneeling, lays the keys in token of surrender, on the quiet breast.

Every page contains some allusion that drives us to history. We cannot rest until we separate fact from fiction. The life of today fades and that of the past becomes reality.

Two hundred years later the world had widened; eager spirits sailed unknown seas to unknown shores. Battle-scarred Englishmen told wonderful tales of the Virginia Coast and the Spanish Main. Galleons laden with gold and silver were to be had for the taking—the land was a mine of precious metals and stones; there was the splendid El Dorado, whose buried ruins may yet be found deep in some Amazonian forest, which Sir Walter Raleigh vainly tried to discover.

Men loved and hated heartily; to fight the Spaniard was a virtue. Of this eager, active, treasure-seeking England, Charles Kingsley tells us in "Westward Ho." The spirit of the time is in it; we cross the Andes with Amyas Leigh and sail the seas with Sir Francis Drake; valiant Drake, who must die at last.

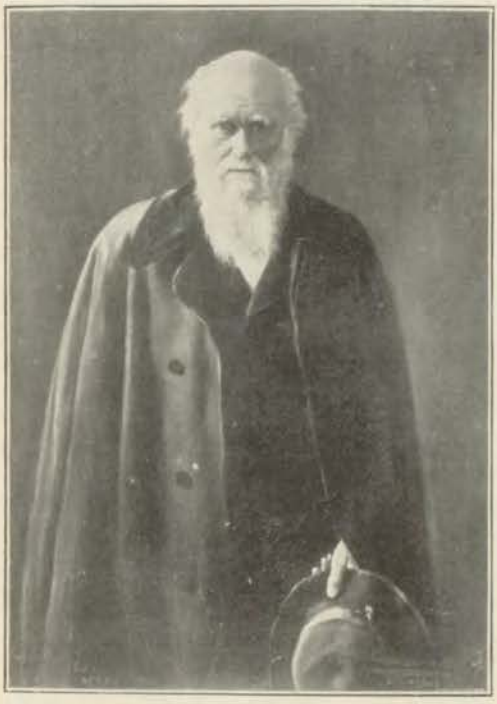
"Slung atwixt the round shot in Nombre-Dios Bay," we listen to Sir Richard Grenville when he tells Amyas, "If you fall in battle, with no wound in your back, I will weep for your mother, but shed never a tear for you." Brave old Sir Richard! Tennyson's ballad "The Revenge" describes his heroic death. They are fearless men; their ships are wrecked and lost; but soon captured Spanish vessels replace their own. No wonder England drove the Armada from the sea.

Some time in the future another Charles Kingsley will look back to the close of the nineteenth century, and seeing its splendid achievements, will write an absorbing story that shows what science has done for mankind. As truly as the Elizabethan age was that of discovery and colonization, so this is one of invention and commercial enterprise. When time enough has passed for us to understand clearly what great things are being done today, some pen will make the men of future ages see that there are greater conquests than those of the sword; mightier victories than those won by force of arms.

HARRY DE VAULT, '03.

CHARLES DARWIN

Charles Robert Darwin was born at Shrewsbury, England, February 12, 1809, and died at his home in Down, April 19, 1882. He was the descendant of a Lincolnshire family, among whom a taste for science or literature and a wide curiosity were always remarkable. His father, a physician and a man of great sympathy, had a love of plants, but he had



not the power of generalization that belongs to the scientific and the philosophical mind.

From his earliest childhood, Charles Darwin had a taste for collecting all sorts of things, a passion not shared by any other member of the family. Speaking of the great difference of taste between his only brother, Erasmus, and himself, he says:

"I am inclined to agree with Francis Galton in believing that education and environment produce only a small effect on the mind of any one and that most of our qualities are innate."

He also tells us that as a little boy, he was given to inventing deliberate falsehoods for the sake of causing excitement. He was fond of shooting and doubted that humanity is an innate sentiment. He thought his school education very defective and writes of the school of his boyhood: "Nothing could be worse for the development of my mind than Dr. Batter's school, as it was strictly classical. * * * During my whole life, I have been singularly incapable of mastering languages."

In later life, in reply to Dr. Galton's question, "How taught?" he replied: "I consider that all I have learned of any value has been self-taught."

He thought that the chief omission of his education was that of teaching him to observe; to use his eyes and ears and reflect on what he saw and heard. Chemistry interested him in the latter part of his school life, and on account of that the boys nicknamed him "Gas." At this time he delighted, too, in the reading of poetry, especially Shakespeare, but later he lost all capacity for enjoying it and regretted this atrophy of his faculties for aesthetic pleasures.

In 1825, he attended the University of Edinburgh, for the sake of the medical course; but he found the lectures intolerably dull and adds: "It has proved one of the greatest evils of my life that I was not urged to practice dissection, for I should soon have got over my disgust and the practice would have been invaluable, for all my future work. This has been an irremediable evil as well as my incapacity to draw."

He also attended insufferably dull lectures on geology, with which he was so

much disgusted that he resolved never to read or study the science again. His father, seeing his aversion to being a physician, proposed his studying for the ministry. He liked the idea, though he was afraid to declare his belief in all the dogmas of the church, but turning to a study of "Pearson on the Creed," he soon persuaded himself into a belief in it. Some phrenologists, discussing his photograph, declared that he had the bump of reverence sufficiently developed for ten priests. He went to Cambridge to prepare for the ministry and remained there three years. So far as academic studies are concerned, he thought that his time was completely wasted there; he hated mathematics and indulged his fondness for shooting and riding. His father once said to him:

"You care for nothing but shooting, dogs and rat-catching, and you will be a disgrace to yourself and all your family."

Indeed, his life at Cambridge by no means prophesied his future career as a great observer and thinker. He joined the "sporting set" with whom he wasted much time at cards and banquets, though he looked back later with pleasure on some of the good times he had had there. He also joined the musical set though wholly destitute of an ear for music, being unable to discover a discord or to recognize tunes. His musical friends used playfully to give him an examination in music by rapidly playing tunes for his recognition and he says that "God Save the King," when thus played, was always a sore puzzle.

Collecting beetles had long been a favorite pursuit; he used to turn over stones, tear the bark from trees, and once in searching the torn bark, he came across two new specimens. He seized one in each hand, then suddenly discovered a third. He popped one of the captured bugs into his mouth, but it ejected an acid fluid and he hastily spit it out, losing all three bugs in his excitement.

Cambridge, however, gave him one delightful experience. He formed a very pleasant and intimate friendship with Prof. Henslow, by whom he was persuaded to take up geology again.

In 1831, he went on the Beagle as naturalist, sharing the captain's cabin, but beyond his expenses he received no pay for his services. He always regarded this ocean trip as the first real education he received. His father opposed his going at first, saying: "If you can find any man of common sense who advises you to go, I will give my consent." An uncle, of whose judgment the father thought highly, gave him the required advice, and he set sail for South America.

"I have always felt," he says, "that I owe to the voyage the first real training or education of my mind. I was led to attend closely to several branches of natural history, and thus my powers of observation were improved."

When he returned from the voyage, his father said: "Why, the shape of his head is quite altered."

In 1839, he married his cousin, Emma Wedgewood, daughter of Josiah Wedgewood, of the Etruria Pottery Works.

Darwin's "Observation on the Volcanic Islands," the result of his voyage on the Beagle, were published in 1844. Five years previously his "Journal of Researches," a very successful book, had appeared, and in 1846 his "Geological Observations in South America" was given to the public. As his interest in science increased, he gradually gave up his shooting, finding, so he said, a keener pleasure in observing and studying than in aiming at a defenseless animal. In his youth, he had read with indifference, Lamarck's Theory of Evolution, but as he began to observe and to collect facts, the material of the "Origin of Species" took shape in his mind. The book was published in

November, 1859. The mere mechanical work of writing it alone cost him "thirteen months and ten days hard labor." He always had difficulty in expressing himself concisely and clearly; he could never read German fluently, and never attempted to pronounce it correctly, yet he read many scientific works in the language, but read little at a time. He called the "Origin of Species" undoubtedly the chief work of his life, and comments with satisfaction on the fact that it has been translated into almost every European tongue.

Eighteen hundred and sixty-eight saw the publication of "Variation of Animals and Plants Under Domestication;" 1871, "The Descent of Man;" 1872, "Expression of Emotions in Man and Animals;" 1875, "Insectivorous Plants."

Darwin was the most patient and ardent of observers. He worked Saturdays and Sundays alike, and used "simple methods, few instruments," says his son Francis. He never neglected to record exceptions. He often quoted the old English saying, "It's dogged persistence as does it." He said that "no one could be a good observer unless he was an active theorizer," but he was never loth to reject a theory when he had found a better one. He thought that a classical scholar could rarely write good English. "Nothing," he says, "is so intolerable as idleness," and he liked to have several subjects on hand at once for investigation. The pleasure which a new thought or the discovery of a new species of plant or animal gave him was so great that he remembered with vividness the exact spot where the thought had occurred to him, or the discovery had been made. Yet, with all this capacity for work and passionate delight in it, nature had not endowed him with a strong, vigorous frame and health to make work easy. "For nearly forty years," says his son, "he never knew one day of the health of ordinary men, and * * * his life was one long struggle against the weariness and strain of sickness." He had to hoard his little stock of health with constant care. So extremely sensitive was his nervous organization that the excitement of seeing society caused him attacks of shivering and vomiting. He was six feet in height and somewhat stooped in later life. His mind delighted in the real; it was curious about the laws of nature; it found its poetry in fact, not fiction.

He says of Carlyle, "His mind seemed to me a very narrow one, even if all branches of science which he despised are excluded. * * * He thought it a most ridiculous thing that any one should care whether a glacier moved a little quicker or a little slower or moved at all.

"As far as I could judge, I never met a man with a mind so ill adapted for scientific research."

Interesting criticism of one great mind upon another's of totally different mould. The great public judges more wisely, loves the observer as well as the creator, and where England lays the dust of her kings crowned or uncrowned, she has found room for Darwin near the grave of Newton in Westminster Abby. M. F.

FROM THE LANGUAGE DEPARTMENT

A letter such as Cicero might have written to his wife, describing a Roman house.

Scripta est epistola Romae A. U. C. 686.

Tullius Trentae suae salutem dicit.

S. T. V. B. E. E. Q. V. I hope that your long visit and quiet rest has greatly benefited you, and that you are nearly

ready to return to your husband and beautiful new home. I know that you must be longing to see it and that the little details I write about will not tire you. So I will describe it minutely.

The entrance door is of wood and is beautifully carved with scenes taken from the different battles in which I have had a part. There are immense pillars at either side of the door. I call it an entrance door, but it does not open directly upon the street, being at the end of the ostium. I have made a special effort to have the ostium please you. The flooring is of tiles, rich in color, and intricate in design. The room on one side of the ostium is to be my office, the one on the other the ostiarius. The passageway between the ostium and atrium is not very long. The draperies dividing it from the atrium are of heavy silk.

The atrium is oblong in shape. The impluvium in the center of the room, I have labored to make ornamental as well as useful, and is of marble. Around the base are large foliage plants. In addition to this is a marble pillar, artistically carved at each end of the impluvium. These extend upward to the roof. The opening above the impluvium is larger than that found in most houses, but the sunlight peeping through the awning produces a beautiful effect as it glistens upon the water in the impluvium and is reflected upon the wainscoted walls and the broad panels of a clear rich color. In this room I have placed the family altar. I thought it good taste to have but little furniture in the atrium, but each piece is of such excellent design and so beautiful in workmanship that it deserves to be set wide apart and relieved, each one against the artistic background.

The rooms on either side of the atrium, extending about two-thirds of its length, are our sleeping rooms and guest rooms. I leave them for you to arrange as it pleases you. Beyond this range of rooms, the atrium broadens out into two alae or wings. I have spent not only a great deal of money, but time also, in collecting the statues of our ancestors, together with a history of their lives. I shall place these statues in the alae, each in its separate niche and nearby on a bronze tablet a brief history of his life.

Between the two alae, directly opposite the entrance door, is the door opening into the tablinum; here, as you know, are kept the archives and my strong-box. It will also be my study-den. On each side of the tablinum there is a narrow passage (fauces), so that the servants can get into the atrium from the rear without passing through the tablinum.

Back of the tablinum is the peristyle, which is one-third greater in breath than in length. This is a garden spot where, fanned by the cool breezes, we can spend the warmest days. The fountain is much larger than that in the impluvium and the pillars more beautiful. There are laurel and cypress trees around the fountain, also many gay-colored flowers. The triclinum opens off the peristyle and also the sacrarium. I cannot now take time to describe them. Vale. C. A.

NEMESIS

An investigation of Shakespeare's "Merchant of Venice" brings to mind the fact that the proverb, "whatsoever a man soweth that shall he also reap" is not a universal truth. It was not an unnatural nemesis under which Shylock fell, nor would it have been strange had the same retributive jus-

tice borne down Antonio, likewise. We all agree that the ultra revengeful nature of Shylock could not, justly, have remained unpunished; but can the unbiased mind believe that Antonio was altogether innocent and deserving of no punishment beyond a severe scare? The Jew craved the most horrible revenge, it is true, but Antonio had helped to rear and educate the avenger. Not because of his nationalty or religion, but because of long ages of hate and persecution of his race by Christians, did he become a monster of malice and cruelty.

The character,—Shylock,—helps to substantiate the philosophy of William Penn, "oppression makes a poor country and a vicious people." This sentiment illustrated and enlarged upon in the "Merchant of Venice," should appeal, if not to the mercy and generosity of mankind, surely, to its judgment; and should teach the world, collectively and individually, the all important lesson, indispensible to the social political, religious and spiritual perfection of mankind—toleration.

We regret that Portia's sublimely eloquent plea for mercy should fall upon a petrified heart, but the forbearance, gentleness and kindness which greet the happy on the threshold of life and accompany them on their paths, Shylock had never known. With tremendous force the thought rushes to our minds: If only this "twice blessed" lesson of mercy had been instilled, long before, into the hearts of his persecutors, Shylock would not have been tossed, all his life, on a sea of injustice, harshness, and contempt.

Is it not an imperfect nemesis which robs the oppressed of family, property, and religion, yet restores to the oppressor, love, life, and the enjoyment of his argosies returning "richly laden?"

SADIE DANCIGER. '04.

CRITICISMS

"IN GOD'S OUT OF DOORS."

What shall we say in praise of our own Dr. Quayle's superb book entitled, "In God's Out of Doors," which was issued just in time to serve as a Christmas present to many an admirer of the eloquent author? In this lovely book the jolly, good parson abandons himself, as only Dr. Quayle can, as a perfect child of nature, and revels in the sentimental beauties of the forest and stream, and restful experiences that he had with God's creatures out of doors.

The book abounds in good humor, which flows as freely and merrily from his pen as the brooks flow on in their race through the woodland. Like the mild and harmless lightning that flickers with the first showers of spring, the writer plays with his gentle but irresistible spirit of wit as he depicts the little foibles of some of his companions on those glorious outings. The doctor, recognizing that a "man's a man for a' that," good naturedly chides his fellows for certain curable weaknesses and hurries on to discover and to laud the good things that his optimistic eye finds in mankind.

The sympathetic artist has exerted himself to rival the writer in enriching the book, for nearly every page is adorned with some enchanting view of landscape, sky-scape, or escape from the fret and furies of city-life.

Its passing through the second edition before the holidays began, shows how gladly it was welcomed by readers in these parts.

"LETTERS FROM A SELF-MADE MERCHANT TO HIS SON."

One of the most original new books for young men is T. H. Lorimer's "Letters From a Self-Made Merchant To His Son." Mr. Graham, of the story, is as fresh and genial a creation as David Harum, the banker-horsetrader. He is a true American, who criticises bruskly without offending, who jollies the boys without forfeiting their respect for him, who teaches without lecturing or sermonizing. He draws close to every boy who reads his highly seasoned and rich pork-packer's epigrams.

Here are a few of his many striking remarks addressed to "Piggy," his son:

"If you graduate with a sound conscience, I shan't care so much if there are a few holes in your Latin."

"With most men duty means something unpleasant which the other fellow ought to do."

"There is plenty of room at the top, but you must erect your own elevator to get there."

Speaking of the value of a college education, he asks if it pays and replies by saying: "Of course, it pays. Anything pays that teaches a boy to think quickly, so that he can get the answer before the other fellow gets through biting the pencil."

"The college doesn't make fools, it develops them; it doesn't make men bright, it develops them."

In business, he observes: "I can give you a start, but after that you must dynamite your way to the front by yourself." "In passing," he alludes to boys doing certain things because other and ringleader boys do so, and adds that there is nothing in it. "Adam invented all the different ways in which a young man can make a fool of himself, and the college yell at the end of them is just a frill that does not change essentials. The

boy who does things just because the other fellows do so, is apt to scratch a poor man's back all his life."

"Have something to say. Say it. Stop talking."

"I remember reading that some fellows use language to conceal thought, but it's been my experience that a good many more use it *instead* of thought."

Old man Graham is certainly what is called "A tough proposition," using the slang of the hour. He is a broader man than Harum, with a wider horizon, and a larger understanding of affairs. It is a better book for boys than the famous "Chesterfield Letters to His Son," and will be read willingly by more boys. Its fund of humor and hard common sense render it a useful and interesting book.

We must not close this little book chat without reference to a delightful book for girls to peruse, especially those girls who have just completed their ward school work and are ready to enter upon high school work. We refer to Geo. Madden's "Emmy Lou." The author shows that she is intimately acquainted with all of the ups and downs, trials and pleasures of a ward school career. Emmy Lou is a strong character and a leader of the girls from grade to grade. The author takes advantage of this circumstance to play upon the conscience of any girl who happens to be naturally the leader of her school companions. When this girl-leader discovers that she is the pupil that the rest are closely watching and following, she gradually realizes the responsibility of her position and in the "drawing class" incident, where she innocently transferred pictures through tissue paper, to save time, and when by so doing she caused the whole class to seem to be making great progress in that study, she saw what an influence she was exerting. Her conscience was aroused and after the battle was fought out in her mind, she wheeled into time the whole rank and file of her girl companions and became a power in the school for good in discriminating between right and wrong, which of course resulted in branding cheating in all forms as a crime.

The best sellers on the book shelves today are novels, and the best novels are those based on history. American history is beginning to furnish valuable and interesting materials for good, strong, wholesome stories of this sort. Among the best books in this class is "The Conqueror," by Gertrude Atherton, a story that deals with the life and times of Alexander Hamilton, who is the brilliant hero of a story that is told with vigor, interest and profit. The author spent years gathering her data, in Cuba and in this country, and has the "papers" or facts to substantiate all of her historical episodes and characteristic traits of this remarkable and history-making American. Every student of American history who desires to know all that is to be known about this young giant of the American Revolution, this clean breasted politician, wise business man, and emergency orator, who did things, should read "The Conqueror." It is a fascinating biography of the favorite young officer of the great Washington. Indeed, it was the author's original intention to publish her book as a biography, but her publishers induced her to issue it in the form of a novel. Indeed, many of the ablest critics consider "The Conqueror" the strongest novel from a woman's pen since George Eliot wrote her famous stories. E. D. P.

A PUFF FROM A FRESHMAN'S PIPE

You know that the good sages tell us,
That the way to be happy through life
Is not in possession of riches,
For riches cause trouble and strife.

Not in this or in that or the other,
They all bring us trouble and care,
Till we ponder and think and we wonder
Is happiness found anywhere.

To be happy is anticipation.
To look and expect and to wait,
But never in realization—
This, so they say, is our fate.

'Tis distance that lends the enchantment,
And gives such a roseate hue;
But most of the beauty has faded,
When scenes are brought nearer to view.

And so, if we wish to be happy,
At least, so the good sages teach,
We must always be waiting and hoping,
But keep the good things out of reach.

'Tis distance that lends the enchantment,
And gives such a roseate hue;
And to keep all gifts bright and entrancing,
They must never come near unto you.

They should always be coming tomorrow—
Always be just out of reach,
And thus they will make you all happy,
For this the good sages all teach.

"FRESH."

Entered at the Kansas City Postoffice as Second Class Matter

NOTICE: THE NAUTILUS is published once every two months in the general interest of the Manual Training High School, at Kansas City, Mo.
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THE NAUTILUS,
Manual Training High School,
Kansas City, Mo

It is now the height of fashion among book lovers to have a book-plate for one's library. What the ancient "Crest" or family "Coat of Arms" was to the family, the book-plate is to the library.

This embellished book label is not simply a useful feature, but an artistic or beautiful expression of the owner's taste and originality. Practically, a book-plate is a label with which to identify the owner's books. Aesthetically, it is an attractive means of exhibiting the owner's enthusiasm for books; and such a factor as this gives the book lover an opportunity to draw upon his imagination and practical experience for interesting elements out of which to produce a simple or complex design for such a purpose.

Since such excellent facilities are furnished by our school in designing, the pupils in the English Literature classes have a fine opportunity to correlate the drawing with the former work in designing something of this sort. For this reason Mr. Phillips has now on exhibition in the literary bulletin case about fifty different book-plates, including the designs of many Kansas City book lovers, as well as those of people of note. His object is to encourage pupils to design something of this sort.

Among these book-plates is that of Robert Burns. Oliver Wendell Holmes' is interesting to us because the design is a Nautilus shell, with the words, "Ad Ampliorum," which means, "To higher things." It is simple, yet how forcible and expressive. The one designed by Cameron Mann is the picture of a hand holding an open book and on its pages in large letters are the words, "Potentiam in Maneo Habeo," "I have power in my hand." There are many unique designs in the case, but Mr. Phillips' is especially interesting to us. There is first of all an excellent motto in English for the satisfaction of those who cannot understand Latin; it reads, "Buy the truth, and sell it not." Beneath the motto is an open book encircled by cedar boughs and across the book is written the

Latin phrase, "Digna Cedro." Beneath the book is a Nautilus shell, which Mr. Phillips, out of loyalty to the school, wished to have upon his book-plate. Before long we hope to see in the case many book-plates which our pupils have designed.

Many of the readers of The Nautilus and members of our school may be ignorant of the proud circumstance that the name and good works of The Manual Training High School are known as far away as Paris, France, but such is the case. This has but lately come to our knowledge, and we take great pleasure in making known the facts.

The honor comes through our deserving principal for writing an excellent monograph on "*School Architecture and Hygiene,*" which constituted a part of the New York state educational exhibit.

In consideration of this literary and scientific work, the Paris exposition in 1900 bestowed upon Prof. G. B. Morrison a handsome large bronze medal, which is a beautiful and artistic piece of workmanship.

This monograph, with others, is published in a handsome edition, edited by Nicholas Murray Butler, president of Columbia College, New York. The school is proud to have its worthy principal thus honored, and congratulates his family on acquiring such a valuable heirloom.

An event of special interest to all the members of our school was the debate which lately took place between the Ion Society and the Manual Society of Debate. The debate was the result of a challenge which the Debaters had sent the Ions upon receiving from them a challenge for a game of foot ball. The foot ball game—but let it suffice to say that it was also a question for "debate."

The conditions imposed in the challenge, which was sent some days before Thanksgiving, were that the debaters should be limited to five members on each side, that the time for each side should be forty minutes, and that while the question was to be chosen by the Ions, the Debaters were to have the choice of sides. The question chosen by the Ions was, "Resolved, That trusts are detrimental to a nation's wellfare." The Debaters took the affirmative side. The contestants met on December 12, in the study hall. There was a large audience, for "a cordial invitation to be present" had been extended to the school. The Debaters had elected Alfred H. Wagner, Raymond Lee, Robert Ridgeway, George Beardsley and William Funck to represent them, while the Ions were ably defended by Walter Vieregg, Constant Jaccard, Charles Shoop, Bert Elmer and Victor Stewart. The leaders were Alfred H. Wagner and Walter Vieregg, respectively. The arguments on both sides were very strong, but we think that the Debaters' arguments were arranged the better, inasmuch as they had divided their side into four different points of view, the moral, the political, the commercial, and the social.

On the respective merits of the debaters we will not even "touch lightly," for it is said that all the contestants are still in splendid condition. Moreover, it would be hard to decide. All the participants were highly praised, both by the three lawyers who acted as judges, and the members of the faculty who were present. And it was only with difficulty that these judges finally decided in favor of the Debaters. The spirit exhibited by the contestants on both sides was even more praiseworthy than their arguments. And we hope to see more oratorical or similar contests take place among the different members of the school.

The Alumni—Perhaps you may think, that in the active school life about us, we have forgotten there is such a thing as an alumni. But indeed this is not so. The whole school watches your career with interest. Whether it is in college life or in the broader school of the world you have the reputation of our school in your hands. It is upon you that all eyes are turned as they ask the question, "What have they made of themselves?" It is a precious charge you have to keep, but we feel that your pride and the love you have for your Alma Mater will lead you safely to your goal.

It is dependent upon you to prove to the world the worth of our system of education. You can keep this sacred trust by your usefulness in the world and by the reputation which you establish. The higher the station you reach, the easier it will be for us seniors who are soon to leave the school. We of the class of '03 are proud of our "pioneer" graduates who have paved the way for our progress.

When the Alumni come to the Manual to visit we sometimes hear them remark, "We see so many strange faces." There are no strangers. We are all your friends, teachers as well as pupils. In the same way we wish to feel, when we join your ranks, that you are our true friends and will help us make our way in the world.

OUR FRIDAY MORNING ENTERTAINMENTS

November 1 a very delightful as well as instructive entertainment was given by J. W. McKecknie, an architect of this city. The stereopticon pictures which he exhibited appealed to one's aesthetic taste and filled one with a desire to travel. There were moonlight scenes, water scenes and snow scenes, all so beautiful and delicate that their charm is lost when one tries to describe them. The pictures of famous temples and palaces were so clear that the statues and the graceful intricate design stood out prominently. Mr. McKecknie's black and white views are equal to Stoddard's well known pictures.

Paola La Villa's program, November 7, was one of the best musical entertainments we have had the pleasure of listening to. The pupils recognized the superior quality and excellent training of the singers' voices and were generous with their hearty applause. Miss Mabel Palmer sang Mattei's "Bianco" in a clear, sweet voice. A ballad from La Villa was rendered remarkably well by Mrs. Thurman Smith. Mr. Louis Dehnke then sang "Thy Sentinel am I." His singing delighted the audience. The program closed with a vocal duet by Mrs. Smith and Miss Palmer. The blending of these two excellent voices produced a charming melody. All sang admirably and reflected great credit on Prof. La Villa's teaching.

The Orchestra gave the opening number of the program, December 5. Our Orchestra has improved wonderfully, and Miss Russell certainly deserves a vote of thanks for her untiring efforts in behalf of the Orchestra. Following this number, Mrs. Mary Calhoun Houlton gave, in the costume of Portia, the trial scene from the Merchant of Venice. The audience thoroughly appreciated her impersonation of the different characters who figure in the trial scene. She has an excellent voice, graceful carriage, and her impersonation is beyond criticism.

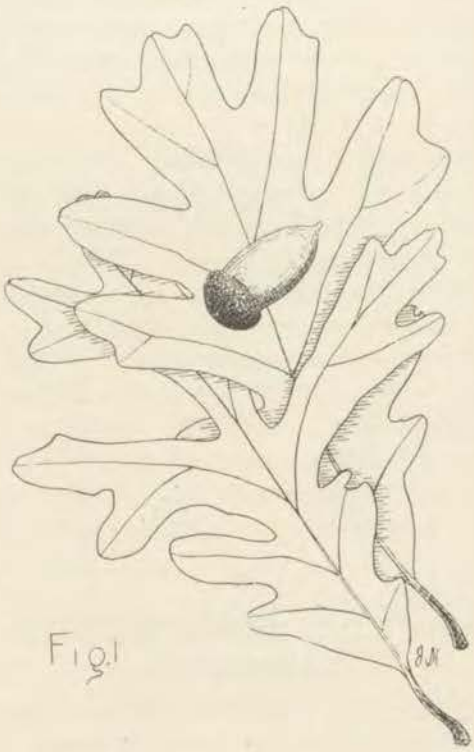
THE OAK

Many, many centuries ago, when the earth was not so old as it is now, and its people were simple-minded, the oak tree was held in great veneration. The ancient Britons believed that it was the favorite abiding-place of their gods and performed their religious ceremonies under its branches; the Romans and Greeks held it sacred to Jove, while even the barbarous Teutons gave it a place in their religious observances. And now, although it is no longer a sacred object, it is still dubbed "King of the Forest."

From fossil remains which have been found, it appears that the genus Quercus, or Oak, was in existence long before man came to inhabit this earth. Different species are found scattered over Europe, Asia, and North America, all originating, it is thought, from a common ancestor in Asia. So widely have they become differentiated from each other by climate, altitude, and general environments, that as many as three hundred species have been formed.

Of these, among the most interesting are the Cork Oak of Spain, and the Live Oak or our own southern states. The former has its spongy bark developed into a thick layer of cork. This is removed and used as an article of commence. The Live Oak is evergreen, with thick, leathery leaves; it is of very great durability and is highly esteemed for ship timber. Until the advent of the armor-clad, the ships of our navy were made almost exclusively of Live Oak, and even now the government protects it. Although there were many species of common oaks, we shall attempt here to describe only a few of them and only far enough to enable one to tell them apart:

The White Oak, Quercus Alba, is thus described by Apgar:



"Leaves short-stemmed, acute at base, with three to nine oblong, obtuse, usually entire, oblique lobes, very persistent, many remaining on the tree through the winter; pubescent when young, soon smooth, bright green above. Acorns in the axles of the

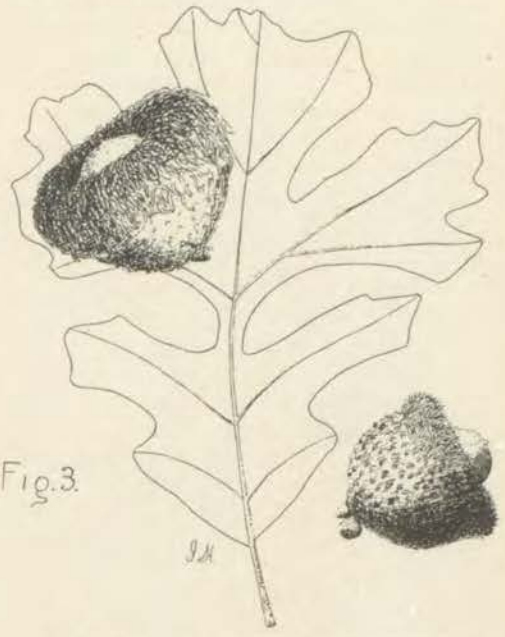
leaves of the year, ovoid-oblong, one inch, in a shallow rough cup; often sweet and edible. A large tree 60 to 80 feet high, with stem often 6 feet in diameter; wood light-colored, hard, tough and very useful. Common throughout."

The leaves of this oak are not only wooly when young but they are red and are a rich red again in the autumn. The wood is extensively used both in the United States and in Europe in carriage-making and interior finishing. Quarter-sawed oak, made from the white oak, makes a very beautiful and expensive wood for finishing and furniture. (Figure 1.)

Very often Post Oaks grow in thickets. Then they are not over twelve feet high, are slender and often very crooked. They are most abundant in the uplands. (Figure 2.)

The Post-oak, Quercus stellata:—"Leaves 4 to 6 inches long, sinuately cut in 5 to 7 roundish, divergent lobes, the upper ones much larger and often 1 to 3-notched, grayish—or yellowish—downy beneath, pale and rough above. Acorn ovoid, about 1-2-inch long, one-third to one-half inclosed in a deep saucer-shaped cup in the axils of the leaves of the year. A medium-sized tree, 40 to 50 feet high, with very hard, durable wood, resembling that of the white oak. Massachusetts, south and west."

This is essentially a western oak. Its strong wood is used for building purposes. (Figure 3.)



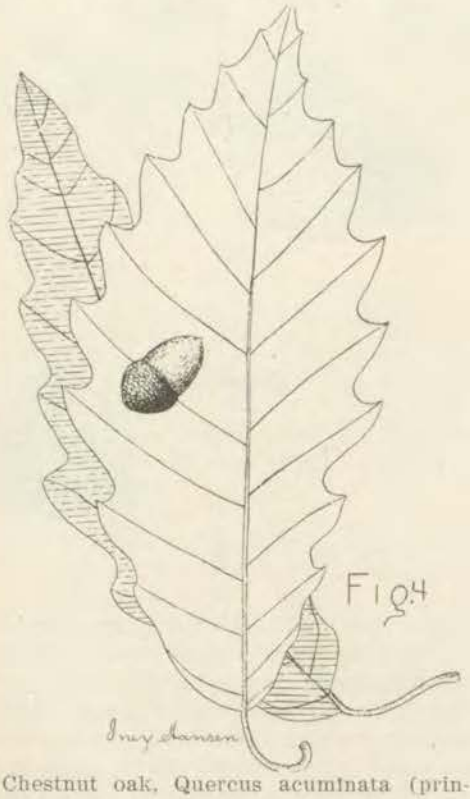
The Bur oak, Quercus macrocarpa:—"Leaves obovate or oblong, lyrately pinnatifid or deeply sinuate—lobed or nearly parted, the lobes sparingly and obtusely toothed or entire acorn broadly ovoid, 1 inch or more long, one-half to almost entirely inclosed in a thick and woody cup with usually a mossy fringed border formed of the upper awned scales; cup very variable in size, ¾ to 2 inches across. A handsome middle-sized tree, 40 to 60 feet higt. Western New England to Wisconsin and southward."

The Chestnut Oak is a beautiful tree. Its foliage is a rich, warm green. In the autumn, the leaves become buff-brown touched with pale scarlet. The bark is rich in tannin and is used in tanning hides. (Figure 4.)

In many places there are oaks which have reached a great age. In a Connecticut town there is an oak which two hundred years ago was noted for its age. Now it cannot be less than five hundred years old. Each year of the tree's growth is marked by a distinct ring in the wood.

Now that we have noticed the oak as a genus and several species of oaks, it would perhaps be interesting to trace the life history of any oak as an individual. Turn-

ing up the damp, half decayed leaves in the springtime, one may often find a little brown acorn lying close to the ground. The shell has burst at the pointed end and



Chestnut oak, Quercus acuminata (prinus):—"Leaves obovate or oblong, coarsely undulately toothed, with 10 to 16 pairs of straight, prominent ribs beneath; surface minutely downy beneath, and smooth above. Acorn ovoid, 1 inch long, covered nearly half way with a thick, mostly tuberculated cup; in the axils of the leaves of the year; kernel sweetish and edible. A middle-sized tree, sometimes small, with reddish, coarse-grained wood. Found throughout, but common only southward."

out of the crevice has crept a slender root, or radical, which has turned immediately to bury itself in the earth. Before many weeks a pale green shoot appears and begins to grow upward, soon showing tiny leaflets. All this time the young plant or seedling, has been living upon the food-material stored within the acorn. All the first year, the seedling is very tender and green, but by the second year the bark has become brown and the plant is soon a sapling. So it grows on from year to year, forming new roots, new branches, and new leaves, becoming taller, broader, and stronger. The stem of the young plant, which is the trunk of the tree, becomes larger by adding yearly a new layer of wood fiber; this causes the distinct rings noticable in a cross section of the stem.

There is no tree more noble or imposing than the oak, with its massive trunk, its wide-spreading branches, sturdy and gnarled, its glossy leaves and dark brown acorns. In our admiration for the tree itself, we often fail to notice its mode of flowering. Many are surprised to find that the oak really does flower and fruit just as smaller plants do. The flowers are of two kinds, pendent catkins and pistillated spikes. The catkins produce the pollen and from the spikes are formed the acorns, the fruit of the oak.

Owing to the strength and durability of its timber, the oak is probably the most highly prized of our native woods. Because of the indiscriminate felling of young oaks, trees old enough to be valuable commercially have become very scarce. For this reason oak lumber has become expensive and is used only in manufacturing high priced articles.

The value to this country of the forests, which have been of great importance in its growth, is inestimable. The great destruction of forests by man and by fires and the increasing scarcity of valuable timber have aroused a feeling that the forests should be better preserved. The Department of Agriculture at Washington has a Bureau with that very object in view. At any rate, forest destruction is a useless waste. The forest should be used for the production of wood without doing harm to the growth or lessening the productiveness of the forest itself.

ELSIE WADELL, '03.

STORMS

When persons use the term storm, they usually mean a local rain, snow or sleet accompanied by wind. However, what is popularly known as a storm is but a small part of the storm. All storms consist of air moving circularly about a center which advances across the country. They are roughly divided into cyclones, thunderstorms and tornadoes. Thunderstorms and tornadoes are offshoots from cyclones. They have far greater wind velocity, cover much smaller areas, and die out after traveling much shorter distances than cyclones do. The direction of the prevailing wind of this latitude is from southwest to northeast, and storms are carried across the country in the same direction by this wind. Local variations in temperature and elevation may change them somewhat from this northeast course.

A cyclone covers a vast area of country, often being from 500 to 1,000 miles in diameter. In the United States this vast mass of whirling air moves eastward with a velocity of about thirty miles per hour. Most thunderstorms and tornadoes originate in the southeast quadrants of cyclones.

CAUSES OF STORMS.

All storms are caused by differences of atmospheric pressure. The wind is caused by the movements of the air in its efforts to regain its equilibrium. This difference of pressure is probably caused in every case by unequal heating of lowlands, highlands, and water surfaces.

Any boy or girl can learn much about cyclonic movements and their causes by placing a great many tiny bits of paper or wood upon the surface of water in a tub, pressing the bottom of a bucket down into the water and then lifting the bucket out. As more and more pressure is exerted to force the bucket down, the water around the bucket increases in depth and the bits move away from the bucket. On lifting the bucket out, its pressure upon the surface of the water, where it was, is removed and the surface is lower than the surface surrounding it so the water rushes toward the center and the bits of paper are seen to move inward and begin to whirl about a center. Now if the tub be dragged, the whirling mass of water in the tub will travel across the floor just as the whirling mass of air of the cyclone travels across the country.

THE BAROMETER.

The barometer is an instrument which enables us to detect differences in air pressure. By noting these differences we can tell our relation to a storm center and can often prerdict from this knowledge what kind of weather will result. Before young people, or anyone else for that matter can comprehend much about the laws which govern storms, they need to understand the barometer, for it is this instrument which enables us to gather a certain kind of information concerning atmospheric conditions upon which the movements of storms depend. A few simple experiments will do more to enable one to understand this instrument than any description that can be given. A few such experiments are here suggested: Fill a cylindrical vessel partially full of some liquid, mercury for example, leaving the upper end of the cylinder open. A cylinder of air of the same diameter as that of the vessel reaches from the surface of the mercury to the top of the atmosphere. The weight of this cylinder of atmosphere presses downward upon the surface of the liquid, but as each part of the surface receives the same amount of pressure as any other part of it of like area, the surface stays level. Thrust a piston into the vessel with a force of ten pounds and the liquid will have an additional force of ten pounds applied to it. Bore a hole through the piston. The surface of the liquid beneath the hole will then have nothing but atmospheric pressure upon it while the rest of the surface has the atmospheric pressure and the additional pressure given by the force of ten pounds with which the piston is pressed against it. As a consequence of the unequal pressure the liquid will spout out through the hole in the

piston. If more pressure is exerted by means of the piston the liquid will spout higher. If less pressure is used the liquid will not spout so high. If a tube be inserted in the hole through the piston, the liquid will rise to a certain height in the tube, when the piston is forced downward with a given amount of pressure. If the upper end of the tube be closed and filled with the liquid before it is inserted in the hole, the liquid will rise much higher for then the column of liquid in tube has no downward pressure except its own weight. If the piston be removed, leaving the lower end of the tube beneath the surface of the liquid some of the liquid will still remain in the tube. But the column will be shorter, for then there will be no presssure upon the surface of the mercury in the cylinder to sustain it except the pressure of the atmosphere resting upon it. Now if a support for the tube and a scale to enable us to read the height of the column of liquid in the tube be added we shall have the simplest form of barometer. In Kansas City the column of mercury in the barometer sometimes stands about 30 inches high and at other times only about 28 inches high. This difference is due to the amount of air and consequently its weight being greater above us sometimes than it is at others.

USE OF BAROMETER IN FORETELLING WEATHER CHANGES.

When the barometer falls rapidly it usually means that the low pressure area of a storm is approaching us from some westerly direction. When the barometer rises rapidly it means that the storm center is moving away from us in an easterly direction. For example, during the forenoon of January 1, 1903, I noticed that the barometer was falling rapidly and suggested that rain or snow would probably result from the approaching storm, although at the time the sky was clear. The morning of January 5 found the sky completely overcast but the barometer was rising rapidly so we said that the afternoon will probably be clear. On the morning of January 6, the sky was clear but the barometer was falling slowly but steadily, so we said this clear weather will probably not last through the day. In each of these cases the results were as we expected.

APPROACHING STORM ON LAKE MICHIGAN

PHOTO BY COURTESY OF A. W. LEWIS, KANSAS CITY, MO.

The weather can, however, be more confidently predicted from a knowledge of the baromertic readings throughout the country around the locality for which the prediction is to be made. This information together with reports as to humidity, etc., is collected by the U. S. Weather Bureau and is published within an hour or

two after the readings are taken, all readings being taken at exactly the same time at each station. Although there are many things which are not yet known concerning the development and movement of storms, sufficient is known to enable us to prepare for any sudden or injurious change of weather which is likely to occur. It would be a conservative estimate to say that the people of this country save annually $15,000,000 worth of property which would otherwise be destroyed were it not for the warnings sent out by the U. S. Weather Bureau. Yet there are many things concerning the weather which are either obscure or wholly unknown. When scientists shall have learned these things it may be that we shall be able to predict confidently what the weather will be weeks in advance instead of now predicting it only for a day or two in advance. We may possibly even learn to exert some sort of control over the weather.

AFTER THE STORM ON LAKE MICHIGAN

PHOTO BY COURTESY OF A. W. LEWIS, KANSAS CITY, MO.

ACCOUNT OF A THUNDERSTORM.

I cannot think of a more fitting conclusion for this brief article than a description of a typical thunderstorm I once witnessed:

One hot summer's day I was in a distant city. About noon the air became oppressively hot and a hazy appearance developed. The barometer was falling. About one o'clock a companion and myself started to drive across the country southeastward. Soon the sky became overcast with stratus clouds from the base of which, in the west and northwest, fold after fold of clouds seemed suspended. The light which shone through and was reflected from the clouds gave a variety of colors of which yellow, green and lavender were the predominant ones. Flashes of lightning could be seen upon the western and northwestern horizon and the ominons growl of the distant thunder could be heard. Finally a great mass of black clouds followed the billowy folds before mentioned. A squall of wind rushed past us from the direction of the storm cloud. Rain was falling from the base of this black cloud and angry flashes of lightning darted through it followed by appalling crashes of thunder. We were evidently in the extreme southeastern margin of the storm. Suddenly some distance north of us a whirling column of cloud seemed to lengthen until it reached the earth and went whirling eastward across the country. At the same time we noticed two or three other whirling columns begin to run down toward the earth from the clouds. These did not reach the earth and soon began to lessen in length from beneath with the appearance of having

been drawn up and reabsorbed in the cloud above.

The main part of the storm passed some distance to the north of us and just as we were congratulating ourselves that we were well out of it, hail stones of a size to make the blows which they struck somewhat painful, began to fall, and we had all we could do to prevent our horses from treating us to a serious run-away by way of protest against the unmerited punishment they were receiving. The hail soon ceased, the sound of the thunder grew fainter and all further danger from storm that afternoon was past. F. E. H.

SCIENCE NOTES

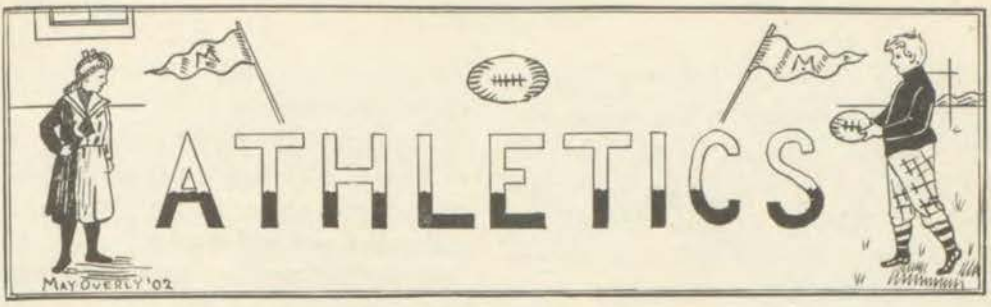
The science courses in Manual are now all about complete. So the aspiring young scientist may lay a secure foundation in the course he wishes to pursue. The laboratories are better equipped than those in most schools of its rank. They contain much valuable apparatus. All students should make the most of these courses.

On the evening of December 5, 1902, some five hundred persons gathered in the school auditorium and listened to a lecture by Prof. Wright of Oberlin College, on the "Ice Age in North America in Connection with the Lansing Skull." During the course of the lecture we visited most of the great glaciers and the geological wonders of the world, by means of the steriopticon. Prof. Wright also showed us pictures of the "Lansing skull," and gave it out as his opinion, that this skull belonged to a man who was drowned in the great floods which covered the country at the close of the Ice Age. Prof. Wright has made a life study of geology and is authority on the Ice Age in North America.

The following is an extract from a letter by William Kline, one of our former students, now attending Ann Arbor:

"I heard Prof. Carhart lecture, several week ago, on the electro-chemical processes used at Niagara. One process that is quite interesting is the electrolysing of molten salt (Na Cl) using molten lead as the cathode. The lead will absorb from 20 per cent to 26 per cent of sodium, which is extracted at one end of the furnace by blowing a jet of steam through the metal. This jet of steam also serves to keep the lead in circulation. It is so arranged that a layer of lead, about an inch thick, is constantly passing under the carbon anodes. The sodium hydroxide is obtained in the molten state and is very pure. This method is much more efficient than the old method of electrolysing a salt solution with mercury as the cathode.

They are now putting up a plant there for the manufacture of atmospheric products, principally nitric acid, nitrates and nitrites. They have an experimental plant in operation and Prof. Carhart went through it. The process consists, primarily, of oxidizing the nitrogen of the air, by means of an electric arc. For this they have a cylindrical drum set on end in the sides of which, projecting on the inside, are a number of vertical rows of ten platinum electrodes. There is an axis passing through the center of the drum, on which there are a corresponding number of electrodes. These electrodes are so arranged that when the axle revolves they pass within 0.1 inch of the fixed electrodes. A current of 10,000 volts and a very low amperage (I think it is 0.05) is then turned on and the axle is revolved by means of a direct connected motor, at a fair speed. Every time one of the revolving electrodes passes a fixed one it draws an arc which reaches a considerable length before it breaks. Air is pumped into this drum and out of it into a larger drum. In this larger drum further combination takes place on account of the ozone formed in the first drum. From the larger drum the gases are then passed into sodium hydroxide or water. The promoters of this process claim that they will be able to produce pure nitric acid for two cents a pound by this process."



AN APPEAL TO ARMS

Now that the football season has closed, we turn, with hopes of better success, to the annual baseball and field events of the spring.

There seem to be many candidates for places on the baseball team, and we have every indication of a successful season; in fact, Manual has never had anything else but a most successful baseball team. Our team has won the High School League pennant every season except one, and then it was lost by only one game. Shall we not this year keep up the records made by previous teams, or even surpass their achievements? Certainly, there's not a boy attending Manual who will not do his best to keep the team at the top of the list.

Although much interest has not been manifested in that direction, the track team is fully as important as the ball team. Manual is required to be represented this year at the Inter-Scholastic High School League meet, or forfeit her membership in the League. Boys, let us have a team there, not in order to stay in the League, but in order to carry off the honors for our school. We have plenty of material to choose from, so, if you are ambitious to become a member of either team, begin at once to work in earnest, for there is no royal road to success in this line. Begin now to train by taking a run every evening or by work in the gymnasium.

The one thing that makes athletics an important factor in education is the lesson learned from careful and unflagging effort put forth while training, and a dogged determination to win. It proves, also, that success is won by hard work only.

Freshmen, Sophomores, join the Athletic Association at once, and prepare yourselves so that you may be able to bear the responsibilities that will soon be placed upon you, for the school depends upon you for its success in athletics in the three years to come!

C. Shoop.

ATHLETICS

On November 21, 1902, Manual met and defeated Argentine High School, by the overwhelming score of 52 to 0.

The day was an ideal one for a football game, and the field was in the best of condition. There was no individual playing, every player making an excellent showing for himself.

Manual made her gains at will and always held Argentine for downs. She deprived herself of running up a larger score, by twice trying for a goal from the field.

By some mistake there were no side line watchmen engaged and the game was greatly hindered and lengthened by the spectators crowding on the field.

On the following Saturday Manual played her last game of the season with Leavenworth. Though we were defeated the game was in reality a tie, for we lost only by missing a goal. Considering that we were defeated earlier in the season by a much larger score, 18 to 0, by this team, we should be proud of our boys for holding them down to the small margin of one point. In this game the team played together better than in any previous one. That the game was rough is shown by the fact that two of our boys received painful bruises.

Thus ended the football season of 1902 at Manual. Though it was not a glorious season it was encouragaing. We won two games, tied one, and lost four.

At the last regular meeting of the athletic Association an able and competent captain for the season of 1903 was elected in the person of Arnold Shawn. The schedule on coach questions was also talked about, but nothing definite was done.

THE ATHLETIC GIRL CHOSEN

Well, as the boys say, we *must* have "something doing next week." The speaker, Edith Brandon, was a pretty blonde of seventeen.

"Yes," said her younger sister, Dorothy, perched on a corner of the table, "But if we only knew what kind of girls our beloved cousins are, we might have some idea as to what they would like."

"All we know is that Harriet is frail and Florence isn't," put in Carl, their older brother. "So I suppose Florence will go in for sports and Harriet will have to be coddled."

Carl, Edith and Dorothy Brandon were holding a consultation in Carl's sanctum sanctorum, more commonly known as his "den." Their cousins, Harriet and Florence Colbert were expected in a few days to make a short visit with their aunt, Mrs. Brandon. As the Colberts lived at a great distance, they had never met their aunt or her family. And now when these cousins were to make a long promised visit, the Brandons wished to "show them a good time." Hence the worried look on the three faces in the den.

* * * *

"I say, girls, the ice is fine, let's go skating," said Carl, a few days later as he poked his head into the room where his sisters and cousins were talking.

"Skating!" almost shrieked Harriet, "Why, I'd catch my death of cold!" But Florence's eyes shone as she and Dorothy ran up-stairs to dress for an afternoon on the ice.

"As you don't care to go, Harriet, I'll stay home with you and we'll practice with the foils awhile," said Edith.

"It is awfully sweet of you Edith to stay with me, but as for fencing—no thanks. I don't care to have my arms ache for the rest of my visit. Florence is wild over fencing and I am sure she will be glad of an opportunity to practice. I never saw such a girl as she is. At home she is always going off with a crowd of girls to the Fencing Academy or to play golf or basket ball or some such foolish game. As for me, I much prefer to stay indoors."

Florence was a tall brunette and carried herself as a young queen might. Her cheeks had the glow of health and her bright, clear eyes bespoke a girl who thoroughly enjoyed life. While Harriet was not an invalid, she was not nearly so robust as her sister, and her over-indulgent mother had always treated her

like a hothouse plant. So while Florence went in for athletics and improved herself physically as well as mentally, Harriet stayed indoors and pored over books.

* * * *

"Well," said Carl emphatically, a few weeks later, "Of all girls you may keep the French dolls and society butterflies, but give me the Athletic Girl every time. For if nature has by any oversight failed to make her physically perfect, athletics have come to her rescue and remedied nearly all defects." So I say, like Carl, "Give me the Athletic Girl every time."

AURA ALBERT, '04.

A POPULAR EXERCISE

Roger Ascham, called the "Father of English Prose," said "Learning should always be mingled with honest mirth, and comely exercise." This sentiment finds its echo today in the fact that students with a liking for athletics are eagerly sought as recruits for the various colleges. This is true not simply because of the advertisement furnished by foot-ball, base-ball, and other athletic victories, but because the faculty recognize that a healthy mind is more apt to accompany a healthy body.

Not only the young men and young women of our high schools and colleges are devoted to athletic sports, but the society women of the large cities of Europe, and of this country also, have formed classes, and vie with each other in their exercises. In Boston, one can find women as old as sixty-five in these classes.

It is the desire of almost every girl to be tall and stately. But if she cannot be this, she, at least, wants to look it, so she has her gowns made, and all of her surroundings arranged so as to increase her height as much as possible. It is this fad to become tall that has made the hoop exercises, which are used for the purpose of increasing height, so popular in these athletic classes.

One of these hoople gymnastics is the lifting exercise. The object of this exercise is to lift the shoulders. Nearly all small girls are round shouldered, therefore, they are an inch shorter than they need be. This defect might soon disappear if they would get their shoulders supple by practicing this exercise.

Take the hoople in both hands, and lift it as high as you can. Hold it so that you are looking through it, with the hoople framing your face. Lower it to the ground. Lift it, look through it, and then lower it again. Without omitting a motion, do this as fast as you can for five minutes. This exercise will rapidly improve round shoulders.

MARY SLOAN, '06.

ATHLETIC GOSSIP

To the casual observer, this season may appear to be a very dull time in athletics. There are no great foot-ball games to be sure, and it is too early as yet for base-ball. The basket-ball teams are not yet chosen and hence there are no interesting matches with outsiders. But notwithstanding all this, the winter months are essentially busy to the true athlete. He is getting in trim for the contests of the spring months. In the gymnasiums much good work is being done along the lines of Indian club practice, fencing, gymnastic dancing and jumping. It is our hope

that these preliminary months of training will bring our Manual colors to the front in all their battles.

To the base-ball team: It is easier to make a fine reputation than to maintain it.

Does it not occur to all who visit our great school that the gymnastic resources are not what they should be? In the equipments of our scientific departments of our manual-training rooms, of our classic studies we excel but in an equally important department of education we are deficient. Physical training is a necessity of these times, and we should have the proper means for attaining the great end —perfect physical health. Our quarters are not large enough, nor have we good equipments. We hope soon to have a plan to secure a better gymnasuium for our growing school. In the meantime however, help from any quarter will be acceptable.

However, things are not so bad as they might be. A new floor has been laid in the girls' gymnasium which is of great benefit. Fencing has also been introduced and is finding many devoted admirers. New apparatus has been purchased for the boys' room and the first steps toward improvment have been taken. Let the good work go on.

Speaking of improvements, there is a plan to secure the use of vacant lots across from the west entrance of the school. If it were fenced the basket ball teams and girls' physical culture classes could use it. Foot-ball and also base-ball might be practiced there by our boys and if a cinder path were laid it might do for the running exercises of the track-team. However, nothing definite is known as yet.

HALF-TONE ENGRAVING

Half-tone engraving, now one of the necessities of printing, has come to the front in the last twenty years. Before that the only illustrations were from wood or metal engravings, and were made entirely by hand, which caused them to be very expensive as well as crude. Our modern engravings, the most important of which is the half-tone, have grown up with the printing press and the camera. The half-tone is in fact a photograph. It is a plate etched on copper by a photographic process, by which the lights and shadows of a photograph or wash drawing are retained in the plate by dots which stand out as a printing surface.

It has not been many years that our magazines and newspapers have been filled with fine pictures, and yet we take little notice of them unless they be of ourselves. But suppose one of our Sunday papers or monthly magazines could have found its way into a home of a hundred years ago, do you suppose they would have been used to build fires and to wrap up lunches? Well, hardly. They would have been carefully preserved or hung on the wall and would have been the envy of the neighborhood as well as the pride of the family. Yet this luxury we enjoy is due to a process which though very simple with our modern apparatus is the product of years of hard work in printing, chemistry and photography.

A brief description of the process in the manufacture of our modern half-tone with its main points only is as follows:

When a photograph or wash drawing is sent to have a half-tone made of it, it is tacked on a board in front of a large camera and a strong electric light turned onto it. The camera is then run backward or forward on a track until the image on the ground glass is the size desired, either larger or smaller than the original. The lens of the camera is then closed and a *wet plate* inserted in the place of the ground glass and a half-tone screen placed in front of the plate. The screen consists of a thin film, divided into very small dots, between two peices of glass, the light coming through this screen onto the plate dividing it also into dots. The plate is then removed and developed in the *dark-room* making a negative. This part of the process is the same as the making of the negative of any photograph, with the exception of the screen and the *wet plate*, which is seldom used now for photography as the *dry plate* is much handier. The reason it is used in this case is that the film can be removed from the glass.

When the negative is developed it is taken to the half-tone department. Here the surface of the film is flooded with first a solution of rubber and then with collodium. This makes quite a thick film on the glass and when it is dry it is placed in dilute acetic acid which loosens the film so that it can be removed. It is then stuck on another glass reversed; this reversing is necessary because when the press prints it, it is reversed again bringing it back to its natural position. When the film has dried on this new piece of glass, it is placed in a printing frame and a sheet of copper, sensitized with bichromate of ammonia is placed under it and the frame is put in the sun or a strong electric light to print. This printing is similar to that of a photograph with the exception that the impression is taken on copper instead of paper.

After printing the copper plate is developed in cold water. This brings out the image but it is very faint until it has been baked in an oven. This baking not only makes the image more distinct but

toughens the film on the copper. When the copper plate is brought out of the oven the picture on it looks, to the naked eye, like a common photograph, with the exception of its coppery aspect, but when examined with a magnifying-glass it is seen to be made up of very small dots, which are produced by the screen. The copper plate is now ready to be placed in the etching bath, which consists of a solution of perchloride of iron. This eats out the copper which is not covered by the dots, leaving them standing out sharp by themselves, thus giving a printing surface. Before putting the copper plate in the bath it is necessary to coat the bottom and sides of it with asphaltum, which keeps the solution from eating into them, for this it would do just as it eats the copper from between the dots.

The plate is left in this etching bath until the dots stand out sharp; this is determined by testing it every few minutes with a magnifying-glass. When the etching is through the plate is washed and dried and taken into the machine shop, where it is cut into shape and mounted on a block and all the defects in it taken out with small tools.

This finishes the making of the half-tone plate and it is now sent to the printer from whom we receive its impression on paper. We give little thought as to how it was made and through how many hands it had passed since we saw it as the original photograph. RICK FILLMORE.

WOOD AND ITS USES

The Nation of late has awakened to the fact that a very few years will be all that is necessary to complete the annihilation of the great northern forests. If something is not done in the near future by lumbermen to remedy this evil, a check will have to be put, by the government on the cutting of timber.

It is estimated that in New York alone, timber has been destroyed at the rate of 150,000 acres per year. Most of this is used for railroad, fuel and building.

In 1870 half of the state of Maine was one gigantic forest, but year by year it has diminished, and although there are great tracts still covered, the greater part of the state has been cleared and is now cultivated land. The principal lumber of Maine is pine and spruce, which makes a good ship material.

The Scotch pine of northern Scotland is not only fine timber, but tar, pitch, lampblack and turpentine are some of its many products. The northern pine and spruce is perhaps the best paying timber. The Oregon pine which comes from the northwestern part of the United States, in the old Oregon Territory, is used extensively in building docks and is also good telegraph pole timber. This timber grows to an enormous size, sometimes reaching a height of two hundred feet. The northern spruce is the best mast timber obtainable. The yellow pine of the south Atlantic states furnishes an abundance of turpentine, tar, and resin. It makes a fine flooring material, if sawed from the right part of the log. Hickory also holds a high place among the woods, on account of its toughness and elasticity. It is used to great advantage in making ax-handles, wagons, and implements, where a strong, durable wood is essential.

Oak is being brought into use again as a finishing material in building. It is capable of a high polish, and all the high-grade houses are now being finished in oak.

Maple takes a high polish, and curly maple especially, makes a good furniture stock. This style of furniture goes well with the enamel finish that builders are now putting in their houses.

Walnut is also a good smooth furniture stock.

The leading stock used by box-factories is cottonwood. This is a cheap wood and is sufficiently strong for boxing and crating purposes. For a heavier grade of boxes, yellow pine is used.

The dye-woods and veneering are furnished by the tropical countries. The principal dye-woods are logwood, brazilwood and fustic. From the West Indies come mahogany, lance-wood, snake-wood, green-

heart, etc., and India, Australia, and New Zealand furnish large supplies of ship timber. British North America, including Canada, New Brunswick and Columbia, furnishes an immense amount of lumber. In our country nearly all the states produce a considerable amount. The principal shipping points for lumber are Albany, New York, Savannah, Brunswick, Ga., and Pensacola.

The tropical woods are generally so expensive that they are used mostly for veneering cheaper woods. Pianos are made of good strong wood and are then veneered with mahogany or other costly wood. Some furniture is treated in the same manner.

The amount of lumber used annually is stupendous. The census of 1880 shows the number of establishments producing lumber in some form to be 26,911; number of men employed, 147,956; capital invested, $181,100,000; wages paid, $31,800,000; total value of products, $233,200,000.

GEORGE M. ARROWSMITH.

THE LIFE OF A SPOOL OF COTTON

Did you ever wonder how a spool of thread grows? How many experiences and incidents it encounters?

About two weeks after the cotton-seeds have been laid in Mother Earth's bed, tiny leaflets may be seen peeping from their cover. This green shoot grows to a plant two to eighteen feet high, whose fibers are long and fine, characteristic of the sea-island plant. This variety of cotton-plant is cultivated in Florida, South Carolina and Georgia, for it will not grow away from the atmosphere of salt water. Near the first of June the fields have blossomed into a pale yellow. Then by August the cotton is ripe and ready to be picked by dexterous fingers, which are busy gathering this fleecy substance until Christmas.

See that large picture of Nature's. Its background of white is broken only by the numerous amount of pickaninnies and their elders, some bent by age while others are just nearing the *"meridian* of life." This picture is framed by the sky and the horizon.

The gathered cotton is soon hurried through gins that have been greatly improved since Eli Whitney's invention. Here the cotton is separated from the seeds.

After the cotton has been *bailed* it is taken to the railroad station or steamer landing by a mule cart. Now its course of life changes, for it next enters a northern mill. Numerous girls and women remove the contrary seeds, that still persist in clinging to the cotton, and pull the matted mass to threads. It has now become a sheet of rude batting.

Its next adventure is in the carding room which consists of large cylinders, each containing ninety-thousand teeth to the square foot. With these, the batting is combed out in parallel lengths and at the same time brushed. Now it appears like a dusty cobweb, which is soon coiled into a rope. This is then drawn out repeatedly until the coil has become many thousands of miles in length. These hair-like threads are then doubled again and again, to secure strength and uniform length. After it has passed through two more machines it is given the name of yarn for cotton thread. This yarn is wound on bobbins, which are put on the back of a twisting frame. The threads, formed, are next wound on rewinding machines as soon as they have been lengthened. Each strand of a thread is then made of a uniform length.

You would now suppose that the thread was prepared to venture on its life's journey. But no, it must be cleansed of its impurities and bleached, for it has now become a cream color. However, it is first examined by expert women who clip off any stains or blemishes. The ends are then tied together.

The thread is then put into a large iron tank, through whose center passes an iron pipe. This pipe emits steam and water, which passes over the thread and out into a boiler, when the remaining impurities have been carried off. Now the thread has become the color of unbleached muslin.

So it is put into another box, containing a solution of chloride of lime. When it leaves this solution it is perfectly white. But it is yet compelled to pass through hot suds, where it is beaten by mechanical rollers and dried by a centrifugal machine.

The preliminary work is completed when it enters a room filled with steam pipes where the bleaching is finished. The skeins are now wound on large bobbins and then on the ordinary spools.

Such is the life of a spool of cotton.

EMMA HUMFELD.

THE MAKING OF WHITE FONDANT

Near Christmas time if one were to take a peep into the cooking laboratory, he would see the girls busily engaged in that charming and mystical science of making candy.

Some people say that it is very easy to make candy, but I am sure that cooking, and especially the art of making candy, requires just as much study as anything else which we learn to do correctly. It must be studied scientifically in order to insure its successful termination. Very few make candy in this way and so we often hear this expression, "Sometimes my candy turns out all right and sometimes it doesn't and I always cook it the same length of time, too." On some days candy must be cooked longer than on others. The time varies as the atmosphere.

The most important part of candy-making, and the most difficult to make is white fondant. Fondant is the foundation of all cream candies. The recipe is as follows: 2½ lbs. sugar, 1½ cups of hot water and ½ teaspoon cream of tartar. Put the cream of tartar in the sugar before adding the hot water to it. Be careful to pour the water around the edge of the pan so that no crystalline sugar will adhere to the pan. Before placing over a fire see that the sugar is thoroughly moist but do not stir the mixture. Let it come slowly to boiling point, remove from the fire and test the syrup by dropping a little of it into cold water. If one can form a soft ball of the testing syrup it is then ready to be poured on an oiled platter and put away to cool just enough so that the plate may be held upon the hand without burning it. When this state is obtained stir the syrup with a wooden spoon until the mixture becomes creamy. We use a wooden spoon so that the candy may not lose that pure white color which is a very essential feature of fondant. We knead the creamy substance, upon a marble slab or china platter, until it is smooth and then leave it twenty-four hours or more in the refrigerator.

The most important item is the sugar. That used in making fondant is sucrose because when it is combined with water and cream of tartar (K. HC 4 H 4 O 6) a part of it changes to glucose and prevents crystallization. It is during the boiling that the sucrose changes to glucose. If one uses less water than the recipe calls for, then less boiling is required. If the ingredients do not boil very long there will be little glucose formed and consequently the fondant may be crystalline. It is better to use more water and boil the mixture longer than to use a smaller amount of water and a shorter period of boiling.

The cream of tartar is an acid salt and therefore neutralizes the alkalinity of the sugar and forces the sucrose (C12, H22, O11), to change to glucose (C6, H12, O6). If one part of water unites chemically to C12, H22, O11, plus H2, O, it would equal C6, H12, O6, plus C6, H12, O6. When cream of tartar, water and sugar are combined, they form an acid syrup. The water used, first, dissolves the sugar, and, secondly, gives the correct consistency.

When crystals of sugar are allowed to form on the sides of the pan, centers of crystallation are formed and the fondant is apt to be crystalline. But if the directions for making fondant are carefully followed, there should be no crystals. The most important direction to remember is that the mixture must not be stirred as this movement causes crystals to be

formed. It is very necessary to boil the ingredients the correct length of time, for if boiled too long the fondant will be dry, and if not boiled long enough it will be too soft to mould. Crystals may be removed by straining the syrup through a thin cloth or tea-strainer, when it is poured on the oiled plate. If in spite of all your care the fondant should be crystalline, add the same amount of water used at first and recook. One-fourth as much cream of tartar as given in the recipe may also be added.

When the fondant has been in the refrigerator the required length of time, put it again upon the marble slab and knead in the flavoring. Then mould the fondant into pieces of any size or shape, and the candies are ready to dip. The dipping is made in a double boiler. Place in the boiler, after the water has boiled, one tablespoon of butter and one cup of soft fondant. Color and flavor the dipping. Then dip your candies. English walnuts, almonds or candied cherries may be placed on the tops of the candies.

K. H.

MY IDEAL

What does she look like? I do not know!
And yet I'm sure I ought to, though.
What does she look like? Ah! I see—
Cupid pictures her to me.

Changing eyes wherein I see
All that's fair and good to me.
A shadow falls across her face;
All the world is mean and base.
The sunlight lightens in her eyes;
I see above me summer skies
Wherein the sky-lark soars and sings
Of happiness, on golden wings.
Arched brows that frown and smile
And flatter or entreat the while.
A warm red mouth which cupid kisses,
(He declares it 'bove all other blisses),
And pearly teeth and raven hair,
(Cupid makes it his own lair.)
All of these are hers at call;
I, her servant, love them all!

H. C. HOULTON, '04.

EXCHANGES

The usual board of arbitration between a bad boy and his father is a shingle.—Ex.

Recipe to remove paint—Sit down on it before it is dry.

It is better to have loved and lost than never to have loved at all. It is better for the jeweler, florist and messenger boy.—Old Hughes.

Professor:—"A fool can ask many questions that a wise man cannot answer."

Henry (aside):—"I wonder if that is the reason I flunk so often."—Otero Student.

A NETHER COAL STRIKE.

Satan:—"Approach, sirrah, what's your kick?"

Beelzebub:—"If you please sir, Napoleon's going to the ball game, and won't tend to the furnaces, and it's Cæsar's day out."—Ex.

Freshman (to waiter):—"Do you serve lobsters here?"

Waiter:—"O, yes, sir; we serve anybody. Just sit down."—Ex.

"Why should we celebrate Washington's birthday more than mine?" asked the teacher. "Because he never told a lie!" shouted a little boy.—Ex.

Our Mariar Jones is missing!
Skipped into the Silent Hence,
Lit the kitchen fire with naptha—
And she hasn't benzine since.
—Ex.

When Richard III. he went to school
He always used to "trot,"
But Dick, one day, I grieve to say,
This useful book forgot.
And when the master called on him,
He saw a "flunk" of course;
So he did shout these old words out,
"My kingdom for a horse!"—Ex.

"What kind of a stove did the prehistoric man use?" asked little Ostend. "Probably he used a mountain range."—Philadelphia Record.

You may find a balm for a lover crossed,
Or a candidate who's defeated,
But the only balm for a ball game lost
Is to say the umpire cheated.—Ex.

Mrs. Blinks:—"I wonder where that boy got such an ugly disposition? He certainly did not take it from me.

Mr. Blinks:—"No, dear; I can see that you have not lost any of yours."—Ex.

The teacher asked:—"What is space?"

The trembling Freshman:—"I cannot tell at present, but I have it in my head."—Ex.

Physicians say there is no cure for the smoking habit; that even after death many continue to smoke.

"I have a few more points to touch upon," said Campbell, as he awkwardly climbed the barbed-wire fence.—Old Hughes.

Wife:—"I've talked to you until I'm worn out."

Husband:—"Why not shut up for repairs."—Ex.

The following idea was taken from the Fulcrum, the publication of one of the classes of the Armour Institute of Technology. In some instances the exact wording of the Fulcrum is used in such a way as to fit existing local conditions.

Schenck, '04.—Greater men than I may have lived, but I doubt it.

Stone, W., '03.—A clever young clown.

Wagner, '04.—Where women are not concerned, he is an honest, worthy man.

Bryant, '03.—Wisdom, awful wisdom.

May, '03.—Meekness now and forever.

Tufts, '03.—My studies above all.

German, '03.—Please, give me leave to enjoy myself.

Kearney, '05—Small, but oh, my!

Jaccard, '03.—One vast, substantial smile.

Montague, '04.—Sweets to the sweet. Oh, joy!

Harnden, '05.—My all—for a game of football.

Shawn, '05.—My curls are gone. (Tears from audience.)

Fessler, '03.—Tell me, is my hair parted properly?

Hallinan, '04.—Music, hath charms, and so on.

Elston, '04.—Troubles galore, poor boy.

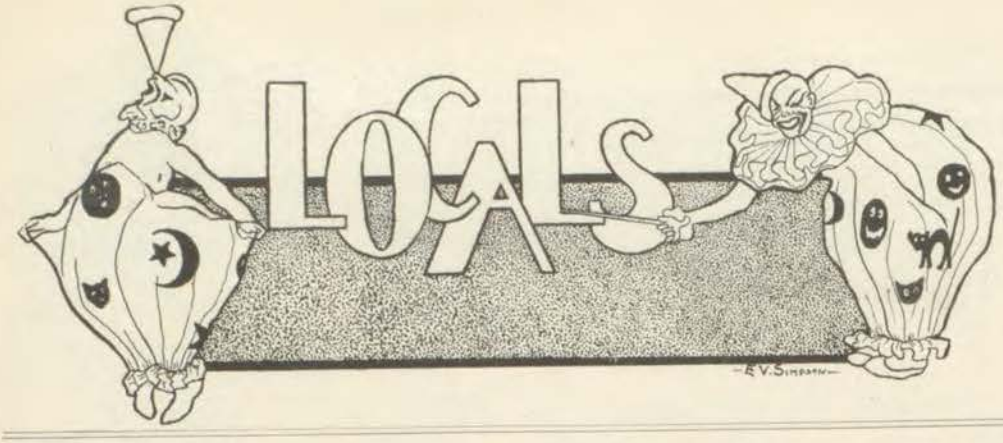
Niccolls, '04.—If you don't know anything, ask me.

Pettibone, '03.—Beauteous dear, altogether lovely.

Funck, '05.—Of goodly mien and much portliness.

Stewart, '03.—The true civil government student. Do you believe it?

You say I am fickle and insincere,
But I solemnly swear that's untrue;
I merely admire those other girls, dear,
For the traits that remind me of you.
—Fulcrum.



A sweet little girl in the drawing room, looking at some lips she had drawn:—"My lips look as if they had been kissed."

The Canton flannel rolls in millinery are about as appetizing as those found at the lunch counter.

Mr. Cowan:—"Well, one thing, the local department won't roast me this year. I'm a married man now."

Come, little Freshie,
Don't get mad at jokes,
When you're a Senior
You'll act like other folks.

Miss Gilday says she takes life too seriously to be funny.

Miss Marquis made the brilliant remark that lead had to be held over the fire to melt. (Now, isn't that strange?)

We wonder if Miss Brinkerhoff can tell the difference between resin and ffy candy yet?

Mr. Cowan:—"There is no more relation between your feet and your ideas than there is between me and an elephant."

Mr. Cowan to pupil reciting:—"You don't seem to appreciate the part, 'And we should live together in a cosy little cot, etc." He appreciates it, all right!!!

Miss Casey to Bertha, kneeling before her for lack of space:—"Don't kneel there like that; I am not used to having anything but gentlemen pose before me in that attitude."

Bert Rogers endorses hair dye.

Mr. Phillips:—"The absent ones please stand up."

Miss Gilday:—"What were the principal events of Henry VIII's reign?"
Horace Kearney:—"Marriages."

"A maid,
Friend Dan,
An open fan,
A seat upon the stair.
An O. Z. O. Miss—
A stolen kiss;
Six weeks of bliss,
But forty years of care."

Miss B., on hearing a quotation from Tennyson:—"It is better to have loved a short man than never to have loved a-tall."

Pupil:—"To preserve youth and beauty you should refrain from eating pie or cake."
Mrs. Shultz:—"I would rather grow old."

Mr. Shields, in French, takes the part of Sleeping Beauty.

Horace Kearney should work in a watch factory; he is so good at making faces.

Allan ate some of Bertha's candy that she made in cooking; next day he was absent.

First Senior:—"Why are Mr. Phillip's talks like the drill in the machine shop?"

Second Senior:—"Because they are a bore."

Mr. R., in German:—"Mr. Sills, will you read?"

Mr. Sills (translating):—"Oh, I don't know."

Mr. Chace:—"No one could choose a higher position than that of an astronomer."

Pupil in sewing class:—"Miss Casey, if I put my hat in soak"—

Another interrupting her:—"This isn't a pawn shop."

Miss Byers:—Miss Steele, may I go down to the Matron's room?"

Miss Steele:—"What's the matter?"

Miss Byers:—"That's what I want to find out."

Miss Casey's pet phrase:—"In the days of my youth."

An O. Z. O., speaking of a certain debater:—"I don't like him, he's so affected."

Oita (calmly):—"Affected, nothing! He's just affectionate."

A Sweet William of the (O. N.) I. O. N. tribe told a certain dainty Maybelle that she spoke with her eyes.

How could "William Tell?"

Horace:—"Oh, Ruby; let me take your O. Z. O. pin home to show mamma."

Mr. Miller says that IONS are small particles, highly charged with electricity.

Pupil in drawing:—"Oh, Miss Campbell; do you know where my nose is."

Another:—"Have you seen anything of my head."

President of A. L. S.:—"Will this asylum come to order?"

Marion, after a chorus of voices have been calling Miss Stewart:—"Don't you wish your name was Dennis?"

Miss Stewart:—"It may be some day."

Miss Bachelor:—"Don't get your desks sticky or I might get stuck up."

Miss Drake:—"Where is that note I sent home by you?"

Pupil:—"I haven't signed it yet."

Mr. Stewart, after receiving a piece of candy from an O. Z. O.:—"This reminds me of the machine shop."

O. Z. O.:—"Why?"

Mr. Stewart:—"It tastes like 'Moore.'"

Lionel Benjamin had a great fall;
Lionel Benjamin couldn't walk at all.
All the boys' visits and all the girls' flowers
Helped Lionel pass the long weary hours

Miss Lyons had the Freshman class write a letter to Santy Claus!

Freshman, to Mr. Fulton in 3B class:—"Say, when's the teacher comin'?"

The Freshmen should beware of fingering apparatus about the building, as it might "shock" them to know that we run things by electricity.

Miss Van Meter (referring to Macbeth):—"Robert, what do you understand by the expression, 'Fair is foul and foul is fair?'"

Mr. Bowman (who is dreaming about a base ball game):—"Must have a bad umpire."

The latest attraction—Mr. Trice Bryant in "If I Were King!"

Answer to the Geometry problem that appeared in the November number of the Nautilus.

Given:—Two people that know each other.

Required to Prove:—How far apart Miss Steele would place them in Study Hall.

Answer:—The distance varies inversely as the square of the affection between them.

Our night watchman was surprised to find Waterman Stone sitting beside the "Nautilus" box, in the corridor, about 2 A. M.

Night Watchman:—"What are you here for?"

Stone:—"I'm guarding this box, to keep people from putting in locals about me."

Little grains of "Stone,"
Little "Tufts" of grass,
Helps to make the mighty
Coming '03 class.

Mr. Shawn is so strong that he can lift the "House of Seven Gables."

President of O. Z. O.'s as Ida fell out of her seat: "Some one has the floor."

Composed by Nautilus Staff.

Harriet had a little cat,
Its fleas—where were they at?
(You could get something better than that).

Seat!!!

"Shakespeare used the blank verse introduced by Julia Marlowe," one of our bright Juniors said.

Miss Gilday to J. P. Brewer:—"Can you brew this out for us?"

Robt. Ridgeway:—"How many of you girls wear pins?"

Egbert:—"I do."

May says if fudge draws the boys, she will bring some.

Miss Paxton, in English:—"My paragraph is about 'What I don't know.'"

Mrs. Elston:—"It will take more than ONE, Mary!"

Miss Crandall has a habit of saying "Watt" when any one asks her a question.

Miss Sublette in Zoology:—"Now, pupils, take out your mouth parts."

Local Editor's Motto.

"Laugh and we all laugh with you,
But weep, and you weep alone."

Clara said she went as "We."

Tell me not in German numbers,
German is not hard to learn,
For the rules have all exceptions,
And the words you can't discern.

Pinky-Winky is the O. Z. O.'s new member,
She was elected in the last of September.
Pinky-Winky is short and fat!
Pinky-Winky is a cat!!!

A Debater in Physiology:—"My brain is very small."

An Oita, near him:—"You should be elected to some office, then it would grow."

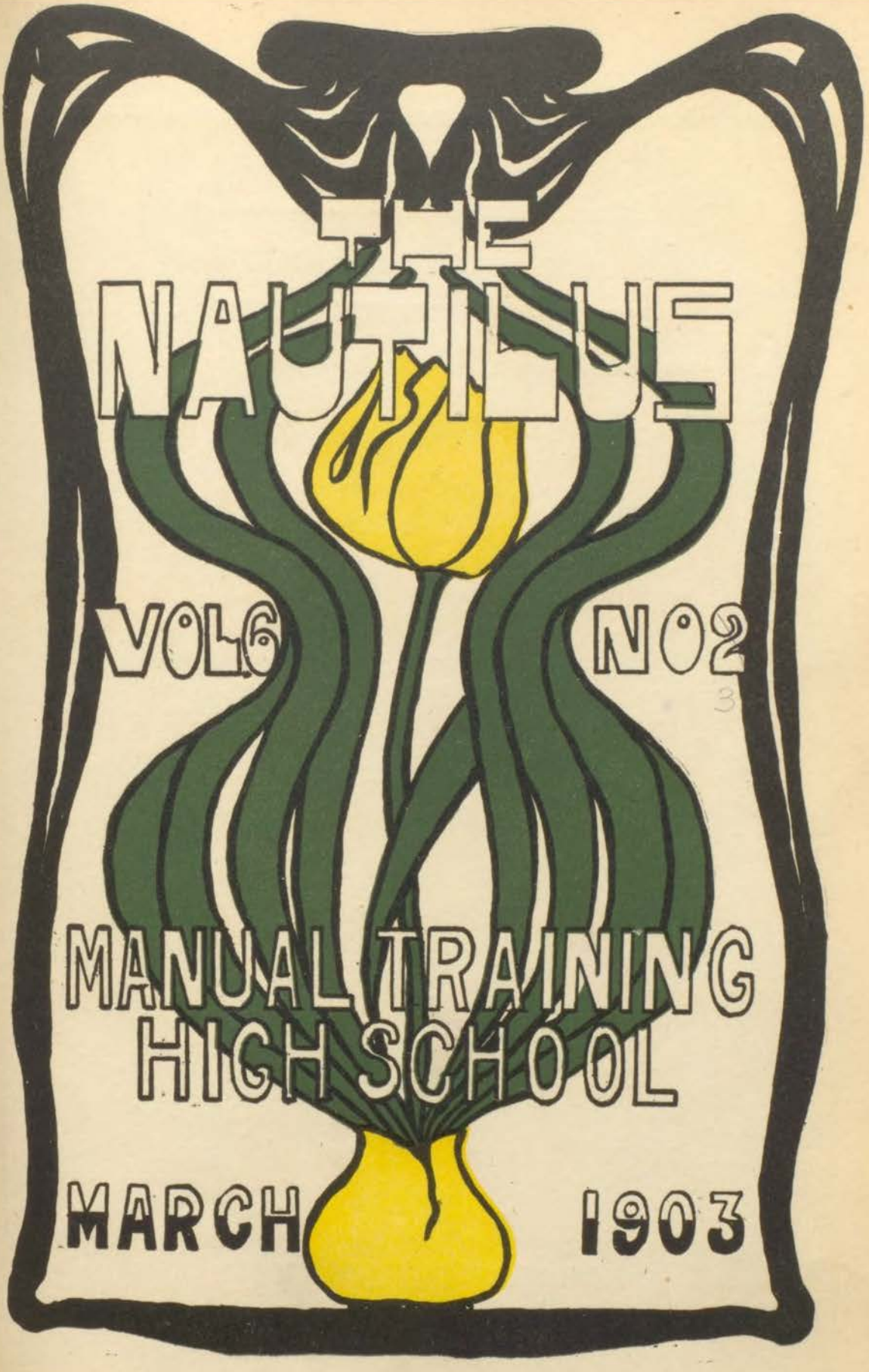
Mr. Sills—Floor-walker in the Drawing Room.

The I. O. N.'s have a "Conny" in their midst to collect the Nicolls."

Waterman Stone, the "Peanut Magnate."

Mr. Page:—"Two can live as cheaply as one if only one eats."

Mr. Phillips to giant senior:—"Why didn't you raise your *little* hand before?"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1903

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VOL. VI. KANSAS CITY, MO., MARCH, 1903. NO. III.

ONE NIGHT AT UNCLE JOHN'S.

The house was aglow with the brilliant light of many candles, reflected from great mirrors on the walls, from the polished floors and the glittering silver ornaments, until, as Ruth said, it really did seem like fairyland. The great, old-fashioned house had put on its holiday attire in honor of Washington's birthday and the annual house party.

Dear old Uncle John occupied all by himself the mansion which had been the family residence for generations. Now Uncle John was very fond of young people, but had never had any girls or boys of his own, since he was an old bachelor. So it was his custom to invite his nieces and nephews and their friends to spend a few days every year at the rambling, old-fashioned house on the hill.

The great clock in the hall chimed eight; then the young people began trooping down the stairs, for they knew that Uncle John stood waiting to welcome them in true colonial style. First, laughing, roguish Ruth, the pride and distraction of her uncle; then, James and May, Frank and Grace, and Henry with Belle, though he would have greatly preferred that it had been Ruth who walked so daintily by his side; and Samuel came last of all. In powdered wigs and waistcoats gay, with slender swords glittering by their sides, the college boys were changed to courtiers of long ago; in dainty robes and slippers quaint, with witching curls on shoulders white, the college girls were lovely as were the maids whom Washington led in the stately minuet.

Announced by the liveried servant, they entered the reception hall to find not their uncle as they were accustomed to see him, but a pompous, courtly old gentleman, who greeted them solemnly with a low bow, then burst into a hearty laugh. Joining in the mirth, they gathered around him laughing, chatting, and inquiring, jokingly, about Washington, Marion, Greene, and "those Britishers"—"red-coats, we mean," they explained.

"A story, a story, Uncle John," Ruth begged, and they all joined in her request. "No, not now. Something else first, and then the story. I've a great mind to tell one on Ruth, too," he managed to say, while they were still calling, "Story, story." "Sambo, strike up," and they all turned to see a white headed, old

darky grinning broadly and preparing to "strike up a tune" on his "fiddle." "Now for the Virginia reel!" and off they went, led by Uncle John and Ruth. "But, uncle," May protested, "this is Washington's birthday, so let's have the minuet." "Very well, but, you see, the Virginia reel is all right because he was a Virginian," and once more the music began. From minuet to waltz, from waltz to two-step they hurried and finally old Rastus was brought in to dance the jig and "cut the pigeon wing."

Glad to rest, they sank into chairs about the great, open fire-place and demanded the promised story. "About Ruth; you know you promised," Henry said and smiled across at her. "Yes about Ruth! She deserves it," they all chimed in.

Uncle John sat looking into the fire for a few moments, then said, "Well, I will tell you a story, a family romance, about a Ruth, but not this one. Years and years ago in the time of the Revolution, another Ruth lived in this house, as pretty and as charming as this little Ruth of ours. No, you needn't blush, Ruth; I'm not Henry; I'm your old uncle and have a right to say what I think. As I was saying, Ruth was a very lovely young girl of about eighteen, and her father had to take good care of her when so many dashing, young officers were around.

"One time when the patriot army was camped in this vicinity watching the movements of the British, Washington and his officers were staying here at your great-great-grandfather's, while the remainder of the army was some half mile away." He paused and gazed thoughtfully into the flames for a few moments. "One of the officers was a handsome fellow, Henry Breckenridge, a young Pennsylvanian. Well, he and Ruth became the best of friends; she gave him her miniature when the news came that the redcoats were near and Washington ordered him to go as a spy among the enemy. Washington and his aides, accompanied by her father, had gone to investigate the situation and to see whether or not they could hazard an encounter with the British, and Ruth was left alone with the servants.

"That night as she sat by this very fireplace trying in vain to spin, the door was burst open and a man dashed in 'Hide me, Ruth! the redcoats are after me!' It was Henry. His face was blanched, his hat gone, his waist-coat was stained with blood. Her heart sank as she saw her lover and heard the clatter of horses' hoofs drawing near; but she did not lose her presence of mind. Without an instant's hesitation, she turned and opened a hidden door there by the fireplace, and he stepped into the secret closet.

"In a moment there was a thundering knock at the door, but before she had time to answer, the knob was turned and five or six rough, red-faced fellows walked in to find her sitting quietly at her spinning wheel. 'Where is that dog of a rebel?' one demanded loudly, while the others began searching the room. 'He is not here.' 'Where is he then?' he asked. 'I have seen no one.' 'He must be here. Show us where he is at once,' and he advanced to lay violent hands upon her. Crack! went a pistol, and the ruffian reeled and fell, while the others whirled around to see a pale, hatless man standing, a pistol in either hand, with his back to the wall.

"A volley of shots seemed to leave him untouched, for he answered by several in rapid succession, wounding three of the men, then, backing into the corner,

he drew his sword to protect himself from further attack. Terribly frightened Ruth had run to the other end of the room, and, when the door again opened, she fully expected to see the whole British army enter. But no, thank heaven! it was Francis Marion of the Ragged Regiment. How glad she was to see him! How glad she was when he carried away the redcoats captives! Then she turned to Henry. He was still leaning against the wall, but when he caught sight of her, he advanced quickly to meet her and took her in his arms. 'Ruth, you have saved my life. Look here!' and he took out her miniature with the back bent and dented by a bullet. 'That lay between me and eternity.' "

Uncle John ceased speaking and again sat meditatively looking into the fire.

"Is that all?" they all asked in a chorus, after a moment's silence. "Yes, that is all, all but the wedding. Did it suit your case, Ruth?" But Ruth had slipped away as soon as he had finished the story and was nowhere to be seen. "Let Henry go to find her," said uncle, and Henry went.

ELSIE WADDELL, '03.

HOW OUR FOREFATHERS WELCOMED THE DECLARATION OF INDEPENDENCE.

"Far dearer the grave or prison,
Illumed by one patriot name,
Than the trophies of all who have risen
On Liberty's ruins to fame."
—Thos. Moore.

It is with a feeling of national pride and filial respect that we draw aside the veil of time, and share the hopes and fears of our Revolutionary ancestors. We were born to the liberty and freedom they fought for. We know of the thrill of patriotism when we see our flag or hear praises of our own United States. But in memory of those who gave us the flag, of those who made our country, let us turn back. We know how we rejoice in freedom in all of our forty-five states, but how was the Declaration of Independence welcomed in the "Old Thirteen" of bygone days?

While we have set apart the fourth of July as a holiday, in memory of the declaration of freedom, in 1776, the whole month was a succession of celebrations. For the glad news did not reach many of the southern colonies until as late as the twenty-third.

When we think of our New England forefathers, we think first perhaps of Massachusetts. In Worcester it was on the fifteenth of July that the resolution of freedom was received by the citizens and its welcome was marked with spirit and dignity. They stopped not long to consider it, but thankful to their Congress, prepared to celebrate the event it proclaimed. They erected a liberty pole, draped it in colonial colors and rang the bells amid the hurrahs of the people. After reading the proclamation, they fired the cannons thirteen times, and ceremoniously consigned the portrait of England's monarch to the flames. Then they spent the evening in discussion of the cause and effect of their proceedings.

While the people of Worcester were gathered on the green about their "Liberty Pole," those of Boston were listening to the proclamation read from the State House balcony. In King street the two regiments formed and fired in thirteen divisions. There was no uncertainty as to the feeling of Boston soldiers and they expressed it much as we would today, and bearing England's coat of arms away from the court house, gave it its last resting place in that old town, namely a bed of ashes.

At Dover, Delaware, the reception was similar to that at Boston, but in addition, a letter from Cæsar Rodney, a delegate to Congress, was read, and loudly cheered, especially when he said, "I congratulate you on the day which restores to every American his birthright, a day which every freeman will record with gratitude, and the millions of posterity read of with rapture."

All the friends of liberty showed their desire and determination to fight for the cause they had pledged that day. But the soldiers in New York, the standing army of early times, were exceedingly demonstrative. The declaration was read to each brigade and was received by each amid cheering and firing. That evening the sons of freedom, in token of their mingled excitement, joy, and disgust, overthrew an effigy of King George III, erected by the Tories. And after they had rolled it in the dirt as a just reward to a tyrant, and a forerunner of the fate of King George should he attempt to rule in America, they carried it to a place of safety; for they resolved that in the near future the lead should be run to bullets to be returned to the hearts of those who loved the statute, by the hands of those who tore it down.

Such was the feeling in northern towns, but let us go down to Maryland and sunny Virginia, the home of the Father of Our Country. Those who heard the Declaration in Richmond were among the largest assemblies to whom it was read. But while they were enthusiastic and joyous during the day, the beautiful illumination of the town that night, and the toasts which were drunk were greater tributes to the cause, for when their hearts prompted them to say, "May the freedom and independence of America endure till the sun grows dim with age, and the earth returns to chaos," we know that henceforth they were liberty's staunchest supporter's. And again, when they lifted their glasses and drank to "Boston." to "Congress," to "Washington," and to "Liberty and Freedom," there was no mistaking the sentiments of the Southern people.

In Baltimore, Maryland, the Declaration was read at the Court House, in Charleston, under the Liberty Tree, and at Savannah, Georgia, at what was known as the Assembly Hall, and from Massachusetts to Georgia not a dissenting voice was heard. But all tried to put their feelings in expressive words and gave such toasts to liberty and the states as, "May Liberty expand her sacred wings and in glorious effort diffuse her influence o'er and o'er the globe," and "May the independence of the American states be firmly established and a speedy peace take place."

So rang the shouts of freedom all through the "Old Thirteen," and today, and in the future, may we be worthy and able to echo and re-echo them from the Atlantic to the Pacific, as they went long ago from Georgia to Maine. And with our Revolutionary forefathers drink to "The memory of those immortal heroes

who fell in the American cause," always remembering;—

How felt the land in every part
The strong throb of a nation's heart,
As its leader gave with reverent awe
His pledge to union, liberty, and law!

Then let the sovereign millions, where
Our banner floats in sun and air,
From the warm palm lands to Alaska's cold,
Repeat with us the pledge a century old!
—T. G. Whittier.

JEAN MORRISON, '04.

CICELY.

It was a chilly, drizzly day in April. A heavy fog overhung all London, shutting out the sun and bathing the whole city in gloom. Here and there a faint light penetrated the denseness, marking the door of some tavern or the gate of some dwelling. It was so cheerless that even the street dogs curled up in sheltered corners and shiveringly tried to sleep, and the hardy little English sparrows remained in their homes, softly chirping and teaching their little ones the lullabys of birddom.

On such a day a little figure walked swiftly down the pavement just outside the walls of the tall forbidding Tower of London. She was enveloped in a bright red cape, from underneath the hood of which, brown curls were peeping. Now and then a smile broke out on her face, and a little snatch of song would escape from her lips, but as she neared the gate of the prison, her countenance became more grave.

The faces of the guards lightened as they saw her. At her cheerful nod they saluted and allowed her to pass, for it was not an unusual sight to see little Cicely Howard, with her bright face and sunny smile, come to the prison. Almost every day she came, bringing food and comfort to its inmates. Many a time she ministered to the sick, cheered the despairing and by her simple stories and talks made it easier for those condemned to die.

Crossing the courtyard, Cicely entered a large hall; turning to the left she gently pushed back a door, which opened into the warden's office. At the sound, a man turned sharply around with a deep frown on his face, which quickly changed to a slight smile, as he beheld the little maid making a courtesy. "Art here again, Mistress Howard. 'Tis a rough day for a little lass like thee to be out," he said.

"I mind not the weather, Master Bailie, she answered, as she threw back her cape and set down a basket, which she had carried on her arm. Then she approached the bailie, timidly laying one hand on his arm, "Wouldst be so kind as to ask John to take me to the cell of Dame Mason? I have brought some excellent ale to her; she is in sore need of it, for her strength faileth fast, and I fear she'll not last long."

At these words the bailie frowned. "I canna allow it," he said, sternly. "I 'ave my orders to allow no'ne to visit the prisoners. I got in pretty straights when thy visits reached the ears of my Lord Dunstone, a fortnight back. Na," he said, as he saw the face of his small visitor fall, "I do na like to disappoint thee, but it must be."

Scarcely were the words out of his mouth when both were startled by a shout from the courtyard. They ran to the window and peered out. Standing in

front of the gate were four soldiers, and in their midst was a prisoner. From where they were, neither the bailie nor Cicely could see the prisoner's face. The soldiers were eagerly talking together, and glancing every second or two up the street. In a few minutes a man galloped up to them, and jumping from his horse, he threw the lines to one of the soldiers; then giving a sharp command, the remaining soldiers, with the prisoner, faced about and marched towards the door of the Tower.

During these preliminaries, the bailie was busy sharpening his quill and getting the necessary papers ready. As the little company turned towards the door and Cicely caught sight of the face of the prisoner, she uttered a cry that sent the bailie hurrying to her side. Covering her face with her hands, she cried, "Charles! my brother!" Then dropping on her knees she grasped the warden's hands, "O, Master Bailie, I prithee, do not put my brother in prison. He would do no harm, I know. 'Tis some mistake, I know 'tis."

The warden's face softened, as he raised her gently to her feet. "I can na' do nothing now, lassie. Be brave and let not the captain see thee, for it will do thy brother no good," and giving her a meaning glance, he turned to greet the captain, followed by his prisoner. At their entrance Cicely sank in a chair behind the warden.

The bailie coughed, dipped his quill in the ink horn and asked, "Thy name, sir?" "Charles Howard," answered the prisoner. "Arrested upon what charge, captain?" The captain glanced darkly at the offender and said, "Charles Howard is arrested by order of his highness, Duke of Langcaster, on the charge of treason to his Royal Majesty the King."

"At these words, all glanced at the prisoner, whose face remained perfectly composed, except for a slight flush that overspread it. Cicely again covered her face with her hands and wept softly. "Hast anything to say for thyself, Master Howard?" inquired the warden. The young man's face flushed deeper as he replied, "'Tis a base lie. I played a game with my lord last night and won. This is his revenge. 'Tis an easy way to redeem his money."

"Man," hissed the captain, "one more word and I swear thou wilt feel the rope's end. Master Bailie, the man lies. I prithee hurry or he will escape justice yet."

At her brother's words, Cicely had risen, both cheeks were crimson, and her little hands were clinched. She must plan for Charles' escape. If she could only catch his eye and let him know she knew of his trouble. Quickly and quietly she slipped to the other side of the room. Oh! if he would only look at her. What was that the bailie was saying?—"Put the prisoner in cell 129 in the east wing."

Just then more shouting was heard in the court yard. All eyes except Cicely's and her brother's were fastened on the window. Charles turned his head, as if he could not bear to see another in his plight. As he did so, his eyes fell on his sister. She put her finger on her lips as a token of silence. Then leaning towards him, she whispered the word, "Hope."

"H'm! I guess there is one more villain to answer for treason," remarked the captain. Then, "Right about face," he commanded, and marched the prisoner to his cell.

Unnoticed, Cicely picked up her basket and slipped away. The next day near noon, she again entered the bailie's room

and found him sitting on a high stool at his desk. The man looked up. The maid's eyes met his in mute appeal. Neither spoke a word. Cicely silently set her basket on a chair and walked over to the man. She looked up into his face, her pretty lips trembling and her eyes filling with tears. "Couldst tell me, Master Bailie, my brother, is he still here?" she faltered.

"Yea," he answered shortly.

At his word the girl seemed to take fresh courage. She pressed closer to him and said, "Yester morn I was so confused by the arrival of Master Captain, and (with a gulp) my brother, that I lost all thought of Dame Mason's ale. Wouldst allow me to take it to the poor old woman now?"

"Thou knowest my orders. Why teasest me so. 'Tis of no avail," replied the bailie, testily.

Without a word Cicely walked over to her basket and pulled the cover off. Leaning down she took something out of the basket, covered with a napkin.

"Master Bailie, wouldst accept this pastry? I made it myself and would not be surprised if it were right toothsome."

The man laughed as he took the bit of pastry from the maid's hand.

"Thou art an able pleader, Mistress Howard. I would wager a pound the King himself could not withstand thy coaxing. Thou hast certainly learned the saying well, that the way to a man's heart is through his stomach."

Then raising his voice, the warden called lustily, "John! John! where art thou, thou lazy knave?" In answer to the summons, a sleepy-looking guard ambled into the room.

"Take Mistress Howard's basket, and conduct her to the women's cell," he ordered. "But hold, I must needs examine the basket, and see that thou hast nothing in it that would hurt the poor prisoners and make them sicken," and with mock solemnity the bailie lifted the clean napkin and inspected the contents of the basket. All he saw was a little flask of ale, two or three buns and a loaf of crisp looking bread.

"'Tis well," he said, with a nod of satisfaction. "I ween such looking bread wilt not hurt some of the wenches." Then turning to John, "Keep thy tongue still," he commanded.

Leaving the warden to enjoy his pastry, Cicely followed close to John's heels. Her little pattering footsteps were drowned by the thud of the guard's ponderous strides. Through court yards and many halls they passed and, making a sharp turn to the left, were stopped by a huge pile of stones.

"Huh," ejaculated John, "I had forgotten. 'Tis a bit of repairing they are doing. We canna pass. Thy visit must needs go 'til another day."

"Canst find no other way? Surely there must be another passage," Cicely answered as she peered around.

"Nay, only this. Except the one that leads through the east wing, and that is not fitten for thee," drawled the guard.

Cicely's heart leaped as she heard the words, "east wing." The very opportunity she was longing for had come.

"Then, we best take that. Lead the way, I prithee," she said, with quiet dignity.

John stared at her stupidly, muttered something about "queer notion," but nevertheless did as he was bidden.

Retracing their steps, the two crossed another court, went down some steps and entered a dark hallway. At first Cicely was dazed by the darkness. The foul odors sickened her so that she found it

necessary to lean against the wall until she felt better.

"I told thee 'twas so," said John. "We had best return."

"Na," replied the girl, "we'll proceed. Thou lead the way, but first give me the basket. Thou'll stumble and break the flask of ale, which would be a pity indeed, considering the trouble 'tis taken to get it here."

John gave the basket to Cicely's keeping, with a sleepy smile, and moved forward.

As soon as his back was turned, the girl quickly pulled the loaf from the basket and hid it under her cape, for she saw on entering that on one side of the hall were cells. "Charles must be in one," she thought. She would walk slowly on the pretense of illness and look carefully in each, until she found her brother. This she did, and about midway down the hall she found him.

Charles was standing, gazing out of a small window at the back of his cell. At the sound of the approaching footsteps, he turned and walked to the grating in the door. At that moment the eyes of the brother and sister met. Cicely gave one glance at the huge figure of John and saw that he did not notice her. Quickly pulling the loaf of bread from underneath her cape, she wedged it through the bars, and turning swiftly but silently caught up with the guard. At last Dame Mason's cell was reached, the ale and buns were left and Cicely returned home with a hopeful heart.

Charles stood where his sister had left him, listening until he could no longer hear her footsteps. He then went over to the window and examined the loaf of bread.

" 'Tis kind of little Cicely to bring this. I feel in sore need of it." Then a feverish excitement took hold of him as the word "hope," flashed through his mind. Could it have any connection with the loaf of bread? He spread his coat down on the floor and quietly broke the loaf. As he did so out fell a bright piece of steel, which proved to be a file, also a piece of paper, rolled into a tiny ball. Carefully unrolling it, he found the following written in his mother's hand:

"God bless and help thee, son. Through thy sister's efforts, we have learned that five days hence the good ship 'Goldenrod' leaves the harbor bound for America. Use thy wits and thy steel. Cicely and I will welcome thee on the boat. For thou knowest 'twill be well for us, too, to be out of harms way, when thy escape reaches the ears of my Lord Langeaster. If thou canst but reach the outer wall on the west, all will be safe, as the guard, Nick Blain, is our friend.

"THY MOTHER."

Scarcely had Charles read the note than he heard the door of the adjacent cell open. He sprang to his feet, gathered the coat together and threw it in the corner. When the jailer entered his cell with the noon rations, Charles was standing gazing out of the window, apparently in deep thought.

Finally the night on which he was to make his escape came. During the preceding days and nights, he had filed the bars of the window, one by one, in such a way, that the jailer had not noticed it. It was a hard task to complete the work, loosen the bars at the top and pull them carefully out, for they were tightly imbedded in the stone. For a man of lesser muscle than Charles, it would have been a task almost impossible. The bars once out, Charles squeezed himself through the opening and jumped to the ground. Keeping close to the shadows of the wall, he

ran to the other end of the court, through a gate and across another court to the west wall. This he scanned anxiously and saw a man running towards him. Charles sank into the shadow and with thumping heart waited. The man stopped a few feet from him, leaned down and whispered, "Charles Howard, art there?"

"Yea," answered Charles.

"Then take hold this rope, man, quickly!" and Charles was pulled up to the top of the wall, and in a twinkling, was on the other side.

That morning the sun shone on no happier group in all the world, than on the little family of Dame Howard, on the good ship "Goldenrod."

HELEN J. DICKEY, 04.

THE FATE OF THE TARDY STUDENT.

AN ALLEGORY.

BY THE AUTHOR OF "UNTOLD TALES."

I awoke with a start. A strange, troubled feeling wended its way through my drowsy brain. But upon directing my organs of vision on the small chronometer, resting on the shelf by my bed, the troubled feeling left me without warning and my brain began to whirl. The clock told me that the hour had come—aye, and had nearly gone,—and it was high time that I should be in action if I expected to arrive at school in time to catch a glimpse of my first recitation period. So I got out of my bed and into my clothes with all possible speed.

I entered the dining-room with a rush, but stopped with a jump. Not a dish had been touched; not a particle of food was in sight. Apparently I was not the only one who had overslept, but this fact did not console as much as it might have done under other circumstances; for if other members of the household were late also, it would but increase my tardiness. With a quick sigh of hunger I turned to the kitchen for relief. Bridget was nowhere to be seen. Not even a fire in the range to cheer a belated traveler, who should have been *traveling* at that very moment. Something must be done, and done quickly if I was to enter my classroom without the aid of an "admit." I ascended the stairs to tell mother we were cookless again. I called, but got no answer. I knocked at her chamber door, but got no response. I entered, but found no one! What a vexing state of affairs: no mother, no cook, and last,—but by no means least,—*no breakfast.* That didn't sound very much like "no tardy mark." I would arouse the other members of the family. But evidently they were not so easily aroused. I had expected it would take a few gallons of water to awaken my brother, but I thought I could awaken father by calling. He did not answer. Not being blessed with an over-amount of time or patience this morning, I hastened into his room to try the cold water cure on him. But my design was thwarted. He was not there. Rushing wildly into my brother's room, I found that deserted also!

What was the matter? Why had all the other members of the family left the house so early? Something unusual must have happened. But where had they gone? I stood still thinking. Glancing down the stair-case my eyes fell upon a little oaken cabinet attached to the wall on the landing. The telephone! A happy idea. I would phone down to father's office and learn what had happened.

I quickly jerked the receiver off the hook and waited for "central" to respond. For a minute, which seemed an hour, I patiently waited. Then I hung up the receiver and rattled it on the hook and placed it to my ear again. The only answer was the monotonous *burz-clank-ety-clank* of the wire, and after waiting another minute, which now seemed as long as two hours, I began to rattle the hook viciously and beat upon the box. Ah, a sad, small voice at last,—or was it only imagination?

"Hello! Hello, central!" I yelled excitedly. "Four-eight-six, Grand! Yes, yes, Grand!" But the only answer was the same old *burz-clank-ety-clank,* and a minute of three hours' duration slid silently by.

"Central! Hello, central!" I cried again, in tones one would use in trying to call the dead back to life. "No, central! No! No, I didn't get 'em, ring 'em again!"

Still the minutes lengthened, and still I waited with the patience of an habitual telephone user. Finally, I gave up in despair. "Central" was taking her usual morning nap or our 'phone was out of order. Either case was quite probable, so I hastened to the drug store to try my 'phonetic luck there.

Another surprise awaited me. For once the drug store was closed. I shook the door and it rattled loud enough to awaken a base ball umpire, but to no avail; and my already excellent temper steadily improved. I grasped the only alternative left; if I couldn't 'phone down town I must go down town.

Now, I had expected to wait ten or fifteen minutes for a car (one always does when one is late), but after I had stood on that corner about twenty-five minutes and had seen no car come from either direction, I applied this law of physics to the situation: "The length of the wait varies inversely as the square of the lateness of the waiter." In order to improve my appetite I decided to walk down town and by so doing beat the poor street railway company out of five cents, for my keen hunger had dulled the edge off of my conscience. So I walked, stopping occasionally to see that no trolley car climbed the rear horizon.

It was a few minutes after nine o'clock when I paused a moment in front of the Junction building. I counted my cash on hand, then collected my thoughts into this summary: In order to appease my hunger I must have breakfast; in order to have breakfast I must have money; in order to have money I must see my father, for at that time my "cash on hand," did not represent the par value of my appetite.

As I entered the New York Life building, I breathed a silent prayer that the elevators might be running. But they weren't. A little sermon which has been dinned into my ears since time immemorial came into my mind: "If you want to rise in life, begin at the bottom and go up." Here was an excellent opportunity to put theory into practice. "If you want to rise in *life*—it did not say "New York *Life*," but I thought so good advice would apply to any life. And thus

thinking, I began my way upward *"via" stairs.* I fixed the top as my goal, for my good father's office was located on the tenth floor. At each step my impatience, hunger, and weariness increased, but I persevered until at last the goal was reached. But, alas,—the door was locked; my father was not there.

With a sigh of acute disappointment I turned sadly away and went to the windows at the end of the corridor. As I stood there leaning wearily over the broad window sill looking down into the streets below, I observed at last that they were totally deserted! Not even the flagman at the Junction, not even a newsboy, not even an automobile or a street car,—not a living or moving thing was in sight. *No, not even a policeman!* Wonder gave way to amazement; amazement gave way to despair. I would fling myself from the window and end it all. I stepped through the open window out onto the stone ledge and was just preparing to let go and drop ten stories to the hard pavement below, when I suddenly remembered that I hadn't had any breakfast. So I climbed back inside and calmly descended the stairs. Once more on earth, I entered a restaurant and partook of a breakfast. After that I felt so much better that I changed my mind about committing suicide.

* * *

There is little more to tell. For three days and nights I minutely searched the town over, but not a human being could I find. So here I am; ruler, owner, mayor, alderman, policeman, fireman, and newspaper reporter of Greater Kansas City, living all alone, undisturbed in the "Deserted Village." As the days pass I sometimes think that its inhabitants will never return. I fear that Gabriel blew his trumpet that morning whilst I slept, and I awoke too late to take the train for glory with the crowd. Here undisturbed will I live; and the end of eternity will probably find me still trying to "make Kansas City a good place to live in."

E. Bernard Garnett, '04.

THE LEGEND OF THE GOLDEN TABLE.

"Senorita," said Polo the banana cutter, "you have called us a superstitious people, but the things I tell you are true. You foreigners do not believe what your eyes see."

"Foreigners," I gasped. "I'm not a foreigner. You're a foreigner yourself. But never mind, it's too warm to argue."

We were very good friends, this old Spaniard and I. Away in a foreign country it is nice to have some one to talk to whom you can understand.

"Yes," he was saying," a friend of my father saw this." "Um," said I, "it was always this way: "My father knew a friend who knew a friend, etc." But there was a whole morning and nothing to do. Besides, those Spanish legends are interesting.

"Up the Chamelocone a long, long way," he said in the vernacular, "you pass the most beautiful places on earth. The trees are bright green and the vines have blue, purple and yellow flowers all inter-

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THE NAUTILUS,
Manual Training High School,
Kansas City, Mo.

This year, contrary to the custom of previous years, the Sophomore class was organized. They have elected officers and adopted a constitution. Moreover, they showed an abundance of class spirit for a short time. But it seems that they will not decide upon colors or a pin this year and furthermore, and much more to be bewailed, will not entertain the Juniors. We hope, however, that the classes hereafter will organize during their Sophomore year and turn out as well as the present one is doing. The fact that a pupil is a member of an organized class makes him take more interest in school; and besides, the organization helps him in his Junior and Senior year, makes him feel more at home with himself and better acquainted with his fellow students who become "his classmates."

On March 6th the Societies of the school met and organized the "Manual Literary Society." The object of the organization being to further an interest in debating in this and other schools. It is hoped that the other high schools of the city will organize similar societies, and that joint debates will ensue. The rules governing the society are of the same general character as those of the Athletic Association. Membership is open to all who wish to join and who can get satisfactory reports from their different teachers.

Mr. Alfred Wagner was elected President of the Society and as it was due to his efforts and those of Mr. Robert Ridgeway that the society was made possible, the choice seems a good one and the organization cannot but prosper if the students will take an interest in it.

The other officers elected were: Vice-President, Miss Ruby Barnett; Secretary, Miss Helen Dickey. While one of the faculty will act as Business Manager.

If the "Luminary" wanted one of our plates badly enough to appropriate it without the formality of giving credit, it is to be regretted that our esteemed contemporary did not select a better one. This cut of our athlete is one of Simpson's "hurry up" sketches made while the printer waited.

The little drawing reproduced on next page is a familiar one to pupils of Manual. Many of the older classes remember well the comrade who made it. Freda Wulfing, whose tragic death last fall sad-

dened a larger circle than often mourns for a girl of seventeen.

Freda belonged to the class of 1903, and would have graduated this year. No pupil who ever attended Manual has won more universally the confidence and respect of her teachers, and the affection of her classmates. It was not alone because she was quick and eager in her studies, but because she had the greater and better qualities of faithfulness to her duties, and a heart honorable and kindly and true. She could not equivocate, nor speak, nor act ungenerously.

Of her talent for drawing this little picture speaks better than any person could. Drawn two years ago, in the spring of 1901, it shows a sympathetic and humorous love of children, and an observation of their ways and attitudes remarkable in a girl of fifteen. Freda was hesitating whether to fit herself for a kindergarten teacher, or for an illustrator of children's stories, and her drawings are sufficient evidence that she might have succeeded well in either field.

Last summer she left her home in this city with her aunt, Mrs. J. R. Brent, for a visit to Viroqua, Wisconsin. While there she went in the river one day bathing with a crowd of young people. Laughing and frolicking, they thoughtlessly went too far down the river. Suddenly the ground gave way, and the whole party found themselves in deep water. Few of the girls could swim. The boys made heroic efforts to save them, but Freda's rescuer was seized with cramp, and before anyone could go to his aid, the two young people perished together.

We have thought it fitting to publish this little drawing, and this sketch of its author, in memory of the sweet and gifted classmate of the class which is soon to leave us, and as a tribute to a pupil who was for three years a pleasure to classmates and teachers alike, and an honor to the school. F. C.

This is one of the two sketches that won the prize offered recently by the "World." We publish it because we think that it is interesting to note what the pupils themselves think would add most to our school. The other prize was won by Edwin Small, whose piece was unfortunately lost.

THE ART OF PRINTING.

The question has been asked, "What will add most to the attractiveness of the courses of Manual Training High School?"

We have nearly all of the essential requirements, yet it might be said we could have a very valuable and attractive course added, that is the art of printing. Reasons? First, the school could turn out proof-readers, copy-holders, editors, etc. And in time the school paper, "The Nautilus," might be printed there. Second,

boys who might not have any talent for drawing, or who might not have any taste for joining, etc., would, in all probability, take to this very readily.

And in after years when in the full glory of his manhood, one of the graduates should be working in some newspaper office getting a good salary, he should meet a less fortunate friend and (not a graduate of Manual Training High school) the latter should say, "Hello, Fred; gettin' there, ain't you? How did you learn proof-reading?"

"Well, it's a short story and I'll tell you. Years ago when I was a pupil of Manual, the "World" offered a prize to the pupil of our school who could write the best essay on "What Would Add Most to the Attractiveness of the Courses of the School." Well, some girl (might have been a freshman for all I know) wrote on "The Art of Printing." And, do you know, the board considered it and we got the printing course. That is where I learned proof-reading. And when I look back on my school days I always feel kind of sorry for the fellow who did not have a chance to go to "Manual."

FRANCES KLUNK.

OUR FRIDAY NIGHT ENTERTAINMENT.

The Friday morning entertainments have been so good lately, owing to the efforts of our faithful Mr. Phillips, that it is hard to pick out the best three or four which our space allows us to mention.

On January 16th, the program was excellent. There were two recitations which were greatly enjoyed by the pupils who always thoroughly appreciate anything of this kind. The speaker was Miss Helen Fairlamb, and the pieces she rendered were, "Grandma at the Masquerade," and "Seein' Things at Night." Miss Fairlamb is quite young and we think she deserves the greatest praise for her pleasing appearance and delivery. We also enjoyed on the same day a piano solo, the "Misereri" from "Il Trovatore," by Joe Hallinan, who is "one of our boys"; a vocal solo entitled "Were I a Star," by Miss Louis Dose; and a violin solo, "Fantasie," excellently rendered by Professor Ralph Wyley, accompanied at the piano by Mr. Elmer Harley.

On February 6, we enjoyed one of the most delightful programs we have had this year. It was a complimentary saxaphone program, given by the distinguished saxaphone player of Brooklyn, N. Y., Mr. E. H. Lefebre, assisted by Mrs. Florence La Folette Mackay and Mrs. Jennie Shultz.

For awhile it seemed that we must lose Mr. Lefebre, for our piano in the Auditorium could not be tuned high enough to harmonize with his saxaphone. But Mr. Carl Hoffman came gallantly to the rescue, and to our delight lent us a piano. In the name of the school we extend a hearty vote of thanks to Mr. Hoffman for this most gracious action.

The first number on the program was "Selections from Martha" by our orchestra. Then Mr. Lefebre played "The Gate of Heaven," by Tours. To say that the audience was delighted by this number would be to put it much too feebly. They were so moved that they gave him our special form of applause and this we would assure Mr. Lefebre happens only on very rare occasions. He next played a duet with Mrs. Florence La Folette Mackay, entitled "Pleasant Companions," which was also charming. Then followed a "Lullaby" by Mr. Lefebre, which was as enthusiastically received as the first. We must say that we sincerely hope that if Mr. Lefebre is ever in our city again he will not fail to visit his many friends and admirers at Manual.

On February 27, we were addressed by the illsutrious J. B. McMaster, the author of the history we use here in the ward schools. He spoke on "Our Early Political Ideals and Their Achievement." The pupils thoroughly enjoyed Mr. McMaster's pleasing address as their hearty applause testified. After this when "consuming the midnight oil" over history, we can recall Mr. McMaster's pleasant countenance and maybe it will lighten the work some.

SOMETHING ABOUT DIAMONDS.

"RAYS OF SUNSHINE."

"Diamond is quartz which has arrived at self-consciousness," or "Quartz is diamond which has become insane."

The diamond has long been considered an emblem of power and has taken an active part in many tragedies as well as in wars and tournaments. The resultant loss in one conquest for these precious stones has been far greater than that of many a military combat.

The diamond was known as early as three centuries B. C., only it was given the name "adamas" by the Greeks. It excels all other substances or minerals, for it has a remarkable composition, a strong refraction and dispersion of light, and is the hardest mineral in Nature, or rather is the hardest that has been fashioned by art. It belongs to the cubic or isometric system, all of its faces and edges being curved.

The Formation of Diamonds in Nature's Laboratory.

"The formation of the diamond is an unsolved problem." It is supposed, by some, that pipes, similar to veins of ore, are filled by the eruption of a mud volcano, containing all kinds of debris and mud together with diamonds, that have been formed in past ages. Before this, however, there are masses of molten iron, beneath the earth, at a great pressure and high temperature, holding carbon in solution. This is ready to crystallize on cooling. As the earth's surface cools, cracks are formed through which the water finds its way. Before reaching the iron, the water is converted into steam, which then acts upon the red-hot iron, forming iron-oxide and hydrogen, which together with the steam and other gases, rapidly penetrate the channels toward the surface until a vent is found. On account of the great pressure of the hydrogen and steam, the molten materials now fill the self-made pipe with rocks, oxide of iron, minerals, etc., in which the diamonds will be mixed, and all "churned together in a veritable witch's caldron."

Others believe that the diamonds have fallen as the meteorite and the volcanic pipes are but the holes these enormous meteors have made in falling.

Hardness.

Diamonds vary in hardness. Some white diamonds are so hard that they cannot be fashioned into a gem and so are useless, except for rock-boring purposes, To illustrate the hardness of a diamond, one was put on the flattened apex of a

conical block of steel, when a second cone of steel was brought down on the diamond; the cones were then forced together by hydraulic power. The diamond being without a flaw, was forced into the steel blocks without being injured in the slightest degree.

Combustibility.

The diamond is the only combustible gem. Its combustibility was ascertained in 1694 and '95. Before the blowpipe it is infusible; however, when heated in air or oxygen to a temperature from 760° to 875° C, according to hardness, it burns, leaving only a light ash and carbonic acid. The amount of the latter was proved, by Mr. Smith Tennant, to be equal to the oxygen consumed, which strongly affirms that the diamond is only pure carbon in the crystallized form.

On close examination of a crystal, a minute cavity or flaw may be seen, on the inside, which is filled with gas. On account of this many explosions occur with the diamond crystals, when held in the warm hand or pocket of miners. Therefore, for protection, many large diamonds, when sent to England, are inserted in raw potatoes.

Cutting.

All honor is due the cutter, for it is he who reveals the sunshine of the diamond, that excels all other gems as "the graces of Venus transcend those of all other goddesses of Olympus."

Most of the diamonds, after being shipped to London, in the rough, are then sent to Amsterdam and Antwerp, the great cutting centers of the world. Ludwig van Berquen discovered, in 1476, the art of cutting and polishing. In cutting a diamond, one is merely rubbed against another and then polished by holding the cut stone against a rapidly revolving wheel.

Some Attributes of Diamonds.

After exposure for some time to the sun, many diamonds glow in a dark-room. Some are fluorescent, appearing milky in the sunlight. Green diamonds, when phosphorescing in a good vacuum, have been known to give as much light as a candle, so that one might by the light they gave read with ease.

That diamonds crystallize from a liquid is verified by the form of their crystals, which are perfect on all sides, showing no irregularities by which they might have been attached to a support.

If genuine, the Graganza is the largest diamond ever known. Its weight is one thousand six hundred and eighty carats in the rough. Don John VI. had a hole drilled through it and wore it on gala days. Yet, the largest undoubted diamond is the Orloff, in the scepter of the emperor of Russia. It weighs one hundred ninety-four and three-fourths carats, and is cut in a rose form with a flat face below, resembling the half of a pigeon's egg. The Orloff is supposed to have adorned an Indian idol or belonged to Nadir Shah of Persia, in previous years.

India is the oldest and most celebrated source of diamonds. However, Brazil and South Africa are now the centers for the great production of them. The Cape diamonds of Africa are found at a depth of from three hundred to five hundred feet below the earth's surface; while in Brazil the diamonds are usually found in the sandy beds of the rivers.

The principal colors of diamonds are white, bluish white, yellow and brown; while green, blue and red are known. The most prized, however, are those that

combine brilliancy with decided tints of rose, green or blue.

Artificial Manufacture of Diamonds.

The art of manufacturing diamonds is due to Prof. Moissan. Carbon was thought, until recent years, to be non-volatile and infusible, but by the introduction of electricity, this theory has been altered; for it volatizes at an ordinary pressure and a temperature of 3600° C, passing from a solid to a gaseous state without liquifying. The critical pressure of carbon is about two thousand three hundred atmospheres or fifteen tons on the square inch.

Pure iron is first selected in the manufacture of diamonds. It is then packed in a carbon crucible with pure charcoal from sugar. One-half pound of this iron is then put into the body of an electric furnace and a powerful arc is formed close above it, between carbon poles, utilizing a current of 800 amperes at 40 volts pressure. The iron rapidly melts and saturates itself with carbon. After a few moments heating to a temperature above 4000° C. the current is broken and the fiery crucible is plunged into cold water, where it is held until it sinks below red heat. This sudden cooling solidifies the outer layer of iron and firmly holds the inner molten mass. The expansion of the inner liquid on solidifying causes an immense pressure, which separates the dissolved carbon in a transparent dense crystalline form,—as a diamond. This is now treated with hot nitro-hydrochloric acid, in order to dissolve the iron. Then the remaining product, diamond and various other minerals, is chemically treated until the latter are all dissolved, leaving only minute diamonds, which are of little commercial value.

Thus we see this artificial process of manufacturing diamonds is perhaps similar to that performed in Nature's Laboratory, and but demonstrates our constant looking to Nature for aid in our inventions and discoveries.

EMMA HUMFELD, '03.

THE UNDULATORY THEORY OF LIGHT.

Thomas Young, a Quaker physician, came to London in 1801. He was one of those prodigies who come but few times in the course of a century. Before his fourth birthday he had read through the Bible twice. When fourteen he could write in fourteen different languages. He seemed to have entered every available field of thought, and once he entered one, he seldom turned aside until he had reached the confines of the subject as then known. He occupied the chair of Natural Philosophy at the Royal Institution. In November, 1801, he delivered a lecture on "The Theory of Lights and Colors." Its reading marks an epoch in physical science; for here was brought forward, for the first time, convincing proof of that undulatory theory of light, with which every student of modern physics is familiar—the theory which holds that light is not a corporeal entity, but a mere vibration in the substance of an all pervading ether, just as sound is a vibration in the air, or in liquids or solids.

It was while pondering over the familiar, but puzzling phenomena of colored rings into which white light is broken

when reflected from thin films—Newton's rings, so-called—that an explanation occurred to him, which at once put the entire undulatory theory on a new footing. With sagacity of insight which we call genius, he saw of a sudden that the phenomena could be explained by supposing that when rays of light fall on a thin glass, part of the rays being reflected from the upper surface, other rays reflected from the lower surface might be so retarded in their course through the glass that the two sets would interfere with each other, the forward pulsation of one ray corresponding to the backward pulsation of another, thus neutralizing the effect. Some of the component pulsations of the light being thus effaced by mutual interference, the remaining rays would no longer give the optical effect of white light, hence the colors.

By following this color with mathematical precision, measuring the exact thickness of the plate and space between the different rings of color, Young was able to show mathematically what must be the length of pulsation for each of the different colors of the spectrum. He estimated that the undulations of red light, at the extreme lower end of the visible spectrum, must number about 37,640 to the inch, and pass any given spot at a rate of 463 millions of millions of undulations in a second, while the extreme violet numbers 59,750 undulations to the inch, or 735 millions of millions to the second.

Young similarly examined the colors that are produced by scratches on a smooth surface, in particular testing the light from "Mr. Coventry's exquisite micrometers," which consist of lines scratched on glass at measured intervals. These microscopic tests brought the same results as other experiments. The colors were produced at certain definite and measured angles, and the theory of interference of undulations explained them perfectly, which Young affirmed, with confidence, no other theory hitherto advanced could explain at all. Taking all the evidence together, Young declared that he considered the argument he had set forth in favor of the undulatory theory of light to be "sufficient and decisive." This doctrine of interference of undulations was the absolutely novel part of Young's theory. In 1802, Young performed other experiments before the Royal Society, which threw additional light on the doctrine of interference; and in 1803 he cited still others, which he affirmed brought the doctrine to complete demonstration. It was not until 1823 that philosophers gradually came to realize the merits of the theory which Young had vainly called to their attention, nearly a quarter of a century before.

I. O. N., '04.

MY OBSERVATION OF POND LIFE.

The pond, which became my field of study, lay in a depression formed by two ridges. The banks on either side sloped gently down to the water's edge; their upper parts were overgrown with thick grasses while the bank at the water-line was of firm clay.

Myriads of little animals made their homes on the banks and in the water. During the summer days it was my chief delight to sit in the shade and watch these creatures.

Over the water the dragon fly flitted to and fro. Each time she touched the water

a tiny egg was deposited. This egg soon hatches and the nymph comes forth. It spends its life in the water, crawling about on the mud in search of food. The color of its body so resembles the mud that one has to look twice to be sure that the nymph is a living creature. It is a ravenous eater from the beginning, so it soon outgrows its tough coat. Then the skin along the dorsal side splits and the animal gradually draws itself out. It is not an uncommon sight to see these empty skins upon the under side of stones and bits of drift wood in the water.

The mouth of the nymph is in the form of a trap. This trap can be extended and many a wandering insect falls a victim to its clutches. After moulting, the coat of the nymph is much larger, and just before the last moulting the nymph crawls upon the stem of some plant above the surface of the water. The skin splits along the back and the full grown dragon fly comes out. It remains on the stem until it is strong enough to go in search of food.

The long slender body of the dragon fly is tinged from a dark green to a bronze. The two pairs of large wings display every color of the rainbow. Its large black eyes cover about three-fourths of its head and give to the animal a very savage appearance.

But what is the mission of this creature? As all living creatures have some mission in life, so has he. He feeds upon the mosquitos and thus helps to rid man of one of his enemies.

The "lucky bugs," as the boys call them, are curious little creatures. How they scamper about! Their color is a shiny black, having a glazed effect, their shape is that of a boat. This shape enables them to move very rapidly over the water. Their legs are paddle-like to aid in the rapid movements. The "lucky bug" belongs to the Beetle family and its covering is very hard, serving as a protection.

While I stood watching the "lucky bug," a ripple of water attracted my attention. Moving very cautiously I saw the form of a crayfish. The crayfish is one of the most interesting creatures to be found in the pond. The large claws serve as a protection and aid in getting food. In the early spring the eggs of the crayfish are laid upon the swimmerets of the female. Here they are carried about until they hatch and the young are ready to care for themselves. During a lifetime the crayfish moults often. The shell splits from end to end and the animal with all its united force gradually draws itself out. Its covering is new and in a short time becomes much larger. When moulting is about to take place, the crayfish seeks a sheltered nook. Just after moulting its body is very soft, so at this time of life it becomes subjected to great destruction, for the other animals feed upon it. The crayfish live in nooks formed by the roots of trees, in the mud of the banks and under stones. They burrow into the mud for a distance of three or four feet, and make their homes. The mud is thrown up around the holes so as to form a protected opening. The crayfish is a scavenger and thus benefits man by eating the waste and decaying matter in the water.

The "Giant Water Bug" is another common inhabitant of the pond. Its body is boat-shaped and would make a good model for a submarine boat. Its covering is of a dark yellowish brown, very leathery in texture. Specialization has taken place in the legs, so they serve as paddles, when the insect moves through the water. The head is pointed and the setting of the small black eyes gives the animal a very

savage look. The "Giant Water Bug," like the crayfish, benefits man by eating decaying matter.

The tadpoles so thickly covered the bottom of the pond that the yellow mud appeared to be black. I dropped a stick into the water and how they scampered off. What peculiar little creatures they are; all head and tail! But they are still more curious when one foot develops and the tail gradually grows less. By casting the skin the tadpole grows much larger. After several sheddings, the little animal is changed into a frog. The frog grows larger by shedding its skin. The color of the frog is that of a slaty green, tinging to a yellowish green. This color resembles the water and thus serves as a protection. When coming to the surface for air, he never comes up in the same place. He will bob his head above the water, but when he sees danger is near, he is gone. Perhaps the next time he comes to the surface he will be on the opposite side of the pond. The frog makes his home in the mud on the bank and in the bottom of the pond. A small space is scooped out of the bank large enough to admit his body. Here he sits and catches his prey, the smaller insects. But at night he is very much alive and sings his melodious tunes, as he sits upon the bank in the moonlight. The eggs of the frog are laid in bunches upon the water. They resemble very much a mass of gelatine, being yellowish white in color, dotted with black. The black spots are the eggs, which are held together by the gelatinous mass. The egg produces the tadpole, the tadpole changes to a frog and the frog lays the eggs, thus forming a complete circle in the life history of the frog. It is a significant fact that the tadpole lives like a fish, while the frog lives upon the land.

One of the smallest, and perhaps the most troublesome, of the tenants of the pond, is the mosquito. The larva, or young one, comes out in the form of a "wiggle tail." By moulting the "wiggle tail" becomes a mosquito.

The last time the mosquito moults the larva comes to the surface of the water, the skin splits and the mosquito comes out. Here it remains for a while, floating about upon the water in this queer little boat, the empty skin. Then it flies off to be a tormenter of mankind.

But now winter is upon us and my tiny friends have gone. Over the pond Nature has spread a blanket of ice and snow But listen, think you there is no life beneath?

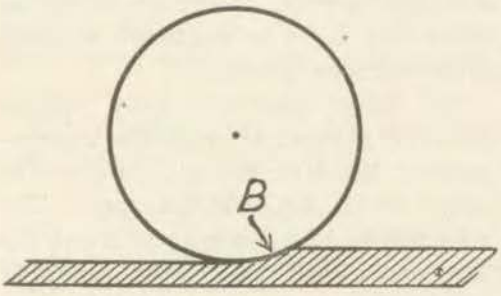
Nature is a wise mother and cares for her children well. This blanket serves as a protection, keeping the water beneath at a moderate temperature and thus these tiny creatures can live. Down deep in the mud the frogs and crayfish lie snugly in the lap of Mother Earth. The larvae of many of the insects lie here waiting for the spring days. When the first warm days return and the sun melts the blanket, down deep in the mud those creatures begin to stir. As the sun encourages them, one by one they come forth until the pond is full of life again.

Amy O. Jones, '03.

A PECULIARITY OF THE EADS BRIDGE.

A traveler, crossing the Eads Bridge at St. Louis, would hardly suppose that it is extremely elastic. But if he were a keen observer and had noticed the tracks on the bridge, he would have seen something peculiar. Every train that crosses the bridge causes the rails to slip or slide lengthwise a fraction of an inch. The spikes that could prevent the rails from slipping have never been invented. The rails slide the same way the train is going, not the opposite way.

When a steam roller is working on a new asphalt pavement, the asphalt is shoved slightly ahead of the engine. If we had tried to study out the action our



theory would probably be, that the engine would shove the asphalt backwards. But since we cannot change the facts we must arrange our theory to suit the case. Such has been the history of science.

Let us imagine the roller to be a circle and the lines to represent the asphalt. Directly under the circle is the greatest pressure. It is evident that when the pressure is great the asphalt could hardly slide backwards, for the weight of the machine is so much greater than the backward push of the roller. Then we may conclude that the asphalt at the point B is shoved forward, for it cannot shove the more compact material backwards. And this is true, for asphalt has been seen to move forward, slightly ahead of the roller.

But can we compare the action of the asphalt to that of the steel rails? Certainly, but with this difference that the rails do not permanently change in form or position, except to slide forwards. The same principle applies in both cases.

At the end of the bridge, toward which the rails slide, the tracks from the shore extend inside of the bridge tracks and being tapered allow the trains to pass over, and also force the sliding rails aside. When the end of a rail passes this point it is taken up, carried to the other end of the bridge and bolted to the other end of the bridge tracks. This device is used at both ends of the bridge.

VICTOR STEWART, '03.

Now that spring has opened, visions of base ball bats, vaulting poles and standards loom up before the athletic boy.

At Manual the boys are already getting prepared for the coming events of the spring.

The track team under the command of Captain Charles Shoop is getting into form by vaulting, high jumping, weight throwing and hurdling.

To stay in the Missouri Valley Inter-Scholastic High School Ieague, Manual must send a delegation to the meet at Lincoln this year; as the rule is, that if you miss two years in succession, you cannot stay in the league. The expenses will be paid by Manual and therefore the delegation will be limited to the takers of first place in the preliminary events, and of course every boy will put up a hard fight for his place.

But the meet at Lincoln will not be the only track meet this year. There is to be a meet between the four classes at school.

Each of the classes is now under the command of a captain. For the Seniors, Shoop is captain; for the Juniors, Chester Mann; for the Sophomores, Arnold Shawn; and last, but we hope not least, we have the Freshmen under their eminent Captain Switzgebel.

As for material, we have in Shoop the long-distance runner, sprinter, and pole vaulter; in Hallam we hope to find a weight thrower. There are numerous others that might be mentioned as being of an unknown quality.

The indoor meet held every year in the boys' gymnasium under the management of Mr. Hall will help to show the ability of the boys who take part. The meet will be held this year on March 27. The events will be in the following order:

1. Standing high jump.
2. Leaping pole vault on H. bar.
3. 100-pound dumb bell.
4. Hitch and kick.
5. Pull up.
6. High dive.
7. Stooping down on heels.
8. Fence vault.
9. 50-pound dumb bell.
10. Peg pole.
11. Dipping.
12. Climbing rope.
13. Double kick.
14. Ladder.

A meeting of the captains and managers of the Central, Westport, Kansas

City, Kansas, and Manual was held in February for the purpose of arranging the schedule, etc., for the coming base ball games. The Schmelzer ball was adopted with National League rules. Spalding's base ball guide and the two-umpire system will be used. Every player must have a credential from the principal of his school stating that he has been a *bona fide* student of that school since January 26.

Manual has but three or four of her last-year players with her. In our captain-pitcher, Foster, we have a good man, and with the other old players back in their positions, we should have no trouble in filling the remaining five or six places out of the thirty or forty boys who are trying for them.

Manager Peters is doing all in his power to fit out the boys, and they are likely to be seen in new uniforms this year.

The schedule adopted for this year is as follows:

CENTRAL.

AT HOME.

April 18.—Westport.
April 25.—Manual.
May 2.—Kansas City, Kans.

ABROAD.

April 16.—Kansas City, Kans.
May 9.—Westport.
May 16.—Manual.

KANSAS CITY, KANS.

AT HOME.

April 11.—Central.
April 18.—Manual.
April 25.—Westport.

ABROAD.

May 2.—Central.
May 9.—Manual.
May 16.—Westport.

WESTPORT.

AT HOME.

April 11.—Manual.
May 9.—Central.
May 16.—Kansas City, Kans.

ABROAD.

April 18.—Central.
April 25.—Kansas City, Kans.
May 2.—Manual.

MANUAL.

AT HOME.

May 2.—Westport.
May 9.—Kansas City, Kans.
May 16.—Central.

ABROAD.

April 11.—Westport.
April 18.—Central.
April 25.—Kansas City, Kans.

THE OLYMPIAN GAMES.

In these days we are accustomed to look back on the doings of the ancient Greeks as misty with far distance. But now with the revival of the Olympian games, which we hope to have in nineteen hundred and four, in the great Stadion they have built at Chicago, a review of these games should prove of interest.

Their origin is uncertain, and the honor thereof is claimed by various peoples of Greece, but those with which we have to deal were held in the country of Elis, in the Pelomonnesian peninsula.

Round about the town rose the Messenian hills and Mount Cronion, within lay the Stadion, which was restored

in eighteen hundred ninety-six, and a great gymnasium. Also a palaestra for boxing and wrestling; a hippodrome for the later chariot races, and various temples, among them that of the Olympian Zeus, in which the victors in the games were crowned with olive wreaths.

These games began in eight hundred eighty-four B. C., and continued until the year three hundred ninety-four A. D., when they were finally abolished by the Emperor Theodosius, not to be revived for fifteen hundred years. During all of their existence, they recurred at intervals of four years, which intervals were called Olympiads.

The object of the games was more than mere amusement. They were of international importance, and were invested with a deep religious sentiment.

At first they lasted but one day, but gradually the people demanded more, and the time of duration was increased to five days. Of these, the first was devoted to sacrifices, the succeeding three were spent in various contests, and the last was for sacrifices, processions, and banquets.

From contests of one event, the single foot race, the games passed through the successive additions of the double foot race, wrestling and other athletic events in the eighth century B. C., boxing, the four-horse chariot race, then boys' wrestling and boxing, foot-races in full armor and in the fifth century the two-horse chariot races. In the year sixty-eight A. D., Nero introduced the musical contests, so delightfully shown to us in "Quo Vadis."

Later the contests were diversified with readings, for when a poet had done well in his own estimation, he either came here and recited his own verses, or had them recited by skillful elocutionists. Here Herodotus first read his history to the multitude.

To be a victor in these contests was to attain the height of glory, for when a victor had been crowned with olive, heralds proclaimed aloud his name, together with those of his father and of his native place. Then he was given the privilege of building in his own honor a statue of himself in a certain spot in the sacred Altis. Some of the wealthy charioteers, not content with bequeathing to the world their images, had also likenesses of their horses and chariots cast in bronze.

Only the highest type of manhood was admitted to these contests. Criminals or those showing evidence of the slightest blood impurity were debarred, and if one were admitted, he must have undergone ten months of training in the gymnasium just before the race. Greatest care was taken in the selection of the judges, that their characters be above the slightest shadow of a possibility of bribery or unfair dealing.

It is said by critics today, that the Greek and Spartan athletes could not hold their own in a contest with the athletes which this generation boasts, but I consider this an open question, partially closed in favor of the sons of Greece and Sparta. DOTTIE HEWITT.

At the last regular meeting of the Athletic Association it was planned that as soon as possible one of the parks should be rented for the joint use of the base ball and track teams. R. D. B.

The editor of this department has in his possession a few editions of the Missouri University Independent, which he was kindly asked to distribute among the foot ball team. This issue of the Independent was edited by Daniel McFarland a Kansas City boy. It is an athletic number and has a long and splendid article on their new coach, John F. McLean, also a cut of Mr. McLean.

THE PRINTING OF A BOOK.

Let us suppose that one of our bright students has written a book of modern fiction and has been so fortunate as to have some publisher agree to print the book.

After the manuscript has been accepted it is divided into small portions called "takes." These are distributed among the type-setters who are to put them in type. The work is usually done by the type-setting machines. Each one of these machines can do the work of five men and it is not long before the proofs are being examined. After all corrections have been made the type now in the form of pages is either taken to the foundry and electrotyped or locked in iron frames called "chases."

The plates or pages in type are then placed on the press and securely fastened. A trial impression is then taken. This will probably be light in some places and in other places the type will have nearly cut through the paper. A pressman now takes the proof-sheet and runs a pencil over certain portions of its reverse side. With these lines as a guide he pastes slip after slip of very thin paper cut in various shapes and sizes. This serves to increase or decrease the pressure brought to bear in various places on the sheet to be printed. The process is known as "making ready," and a great deal of painstaking care is required to prepare each "form" or set of pages. After a fair proof has been turned out the actual printing soon begins. As fast as the piles of damp sheets rise on the delivery boards at the ends of the different presses that may be doing the work, they are carried away to machines which fold them until each is a bundle of consecutive pages a little larger than the size of the prospective book page.

The sheets are now taken to a double row of tables and placed in piles, from which a girl, who passes up and down between the tables, lifts a sheet in turn. When she has all the pages of the book, she places each set of pages or "signature" in their proper places. After verifying by a glance at the signature numbers, the sheets are carried to a long bedded press and there under great pressure, are strapped beteen boards for convenience in handling. Next, they go through machines in which swiftly revolving, circular needles sew each signature, and binds all together. After being trimmed to the proper size they are clamped fast while a roller rounds off the backs.

In the meantime a machine which acts with almost human ingenuity, and with more than human precision, has been picking up two pieces at a time of smoothly cut binder's board and quickly gluing colored cloth over them. Another machine stamps indelibly, in color, on the front of the cloth covered board, the title of the book, the author's and publisher's names, and other decorations that are to appear

At home I had often seen steam emerging from a kettle and in answer to my inquiry had been told that something was stewing for dinner. I recalled this fact in my emergency. I also remembered having learned in Physics that steam must come from some liquid. The only liquids we had in camp were condensed milk and water. As the milk was rather thick, I used water—about enough to cover the beans in the kettle. Then I built a fire and set them on to boil. (This is something else I learned from Physics, for I knew that water must boil before there could be any steam.) The beans were now off my mind for a short time—a short time indeed.

Next came the venison, but I had often fried eggs at home and soon finished the task and set the steaming slices aside. (I will say here that they did not sit long, for from time to time I visited the pan and when the biscuits were out of the stove, this part of the dinner had to be prepared again.)

Last of all came the biscuits. This is the most important part of a meal. If one has good biscuit he can overlook the burnt steak and potatoes, but if the biscuit are bad the rest of the meal is very likely to be proportionally spoiled. I knew from my observation, conversation and readings, that the ingredients which went to make biscuit were flour, lard, water, baking powder, soda, buttermilk, salt and pepper. I was not very confident on this last point, but then salt and pepper always go together and I thought that it could be easily overlooked if I only put in a little. We had no soda or buttermilk in camp, so much to my regret I was compelled to omit the soda. However, after I had tried quite a while to think of some way to get buttermilk from condensed milk, I hit upon the following plan, which I gladly recommend.

The principal things noticed in buttermilk are a thick milky-like substance, butter, a watery liquid and a slightly acid taste. For the thick substance I substituted condensed milk, one gill. For the butter, packed butter, one table spoonful. While the juice of six lemons and a little water made an excellent substitute for the watery ingredients and the acid taste. I shook this well to mix it up and had a pint of excellent buttermilk.

The mental labor involved in the above discovery was so great that it put my brain in a whirl and completely jumbled my thoughts. Such terms as sifterfulls, half cupfulls, teaspoonfulls and pinches were sadly confused in my tired brain. However, after a process of logical reasoning greatly helped by my Geometry, I decided that "sifter full" referred to flour; "cups full," or one-half full, to lard, baking powder and water; teaspoonfuls to salt and pinches to pepper. (Your teachers are not wrong you see when they tell you several times a day that Geometry helps you to reason.)

The next question to be debated was, how many sifters full of flour are required to make enough for a hungry boy. The answer I finally decided upon was two. I sifted this amount into a pan, carefully picking up all I spilled. I knew that no one could tell the dirt from the pepper. I had learned the use of pepper already.

Now, what comes next? I knew that there was a certain order which should be observed, but I did not know what that order was. Should lard, water, buttermilk, or baking powder come next. I determined at length to put them all in at once. But I found, after a thorough search, only three empty cups, and besides how could I empty four cupfulls of things into a pan at one time with only two

hands? When this plan failed, I drew straws, or to be more accurate, pine needles, and the lard won. I got about three-fourths of a cup of lard and putting it in the pan began to mix it with the flour. It did not mix well, however, for although they seemed to be especially intimate in spots, the lard was strangely conservative and would not spread out and mix with the flour as a whole. This was rather disgusting I thought, after having given it the first place. But I consoled myself with a large piece of venison and a short rest.

As I ate I meditated on the matter more calmly and remembered hearing that lard was put in biscuit to shorten them, while the baking powder was put in them to raise or lengthen them, so to speak. I decided, therefore, that as I had put in the shortening the lengthening ought to come next. I also thought I should use the same amount, three-fourths of a cupful. (I would remark here that it seems to me from the logic shown in the above mental process that venison is as valuable as Geometry as an incentive to reasoning, but then Geometry can be obtained in large quantities easier.)

The baking powder mixed up well with the flour, but it did not agree with the lard. The enmity seemed perfectly natural to me as their purposes in life were opposite. I thoroughly agreed with the baking powder, too; for it had a more elevating aim, I thought.

Now, only two more things to be put in, a pint of buttermilk and a cup of water. I put them in at the same time to save debating the question. The ingredients mixed very well. Adding a tablespoonful of salt and a large pinch of pepper, I had them ready to roll out.

I took off my coat and daubed flour on my arms up to my elbows. I had some trouble in doing this. In fact, I had to wet my arms to make the flour stick. I did not know what it was for, but then cooks always seemed to be so and I wished to be entirely right. It was a great deal of trouble getting the biscuit rolled out, but I persevered and at last had ten biscuit, each one inch thick and four inches in diameter.

They looked beautiful as they sat there, and already my palate was tickling in anticipation of the feast.

"Always have a hot oven for biscuit," I had often heard my mother say. So I got a lot of brush wood and made a hot fire. So hot indeed that the sides of our little tin oven were red. Then three biscuit were placed in a pan, it would not hold any more, and with a prayer for their preservation I put them in.

"Now I can wash my hands." I go to the creek, get a bucket of water and am busily engaged in scrubbing that awful mixture off my hands with soap and sand, when I detect a faint, peculiar odor stealing through the air. My biscuit! I rush back and fling open the oven door, burning my hand fearfully. A cloud of smoke and a terrible smell rush out to greet me. Where is a rag, a towel, anything? I seize two sticks and try in desperation to lift them out with these. Out they come. When they have cooled a little, I try one; but almost immediately remember that the doctors say hot biscuit never are good for me and these are no exception. That night I put them on the table for the rest of the people, thinking to surprise them by my generosity. They merely looked at them, however, and made sarcastic remarks about my cooking. The next morning I tried them on Bum, my horse. I had heard that an animal's love may be won in this way and as Bum was a kicker I wished very much to win his. He turned up his nose at them, however, and incidentally his heels and I barely escaped with my life.

At last with mournful tread and downcast eyes I bore them half a mile from camp and placed them by a log. Here, from time to time, in the days that followed, I visited them. They never changed. They shed rain. The animals were defied. Winds and storms harmed them not. In short, I had invented something which defied time. No doubt some professor in some age that is to come will grow bent and wrinkled with age trying to trace the origin of these fossils of the age of Culinary Art and Advancement.

S. E., '04.

NEEDLEWORK OF THE PAST AND PRESENT.

The introduction of needlework as an art in the public schools within the last few years, brings to the mind of the student the fact that, along with other arts, needlework has made rapid strides in the journey towards perfection.

The first needles according to tradition were thorns. History tells us that the early inhabitants of Great Britain used small fish bones crudely sharpened at one end with which they sewed skins of animals. Bone needles with eyes were also found in the reindeer caves of France. Needles of bronze were used, but very few of iron. The steel needles were first made in Nuremburg in 1370, but it was not until 1650 that their manufacture became important.

In the ancient temples of worship, needlework played a very important part, as all the vestments and altar ornamentation was of the finest workmanship. However, it is to Egypt that we owe our present perfection in the art of sewing, for the Egyptian maidens were noted for their skill in the embroidery used in the service of the Tabernacle. The loom was in existence even at this early date and a fine thread of gold was often woven in a linen fabric and was also used in embroidery.

In 1066 we read of the wonderful Baycux tapestry which was supposed to have been wrought by Matilda, the wife of the conquering Duke of Normandy. Matilda, in her tapestry, perpetuated the story of her husband's brave deeds, and indeed, it is of great value to history as it exhibits the manners and costumes of that age as nothing else could. It is worked with different colored worsted on white cloth, but time has turned it brown. The worsteds are somewhat faded and as the people of that time had very few colors at their disposal, that is probably the reason for the blue, green, red and yellow horses which frequently occur in the work. The different tableaus of events are separated from each other by a tree extending the width of the tapestry and above each scene are the names of the principal actors. This specimen of ancient needlework is still in existence in the town hall of Rouen, France.

In the days of Queen Elizabeth, although needlework was not popular, yet it was recognized as a needful accomplishment for every lady. Queen Elizabeth herself was an accomplished needlewoman, and many books with patterns for needlework were published at this time and one a little later, which speaks of Elizabeth as especially skillful in the art. Ornamental needlework was much admired as almost every article of dress was adorned by it. Then also in the courts and palaces everything was resplendent with gold, silver and silk of various colors. The tapestries were of the finest and the hangings of the state chambers were said to be lavishly adorned with the richest embroidery.

From the time of Queen Elizabeth down to the time of the invention of the sewing machine, needlework played an important part for pastime as well as employment for women of all classes.

The sewing machine was invented in 1846 by Elias Howe of Cambridge, Mass., and although it is a great saver of labor and time, yet it does not take the place of the handwork. Indeed, at the present day, there is a great demand among the wealthy for the handwork done in the French convents. Sewing machines are so universally used in the homes that we wonder how our great-grandmothers ever got along without them. Possibly the simplicity of life and dress at this time made fewer demands upon their time than at the present period.

ALICE I. MARQUIS, '03.

EXCHANGES

ODE TO THE PONY.

Friend of our fathers, known of old,
Steed of student of every clime,
We fain would have thy praises told,
Thy hoof prints left in sand of time;
Friend of our fathers, bear us yet,
Lest we forget, lest we forget.

The college halls grow gray with age,
The presidents and profs. depart;
Few still live on save thou and Rage—
Thou idol of the freshman's heart;
Pride of our course, trot with us yet,
Lest we forget, lest we forget.

The cribber bold that puts his trust
In printed cuff or pony's word—
No tough exam. by him is cussed,
No vain regret from him is heard;
And ages still to come, you bet,
Will ride on thee—lest they forget.—Ex.

First miss (confidentially):—"He said I was a poem."

Second miss (sarcastically):—"Did he scan your feet?"—Ex.

He:—"What makes you so angry at the doctor?"

She:—"When I told him I had such a dreadfully tired feeling, he asked me to show him my tongue."—Spectator.

Kind old lady:—"Poor man! You look as if you had seen better days."

Frayed Fagin:—"I have mum, once I dwelt in granite walls."

"And how did you lose such a home?"

"Me term expired."—Ex.

Profs. are stranger than fiction.—Ex.

Kind old gentleman seeing small boy in tears:—"Little fellow, tell me, how did it happen?"

Small boy:—"It didn't happen; pa did it on purpose."—Ex.

Aunt Dinah (to her son and heir):—"Heah, yo' Cotton C. Doyle Johnsing, yo take dat key outen yo' mouf! Yo' want to git de lockjaw?"—Ex.

Chimmy:—"Wot's de best way to teach a girl to swim?"

Johnny:—"Well, yer want ter take her gently by de hand, lead her gently down to de water, put your arm gently around her waist, and—"

Chimmy:—"Oh, cut it out! It's me sister!"

Johnny:—"Oh! Push her off de rock."—Ex.

Professor (dictating Greek prose):—"Slave, where is thy horse?"

Startled Senior:—"It's under my chair, but I wasn't using it."—Ex.

Her lips were so near,
That what else could I do!
You'll be angry I fear,
But her lips were so near,
Well I can't make it clear
Or explain it to you;
But her lips were so near
That what else could I do!—Ex.

Distance lends enchantment to the Prof. —Ex.

Don't work an easy Prof. to death.—Ex.

Arthur:—"I think mamma is an awful gossip."

Ethel:—"O, Arthur! how can you say such a thing?"

Arthur:—"Well, she is; everything I do she immediately goes and tells papa. I hate gossip."—Purple and White.

"Let me print a kiss on your cheek" said he,
And she smiled a sweet submission,
So they went to press and I rather guess,
They printed a large editon.—Ex.

Alice:—"When Jack had confessed his love and I mine, he said he felt sure I loved him, for he could read me like a book."

Bess:—"Indeed! And then of course, he swore to be true and kissed the book."—Ex.

"How goes it now at college, John?"
A father once petitioned.
Then quickly came the answer back,
"I'm very well conditioned."

Wise Freshman:—"If any one can stop a minute, why doesn't some one stop the flight of time?"—Ex.

Angry Mother:—"Now, Bobby, don't let me speak to you again!"

Bobby, helplessly:—"How can I prevent you?"—Ex.

Mary had a little lamp,
A jealous lamp no doubt;
For when Mary's beaux went in
Why, the little lamp went out.
—Messenger.

"He is a man after my own heart," the society belle remarked, as she opened the letter containing his proposal. "But," she added reflectively, as she dictated her refusal to her stenographer, "a person may be after a great many things that he doesn't get."—Ex.

He guessed he'd guess for his degree,
But guessed his guess in vain,
For he guessed without the Faculty
Who guessed he'd guess again.—Ex.

A small boy of four summers was riding on a rocking-horse with a companion. He was seated rather uncomfortably on the horse's neck. After a reflective pause he said: "I think if one of us gets off, I could ride much better."—Ex.

"One heart is one
And one heart is one
When one heart is won
Then two hearts are one."—Ex.

Pat:—"Do you believe in dreams, Moike?"

Moike:—"Faith an' I do; last night I dreamt I was awake, and in the morning my dream kem true."—Ex.

"Paw," said little Willie, "is they such a thing as a 'cradle of the deep?'"

"Certainly, son, replied Paw. There's got to be something to stop the squalls at sea."—Ex.

"Bobby," cried Tadley to his young hopeful, angrily, "my father used to whip me when I behaved as badly as you are doing."

"Well," answered Bobby, thoughtfully, "I hope I'll never have to tell my little boy that."—Ex.

My son shall sit on England's throne
With all that job entails;
For judging by his midnight voice
He is the prince of wails.—Ex.

Freshman:—"Say, will I look like you when I grow up?"

Senior:—"Certainly, my son."

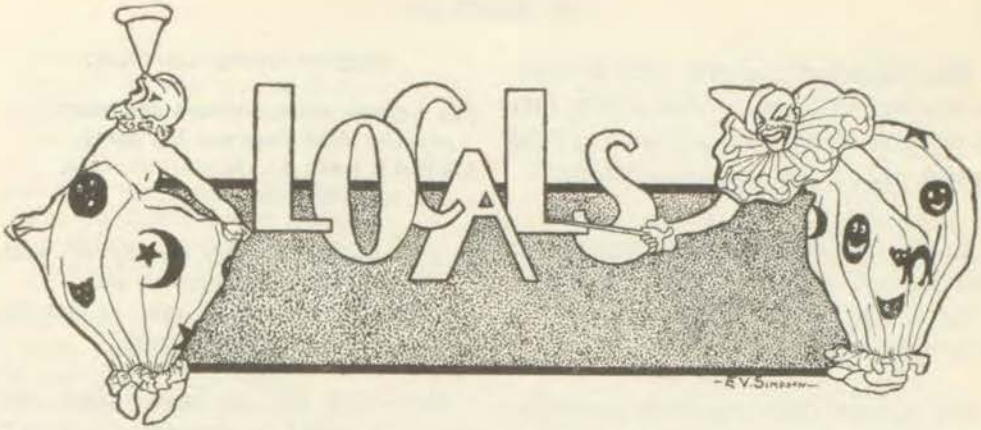
Freshman:—Then I don't care how soon they bring out the axe.—Ex.

Tired Tompkins:—"Dey say dat some poets gits a dollar a word."

Plodding Pete:—"Dat ain't nuthin', I got two dollars a word once."

Tired Tompkins:—"What fer?"

Plodding Pete:—"Fer sassin' de jedge."—Ex.



Mr. Myles to Freshman:—"See here, I want gauge lines, not irrigation ditches."

French student, translating:—"He sat down on his face."

Mr. Phillips:—"Now we are able to see Jupiter's four rings which are six!"

Miss Jenkins:—"Why do they call bureaus of information bureaus?"

Bright Pupil:—"Because you never can find what you are looking for."

"I shall tell father if you attempt to kiss me!"

He hesitated.

"Father is out to Council meeting," she hastened to explain, then cast her eyes meekly down and waited.

Why did all the Debators go to the Winter Circus on children's day?

Freshie in Phys. Geog.:—"The other day when I measured Missouri—"

'03:—"They never have any quarrels in the M. S. D. meetings."

'04:—"Is that so?"

'03:—"Yes, all their heated discussions are called 'debates.'"

Teacher:—"Mr. Funk, what is work?"

William:—"I don't know."

Alfred:—"Oh, I know that, but my mind was not here at the moment."

This is awful, Alfred, your heart is enough to leave in Kentucky.

"At which theaters are the back rows taken first?"

"Special matinees in room 25."

Here is one of Selma's brilliant ideas: "When you don't wish your face noticed, wear badges instead of paint."

Mr. Funk has said to his friends in a relieved tone: "I have at last fallen in love!"

Mr. McCurdy:—"You can see better in this experiment with both eyes shut."

Waterman Stone is requested to remember of the pupils in his classes are *not* deaf.

Mr. Page is at last married, but, girls, Mr. Burr is now on the auction stand.

Miss Fisher:—"No, Egbert, I wouldn't curl Allan's hair now, it looks very well."

Miss Bachelor uses two cakes of yeast to one loaf of bread. What a pity that Sophomore spirit and politics can't be bottled up. It would raise anything."

In physics we learn that music is a pleasing and noise an unpleasing sound. What is that sound that comes from the girls' gym.?

We learned that bread has energy to raise itself 500 feet. How high would a piece of limburger soar?

Mr. Dodd:—"How many rods in a mile?"

Pupil:—"Let X equal that.

William said: "Not that I love the Debators less, but Mable Moore."

Mr. X:—"Hello! How's Mr. Stewart?"

Mr. S:—"He is still Victor."

Mr. Miller says that parlor *matches* are never considered dangerous.

All year Lionel has been a sleuth on the track of an O. Z. O. pin.

At a party given the other evening a toast to the O. Z. O.'s won the booby prize.

Girl sitting near Alfred:—"I'd like to draw his head."

Her Friend:—"Better get a larger piece of paper."

The following lines were dedicated to one of the Oitas:

Red and yellow becomes you fair
Red and green sets off your hair
But why are these three colors chose?
For I. O. N. and Debator beaux.

HAS IT COME TO THIS?

The burglar slowly opened the safe,
And the sight that met his gaze;
Gradually made his hands turn cold,
And his hair began to raise.

At a glance he knew his fortune was made
And his eyes commenced to roll,
For there snugly tucked away in that safe
Was a hod of anthracite coal.

He:—"I'd like to hear Robert propose. It would be something killing."

Anne (indignantly):—"It wouldn't be anything of the kind. He just proposes beautifully."

Joe tried to get an Oita pin to Fill(ey) up that vacant spot and at last succeeded.

When I was a Freshman, I suffered taunts galore,
Now I am a Sophomore, they bother me no more.

Burtie:—"I fumed all the time I got my French lesson."

Egbert:—"I didn't know you smoked."

Warning to blondes—Please have a care. Mr. Burr has a failing in that line.

Mr. Funck credits himself with saying that he drew a hen so true to life that when the editor threw it in the basket, it laid there.

Mrs. Elston in 3A English class:—"I want you to stand and talk on your feet.

Lionel says he wouldn't wear any pin but I. M. P's.

Pupil in Drawing:—"Miss Rapp, my nose is so crooked I want to cry."

Conny may be able to spin tops, but he can't spin his red top.

There's nothing new in literature,
There's nothing new in art;
The Chinese claim they knew it all
Before we got a start.

And folks who see the Pyramids
And travel where they please,
Declare that the Egyptians were
Ahead of the Chinese.

Each little joke that some one tells,
Each passing subtle jab
Is very likely to be found
On some Babylonian slab.

But why pursue this direful rhyme
With no relief in view;
There is no good in telling men
That there is nothing new.

ODE TO OUR PHYSICS TEACHER.

Let dogs delight to bark and bite
For it's their nature to,
Let teachers bold, as usual scold,
But, Mr. Page, not you.

From every side, both near and wide
There comes a loud bewailing
His eyes flash fire, he speaks with ire,
And threatens us with failing.

Our hearts are sore, unto the core,
Our eyes are dim with weeping
But Mr. Page, he still doth rage,
Alas! our woes are heaping.

Oh, teacher dear, (?) our prayers hear,
Accept our deep contrition;
And as of yore, please smile once more,
Oh, list to our petition.

"Retrace those words!" said he, and she set the typewriter back.

Here is one on Mr. May
At the girls he grins and runs away.

Editor's Note.—This is not quite true in one case.

To E. T. B.

"We wonder, and still our wonder grows
That one small head can carry all he knows."

A swordfish which had ventured near land threatened to destroy a pig's pen on the shore.

"Beware, beware," squeaked a bespectacled baby pig (a Bostonian by birth and culture), "the pen is mightier than the sword."

No moral.—Ex.

Donald and John, the two side pockets of the I. O. N.'s.

Oita in Assembly Hall:—"I'm so glad Trice Bryant sits between Mr. Chase and us. His head hides us from view."

Jim Dumps once called on Sally Lunn,
Against her father's threat —
He "Presto" pressed her to his heart—
The dearest girl he'd met.

Just then the father came down stairs,
And Jim paused in his suit,
The "Force" that moved him from the house
Was Sally's father's boot.

A MILK TOAST.

Here's to the freshman with his innocent ways,
(Milk instead of wine.)
Here's to the sophomore who loves his books,—
Especially, at Christmas time.
Here's to the Juniors with those "Dreamy Eyes,"—
His thoughts have turned to rhyme.
Here's to the Seniors who joyfully await—
"The Good Old Summer Time."

The Local Editors offer an apology for these WITTICISMS without WIT, but if you don't send us any with wit in, what are we to do?

QUESTIONS OF INFORMATION.

How long does that Fairman primp before the mirror each day?

Why does Allan blush when he looks at Dorothy?

Where was William's Debator pin?

What has become of the Science Club?

Will some kind-hearted soul furnish us with a microscope to discover the once famous Waterman?

Has any one heard of the Glee Club?

What *book* does Robert need to study most?

Where is the Sophomore class?

These advertisers are among the most reliable in town.

New Things to See.

Easter comes on April 12th, this year. Most every woman gets ready with the new garments in time to let Easter serve as the initial introduction.

With this thought in mind we prepared so as to have complete stocks of New Spring Merchandise early enough for Easter buying.

Dress materials, in both the woolen and cotton fabrics; silks, laces, ribbons, embroideries for dress trimming—all the new accessories to the fashionably styled costumes are ready.

Our new Spring Hosiery, Underwear and Gloves deserve special notice as you go through the store.

We extend our welcome to any strangers who may be in town. Everybody in Kansas City has a sort of ownership in our store; a come-at-will and do-as-you-please feeling of possession. And so we want all comers to feel.

The store is especially bright and cheery now. Gay colors, dazzling arrays of spring merchandise all create sunshiny dispositions to those who drink in the beauty.

Wander at will, upstairs and down, rest in the waiting rooms, ask questions, buy or not, just as you please. We only want you to to take a bright thought about this store.

In the Suit Room, for women, are numerous ideas entirely new to spring dressing. We have handsome Imported Dresses, lavishly trimmed with gorgeous laces, priced as high as $150.00; we also have the ready-to-wear Tailor Suits, correctly fashioned and tailored, made in the popular fabrics for spring and priced so that it is a comparatively small cost to buy one.

The Suit Room offers many attractions in the way of interesting styles, etc.

As to Spring Shoes—There's difference enough in Women's Shoes here to suit any taste. Low cut or high, button or lace, low heels or the Frenchiest of French. Nothing that isn't neat and our indorsement back of every pair we sell. A standing invitation goes out for all to examine and familiarize yourselves with the new spring creations that are now on display. Remember that Easter is but four weeks off; after that—Spring.

Walnut 11th Sts. Grand Ave

Emery, Bird, Thayer Co.

Successors to BULLENE, MOORE, EMERY & CO.

Walnut 11th Sts. Grand Ave

NAUTILUS

MAY

1903

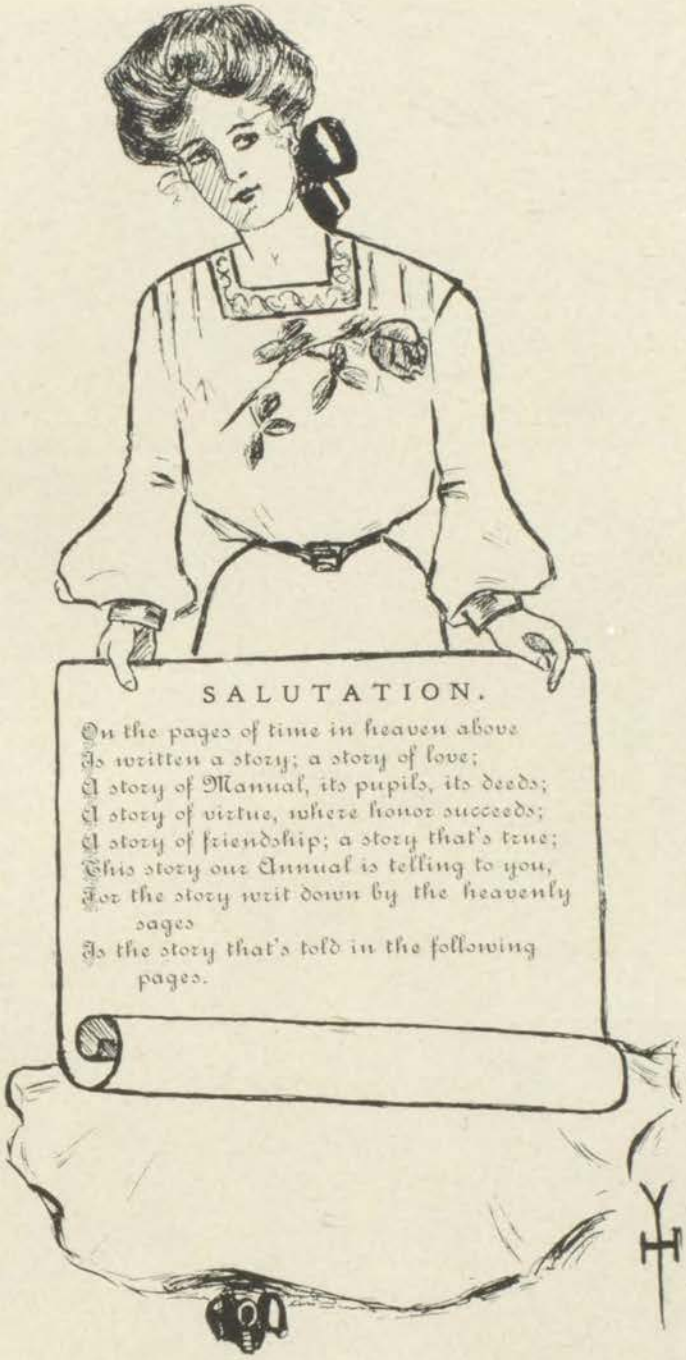
VOL 6 NO 4

ANNUAL

MANUAL TRAINING
HIGH SCHOOL

MANUAL TRAINING HIGH SCHOOL

KANSAS CITY MISSOURI



SALUTATION.

On the pages of time in heaven above
Is written a story; a story of love;
A story of Manual, its pupils, its deeds;
A story of virtue, where honor succeeds;
A story of friendship; a story that's true;
This story our Annual is telling to you,
For the story writ down by the heavenly sages
Is the story that's told in the following pages.

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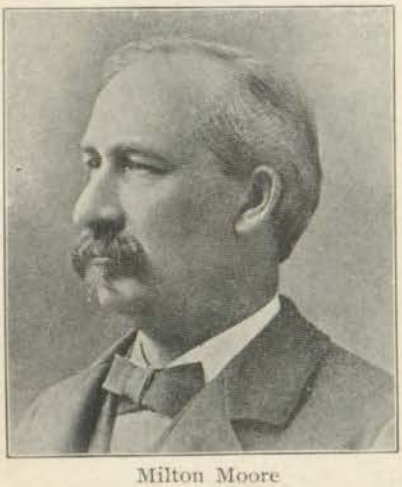

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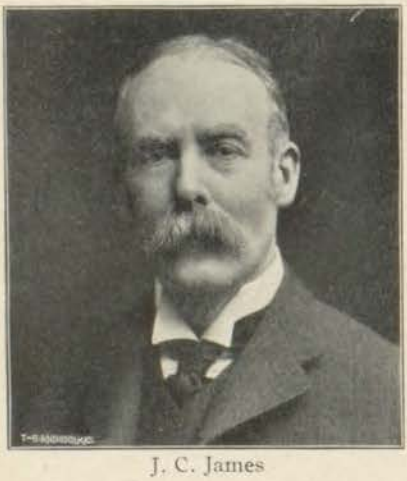

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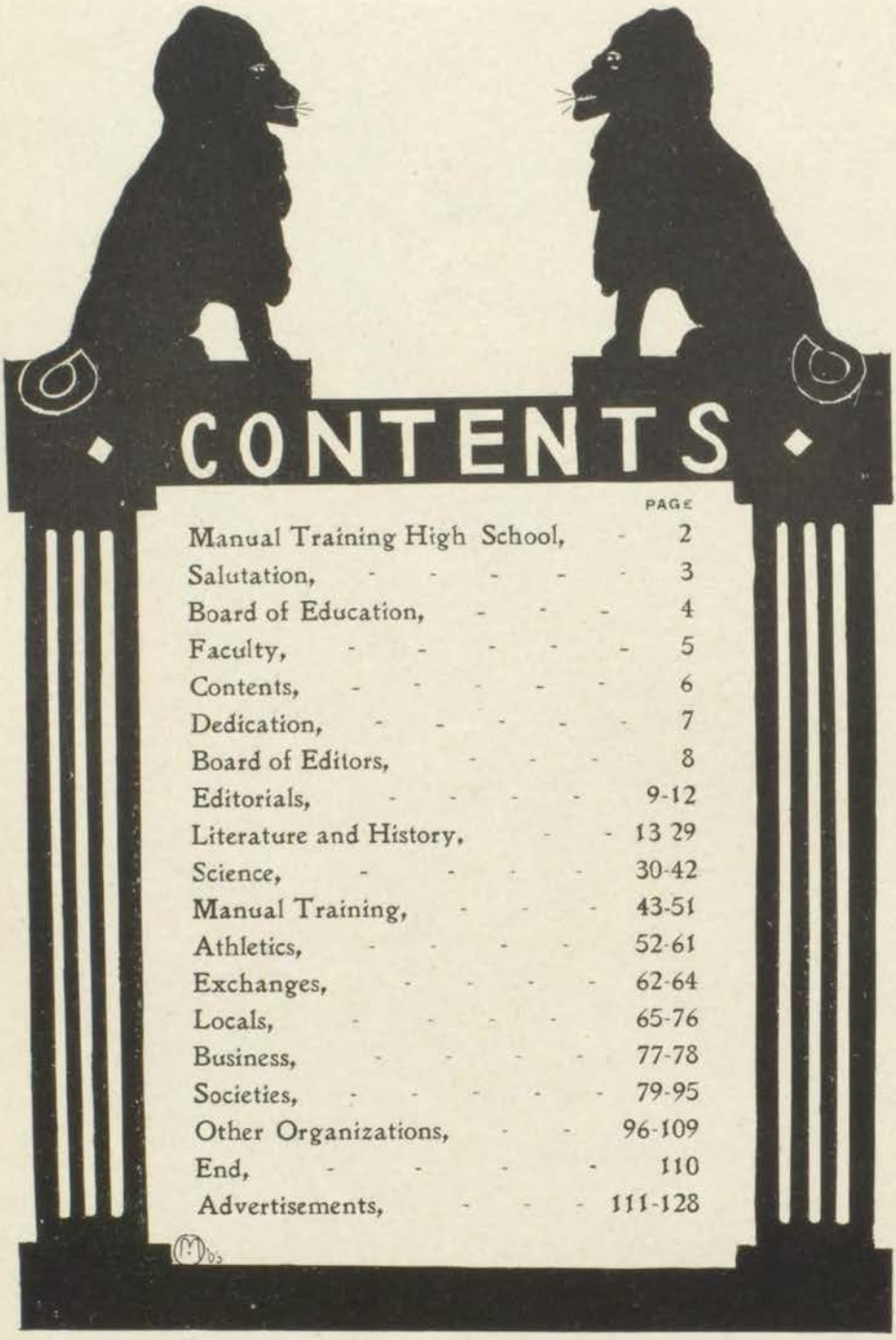
Kansas City, Mo.
1902



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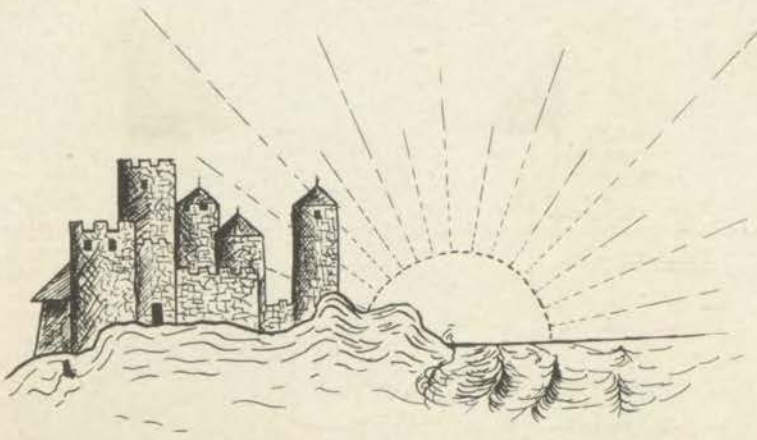

TO THE SENIORS:

Once again a class of Seniors leaves its "Alma Mater." To this class of '03, the Nautilus dedicates the Annual. We have tried to make this the best issue of the school year and sincerly hope that, in the days to come, wherever you may be, the Annual of 1903 will recall to your minds many pleasant memories of "Old Manual."

May you ever aspire "ad ampliorum," and meet with success. New plans and new hopes are now dawning for you; the gleaming rays of a rising sun shine full upon you—onward, Seniors, to the lofty castles of fame!

"Sail on, nor fear to breast the sea!
Our hearts, our hopes, are all with thee;
Our hearts, our hopes, our prayers, our tears,
Our faith triumphant o'er our fears,
Are all with thee—are all with thee!"

HERBERT HARE.

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Editor-in-Chief

KATE HANKINS
Associate Editor

EDITORIALS.

We hope that the prompt and just action of the Board of Education in dealing with the boys who started a fight at the door of our school on the day of the President's visit, will impart a wholesome lesson and put a stop to the annual raids which we have been obliged to endure since our school was organized. Between the schools at large there has always been a friendly feeling, but a few boys who like excitement succeeded in creating an impression that a bad spirit prevailed. This impression did much to injure the reputation of both schools, and it is a matter for congratulation that it has received a strenuous and wholesome check by the Board.

It can be said for these boys that their apology was manly and in the proper spirit, and we gladly accepted it in the spirit in which it was offered. Now, "let bygones be bygones." The hatchet is buried. Let us build no monument to its memory, but let it be covered with the green sward of forgetfulness.

This year has been a unique one in the lives of many of the societies, for all of them have given "open sessions." The custom was started many years ago when Manual was first founded, but the practice was discontinued after the Art Club, the Debaters and the OZO's had each given one. These "open sessions" were then more exactly what the name implies, being merely a usual society program somewhat elaborated. This year

the faculty's consent was given to the continuance of the practice, and during all the last term every society member has been busy. It might seem that with the seven literary societies and the Glee Club that it would be quantity rather than quality that our visitors and schoolmates would get. But each society has striven to outstrip all others, and all have indeed been excellent for amateurs. The only trouble has been that they all came at the end of the year, and consequently confused matters more than was necessary. If these entertainments are given next year, it would seem advisable to have them placed farther apart. We give below only a summary of each entertainment without trying to go into detail or depict all the excellent points.

The first to give their open session were the OZO's. They presented Tennyson's "Princess." The principal parts were taken by the following young ladies:

Princess Ida.....Miss Edith Shepard
Lady Psyche.....Miss Rachel Brinkerhoff
Lady Blanche.....Miss Lillian Carnes
Melissa, Lady Blanche's Daughter.....
.....Miss Mary Paxton
Violet.....Dorothy Hopkins
Prince.....Miss Selma Crohn
Cyril.....Miss Mildred Schenck
Florian.....Miss Ruby Barnette
Friends of the Prince.

The rest of the society members were pupils either of Lady Blanche or Lady Psyche, and Miss Celia Traber sang a beautiful solo.

The poem was dramatized for them by Miss Anna Gilday who, together with Mrs. Elston, prepared them for the presentation. All the parts were excellently played, the "boys" especially deserving great credit for the way in which they rendered their difficult parts. The standard set by these young ladies was so high that every one was greatly pleased, and the giving of the open session, which had been regarded rather as an experiment, was voted a great success. If they come up to this mark next year, we know that we have at least one treat in store for us.

On April 10th the Ions gave their entertainment in the form of a minstrel show. This was enjoyed by all, for it contained many excellent jokes and "roasts" on well known school people. One of the principal features was the caricatures which were thrown upon a white curtain with the lantern. In these the "lunch counter" figured prominently. The "grand entree," in which all well-known "rag-time" songs were sung, was also enjoyed by all. The participants, besides the chorus and the bone and tambourine players, were:

Songs.

"Mandy, Mandy," .....Walter Vieregg
"You Couldn't Hardly Notice It At All"...
..... William Bott
"Kentucky Babe," ..Joe Halliman, William May, Robert Fairman, Woodville Smith.
"Dat's De Way to Spell Chicken,".....
..... Robert Fairman
"Just Kiss Yourself Good Bye,".....
..... Ashford Lang

Readings.

Lionel Benjamin, Charlie Shoop and Constant Jaccard.

An electrical fencing bout between Milton Luce and Glen Harnden.

We will expect much from the Ions next year.

On the following Friday afternoon the O'itas gave their play. This play was written by one of their members, and for that reason was especially interesting. The program was as follows:

"Aunt Cnythia" gives a house party for the friends of her niece, Margaret. Before departing the guests plan a surprise in the form of an entertainment for Aunt Cynthia, and make inroads upon the garret to furnish material. They present the numbers as follows:
Recitation, "Parody on Maud Muller".....
..... Bertha Faris
Violin Solo, "Cavalliera Rusticana".....
..... Helen Filley
Original Story.....Hazel Byers
Piano Solo, March.....Alice Marquis
Recitation, "As the Moon Rose".....
..... Elizabeth Vernon

Song, "Chinese Honeymoon," .. Helen Dickey, Alice Richardson, Jean Morrison.
Manual Paper, ... Burtie Haar

Miss Faris's piece was original and was very characteristic of school life. Miss Haar's article was also quite clever; the "Chinese Honeymoon," with the dancing by the three "Japs," was excellent; and all the numbers were highly commended by those who heard them. The song written by the young ladies and dedicated to Manual should be learned by all of our students.

After much delay, caused by postponements on account of the track team, the Art Club gave their open session on Thursday, April 30th. They presented the "Masque of Pandora." The play was well adapted to an "art club," being a classic, and bringing in as it did the old costumes, the graceful dances, the statues, and the beautiful tableaux. The piece was prepared by Miss Gilday, and to her the success of the play is due. The speaking parts of the piece are short, but many dances, songs and pantomime scenes were put in, and the play was as long as desirable. The principal characters were as follows:

Hephaestus.....Roy Kendall
Prometheus ..... Egbert Schenck
Epimetheus ..... Richard Montague
Pandora ..... Isabel Leonard
Hermes ..... Arnold Shawn

All of the other members of the society had important parts in the choruses of the graces, fates, winds, trees, waters, reeds, birds, and furies. Mr. Montague and Miss Leonard had the most trying parts, but played them admirably. We hope that this society will continue its good work in the future.

The next day, on May 1st, the Manual Society of Debate, presented "She Stoops to Conquer." The acting in this play was extremely difficult, and the boys certainly deserve much praise for the way in which they performed their parts. Mr. Bone as an old woman, Mr. Ridgway, Mr. Sills, Mr. Mann, and Mr. Wagner were especially good. An important feature of their open session was the neat little booklet they issued. This contained stories, locals, the society's picture, the program, etc. Its cover was attractive, and the whole well arranged. Their *dramatis personae* were:

Sir Charles Marlow.....Walter Eyssell
Mr. Hardcastle.....Chester Mann
Charles Marlow.....Louis E. Sills
George Mastings.....Frank W. Harper
Tony Lumpkin.....Robert Ridgway
Diggory.....Allan Elston
Landlord.....George Beardsley
Mrs. Hardcastle.....Robert Bone
Miss Hardcastle.....Alfred H. Wagner
Miss Neville.....Stephen Luckett

The other two societies, the A. L. S. and the Science Club, have not given theirs up to the time we go to press, but it is said that the members are working hard, and something excellent is expected.

The Manual Training High School Orchestra kindly played for all the so-

WILLIAM FUNCK

ARTISTS

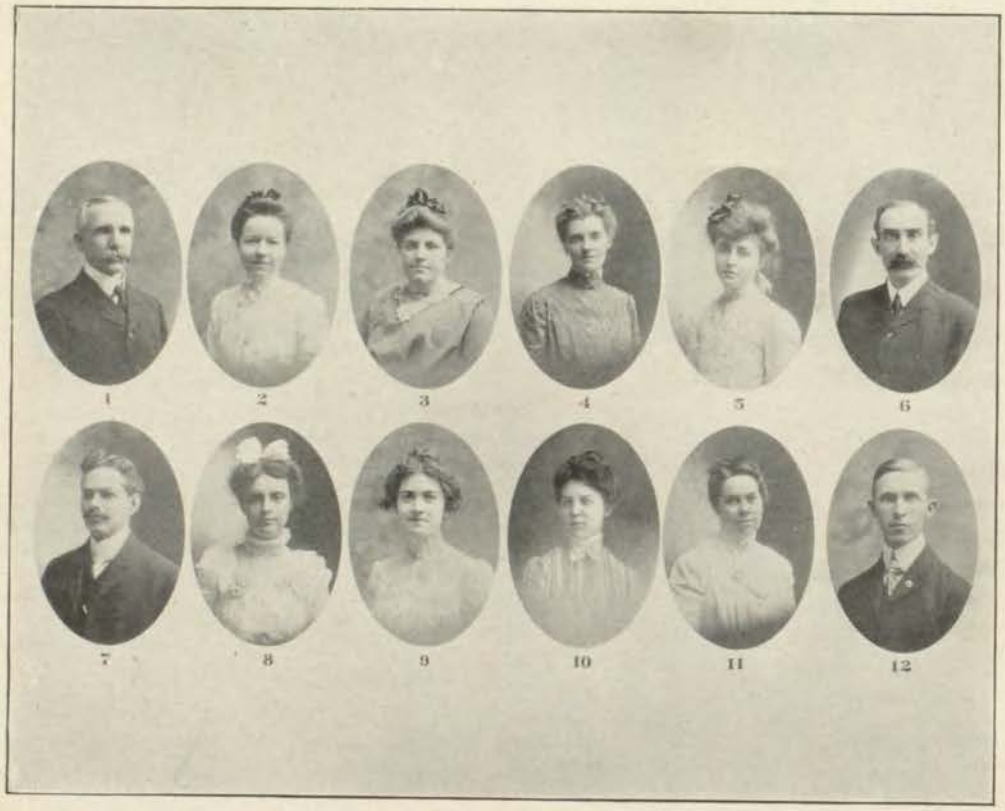
MAY OVERLY

cieties on the days of their plays, and to them and all the teachers and pupils who aided them in many ways, all society members in the school extend a hearty vote of thanks.

This issue of the Nautilus, as all have surely noticed, not only has a front cover, but it also has a very pretty design for the back. Heretofore the back has either been left blank or covered with an advertisement. This year the Atlas Oats Company contracted and paid for an advertisement for the back, then, owing to the kindness of Mr. Wyman, a member of the firm, the space was voluntarily given to the Nautilus to use as seemed best to us. You can all see the result. For this courteous act we not only thank Mr. Wyman, but we will also eat Atlas Oats.

Now while we are thanking people we must not forget in this, our last issue, those to whom thanks are due—the Board, for the money they have given us; the faculty, for their aid; the school, for its support; our advertisers, for their patronage; and the printer, for his good work. All of these people will be most pleasantly remembered by the Nautilus "staff of 1903," and we hope that all future staffs can say the same thing.

The covers handed in for this Nautilus were the best that we have ever had to choose from. It was with great difficulty that the present one was finally chosen. Any one of them would have been good, while Miss Anna Stophlet's and Miss Charline Bayha's were excellent.



THIS YEAR'S ADDITION TO OUR FACULTY.

1. E. B. Denison.
2. Gertrude Von Unwerth.
3. Nina Drake.
4. Gustav Olson.
5. Imogene Williams.
6. Chas. E. Morse.
7. Arthur J. Burr.
8. Lena Lindsay.
9. Sarah Tudhope.
10. Edith Hill.
11. Belle Stewart.
12. Marshall Myles.

LITERATURE AND HISTORY

EDITORS

ALFRED WAGNER

RACHEL BRINKERHOFF

The Surveyor's Story.

YOU don't know how glad we are to see you, old fellow! We haven't known a thing of you for the last five years, except that you had a surveying gang down in Oklahoma. And, by the way, one of the men who was with you part of this year will be here tonight—Jim Rogers. His sweetheart is visiting us. Pretty girl—came out a couple of months ago, all broken up over the loss of her twin brother. Jim didn't know her before; he hasn't lost any time.

"Well, I'll be glad to see Jim. Good fellow; hard worker, and straight as he shoots. Hope he's got a nice girl; Jim deserves a good wife. Why, hello, Jim!" The surveyor turned to the young man entering. "How are you? Mighty glad to see you. And how's the world using you?" A hearty handshake and a slap on the back gave emphasis to his greeting, to which Jim made an equally cordial response. Just then the hostess entered with a pale, slender girl, dressed in black, by her side.

The surveyor was pleased with the pleasant smile which recognized his introduction, and the faint reddening of the girl's cheek as she greeted Rogers did not escape his notice.

The surveyor and the hostess were old and warm friends; and soon the grate fire, which relieved the chill of early autumn, gleamed on a cheerful group, seated comfortably before it.

"Let's see, Jim," began the surveyor, "you left us just after that little scrap we had last April, over on the other side of the Washita. Queer thing, that. Did you ever stop to think how it is that several people will often think to do exactly the same thing, at the same time, without a word beforehand?"

"Won't you tell us about it?" asked Miss Logan, with interest.

"Why, it's not very much; though it was kind of interesting to us. Our surveying gang was out the other side of the Washita. I was looking through my field-glass, and about three-quarters of a mile away I saw a buggy drive up to a moving wagon. I looked a little closely, and I saw two men jump out of the buggy, and raise their guns. Next minute a man sprang out of the wagon, and one of the men knocked him down. I told the boys, and we started for the place to see what was occurring. We followed a little ravine so as to keep out of sight as long as we could, but when we came up on a rise of ground, it put us in plain sight. The two men were bending over the fellow they had knocked down. One of them soon looked our way, and both made for the buggy. It was headed toward us, and there was another man in it. They turned the buggy the other way, and then two of them stood up and shot at us over the top. All at once, without a word, we all five pulled our guns and fired, just as if somebody had given the command. They made a circle and two of them got out and picked up the third, who must have pitched straight forward over the dashboard and fallen between the horses. They struck off over the prairie as fast as the team could go. We didn't shoot again; we were too far off for anybody except Jim to hit anything; only we'd been too excited to realize it at first. We all had revolvers but him; his Winchester was the only gun in the party that would carry that distance. Course we knew it was Jim that had got him."

"Killed the man, do you mean?" Miss Logan's voice was horror stricken.

"Why, what else would he do?" answered the surveyor, astonished at anything like objection. "Better shoot the other man than get shot yourself. Well, we hurried on to the moving wagon, and found the man just getting up, dazed and bleeding badly; and his wife was just scared out of her senses. She was trying to open a box in the back of the wagon to get a little money she had in it. All she knew was that they told her to dig for her money, and she was 'diggin'. They'd got what the man had—about twenty-six dollars, I believe. He couldn't describe them at all; only that one had a peculiar scar on the right cheek."

Miss Logan glanced at the speaker a moment, then looked again at the fire.

"The men were out of sight by this time. If we'd known in the beginning just what the matter was, we'd been shooting yet, but what we'd have got them.

"Jim, you left us a little after this, and so don't know the rest. But there's more to follow.

"A few weeks afterward I was over in Chickasha—nearest railroad town—when in front of a livery stable I noticed a

buggy with what looked like a bullet hole through the back curtain. Now, Jim, you remember they had their curtain down, and your shot must have gone right through and struck that chap in the back. Just inside the stable stood a team of bays—and they drove bays. I asked the proprietor where those horses were on the fifteenth of April—that was the date of our skirmish, you know. He looked it up in his books, and then told me that three young men had them out on a hunting trip. He should remember it, he said, for when they returned about dusk one of them had accidentally shot himself and was dead as a door-nail.

"Well, I wanted to know some more. He sent me across the street to the undertaker. I asked him if he remembered the case, and he said he did. The man was shot through the base of the neck. I asked him if he had any reason to believe the shot had come from behind. He studied a little bit, and then wondered why he hadn't thought of that before. He had picked a little piece of cloth—a bit of the coat—out of the wound at the back, and that couldn't have been there if he'd have been shot in front. Said the man had a peculiar scar on the right cheek, and wanted to know if he was a relation of mine. I told him no, and asked what was done with the body, and was referred to the station agent.

"I went to him and he remembered all about it at once. Didn't have to look up anything. The body was sent out on the midnight train, and nothing had been seen of the other two since. They had shipped him back to Lewistown, Pennsylvania. The fifteenth of April it all happened. Well, the world's not very wide, and we might hear something of your target yet, Jim."

Perfect silence followed. The surveyor looked up to see the host and hostess staring mutely at each other; to see Rogers, motionless, his head leaning on his hand; to see Mary Logan, white, rigid, in her eyes one despairing question.

"To whom—where—was that—body—sent?" The stiff lips rather breathed than spoke the words.

"To a Mrs. John D. Franklin, Lewistown, Pennsylvania," was the wondering answer.

"Mary, Mary," Rogers turned imploringly toward her.

"No! no!" she gasped. "Don't speak to me—don't come near me!" She turned blindly toward the door. The hostess sprang to her side, and tenderly led her from the room. Rogers sat silent, his eyes fixed, miserable, unseeing.

"Who was he? What's it all about?" demanded the surveyor.

"Mary's twin brother accidentally shot himself in Oklahoma last spring—so his companions said," whispered the host. "His body was shipped to Lewistown from Chickasha the fifteenth of April. Mrs. Franklin is the older sister with whom they lived after the parents died. That scar was caused by the kick of a vicious horse. We all knew he was a little wild, but no one ever dreamed of anything like this. And poor Jim—"

"Good, Lord!" exclaimed the surveyor.

HARRY DE VAULT.

Flowers of Shakespeare

PRELUDE.

"Gather ye roses while ye may,
Old time is still a-flying;
And the same flower that smiles today,
Tomorrow may be dying."

SHAKESPEARE was an ardent lover of nature. There are, throughout his works, countless references to the children of nature, the flowers, trees, birds, and insects. This piece shall be limited to the wild flowers, or, at least, to those flowers with which every one ought to be familiar. Although the flowers described are botanically correct, his references to them are not made in the light of a botanist, but are spoken of as though seen by one who loves them well and by one who loves them, not for their beauty, but for that which is greater, the lessons which they teach. Most of those he mentions grew near his home. The lands about Stratford-on-Avon were rich with many gay-colored wild flowers, and the air was heavily laden with their sweet fragrance. It is very strange that the poet's flower, the daisy, Shakespeare William is not mentioned at all. He has speaks of only a few times, and the sweet occasion to bring the rose into his plays nearly sixty times; the lily is mentioned twenty times, and the violet quite frequently. The violet and the primrose before Shapespeare's time had no special name; it is to him we are indebted for naming two of our favorite flowers. The quotations used in the following composition, with the exception of the last, which is Herbert's, are quoted directly from Shakespeare's works.

A FLORAL BANQUET.

"Here's flowers for you."—Perdita.

The "Rose of May" was thinking. As this was something quite unusual, her subjects in the kingdom of flowers were quite disturbed. At last she said aloud, "It must be done." "What must be done?" said the poppy, nodding sleepily. "We must invite Shakespeare to visit our kingdom and give him royal entertainment. Perhaps you are too sleepy to know that Shakespeare is the greatest mortal in the world now, and more than

that, he is a champion and lover of the world of flowers." The Rose and queen, said this quite grandly, and then playfully shook the dozing Poppy, as she said, "Oh, what a poor guard you do make. Run quickly and call hither my subjects."

The flowers agreed unanimously, when assembled, that Shakespeare must be entertained. "But when?" asked Primrose. "Oh, do have him late in the summer," said the Briar—

'When Briars shall have leaves as well as thorns,
And be as sweet as sharp.' "

"Oh, no," answered the Queen, laughing; "I fear you are selfish, and, besides, I know that Shakespeare would say— No, we shall ask him—

'When Daisies pied, and Violets blue,
And Lady-smocks all silver white;
And Cuckoo-buds of yellow hue,
Do paint the meadows with delight.' "

"Agreed," shouted her subjects.

"Then here's to the 'lover of flowers,' " said the Queen, as she drank a cup of sweet nectar—

" 'He shall flourish;
And like a mountain Cedar, reach his branches
To all the plains about him.' "

"Hurrah! hurrah!" again shouted her loyal subjects.

"Begone now," and the Queen majestically waved her hand. "But come hither, my Violet—

'O! Violets dim,
But sweeter than the lids of Juno's eyes,
Or Cytherea's breath'—

My Violet, you must go upon a mission for your Queen.

'Over hill, over dale,
Through bush, through Briar,'—

until you find this Shakespeare. Then tell him, dear, how much we all want him; how much your Queen desires it, and tell him that the war is over—

'The silent war of Lilies and Roses,'

and that the Rose now reigns supreme. Take him Pansies, and say to him—

'And there is Pansies—that's for thoughts,'—

Take him Rosemary, the emblem of remembrance, and whisper softly to him—

There's Rosemary for you, that's for remembrance
I pray you, love, remember,'—

Make haste, my trusty messenger, and—

'While's yet the dew's on ground, gather those flowers.' "

From that day work in the kingdom began. The little army of flowers, obeying the strict orders of the Queen to make their home "a bower of beauty," ran hither and thither, in busy confusion. It must be said with regret that some were lazy, for one day the chief songster could not be found. When, after a long search, Harebell found him, who said to her, "Tell my Queen

'Where the bee sucks, there lurk I
In the Cowslip's bell I lie.' "

And from a shady nook the saucy Cuckoo-bud piped gaily—

" 'Witness this Primrose bank whereon I lie,' "

The day at last arrived. The birds sang their sweetest songs, the bees buzzed and hummed, and the butterflies flitted daintily here and there. The ladies all wore new frocks, made especially for this grand occasion. When the guards stationed on the outskirts of the forest saw Shakespeare approaching, they gave a signal, and the Queen sent special maids of honor to conduct him to her throne—

—"The pleached bower,
Where Honeysuckles, ripened by the sun,
Forbid the sun to enter. "

How beautiful the Queen looked, attended by the fairest Lilies! Which is the fairer, the Rose or the Lily? Neither could have been fairer than Shakespeare had anticipated, for he said afterwards—

"Nor did I wonder at the Lilies' white,
Nor praise the deep vermillion of the Rose."

Shakespeare, like the gallant knight that he was, bowed low over the hand of this fair Queen. Then the banquet began. It cannot be told in detail here. Suffice it that the birds made sweet music, while the guest of honor and his fair attendants partook of the royal feast. At length the Queen said, "I propose a toast." "Wait," interrupted Shakespeare, "mine is the honor to drink to the health of your fair ladies, my gracious Queen. Attend ye now. I am more than sorry not to see the Daffodils, on this my first visit to your kingdom—

'Daffodils,—
That come before the swallow dares and take
The winds of March with beauty.'

To the thoughtful Pansy, which mortals call 'Love in Idleness,—

'Yet marked I where the bolt of Cupid fell,
It fell upon a little western flower;
Before milk-white, now purple with love's wound,
And maidens call it love in idleness.'

O! my Primroses—

'That die unmarried, ere they can behold
Bright Phoebus in his strength.'

O! proud Carnations—

'The fairest flowers of the season
Are our Carnations and streaked Gilly-flowers.'

To my friend, the Holly—

'Heigh-ho! sing, heigh-ho! unto the green Holly;
Most friendship is feigning, most loving mere jolly;
Then, heigh-ho, the Holly,
This life is most jolly.'"

"Enough, dear sir," interrupted the Queen, blushing a deeper red at this praise of her subjects, "I fear me you will make my maidens too vain. But come now, I have much to show you of our kingdom before the dewy shadows fall—

'And I know a bank
Whereon the wild-thyme grows.'"

So away they went, followed by a troop of joyous flowers. The woods resounded with merry laughter and night had fallen ere Shakespeare turned his steps reluctantly toward the land of mortals.

"Farewell, dear flowers, sweetly your time ye spent,
Fit while ye lived, for smell or ornament,
And after death for cures.
I follow straight without complaint or grief,
Since if my scent be good, I care not if
It be as short as yours."

KATE HANKINS.

Rosalie's Walk.

T was a beautiful place, the Girl's School at Erqhart. In style it was English, and its large, gray towers, over which climbed the ivy and roses, and the little lattice windows out of which occasionally peeped a bright young girl, gave it an air of gentle dignity and picturesqueness. One could guess, on seeing the graceful, winding walks, the hedges, and beautiful gardens where such quiet prevailed, that here the girls led a tranquil life, and followed the old standards of good manners.

For many years I had looked forward to seeing this grand old place, where my mother went to school and now I was not disappointed in it. I first went to the spacious rooms of the main house, where I recognized many of the old pictures, then to the chapel where in all its simplicity the girls' voices still seemed to echo, and last to the dormitory of the place where my mother spent her girlhood. I naturally wanted to visit her room whose little windows faced east. For of all the spots dear to a college girl, her room is the dearest. Her room which holds remembrances of past school-life and home, and in which she can unfold and live her dearest thoughts and dreams, and receive her best friends. I held as treasures, many of the things which had once ornamented the walls of that little room, and once there, looked with interest at all the changes which I knew must have taken place. It was now the pride of a bright-eyed, dark-haired young girl, who, learning of my special interest and knowledge of the school, requested at once to relieve the principal, Mrs. Dean, and take me over the grounds. Only too glad to find one of the girls for a companion, I followed her out of the building into the rose gardens. The rose was the school flower, and in the winter each girl tended with the greatest care one beautiful plant.

It was one of the pleasant customs of Erqhart college to connect and remember stories about places on the campus. Nearly every tree had some little thing by which to be remembered. I had often heard of the little ravine known as the camp, where the girls once held a moonlight picnic; and of the large willow, under which they took what they called the emerald seal, never to divulge the secrets of one of the societies; and again of a beautiful large rock which had been found on the grounds by the first class, whose members solemnly marched around it and dubbed it guard and sentinel over the school and its inmates. These stories and many others gave to the school its own mythology. I enjoyed picking out these places I had heard about and my companion left me to my own thoughts until we came to a little walk bordered by young pines. It was quite long and as I looked about in wonder she said, "Have you never heard of Rosalie's walk?" We were at the end now and sat down on a little seat. "No," I replied, "I am only familiar with the stories of thirty years ago." "Well, then, of course you do not know of it." I showed my desire to hear it and she continued:

"Well, it was only three years ago that she came, placed herself in our hearts and memories, and left just when the girls began to understand her. It was in early autumn that she came, and about three weeks before regular work began. There were about ten girls entered that quarter but Rosalie Vaughn stood apart as a different type. Her father, a tall, stately man, came with her and immediately was a favorite with the girls. And he asked us to try to make her enjoy life here for she must go somewhere and it was only to Erqhart she would willingly go.

"Rosalie was a very beautiful, wealthy, and yet strangely sad girl. She treated everyone in the school with a quiet dignifed respect, and when she chose could laugh and sing with us. But when she looked at us with her large, pleading brown eyes we could not read her thoughts and let her alone. She had her walls covered with pictures, but as she never offered to tell us about them we found little pleasure in the formality of visiting her. It was only a short time until

we noticed how regularly she went out every day. Sun or rain, she took a walk.

"At last, one day, she returned a little late and for the first time since coming was enthusiastic. She had walked to the extreme limit of the college grounds and found a clump of young pines. It was one of the things on the campus the girls had never paid any attention to and had not told her about. We who had never associated anything pleasant with that little bunch of trees were anxious to know what Rosalie had discovered, or wanted done. She was not long in telling and went straight to Mrs. Dean and begged her to have some of the trees cut out and a few replanted so as to make this little walk. Mrs. Dean would probably never have let any other girl do that, but Rosalie seemed so strangely lonesome and homesick, and so happy in thinking of this little plan that she gave her consent. There seemed to have been a natural path for we were allsurprised at the short time it took until the path was as it is now. All of us liked to come here occasionally, but Rosalie came every day. It was no longer a mystery where she walked, and if not in her room, was always at the seat at the end of the pine walk at the edge of the grounds.

"One day when she had taken a book and gone to the little retreat, she came just as one of the girls was leaving. She waited a moment till she thought she was alone, drew from her book a note, threw it over the hedge and settled to reading. But she had been seen, and it was not half an hour until Mrs. Dean and almost all the girls knew that Rosalie had broken one of the few but important rules of Erqhart, communicating with outsiders.

"When she returned every girl in the school was wondering what Mrs. Dean would do. Returning at the usual time she started to her room. She looked just as usual to most of us, but some of the girls were sure she was slightly excited. Of course some invented foolish and romantic stories. She passed a group of us in the hall and went off apparently joyous when we told her Mrs. Dean wanted her. Now Mrs. Dean never made public little faults, but in this case, knowing how the girls exaggerated the incident we thought we would know part, at least, of Rosalie's explanation. Well, we knew all of it, for she denied nothing; but, guessing the curiosity of the girls, assumed a quiet, calm, but obstinate air, and refused to tell any more. With a natural curiosity we waited and wondered what Mrs. Dean would do next. But she said nothing and the matter seemed dropped. Afternoon came and went and Rosalie stayed indoors, so we concluded that she had been forbidden the freedom of her walk.

"That evening when she came to dinner her face was so pale that her great brown eyes seemed to look right through one, and we felt almost afraid and avoided her glances. But had we known that it would be so long before we were to see her again perhaps we would have been kinder. For Rosalie did not eat with us again for two months.

"The next morning she had a fever and lay in a dark room. The village doctor came and went. Her condition seemed to grow worse, until the doctor guessed that something was on her mind and got from us the incident just before her illness. Then he talked to her of the pine walk and the letter and finally believed he had aroused her mind; and if we listened to her talk we might hear some clue. From that day we who knew her best were all allowed to visit her, but she called us all "Catherine," and begged us to forgive her for not coming again. And then she cried and said if she could not come again she was afraid her father would come.

"Mrs. Dean was kind but strong willed and she believed Rosalie would recover in time, but the day came when Dr. Elberg insisted on bringing to see her a young neighbor of his, named Catherine Merton. None of the girls were in the room at the time, but several saw her enter. Her likeness to Rosalie was strong, but her likeness to one of Rosalie's pictures was more striking.

"A part of the story was told, for Catherine watched Rosalie through her long sickness with patience. Indeed, she quite gained the heart of Mrs. Dean. She told us that it was she to whom Rosalie had

gone every day, but, like her beautiful friend, would tell no more.

"Rosalie gradually recovered but was so changed. She became happy, bright, unselfish and interesting. Her father came as soon as he could, but not having been warned until she was seriously ill, he did not come until she was almost well. Before Mr. Vaughn saw her he was told of the strange affection between his daughter and the young girl outside the school. Mrs. Dean could not explain how they had met, but she told him how much Catherine had done for Rosalie. Then Mr. Vaughn went up and the rest of the story we heard directly from her.

"The next afternoon those who had seen her while sick were invited to her room and introduced to her cousin, Catherine Merton. As we gave a start of surprise, she said, 'I came to Erqhart college to find my cousin and reconcile my father and his sister. That is done now and I will try to be more agreeable as a companion. Do you want to see my things?' But Catherine guessed our desire to hear the rest of the story and said, 'Our grandfather disinherited my mother when she married and all her brothers and sisters hated papa, too. So mama was lost to the Vaughns. But four years ago in Europe Rosalie and I found each other by accident through one of grandfather's pictures. And we decided that if she could come to Erqhart near my home we might unite the family. She teased and gained consent to come. For young girl's plans ours have worked out most successfully, for she tried for a long time before she could come to the hedge every day without a reason. And although we love each other, we could not know how Mr. Vaughn would receive me. But he is driving with mama now, and girls, I propose we take our invalid and go down to Rosalie's walk.' That checked our astonished remarks and we hurried to come down here. From that day this has been known as Rosalie's walk, and Rosalie Vaughn has been loved and remembered by the girls.

"She and her cousin left that spring to return to the city life they had both been used to some years before."

This was one of the longest as well as most interesting stories of campus life I had heard. The sun was getting low, and as we walked back toward the building the gong rang for dinner. I found my friends whom I was visiting in the village already waiting for me with the carriage, but I left with regret, wishing that I might have spent part of my school life at that beautiful old school whose work had advanced with the years, but whose grounds were improved with age.

JEAN MORRISON.

Thomas H. Benton.

Prize Essay in the J. H. Coburn Contest.

THE rugged figure of Thomas H. Benton has never been given its proper place in the American political pantheon. His public career covered a period during which the leaders of our political thought were more often to be found in the Senate than even in the presidential chair, and his name has been dimmed because of its association with the great names of Clay, Calhoun and Webster. He was not, like Calhoun, the leader and almost embodiment of a movement which for a quarter of a century became of ever increasing importance in our national politics until it broke in the bloody crash of the Civil War. He was not, like Webster or Clay, the idol and leader of a great wing in his own party. In point of ability he was not the equal of these three men; but none the less he was a very able man, and in rugged force of character, in unwavering intensity of purpose and in honorable and

disinterested devotion to the good of his country as he saw it he was not surpassed by any of his associates and he was equaled by few. Benton was the most distinguished statesman accredited to Missouri. He was born March 14, 1782, near Hillsborough, North Carolina. His father was Colonel Jesse Benton, a lawyer of North Carloina, and his mother was Ann (Gooch) Benton. Thomas H. Benton's father died when young Benton was eight years old. He grew up under his mother's care and his early youth had few opportunities for study. The extent of his academic training appears to have been attendance for a short time at a grammar school and a short course at the University of North Carolina. He left the last named institution to remove with his mother's family to Tennessee. When the Benton family moved West they founded a little town which was named after them. It lay on the outskirts of the Indian country; indeed, the great war trail of the southern Indians lay right through the settlement, and at all times the Indians swarmed around it. The change from the still somewhat rude civilization to the wilderness on the border was far less abrupt and startling than would be the case now, and the Bentons soon identified themselves completely with the life and interests of the people around them. They even abandoned the Episcopalianism of their old home and became Methodists, like their neighbors. Young Benton himself had his hands full at first attending to his great backwoods farm, tilled by slaves, and in pushing the growth of the settlement, by building first a rude log cabin school house (he himself taught school while studying law), and a meeting house of the same primitive material, then mills, roads, bridges and so forth. That hardened and developed him, and he readily enough turned into a regular frontiersman.

Benton studied law under St. George Tucker and in 1811 was admitted to the bar under the patronage of Andrew Jackson, at that time a Judge of the Supreme Court and his warm friend. Elected to the legislature of Tennessee, he obtained the passage of a law for the judicial system of the state and another by which the right of trial by jury was given to slaves.

In the war of 1812 he was for a time Jackson's aide-de-camp and also raised a regiment of volunteers. In 1814 Benton was appointed lieutenant-colonel of the United States Army and set out to report for duty in Canada, but peace being already declared soon afterwards he resigned his commission. Benton was considered a peaceable man for those days, but he never shirked a fight he didn't start. The most famous of Benton's affrays was that between Jackson, Benton and his brothers. The quarrel started with a quarrel between his brother Jesse Benton and General Carrol. On the 4th of September, 1813, the Benton brothers and Jackson had an encounter in Nashville in which knives and pistols were not wanting. After a severe fight Jackson had to be carried from the field and the Benton brothers were left victors. In 1815 he came to St. Louis and began to practice law there. At the same time he published a newspaper, "The Missouri Inquirer." He was possessed of a commanding intelligence, an assiduous student and endowed with a memory whose tenacity soon placed him among the leaders in the national council. Becoming reconciled to General Jackson he was one of the ablest and most loyal supporters of his administration and gained great influence in the Democratic party. Because he urged the adoption of gold and silver currency, the name of "Old Bullion" was given to him. During the Mexican War his services and acquaintance with Spanish provinces proved most useful to the Government. In the nullification struggle Benton was Calhoun's leading Democratic opponent and their opposition to each other developed into a life-long animosity. When the Kansas-Nebraskan bill was brought up Benton delivered a memorable speech against it which did much to excite the country against it but failed to defeat its passage. In 1856 he became a candidate for the governorship of Missouri, but was not elected, owing to the breaking up of the Democratic party. In 1854 he issued

the first volume of his "Thirty Year View" on the workings of the Government. The second and last volume appeared in 1856.

Although a slave-holder from a slave state, Benton, with his broad-minded and generous instincts, could not look with any degree of tolerance upon the extension of slavery into the territories, and when John C. Calhoun began to proclaim his fine spun theory of state rights and nullification, Benton was by the side of Andrew Jackson battling for the Union and opposing nullification. When the project to annex Texas came before the people Benton raised his voice against it. He boldly and forcibly disclosed the real motives of this great enterprise and said that although it was mixed up with speculative jobs and political intrigues, disunion was at the bottom of it all. He said that a cry had already been raised: "Texas without the Union rather than the Union without Texas," and he said that a "Southern confederacy stretching from the Atlantic to the Californias is the cherished vision of disappointed ambition." He was with Jackson also in the War on the United States Bank, and early in 1831 he had moved a re-charter of that institution, thus showing himself really in advance of Jackson in his hostility to the bank. He did not assail the bank as unconstitutional, but, rather, dwelt upon the aspects of the case which would be more likely to attract public attention. He said that the bank has too much power over the people and the government, over business and politics, and was too much disposed to exercise the power to the prejudice of freedom and equality which should prevail in a republic. He said "I am willing to see the charter expire without providing any substitute for the present bank. I am willing to see the currency of the Federal Government left to the hard money mentioned for a republic." One of Benton's darling objects was the development of what is called the Sub-Treasury system of the United States. It was first made known under the title of the Independent Treasury Bill. He succeeded in getting it through the Senate twice. The first time it was lost in the House of Representatives; but on the second venture, toward the close of President Van Buren's term, his firmness and pertinacity were rewarded. The bill passed the Senate by a considerable majority, went through the House after a bitter contest and became a law. From this arose the system which to the present day is satisfactorily known as the Sub-Treasury.

Benton married Elizabeth McDowell, daughter of Colonel James McDowell. She suffered from a stroke of paralysis in 1844 and from that time on Benton was never known to go to any place of festivity or amusement. Mrs. Benton died in 1854 leaving four daughters, the second of whom married General John C. Fremont.

Benton not only loved work for work's sake; his spirit was indomitable, defiant and aggressive. He was simply unable to comprehend the meaning of the word "defeat". Repulsed again and again he returned to the attack with a freshness and vigor that bore all before it. His will was iron, his purpose inflexible and doubtless a great proportion of his successes in his long and stormy career were due to his persistence rather than to the intrinsic merits of the cause advocated. His support of the Sub-Treasury scheme and its ultimate success is one example of his triumph after many defeats, and his magnificent crusade at the head of the so-called expungers is another. During his last years when his sturdy independence and devotion to the Union had caused him the loss of his political influence in his own state and with his own party, he nevertheless stood higher with the country at large than ever before. He was a faithful friend and a bitter foe; he was vain, proud, utterly fearless and quite unable to comprehend such emotions as are expressed by the terms despondency and yielding. Without being a great orator or writer, or even an original thinker, he yet possessed marked ability, and his abounding vitality and marvelous memory, his indomitable energy and industry, and his tenacious persistency and personal courage all combined to give him a position and influence such as few American statesmen ever held. He was

very courteous, except when provoked; his courage was proof against all fear, and he shrank from no contest, personal or political. At all times and in all places he held every good gift he had completely at the service of the American Federal Union. He died April 10, 1858, in Washington.

HARRY L. REITER.

The Modesty of Nature.

"Suit the action to the word, the word to the action; with this special observance, that you o'erstep not the modesty of nature."—Hamlet.

"WE should be able to win this year," remarked Lawrence Holloway to his friend as they were leaving the club house.

"I hope so, but I'm afraid not," replied Dick Harding.

The answer was an unexpected one to Lawrence. Dick ususally looked on the bright side of things; and in previous years had always placed the greatest confidence in the strength of the track team.

"Why, Dick? We have better material this year than we had last. There's Winslow, he'll be sure to carry off all the running events. Professor Sheldon said last night that Guy was the best man he had trained since the days of Old Bill Shawner."

"That fellow Winslow makes me tired," replied Dick in a somewhat envious tone.

"Guy's a mighty nice fellow, Dick. And, what's better, he's a good sprinter. But hurry up, let's catch up with those fellows; there's Guy now, I think."

"You can go on; I've forgotten my belt." Dick turned back toward the club house.

"Well, so long, old man. Take a good rest tonight and you will feel O. K. tomorrow."

"I wonder what's come over Dick," thought Lawrence as he came up with his fellow athletes.

"Hello, Lawrence. We would have waited for you and Dick, but we thought you left before we did," said Guy Winslow as Holloway joined them.

"No, Dick was as slow as usual. How are you tonight, old chap?"

"I'm dead tired, but beside that I never felt better in my life."

The boys had had a hard afternoon's practice for the coming field day meet. They were all tired and looked so.

"We will give those Bloomington fellows a race for their money tomorrow," continued Guy.

"That's what I was telling Dick, but he's gloomy and says we'll have a hard time of it."

"Yes, just because he can't do much he thinks no one else can. I feel rather sorry for Harding though; he tries so hard and yet never wins a thing," said Guy.

"Well, I must leave you here, Winslow. Going my way, Tom? Well, so long, then, fellows," and Lawrence started up the hill.

"Good night, old boy," returned the other two.

* * * * * *

"*What's the matter with Winslow? He's all right! Who's all right? Winslow!*" Thus yelled the crowd on the afternoon of the field day. Guy Winslow had just broken a high school record, running one hundred yards in nine and seven-eighths seconds. This had brought the score of the Quincy boys up to that of the Bloomingtons. The next event, a hurdle race, would decide who was the winner of the track meet.

The hurdles were placed. The runners took position. The pistol cracked, and the race began. Excitement was high for great was the rivalry which existed between the two schools. Dick Harding took the lead and kept it for nearly 100 yards. Then Winslow came abreast with him and they began clearing the hurdles together. Brown of Bloomington was

close behind. Dick Harding was panting violently. He saw that Guy had the Bloomington boy bested, and it was to Dick the same old story; Guy would win and he himself would lose again. The thought was too much. As he cleared a hurdle with Guy he made a mighty dash forward, fell against the next hurdle, which turned half way round and fell back just before Guy's feet. Guy stumbled and fell heavily across the hurdle. The Bloomington boy, seeing his chance, leaped both fallen men and fallen hurdle, cleared the next two hurdles, and won the race with ease. Harding got up and turning muttered to Winslow:

"You don't win everything here."

No one heard him except Guy. The Bloomington crowd was yelling wildly. Guy Winslow lay on the ground white and still.

* * * * * *

"Never mind, fellows," said Guy as he lay back on his bed in his room several days later; "I can't win any more running races but we can beat them rowing, all right, all right." The fall on the hurdle had badly broken his leg in two places.

He did not speak of winning the races in a boasting tone. Guy Winslow was not of that kind. He knew that he had been the best amateur sprinter in the state of Illinois, but he was not conceited on account of the fact.

"So we can, old man," replied Lawrence cheerfully. "And you shall be stroke-oar on the crew this year. But how long are they going to keep you caged up here?"

"A good while, I'm afraid, but Harding can take my place this year, you know."

The thought was hard for Guy to bear. No one but himself knew that Dick had intentionally fallen on the hurdle. And now Guy must lie in bed for months, while Dick would take his place. Dick would be stroke-oar on the crew this year. Dick would go to baseball games and on field trips with a certain pretty girl. Although Dick had made a foul play no one knew of it.

Dick Harding was popular with the girls because he held several season tickets for the theatre and did not mind filling the seats which these tickets obtained. He also owned the fastest team and the handsomest trap in town, and the girls enjoyed riding immensely. Dick's father was a retired capitalist who lived in the big stone house on the hill. This place upon the hill was the scene of many enjoyable evenings that summer and Dick became more popular than ever. He had not lived in Quincy long, and was as much sought after as most wealthy new-comers to small towns are.

But Guy Winslow had been popular also. Too popular to please Dick. And it was for this reason that Harding had made the foul play.

The summer passed and although Guy Winslow was not entirely forgotten, he had had a lonesome time of it. Many of the girls had liked Guy, but now that he could not be out Dick had things his own way. Winslow was a whole-souled boy of excellent manners, which was naturally in consequence of the good old Southern family from which he had sprung. He was too quiet, however, for "Dashing Dick", as Harding was sometimes called. So Dick took Guy's place; not only at the stroke-oar, but also in a certain girl's fancy.

* * * * * *

"Hello, Guy!" exclaimed Lawrence Holloway one evening nearly a year after the field day accident; "I'm awfully glad to see you about again, old fellow!"

"Well, I'm glad it's over. I got pretty tired being cooped up, I can tell you. But where are you going? You seem to be killing it tonight."

"Why, aren't you going, Guy?"

"Going where?"

"Winifred Sterling has a 'Flinch' party tonight. I thought of course you would go."

"No, I didn't get a bid," replied Guy huskily, for Winifred Sterling was that certain pretty girl. Good night, Holloway," he said in a more cheerful tone, "I will not keep you for I expect Theodosia is waiting for you."

Guy did not wish Lawrence to know how slighted he felt, but in his heart he was bitter. Not so much against the

girl who had slighted him, but more against Dick Harding.

"Good night, Guy, I'm awfully sorry you are not going. I can't understand why you didn't get an invite."

That was just the thing that Guy himself couldn't understand. He turned homeward with a heavy heart. Could Winifred have forgotten him? No, it was evident that Dick had had a hand in the game. How could he crush this Dick who was making his life so unbearable? Should he tell of the foul play? No, this was contrary to Guy Winslow's sense of honor. He retired early, but passed a sleepless night.

* * * * * *

The next afternoon Winslow was returning from a walk, and on account of his injured limb had flung himself down under a tree near the railroad tracks to rest. He had not been there long when far down the lane he heard the clatter of horses' hoofs. Looking down the road, which ran through the valley beyond the railroad tracks, he saw the team and trap of Dick Harding. Harding was in the trap and some young lady was with him. As the conveyance approached he recognized the girl. It was Winifred Sterling. For a moment Guy felt like concealing himself until they had passed. But no, why should he? He had not committed a crime, why should he flee?

As the rig came nearer a sharp gust of wind sent a large, white piece of paper rustling across the road directly in front of the team. The horse on the off-hand side suddenly gave a snort, reared, and plunged forward. His mate also became terrified. At the first jump of the young team the reins had been jerked from Dick's hands, for he had held them but loosely, giving far more attention to his companion than to his driving.

The frightened animals were running swiftly toward the railroad tracks. Harding's face was white as he helplessly called to the team in frightened tones. The girl sat very pale and erect, firmly holding to the seat with an intense grasp. Suddenly a new terror confronted them. The team was about two hundred yards from the tracks when the 4:50 Limited rounded a sharp curve at high speed and whistled for the crossing. At the shriek of the sharp locomotive whistle the horses became more frightened than ever. Onward came the train; forward sped the team. Dick, with a look of tragic appeal to the helpless girl, jumped from the trap. She screamed as if she was now sure that her fate was a hopeless one. The train and the team would certainly collide! One more minute and all would be over. Winifred stopped screaming and clinched her teeth, resolving to meet death bravely. Suddenly a stalwart figure dashed across the tracks directly in front of the oncoming train. Guy Winslow made better time down that road than he ever had in any race. With a tremendous leap he grasped the bits of the maddened team, turning them aside into a fence. The train rushed by. Hundreds of passengers had seen his action and cheered with approbation.

He quickly and securely tied the horses, which had now become more quiet.

"Miss Sterling" (he did not say 'Winifred' as of old, and it cut her deeply), "since your escort has neglected you, permit me," and at the same time he extended his hand and helped her from the trap. Then he pointed to the figure of Dick, which had been arrayed in an immaculate white duck suit, slowly arising from the dusty road.

"Oh, Guy! How *can* I thank you?" exclaimed Winifred. In the excitement she had forgotten to faint.

"I will tell you," he said. "For Dick's sake and for mine, promise never to mention this."

The girl pondered several moments. Then looking him fairly in the face she said:

"It is hard to do, but I promise."

By a few words he could tell of Dick's cowardly act and Dick's fame would be no more. Should he tell of the foul act? No, this was contrary to Guy Winslow's sense of honor.

The sun was just setting as they drove into town. Far away the band was playing, "And They Gave Me a Medal for That."

E. Bernard Garnett, '04.

"For Ye Know Neither the Day Nor the Hour."

A True Story.

THE dusty air had stirred but slightly as a husky trainman broke forth in a crackling call of "Mexia"! The weary travelers only turned in their sooty seats to resume their fitful nodding. Back in the car a child, of some four summers, cried piteously, a man snored to the discomfiture of his neighbors. The drinking water was hot, and each trip to it but awakened a thirst for another. Nodding heads appeared behind papers and books, and tired eyes, red and burning, closed fitfully. Occasionally some were dropped off, mercilessly, cruelly, to parch on the wastes of a wayside station in Texas.

The blue of the sky was lifeless, no bird winged its heated course. A few summer clouds, blinding in their white intensity, made the firmament hard to gaze upon, and few gazed and fewer slept. They were possessed of that sleepless weariness of the traveler. An ominous silence prevailed.

As the long train crept into the station and slowed down reluctantly, as it seemed, a few people, gaunt, dust-clad figures, stirred sluggishly. A clerk swung aboard the Dallas mail, a few trunks crashed on the rickety planks of the shabby station, a door slammed, voices approached, and with a puff—

"Pardon me, sir," someone spoke at my elbow, "is this seat taken?"

The man, or rather the boy, for the full bloom of his youth rested on his fair brow, was tall and handsome. A woman, sweet-faced and smiling, leaned upon his arm. Few things of the Creator's master hand excel a noble woman, but when God made a mother, he gave the world perfection. Radiant under her fifty or more years, her wrinkled brow wreathed in perennial snows, she beamed with pride upon the boy. As I saw them during that hasty good-bye, hidden only by a mist of my own making, there came before me a picture. 'Twas a picture of some forty years past, whose brilliant tints had never faded.

The train, rude interrupter of loving farewells, began to creep, the boy's arms stole around her slender waist, and with upturned face—but I looked far out o'er the stretch of cacti. There are some things in the world far too sacred to see.

Sorrow, joy, these two, although at opposite ends of the list of human passions, most crave companionship. And as a fitting background to such relationship, few places excel the average passenger coach. And so we fell to chatting.

After a few commonplace remarks concerning the weather, of rather a predictive nature, she volunteered:

"That was my son."

"I should judge so," I responded. "It did me good to see him. His affection for you was marked." A man of fifty can speak of such things with propriety.

"Yes," and her smile was good to see, "John is a good boy. But I hate to have him away from me. He ain't never been away so long a spell before and I can't help worrying about him. There be so many temptations to a young lad like him. And that is why I have cum down, to see how John be a getting along.

"Is he employed in Mexia?" I ventured.

"Yes, he's a-working fer a man there by the name of Tucker. Do you know Mr. Tucker? He runs a store there. John's been getting along right smart. He got a raise a spell back. But I reckon John will be all right, he always has been, an' that is more'n most folks can say. I reckon the Lord will help him. John's been a powerful help to me since—"

But to me her words ceased, for I was thinking of a far city, where a mother, sweet and wrinkled, even as this one, had spoken such words before. And I wondered at myself.

Clouds, dark banks of inky vast possibilities frowned upon the scorched land. The air hung motionless, birds flew past to shelter. All creatures seemed to feel the approaching disturbance. A respite

to the tortures of the sun would indeed be welcome.

Nervously the little woman by my side glanced at the lowering sky. With a quaver in her sweet voice she said,

"Do you think it will storm?"

The circumstances at the moment vouchsafed an affirmative. My answer seemed to sting her, and to have avoided the troubled anguish of her look, I would have meekly and uncomplainingly suffered the misery of the heat.

"My, but I do hope it won't lightnin."

"Do not worry," I ventured, ransacking my memory for something comforting, "there are many more than us and it is scarcely possible that we shall be chosen."

She looked at me as one who has tasted of the waters of life and found them bitter, who has tried so oft before, and knew the fallacy of my words.

"Yes, I know," and in a vague way continued, "but oh! there were so many more and yet he was taken. It might not be so bad if I go now, but John—I hate to leave John," and the sweet voice was lost in a sob. Two drops of anguish traced a well-known path down her lovely cheek to fall unheeded on the rusty black skirt.

Soon she brightened up and told me her story, sweet with its love and rich in its sacrifices.

"We were both poor, but we knew we'd be happy, and we were willing to be careful and savin', so we bought—Oh, but ain't that thunder awful—, we bought a little farm just out of Dallas, and we was real careful and had such hopes, John and me. And then baby came, bless his heart, he was so dear—I wish it'd stop. He was awfully pretty, with great big blue eyes and long gold curls. We were so proud of him and we called him after John, but just Toots 'fer short'.

"And so we got along all right. John planted a garden and Toots played there and we were so happy—I believe it's going to stop lightnin'—and the future looked so bright; and one morning we got a letter from home, back at Westfalls, Ohio, telling us we'd get a box fer our anniversary, August thirteenth; yes 'twas August thirteenth. So on that Friday John said he'd go to town and get it. And when he'd hitched up I carried Toots out to say good-bye. John was so good and strong and handsome. And I was so proud of him. He played a minute with baby and kissed us both good-bye and druve off.

"Baby and I went in and I flew round to fix everything so it 'ud be nice when John got back. Bye and bye it grew dark and begun to lightnin'. I didn't notice it at first, I was so busy an' a-singin' away. Pretty soon baby come and put his head in my lap an' cried like he'd break his heart. And all to on'st there came an awful clap o' thunder. It sorter made my heart stop and then beat right fast. Somehow, I thought of John, but I 'lowed he'd stop in the store till it was over. After a bit it cleared up, like it has now, and baby began to play and I went singing about my work.

"Pretty soon I went out to the well to get a drink for Toots. I looked down the road and saw a man a wavin' his arms like mad. And there was John's team a-comin down the road, a runnin' away. I wa'n't much scared, as I 'lowed they had broke loose when John was in the store. So I went out to the road, 'twan't but just a step, an' thanked him for catchin' 'em, and he went on down the road. I led 'em up to the back stoop and looked all over to see if anything was broke. I looked in the wagon and on the straw was John—poor John—dead and burnt, struck by that awful clap o' thunder, as a man tole me what hed seen it. And baby came out an' begun to say 'daddy'—he'd just learnt how. He didn't know as how—"

But again the sweet voice was lost in a sob. I could not see her now, for my eyes were blurred—and I cried a little, too.

"And Oh, sir!" she continued, "I am going back to the old place. I always do, but this is the first time Toots—I should say John, Jr., the one you saw, isn't with me. It will be awful lonesome, you know. Tomorrow's the day—the thirteenth of August."

I looked at my calendar and saw her mistake. It was then the thirteenth, but I left her in ignorance of it for

"Where ignorance is bliss
'Tis folly to be wise."

ALFRED H. WAGNER.

MANUAL.

A health to you old Manual,
And may you thrive a million years,
Triumphant and perpetual,
And undismayed by foes or fears.
Still staunch and dauntless when you have
The storms of centuries withstood;
And after we are in the grave
Still nobly, grandly doing good.

A kind old mother you have been,
Who trained her children 'till they stood
Before the world as upright men,
And all that's best in woman-hood;
That filled us with a high ideal,
And urged us on to strive, to do;
That taught us to seek out the real,
And shun the hollow and untrue.

To me, who groped half blindly through
Your halls, in my desire to find
The path my talents called me to,
You have indeed been more than kind.
You led my feet along the ways
In which I long had hoped to stray,
But moments, seemed the passing days
That sped so happily away.

And so I give you meed of praise,
And when the world upon me falls
I'll wander back in future days
To stand once more within your halls;
In memory old friends I'll greet,
And gaze on each familiar scene;
I'll dream of days with joys replete,
And think how sweet these days have been.

The sweetest lilies that e'er grew,
The purest and most fragrant flowers
Are symbols of my love for you
Who gave to me such pleasant hours.
The time has come when I must go,
Must leave your pleasures prodigal
To go my way alone, and so,
Farewell to thee, old Manual.

—Franklin Walton Harper.

SCIENCE

CONSTANT JACCARD

EDITORS

VEVA HAWKINS

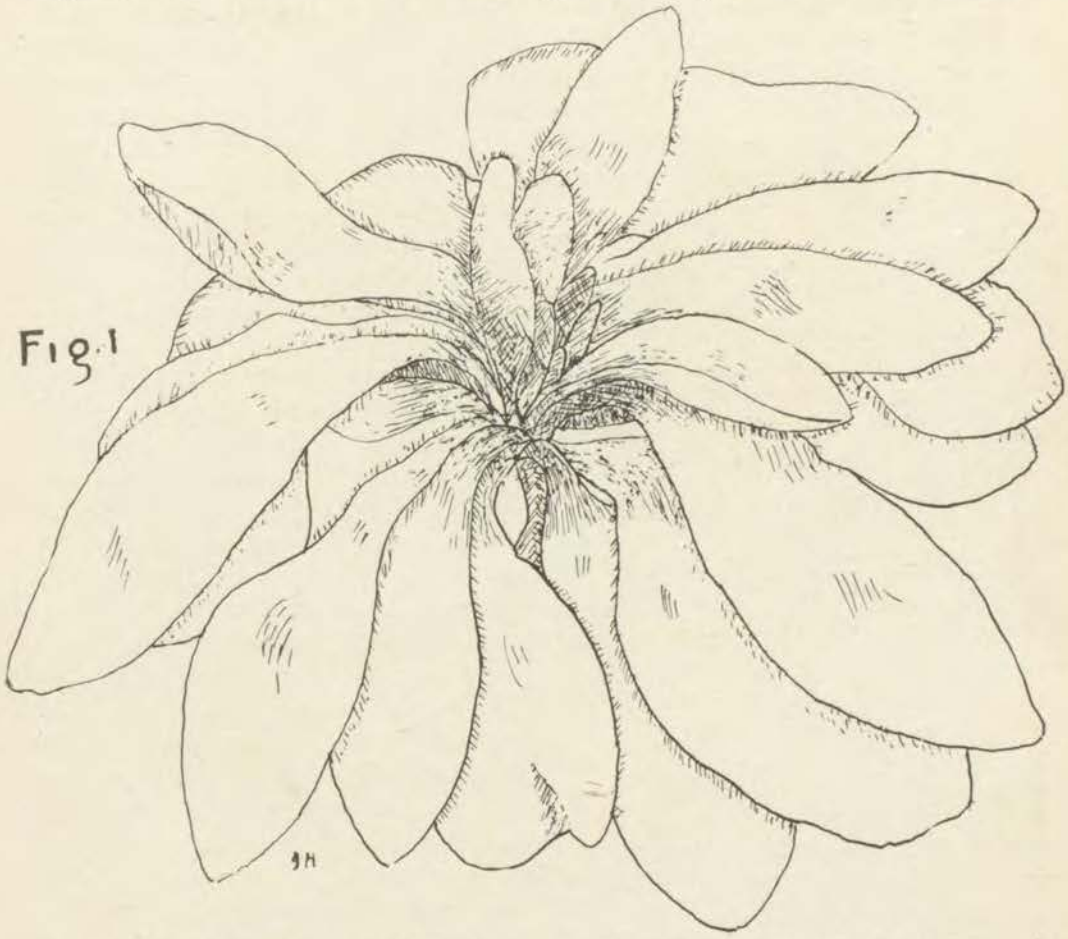
The Life History of the Common Mullein.

THE common mullein (verbascum thapsus), belonging to the Scrophulariaceae or figwort family, grows in fields and waste places from Nova Scotia to Minnesota, Florida and Kansas. It is sometimes known as the velvet dock, great mullein or mullein dock. It is native to Asia and Europe and was naturalized in this country from the latter place.

The seeds which caused the introduction of this often troublesome weed into the United States are only three-fourths of a millimeter, or three-hundredths of an inch, large. They vary in shape (Fig. 3 B) and color, but the ripe seeds are usually a gray brown, while those not mature are often yellow. Their peculiar pitting (Fig. 3 B) has not been satisfactorily accounted for by botanists.

The seedlings produced from these seeds have the parts usual to dicotyledons and develop from the embryo in the manner common to them. The plants produced remain partially developed buds during the first year. They are loose rosettes and are common in Kansas City throughout the year. During the very coldest part of the winter they are somewhat injured, but seldom die, and they

are always ready to begin food manufacture at the first appearance of favorable conditions. The hairs covering the leaves of the mullein make them appear thick and velvety and give them quite a beautiful appearance. This taking on of the rosette form and the hairs is largely to provide for winter conditions. The problem of getting sufficient heat to maintain life



at this time of the year is partially solved by the overlapping leaves of the rosette being closely pressed to the ground. This diminishes the loss of heat by radiation and causes the plant to escape the cold winds, which seldom reach the earth at their full force on account of taller plants and other obstructions.

But the chief provision to be made is for collecting water and preventing its loss. It is necessary that water should be collected, as it is one of the principal things used in making food. Water is also the only vehicle for getting soil food. The use of water in manufacturing food necessitates its retention until it has served this purpose, and an important part of the specialization of the mullein is directed toward the regulation of evaporation of water from the plant. The object is that it may occur sufficiently to send off the water from which the food material has been extracted, but not so much that any other is parted with.

The fact that water is cold during the winter, combined with the frozen or partly frozen condition of the soil at this

time, makes its absorption by the roots very difficult. This is explained by the theory of osmosis. According to this theory the absence of heat implies the reduction of molecular activity and consequently of the activity of the fluid of which the molecules are a part. The effect on root absorption may be illustrated by dipping the edge of one cloth in hot or warm water and the edge of a second in cold. It will be seen that the water is drawn up into the cloth much more quickly in the first case. However,

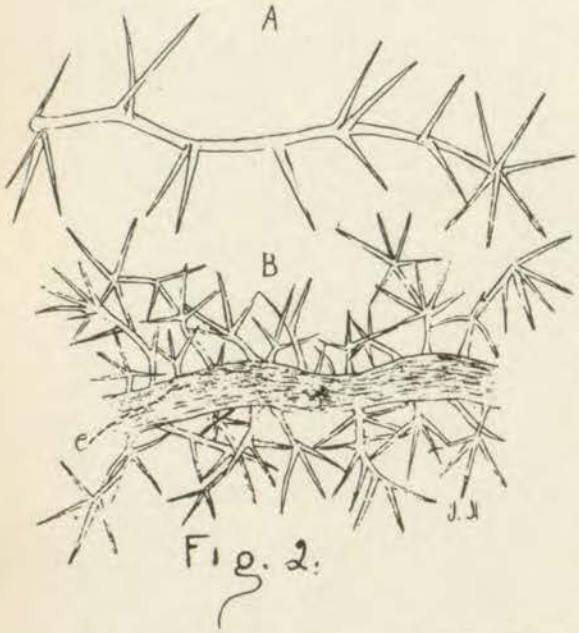


Fig. 2.

the roots are in no way assisted in their work of absorption by the rosette form, but, as there are no long stems for the water to be taken through before it reaches the leaves, it is more easily and quickly carried to its required destination.

The plant is shielded from the dry winds by its rosette form, and as the leaves lie close to the ground and to each other the loss of heat is prevented. This also keeps the under sides of the leaves from being greatly exposed to the sun, and consequently the amount of water given off is not so great. Besides, the leaves are prevented from giving it off by the closing of the stomata. However, the work of food manufacture is not interfered with, as the leaves are only from four to twelve inches long and permit the light to strike between them. Their alternation (Fig. 1) prevents too great shading. The leaves are narrowed at the base so as almost to form a petiole. (Fig. 1). This diminishes the parts which are necessarily shaded. A happy medium of light and moisture is secured by all of these means, giving, under nearly all conditions, sufficient and yet not too much so that the plant is not wasting its energies in combating with adverse influences. Thus it is enabled to manufacture and store up food by the aid of sufficient light.

But a specialization almost equal in importance to the rosette form is the matted hairs, which look like a velvety covering when viewed with the naked eye, but under the microscope are seen to be translucent, branched hairs, matted together and making up the greater part of the thickness of the leaf. (Fig. 2). They serve somewhat to protect the leaf proper from the cold. However, their principal office is to prevent too great loss of water. They serve to hold a distinct stratum of air all around the leaf. This layer soon becomes laden with moisture so that its power of taking up more is nearly or quite exhausted. As it is a known fact that the more moist the air is the less readily it takes up more moisture, it is evident that the stomata are soon prevented from giving off any more.

In the first year the plant is a partially developed bud and is assigned to the class of so-called stemless plants. The second year the bud becomes fully developed and the stem attains a height of from two to seven feet. The edges of the bases of

the leaves run down this stalk, making deep troughs by their strong decurrence and causing the water to run down to the base of the plant. The roots are arranged closely around the center to take advantage of this peculiar drainage system.

On this stalk the sessile, showy white or yellow flowers, are borne in dense, elongated spikes, which are occasionally branched above. The stamens of these flowers are unequal, the three upper being the shorter and having white, hairy filaments and short anthers, and the two lower being smooth, or nearly so, with long anthers.

Sir John Lubbock says of the flowers in regard to fertilization: "They secrete very little honey, but are visited by various insects for the sake of their pollen, and perhaps also on account of the glandular termination of their violet staminal hairs. The stamens turn somewhat upwards, the pistil, on the contrary, downward, so that an insect alighting on the lower lip of the corolla, which is the most convenient place, would naturally come in contact with it before touching the stamens." The pollen thus gathered by the insect is rubbed off on the stigma of the next flower (Fig. 3 D S) and sends tiny tubes down the style (Fig 3 D st.) to the ovary (Fig. 3 D o.) and fertilizes the ovules, which afterward develop into seeds. The capsules produced are two-valved and slightly higher than the wooly calyx (Fig. 3 C). They break open by the bursting of their partitions, but rarely split open as widely at the base as at the apex and do not eject their seed. Consequently when these are freed from the placenta they fall into the lower valve, where they remain until the stalk is inclined to one side, usually by wind or animals. As it takes a great many gusts

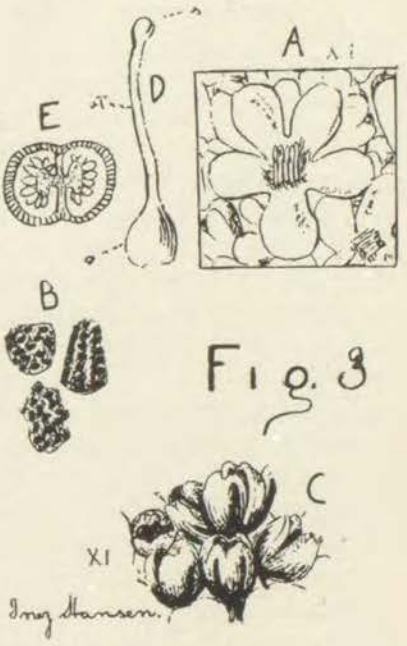


Fig. 3

of wind to cause all of the seeds to fall out they are scattered in many different directions, so assuring their wide dissemination. When the seeds have been sent out to start new plants the life history of many a future mullein has begun, to repeat in every essential feature the one which has just been completed.

INEZ HANSEN, '05.

THERMOMETERS

THERMOMETERS are instruments that measure degrees of heat. It is necessary that some part of the instrument should move considerably, when a change of temperature takes place, so an accurate reading may be obtained. In the common mercury thermometer the mercury in the tube does not expand nearly enough without the large mass in the bulb.

Alcohol thermometers can be made with smaller bulbs, as the rate of expansion is about ten times that of mercury. Alcohol freezes at a much lower temperature. It is generally colored red or blue. The thermometers the street car company placed in its cars last winter contained alcohol. It was claimed that the jolting of the car made the "mercury" settle down in the tubes. But that was just to make the passengers think the car wamer than it was. However, cheap thermometers are very seldom accurate. The proper way for thermometers to be graduated is that each one should have a scale made for it. No two thermometers should have similar scales. In ordinary ones the tubes are made by the hundreds and the scales made all alike. Of course it would be almost impossible for two tubes to be exactly alike.

Standard thermometers are made one at a time and cost more than others. After the tube is completed, with the mercury inside, it is placed in melting ice. When the mercury stops falling a mark is made on the tube at that point. Then it is placed in boiling water and another mark is made at that point. If it is to be a Fahrenheit scale the first point is marked 32 deg. and the second one 212 deg. If a Centrigrade scale is wanted the first is marked 0 deg. and the second 100 deg. Then the degrees between the two are marked.

In weather observations it is often required the highest temperatue and the lowest during a certain length of time. For this purpose two thermometers are used. Inside of each tube is a small float. One stays on the surface of the alcohol and the other is just under the surface. The thermometers are held horizontally. When the air grows warmer the alcohol rises in both tubes. The floater on the surface is shoved along until the air grows cooler. Then it stays where it was shoved and shows the highest temperature. The other floater does not rise with the alcohol but on cooling the alcohol pulls it down, always keeping it under the surface. When the air grows warmer again the alcohol leaves the floater at the lowest temperature.

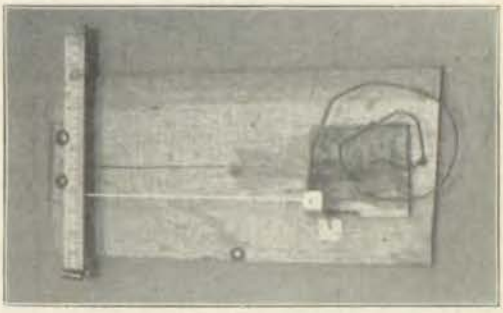
When Lewis and Clark were preparing for their expedition through the Northwest their thermometer was made by Dr. Sangrain at St. Louis. Finding it impossible to buy glass or mercury in this country, he scraped the quicksilver from the back of a large mirror and then used the glass to make the tubes. After days of patient labor he produced a few accurate thermometers. To make such a

thermometer would require experience in the handling of molten glass.

An air thermometer is about the easiest to construct. An ordinary flask or bottle is fitted with a rubber cork; through a hole in the cork is thrust a glass tube. These fits should be air tight. Then the bottle and tube are inverted and the lower end of the tube is placed in a glass of colored water. When the bottle is warmed the air inside expands and some escapes through the water. On cooling the air contracts and the water is forced into the tube to take the place of the air that escaped. When the temperature of the outside air is warmed or cooled it causes the air in the bottle to expand or contract. Then the water in the tube will rise on cooling and fall on warming.

This style of a thermometer is not accurate for any length of time, for the variation of atmospheric pressure will affect the height of the water in the tube. Anyhow it would be difficult to construct an accurate scale for it.

Metallic thermometers are not so common as the mercurial thermometer, but are practical. No special knowledge or mechanical genius is required to make one. The principle on which they are made is that different metals will expand different amounts for the same change in temperature. If a strip of iron or steel, a clock spring will do, be riveted or soldered to a strip of brass the two will form the main part of a metallic thermometer. If one end is fastened and the strips heated with a match they will bend slightly. This is because the brass expands much more than the iron. One end being fastened, the other end moves toward the iron side when heated and toward the brass side when cooled. A pointer may be fastened to this end in the form of a lever, the short arm being next the strips. At the end of the pointer a scale may be marked off by comparing it with a standard thermometer. If the strips are in the form of a coil the apparatus can be made more compact.



The illustration is a photograph of one that was made with as little work as possible. Although it is a very crude affair, it will show a sudden change in temperature much sooner than a common thermometer. The inside end of the coil is soldered to a nail in the block of wood. A change of temperature will cause the strips to coil or uncoil a very small amount. To enlarge this difference, a long glass thread was used. The white line in the picture represents the glass thread. The piece of tin is a support for the pivot on which the thread turns. The thread rests on the end of the coil about a quarter of an inch from the pivot. The other end of the thread moves many times further and the ruler was placed in position just to see if it would do for a scale. Luckily it was just the thing, for it turned out that a sixteenth of an inch was one degree.

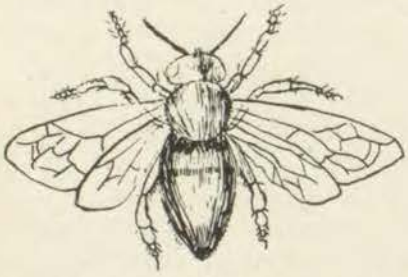
It was quite accurate for small changes in temperature, but this spring did not seem to be elastic enough to return to the correct position. If the strips had been riveted together and then been boiled in linseed oil this would probably give better results.

VICTOR STEWART.

HONEY BEES.

ONE of the most useful of tiny animals, to man, is the busy little apis, or honey bee.

Of all the bees who help to form the colony, the queen bee is by far the most important personage of the hive. For it is the queen who lays the eggs and so furthers the existence of the colony. She receives great care from the other bees and is constantly surrounded by a little coterie, who bring her honey and attend to her other wants and wishes.

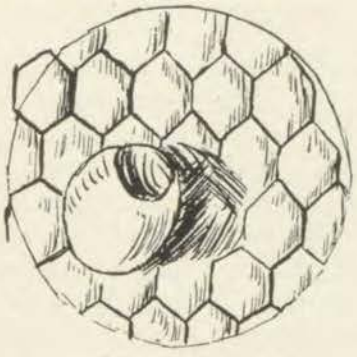


Besides the queen there are the neuters, or workers, and the drones. The first class is divided into two general classes, those who work in the fields and those who perform the household duties. The latter are sub-divided into different groups. There are the nurses, who feed the bees when they are in the larval stage; and the cell-makers, or they might be called masons, for they make those wonderful hexagonal cells which have been the wonder of so many ages, and that have puzzled the most learned of scientists. A small portion are sentinels and guard the door. They see that no enemy gains admittance to the hive, also that no stranger enters to steal the honey. The doorkeepers sometimes permit a visitor to come in and leave his burden, but never is he allowed to leave the hive laden. If a stray wasp or some other traveler attempts to gain access to the hive, he is either driven away or stung to death. One day a mouse got into a hive I know of and was immediately killed. The body was too large to drag out, so the ingenious little bees simply sealed him to the floor of the hive with wax and thus preserved the cleanliness of their home. Then there are the chambermaids, who keep the hive in a clean and orderly condition. They remove any refuse that might be lying around in the corridors, and prepare the cell of a newly escaped bee for another egg.

Those of the workers who are not employed in the hive, constitute the huge army which gathers the nectar and pollen

from the fields. The little workers procure their sweets from the sap of trees and from flowers. When a bee alights on a flower, he thrusts into its cup his proboscis, which is like a hollow tube. The nectar passes through this and into a little sac known as the honey sac; there

it is retained until the hive is reached. The watery nectar is reduced to honey by evaporation caused by currents of air in the hive.



The drones, or males, form the second class. They are in every sense of the word gentlemen of leisure. They do nothing but enjoy life from morning till night. All summer long their life is like one sweet dream, but they have a rude awakening when fall puts in an appearance, for the poor drones are not allowed to live. They are either mercifully stung to death by the workers, whom they have regarded with such scorn during the heyday of life, or else they freeze or starve to death, for nature has given the drone such degenerate mouth parts that he is not able to procure his own food.

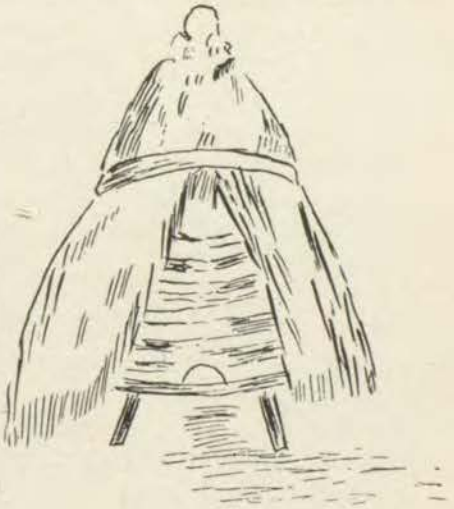
Let us follow up the life of the bee from the egg to the fully developed animal. Those eggs that are destined to become queens, several in number, are tenderly watched over, and after about three days hatch out into larva. The larval queens are fed on "royal jelly," a whitish, jelly-like substance, which is secreted in glands in the heads of the nurses. Bee bread made from pollen and honey is fed to the worker babies.

The larval queen spends about six days in this state, then goes in the pupal stage for about seven days and from this emerges a fully developed bee. The queen lays from two to three thousand eggs a day, which is on the average of two every minute.

"Might is right" is a rule observed by bees, for when several queens are hatched out at the same time they proceed at once to kill off one another until only one is left. The new queen will then start out for a new hive, followed by the workers who were hatched at the same time as

their queen. This leaves the parent, or old queen, room to lay more eggs, and thus produce another colony.

A proof of the bee's intellect is that he never gets lost, no matter how far he strays from his home, and some have been known to go a mile or more from



the hive. Another is that a bee never gets into the wrong hive, no matter how many of them may be in a row.

HELEN J. DICKEY, '04.

Our New Psychology.

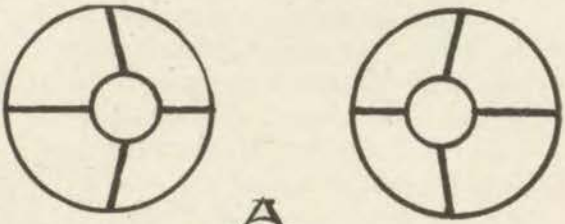
THE first part of this term a class of Analytical or Experimental Psychology was formed. Psychology has always been taught in the school, but always from a theoretical standpoint, never an experimental one. To teach the subject in such a manner was in itself something of an experiment. It has been so taught in the large colleges for some time, but they have all been equipped with psychological laboratories and apparatus costing many thousands of dollars. The need has long been felt of some way in which the subject could be taught experimentally without any such elaborate outlay or equipment.

This need has been filled by the book of Professor Lightner Witmer, of the University of Pennsylvania. This book, a "Manual of Analytical Psychology," comprises a series of experiments that can be performed with the aid of no other apparatus than the plates in the book itself, or of such a simple nature that they can be made very easily.

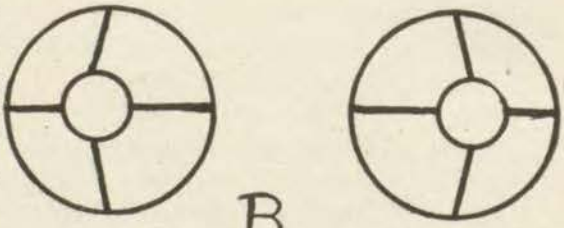
These experiments have been so arranged as to systematically and logically prove to the student the laws governing mental phenomena, or action of the mind. Professor Witmer is not at all radical in his statements, and leaves much for the student to decide for himself.

In studying the subject, each student using his manual for a guide, performed the experiments for himself. He then wrote up complete notes of the experiment just as he experienced it. The experiment was then discussed by the class. The student may not have succeeded with the experiment just as the book said he would. Again, no two members of the class may have gotten the same result, yet in each case every result has been correct. No two minds are exactly alike, hence no two will act in exactly the same manner. Thus one might get a certain result in an experiment and another obtain just the opposite one in the same experiment, yet both were equally correct, inasmuch as in each case they were the impressions of each student.

Under one of the experiments, "Binocular perceptions of space," the accompanying plate is used. The best way to succeed with it is this, using either pair



A



B.

of the circles, A or B, fasten the left eye upon the left hand circle of one pair and the right eye upon the right hand circle. Keeping the eyes fixed so upon

them gradually bring the eyes close to the circles. When they are an inch or two away the figures will appear to gradually approach each other until they at last combine into one, directly between the two eyes. Sometimes it is necessary to hold a card edgewise between the figures to keep the eyes upon their respective figures. When the figures have combined into one, that one stands out in bold perspective. Of course it is very easy to succeed with this part of the experiment, but the questions such as the physiological and psychological reasons for it and its connection with our perception of space are the most important part of the experiment.

The advantages derived from the study are very great. First, it creates a scientific investigating attitude of mind; second, it affords one of the best mental drills one can find; third, it gives a clearer understanding of the terms used in psychology, which we meet with every day; fourth, a broader view of life, and, fifth, and most important, a greater tolerance with those who may differ from us in opinion, as we are able to see why they differ, and so are placed in sympathy with them.

Studied in an abstract or theoretical way, we may be able to glibly define in the language of another all the definitions and established rules of the science of psychology, and still know little or nothing about it. But when it is placed on an experimental basis and those rules and definitions proved to us through the medium of our own experiments they become vastly more interesting and infinitely more valuable to us. The difference between ordinary theoretical psychology and experimental psychology is the difference between some one else's experience and our own experience.

E. Trice Bryant.

A FEW Theories of Matter.

EFORE we consider anything special, let us get a few general definitions into our note books. First, as we are seriously concerned with matter, we will seek some explanations of the word. If we consult the ancient scholastic, he will say: "All matter is divided into three classes; firstly first, secondly first, and thirdly first. Such is matter." Consulting the dictionary, we will find: "That of which the sensible universe is made. That which occupies space." But matter is so broad a subject that here we will only attempt to look at the most interesting side of a few theories met with in beginning chemistry.

It has long been conceded that there is a limited number of elements, from which are formed a limitless number of compounds. One writer has compared matter to a language. The words of the language are spelled with letters, the compounds of matter are built with elements. So salt may be considered a word of two letters, spelled by the elements sodium and chlorine. In the English language are twenty-six letters, in the language of matter are seventy-five elements.

For a long while many of what we now know to be compounds were considered elements, as, for instance, sodium hydroxide. But when, with the aid of the electric current, this compound was reduced to its elements and a metal sodium extracted from it, chemists were astonished, and in the adjusting of their mental equilibrium swung so far to the other side as to call nothing an element, but all things simply undecomposed compounds.

The atomic theory was discovered by John Dalton in the begining of the nineteenth century. He was experimenting with an invention for measuring rainfall (the same apparatus which we now use in a modified form), and noticing evaporation, commenced speculating on its causes and effects. He decided that water vapor must exist in the atmosphere as an independent gas. But since two bodies cannot occupy the same space at the same time, the gases of the atmosphere must be divided into numerous small particles. After working for about a year upon various confirmatory experiments, he finally announced his theory, which is that all forms of matter are composed of separate particles called atoms.

This theory promised so much in the way of helping to explain various phenomena that chemists became interested immediately. Disputes arose for and against and were hotly contested. Finally it was an accepted fact, and these laws grew from it. Gay Lussac, a French chemist, said that under the same conditions of temperature and pressure gases combine always in definite numerical proportions as to volumes. Then Avogadro stated as a law that under similar conditions of temperature and pressure every

form of gas contains the same number of ultimate particles to a given volume. At the time that Avogadro announced his law it was at first partially credited, then rejected, and it lay for many years in disregard until finally it was revived by a reputable chemist and through his support became an established law which we all must learn.

As soon as it was definitely settled that there were atoms, chemists proceeded to weigh them—by indirect methods, of course—and made the table of atomic weights. In this table hydrogen, because it is one of the lightest elements, was taken as unity and the others calculated from it.

After the determination of the atomic weights for many of the elements a curious relation was observed. When the elements were arranged in order according to their increasing atomic weights, it was noticed that while each element differed much from the elements on each side of it, still at definite intervals elements were found to recur which resembled each other very closely in their actions. These recurrences were every seventh one in the first fourteen elements, then every sventeenth. Also it was found that in many cases when three similar elements falling in the same group were compared the atomic weight of the second one would be approximately half way between the weights of the first and third. By these similarities a table known to represent the periodic law was arranged. Whenever a space between atomic weights was found the chemists did not worry, but just left a space with the comment that some time an element would be found of the required atomic weight and having the requisite chemical and physical properties. Three of these vacant spaces have since been filled by elements whose natures were determined before the elements themselves were found.

When chemists had found out this much they desired to know more, for such is the nature of a scientist. Then they sought to find with how many atoms of each other element any one element could combine. So they worked out the theory or system called valence. Here, again, they took hydrogen as unity, that is as having one bond for combining with other elements, and the others were calculated from the compounds they formed with hydrogen. Oxygen has two bonds and the way its combination with hydrogen is expresed is by the formula H2O or otherwise H-O-H, where H stands for hydrogen and O for oxygen. H2O2 is also wriffen H-O-O-H. In these the horizontal lines represent the bonds. Thus it will be seen that from each H extends one bond, while from each O are two bonds. An atom does not, as a rule, remain by itself uncombined. If it can find nothing else to go with, it forms a molecule, or group of atoms, of its own kind. But these combinations are often not so stable as compounds formed from different elements, and break down when opportunity offers, for an atom will desert one of its own kind to go with another for which it has a greater affinity.

When, with the aid of these theories, for we must keep in mind the fact that this is all theory, the system of atomic weights was worked out, the idea struck with paralyzing force that perhaps after all there was but one element, hydrogen, and maybe it was an aggregation of atoms. This theory was hopefully nursed, and some chemists even went so far as to do away with fractional atomic weights and put them in round numbers whether they would or not. For, said they, how can they be fractions where they are merely multiples of a whole number? But this

theory was too highly volatile, and the friction exploded it. Dumas was its chief supporter.

Scientists now realized that this theory of atoms would help them to explain a new force. One which, by the way, has not yet been fully explained, the force of "Osmosis." This is the pressure exerted when two liquids with an affinity for each other are separated by a membrane which is impervious to one of the liquids. The pressure here is something astonishing and is exerted by the one liquid in passing throught the membrane, and by the other in trying to pass, and thereby producing a sort of reacting force so that eventually both pressures act the same way. To obtain an idea of the extent of this force, let us study the experiments of a German chemist, Professor Pfeffer. First he filled the pores of a porous earthen cell with copper ferrocyanide, which made the cell impervious to cane sugar solution, but not to water. Then he filled the cell with a one per cent solution of cane sugar and, sealing into the top a long tube containing mercury, immersed the cell in water. The column of mercury was raised to a height of fifty-eight and three-tenths centimeters. He repeated the experiment several times, using solutions of different strengths. For a two per cent solution the mercury column attained a height of one hundred and one and six-tenths centimeters. A four per cent solution supported a column two hundred and eight and six-tenths centimeters in height. A column of three hundred and seven and six-tenth centimeters was raised by a solution of six per cent. So it was seen that approximately the force increased directly with the strength of the solution. The fact that the last reading is a little low is accounted for by saying that at that high pressure some of the sugar solution is able to force its way through the pores of the cell.

Chemists were very much pleased with this lucid explanation of a natural force, and continued to be while they used such organic compounds as sugar. But when they drew upon inorganic matter to verify the results and used a solution of salt all kinds of strange things happened. The solution had no respect for laws. The solution was electrically charged and its osmotic pressure was found to increase on dilution. So a new theory had to be evolved to cover these strange conditions, and presently we were given the theory of ionization. This theory states that when an electrolyte, such as common salt, is put into solution its component parts separate and the sodium positively charged with electricity, avoids the chlorine negatively charged. Then each of these ions exerts the same osmotic pressure that a molecule of the two combined did before. This dissociation into ions progresses as the solution is diluted, hence the relative increase in osmotic pressure.

Though in this brief sketch we have only touched upon a little of the profound and portentious wisdom of the scientists, yet we certainly did not damage the wisdom, and hope we have acquired a few working principles.

I.

CHESTER MANN

EDITORS

ISABEL LEONARD

Clay Moulding and Modeling.

UPON the facts that moist clay may be formed into any desired shape and that when it is exposed to a very great heat it becomes very hard, the industry of clay moulding is based. Because of this simple manufacture of earthen articles, it is but natural the earliest people, even in their semi-barbaric state, should discover the possibility of forming valuable articles from clay.

So to Egypt, the oldest of civilizations, this art of utilizing worthless clay is due, and in that country in the most remote period of history bricks and artistic vases were extensively manufactured for building and ornamental purposes. In making their bricks the Egyptians, or rather their slaves, moulded the moist clay into a number of rectangular blocks, but instead of baking these bricks in hot ovens, as it is done today, the Egyptians exposed their bricks to the heat of the sun only, consequently manufacturing an inferior quality of building material. Vases and other articles were often shaped by hand, and, like the bricks, were only sun dried, but notwithstanding this insufficient preparation, great numbers of these vases are still found in the tombs of ancient Egyptian rulers. Babylonia and Assyria, following the example of Egypt, utilizing the clay for numerous purposes, and also going further than moulding bricks with which to build their walls and shaping vases to ornament their palaces, the Babylonians and Assyrians even wrote their histories upon artistic tablets of moistened clay, and when they had the foresight to dry these plates they preserved their records to be read thousands of years afterward.

From ancient Egypt and Babylonia this industry of clay moulding has spread over Greece and Italy and finally over the entire world. In America, however, the on-

ly ancient people who have attained very great efficiency in working clay are the Mexicans, and, although a great amount of pottery is manufactured upon this continent, yet England leads the world in the amount and quality of the pottery which she annually produces.

The qualities of the articles which are produced from clay may be well divided into three distinct divisions. One kind is earthenware, which being the poorest in quality and only partially baked, is of rough texture and very soft. Stoneware, another kind of pottery, which in all respects is much better than earthenware, is baked until it is very hard and compact, being used for crocks, jars and many kitchen utensils. Porcelain is the best quality of pottery, and, although known to the ancient Chinese, it was not manufactured in Europe until the fifteenth century, and since that time it has been extensively moulded into plates, cups, and indeed into all the finer articles.

In being prepared for its manufacture into either earthen or stoneware, the clay is cut up until very fine and is then mixed with pulverized flint. This mixture is put into a tank of water and after it settles to the bottom of the tank the water is drained off, leaving a paste-like substance of clay and flint. This being kneaded until as much moisture as possible is abstracted, the clay is prepared for the potter's bath.

The potter's wheel is a table, through which an iron shaft protrudes several inches, upon the end of this shaft and parallel to the upper surface of the table a wooden disc is fastened. The axle then being turned either by hand or machinery causes the disc above the surface of the table to revolve with great rapidity. The clay paste is placed upon this disc, and as it revolves very rapidly the potter, with the aid of a few tools, deftly shapes the moist clay into any desired form. Besides being manufactured in this manner, the clay is also moulded in plaster moulds. This process is only used, however, for manufacturing flat, thin articles, such as plates and saucers. After the clay is moulded into the required shapes and carefully sponged any pattern or inscription which may be desired is stamped upon the soft material.

The articles are now ready to be baked and for this purpose they are placed into earthenware boxes, commonly known as "seggars," which are immediately exposed to a very hot fire for forty hours, and at the expiration of this time the fire is permitted to go out and the seggars to cool very gradually. As soon as these are sufficiently cool, the earthen articles, which are now very hard and brittle, are taken from the seggars to await their future development by glazing.

The glaze is made from the combination of white lead, flint and granite, and when these substances are properly compounded the glaze is an inferior quality of melted glass. The potter then dips the baked ware into this hot glaze, handling so skillfully that the glaze forms a smooth, even surface, and when this process is properly completed, all the patterns or inscriptions which were previously stamped, may be seen through the transparent coating.

Porcelain, which is of much finer quality than earthenware or stoneware, is manufactured in quite the same manner, only with the exception of the glazing process. Decorating porcelain has for many years been considered a fine art. The colors used in such decoration are of different colored glasses ground into a powder and then changed to a liquid with the aid of oil of spike. These liquid colors, thus formed, are stained upon the porcelain

with a very delicate brush, in this manner glazing it with pure, colored glass. The porcelain, carefully glazed and colored, is often beautified and enriched by gilding. To accomplish this, a gold leaf is rubbed with turpentine, in this manner forming a gold liquid, and when this is carefully painted upon the porcelain, it is heated and then finely burnished.

The porcelain, as well as the earthen and stoneware, being stamped with the name of the manufacturer, is then ready to be sold and shipped to all parts of the world.

GUS PATRICK.

Sparks From the Anvil.

THE fact is frequently remarked upon, and is noticed by all, that never before at Manual have the days been so full of hustle and bustle. To school in the morning, home and right out to the ball park for practice, home again to dive immediately into the depths of Cicero's flowing oratory. Next day the same things are repeated with, perhaps, an open session rehearsal or something else of the sort added to the list. All this may in some measure account for the lack of interest which seems to be shown this year in extra work. With the exception of a few Seniors, no one at all has produced any work, in the manual line, aside from the regular course.

Of these few Seniors, Cooper Milnes has turned his attention to a four-horse-power multipolar motor. The patterns for this were begun last year, and the actual construction done this year. Mr. Milnes will probably find that, besides the motor, he has gained a great deal in the patience and perseverance acquired. Arthur Wright is making a ten-inch foot-power lathe; Geo. Laundre, a breech-loading canon; Frank Barry, a twelve-horse-power compound marine engine; while the fancy of Ivan Hayes has settled upon gas engines. He has already made two, while the third will be completed probably by the end of the year.

But with the decline of extra work we find a difference in the *kind* of work done, particularly in the joinery classes, which more than compensates for it. Should the writer rummage through a certain old trunk, he has no doubt that he would find several exercises, marked "B," from which the plugs had dropped and left great cracks, which show even in the darkness of the trunk. But at present, to judge from the talk of our little men, an exercise to be marked "B," *must B* all right.

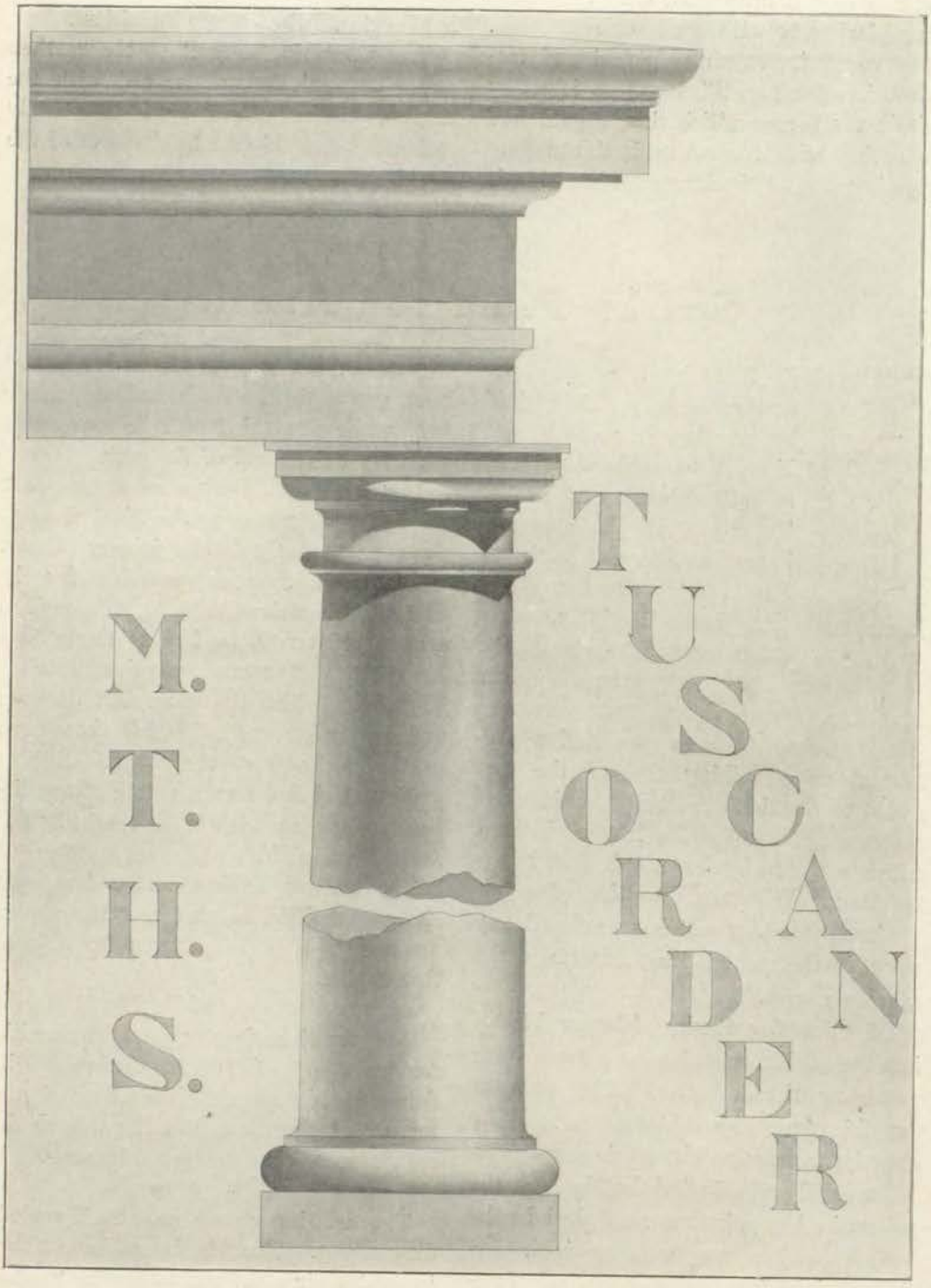
The pattern-making course has been changed a little, so that now the classes are making a set of patterns for a gasoline engine.

As for the rest, while Mr. Myles is calling for tight joints; Mr. Arrowsmith, for an even polish; Mr. Cushman still demands his purple, indicative of the temper of the tools, and Mr. Moore demands more accurate measurements.

* * * *

The drawing classes are steadily plodding along. The Freshmen have about learned their a, b, c's, while the "recurrence of fashions" is forcefully impressed upon the Juniors by the fact that they are again making letters.

M.


M.
T.
H.
S.
TUSCAN
ORDER

Domestic Arts Among the Greeks and Romans.

"With piles of rich treasure the store-house she spreads
And winds 'round the loud-whirring spindle her threads;
She winds 'till the bright-polished presses are full
Of the snow-white linen and glittering wool,
Blends the brilliant and solid in constant endeavor,
And resteth never."

WE are apt to think of the ancient Greeks as being a race of gods and goddesses, having nothing in common with our bustling world, but being many degrees, intellectually, above us. And yet the Grecian women did have one thing in common with us,—an art which has outlasted centuries, and probably will last as long as the world—the art of needlework. Even the goddesses descended so far as to teach this great art, for we are told that by Minerva herself, a woman affecting old fashions and formality, the mysteries of the distaff and spindle were taught.

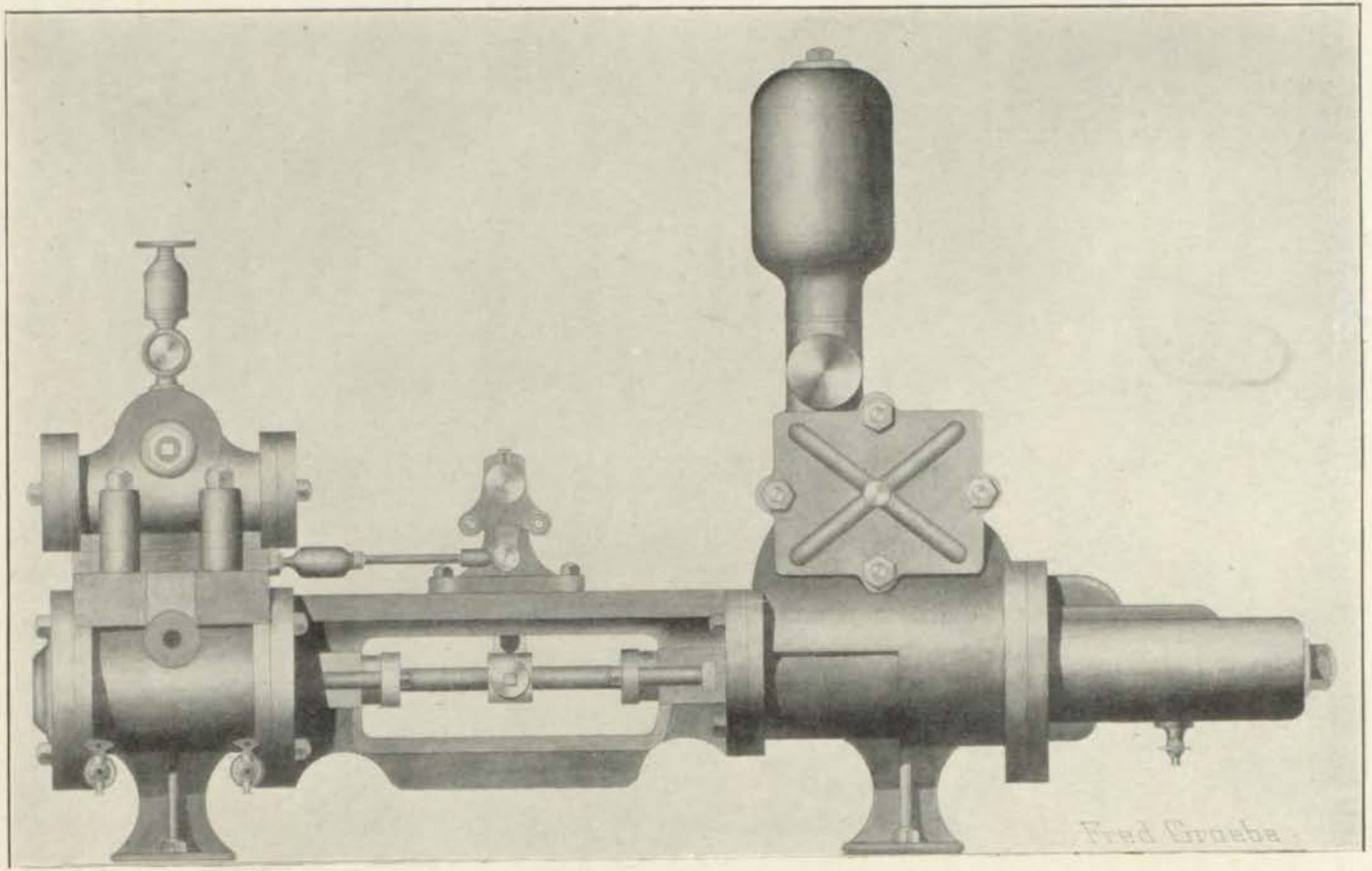
The Grecian women were excluded from the employments of men, and even Homer, the great fountain of ancient lore, hardly mentions throughout his whole work, the name of a woman but as connected with the noble occupation of needlework.

Their costumes were rich in the extreme, and although we would not gather as much from their colorless statues, they were heavily embroidered, often with gold. No one there considered themselves too high in the walks of life to disdain such work. Great ladies embroidered many garments, and as it was the custom for each guest to be provided with beautiful apparel, large supplies were always kept ready.

The Romans soon followed the example of the Greeks, and one of their emperors even had a tunic woven entirely of gold threads. It was not interwoven with silk or woolen, but was formed by the weaving of gold, which had been beaten out and rolled. Silk was seldom used for garments, as it was worth its weight in gold.

We perhaps think that the colors which are used today are rather gay and flaring, but they would be set to naught by the side of the embroidered work of the ancient people. Birds, animals, and even human figures were worked, not merely on hangings and carpets, but even on wearing apparel. They sometimes had verses and (scrystures) titles inscribed on them, and in the later days of Rome, the more pious had scenes from Scripture worked on their garments.

We see by our study that domestic art reached a high state of perfection among classic people; that even Minerva, who sprang from the brain of Zeus, and who represented the highest intellectual life, prided herself none the less on her manual dexterity, and hastened to teach her skill to mortals. Thus the principle upon which our Manual Training School is founded—the combining of the intellectual with the manual—is an idea descended from high Olympus.


Fred Gruebe

Milady's Bonnet.

NO creature, no object, not even the much abused Irishman, has ever had so much fun made at its expense as the Easter bonnet. Ever since Eve crowned her flowing locks with a wreath of leaves, her daughters have been striving to enhance their beauty with becoming headdresses. Ever since Adam laughed at his helpmate for her vanity, heartless men have been ridiculing their better halves for spending so much time and money on coverings for their heads.

How few of the modern Benedicts would long for the good old times if they knew what fortunes the women of those days put into outlandish headwear! Once upon a time the women wore tall, pointed caps, some of them over thirty inches high, with veils falling from their peaks down to the ground. Then architects had to build the church doors on a new plan in order to let the fashionable ladies in; thus the Gothic style of architecture was originated. At another time huge turbans were worn, so ponderous that their fair wearers almost needed to be assisted in carrying the weight of their own heads.

To be sure, these fashions did not belong to the early peoples. It was not until the reigns of Henry VI and Edward IV of England that anyone had the ingenuity to invent and the courage to wear such monstrosities. In the very beginning men and women alike went with heads uncovered, winter and summer. Later on they began throwing parts of their garments over their heads for protection, much after the manner of shawls. Then separate veils of thinner material came into use, and are still retained in many countries, especially those about the eastern Mediterranean. At a very early date the tiara began to be worn, the Egytians and Babylonians making theirs in the form of a tower. The Egyptian tiara was once imitated in England, but this time it was in the shape of a turret, such as those borne by the old feudal castles.

The caul is mentioned in the Bible as one of the early headdresses. This was a net-work of silk, gold, or jewels, enclosing all the hair and allowing it to hang in a knob on the neck. The caul has been affected in England and France at regular intervals during the centuries, being held in great favor often for several successive years. Most becoming of all, and most popular from ancient times down, has been the plain band of gold or riband, worn with the hair flowing. Grecian women wore the fillet, or riband, bound around the hair and fastening it in a knot low down on the back of the head. In fact, most of the ancients dressed their heads very simply, leaving it to the enlightened people of mediaeval and modern times to make themselves entirely ridiculous for dear vanity's sake.

At all times England and France had very nearly the same fashions, each creating part, though France is given most credit for it, and each striving to surpass the other in the outlandishness of its caps, hoods, hats, or whatever they called them. The first of these odd creations was very ugly indeed, the gorget, wrapped tightly around the head and neck, covering every wisp of hair and almost all the face. Sometimes, in addition, the gorget had queer little things

like boxes, one on each side, for the ears. Not satisfied with this, the makers of fashions produced a wonderful framework, which, when covered with a veil, resembled nothing more than a pair of huge horns, or a gibbet, perhaps, so some men of that time said. These were often fairly loaded with jewelry. Another particularly strange covering for the head was in the shape of a huge heart. This was often literally covered with gold and gems.

After a while women ceased wishing to look tall and began wearing the hair in nets projecting straight out behind, with stiffened wings on either side of the face. Then the hair was worn for a time hanging and crowned by a simple cap. In the reign of Henry III, three-cornered caps of velvet were seen, and others after the fashion of those later worn by the unfortunate Mary of Scotland. Queen Elizabeth introduced a very extravagant fashion of wearing the hair curled all over, with strings of jewels and single ornaments scattered carelessly through it. On top of the creation of fluffiness was worn a simple cap of velvet or wire net. After the Restoration, in the reign of Charles II, everybody affected carelessness. The hair was allowed to flow in charming ringlets and was adorned simply with a bandeau of pearls. With William and Mary, the Dutch styles came in, and women had their hair powdered and combed over high cushions, then surmounted by piles of ribands and lace, or great bows. All sorts of lofty headdresses were worn until late in the eighteenth century, when broad, flat straw hats came into fashion. With them the hair was worn very much puffed at the sides and in curls on the shoulders. About eighteen hundred, in France, the simple Greek styles were affected; but this did not last long; they soon went back to headdresses more towering than ever before.

Thus far we have discussed only what English and French husbands had to contend with—now, for the Scotchmen. Among the ultra-fashionable, English styles were copied, but even today the Scotch peasant woman wears the coif of her ancestresses, if she is married; if she is single, her hair is entirely uncovered and bound only by a snood; where something must be worn on the head, a piece of linen is tied under the chin. The Irish peasants usually have the hair plaited and falling from under rolls of linen on the head. Some wear kerchiefs pinned under their chins.

Of course, when French fashions were referred to, the peasants were excluded. Among them, each province has its own customs, which have been just the same for generations. In Brittany hats with great broad flaps at the sides are worn almost universally, with the hair falling on the shoulders; in Bignan, tight-fitting caps with huge flaps are seen; in Moribau, close caps of velvet and also folds of linen are worn, piled high, with drapery falling close to the head behind. The Norman peasants, especially, are notable for their immense and wonderfully constructed head coverings. They all consist of frames covered with stiff, white linen. One is in the shape of a great cone with the point cut off, flaps on either side, and streamers hanging behind. Naturally such a structure must be tied under the chin to keep it on. Another is made much in the shape of an inverted "horn of plenty." About the face is a broad band of red velvet, above that blue pasteboard covered with gold tinsel, and crowning all, a huge white muslin ruff. Combined with a tight-fitting bodice and a very short, full skirt, this makes a rather startling costume.

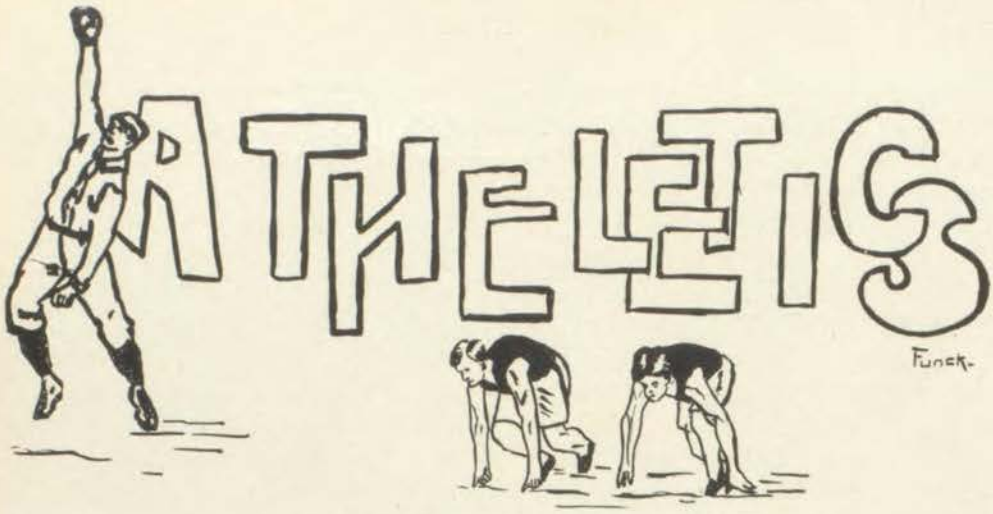
The peasants of German provinces, like those of the French, wear the traditional costumes of their own sections. Those about Hamburg wear flat, round caps; those of Bohemia, tight bands of linen about their foreheads, with red crowns above and long ribands streaming down their backs. The peasants of Alsace have given their name to great, broad bows from those which they are accustomed to wear. In Bavaria, felt hats are used, some with knobbed crowns, others with great broad brims, red and yellow bands, and long, sweeping feathers. In Nuremburg, they wear skull caps, with pieces standing up on either side of the head like huge ears. In Radstadt, the straw hats are celebrated for their immense size; some are like the ridge of a roof, with huge rolls on either side and a full veil falling down on the shoulders; others are very deep shovel bonnets of black lace. Allenburg is not far behind Radstadt in the size of its hats. One characteristic chapeau is cone-shaped, topped by a muslin ruffle, with a great thick veiling hanging behind. It is tied under the chin with a huge, stiff bow. In the Austrian province of Tyrol, immense caps with plaited crowns are ornamented with fresh flowers.

In Spain and Portugal fresh flowers are much worn, and they, with the charming mantilla and dainty fan, make the Spanish girl the fascinating creature that she is. A few of the Spanish peasants wear caps with bows in front, but the Portuguese never do; they merely wear nets over their hair. The Swiss are very picturesque in their costuming. Some of them have broad-brimmed straws, with four bows; others, black lace caps, and on Sunday white linen caps; while in Uri the peasant women wear simple ringlets down on their shoulders. Many of the Italian peasants wear on their heads pieces of cloth folded and drooping down behind. In Venice, they wear little hats, with bands of flowers. The peasants about Rome, following the example of their ancient predecessors, wear veils. Russian peasant women wrap towels about their heads and, as a general rule, wear no other head covering.

Among uncivilized or half-civilized nations, hats play a very important part; in fact, they are almost the entire costume. The Philippine belle wears an exquisitely wrought hat of nipa palm and split bamboo, woven often into beautiful lace effects. The Japanese girl decorates her hair with all sorts of pretty ornaments, and then cannot wear a hat for fear of spoiling, or at least hiding, the results of her labor of hours.

Many interesting collections of hats have been made, including those of many countries for centuries back, and those of even the wildest tribes of today. The Philippine hat described above belongs to the collection made by Colonel Waws, a member of our medical staff in the East Indian possessions. Museums and many private homes here in the United States have excellent illustrations of the various styles which have been in vogue in our own country, showing the progress toward perfection of the bonnet, at the same time the joy and distraction of all mankind.

ELSIE WADDELL, '03.



ROBERT BONE

EDITORS

SELMA CROHN

Athletics--Baseball.

Manual opened her baseball season by defeating Westport with the score of 15 to 8. It could easily be seen that this was the first game of the season, for both teams were weak in fielding and batting. It was only a matter of which pitcher had the most effective curves; and Neal came off with the victory; he struck out twelve men against five for the Westport twirler. Westport took the lead early in the game, scoring three men in the first inning; but Manual came back at them with five scores in the fourth inning and after that the game was never in doubt.

The following week Manual's hopes for a clean record this season were shattered, for the Kansas boys trounced us to the tune of 12 to 9. The reason for this is that which has brought former Manual teams to defeat—that of overconfidence. After opening the game by scoring seven times in the first inning the boys relaxed and allowed Kansas also to score seven times. Pulling themselves out of the hole seemed to brace Kansas; while Manual's players "bobled" everything that came their way and allowed the Jayhawkers to win in a walk.

Saturday, April 25, was surely a sunny day for Central and more surely a dreary day for Manual; for on this day we played them a double-header.

The faculty game was played first. Central pounded the ball like a bunch of colts, while Manual's pedagogues certainly showed their age. But every man on the Manual team did his best, for every

M. T. H. S.
FOOT BALL
1902

MANUAL BASE BALL TEAM.

Edwards, 3 b.; Trowbridge, r. f.; Shirley, 1 b.; Peters, Mgr.; Brooks, s. s.; Howells, 2 b.; Niccolls, sub.
Bott, l. f.; Harnden, c.; Neal, p.; Bone, c. f.

time a ball was knocked every man ran after it; in case of a high fly, all nine would be bunched together waiting to catch it, and of course they never got it. And so runs the tale of one of the double-heads. Central's score card counted 19 against 4 on Manual's.

The second game went in a like manner to Central, though it was much more interesting. Manual never settled down until after the second inning and then it was too late, for Central had scored 8 runs. The remainder of the game was well played by both teams, Central allowing us to score but twice, while they were unable to score more than once. The final score stood Central 9, Manual 2.

Our next game was with Westport. This game was listless and uninteresting, both teams seeming stiff and lazy. Both hit the ball hard, but their fielding was very poor. The attendance was also very poor, Manual having less than fifty rooters present. The final score was Manual 19, Westport 11.

On Friday, May 8, Manual met Kansas and secured her revenge, defeating them by the score of 10 to 4. Both teams hit the ball freely, but the Kansas boys were credited with quite a few errors, while the Manuals handled everything that came their way. This game puts us back into the running again, and though we can't win the cup, we are assured of a good second.

On May 2 the dual track meet between Central and Manual was held. Manual has been without a track team for two years and of course all of the boys were inexperienced. When this meet was arranged we did not have any hopes of winning; we entered merely for the experience and to again start the yearly track meets between the two schools.

TRACK TEAM.

The day was very bad for such a meet for it was damp and cold and the boys in their track suits could not keep their muscles from becoming stiff. In the contests Central took every first except the pole vault, which was captured by Captain Shoop at 9 ft. 4 in. The final score was Central 94, Manual 23. The results of the events were:

SHOT PUT.
1. Green—C.
2. Welsh—C.
3. Keeler—M.

DISCUS THROW.
1. Welsh—C.
2. Green—C.
3. ———C.

HAMMER THROW.
1. Welsh—C.
2. Green—C.
3. Keeler—M.

220-YARD HURDLES.
1. Getman—C.
2. Scarritt—C.
3. Birrell—M.

100-YARD DASH.
1. Page—C.
2. Cotton—C.
3. Birrell—M.

½-MILE RUN.
1. Cotton—C.
2. Hill—C.
3. Hallam—M.

ONE MILE RUN.
1. Hill—C.
2. Getman—C.
3. Freshman—C.

POLE VAULT.
1. Shoop—M.
2. Scarritt—C.
3. Saunders— —.

220-YARD DASH.
1. Davis—C.
2. Schenck—M.
3. Bone—M.

¼-MILE RUN.
1. Cotton—C.
2. Schenck—M.
3. ———C.

120-YARD HURDLE.
1. Page—C.
2. Levering—C.
3. Etlinger—M.

HIGH JUMP.
1. Page—M.
2. Powell—M.
3. Saunders—M.

BROAD JUMP.
1. Cotton—C.
2. Page—C.
3. Shoop—M.

LINE UP MANUAL "NEVER BEATS."

Fulton, sub.; Myles, sub.; Peters, 2 b.; Small, l. f.; Shields, 1 b.; Knause, p.
Shelton, sub.; Miller, r. f.; Dodd, c. f.; Hall, 1 b.; Moore, c.; Cowen, s. s.;

MANUAL TRACK TEAM.

The Father of German Gymnastics.

IN the year 1778, when the thirteen colonies were fighting for their freedom, there was born, in a far away country, a boy who, it seems, took on the sprit that was then prevalent nowhere as in America—the spirit of liberty.

The city of Lanz, in Prussia, was the birth place of Friedrich Ludwig John; and an humble but sturdy father, a good, religious mother were the parents of this German genius. Young John received but little schooling, yet it cannot be said that he had a meager education, for he had a great love for learning, and became a self-educated man. Before John left his native town of Lanz he realized the value of liberty. His boyhood and early manhood had few restrictions. He could shoot, swim, and climb trees; he was a swift runner, and in his simple, untutored way, a creditable athlete.

During the early part of the nineteenth century Germany was conquered and held under the thralldom of Napoleon. John took in the situation at a glance. His country had been conquered. She must be freed. He realized that his fellow countrymen were not capable of accomplishing such a feat. To fit them for this task John secured a teacher's position in Berlin and began to train young men and boys in athletics. Began, in fact, to

give them individual liberty; to make them each master of himself that they together might have the strength to liberate and master Germany.

It is through this work that John earned the proud title of Turnvater, or Father of Gymnastics. The Turnvater's methods were always simple. He took his pupils, as often as possible, into the open air and there interested them in games involving leaping, running, and wrestling. The Turnvater, too, first conceived the notion of organizing classes for the purpose of conducting gymnastic exercises with system, and was among the first to install the horizontal and parallel bars and vaulting horse. He believed in associating with each exercise lofty ideas, and accomplished this through suggestion or by patriotic songs.

Friederich Ludwig John died in the year 1852. His life was directed where it was most needed, and he accomplished much by the increased enthusiasm which he aroused for physical education. His system was soon part of the curriculum of every German school, and from Germany has been carried to every corner of the world, so one may claim that John is our Turnvater as well as that of the Germans. SADIE DANCIGER, '04.

Girls' Basket Ball Team.

HURRAH for the Manual basket ball team! Victory has smiled upon them, for they have won both games of the season. The first game was played April 8th, in the Manual gymnasium, with Westport. The line-up was as follows:

WESTPORT.		MANUAL.
Miss Garrett	Forward	Miss Hewitt.
Miss Bell	Forward	Miss Warner.
Miss Johnson	Center	Miss Canny.
Miss Morens	Center	Miss Harrington.
Miss Blake	Back	Miss D. Hewitt.
Miss Cheatham	Back	Miss E. Canny.

The score was 39 to 11 in favor of Manual. Both teams played well, and much credit is due all the forwards, especially Miss Nellie Hewitt, of Manual, and Miss Garrett, of Westport. The return game was played on the Westport grounds, and here again Manual scored 13 to 0. The line-up was the same. Both teams are to be commended for the good feeling displayed. For this reason the games were enjoyable to all, and were played in the true sportsman-like manner. To Miss Hoernig is due much praise, as the Manual team was splendidly drilled, and not only played well as individuals, but did excellent team work.

S. C.

"READY."

THE afternoon's practice was over, and Captain Anderson threw himself upon the ground with a satisfied sigh. Three hours his team had been hard at practice, and not once had they made a fumble or false play. He was satisfied, more than satisfied, with the team, himself, and the whole world in general.

As he lay outstretched upon his flaring red blanket, a young fellow timidly approached and sat down beside him. The boy was small, but slight as he was, his easy carriage and elastic steps betokened the athlete. His hair was a most intense red; his nose decidedly "retrouse," to say the least of it—in fact, he was so very ugly that he served as a target for all the arrows of wit and sarcasm of the whole school. He looked at the prostrate giant with all the respect and awe of a football worshipper to a gridiron hero.

The captain finally noticed the boy and lazily turned over. "Well, Reddy, I understand you are out practicing with the 'scrubs'. Sorry you did not make the first team, but you know you are too little. Keep at it, and maybe you will get sub. on the first team by the last of the season."

"Well, maybe I can, captain, but after the big game tomorrow, I don't care if I never get on. All the others put together won't amount to that."

"Yes, that's very true, Reddy, but we may need you to help at the last games," and rising, he walked away, leaving disconsolate Reddy to ponder over his words. He sat there, thinking, the others standing in groups aside discussing the great contest of the next day.

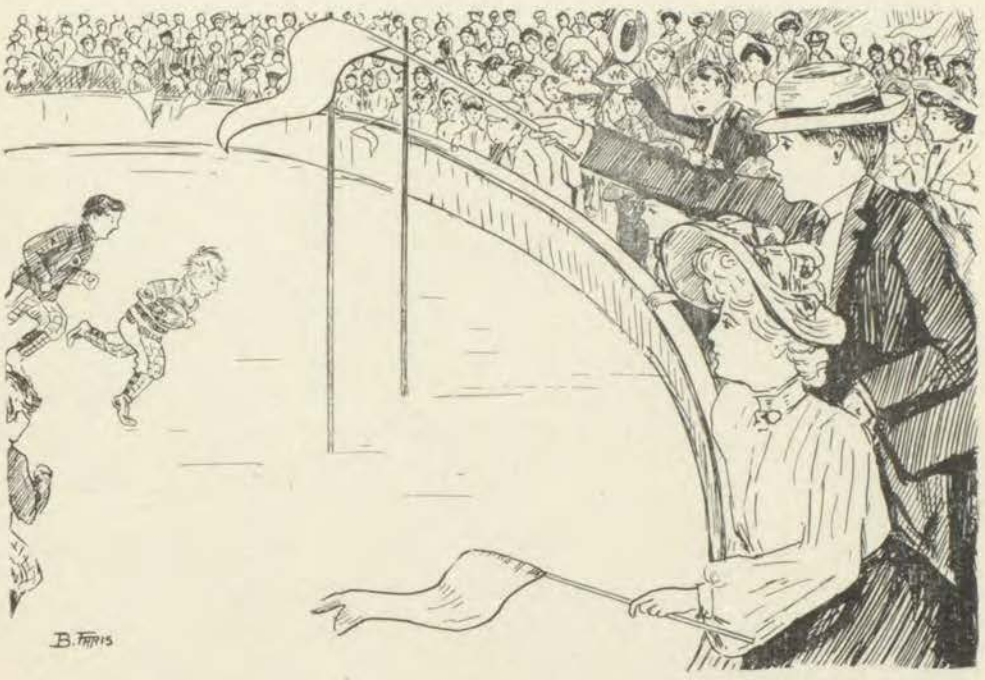
Why was it, he pondered, that he had not made the quarterback upon the team? Surely it was not due to lack of work, for he had turned out to every practice and worked hard each time. Besides, he was twice as good a player as the frail Nelson who had gotten the position; of that he was sure. There was no way of getting around it, the true reason ever stared him in the face; the boys did not like him and did not want him on the team. Finally he looked up; he was alone; the others had left while he sat, thinking. As he walked slowly homeward, he made a firm resolve; in spite of all, he would show them what stuff he was made of and show them in a way they would long remember.

The two schools or colleges of Dearborn and Dalton were rivals in every sense of the word. The whole school year was a continual struggle between the two colleges for the mastery. First in one form, then another; but the greatest event, the event which capped the climax, was the big football game. The side that won this game was the acknowledged victor. This year it seemed as if Dearborn would surely win; at least their captain, Anderson, was confident that this could be the only outcome. There was one other equally confident; that one was Reddy, and in his room in his cheap boarding house he once more repeated his resolve, to help Dearborn win or die in the attempt, on the next day.

At last the morning of the great game dawned bright and clear. The game was to be called at nine-thirty, but long before that time the grand-stand was packed with spectators. Upon one side the grand-stand blazed with the scarlet of Dearborn; upon the other, the blue and gold of Dalton was equally in evidence. Mothers strained their eyes in a vain attempt to catch a sight of their leather padded sons upon the field and pompous, prosperous looking business men discussed "punts" and "tackles" instead of "options" and "bids." Of course the girls were greatly in evidence, nervously wait-

ing the coming of the champions of their schools.

Soon the Dalton team trotted out in even line, rapidly snapping the ball from one to another. Then half the grandstand burst into cheering and the air was full of waving blue and gold. They were



immediately followed by the Dearborn boys, and then the crimson joined the blue and gold.

After what seemed to the anxious crowd to be an age, the referee's whistle sounded. The kickoff went to Dalton, and the teams took their positions, Dalton in a long line with the ball in the middle, and Dearborn scattered over their half of the field. A second whistle blew, then a dull thud of a sturdy foot coming in contact with the ball, which soared high and then fell into the arms of a Dearborn player. A mad rush, a quick tackle, and the first "down" had been made. The two teams lined up, a few sharply uttered signals, and again the ball was in motion; then a piling up of the players, and the second down was made. So it was for twenty-five minutes; first it seemed as if Dalton would score, then it surely appeared that Dearborn would win. When at last the timekeeper's whistle blew, the first half closed with a score of 0 to 0.

The tired players stretched themselves out upon the grass to take their hard-earned rest. From one to another a smaller player carried water and lemons. That player was Reddy; he was doing all he could to help Dearborn win.

The second half began as the first; one moment the ball was in Dearborn's territory, the next it was in Dalton's. Every trick play known to the game was tried, but without success. At last, the signal was given for a play that required a straight rush through centre; Captain Anderson gave the signal, the ball was passed, and after a slight gain for Dearborn, was downed.

All the players quickly rose to their feet; all except one; that one was Nelson, the quarterback of Dearborn who lay outstretched with a twisted ankle. This was an unexpected calamity. The captain quickly sized up the situation, then called out one word, "Reddy." Out from the side lines in response the wiry little figure trotted, and once more the play was on. The ball was passed, then the ref-

THE GIRLS' ATHLETIC ASSOCIATION.

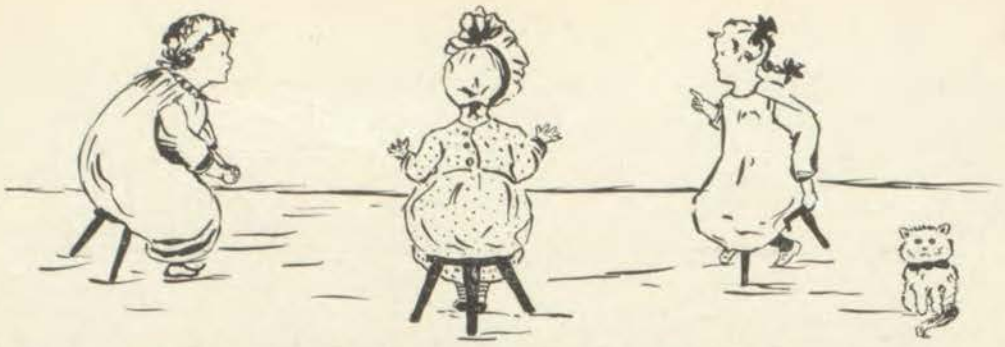
eree called, "Dearborn's second down; three yards to gain and one minute to play."

That call smote a despairing blow to the hearts of the Dearborn players. Over half the field lay between them and their goal, and one minute to make it in! Yet they played on with the courage born of despair. The score at least would be a tie, for they would never let Dalton score.

Monotonously the signals were again given, a rush, the impact of swiftly moving bodies and then the fall, but from out the jumble of legs, arms and heads the ball bounced and rolled a few feet away. Only for a fraction of a second did it lie, for quick as a flash it was snatched up, tucked under the arm of a small runner who had a shock of very red hair. Reddy, for it was he, ran as he had never run before. Only a few hundred feet lay between him and victory, yet he could hear behind him, ever gaining upon him, the footfalls of his pursuer. Swifter and swifter he ran; his eyes seemed to be starting from their sockets, and there was a taste of blood in his mouth. So intense was the excitement in the grand-stand, yet so great was the silence, that the thud, thud, thud of the runners' steps could be distinctly heard. Only fifty feet between Reddy and the goal post. He dared not look behind him, yet he knew his pursuer was close upon his heels. Putting all his remaining strength into a last sprint, he staggered rather than ran forward; just then the big player behind him dove forward, striking him to the ground. Yet he knew that the force of the impact was great enough to carry him past the goal posts; then all became a blank, with the sound of roaring waters in his ears.

Then pandemonium broke loose; men yelled until they were red in the face; women laughed and cried by turns; and the crowd would not be satisfied until Reddy, very pale, but very happy, was borne aloft before them upon the shoulders of his cheering classmates. From that time he was never known as "Reddy" from the color of his hair, but "Ready" from his act upon the foot ball field.

E. Trice Bryant, '03.



EXCHANGES

LIONEL BENJAMIN
Editor.

EXCHANGES.

In this closing number of the Nautilus, we wish that there were space to mention all of our exchanges, and to make a brief remark concerning each one. But, as this is impossible, we must say that all of them are excellent from a literary standpoint, and, while while their locals are not always plentiful, we hope that those schools who received the Nautilus, enjoyed reading it as much as we enjoyed their papers.

Some of our Exchanges: *Wm. Jewell Student, The Blue and White, High School Mirror, The Fulcrum, The Herald, The Midland, The Clarion, Kansas University Weekly, M. S. U. Independent, Luminary, Old Hughes, Ottawa Campus, High School Forum, The Crucible, The Messenger, Normal Review, The Pulse, Purple and White, Hand and Mind, Ogdensburg Academy, Drury Academy.*

CHEMICAL LABORATORY EXPERIENCE.

41144. Purification by explosion: or How to become an angel.—Immerse iodine in aqua ammonia. Filter. Dry the precipitate. Then grind the precipitate in mortar with a pestle. Write up your notes in the next world.

Cake.—First count your eggs. Save one for frosting. Beat the rest until they are black and blue. Add some sugar, milk and baking powder, and a chunk of butter as large as a piece of chalk. If you haven't these, put in whatever you have. Bake in an oven. If the cake falls, help it up.

Cholly—"I want something for my head." Doctor—"I wouldn't take it for a gift."

Son: "Papa, do you think this overcoat is long enough?"

Papa: "Not now, but it will be long enough before you get another."

Jones—"I'm quite a near neighbor of yours now; I've taken a house by the river."

Mrs. Golightly—"Oh, I hope you'll drop in some day."

A thought struck him; he fell to thinking and hit upon an idea; thus arriving at a conclusion.

AT 10TION.

10 10tative 10ters once 10ted
In 10 10ts, in 10 they con10ted
They retired at 10:10,
They slept till 10:10,
Thus they used their 10 10ts while they 10ted.

"Why can't you act like a little man, my boy?"

"Please sir, I tried to, but the very first time I swore pa licked me."

"You are a brick," I did aver
To Daphne, by my side;
"A sort of pressed brick, as it were,"
She roguishly replies.

"Yes, father, when I graduate I am going to follow my literary bent and write for money."

"Humph, John, you ought to be succesful. That's all you've did the four years you spent in college."

"Money talks,"
As we've heard tell,
And to most of us
It says farewell

If Columbus hadn't discovered America, we would be English in England, not immured in this High School. Thus was Columbus justly thrown in jail, though too late.

"Ha, I will fool the bloodhounds yet!" cried the fugitive hoarsely and, slipping on a pair of rubbers, he erased his tracks.

NEW PREPARATIONS.

The great success attending the manufacture and production of "Taka-Bita," "Feeda-Summa," "Chewa-Chunka," and other ready digested foods has not failed of effect upon the inventive genius of the country. The following labor and time-saving products will soon be on the market:

Canta-Fitta—Ingenious suit of clothes. You don't need to wear it.

Outa-Sighta—Marvelous achievement in eyeglasses. It is not necessary to look through them.

Walka-Fasta—Artistic shoes, which have been walked ten thousand miles before being placed on sale. You don't have to break them in.

Grinna-Gonna—The latest form of breakfast food joke. You don't have to laugh at it. The manufacturers guarantee that all the necessary laughing is done before the joke leaves the factory.

Paya-Debta—A South African invention. Through its use it is possible to buy everything one needs, and not have to pay for anything. It's great.

Smoka-Butta—A ready-smoked cigar.

"Where are you going, my pretty maid?"
"Collecting souvenirs," she said.
"May I go with you, my pretty maid?
"My fad's not spoons, kind sir," she said.

"Johnny, can you tell me how iron was first discovered?"

Johnny—"Yes ma'am. Pa says they smelt it.

Freshman—"Comedy of Errors."

Sophomore—"Much Ado About Nothing."

Junior—"As You Like It."

Senior—"All's Well That Ends Well."

Teacher—Do you believe that the Rock of Gibraltar is really impregnable?

Senior—No; it's only a big bluff.

Jim—"Say, these laundries are all out for the dough, ain't they?"

Bill—"Why?"

Jim—"Last week my wash came back to me with a handkerchief torn clean in half, and they charged me for both pieces."

POPULAR FICTION.

A dab or two of history
A fragile thread of plot,
Great gobs of talk and love of gore—
The rest, it matters not.

He (tenderly)—It is a mistake for a man to travel through life alone.

She—Yes, indeed. Why don't you get your mother to chaperon you?

"There's nothing half so sweet in life as a nice young Prof. without a wife."

EVOLUTION.

Rags make paper,
Paper makes money,
Money makes banks,
Banks make loans,
Loans make poverty,
Poverty make rags.

"Ze Eenglish language it ees mad,"
Cries Jacques with a frown;
"Zey say, ze man, he was burned up,
When his house, eet was burned down."

Summer romance,
Shady nook,
Girl in hammock,
Reading book.
—Maid one.

Summer boarder,
This time male,
Hearts in flutter,
Same old tale.
—Maid won.

Autumn wedding,
Guests galore,
Same old verdict,
As of yore.
—Made one.

Tommy—Papa, what's an average?

Papa (hesitatingly)—Well, my son, it's—well, what do you think it is?

Tommy—I guess it's the bottom of a hen's nest.

Papa—Great Scott! What do you mean?

Tommy—Every time I read about a wonderful hen, it says she lays so many eggs on an average.

She (at the piano)—"How do you like this refrain?"

He—"The more you refrain, the better I like it."

The Freshmen had been impressed by their teacher with the fact that every composition should have an outline, made before they write the composition. One day the teacher requested a composition and outline handed in. This was the outline:

Ichabod Crane.

1. Introduction.
2. Body.
3. Head.
4. Arms and waist.
5. Legs and feet.
6. Conclusion.

Prof.—What are you doing—learning something?

Student—No sir; listening to you.—Red and Black.

"I love my gentle warble,
I love its gentle flow.
I love to wind my tongue up,
I love to hear it go."

In a restaurant. He—Will you have a lobster?

She—Oh, John, this is so sudden!

"Goodness! We'll miss the opera," she said impatiently, "we've been waiting a good many minutes for that mother of mine."

"Hours, I should say," he replied somewhat testily.

"Ours," she cried rapturously, "O George, this is so sudden!" Then she fell upon his neck.

Act I.
Mary had a mule.
It followed her to school,
Which was against the rule.

Act II.
The teacher was a fool;
She got behind the mule.

Act III.
She hit it with a rule.

Act IV.
She had to let out school.

Little lines of Latin,
Little lines of scan,
Make a mighty Virgil,
But a crazy man.

Senior—"Can you tell me why College is such a learned place?"

Sophomore—"Certainly. The Sophs always bring a little knowledge to it and the Seniors never take any away, so it accumulates."

"Young man," said the Professor, as he grabbed a frisky junior by the shoulder, "I believe Satan has got hold of you."

"I believe he has," was the reply.

RICHARD MONTAGUE

EDITORS

BERTHA FARIS

Bright Senior—How does a girl return from shopping?

Second Senior—Rubber tired, of course.

Directions for finding what has become of the Science Club: Apply the law of Physics, that energetic forces make little noise, then investigate.

Prize of one cent offered for the proper solution of the following:

E TATLAS SOTES.

N. B.—This prize will be given by next year's staff.

Mr. Funck—I have a terrible toothache.

Louis—No wonder; look at the rate you talk!

Why is William like a chocolate drop? Because he is "Funk's Best."

NOTICE TO VISITORS.

Don't pick up scrap iron in the forging room; it might be hot.

Don't open the lockers in the hall.

Don't ask Stone about his trip to Germany.

Don't think you are insulted if your knock on the turning room door is not answered; they can't hear you; walk in.

Don't talk to the plaster busts in the hall.

Don't ask a Senior why he chose his pin.

Don't overcrowd the elevator.

Last and not least, don't use the local box for a mail box.

Horace Kearney—Are we frozen?

Mr. Page—YOU are mostly in a gaseous state.

Some time or some place, we think, there was an "entertainment" given by some of our pupils, and with a few apologies to a few authors we take the liberty to reprint the programme:

Solo—"I Want to be a Military Man" (in French).
Raymond Lee.

Trio—"We wants to be Leading Ladies"
Edith Shepard, Rachel Brinkerhoff and Ida Pennington.

Basso Solo—"When Mr. Shakespeare Comes to Town."
Mr. E. D. Phillips.

Duet—"We Sing Because People Love to Hear Us Sing."
Laura Negbaur and Louis Sills.

Solo—"It's Nice to be a Boy Sometimes."
Selma Crohn.

Solo—"Please Go 'Way and Let us Talk French."
Trice Bryant and Arthur Hallam.

Duet—"We Love and the World is Ours."
Allan and Dorothy.

Recitation—"When I Was Sweet Sixteen."
Belle Leonard.

Duet—"When We Were Married" (in French).
Maud Ingraham and Waterman Stone.

Chorus—"WE ARE IT."
Seniors.

Chorus—"You're Not so Warm, There are Some Other Brands."
Juniors.

Chorus—"Wait."
Sophomores.

Miss Drake said it was "tres grand;" Mr. Richardson said it was "sehr gut;" what the English speaking audience said doesn't bear repetition. A. L.

One of our local editor's poems:

Atlas was a man of strength,
For he the world did carry,
But when Atlas Oats began to grow
No longer did he tarry.

Teacher—What is angel food?

Johnnie—Oh, lots of things, like Paris green, laudanum and green apples.

Miss Drake (to Stanley who is looking at a vacant seat beside George Beardsley)—"No, you can't sit over there *by* George."

A Boy—Allan, may I borrow your knife?

Allan—I haven't any, but my wit is sharp.

The way Dorothy's name was seen on Allan's subscription list: DOROTHY HOPKINS.

To her who in the street car goes to school
Communing with the visible signs, there comes
A various knowledge. She learns to eat
The Warneke bread, the Malta Vita, Korn Krisp even;
Or perchance to leap with Sunny Jim high o'er the fence,
If such shall be her wish and dignity permit,
When thoughts of the dread sameness of that cereal diet come.
She gazes, rapt, where sausage is extolled, famed for its purity, all pork;
And, anon, reads of Uneeda Biscuit in in-er-seal.

So read, that when thy summons comes to partake
Of the innumerable viands for luncheon spread
In the assembly hall—where each must mind
Miss Steele, or wish she had—
Thou go not like the ignorant who buy
Candy, cream and foolishness galore, but sustained and soothed
By an unfaltering trust in Force, approach the caterer.
Like one who knows what's best for her to eat,
And order without fear and sit down to keen enjoyment.

WARNING TO CLASS TREASURERS.

"All that glitters is not gold."

Allan said he was a lobster, but he didn't want anyone to know it.

WHAT IT MEANS TO POSE FOR THE LIFE CLASS !!!

Amo, amas,
I loved, a lass,
And she was sweet as lasses.
Amas, amat,
We had a spat,
She cuts me when she passes.

LOST—A large white rag. Strayed from Room 35. It was well spotted with red and black ink. Liberal reward for information leading to its recovery. Wm. Funck.

LOST—The "Matrimonial Bureau."

Hic, haec, hoc,
Latin is no joke;
Huius, huius, huius,
Words are awf'ly curious;
Huic, huic, huic,
Can't learn it quick;
Hunc, hanc, hoc,
Wish it were in soak.

THINGS ARE NOT WHAT THEY SEEM.

Judging from appearances, you would think the local box was a book rack.

Judging from appearances, you would think it was cold on the stage, from the way the O. Z. O. boys (?) kept their cloaks on.

Judging from appearances, who would think Mr. Fulton was a married man?

Judging from appearances, where is the Sophomore class?

A sofa, a girl, a boy,
A kiss, a hug, Oh, joy!

What, besides fish, makes gray matter? —Atlas Oats. It is stated that no Senior in this school has ever eaten either.

Arguing with a Debater is like going into a shower bath with an umbrella—it does little good.

Miss Lyons—Horace, what is in your head?

Horace—Shavens and sawdust.

Mr. Cowan (who is starting in the chicken business)—"Mr. Myles, have you any more hens to sell?"

Miss Canny (indignantly)—"I am not a hen."

The baseball boys all drank ATLAS OATS water during the second game with K. C. K.—that's why they won.

CHARGE OF THE LATIN CLASS.

Latin to right of them, Latin to left of them,
Latin behind them volleyed and thundered;
Stormed at with verb and noun,
Adjective and name of town,
F's and C's for them abound.
How many have blundered?
Theirs not to weep or wail—
Theirs but to pass or fail
With bad words a hundred.

A QUARREL.

"You are easily stretched," said the football to the sweater. "Oh, go on!" exclaimed the sweater. "You are full of air." About this time the shin guard interfered, but to save the reputation of the outfit, the shoe, who was quit a kicker, acted in the capacity of a peacemaker and settled the dispute.

"We have toasted our sweet-hearts,
Our friends and our wives;
We have toasted each other,
Wishing all merry lives.
Don't frown when I tell you
This toast beats all others,
But drink one more toast boys,
A toast to "our mothers."

FRESHIE

The two sisters "Pro Tem.," Mildred and Mary.

Freshman—Why does a postage stamp?

Senior—Merely to call attention to the fact that it is strictly sticking to business.

Soph.—Say, Senior; why do you wear your trousers turned up?

Senior—This is my long suit.

Before the O. Z. O. open session the leading characters had a quarrel.

Hot words flew thick and fast.

At last—"I will never appear on the same stage with you!" cried one.

"Nor I!" retorted another.

All attempts at reconciliation failed.

Standing on the landing Miss Gilday watched the visitors passing into the hall. Finally she sent a mesenger to the dressing room to see how matters were progressing, and was startled by hearing him announce a few minutes later, "They're making up now."

A lady in the street car,
Was hanging by a strap,
So tightly that the leather
Was sure that it would snap.

"You have a pull, I notice,"
The strap said, low and sweet.
"Maybe," said she, "but scarcely
Enough to get a seat."

A familiar sound: Wagner (in the hall)—"Say girls!!!!"

Trice Bryant, understudy of Mr. Knause.

Johnnie: "Mr. Page is going down in the world."

Senior: "Why?"

J—ie: "He's digging a well."

Mr. Page said Stone is a great conductor.

Miss Williams was hunting for the absent papers.

Lionel: "I see Dorothy's name, that's part of it."

Allan: "That's not part of it. It's ALL."

Receipt for paying society dues:

Buy ATLAS OATS.

Eat it for breakfast.

Walk to school on the strength acquired.

Pay your dues with the money saved.

Robert Ridgway—Is Anne laughing at me?

Louis—I can't say; she often laughs at nothing.

Miss Gilday said she did not have anything to do with making the earth.

Seen in Dorothy's composition: "And sweet-scented herbs were scattered over her beer."

DON'TS.

Don't pose.

Don't eat fudge.

Don't say "Dodd gast it."

Don't trip over the Stone in the halls.

Don't make puns. They are the lowest form of wit.

Miss Williams (to Freshman)—What's your name?

Freshman—Frank Orr.

Miss Williams—Or what?

Mrs. Fulton travels under an assumed name, that of her husband's.

THE BASE BALL GLEE CLUB.

Director and manager.....Mr. Peters
First base.....Grover Shirley
Second base.....Howell
Third base.....Calvin Edwards

Roy Neal, deliverer of pitches, and Glen Harnden, catcher and distributer of the same.

Chorus—William Bott, Robert Bone, Harold Trowbridge, Elmer Brooks.

Favorite tune: "After the Ball."

It has been said that some of the boys have made some good hits. ("But you couldn't hardly notice it at all.")

Birrell's definition of a dude: "A dude is a living picture of an unpaid tailor's bill."

The faculty ball team's batting average is below par. This may be due to the fact that they were unable to calculate accurately the curves and angles that accompanied the ball.

Dorothy says that she doesn't mind locals on herself, but she does hate to have them go in on Allan.

A TOAST TO "CLASS OF '03."

Here's to "Class of 03" which, all will agree,
Has honored us with reason.
Here's to their pluck which has caused them this luck,
And brought their diplomas in season.

To the Manual Girls:

"Whatsoever ye sew, that also shalt ye rip."

The botany students were out gathering *leaves* for their notebooks on the last windy day.

"Ruby," the gem of the O. Z. O.'s.

Warning to boys: Don't "loaf" around the bakery.

We have only one suggestion for Freshmen: Keep off the grass or the blades will cut your feet.

We all Miss Green, because in the early days of spring, she was hunted and captured. Now, everyone Mrs. Hunting."

Why don't the lunch counter serve ATLAS OATS?

M.: "Oh, Miss Gilday, there are thirteen people in this room."

Miss G.: Well, I'll make you and Waterman *one*, and then it will be even.

Miss Canny says she is *so* tired of her name. Why doesn't she do as Miss Green did?

H. to Miss Domestic Art: "When this is basted, may I have a fit?"

Miss D. A. "Yes, but you'd better go into the hall where there's more room to do it."

"Conny" is becoming quite sentimental; all the year he has been writing poetry and dedicating it to Helen Filley.

ANECDOTES OF FAMOUS PEOPLE.

Once there lived two mighty mathematicians.

It is known that they devoured books in great numbers.

The time came when these great people wrote a book and there were books within this book, and it is related that they are tough propositions.

There was once an absent-minded teacher of English. One day he boarded a car with a large package under his arm. As he arose from his seat to leave the car, a passenger remarked: "You forgot your package." "Oh, that's all right," said the absent minded teacher; "I have the car and conductor's number and can get it at the barn."

And here's the fate of three boys:

There were three boys, Tom, Dick and Harry, who thought they could write essays like Emerson. Now it came to pass that in the school of Manual, a prize was offered for a short essay, it being a box at Convention hall to hear Creatore. Thereupon these boys organized themselves into a trust for the purpose of securing the prize. An agreement was made that the boy who won the prize was to take the other two as his guests. Now the box contained six seats so they consented to take three fair maids. Two of the boys explained their slim chances for securing the prize to their two fair friends, but these girls could not

possibly go, anyway. But the third lad was an optimist and explained not to his friend. He simply asked her to go. She consented.

At last when the prize was awarded, the trust found itself out in the cold. There was much weeping and wailing and gnashing of teeth when the third boy had to "dig up" the required amount for two tickets.

A teacher of drawing quite fair,
Locked three men in a room, they declare.
Miss Boyd left them collared;
They yelled and they hollered.
And each killed himself in despair.

A teacher of Latin named Drake,
Who delighted in making hearts ache;
To add to our woes,
Gave a lesson in prose,
Which succeeded in making us quake.

There was a young lady named Dunn,
Who taught German in room twenty-one;
When she went away,
Some boys felt quite gay,
But Miss von Unworth soon lessened their fun.

A LUNCH ROOM PIE IN ACTION.

Now that the Seniors are about to graduate we must remind them not to sow "wild oats," but to eat ATLAS OATS.

The other day when Lionel was riding on a street car the conductor called out "Charlotte." Lionel jumped, turned pale and looked searchingly around.

A dainty young (?) lady named Lyons
Fell deeply in love with some Ions.
"Precious, sweetheart, and honey,
Darling, baby and sonny,"
She called all these clever (?) young scions.

A teacher of Physics named Page,
Who sometimes got into a rage.
When some boys laughed in school,
Forgot the "good rule,"
And spoke of respect due to age.

Our dignified, wise Miss Van Meter,
When anxiously asked to repeat her
Last words to the class,
Said, "Indeed you won't pass,
Unless all work is much neater."

Solomon—Mr. Page has a poor constitution.

Brighty—He ought to have it amended.

Arthur Hallam eats ATLAS OATS—Johnnie Van Brunt does not. Note the difference.

WANT COLUMN.

WANTED—A student's pin exchange. This would greatly assist the members of different societies in exchanging pins.

A few more *boys* in the Junior class.

Also a Sophomore meeting. This would make the little dears feel as if they were really organized.

Why is Miss Steele so appropriately named? Because when she gets hot she loses her temper.

Answer to local in the last issue about how high a piece of limburger cheese would soar. Ans.—The cheese will soar as high as its s(c)ent.

Willie tried to tack the carpet;
Willie gave his thumb a slam;
This made Willie very angry,
And he softly murmured—"Mother, get the liniment."

Why does OZO Helen Harp (er) about Frank so much?

Miss C.—Here's a book that was published during the Centennial.

Miss Heyl—Did you get it there?

Note—Why, Miss Heyl, this is preposterous. Miss C. is *so* young.

Visitor: "Who is that sweet, pretty, bashful boy?"

Pupil: "Oh, that's Waterman Stone; isn't he dear?"

She: "I'll throw a—a— sofa pillow at you if you don't—go—away."

He: "Do; then we can both hide behind it."

William Bott had his hair blacked in the minstrels. "But you couldn't hardly notice it at all."

Quartets are fine, as all agree,
But boys are best you know;
The ION's had one fair to see,
And they made quite a show.
They sung so soft, so sweet, so low,
Their faces they turned black;
Their noise reached only the front row—
No one heard in the back.
Folks saw their mouths open and close,
And thought that they did sing,
But concluded that t'was but a pose,
Until applause did ring.

Miss Painter: "Did you hear of that dog dying of domestic art?"

Miss Domestic Art: "Why, that dog didn't die of that; he died of domestic science. If it had been art, he would have died with a stitch in his side."

Miss D. (in cooking)—Will you please tell me how to make kisses, Miss L.?

Miss L.—Yes, I have a paper on them some place.

Atlas Oats eaters all remind us,
We can make our lives sublime,
And departing, leave behind us,
Foot-prints on the sands of time.
(With apologies to Longfellow).

Margaret: "I like the ION's better than the Debaters, because I have relatives there."

Lillian: I like the Debaters best. I have no relatives, but interests there."

Theo. Quadlander, as he lent May a pencil—"My dear Alfonse."

May (aside)—"Oh, I'm never going to bring a pencil again."

We take it that she liked to be called "My dear," etc.

And is this then, our finish?
Oh! dear, can it be true;
That in these Mathematics,
We've met our Waterloo?

Louis said that he wasn't going to get married until he saw the Pyramids.

Lillian was standing near and remarked, "I don't see what that's got to do with it."

All during the ION's performance the people sat in dread for fear the two side pockets ("Don and John") would roll up with the curtain, in the same manner that the earth did in the OZO's.

Why should we these note books keep,
Is it a fad or notion?
For when the teachers in them peep,
It causes a commotion.

How doth our faculty so dear (?)
Improve its rigid power;
Demanding note books all the year,
Enough to build a tower.

How skillfully they wage their cause,
To every class in school;
While toward them our affection draws,
Because we know THEY rule.

Alfred (who was violently chewing)—Oh, say! I've got to go in and see Mr. Morrison; where shall I put my gum?

Alfred in his Freshman Year.

Wm. Funck (to Helen, as they were leaving a party): "Oh, Miss Dickey; I'm so sorry I can't see you home this evening. I shall miss the pleasure very much indeed!!!"

Note: Funck had never been known to take her home.

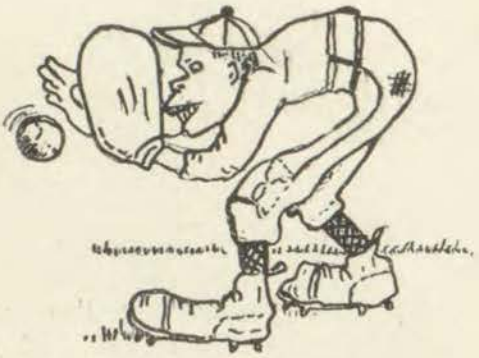
Now.

For she is an OZO Miss,
Bright and gay, and that, and this;
She will sing to you sweetly,
That may she do neatly,
For she is an OZO Miss.

This was written by one of our most promising young poets.

Sung to the tune of "I Won't be Home until Morning."

Eat Atlas Oats every morning,
Eat Atlas Oats every morning,
Eat Atlas Oats every morning,
It'll carry you through the day.



ONE OF THE TEAM

SENIOR'S WOE.

Two Senior maids, oh, great to tell,
Had almost finished school,
Their work in note books stood out well
And they obeyed the rule;
Good scholars were they always classed,
And they had points galore!
But in horrid Mathematics,
They needed one point more;
They strove quite hard, so runs the tale,
To quench this single menace.
But woe for these two Manual maids,
Their cards were marked with "Dennis."

MAUD MULLER.

Maud Muller on a bright spring day,
Came to Manual, blythe and gay.

Beneath her worn hat glowed the wealth,
Of simple beauty and rustic health.

An Oita girl she turned to be,
And wore her pin with modesty.

One day she stood near the office door,
Talking to boys—Oh! such a bore.

A Debater came slowly down the hall,
Tripped on a local—had a fall.

He mopped his brow, this boy so green,
And looked to see if she had seen.

Then went to her side and spoke sublime,
Forgetting his woe, as well as time.

Her O'ita pin then caught his eye;
To tease it from her he did try.

His pride alas, received a blow;
She answered, "Sir Debater, No."

To try again he did not stay;
In great chagrin he stalked away.

Maud Muller looked and sighed, "Ah, me,
How sweet his pin on me would be."

"'Twould look so bright, so grand, so fine,
Alas, too bad, I must decline.

"But father's law my course must rule,
Or else he'd have me leave this school."

The Debater hoped to hear her say,
"Most mighty one, I beg you stay."

The boy looked back, his eyes to fill,
For there Maud Muller was standing still.

But not alone I'd have you know,
For she'd been sought by another beau.

An ION lad, short, stout and spry,
Had just secured her drooping eye.

He also for her pin had asked;
The truth before HIM she unmasked.

The Young "HARPER" ING POET (?)

I'll ask your father if you "MAY;"
His perseverance gained the day.

Her pin went off with the ION lad—
And often now is her heart beat sad.

For looking down at his tiny pin,
She sighed and said, "It might have been."

Dutiful Daughter: "Say, father, I want to *interview* you." But before she had a chance, the obliging father had disappeared.

OZO

I

If you want your features criticised, pose for the life class. It's—

"No, her mouth is too large."

"Her eyes are too close together."

"She's too flat headed," etc.

ION

II

Atlas Oats are dainty,
Atlas Oats are sweet,
And when it comes to breakfast
They surely can't be beat.

The other day a crowd of Seniors came down the hall and caught Kendall Chatt(en)ing with Maud.

A is for Alfred, who flatters the girls,
And sends them away in puffs and whirls.

B is for Benjamin, who wears Charlotte's pin,
But on some other boy "it might have been."

C is for Crandall, blushing in a jiffy,
When some one remarks, "Here comes Riffe."

D, for Dickey, who once was a Jap,
That beamed and smiled on a young ION chap.

E is for Edith, in the President's chair,
The sweetest girl that's ever been there.

DITA III

F, for Fairman, the school girls' delight.
If he didn't comb his hair so much, he'd be "all right."

G is for George, a Debater quite small (???),
Who, like a young elephant, comes down the hall.

H is for Helen, of musical fame,
Whose heart an ION would like to claim.

I is for Isabel, a pretty young thing;
"With Bushels of Love" carved on her ring.

J, for Jaccard, who thinks Helen so dear,
And writes her an ode—once a year.

K is for Kearney, the little midget,
Who does nothing else besides fidget and fidget.

L is for Louis and Lillian, too;
Everybody get ready to throw an old shoe.

M is for Mulford, who does Foster her love,
And coos around like a young turtle dove.

N is for Nellie, who giggles the while,
And makes all around her just simper and smile.

O, for Oviatt, the secretary bright,
Who writes essays for minutes which are "out of sight."

P, for Poor, the German sing songer,
Who sings so off it's like a ping-ponger.

Q is for Quadlander, the bright, the free,
His greatest ambition's an ION to be.

R is for Ridgway, who with stately mien,
Walks down the hall by the side of his queen (?).

S is for Schenck, our athlete fine,
Who always comes in a long ways behind.

T is for Tuttle, the blythe, the gay,
When Lionel appears, she runs away.

U is for You, a Senior bright,
When he is gone he'll be out of sight.

V is for Vieregg, with long curling hair,
'Twould make a barber rich, if cut with care.

W is for William, the Sophomore's bright head;
If he'd call a meeting, they'd all fall dead.

There was a young man from Verdun,
He ate Atlas Oats by the ton.
He lived a long life
With his children and wife,
And when he died he went to heaven.

First Boy—The other day when I was eating an oyster I found a pearl.

Second Boy—That's nothing; some folks get diamonds out of lobsters.

"An ugly boy is ugly—
He cannot help himself;
But an ugly girl just merely
Takes the paint pot off the shelf."

Miss Campbell, instead of asking a pupil whether first or second year, asked "Are you one or two point perspective?"

A disturbance was raised in Physics and Mr. Page immediately turned to Stone.

Kate said she had been looking for furniture all over town. Bad sign.

Miss Lavine (talking about the faculty baseball picture)—They are all good looking if you don't care what you say.

Look out, boys; Mary has another "ONE" on the string.

BUSINESS

MANAGERS

ROBERT RIDGWAY

RAYMOND LEE

ALLAN ELSTON
Subscription Clerk

As far as I have been able to learn from science, everything on this wide, green earth has to be fed. At least that is so with a magazine. It costs more for its size than any other living creature and we certainly wish to keep it alive, so we keep on feeding it and always will as long as there is a school and pupils to run it. The business is the stoker, so to speak, of a magazine. The business managers regulate the draught and see that it doesn't get too warm in the spending line. We are what you might call the necessary incorrigibles. Have to have us to make ends meet, for although a paper cannot run long without a good literary or local department, it will not be started at all unless there are some means of procuring funds. This we have done after running the gauntlet of all the city merchants, whose only recreation seems to be in torturing

poor advertisement solicitors who can't defend themselves. In our last issue, though, we are able to state the plain truth without fear of their vengeance; and we hope that in coming years the business managers will be able to do a mail order business without having to beard the lions in their dens.

The advertisers, though, are our best friends and enable us to run the high-class publication that we do. Since the first we have maintained as high, if not the highest grade school paper of any hereabouts. The merchants have not been slow in recognizing this and have always given us their loyal support, without which we could not hope to continue. In closing our term of office we wish to sincerely thank our patrons for their share in the management of this paper and those in the school who have assisted us in procuring advertisements; and would have you follow out the motto of this magazine which is: "Patronize those who patronize the Nautilus."

ROBERT RIDGWAY.


SOCIETIES

Colors: Orange and Yale Blue. *Organized: November, 1897*

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May Overly,	Vice-President.
Katherine Higgins,	Secretary.
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Katherine Higgins,
Roy Kendall,
Isabel Leonard,
Harriet Mulford,
Richard Montague,
John McDonald,
Arnold Shawn,
Egbert Schenck,
Mildred Trowbridge,
Ellen Vincil,
Elsie Wadell,
Clara Webb,
Watt Webb,
Irene Verner,
Theo Nettleton.

Anna C. Gilday, - - - - - - Sponsor.

Colors: Gold and Crimson. *Organized: December, 1898.*

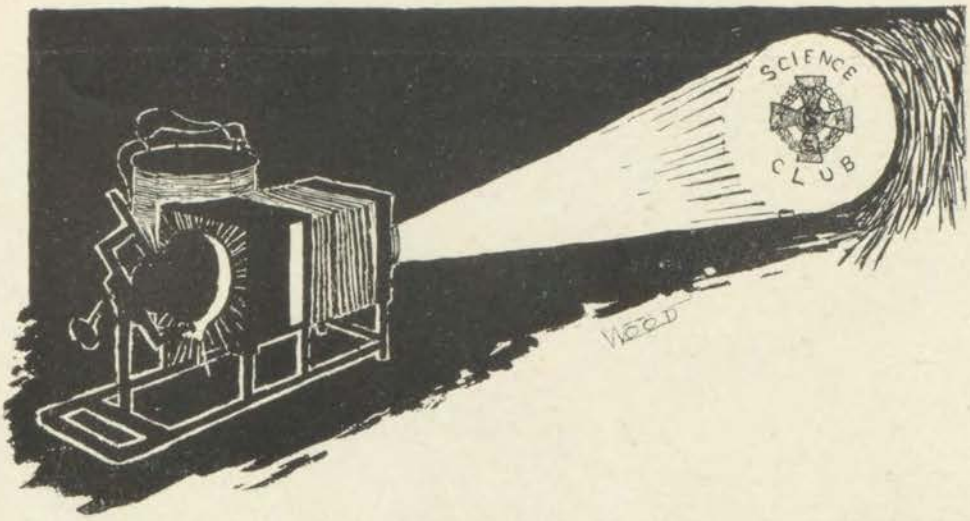
OFFICERS.

Edward Van Buskirk,	President.
Robert Bone,	Vice-President.
Stephen Luckett,	Secretary.
Chester Mann,	Treasurer.
Robert Ridgway,	Librarian.
Allan Elston,	Critic.
Alfred Wagner,	Sergeant-at-Arms.

MEMBERS.

Robert Bone,
Harry Busch,
Herbert Barr,
George Beardsley,
Carson Chiles,
Lester Charles,
Alfred Wagner,
Frank Harper,
Robert Ridgway,
Raymond Lee,
Edward Van Buskirk,
Allan Elston,
Walter Eyssell,
William Funck,
Bruce Gilmore,
Paton Kruse,
Stephen Luckett.
Harold Trowbridge,
Chester Mann,
Louis Sills,
Herbert Powell,
Raymond Riffee.

E. D. Phillips, - - - - - - Sponsor.



Colors: Yale Blue. *Organized: January, 1899.*

OFFICERS.

Kathleen Woods,	President.
Inez Hansen,	Vice-President.
Leo Holz,	Secretary.
Nellie Hewitt,	Treasurer.
Alma Betz, Martha Betz,	Ways and Means Committee.
Dottie Hewitt,	Critic.

MEMBERS.

Alma Betz,
Martha Betz,
Paul Greer,
Dottie Hewitt,
Nellie Hewitt,
Inez Hansen,
Leo Holz,
Jeanette Long,
Lora Marsh,
Arthur Sweetland,
Lela Rogers,
Effie Terry,
Kathleen Woods,
Winifred Woods,
Amy Jones.

B. M. Stigall, - - - - - - Sponsor.

Colors: Moss Green and Cream. *Organized: October, 1899.*

OFFICERS.

Lilian M. Carnes,	President.
Mary Paxton,	Vice-President.
Veva P. Hawkins,	Secretary.
Ida M. Pennington,	Treasurer.
Charlotte Tuttle,	Sergeant-at-Arms.
Ione Bone,	Critic.
Kate Hankins,	Reporter.

MEMBERS.

Ione Bone,
Rachel Brinkerhoff,
Ruby Barnett,
Selma Crohn,
Gladys Coates,
Lilian M. Carnes,
Louise Campbell,

Mary Paxton,
Edith Shepard,
Mildred Schenck,
Charlotte Tuttle,
Margaret Pettibone,
Harriet Young,
Ethel Bone,

Veva Hawkins,
Kate Hankins,
Helen Leach,
Marion Leach,
Sara Moffat,
Margaret Mitchener,
Ida M. Pennington,

Jane Casey,
Maude Chatten,
Renee Crohn,
Dorothy Hopkins,
Eugenia Hackett,
Margaret McCrum,
Elizabeth Nofsinger.

Mrs. Sarah G. Elston, - - - - Sponsor.

Colors: Olive Green and Crimson. *Organized: November, 1901.*

OFFICERS.

Ira Pettibone,	President.
Robert Fairman,	Vice-President.
Joe Halliman,	Secretary.
Earl Mill,	Critic.
Glen Harnden,	Sergeant-at-Arms.

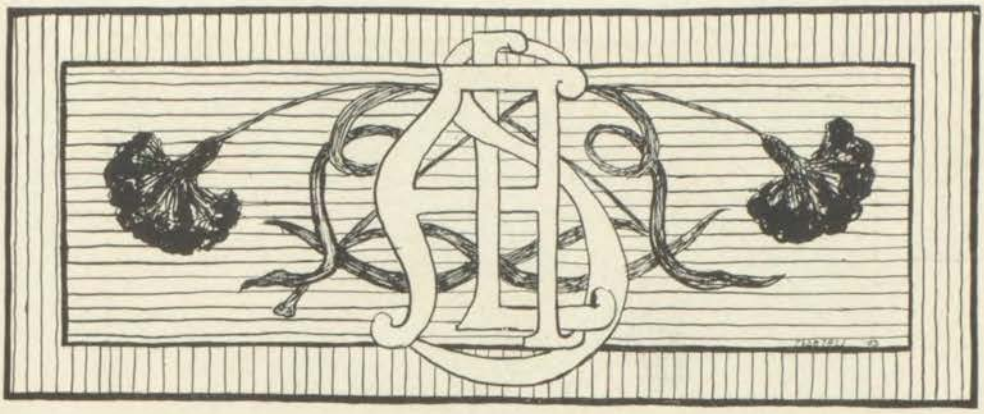
MEMBERS.

Ira Pettibone,
Robert Fairman,
Joe Halliman,
Earl Mill,
Glen Harnden,
Ashford Lang,

Milton Luce,
Lester Bear,
Walter L. Vieregg.
Chas. Shoop,
Constant Jaccard,
William May,
Neally White,
Arthur A. Dodd. - - - Sponsor.

John Van Brunt,
Donald Moffatt,
Victor Stewart,
Horace Kearney,
Roy Neal,
Virgil Morgan,
Will Fullerton,

Chas. Fuller,
Bert Elmer,
Rolland Niccolls,
Woodson Dixon,
Woodville Smith,
Lionel Benjamin,
Dan Bonticou,



Colors: Pink and Green. *Organized: November, 1901.*

OFFICERS.

Charlie Vieregg,	President.
Eva Walton,	Vice-President.
Grace Kirlin,	Secretary.
Roy Benson,	Treasurer.
Roy Lott,	Sergeant-at-Arms.
Mary Shortall,	Reporter.
J. P. Brewer,	Critic.

MEMBERS.

Roy Benson,
Eula Brown,
Winfield Bowman,
J. P. Brewer,
Ralph Brotemarkle,
Evelyn Canny,
Victor Charpiot,
Lorraine Derry,
Grace Ford,
Frances Jones,
Marie Kurtz,
Grace Kirlin,
Preston Langworthy,
Berenese Lake,
Eva Walton,
Roy Lott,
Hal Lebrecht,
Walter Miller,
Lyla Reed,
Henry Reiger,
Robert Randall,
Mary Shortall,
Oscar Sthrelow,
Nellie Stephens,
Ray Sterret,
Ilene Smith,
George Stadler,
Grace Vandergrift,
Charles Vieregg.
Alma Zaiss.

Colors: Old Rose and Silver. *Organized: March, 1902.*

OFFICERS.

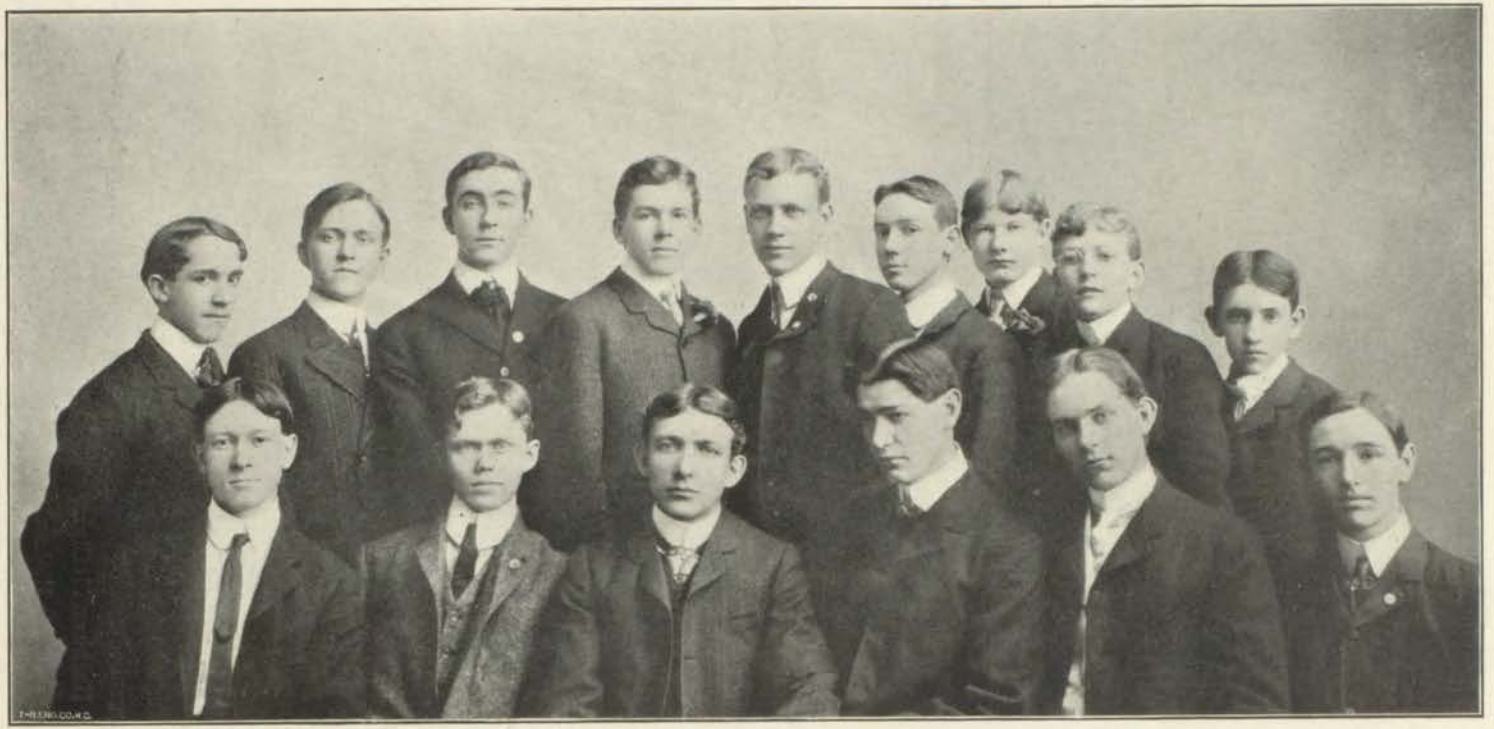
Alice Marquis,	President.
Margaret Burton,	Vice-President.
Kathleen McClure,	Secretary.
Hazel Byers,	Treasurer.
Burtie Haar,	Librarian.
Helen Filley,	Critic.
Nellie Carroll,	Sergeant-at-Arms.

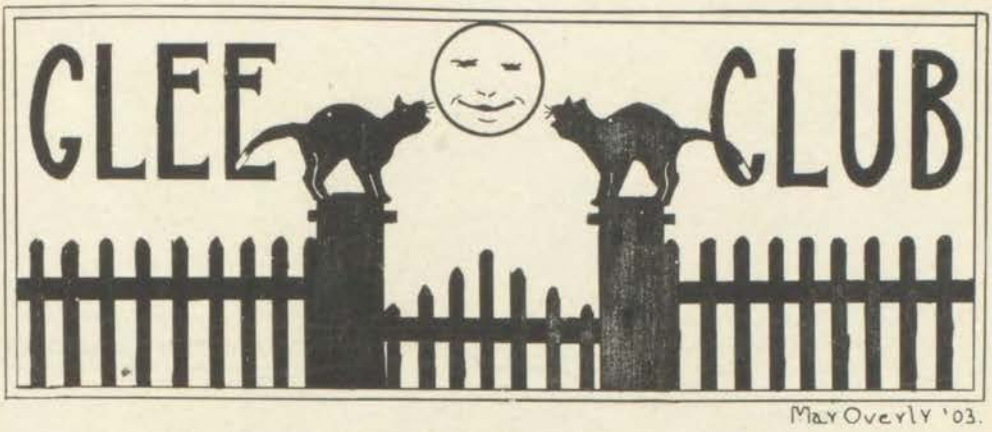
MEMBERS.

Hazel Byers,
Margaret Burton,
Nellie Carroll,
Helen Dickey,
Pauline Dunlop,
Leslie Frame,
Burtie Haar,
Emma Humfeld,
Maud Ingraham,
Eugenie Jaccard,
Kathleen McClure,
Alice Richardson,
Gertrude Elliott,
Selma Ettlinger,
Florence Elliott,
Bertha Faris,
Helen Filley,
Hesper Kirkpatrick,
Donna Lawrence,
Jean Morrison,
Mable Moore,
Alice Marquis,
Jean Norris,
Ethel Richardson,

Elizabeth Vernon.

Della Drake, - - - - Sponsor.





Flower: Red Carnation. *Organized: December 17, 1901.*

OFFICERS.

Herbert Poor,	President.
Cooper Milnes,	Sec'y. and Treas.
Dean Stringer	Business Manager.
Walter Kramer,	Sergeant-at-Arms.

MEMBERS.

Alex Rindskopf,
Robert Benjamin,
Harry Randall,
Collen Lee,

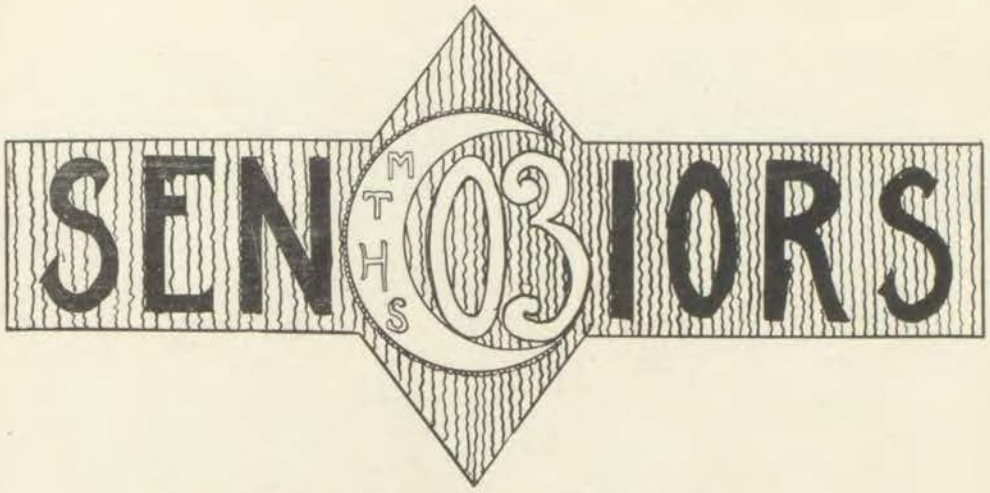
Chas. Stone,
Vincil Stark,
Louis Sills,
Cooper Milnes,

Rick Filmore,
Frank Cushman, Jr.,
Herbert Welhner,
Ray Woodling,

Herbert Poor,
Stanley H. Moore,
Edwin Ryden,
Dean Stringer,

Walter Kramer.


SENIORS
AND
OTHER
ORGANIZATIONS



The Class of 1903.

WHEN the members of the class of '03 returned to school last September they were proud and happy. Proud of the fact that they were Seniors, and happy at the thought of the diploma that would be waiting each one at the end of the year.

The year is drawing to a close and it is with some regret but great expectations, we realize that commencement is near at hand. We do not regret leaving, because we know that we carry the well wishes of the faculty and our fellow students with us; and we realize that if we remained longer, we would be keeping others from receiving the beneficial training that we have had during our four years of high school life.

The class held its first meeting the Friday before the Christmas holidays, when officers were elected. Subsequently much work has been accomplished and class spirit and enthusiasm has prevailed among the members.

The class colors are gold and white, and the daisy is the class flower. The design for the pin was chosen in the Junior year and a large majority of the class are proud possessors of the dainty souvenir.

The contestants for the privilege of appearing on the commencement programme were more numerous than usual and the variety of the numbers selected is a proof of the versatility of the Seniors.

Class Day is, of course, the Seniors' own day and we hope it will prove a pleasant ending to four successful years. It will be the 28th of May and the programme will be given in our own auditorium, the place, of all others, where we should bid farewell to our many happy associations.

Realizing the need of proper furnishings for our stage, the class will present the school with a handsome oak table for the platform. We hope it will prove useful as well as ornamental.

Commencement will be held May 27th, and when we receive our "sheepskins," we will really feel that our high school days are over.

No matter where we are, or what we are doing, we will always be interested in news from Manual, and fond memories of the happy days spent together will linger with the members of the class of '03 long after we are scattered.

EDITH SHEPARD.

SENIOR OFFICERS.

Bertha Faris, Gift'n. Fred Fesler, Treas. Nora Sullivan, Reporter.
Chas. Shoop, Sergt. Edith Shepard, Pres. Jessie Oviatt, Sec'y. Constant Jaccard, V.-Pres.

CLASS DAY PROGRAM.

Music	M. T. H. S. Orchestra
President's Address	Miss Edith Shepard
Song	Glee Club
Reading	Miss Harriet Duke
Solo	Miss Nora Sullivan
Music	M. T. H. S. Orchestra
Senior Gift to School	Mr. E. Trice Bryant
Solo	Miss Constance Gerhart
Recitation	Miss Blanche Cook
Song	Glee Club
Senior Gift to Juniors	Miss Bertha Faris
Junior Reception of Gift	Mr. Richard Montague
Music	M. T. H. S. Orchestra

THE SENIORS.

THE SENIORS

THE SENIORS

List of Seniors, Class of '03.

BOYS.

Brink, Vincent
Benjamin, Lionel
Berry, Frank Leslie
Block, Alfred S.
Bowman, Winfield S.
Brewer, John
Brown, Leo
Bryant, E. Trice
Busch, Harry
Busch, Svend
Capen, Lester Edwin
De Vault, Harry Hollis
Elmer, Bert Lee
Ettlinger, Ralph
Fesler, Frederick Kimball
Hallam, Arthur Clifton
Hanley, Clarence P.
Hayes, John Ivan
Hazen, George D.
Jaccard, Frederick Constant
Jeanneret, Roland A.
Launder, C. George
Lawrence, Roy Edwin
Lott, Roy Ilo
Lebrecht, Hal E.
Mack, Clyde P.
Marquis, Wilson M.
May, William D.
Meyer, Ouray X.
Miller, Burton Foster
Miller, Joe Aubrey
Milnes, H. Cooper
Moore, Stephen Preston
Perkins, Warren Otis
Pettibone, Ira F.
Poor, Herbert E.
Randall, Robert Bryant
Shoop, Charles
Small, Edwin W.
Smith, Woodville
Snyder, Chester A.
Spillman, Loyd A.
Stadler, J. George
Stewart, Victor
Stone, Charles C.
Thornton, Warren T.
Trumbo, Thomas D.
Vieregg, Charles F.
Vieregg, Walter Lee
Warnock, Edward O.
Welhener, Herbert Eggert
Woodling, Ray S.
Wright, Arthur E.
Stewart, William Earl

GIRLS.

Adler, Blanche
Arnold, E. Grace
Barnette, Ruby
Bedell, Dorothy
Benz, Carrie
Bergman, Anna
Bone, Ione Antle
Bostwick, Florence
Brightwell, Ethel C.
Brinkerhoff, Rachel
Burnette, May Agnes
Butler, Hattie May
Canny, Evelyn Duff
Carey, Mamie T.
Carnes, Lillian M.
Catron, Mayme
Clinton, Nettie H.
Clinton, Jean M.
Connor, Annie C.
Cook, Blanche
DeLane, Lota
Dennis, Mabel C.
Duke, Harriet Mary
Elliotte, Gertrude
Elmer, Juanita
Faris, Bertha
Gant, Anna Deborah
Gerhart, Constance
Greene, Myra Estell
Hankins, Kate Croft
Harris, Mildred I.
Hawkins, Veva Polk
Hewitt, Dottie
Higgins, Katherine D.
Hill, Minnie H.
Hope, Estella G.
Humfeld, Emma H.
Ingraham, Maude
Jackson, Belle
Jarboe, Carol
Jones, Amy O.
Kirlin, Grace B.
Kurtz, Edith E.
Lamb, Elizabeth
Leggett, Alma
Leonard, Isabel
Long, Jeannette
Lunt, Edith
Marquis, Alice Ione
Marsh, Laura
Martiny, Stella M.
McConnell, Marie Elizabeth
Mitchell, Myrtle K.
Mulford, Harriett
Meyers, Ethel G.
Negbaur, Laura
O'Reilly, Grace
Oviatt, Bessie B.
Oviatt, Jessie M.
Overly, May
Park, Katie
Pierce, Mary Louise
Pennington, Ida Margaret
Pretz, Florence
Rollman, Edna E.
Ross, Irene
Ruckel, Cora Bird
Sampson, Della
Shepard, Edith
Shortall, Mary
Shoop, Mary
Slocumb, Grace
Stone, Sarah M.
Stoner, Hope
Sullivan, Nora
Talpey, Lottie A.
Terry, Effie E.
Thornton, Della
Toelle, Ella
Tuttle, Charlotte Wright
Wadell, Elsie
Warner, Gertrude
Webb, Clara Lee
Willis, Gussie B.
Woodman, Martha
Zacharias, Ray
Zaiss, Alma

THE SENIORS

THE SENIORS

SIXTH ANNUAL COMMENCEMENT

—OF THE—

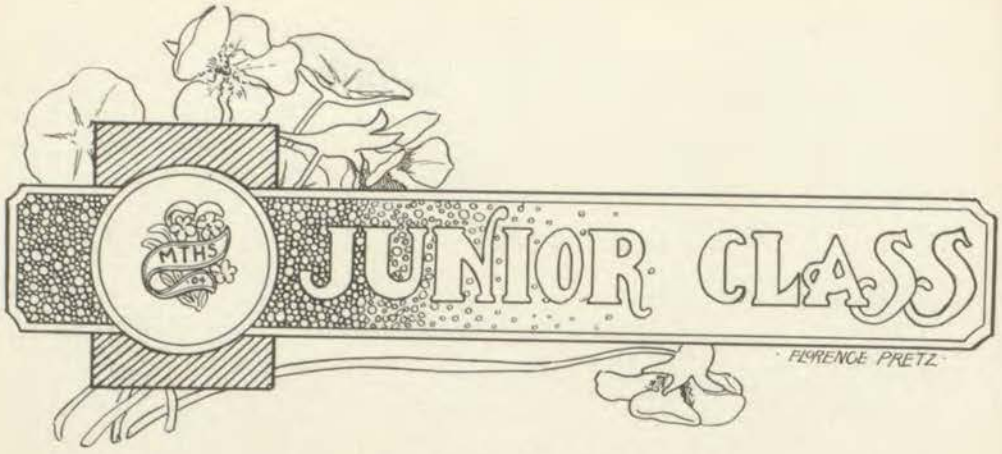
MANUAL TRAINING HIGH SCHOOL

KANSAS CITY, MISSOURI

MAY 28, 1903

Program.

1. Music - - - - - - - - - M. T. H. S. Orchestra
2. Invocation - - - - - - - - Rev. Chas. W. Scarritt
3. Address of Class President - - - - - - Edith Shepard
4. Oration—"The Spirit of the West" - - - - - Harry DeVault
5. Piano Solo—"Fifth Nocturne"—*Leybach* - - - - - Ethel Myers
6. Essay—"Wells" - - - - - - - - Elsie Wadell
7. Oration—"Statesmanship of the Louisiana Purchase" - - - Walter Vieregg
8. Piano Solo—"Hark, Hark the Lark"—*Liszt* - - - - Carrie Benz
9. Prophecy—"Manual in the Year 2003" - - - - Charlotte Tuttle
10. Oration—"The New Patriotism" - - - - - Constant Jaccard
11. Vocal Solo—"Roses in June"—German - - - - Laura Negbaur
12. Essay—"The Women of the Revolution" - - - Kate Cruft Hankins
13. Address—"Beaumarchais" - - - - - - - Edwin Small
14. Piano Solo—"Polonaise Opur"—*Carl Reinecke* - - Mildred Isabel Harris
15. Impersonation—"The Story of Patsie" - - - - - Bertha Faris
16. Piano Solo—"Polka de la Reine" - - - - - Alice Marquis
17. Presentation of Diplomas - - Jos. L. Norman, President Board of Education.



The Class of 1904.

The student in his junior year occupies a place in school affairs that is very important. He is not like a Freshman or Sophomore, for he has passed through those turbulent years that must go by before he is at last able to be a factor in school life. He now stands ready to receive the new responsibilities that have been placed upon him. These responsibilities, though they may seem trifling at first glance, grow more serious with thought. First, the Junior must learn to know his fellow classmates, so that with their co-operation they may be able to stand the duties now placed upon them. Second, the Junior must now begin to prepare himself for his Senior year, the year that will end the high school course.

The Junior class of the present year is, to our knowledge, the greatest class that "Old Manual" has yet seen. The class has acquired, by reason of its greatness, the decided aspect of a class and not an organization like the "Sophomore class". The first move was our early organization, for its scale of action was to be in porportion to its greatness. Though the number of the class would at first seem fatal to a strong organization, the meetings have been well attended. Each view and suggestion of the members enrolled has been modified and broadened by the views of all, and has been marked as a product of our class. Thus far we have been able to avoid all the stumbling places that are frequent in the paths of such bodies, and have been, as far as possible, original in our proceedings. These were the selection of the class pin design and the colors, olive green and old gold.

In the numerous class meetings that have been held, the importance of the individual has been raised, until now it does not mean merely three years of high school work, but that the individual is a free and unrestrained helper in class work. The experience thus gained is of great benefit, for there is the school spirit it creates as well as the social standing among the pupils, and the experience gained in being a member of an organized class.

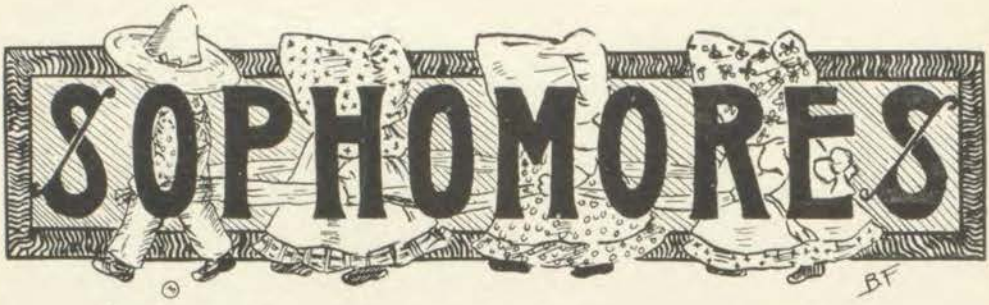
Now as the school year draws to a close, we see our friends, the Seniors, about to launch their frail barks on the sea of life; and we feel proud to be able to be to the school what they have been, to be able to step into their places and set an example for the class that follows in

our wake. As we stand in our new position, the feeling of our greatness oppresses us. The years that are passed seem but a dream, and the one year to come seems altogether too short for the wearing of the Senior honors. But we must not let this spirit invade our thoughts, but strive to live up to the expectations of all, making the "class of '04" a model for all classes yet to come.

RICHARD MONTAGUE.

JUNIOR OFFICERS.

Lester Bear, Sec'y. Chester Mann, Reporter. Robert Bone, Sergt.
Allan Elston, Treas. Julia Simms, Vice-Pres. Richard Montague, Pres.



The Class of 1905.

WHEN Prof. Morrison announced that the Sophomores of the Manual Training High School were to organize into a class, there was much anxiety among the Seniors and Juniors as to the result. Of course, they were jealous to think we would share with their pleasure in having elections and meetings. Naturally they asked, "Why are the Sophomores going to organize?" Well, I can tell you, but it is one of the faculty's secrets. Don't you know that this is the first class that ever attained enough dignity to warrant such a concession?" We have conducted ourselves so well that people larger than Seniors and Juniors have noticed it. Why the Seniors and Juniors even asked to be admitted to our election, so that they might profit by our mode of carrying on business. Experience to them, has proven itself to be expensive.

From the time the announcement was received, until the Sophomores were called to order by Prof. Morrison in the assembly hall, there was an abundance of class spirit shown. All Sophomores were busy meditating on the result, and, furthermore, they thought of the experience that was to be gained.

Having been called to order by Prof. Morrison one day in January, we were given a few suggestions on "How to elect officers." It was evident that a hint to the wise was sufficient. The chair was then turned over to Mr. Raymond Riffee, who was elected temporary chairman. At this first meeting officers were elected. We then adjourned to build castles that would have foundations under them in 1905.

The Seniors insisted on talking about our first meeting, thereby gaining for us a good reputation, but while they gossiped, we were working to make it a success.

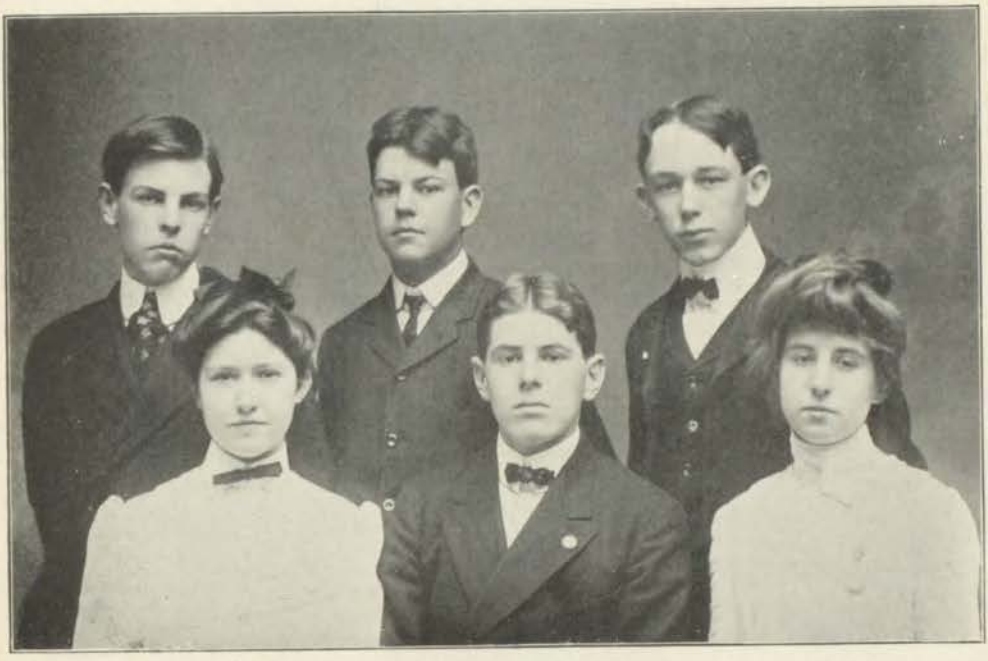
The meetings of the class were not held regulaly, but were called whenever it seemed to be necessary; this allowed enough business to collect to make the proceedings important and interesting. The class usually stood two hundred and fifty strong when assembled.

At the second meeting, our constitution and by-laws were accepted as read. It provided for monthly dues of ten cents. This money is to be put into the bank. Now, next year when we entertain the Seniors we will have a ready supply of Uncle Sam's greenbacks. Now, wise Juniors, if you had done this you would have saved yourself embarrassment. At this meeting many important questions

arose. Many wanted to decide upon a pin or colors. The class, however, showed their good judgment by putting it off until they became Juniors. Another question came before the house; it was of little importance, however. It was, "Shall we entertain the Juniors?" After a short discussion, the class decided to leave the Juniors to wander for themselves. Of course, it is understood by all, it would have been a great success for the Sophomores, but we were held back by an old proverb, "Lost time and money are never found again."

Now we all join and offer our thanks to the faculty, who recognized our dignity; again we thank you for your encouragement and co-operation and we offer thanks to all Sophomores who showed their loyalty by the support they gave the class. So here's the successful ending of Manual's first Sophomore class.

WILLIAM FUNCK.



SOPHOMORE OFFICERS.

Raymond Riffee, Serg't. George Beardsley, Treas. Frank P. Shipley, Reporter.

Sara Moffat, Vice-Pres. William Funck, President. Mary Koogle, Sec'y.


THE
END

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Clothing for the Youth

"Youthful" Clothing Would Perhaps be Better, for we use Brighter Colorings and model the Coats after Very Advanced Styles.

These garments we show embody the latest effects in style and cut. They instantly appeal to young men—and the price range is large.

At $8.98 A considerable showing of fancy cheviots in new shades and colorings.

At $12.00 A very complete line of Scotchy cheviots and Irish homespun effects.

At $15.00 A lot of rich colorings that custom tailors charge long prices for.

And still others at $20.00 completing a showing we are proud of.

HATS, TOO!

A hat either "makes or breaks" the general effectiveness of a person's appearance and perhaps it is hardest to select hats really suitable for young men. Think we've got onto the "hang" of it though, and our hat business is showing a splendid increase. We made a special effort to get a very good hat, in shapes suitable for youthful faces to sell at a popular price, and think we've succeeded.

The Price is $2.00

and it is low for such hat excellence. Colors: pearls, browns and black.

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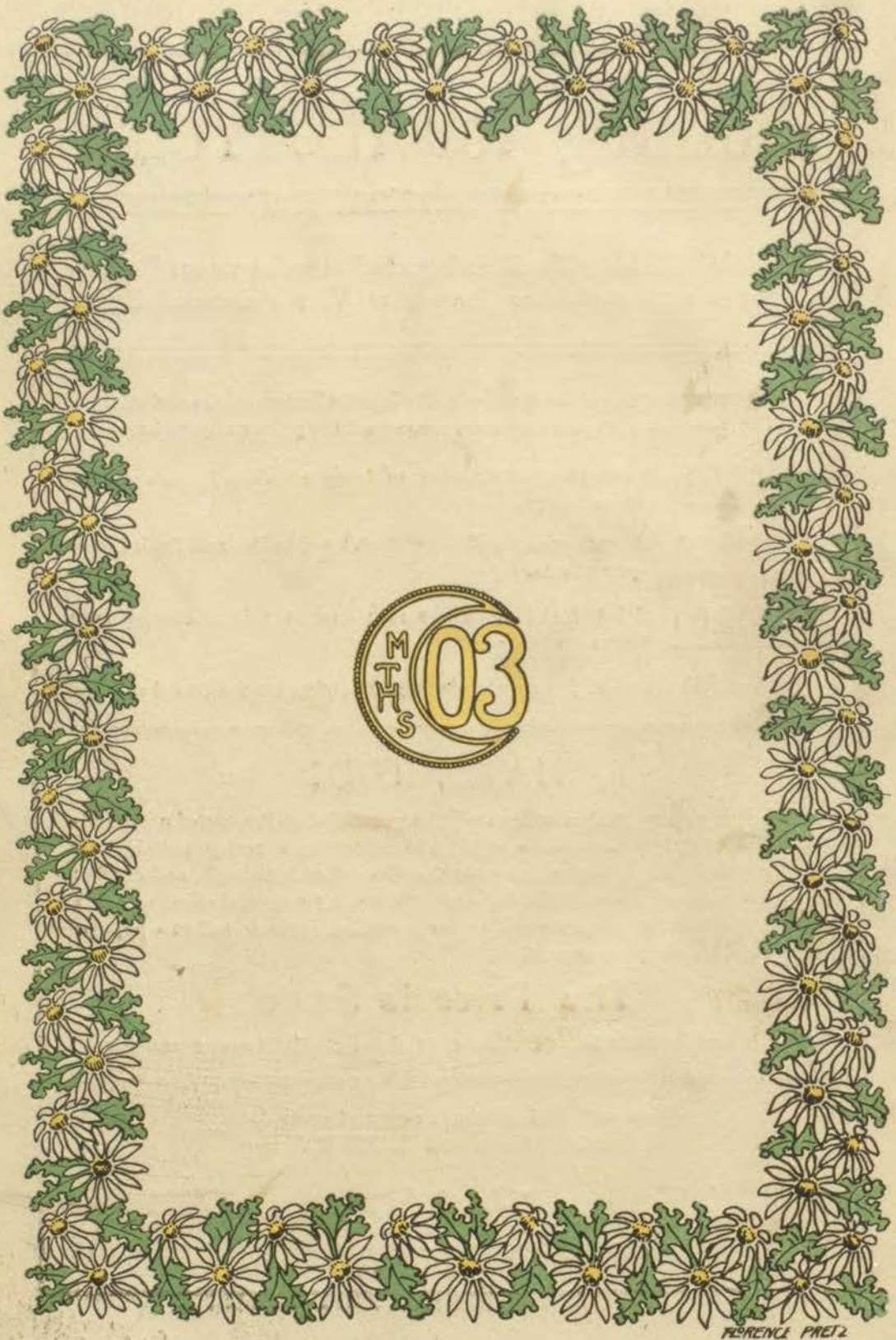
MTHS
03
FLORENCE PRETZ