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The Spectator

Mich Agricultural College.

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THE SPECULUM.

VOLUME VIII.—No. 1. AGRICULTURAL COLLEGE, MICH., AUG. 10, 1888.

WHOLE No. 31.

Ball Playing.

G. JAY JENKS, DELTA TAU DELTA FRATERNITY.

The origin of ball playing seems rather uncertain. It is probable, however, that our forefathers (according to Darwin) threw cocoanuts at each other's heads, thousands of years ago, as they sported at will among the trees of their native forests. Be it as it may, the game in some form or other has been a popular one among all nations, from the earliest times. Man has always exhibited a tendency to play with a spherical object, to roll it along the ground, or to bat it with a stick. Among the Egyptians, ball playing was held in high esteem; and the Egyptian boy loved it next to wrestling. It was a favorite amusement with the Greeks and Romans. The Greeks, especially, prized it, because it gave strength and elasticity to the limbs. Boys and grayhaired men alike, assembled every afternoon to play, on ground set aside for that purpose. Throwing the ball into the air and then rushing forward to catch it; throwing it at each other and striving to hold and return it; also a game something like modern tennis, were the principal forms. The Greeks erected a statue to one of their athletes who was very proficient in ball playing, and their physicians prescribed it for their patients, instead of pills and powders.

From this time little mention is made of ball playing until the sixteenth century, when a game resembling tennis became very popular in the French and Italian courts. The great English game of cricket has reached its present importance during the last century. It is derived from club-ball of the fourteenth century. Tennis—another modification of ball playing—is of ancient origin. It is growing in favor in the United States,

and bids fair to become as popular in its way, as base ball.

Base ball is a modern game, and comes more directly from the "two-old-cat" of America; but is an outgrowth of the old English game of rounders, which resembles it in the essential particulars. The first club of any importance was the "Knickerbocker," organized at New York in 1845. For the next fifteen years the game grew steadily in favor, although little advance was made in the method of playing. In 1857 the National Association was formed, which gave a marked impetus to the game, and after the war it rose rapidly in the esteem of the public. Real professional base ball, however, dates from 1871, when the National Association was divided into two classes, and a National code of playing rules adopted. After the season of 1874 the "Bostons" and the "Athletics" of Philadelphia, both members of the association, played a series of games throughout England, but met with little success. It was said to be "too swift for the Johnny Bulls." The National League of 1876 and the American Association of 1882 are the two great ball playing organizations in the country to-day. They have placed the sport on an honest, professional footing, and have kept it there.

The curve, as a factor in base ball, was introduced about twenty years ago, by Arthur Cummings, of the "Brooklyn Stars; this made some little stir in scientific as well as base ball circles. It was declared to be an absurdity by not a few scientists, who claimed that it was directly opposed to all known laws of physics, and that it was merely an optical illusion. They were a little behind the times. The fact had served Galileo as an illustration of the deviation of the planets from their true path several years before

these scientists were born. The accepted theory, to-day, is that a ball on leaving the pitcher's hand, is given a rotary motion. When this rotary motion is from right to left, it packs the air more closely on the right side, making the resistance greater, which causes the ball to curve to the left; this is called the "out" when thrown by a right handed pitcher. The motion from left to right results in a curve to the right, called the "in." The motion acting from above gives the "drop," and from below the "rise."

Base ball has at last reached the distinction of being called the National game. Anglo-maniacs have sought to introduce cricket in its place, but in vain. Although it has become somewhat popular in the large cities of the East, and in a few colleges, it will never supersede base ball as long as Americans remain what they are to-day. Cricket is very slow and scientific, sometimes taking two or three days to finish a game. It is, withal, very dangerous, and the players have to be encased in an armor, which prevents the free exercise of their limbs. The average American audience does not care for brutal sport, and to see a man carried from the field bruised and battered, has in it no element of pleasure. On the other hand, base ball is quick and lively. Of course skill is essential, but the element of chance enters into the game to a greater or less extent. The interest is held to the close, and the sport is far from being brutal or dangerous. On the contrary, it is as safe as most out-door sports. One of the unique features of the National game is the literature it has developed. Its characteristics would not, perhaps, secure for it the admiration of a learned literary man, but its sprightliness, and the abundant opportunities it offers for the use of slang, are sufficient to recommend it to the average American.

America has long sought a literature distinctively American; she has sought an art distinctively American, and she has been re-

warded with base ball, which is nothing if not American.

Aerial Navigation.

H. F. HALL, PHI DELTA THETA FRATERNITY.

Soon after mastering the science of the navigation of the water, the ever ambitious human race turned a part of its attention to the navigation of the air. Naturally the motion of the bird was looked upon as the basis of such navigation, and many attempts, invariably unsuccessful, were made to imitate the motions of this creature. Before the discovery of the barometer there was prevalent an idea that a ship could be constructed, light enough to sail on the air as does a ship on the sea. The barometer proved that this idea could not be carried out.

When it was seen that the flight of a bird could not be imitated, attention was turned towards finding some substance, lighter than air on the earth's surface, which would support some vessel containing it. The suspension of clouds in the air was noticed, and the thought was conceived that, if a bag inflated with some such substance as the clouds were released, a balloon capable of sustaining a small weight would be the result. Accordingly bags were filled with the smoke from straw, and it was found that they would ascend and remain in the air for a considerable time. From this discovery dates the ascension of the first hot-air balloon. As this method of ascension was rather cumbersome, especially with passengers, it was proposed that hydrogen gas, known at that time as "inflammable gas," be employed in the place of hot air, as it is very much lighter than the atmosphere. The first person who ascended was raised by means of hot air. From this time balloon ascensions became more numerous, and slight but not radical improvements were made from time to time.

Many ingenious projects, the theory of which seemed plausible enough, were pre-

sented, but few were at all successful. One of the most noted of these was a scheme to exhaust the air from four large copper balls, which would then, it was claimed, be light enough to ascend in the atmosphere. The trouble with this idea was that the copper, being necessarily very thin, would not withstand the atmospheric pressure, but would collapse.

At a comparatively early date in the history of aeronautics, the English channel was safely crossed in a balloon carrying two passengers, although twice during the journey precipitation into the sea was avoided only by throwing from the car every available article, including the clothing of the passengers. In two attempts to cross the Adriatic sea, the aeronaut was nearly drowned by descending too soon. Shortly after this, however, a successful journey over the Mediterranean sea was accomplished, with a margin of fifty miles. The largest gas balloon ever made was constructed by a photographer and contained over two hundred thousand cubic feet of gas, and was capable of carrying fifteen people. The idea of the photographer was to raise funds, by means of which he thought he could construct a screw which would guide the motions of the balloon in the air. This idea was not founded on a scientific basis, although so claimed by its author.

A project for an aerial journey across the Atlantic Ocean was at one time contemplated, but, farther than the construction of the balloon, it was never carried. The foundation of this scheme was the supposed existence of a westerly current of air in the upper atmosphere. Later it was proved that no such current existed; but that the wind varied as much there as on the surface of the earth.

Nearly the only uses for which aeronautics has, as yet, been applied are for the advancement of science and in military operations. Many important physical facts were brought to light from the results of a series of ascensions. Among the most important of these

are, that the chemical constitution of the atmosphere is constant at all attainable heights, and that with each high ascension a fall of temperature increasing with the height was observed. Experiments with magnetic force and force of gravitation, proved that there was no appreciable diminution in either, up to the height at which it was possible to perform the experiments. The use of the balloon in military operations was soon adopted and important results were obtained.

Being able to govern the movements of aerial machines would greatly increase their value. Many attempts have been made with this object in view, but perfection has not as yet been obtained, though great advancements have been made.

One invention was in the form of an immense cigar and was designed for a war ship. Large screws were used to propel this machine as well as to raise and lower it. With a complete apparatus of this kind, the old manner of allowing gas to escape or of throwing out ballast may be done away with. Another aerial machine of an entirely different construction is one, the motive power of which is compressed air combined with the muscular force of the operator. The air, which is contained in two cylinders, works a system of propellers, the majority of which are above the center of gravity of the machine. A velocipede motion is at the bottom of the frame and can be worked at the will of the rider. This seems to be a plausible form, as the machine may be so constructed as to weigh but sixty-five pounds. Estimating the weight of the rider at one hundred and sixty pounds, but one-sixth of a horse power will be needed to raise it.

In another half century, if improvements in this art are made proportional to those of the past, it may reasonably be expected that aerial navigation will be as popular a mode of travel as is the railroad at the present time.

Albion College graduated this year seven Bachelors of Art, six Bachelors of Science, nine musicians and one artist.

True Charity.

A. B. GOODWIN, OLYMPIC SOCIETY.

How common it is to regard the mechanical act of dealing out alms as charity, and to applaud it as such. The millionaire politician who gives his thousands to some benevolent work is praised as a public benefactor. The money, so freely lavished, often serves to stimulate indolence and vice. His humble neighbor aids a needy brother. His little mite, the love, benevolence and good will which he bore towards a fellow being, receives the praise of none. Financial aid too often proves a curse; more stand in need of friendly aid and sympathy. Such charity is worthy of the highest thoughts. Through such charity must the sick be healed, the weak protected, and the vicious restored.

Reverence for human nature must be observed. "We have no right," says Sir Walter Scott, "to intrude upon the poor." Each suffering heart has its peculiar bitterness. There must be an insight into and respect for human personalities. Regard and respect for human interest have given the stories of Bret Harte their greatest power. In each soul there is a different resource at command. It needs human interest to call out the varied wealth. The good Samaritan stands out as a bright example of this element. The wounded man lying there was his personal care. Wine was given for strength and oil for healing. He was taken to a neighboring inn and arrangements made for his future care; above all, he had found a friend. Needed aid must be placed under the care of such true, hopeful friendship.

Helpful action tends to keep all society pure; morbid corruption wastes vital power and energy. Too often we find the hope of youthful manhood, the spotless life of maidenhood averted or cast away. How irksome the daily toil of one never taught to do a useful thing, the conscience wrapped in fruitless agony. Let him set about some noble object in life and he will be a useful citizen.

It would be a stimulus to better his condition in life. Its influence is necessary to the development of character to the highest excellency. Charitable associations can find no grander work than to impress upon society the true nobility of labor. This would lessen the number of our jails and the calls for needed aid.

No form of charity can meet with marked success, until the saloon element is crippled; until its coils, which fetter humanity, are broken. It is largely this influence that swells the large army of tramps, breeds discontent among laborers, and incites them to deeds of violence. We find among their number intelligent men, skilled artisans, and good laborers. Depraved by maddening drink, they no longer care to work honestly with their hands or industriously with their brains. Even the common decencies of human life are often disregarded. Their energy and influence are now at work to tear down society, the corner stone of our civilization.

Active moral principles, and the protection of every virtue, are necessary to the loftiest efforts of human intellect. The cultivation of morality is essential to the stability of our government. It is the price we must pay for our freedom. Diffuse the poison of immorality among the minds of the people, and factious ambition would sway the councils of our nation. Rome prospered when resisting the encroachment of vice. Rome fell, when licentiousness and corruption destroyed her moral principles, the supporting pillars of her political institutions. Charitable efforts that touch not the moral nature of man are wasted. Those that degrade the dignity of man are corrupt. The true mission of charity is to enlarge his sphere of usefulness.

The Alumni Fortnightly Club.

This club was organized March 15, 1888, by the resident Alumni, not including professors. The object of the club is mutual improvement and social enjoyment, and any alumnus connected with the college may be

four times. Analyses of two quarts of ripe cherries from these trees showed no trace of arsenic.

L. A. B. '88.

A SPECIMEN of more than usual scientific interest has just been added to the general museum. It is that of the *Cestracion Philippi*, very common in the carboniferous period and for some time before, but until a comparatively recent period thought to be entirely extinct since that time.

It will be remembered that this is a species of the type that Agassiz while yet very young described before the Royal Society of London in a talk on fossil fishes. Having a certain knowledge of nothing but the pavement teeth, the two heavy spines of the first and second dorsal fins and the phalanges of the large pectoral fins, he made a drawing of the animal as he supposed it to have been. His presumption aroused some criticism, but before the meeting had adjourned the appearance of a fish of the same type produced by an old sailor who had been so fortunate as to capture a remaining specimen of that old, old type, demonstrated the accuracy of Agassiz's conclusions.

The specimen brought to notice then was found at Port Jackson, Australia, and is sometimes called the Port Jackson shark. Since then several specimens have been captured at the same place, and of recent years a few have been seen around Lower California.

The relation of this shark to geology and its personification of the now differentiated type peculiar to all ancient orders, renders it of great value to the scientist. In its pavement teeth, its respiratory organs and phalanges extending into the pectoral fins is seen its great resemblance to the order of reptiles. So perfect is this that it is more than a mere suggestion of a still earlier type, that leading scientists well conclude embraced them both.

The great scarcity of this shark when compared with its abundance in earlier epochs

is one of the many incidents showing nature's stern law of destruction to the types that are not adapted to the more complex life and fiercer struggle that come with the earth's more recent periods.

THE large amount of light, sandy soils in some of the northern counties of Michigan, which do not appear to respond favorably to ordinary methods of tillage, seems to call for investigation and experimental inquiry. Some persons doubt the possibility of their successful cultivation, and are disposed to scoff at all attempts in that direction. The fact that many persons have settled on these lands for homesteads, and after a few years have abandoned their claims and gone elsewhere for permanent homes, seems to countenance the doubt about their agricultural value. The hundreds of abandoned homesteads give sad evidence of misdirected labor and disappointed hopes. The question is, how to bring these lands into profitable cultivation by such methods of tillage and the use of such manurial materials as are within the reach of every farmer of moderate means. It does not include the use of stable manure, for the reason that this cannot at present be obtained in sufficient quantity to supply the needs of the plains. No one need doubt the capacity of these sandy soils to produce crops if a sufficient supply of stable manure can be obtained. The first question is, how to raise the crops on these lands that shall furnish the stable manure. The problem briefly stated is this: With a light sandy soil of very porous quality, in a northern climate, subject to late frosts in spring and early frosts in autumn, and liable to midsummer drought, with no fertilizers except manure, salt and plaster, can any methods of tillage or kinds of crops bring these plains into profitable cultivation for ordinary farming, stock raising, or fruit production? For many years Professor R. C. Kedzie of the Agricultural College of Michigan has given thought and study to this problem, and in lectures and articles called attention to the subject. When the Hatch

Bill became a law, it was felt that the time had come to take up this subject in a practical way. A farmers' institute had been held at Grayling, Crawford county, in which farming on the plains occupied most of the time and thought of those present. When it was determined to establish an experimental farm on the plains, the State Board of Agriculture fixed upon Grayling as the place, because it is in the heart of the jack-pine lands, is readily accessible by railway, is near a large deposit of marl, the people take a lively interest in the experimental work, and the Michigan Central railroad offered to donate eighty acres of jack-pine land for the experimental farm. The tract of land donated, both as to soil and the natural products growing on it, is considered a fair average of the jack-pine plains. The experimental work at Grayling is only begun, and it is too soon to ask, "What shall the harvest be?"—*From "Science," July 20, 1888.*

Phebe Gray.

BY PERRY G. HOLDEN.

[Written for the Union Meeting of the Societies, July 21, '88.]

It lacked one year of sixty-three,
 And on the banks of Tennessee
 There stood a cabin all alone;
 At morn the sun had brightly shone,
 But now half hides his face for shame,
 And sinks to rest, a fiery flame.
 Around the cabin, neat and clean,
 A little garden may be seen,
 But darkness now enwraps it all;
 Within, a candle lights the wall.
 Though once it was a happy home,
 Within is heard a mournful tone,—
 A mother prays, a daughter weeps,
 The silent dead before them sleeps.
 At length the daughter rose and said:
 "We'll weep no more, though father's dead,
 For well to front his men he led,
 And nobly fought and nobly bled;
 And when I searched the field to night,
 In the dim and fading light,
 For father's form that now before us lies,
 I heard the shrieks and moans and cries
 Of hundreds that, without a fire
 To warm their chilling limbs, expire.
 The soldiers flung their coats away,

It being warm till eve of day;
 But, changed to rain and now to snow,
 A western blast begins to blow.
 O, hark! and hear those fearful yells,
 As of a fight 'twixt fiends of hell!
 To-night I'll lend a helping hand,
 To comfort some poor, suffering man.
 But first these chevrons I will take,
 And keep them for remembrance' sake;
 I'll draw this dagger from his breast,
 And use as reason tells me best.
 Permit me, mother—I know thou wilt."
 She seized the dagger by the hilt,
 An effort made, but all in vain,
 Renewed her efforts once again,
 Ere from his breast she could regain
 The shaft that pierced his heart in twain.
 As in her hands the blade she held,
 Upon its hilt a name beheld.
 "Why, mother, what is this I see?
 My brother's name it cannot be."
 The anxious mother sprang to see.
 "But hush! A step! Who can it be?
 The latch is raised!" But neither knows
 Whether it be by friends or foes.
 Their faces white now whiter grow,
 Their blood is chilled and will not flow.
 Now open swings the cabin door,
 A rebel soldier stands before.
 His form and face and manner fair,
 The suit of gray could not impair;
 The mother knew it was her son,
 But for what purpose had he come?
 The daughter raised the blade and said:
 "Thou tread'st too near the sacred dead."
 As if her heart, by fear unstrung,
 An instant paused, then forward sprung.
 Before the son his father lies,
 He hears his mother's shrieks and cries;
 In air the crimson dagger gleams,
 To take his life its purpose seems.
 His heart by grief and sorrow weak,
 'T is all in vain he tries to speak,
 To tell his sister pressing near,
 That she from him need have no fear.
 He came to ask his mother's grace,
 His steps he will not now retrace.
 The only way that now he sees,
 Submissive falls upon his knees.
 "This is my son," the mother said,
 "Long since we thought that you were dead."
 "Ere I can take a brother's hand,"
 The daughter cried, "I must demand,—
 Be brief and answer what I say,—
 Why do you wear this suit of gray?
 And why this dagger, crimson stained,
 Upon its hilt your very name?
 Why come you on this stormy night,
 Our fears expanding into fright."
 His words are weak, at first, and slow,
 But as he speaks they firmer grow.

"It's been quite thirteen years or more,
 Since last I entered here before,
 The last time I remember well,
 I bid you all a kind farewell."
 "But hush! and answer what I asked,"
 And she the blade more tightly grasped;
 "And hear you not yon sufferers' cry?
 An hundred there to-night must die."
 "Be brief and answer quick," she said,
 "Or else you have defied this blade."
 "They drafted me, and that's the way
 I came to wear this suit of gray."
 "And why that dagger crimson stained?"
 "They charged upon our cannon famed,
 Though hard we fought, our ranks they
 pressed,
 My dagger pierced a soldier's breast;
 And when upon the ground he fell
 I saw—nay, more I cannot tell.
 And why before you here to-night?
 As light was fading into night,
 And cannon ceased their heavy war,
 I searched the battle field quite o'er;
 But father's form I found not there,
 And wandered round, no matter where.
 I saw my father lifeless fall,
 The stars and stripes were ruined all.
 I saw the nation split in twain,
 And freedom's blood was spilt in vain;
 And conscious of my fearful sin,
 I came to-night and entered in
 To ask—"Enough, enough to know
 That you'll no longer aid the foe,"
 The maiden said, and quick departs,
 Spare cloaks and robes she takes and starts,
 Her work to do upon the field,
 Where men have fought and bled and reeled.
 She little heeds the icy blast,
 Nor thinks to dread the weary task.
 The fervent prayers, the moans and cries
 Direct her where the sufferer lies;
 But some have passed from human needs,
 And left their bodies and their deeds.
 A dozen homes cannot be found,
 Within five miles of there around,
 But fires are kindled on the ground,
 And wounded soldiers brought around.
 The sapling trees, by soldiers cut,
 She weaves into a kind of hut,
 To shield the suffering, bleeding men
 That fought so well within the glen.
 All night she staid, till break of day,
 Then homeward went her weary way.

 Too few the words that here can tell
 Of what she did and did so well.
 Not long ago her life was handed in
 To Him who knows the good from sin.
 Though honor's due, no nation mourns,
 Not history's page her name adorns.
 But years have passed since sixty-three,
 And on the banks of Tennessee,
 The sun will cast a ling'ring ray
 Upon the grave of Phebe Gray.

THE SPECULUM.

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AGRICULTURAL COLLEGE, AUG. 10, 1888.

ANOTHER turn in the wheel of time has brought a new set of editors before the readers of the SPECULUM. At the beginning of the eighth year the outlook for our college paper is very promising. Its finances are in good condition, its subscription list larger than ever before, and the support by the students and alumni very cordial. Much credit is due to the old board for its untiring energy in behalf of the SPECULUM, and many of the improvements which the new board has been enabled to make for the coming volume, owe their origin to suggestions made by the retiring editors. "Practice makes perfect," and the experience of the old board of editors would undoubtedly enable them to conduct the paper for another year with

excellent results. But college life demands the change of editors, and a constant improvement in the paper, to correspond with that of our college, should be looked for. The policy of the SPECULUM will be the same as it has always been—to reflect the life and sentiments of the students at the Michigan Agricultural College. Its aim is to uphold the faculty, and bring the students into closer relationship with that body. It has always been a student's organ, and not a college advertisement.

How do you like our new dress? Early last year the SPECULUM was made a monthly and the reading matter in each issue necessarily reduced. To make the form neater, and to insure greater ease in mailing, the size has been reduced from 9x12 to 8x10½ inches. This necessitated a change in the cover, and in this issue we present our readers with a new design, for which we are indebted to Mr. P. M. Chamberlain of '88. The amount of reading matter will be the same as ever, and we hope that the quality will remain unchanged.

The matter of a State Inter-Collegiate Oratorical Association has often been discussed by the SPECULUM. A year ago it was talked of in connection with an athletic association. The latter has materialized and the colleges of Michigan are no longer behind the times, but have a good organization for field sports. Why then should Michigan be behind her sister states in organizing for oratorical contests? The Agricultural College has always been much in favor of such an association, and has already taken the first steps in the right direction by forming an oratorical association of its own, which has held one contest. The next one occurs in October. Is this matter to become a dead letter? Several years ago some of our Michigan colleges had an oratorical association, in which Kalamazoo College took the prizes; but after a few contests it died out and has never been revived. Even the Territory of

Dakota, small in her number of colleges, has a thriving oratorical association. Must Michigan colleges be behind all the rest?

THE '88 *Harrow* now being prepared by the sophomore class ('90) is nearly completed; but on account of delay in getting the cuts, the book will not be on sale until the beginning of next term. The editors wished to have it out before the alumni meeting; but as it was impossible, one of their number will stay during the meeting and push the sale as much as possible. Every alumnus should have one of these books, as they give him a better idea of what the college of to-day is, than anything else. Then the publication of of such a book is a great advertisement to the college, and for that reason it should be encouraged. Among other things the book will contain a short history of the Alumni Association, together with all of its officers since its foundation. This will be an interesting feature to the Alumni. The price of the book will probably be seventy-five cents, a little less than last year. Every alumnus should leave his order for at least one.

“Do the cadets drill to-night,” and “What has become of your military department,” are questions frequently asked by visitors at the College. We can only sorrowfully answer that we don't know. It is surprising how fast drill has degenerated during this term. The battalions pretend to drill twice a week, but the companies, department and all have become a laughing stock to the whole College. Usually half of those who report are officers and the other half poor deluded freshmen. The interest last summer was very marked. The cadets drilled every day, went to target practice once a week, and were striving with every energy to win the colors at a company competitive drill, which was to be held later in the term. If this department is to be continued, the students must at least be allowed to drill. There are at present no stringent absence rules, and no organization as in other departments. If we

are to have drill, why cannot it be placed on the same basis as other departments; otherwise it would be better to "shut up shop." Where there is no interest, drill or anything else becomes a drudge. Previous to this term the rules have been, three hours work, or two hours work and one hour drill—the drill sometimes being elective and sometimes compulsory. But this term the students were required to work three hours and take drill if they wanted to. Of course it could not be expected that any student would do this. The faculty relented a little and let those who wished to drill work but two hours during *two* days of the week. But the interest could not be kept up with this amount of drill and most of the students preferred work. Hence our military department has not amounted to much this term, but we hope to see a change in the future. The prospect now is that such a change will be made.

ANOTHER year in the annals of college life is about to close. In reviewing the progress during this time we find many things upon which to congratulate ourselves. The year opened with a strong freshman class, which was much enlarged at the beginning of the following spring term. The year will close with the graduation of one of the largest classes the institution has ever seen. Several from this class will stay at the college as assistants in the various departments and to aid in experimental work. The college is proud in honoring its Alumni. The new catalogue about to be issued shows an increase in the number of students and to accommodate those and those who are to come, a new dormitory, Abbot Hall, has been erected. It is a neat, convenient building, pleasantly located, and shows a marked advantage over the old halls in many respects. The large new apartment building will furnish room for some of the professors and the assistants. Last, but not least, we have the Horticultural Laboratory which will soon be finished. It is situated conveniently near the garden and forcing house, and we understand that it is

to be a model building of its kind, containing both class and experimental rooms, laboratory, tool and seed rooms, and besides a professor's office, a root cellar and numerous cosy little nooks and corners, for what purpose the horticulturist only knows. An excellent gymnasium has also been formed in the armory during the year. On the afternoon of any day large classes of students in flannel jackets, white knickerbockers and long black stockings may be seen tumbling, jumping, climbing or wildly swinging on bars or rings in the pursuit of athletic renown. We might, if space permitted, name a great many other changes, such as the improved condition of the dormitory halls under the careful supervision of our president; the addition to the library of several cases of books owned by the experiment station; the fire escapes in the rooms of the dormitories; the extension of Mechanical Hall and other things too numerous to mention. It is true that we shall soon have to mourn the loss of two of our most efficient professors, who go to better positions in other colleges. Professor L. H. Bailey, Jr., takes the chair of horticulture at Cornell University, and Professor L. G. Carpenter is to have the position of irrigating engineer and meteorologist at Colorado Agricultural College.

All of our students as well as the Alumni should attend the Alumni reunion on Wednesday August 15. It only comes once in three years, and most of the under graduates get but one chance of being present and hearing what "those who have gone before" have to say. It is no more than patriotic to be present, and the SPECULUM assures a rich treat to those who attend. The program for the day is as follows:

8 A. M.—Business Meeting.

9 A. M.—Class Meetings.

10:30 A. M.—Literary Exercises.

1 P. M.—Dinner.

7 P. M.—Banquet.

The literary exercises will consist of a

history by Mrs. M. J. C. Carpenter; poem by Mr. H. W. Collingwood, and an oration by Mr. F. E. Robson.

At a meeting of the Eclectic society held June 30th, the following resolutions were adopted:

WHEREAS, An all-wise Providence has removed our beloved brother, Jay P. Monroe, who died in Kalamazoo, Mich., June 30, 1888;

Resolved, That in the death of Jay P. Monroe the Eclectic society has lost an honored and respected member, who, as its first president, proved himself an energetic and faithful worker, and a true and kind-hearted friend;

Resolved, That we extend our heart-felt sympathy to his bereaved family, who are called upon to mourn his untimely death;

Resolved, That a copy of these resolutions be sent to his bereaved family; that they be spread upon the records of this society, and that they be published in the COLLEGE SPECULUM.

GEORGE S. JENKS,
JAMES W. TOUMEY,
HORACE L. BUNNELL,
Committee of the Eclectic Society.

COLLEGE NEWS.

Faculty party at Pine Lake, July 28.

Eusilage corn promises a large crop.

Board in most of the clubs will be high this term.

Prof. Cook took his class in geology to Grand Ledge, July 28.

Miss Garfield will leave for Albion soon, where she will resume her work as teacher.

The trunk and package room in the cellar of the new hall will be placed in charge of one of the students.

The Olympic Society has just been purchasing a new piano. It is pronounced a good instrument by those capable of judging.

The freshmen decided to have a class-day at Grand Ledge, July 28, but it deteriorated into a one-half class picnic. Those who went report a very pleasant time.

The attention of the students is especially directed to the Caucasian prickly comfrey growing in No. 3. This plant is being boomed to some extent as a forage plant.

Stewards elected for next term in the clubs are as follows:—In Club A, R. S. Baker; Club B, W. S. Palmer; Club C, F. B. Stockwell; Club D, J. W. Toumey; Club E, F. E. Semon.

Nothing has been done on the street railway lately. The report was circulated about a month ago, that it

would be completed before commencement this year, but the way things look now, it will not be completed before next commencement.

Forage plants tested on the farm this season are doing finely, with few exceptions found in the vetches, Icradella and yellow lupine. The Camaroon corn, Kaffir corn and Brazilian flour corn are doing very nicely indeed.

A new case for apparatus is being put in the chemical laboratory. The recitation room for chemical physics has been well fixed up. Mr. Woodworth will have it arranged soon so that he can perform experiments with light, electricity and heat before his class.

The lecture delivered in chapel, July 18, by Lieut. Durand, of the U. S. Naval Academy, was very interesting and instructive, as was the one delivered by Lieut. Simpson, two weeks later, on the U. S. Military Academy. The chapel was filled on both occasions.

The junior reception at Professor Cook's house, July 27, was very much enjoyed by all. We had an unusual treat. Miss Benfey, a cousin of Professor Cook, favored us with three very interesting recitations. Miss Benfey is a graduate of Ypsilanti and also of California U. V.

Mr. Grimm, a graduate of M. A. C., and now professor of agriculture in the Oregon Agricultural College, and director of the experiment station, is on the grounds. Rumor says he is trying to secure the services of Mr. Lake for the Agricultural College of Oregon.

The average yield of wheat on the college farm this year is 21 bushels, the best yield being 28 bushels of the Clawson variety, and the poorest 15½ bushels of Phelps. Martin's amber, Deihl Mediterranean and Clawson are rather the best in quality. The oat crop promises to be a very good one this year.

The horticultural laboratory will be completed by the first of October. In the basement there will be one room for grafting, one for preparation of vegetables for market, and two for storage purposes. The first floor is for tools, office and workshop. The second floor will contain three rooms for laboratory practice and the class room.

Prof. L. R. Taft, a graduate of Amherst Agricultural College, and for some years a professor of horticulture in Missouri Agricultural College, has been engaged by the State Board of Agriculture to fill the place made vacant by Professor Bailey. When the Missouri State Board of Agriculture learned that he was likely to accept a position here, they met and offered him \$2,400 to remain.

A few changes will be made in the new catalogue. Drill will be obligatory for all except the seniors. It will come on Wednesdays and Saturdays during the summer term. Wednesday afternoons will be set aside for systematic botany, drill, rhetorical and public exercises. Work in the carpenter shop will be obligatory first half of spring term, for freshmen in the agricultural course, and elective the last half. Military engineering will be elective for seniors.

Professor Bailey on his way to Europe will pass

through Montreal and Quebec. His main object in going by the way of Quebec is to make the ocean voyage shorter, and to see the icebergs. He will leave here the last of August. Professor Bailey has never been across the ocean, and will enjoy his trip very much, no doubt. He has purchased one of Anthony's detective cameras, and will take many views of gardens and landscapes. We will be glad to hear from him occasionally through the SPECULUM columns.

The recent zoological classification of the senior class by the professor in astronomy places them in the orders of ruminants and non-ruminants. The examination papers of each order are to be kept carefully apart, and intellectual tests applied to each to determine, if possible, whether an increased flow of saliva, induced by a crocodilian mastication of black jack, will promote the efficiency of brain action. An anxious world holds its breath for the result, as by it the intellectual superiority of either Pegasus or ruminating Taurus will be forever determined.

The fine work done by the mechanical students in the iron shop reflects much credit upon this department of our college. The twenty-horse power engine lately completed is to replace the old one in the shop, which is only eleven-horse power. The extension of the shop and the addition of new machinery called for a stronger engine. It will be placed on exhibition in the State fair at Jackson this fall. The blacksmith shop is a model one, and is the best in the State. The State Board will hire a blacksmith to have charge of the work in the blacksmith shop. Seven lathes for use in the shop and five engines have been made by the boys since this course was started at our college.

The Sunday evening program of the Y. M. C. A. for next term:

Sept. 2—Leader, Prof. Cook. Subject: The object and work of the Y. M. C. A.

Sept. 9—Leader, Mr. Anderson. Subject: What pleasures do I receive from being a Christian?

Sept. 16—Leader, Mr. Cannon. Praise and song service.

Sept. 23—Missionary meeting.

Sept. 30—Leader, Prof. McEwan. Subject: What are the benefits of Bible study to the student?

Oct. 7—Leader, Mr. Curtis. Subject: The Christian's life is a warfare.

Oct. 14—Leader, Pres. Willits. Subject: The Sabbath.

Oct. 21—Missionary meeting.

Oct. 28—Leader, Lieut. Durand. Subject: Are we leading Christian lives every day?

Nov. 4—Leader, T. H. Hall. Song service.

Nov. 11—Leader, R. S. Baker. Subject: How can we work for our Master during our winter vacation?

The record number of the specimens in the botanical museum has reached 2,500. None of these are duplicates, while many single numbers represent a series of specimens. Many of the recently acquired specimens add much to the appearance and usefulness of the collection. Among these are the products of a pulp mill, showing paper in all stages of manufacture, from the spruce blocks to the finished product; also a collection of wood alcohols, tar, acetate of lime, etc., showing the products arising in the distillation of wood. Of a different nature, though not of less inter-

est, are the collections of tropical fruits, one from South America and another from Jamaica. In the former a large variety of palm fruits is shown, while the latter among other interesting things shows the large fruit of the baobab tree, second only to our own redwoods in size, and attaining an age, it is thought, of 5,000 years. Among the other recent collections are valuable specimens of lumber, an Indian birch-bark canoe, and various timber specimens, showing the damage done by birds and mammalia. Specimens for a museum of this character are rarely found in the museum markets, hence but few have been purchased. Nearly all have been collected by the curators or friends of the museum. Any information concerning specimens of plant growth will be gratefully received by Dr. Beal, as it is his desire and intention to add to the present collection as rapidly as possible.

PERSONALS.

As the SPECULUM circulates widely among the alumni, it is aimed to make this department of much interest to them. All persons having items of interest concerning alumni will oblige by forwarding to Personals Editor, SPECULUM.

Those who intend to be present at the alumni reunion will be indicated by a *.

'62.

In the absence of Mr. Preston, the president of the alumni association, it is probable that Vice President Byron D. Halsted of '71 will preside.

E. M. Preston writes, at the last moment, that owing to an unforeseen press of business which will necessitate his close attention during the whole of August and September, he will be unable to attend the alumni reunion. The alumni and all the rest of his old friends in Michigan will unite in expressing regret at this unexpected change in his plans.

'64.

Lewis Vanderbilt is at Pittville, California. He is county surveyor of Lassen county.

'67.

* A Clifford Prutzman is manufacturing agricultural implements in Three Rivers, Michigan.

'68.

William D. Place is farming near Ionia. Does not know whether he will come to the reunion.

Alfred Gulley of South Haven, Michigan, is yet in ill health, resulting from sun-stroke last summer. Thinks it doubtful whether he will attend the reunion or not.

WITH '69.

A. J. Pierce is surveyor at Aberdeen, Dakota.

'70.

* Warren W. Reynolds is a farmer and fruit grower at Cassopolis.

'71.

E. B. Fairfield is manufacturing salt at Manistee.

* E. M. Shelton expects to arrive here August 10.

Dr. B. D. Halsted of the Iowa Agricultural College has issued, from the botanical department, a bulletin which is said to contain matter of much interest to students of botany.

WITH '71.

E. S. Thompson is a fruit and vegetable grower at South Haven, Michigan.

'74.

C. L. Bemis, county superintendent of Ionia county, is conducting a teachers' normal class in Ionia.

* George W. Brewer is having good success at teaching in Leslie, Michigan. He is married and has one boy.

* Henry A. Haigh is permanent secretary of the Michigan Republican League. Will be toastmaster at alumni banquet.

J. W. Higbee is a farmer at Lone Pine, Whitman county, Washington Territory. He is married to the lady who was former instructor in French in the Cedar Hill Seminary, Lansing, while the institution was under Mrs. Abbot's management. Mr. Higbee has three children.

George Mitchell is a farmer and fruit grower at Newberg, Oregon. He is a Prohibitionist, and says that they are having an exciting political canvass. Besides being superintendent of schools, he is president of the Newberg Agricultural Society, and secretary and treasurer of the board of managers of the Friends' Pacific Academy.

'76.

Joseph A. Horton is married, and is farming at Owosso.

* Wallace W. Bemis is a market gardener and fruit grower at Ionia, Michigan. He has four children.

Gates A. Stannard is farming at Lowell, Michigan. Does not know whether he will attend the reunion or not.

WITH '76.

Charles Spencer is a J. P. at Ionia.

Mark Pennel is farming at DeWitt.

George A. Young is a machinist at Battle Creek.

Andrew Bracelin is farming at Allegan, Michigan.

Frank E. Swan is farming at Williamston, Michigan.

'77.

* Lyman A. Lilley is farming with good success at Hilliards, Michigan.

W. C. Latta is teaching and farming. Thinks he can not come to the reunion.

WITH '76.

H. H. Mills is farming at Joppa, Indiana.

Jerome McAlpin is county superintendent of schools, at Warsaw, Indiana.

'78.

H. F. Buskirk is a farmer and lumber dealer at Wayland, Michigan.

'79.

Frank Benton is in Laibach, Austria. He has two children. His business is raising and exporting fine queen bees. He writes that he is not very successful financially.

'81.

J. C. Simonson is president of the first national bank at Holly, Michigan.

* George W. Grover is engaged as principal of the school at Napoleon for the ensuing year.

H. L. Rosenberry will come to the reunion if possible. He is doing well as a physician in Millsburgh, Ohio.

A. W. Troop, M. D. is in Pine Bluffs, Arkansas. He is a division surgeon of the St. Louis, Arkansas and Texas Railway.

C. M. McCurdy sends program of the first commencement exercises of Sand Beach public schools. He has been principal there for three years, and is now at his home in Dansville, New York.

WITH '81.

Carl Dart is civil engineer at St. Joseph, Missouri. C. A. Smith is chief surgeon of the S. L., A. and T. Railway.

'82.

John Ewart, formerly of Moor Park, has accepted the principalship of the Mendon schools for next year.

W. T. Langley, who has been principal of the public schools of St. Ansgar, Iowa, has been elected principal of the schools of West Superior, Wisconsin, "the great boom town at the head of the lakes." His salary is \$1,000 per year.

W. L. Snyder is so well supplied with business that he cannot attend commencement in August. His "best wishes will be for the success of the class and the alumni meeting." He is superintendent of the Sunday school of the Church of our Father, Detroit.

WITH '82.

W. L. Wilcox, M. D., is at Room 16, First Methodist Church block, Chicago, Ill. He is professor of therapeutics and materia medica at Bennett Medical College, Chicago.

'83.

E. P. Clark of Coloma, Michigan, is spending the summer in Illinois.

Professor Allen C. Redding of Findlay College, Findlay, Ohio, will be here Aug. 11.

E. Grimm, professor of agriculture and chemistry at the Oregon State Agricultural College, Corvallis, was here recently with President Arnold of the same college.

J. H. Smith, for the last three years superintendent of schools at Rock Rapids, Iowa, has lately accepted the position of superintendent of schools at Durango, Colorado, at a salary of \$1,400. He goes to his work in September. Durango is a young city of 5,000 inhabitants and has all the modern improvements, as well as a fine climate. Mr. Smith is well pleased with the situation.

WITH '83.

Sage takes the Hartford schools next year.

'84.

Fred J. Hodges, M. D., of the Cook county hospital is spending his vacation in Allegan.

* C. P. Gillette expects to come to Michigan about August 10. He is very well pleased with his position as entomologist at Iowa experiment station, Ames, Ia.

WITH '84.

E. A. Stone is at Almont.

'85.

* James Y. Clark is farming at Orion.

H. E. Thomas is a railway postal clerk on the L. S. & M. S., between Toledo and Buffalo.

E. R. L. says that he has no (?) prospects for next year.

* Willis Leisenring, formerly pharmacist at Pinckney, Livingston Co., is engaged to work for Frank Wells, of Lansing.

WITH '85.

John E. Walch, a special student in chemistry in the summer term of '85, was recently married in Chicago. He is city physician of Denver, Colorado.

'86.

A. L. Nichols has joined the church.

James Jakway, Jr., was married, July 9, to Miss Nettie Closson, of Benton Harbor.

Chas. Lawson, who has been taking the course in pharmacy at Ann Arbor since he left M. A. C., will not return to Ann Arbor for a year. He is now at Brighton, Mich.

'87.

* George C. Crandall expects to be here August 11th.

WITH '87.

Will. Smith is a member of the Ypsilanti light guards. He attended this year's State encampment at Mackinaw.

'88.

What the members of '88 expect to do next year :

J. C. Stafford expects to farm.

Clark Hubbell will study law.

Glenn D. Ferrigo expects to teach.

Miss M. L. Carpenter expects to teach.

Paul M. Chamberlain expects to teach.

C. H. Redman expects to work at surveying.

H. B. Cannon expects to teach and to study.

Miss C. L. Harrison expects to go to Detroit.

Henry Thurtell will probably wield the ferule.

Louis A. Bregger expects to work at floriculture.

George F. Stow intends to work at home on the farm.

Dale A. Smith expects to study medicine with his father.

R. H. Cary will farm for awhile, and teach next winter.

Frank H. Hall expects to instruct '92 in algebra and geometry.

Will. A. Taylor will farm at home in the west part of Allegan Co.

J. N. Estabrook expects to engage in mercantile work or teach school.

A. E. Bulson expects to study medicine at the Chicago Medical College.

L. H. Dewey expects to work in the botanical department at this college.

A. B. Cordley expects to remain as an assistant in the department of entomology.

Frank J. Free expects to teach during the winter, and to study veterinary science.

George L. Teller expects to remain here as an assistant in the chemical department.

C. B. Cook expects to work as bee-keeper in the department of entomology at this college.

H. E. Harrison expects to take a course in pharmacy. Does not yet know at what school.

F. H. Hillman expects to act as an assistant in the department of entomology at this college.

H. J. DeGarmo will farm for about three months, then will go to the Toronto Veterinary College.

W. Fay Staley will farm this fall, teach this winter or work at surveying, and after that he will study pharmacy.

Chas. L. Lawton expects to survey in Van Buren county. He may attend the State Mining School at Houghton.

A. B. Goodwin intends to teach awhile. He will probably farm next summer. He will shout for Harrison and Morton.

W. J. Hinkson expects to survey in the Northern Peninsula. May enter the course in civil engineering at Ann Arbor next fall.

Ned S. Mayo expects to remain here as an assistant to Dr. Grange of the veterinary department. During our winter vacation he will attend the Toronto Veterinary College.

W. M. Munson expects to go to Cornell about the middle of next December, as Professor Bailey's assistant in horticulture. His time, before that date, he will spend in the fruit districts of Michigan and New York.

Luke C. Colburn will teach at Grayling. He will act as principal of the Grayling schools at a salary of \$800. He will also report to headquarters the progress of the experiments being conducted on the State experiment farm at that place.

WITH '88.

John Wesener graduated from the course in pharmacy at Ann Arbor this year.

W. L. Learned has just returned to his home in Port Austin, after a trip in the West.

Jo. Thompson is now in Colton, California, working for the Colton Marble Company. He expects to return to M. A. C. next February. He says, "Boys, stay in Michigan."

WITH '89.

Joseph A. Strehle is at his home in Three Oaks.

I. B. Winsor is at home at Port Austin, Michigan.

F. M. Hopkins is studying at the Toronto Veterinary College.

Frank Bruen is in the Salina National Bank of Salina, Kansas.

G. L. McPherson is clerking in his father's dry goods store at Howell.

Orrie Beach is with Hickey & Goodnow, clothiers, Howell, Michigan.

Arthur Allen is now in Lansing, clerking in the office of the Supreme Court.

Will. McDonald is engineer on one of the lake steamers between Buffalo and Chicago.

Lew. C. McLouth is instructor in the shops at Dakota Agricultural College, Brookings, Dakota.

Henry L. Avery is book-keeper for McCormick & Co., harness manufacturers, Port Huron, Michigan.

John M. Chapman is at present living in Nebraska. He is married, and rejoices in the possession of an heir some two months old.

A. F. Pettit recently sent some fine Arkansas grapes to Secretary Reynolds.

Frank Kellogg is "local car recorder" for the C. & W. M. R'y at Muskegon.

T. A. Sanderson has finished his summer term of school, and is working on a farm at Douglas, Mich.

Ed. Emmons is clerking for H. E. Emmons & Co., flour and grain merchants, foot of First street, Detroit, Michigan.

I. B. Sweeney is "studying" practical agriculture and stock raising in Noble township, Branch county, Michigan.

Chas. Leipprandt expects to return to M. A. C. at the beginning of the next term. He is at present in the mercantile business at his home in Huron county.

A. Orlando Snook has finished his summer term of school in Clinton county, and is now working at harvesting near Lansing. He visited the college recently.

WITH '90.

Chas. Dodge is in Cleveland, Ohio, clerking in a music store.

C. G. Collins is working in his father's drug store at Charlotte, Michigan.

George W. Foote, with '90 this term, has opened a drug store in Charlotte.

H. F. Johnson graduated from Ludington high school this year. He was one of the commencement orators.

A. B. Holman will probably not return to college next fall, on account of ill health. He will probably

spend the winter in the South, and hopes to return next spring.

WITH '91.

L. E. Ickes is at home in Fremont, Ohio, clerking in the Fremont National Bank.

W. A. Cannon is rapidly recruiting his health, and enjoying a summer vacation in fishing on Indian river, Cheboygan Co., Michigan. The fish stories that he tells remind us of the time when we used to fish.

COLLEGES.

There is but one lady student at Johns Hopkins.

Ninety-two of Yale's graduates have become college presidents.

President Adams of Cornell is a very enthusiastic tennis player.

Cornell supports nineteen Greek letter societies, three of which are composed of ladies.

Commencement exercises held June 14 at Vassar. The graduating class numbered thirty-six.

Adrian College graduated eight from the literary department and ten from the music school this year.

The freshman class at Amherst College has voted not to engage in "rushing" with the incoming freshmen.

Harvard University will soon have a "Hasting Hall" to cost \$250,000, built by the Hasting family which has been represented there in every generation except one for over 200 years.

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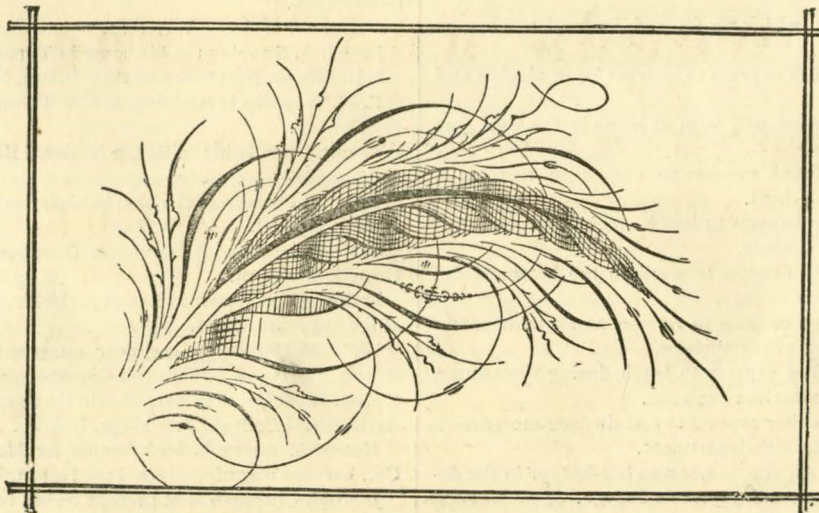
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The thirtieth Annual Course of Instruction will begin Tuesday, September 25th, 1888, and close Tuesday, March 26th, 1889. The course of instruction is graded, students being divided into first, second and third year classes. Qualifications for admission are, either a degree of A. B., a certificate of a reputable academy, a teacher's certificate, or a preliminary examination.

The method of instruction is conspicuously practical, and is applied in the wards of the Mercy, St. Luke's and Michael Reese Hospitals daily at the bedside of the sick, and in the South Side Dispensary attached to the College, where from nine to ten thousand patients are treated annually. Fees: Matriculation \$5. Lectures, first and second years, each \$75, third year free. Demonstrator \$10, including material. Laboratory \$5. Breakage (returnable) \$5. Hospitals: Mercy \$6, for third year students. St. Luke's \$5, for second year students. Final examination \$30. No extra fees for private classes or Microscopical Laboratory.

For further information or announcement address,

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