

THE SPECULUM.

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WHOLE No. 35.

The Literary Value of the Pilgrim's Progress.

W. S. PALMER, UNION LITERARY SOCIETY.

The stirring and antagonistic theological discussions caused by the Reformation gave birth to, and increased the religious zeal of, one Bedford churchman. The persecutions of Bunyan resulted in much good; for attributable to their influences, from his pen arose a work which, at its publication in 1678, was received with great favor, and no better testimony can be given of its worth than the fact, that, excepting the Bible, it is in England to-day the most widely read of all books. It is not the production of a man who devoted the years of his life to literary work, but it is the simple, plain, outspoken language of a poor peasant whose knowledge of books was very limited and whose education was gained by his contact with, and proper study of, those persons whom he drew around him. Its popularity is largely due to its religious nature, but aside from that, it has many merits which would place it high among the productions of English authors.

Bunyan has justly been styled the "Prince of Allegorists," and the Pilgrim's Progress alone would entitle him to that distinction. Of the many allegories of literature, none approach this masterpiece, which, like the overtowering oak of the forest, stands unrivalled in its supremacy. Allegory seems natural to this dreamer and visionary. His very language of conversation is full of images, and all things go to show that Bunyan adopted this style of writing, not from some particular choice, but because it was his natural language. The allegory is com-

plete. A clear allegorical style, happy allegorical personages, a profusion of rich allegorical figures and a fitting allegorical subject combine to make a work which must last as long as the English allegory commands attention. His clear style is admirably suited to his work, for of all writings, the allegory must be clearest. Bunyan is also happy in the selections and treatment of his personages. His rich imagination on all occasions supplied him with appropriate characters, which, although imaginary, excite our sympathy and we are made to feel an intense interest in their welfare. The varying discouragements and trials of Christian, his struggle through the Slough of Despond, his encounter with Apollyon, his lonely travel through the Valley of the Shadow of Death, his narrow escape from Vanity Fair, his passage of the river of Death and his final triumph in being admitted through the gate and into the Celestial City give to the allegory of Bunyan much of the fascinating power of a novel.

The style of the writing will ever stand as the most perfect representative of the plain, terse, idiomatic language of the common people. Its strength is increased by the preponderance of Saxon words. With the exception of a few technical terms, the work can be as easily understood by the poor peasant, for whom the work was written, as by men of literary standing who smile with the joys and weep with the sufferings of Bunyan's personages. The task of developing a style perfectly suited to the common people and yet artistic enough for the best critics was left for Bunyan to accomplish, and he did his work to the satisfaction of all. The student who desires a simple mastery of the English language will do well to carefully peruse the pages of the Pilgrim's

Progress and disregard the heavy, lumbering, verbose style which characterizes the works of too many authors.

Critics hold to the standard of concealing the personality of an author by the personality of his characters. Shakespeare alone has approached this criterion, and was Bunyan to be judged solely by such a standard he would have to be assigned a low place among authors. Bunyan's whole character can be read in the *Pilgrim's Progress*, and instead of diminishing the value of the work, it adds much to its power, for no one can but admire such a character wherever it may be found.

The work has a good plot to the narrative, all parts bearing on the *finale*, which is not reached until Christian enters the Celestial City. Along the course of the narrative are fine descriptions—as the description of the encounter between Christian and Apollyon,—quaint touches of humor, pathetic scenes, and many dialogues which show how well the author understood all sides of human nature.

The second part of the work is inferior to the first. Bunyan has given the whole journey in the first part, and the interest in the second part, much of which is mere repetition, is sustained only by the sympathy we feel for Christiana and her children. The style is not the plain, simple style of the first part, for there has crept in a little artificial tone which materially weakens that force, so peculiar to Bunyan.

The language is not free from grammatical mistakes which, although noticeable, are not misleading. Bunyan was not a scholarly man, and his brief study of the English language at school may account for the few pardonable mistakes.

For more than 200 years the *Pilgrim's Progress* has retained its popularity and its high rank among the religious literature of the English language. When the allegory shall have no charms for English readers, when a love for a clear, plain, vigorous,

natural language shall have been replaced by a love for the majestic march of the Johnsonese style, when God's people can no longer enjoy the story of Christian's journey to the Celestial City, then and not till then will Bunyan's *Pilgrim's Progress* lose its popularity.

Reciprocal and Financial Advantage of Co-Education.

LEWIS W. SPAULDING, OLYMPIC SOCIETY.

We are creatures of habit. We do those acts, use those phrases, and think those thoughts to which we habituate ourselves. A boy learns to swear and he may continue this practice till the day of his death. A young man acquires a slovenly appearance and he may never afterwards dress neatly. Round shoulders, thoughtlessly acquired, may last a life time. On the other hand, it may be said that purity of speech, neatness in dress and erectness of attitude, if cultivated, become a part of a person's nature and may remain such during his life.

It is an indisputable fact that young men who have any respect for themselves, are careful of the language which they use in the presence of ladies. This is clearly shown by comparing the character of language used at an ordinary social gathering, with that used in a lumber camp. Most young men who use indecent or profane language, do so largely from a habit of carelessness in what they say; but, let a man thus habituated be in a company of ladies, and one may observe what a purifying effect it has on his speech. If this be true then, the almost constant presence of ladies would serve as an almost constant restraint on impurity of conversation, and the habit of using pure language would thus unconsciously be formed.

One of the potent objections to educating young ladies at female seminaries is based on the tendency of those educated there to form a habit of using extravagant forms of language of expressing themselves; and of

cultivating other ridiculous foibles. But, if one of the ladies educated at a female seminary is in company with young men, one can hardly fail to observe how she eliminates, as much as possible, all weaknesses of this nature from her conversation.

Upon those young men who do as others do, whether it be good or evil, the presence of ladies would exert a powerful influence in the right direction, for, what young man will do a mean act in the presence of ladies?

What various ideas young ladies have of manliness! One has her ideal in the rich bass voice, another in the polite manners, and a third in the strong moral character of some young man. Much misery in after life is often caused by young ladies thus admiring and over-estimating some one of the qualities of a young man. If, however, young ladies and gentlemen were daily associated together, the ladies would soon learn to distinguish between good and bad traits of character as set forth in the daily life of the young gentlemen. And, as the young ladies would be subject to the almost constant observation of their gentlemen friends, they would act with more discretion than if otherwise situated.

Even at this period of enlightenment, some men doubt that women merit the legal rights given to men; but, by continued social intercourse, this feeling would be removed. Some men, closely related to those just referred to, still contend that women are intellectually inferior to men; but the test of the class room would dissipate such an idea as this; and, instead of despising, men would learn to respect the intellect of women.

At the present time, education is coming more and more to mean the training of such faculties of body and mind as will be used in after life. What then is more important, as a part of one's education, than the influence of society? Men and women live together in life, and hence, should be trained together in school.

Again, many young people, by over self consciousness, render themselves miserable whenever in company; this weakness would be overcome by frequent social intercourse, as our observation has frequently shown.

How carefully the slovenly young man dresses when he is to go to a party; and the careless young lady becomes more neat and tidy in the presence of the opposite sex. There is a strong tendency on the part of young men away at college, especially if they are poor, to dress in an untidy manner. A man may dress in cheap clothes and still observe neatness. This the poor young man does at institutions where co-education prevails.

Casual observation teaches one that young ladies and gentlemen are much more particular regarding physical bearing and cleanliness when in each other's company than at other times. The slow plodding young man and the dull listless young lady brighten in an unwonted degree when they meet in society.

To be sure, an institution for the education of the sexes would require a more extensive curriculum and a larger corps of teachers than a school where young men only were educated; and consequently, the cost of maintaining the school would be increased. But, as it is as much the duty of the State to educate one sex as the other, either co-education must prevail, or two separate colleges will have to be substituted for each institution where co-education does prevail at present. It hardly need be added, that one college for both sexes would cost much less than one college for each sex.

Some reason that because the education of young men remunerates the State it should be carried on, even to exclusion of young ladies. If, however, one considers the part which each sex performs in building up the State, he will surely be led to the conviction that it is quite as important to educate young ladies to make homes happy, as to educate young men to provide for these homes.

Hope.

BY A. B. S.

We toil and strive, and patiently we bear
our sorrow,
And hope each darkening night will bring
a bright to-morrow;
But when the morrow comes and brings its
heavy load of pain,
We still hope on, and live the self-same
story o'er again.

Grant Before Vicksburg.

F. B. PLIMPTON, PHI DELTA THETA FRATERNITY.

As years pass by we look with more pleasure upon those gallant heroes who fought in our late war. There were many of them, yet we will all agree that there was one who was superior to all others and that one was none other than Gen. Ulysses S. Grant.

Before we take him as he stood before the great fortress of Vicksburg, perhaps it would be better to know something of his previous career. He graduated from West Point, served with credit through the Mexican war, remained in the regular army for a time, and then resigned his commission and became a private citizen. At the breaking out of the civil war he offered his services to his country and they were promptly accepted.

He rose in rank until he became Brigadier General over a part of the western army. He captured Forts Donelson and Henry, was victorious upon the bloody field of Shiloh and worked his way into the enemy's country until we see him before the Gibraltar of America.

Vicksburg was the most important Confederate point. If it fell it would cut off the supply of grain from the rich fields of Texas and western Louisiana; of great droves of cattle and abundant stores of corn; of arms and ammunition, the Confederacy had been in the habit of obtaining through its foreign allies at Matamoras, and more than this it

would be the great decisive step in opening the Mississippi river, which was the objective point. But Vicksburg was so strongly fortified by nature and art as to be impregnable to any direct attack. It was situated upon a series of high bluffs at a bend in the river, so elevated as to be above the reach of naval attack. On the north a range of high land and the Yazoo river protected it. Around it were dismal swamps with wastes of land overflowed by the Mississippi, a rough and broken country full of ravines and bayous. Every point in its neighborhood capable of defense was covered with earth works and defended by cannon; its garrison numbered 30,000 men and was the rallying point of several detached armies of Confederates who were to aid it in time of need. Below were the well fortified posts, Grand Gulf and Port Hudson. Its supplies came chiefly from Mississippi over the railroad from Jackson, the capital of the State. Who was to capture this stronghold when our government was unpopular and divided and our armies in the east retreating and the enemy advancing; whose hand could stay the wave of ill-success? Statesmanship was no longer of any avail; it could create but not command the armies. Poetry, oratory, history and philosophy were powerless. Intellect had ceased to be sufficient except in its rarest form. We wanted a Scipio rather than a Cato.

Grant was in an enemy's country surrounded by hostile armies. All eyes of Europe and America were on him and with him rested the fate of the nation. He conducted his campaign by attempting to cut canals through the swamps to float his iron-clads and get in rear of the enemy. Thrice did he attempt this arduous work and thrice did he fail. But did these failures discourage him? He had a yet bolder plan which was to steam down the river and pass the long line of forts. He met Commander Porter and made arrangements that on the night of the 16th of April, 1863, the fleet should attempt to get below the enemy. Porter's seven

iron-clads were to engage the batteries, while a fleet of river steamers, protected by cotton bales and manned by volunteers from the army, were to run the gauntlet of fifteen miles of continuous fire. The night was dark and the flotilla moved silently down the river. Porter in the *Benton* led the way. Grant watched the movement from a transport above. But suddenly the enemy discovered the leading vessels and a shower of shot and shell poured in upon the long line of almost defenseless vessels as they sailed into the awful pass. The river was lighted up by an incessant cannonade. At length they were opposite the center of the city and here every shot from the hostile shore took effect. Every vessel was struck and even the sides of the iron-clads were crushed in. Exposed for two hours and forty minutes to the merciless fire the shattered vessels moved on and were soon out of range and silence once more reigned.

Not long after this a number of barges and steamers passed the batteries. Yet there was a bolder act than to pass the cannon of Vicksburg. He led his fine army with infinite toil through the swamps and wild-woods of Louisiana on the west side of the Mississippi, crossed again below Grand Gulf to the Mississippi shore and with a force of 30,000 men marched into the hostile country. But every man was a soldier, bound to his chief by a bond of perfect trust. Sherman and McPherson were with him, and he did not fear to encounter an army of twice his numbers. They threw themselves between two powerful armies, defeated them separately, turned and captured the works of Grand Gulf, and destroyed Jackson, routed Pemberton and finally drove his dismayed and scattered army within the walls of Vicksburg. The true siege now began. Nature had done even more than art for the American Gibraltar. Its rear was protected by deep ravines, gullies and sandy precipices so that no force could approach it except in scattered parties. It was defended by

more than 30,000 brave men. Grant, hoping to take the city by storm, made an assault on the 19th of May and another in concert with the fleet on the 22d, but both failed. Grant therefore prepared for a long siege and began to throw up entrenchments. The hot summer came on, the land was parched and dusty, but the weary soldier toiled on with a patience and calmness that promised success. It should be remembered that at this time the forces in the east were being defeated and the public had lost confidence in its armies. At this moment Grant was in the heart of the Confederacy, besieging a force equal to his own, far from supplies, cut off from retreat and conscious that he must capture Vicksburg or suffer a disastrous defeat. Meanwhile an army under Johnston had collected and it was rumored that he was about to crush the invaders but Johnston dared not attack. Shot and shell rained upon the besieged city and each day brought the city one step nearer to capitulation. At last Grant ordered a general assault, but Vicksburg was spared this terrible scene. It surrendered. Pemberton and Grant arranged the terms and on the 4th of July, 1863, the American army, with Grant at its head, marched into Vicksburg. Thus fell the great fortress and with it sank forever the rebellion in the west.

SCIENTIFIC.

Natural History Society.

The first meeting of the Natural History society for the year 1889 occurred on the evening of March 8th. An interesting and instructive program was given, beginning with a talk on cattle ticks by Mr. F. H. Hillman containing the following points:

THE CATTLE TICK.

The cattle tick is an eight-legged little animal belonging to the order of mites, and is closely related to the woodtick. In size and form it be likened to a small Concord

or Hartford grape somewhat compressed. The color varies from a light yellow to a light brown. The head is insignificant in size but bears the mouth parts, the peculiar form of which makes the animal so greatly dreaded.

This tick, known to the naturalist as *Ixodes bovis* belongs to the family of mites, *Ixodidae*, or the ticks. It is not a native of Michigan and is found here only when imported on the Texas and Kansas ponies that are frequently brought into the State. The ponies seem to be able to withstand the ravages of the ticks, which soon spread to our native horses and cattle when it becomes a question of the "survival of the fittest." Unless prevented, this will soon prove to be the ticks, for the females are capable of laying thousands of eggs which in three or four weeks reach an active maturity. The suffering beast finds the pests too great to contend with, and thus often becomes completely covered with them. The tick's mode of action is to bury its mouth parts within the skin of its victim, thus reaching through to the blood vessels beneath. This position once taken, the tick is unable to withdraw its mouth parts which is due to their peculiar structure. These consist of five parts, on each side are two grooved mandibles, each bearing a sucking tube which ends at its extremity. Just within these are the two rod-like *maxillae* bearing a great many minute barbs which point toward the tick's head and at their extremities several strong hooks. These four parts surround a heavy central portion, the ligula, which resembles a ball bat, the extremities representing the longer end. This is covered by strong barbs projecting towards the head. This is the part which holds the tick in position which it does so well that the tick's head will part from its body before the barbed rod will leave the animal's flesh.

A decoction of tobacco thoroughly applied to the infested animal is probably the best remedy thus far employed.

Mr. Teller next gave a talk on the analysis of cattle foods. By means of chemical apparatus he illustrated all the processes, thus making a very interesting part of the program. Mr. Teller has been engaged in the analysis of cattle foods all winter and in a future issue we hope to give an account of the processes used, and the result obtained.

Following Mr. Teller's talk was an article on lichens by L. H. Dewey, which we publish in full.

DUALISM OF LICHENS AND ALGÆ.

On trees, on rocks, on old buildings, on wooden fences, we often see a kind of grayish green appearance. Few go further than to casually notice the color. Some with a poetic turn of mind say that nature is trying to cover up the bare spots. Yes, but what is the texture of the clothing that nature is using? This gray color, this clothing for the bare spots, is composed of plants, plants low down in the scale of the vegetable kingdom, yet full of interest. We call them lichens or tree moss or rock moss. They have no chlorophyll or anything like it so they must live on organic matter like fungi. They never produce beautiful flowers or edible fruits so that economically they are of comparatively little importance. But they are important to the observer for to him every thing in nature is interesting. They are especially important because of a peculiarity in their mode of living.

Algæ are a group of plants as low as the lichens and in some respects still lower. Some forms of algæ are among the simplest plants that we have; eg., *Protococcus viridis* which, so far as is known, consists of but one single cell for each individual plant. Algæ are usually aquatic plants, and are always found more abundant in moist places. The green coating on the bark on the north sides of trees is composed of a species of algæ. They are always green or of a greenish color and they are capable of performing the functions of chlorophyll-bearing leaves, hence they can live independently. They

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are not known to bear any kind of fruit, but reproduce by a cell division.

* Now what connection have lichens and algæ, these two dissimilar groups of plants at the bottom of the vegetable kingdom? The closest kind of a connection. Lichens could not live without the algæ, therefore some species of algæ live within the lichens. The lichen is parasitic upon the alga yet not detrimental to it. The broad leaf-like part of the lichen is called the thallus. This is composed of many thread-like parts, closely interwoven and these are called hyphæ. The surface on both sides is composed entirely of these interwoven hyphæ, but in the interior they are more loosely arranged and enclose in their meshes many little green bodies which bear a very close resemblance to algæ. It was formerly supposed that these green bodies were only special parts of the plant as the green rind is a part of a melon. Most every one was well satisfied with this theory until about a quarter of a century ago, when Schwendener disturbed the sanctity of nature and the quiet repose of the old school by discovering that lichens were parasitic like fungi and that the host plants were algæ which were not only uninjured but benefited by their guests.

A new theory is worth but little without facts to support it. The supposed algæ were taken from the lichen and made to reproduce by themselves. They produced true, undoubted algæ. Spores taken from the lichen produced lichens with none of the algæ-like green bodies, but the lichens thus produced could not be made to grow to full development.

Different species of lichens have different kinds of green bodies within them, but in each case these green bodies resemble some particular species of algæ. Thus it would appear that lichens have a preference for favorite host plants and that this preference varies with different species.

Dr. Gray, Dr. Bessey and nearly all American botanists, who have given much

attention to lichens favor Schwendener's theory of dualism of lichens and algæ, while most of the English lichenologists, in spite of the facts and arguments produced, still hold to the old theory. Schwendener, the discoverer, was not an Englishman, you know.

They say that algæ are aquatic plants while lichens live in exposed dry places. *Protococcus viridis* is an undoubted algæ yet it lives and flourishes on the trunks of cherry trees and cherry trees do not grow in the water. Algæ living within the lichen thallus are protected from drying winds by the thicker outside of the thallus itself. Lichens may live in exposed places, but do we not always find them most on the north sides of trees and fences out of the way of the drying sun, and are they not always largest, most abundant and best developed in thick damp woods? On young trees before the lichen begins to spread its gray leaf-like covering we find, if we take the trouble to examine, that they are already little groups of green algæ.

It is objected that plants so low down as lichens would not choose particular species of algæ as host plants. We can not satisfy ourselves as to the likes and dislikes of the higher plants. We can but less expect to do so with these plants of which we know less. The infusoria among the lowest of the animals accepts one kind of food which floats into its mouth and rejects another. Why should not the lowest plant do as well in its line?

Another objection urged is that it is contrary to the laws of nature for organisms to live upon each other so as to gain mutual benefit. If so, these same algæ are a very guilty lot of law breakers. A certain small animal, vorticella, very common and well known to all who have studied the microscopic animals of our ponds is fastened to some support by a kind of long, spiral, springing stem, while the greater part of him, mouth and stomach, goes about in search of food as far as the stem will reach. Along

comes a very palatable little algæ which is taken in but suffers no harm in the operation. It finds here a nice, snug, protected, little home and it grows here, reproducing as usual by cell division. The vorticella, finds this a very comfortable state of affairs for it no longer has to go abroad in search of food for a sufficient supply is constantly being produced within itself. Here we see in the animal kingdom a mode of life very similar to that of the lichen and algæ in the vegetable kingdom; the algæ in each case producing from inorganic material the organic food needed by the plant or animal within which it is growing.

The collection of insects that the college just received is a feature of such general interest that Professor Cook was asked to give a talk concerning it. Since the collection is valued so highly we give rather full notes concerning its character and the manner in which the college was so fortunate as to obtain it.

THE MCMILLAN CABINET OF INSECTS.

Among the many valuable additions to our college plant, there are very few which have given to the friends of the college more real genuine satisfaction than has this magnificent collection of insects, generously donated to the college by United States Senator James McMillan. The reasons for this are obvious:

First, Comes the intrinsic value of the collection, which is said to have actually cost the sum of \$5,000. Besides this, no one can view the elegant arrangement and superb condition of this collection all correctly named and classified, without at once appreciating the immense amount of time and study that has been devoted to its arrangement and preparation. Indeed this is one of the finest private collections of the kind in the country. There is a large number of types and uniques.—especially large for a collection made by a private individual. These types are the actual specimens from

which the original descriptions of the species were made and so possess exceptional interest and value, which grow with the years. The uniques are specimens which are very rare, existing in few or none other of the collections of the world. There are several uniques in this collection which are in no other cabinet.

Secondly, This collection will be of great practical value to the department of entomology in the college. The exceeding importance of economic entomology needs no proof at our hands. It is recognized by all intelligent persons throughout the breadth of the land. But economic entomology, to work the most benefit, must rest on the broad basis of systematic and structural entomology. Here as in many other practical fields, science helps greatly to direct our practice. Thus it is that this fine collection will be greatly appreciated by the students and patrons of the college, and by the farmers of the entire State and country.

Thirdly, this collection comes not by purchase, but as the noble gift of one of Michigan's most generous and discriminating philanthropists. Cornell and other colleges have received rich and numerous benefactions—so many indeed that they can receive no more. The limit of corporations is reached. Our University and Agricultural Colleges are as deserving of benefactions as are the more favored eastern institutions; yet how few have been received. True the University was the happy and grateful recipient of the fine Shakespearian Library donated by this same noble benefactor, Senator McMillan, of the Lewis Art Collection, and if we mistake not, of some fine statues from Rogers, the distinguished sculptor, a graduate of the institution. Yet how little is all this, in comparison to the greatness and need of the great University that received them. In the case of our own college, if we except the Cooley collection of plants, and the Sleeper Entomological collection, this is the first time we have been remembered. In-

deed it is the first considerable gift that the college has received. Governor Luce expressed the hope in his second inaugural address, that such gifts might be made, and become as common as they are in the east. This wish will be seconded by all lovers of true progress—all lovers of what must ever precede true progress, more thorough and general education. Thus it is greatly to be hoped that this valuable donation from Senator McMillan to our college is but the "nest egg" of many similiar gifts. Prof. Cook learned of this collection last summer, and that the person who made it was desirous to dispose of it and would take about one-fifth of its actual cost if he could make a cash sale. A noted entomologist, professor in one of the best of our eastern colleges, and entomologist of one of the experimental stations, who knew this collection almost as well as he knew his own, wrote to Prof. Cook last September as follows: "If you have the money to put into a collection, why do you not buy the Tepper collection. If, as I hear, it can be had for \$1,500, you can't do better I am sure. It could not be gotten together for less than \$5,000." Prof. Cook communicated the facts in the case to President Willits, who, true to his record here and elsewhere, became at once heartily in favor of making the purchase. He seemed hardly less interested in the matter than did Professor Cook himself. Professor Cook urged the State Board of Agriculture to ask for an appropriation for this purpose, President Willits seconded the request in a very eloquent appeal to the Board. These gentlemen in view of the fact that they had promised two years ago to ask for nothing at this time beyond what was absolutely necessary, thought it not wise to grant the request.

These facts came to the notice of our newly elected United States Senator, Hon. James McMillan, when he at once sent the following letter to Professor Cook at the college. "I have considered the matter of the Tepper collection and have decided to authorize you

to make the purchase of this collection of insects for \$1,500. You may draw on me for that amount when you have concluded the arrangement. I feel that there is a necessity for this, and have no doubt but that the collection will be of great value to the Agricultural College." This letter was written January 14th, and the purchase was made at once by telegraph. Prof. Cook went at once to New York to arrange for the packing so that the collection might be transferred intact. The collection arrived at the college March 5th, and was so carefully prepared for shipment that the 12,000 insects came without the least injury. The collection is now on exhibition at the Entomological Laboratory and is greatly admired by all who are privileged to see it. It is the common remark of visitors who examine this rare exhibition that they had no idea that a collection could be so beautiful. Thus the "McMillan Cabinet" the name by which this collection will be known in future, is now one of the most attractive features of the college.

COLLEGES.

It is said that many Harvard men spend ten thousand dollars a year.

Yale and Amherst have put the Bible on the list of elective studies.

The College of Mexico is the oldest American college, being fifty years older than Harvard.

The four colleges in the United States that publish daily college journals are: Harvard, Yale, Cornell and Princeton.

One million dollars have been subscribed for the erection of a college at Washington, D. C., for the education of Indians.

That a college presidency is a position which every man is not qualified to fill is proved by the fact that seventeen colleges are looking for suitable men.

President Harrison will be a guest of President Patton at Princeton, on the 27th of April. Just one century before this date President Washington was the guest of President Witherspoon of that institution.

Princeton College is to have a journal managed and edited by the faculty. President Patton will be editor-in-chief, and the departments in the different branches of learning will be conducted by the various professors. They will call it the Princeton College Bulletin.

THE SPECULUM.

PUBLISHED MONTHLY DURING THE COLLEGE YEAR,
BY THE STUDENTS
OF THE MICHIGAN STATE AGRICULTURAL COLLEGE.

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AGRICULTURAL COLLEGE, APRIL 10, 1889.

ONCE more we give you greeting. Our long winter vacation has passed and the dormitories again hum with the usual noise. We welcome many new faces into our midst, and we bid a sad farewell to those who cannot return. Many of the students have spent their winter in teaching in different parts of the State and spreading a wider knowledge of the college and its advantages. The number of students is again increased and the college opens the term with greater assurance of success than ever before. We notice several improvements on the grounds and buildings, among which may be mentioned the completion of the new Horticultural Laboratory, which is now fully occupied; and the new Y. M. C. A. room on the first floor of Williams Hall has also been constructed

during the winter, and by the generosity of the college and its students it is now elegantly furnished, ready for occupation. The addition of the Tepper collection of insects, a gift of Senator McMillan to the entomological museum, gives additional facilities in the studying and classifying of rare and beautiful specimens of Lepidoptera. Many other improvements of minor importance have also been made, all of which add something to the beauty of the grounds or value of the college instruction.

THE brightest sunshine is often obscured by the darkest clouds. A very dark and unwelcome shadow hangs over us, obscuring the brightness of the sunshine of our success as an institution. For nearly four years the college has been making long strides to the front, both in the advantages offered and the consequent growth of its reputation, under the fostering care of President Edwin Willits. He has been the life and soul of the institution. He came to us when we were weak and it is he who has made us strong. He put new energy into every department and by his strong personality and untiring energy has so identified himself with all improvements which have been made that they will always stand as monuments of his energy and executive ability. Hazing was prevalent when he took the reins of power but to day nearly the last vestige of it has passed away. It was he who inspired love and respect in every heart and stirred all with whom he came in contact to nobler impulse and higher motives. The place which President Willits has occupied has been, it is true in many respects a hard one. Some unpleasant circumstances have arisen which could not well be avoided. These, we know have often been annoying to President Willits, yet the good will of the students have ever been with him and we have always been proud to say that the Agricultural College had such a man at its head. But we shall have to lose him. He has been offered the first assistant secretaryship of agricultur

at Washington and he cannot be blamed for accepting a position so much better suited to his attainments and giving a much wider scope to his abilities as an organizer and promoter of scientific investigation. The place also brings political advancement of no small value. We shall feel the loss bitterly but we are proud that such an honor should be bestowed on a president of the college. We are proud to have had such a man in daily contact with us, and yet we are mournfully proud, for in losing him we lose our friend, adviser and president. Yet we do not regard it as an entire loss for we shall always feel that his interest is with us and that our welfare will always find a prominent place in his attention. He has always had the sincere respect and confidence of every student and our very best wishes go with him as he enters upon his new duties.

THE time is fast approaching for the holding of the annual Field Day. The work last year of the Michigan Inter-Collegiate Athletic Association was very satisfactory indeed, and the Field Day was a great success. Movements have already been made in the right direction this year and we trust that there will be no lagging or delay in the work of the committees. In order to make the Field Day the greatest possible success, it is necessary for every man who intends to enter the sports to be training for that purpose. Hasty and irregular practice accomplishes nothing. It must be steady hard drill. The gymnasium is open every day and we would like to see more men at work. Our base-ball organization is very defective and measures must be at once taken to place it upon a firm basis if the team expects to hold its old place among other college nines. Too much stress cannot be laid upon this work if M. A. C. expects to carry off her share of the prizes as of old. We would like to see a little more enthusiasm in the matter before it is too late. Every one can do something to help the good cause along, even if he takes no part in the sports and we

hope all will "lay hold" and work with a will.

WE are sorry to lose our late efficient assistant business manager G. S. Jenks, who has been called away from college. He was the first to fill that office since its establishment and it is needless to say that THE SPECULUM owes much to his efficient management. Mr. F. G. Clark has been elected to fill the vacancy.

COLLEGE NEWS.

J. E. Hammond of '86 was on the grounds last week.

Mr. Butterfield has been elected poet of the class of '91.

Mr. Estabrook of '88 is assistant in the secretary's office.

The Library is now held open from 9 to 12 A. M. on Sundays.

Dr. Kedzie has been appointed director *pro tem.* of the experimental station.

Mr. Frank G. Clark is giving dancing lessons to Union Literary Society boys.

The freshman class received an addition of 35 at the beginning of the spring term.

Mr. L. A. Bregger of '88 was lately called to Grand Rapids as florist in the Chapman House.

Miss Johnson, daughter of Professor Johnson, has been secured by the State Board of Agriculture as assistant for the Agricultural department.

D. C. Postle, of '75, a brick and tile maker of Galloway, Ohio, was on the grounds the 22d of March.

Mr. Palmer of Grayling was chosen by the State Board of Agriculture to represent that body at the flower show held in Detroit.

The Senior Engineering class surveyed a branch line of the Grand Trunk through the college grounds for their field work of this term.

There has just been prepared for the Zoological Museum fine specimens of Florida spoon bill, panther, porcupine, and Florida flamingo.

President Willits's resignation will take effect April 13. Until the State Board can secure a president of the college, Pres. Wells will fill the place.

The committee on Farmers' Institutes is requested to prepare a schedule of institute work for 1890 with dates and expenses, and report to State Board of Agriculture.

The lecture on Wednesday evening, April 3d, in the chapel, by Colonel McCreery, on his experiences at Libby Prison, is highly commended by all. The chapel was crowded. Professor McEwan was heard to say that it was one of the best lectures that he ever heard.

The commencement orators who have been chosen are: D. F. Anderson, A. D. Baker, R. S. Baker, W. E. Davis, O. C. Hollister, W. M. Meyers, W. S. Palmer, and E. N. Pagelson.

N. S. Mayo of '88, Assistant Veterinarian of the college, graduated with highest honors of his class from the Chicago Veterinary School, March 21. He now bears the titles M. S. & D. V. S.

There is a great demand for Professor Cook's pamphlet on "Silos and Silage." Professor Cook is especially well informed on this subject and every farmer should read this little work.

Senator James McMillan presented the college with a \$5,000 collection of insects. This generous act is highly appreciated by the college. It is more fully noticed in another column.

Dr. Beal has sold the copyright of his book on "North American Grasses" to the Orange Judd Co. of N. Y. City. He has also disposed of all the copies he has on hand. He is now hard at work on the second volume.

Has anybody seen anything of the Lansing & College street railroad lately? The company state, without reserving even an "if," that before next August we will see the street railroad completed. We hope it is so.

The new arrangement by which the assistant professors of the college were appointed by the State Board of Agriculture to take part in Farmers' Institute work during the winter vacation proved very satisfactory.

The College Appropriation Bill asks the State for only enough funds to meet the current expenses and erect a Laboratory for the Farm department. No department can make better use of a Laboratory than the Farm.

Among the twenty or more whose names have prominent mention for president of the college to succeed President Willits are President Fairchild of Kansas Agricultural College, Dr. Kedzie, Governor Luce, Judge Ramsdell and Dr. McLouth.

Olivet College has just negotiated for a collection of Michigan insects from our college. The consideration for the entire collection, cases and cabinet will be \$150. The collection will be named and classified, and will contain specimens of all the several orders. Negotiations are pending with another institution—a University in a neighboring State—for a small economic collection and a series of charts to illustrate a course of lectures in practical entomology. We see in these exchanges the wisdom of more assistance in the departments. These sales are mutually valuable to the institutions interested, but could not be made except for the new regime.

Not a day passes but there are visitors on the grounds. Many of them are unacquainted and wish to see all they can in the limited time they have. Many of them go away without having a chance to see the most interesting things of the college. Everyone is generally busy with his own work and has little time

to show visitors around the grounds. If the students did have the time, they have no keys to the various laboratories and much must go unseen, and again the students are not generally well enough informed on the many questions that might be asked by the visitors regarding the college and its various departments. As a result visitors often go away with anything but a favorable impression of the college. Can we not have some one whose business it is to escort visitor around and explain the workings of the college machinery and answer any questions that might be asked? It should be some one that has no recitation in the forenoon, so that he can show the visitors through the different class rooms.

Among the pleasant features of our winter vacation there are perhaps none more enjoyable than the reunions which are held by the students in various parts of the State. That of the Central Michigan Association was held in Lansing on the 28th day of December, 1888. Its success for a time was rather doubtful but on the evening named a large number of students and alumni gathered at Liederkrantz Hall and pressed each other's hands for Alma Mater's sake. The literary program was opened by an address from President Davenport. It was followed by a very interesting article by Judge M. W. Chatterton on "Pioneer Life at the College." The Judge was the first man who entered college and his stories of the early hardships and enjoyments were very interesting. Miss Jessie I. Beal followed with an article on the "Life of the Co-eds at M. A. C." which was very spicy and true to life. This was followed with an essay by Mr. L. A. Bregger. The program was completed with a jolly college song, by the congregation written by Frank Hodgeman of the class of '62. This poem is printed in another column and any one who has ever attended a college will be glad to read it. Music by the orchestra was generously interspersed throughout the exercises. The inner man was next feasted and numerous toasts responded to, all with the true spirit of college days and college ways, though some heads were sprinkled with gray and some eyes grown dim with years. Last but not least came a hop which lasted until a late hour after which the "boys" were back once more to their various duties, and a declared the reunion a great success.

The question is, what did the "co-eds" do during the long vacation, besides waiting for the boys to return. Miss Susie Anderson left two weeks before school closed in the fall and went to Detroit, remaining there during the vacation. Miss Jessie Beal spent her vacation at home. She studied music under Mr. Kedzie, attended taffy pulls, fancy dress parties and received letters from her classmates. She also distinguished herself at the reunion by presenting a paper on the "Life of the Co-eds at M. A. C." Miss Ella Taylor spent the winter quietly at home. Miss Marian Wee remained at her home near Lansing, studied music with Mrs. Kedzie, attended all the parties at the college except when suffering from vaccination. Miss Truma took good care of her little pony and was on hand when school began. At her home in Benzie county

Miss Mabel Linkletter spent a very pleasant winter, taking an active part in literary societies and church work. Miss Grace Fuller remained at home during the winter and returned to college, after a year's absence to continue her studies. Mrs. Davenport spent the vacation at the college and at her home in Barry county. Miss Jessie Foster remained at home during the vacation. Miss Katie Cook remained at home during the winter with the exception of a short visit to Detroit. She also studied music under Mrs. Kedzie. Miss Mary Smith spent the winter with her mother in Lansing. She visited many friends and attended a few parties.

Baird, Bregger, Cordley, Dewey, Estabrook, Lodeman, Teller, Waldron and C. F. Baker all spent most of the winter at the college. They boarded in club "F." For amusement they drove the professors' horses and attended plays, and for exercise played tennis in the armory each day, while the divinity of recreation received homage in the form of whist parties and candy pulls. The following items found in the diary of a casual observer of the weaknesses of the "winter's crowd" may be of interest to the public.

Nov. 17th. Winter vacation begins.

Nov. 21st. Bregger goes to Chicago on "business." The same is so pressing that he forgets to take his satchel. Waldron plays the part of guardian angel and takes it to Lansing for him just in time for the train.

Nov. 23d. Botanist Dewey goes out to get some gooseberry cuttings; returns with some black currant sprouts!!

Nov. 26th. Waldron takes some practical lessons in the art of white-washing.

Nov. 27th. Bregger returns from Chicago at 4:21 A. M. Brings satchel and Lodeman.

Nov. 28th. Estabrook has a birthday to break the monotony of affairs; the same is celebrated by whist party, fruit, nuts, and boxing.

Cordley goes home, seems to have some special reason for giving thanks.

Nov. 29th. Turkey everywhere; half of the boys carried home on stretchers by the other half.

Dec. 13th. Mrs. Beal arranges for a candy pull. Waldron suggests, as an early date, Saturday evening.

Dec. 14th. Miss Chippie visits the college. Reception for her benefit in the evening at the residence of Mrs. Secretary.

Dec. 15th. The candy pull at Dr. Beal's is enjoyed by all present.

Waldron mysteriously disappears in the afternoon and no trace of him can be found.

Dec. 16th. The lost wanderer returns; Waldron appears late in the afternoon. Reports having gone to Lansing yesterday afternoon and was left by the stage. (Stage does not run in the afternoon). ?

Dec. 24th. Every one borrows a few dollars and goes home "to spend holidays with the old folks." Estabrook succeeds in raising enough to go to Milwaukee.

Dec. 28th. Every fellow gets his best girl, or if not, the best girl he can find, and goes to the M. A. C. reunion at Lansing.

Dec. 29th. At noon all of the professors and most of the younger people had returned from the reunion.

Jan. 1st. Secretary Reynolds and his sons return from California.

Harry Baird leaves the college and with it many warm friends who wish him the best of all that is.

Jan. 3d. Prof. MacEwan is vaccinated,—two holes in his arm "a quarter of an inch deep and as big as half dollars."

Jan. 5th. Prof. MacEwan spends all day nursing his vaccinated arm and all night awake with it.

Jan. 10th. Jim Campbell has a birthday party which is a decided success, and we don't go home till the wee sma' hours.

Jan. 14th. Waldron returns from his holiday vacation with a tired and sleepy look on his features.

Jan. 18th. Romeo and Juliet at the opera house in Lansing, followed by a midnight feast of wienerwursts in Bregger's room.

Feb. 8th. Miss Beal and Miss Underwood give a reception in the evening. With pleasure and song the hours glide along all too quickly.

Feb. 15th. Candy pull at Lodeman's combined with a party at Mr. Campbell's. Eyes full of lassies, ears full of taffy and mouths full of chunks of sweetness.

Feb. 20th. Surprise party for Bregger at Mr. Knapper's. Great heaps of wienerwursts and a jolly good time.

Feb. 21st. The Misses Johnson give a fancy dress party, one of the most enjoyable events of the season; costumes indescribably immense.

PERSONAL.

'61.

Prof. Albert N. Prentiss of Cornell gave a very instructive address on fungi at the meeting of the New York Horticultural Society, held last February.

'62.

In the last general election, Hon. E. M. Preston was chosen State Senator from his county for a term of four years, receiving a plurality of 440 votes, which was highly complimentary considering that only three other candidates on the same ticket, the Republican, were elected. During the winter he has been an active member of the California Senate, and through his instrumentality a bill was recently passed, establishing a State Reform School.

'66.

C. H. Watson is head book-keeper for the North-western Mutual Life Insurance Co., of Milwaukee. He has been with that company in one capacity or another for eighteen years.

'68.

W. A. Wells is teaching and farming at Corning, Clay county, Arkansas

'69.

Paul J. Wilkins, in the fall of 1887, accepted the position of Assistant Professor in the Missouri School of Mines at Rolla, Mo., and still holds the position. He has been married fifteen years and has two daughters, the elder of whom entered the St. Louis High School last January.

'70.

W. E. Fraser, M. D., of Fernandina, Florida, writes that he "came near traveling paradise way" last season in the yellow fever epidemic, but is none the worse for it now.

'71.

Doctor Byron D. Halsted has recently been appointed to the professorship of botany at Rutgers College, New Brunswick, New Jersey.

'72.

J. T. Fraser is practicing as V. S. in Savannah, Ga.

'73.

Ransom M. Brooks was slowly improving in health when last heard from, January 10, 1889.

Hon. Frank L. Carpenter of Grand Rapids, writes Litigation is rampant and I am very busy. The man who invented litigation builded on a rock, and better than he knew—or at least full as well."

'74.

Henry A. Haigh's "Manual of Law and Forms" is selling very extensively. The publishers expect to sell 20,000 copies of the book during 1889.

William Cook is now on his second term as Superintendent of Schools of Marshall county, Dakota. His address is Britton, Dakota.

Dr. John K. Gailey has been one of the most influential of the founders and upbuilders of Harper Hospital, Detroit, and is still actively engaged in the work.

R. H. McDowell was a delegate to the meeting of the Directors of Experimental Stations, held at Knoxville, Tenn.

Pres. Charles L. Ingersoll represented the Fort Collins Experimental Station at the Knoxville meeting. He reports the Colorado Agricultural College to be in a flourishing condition. The college recently received one of the largest appropriations in the history of the institution and with no opposition.

'75.

Chas. W. Sheldon is dairyman and gardener at Fremont, Nebraska. He is prosperous but his business takes all his time; so he wishes to sell his interest in dairying. He has 160 acres of land now worth \$100 per acre.

Louis D. Niles expects to take the degree of LL. B. in June next, after that to practice law or medicine, probably law.

D. F. Griswold is succeeding fairly well at farming at Northville, Mich.

C. S. Ingersoll is Insurance Agent and Adjuster at Garden City, Kansas.

Chas. A. Sturgis of Centerville is county clerk of St. Joseph county.

'76.

Robert E. Caine in the lumber business at Kalkaska was burned out in the recent fire there.

'77.

W. O. Fritz is now at La Fayette, Ind.

'78.

James P. Lewis is manager of the Lewis Hardware and Implement Co., Lincoln, Nebraska, and is prospering.

A. A. Robinson is now general manager of the Detroit Motor Co.; he was engaged in farming and the lumber business before he took up his present work. He still owns a farm.

Frank E. Robson passed a portion of his winter in resisting the small-pox, but has now completely recovered.

Eugene Gregory is teaching at Sturgis, Mich.

William K. Prudden is secretary and treasurer of the Lansing Wheel Works.

Henry V. Clark is in the third year of his pastorate at Elmira, Otsego county, Mich.

Emmor O. Ladd is a farmer and fruit growing at Old Mission, Grand Traverse county. He reports on agricultural topics for several journals, also for Farmers' Clubs.

'79.

A. O. Crozier has been re-elected secretary of the American Horticultural Society. He is still botanist at the Iowa Experiment Station.

John Q. Thomas is farmer and pedagogue at Wrenford, Davis county, Kansas.

C. P. Cronk graduated from the medical department of the Columbia University in 1888. He now has full charge of the U. S. Signal Service office at Baltimore, and has three assistants.

Prof. L. G. Carpenter is engaged in gathering material on irrigation and kindred subjects for a monograph for the Paris Exposition. He has been collecting books on the subject of irrigation; he already has a very large collection in English and French, and now has an agent in Italy gathering Italian works on the subject.

Thomas E. Dryden, Miss Augusta Wilcox, married, Wednesday, Feb. 6, 1889. At home after Feb. 20th, Allegan, Michigan.

WITH '79.

A. B. Swift is a State Representative from Eaton county.

A. B. Cortwright is farming at Charlotte.

'80.

C. T. Crandall has been Prosecuting Attorney of Iron county during the last four years, and has the office for the next two years.

The item in the November number of THE SPECULUM concerning Mr. W. W. Remington is incorrect. He is market-gardner at Greeley.

WITH '80.

Ira T. Sayre is attorney at law at Flushing, also secretary of the Flushing R'y Co.

'81.

William S. Delano is grower of field and garden seeds at Lee Park, Valley county, Nebraska.

J. L. H. Knight is a farmer and stock-breeder at Lee's Park, Custer county, Nebraska. His specialty is Poland China swine.

C. W. McCurdy, at the head of the department of biology and geology in the Winona High School, has classes in geology, botany, and physiology, and puts in his leisure hours in classifying and cataloguing the material in the museum.

A. B. Turner is teaching at Burr Oak.

Dr. Byron S. Palmer has the position of dentist on the medical staff of St. Joseph's Hospital of Chicago,

and is also Clinical Instructor in the Dental Department of the Northwestern University.

W. R. Hubbert is practicing medicine at Michigan City, Dakota.

A. W. Voight is married, has one child, and is prospering in the furniture business at Los Angeles, Cal.

Jason Woodman has been re-elected Lecturer of the State Grange.

WITH '81.

J. G. Sleeth has completed the course in the Bellevue Hospital Training School for male nurses and is now engaged in his profession in Detroit.

'82.

Prof. L. H. Bailey delivered several lectures at Institutes this winter, which were very well received. He is now at Cornell, and likes his position there very well.

E. N. Ball is Secretary of the Michigan Merino Sheep Breeders' Association, also edits the Register of the Association.

Will E. Hale has an heir.

A. J. Chappel is druggist at Pinckney, Livingston county.

James L. McClear is city attorney and attorney-at-law in Negaunee.

Jeff H. Irish of Detroit, Minn., is county attorney.

Fred C. Snyder is now completing his second term as supervisor of Eureka township, Montcalm county.

WITH '82.

C. S. Park is a physician at Hubbardston, Ionia county.

John J. Bohn is editor and part proprietor of the Hotel World, Chicago.

'83.

John T. Mathews is attorney and solicitor at Ithaca, Mich.

W. A. Bahlke is attorney-at-law at Alma.

H. W. Collingwood is now managing editor of the Rural New Yorker, and also has a financial interest in the journal.

H. W. Baird is studying law with Uhl and Crane of Grand Rapids.

Ralph Allison, son of Professor and Mrs. A. C. Redding, died March 6th, aged two years.

J. H. Smith, Superintendent of Public Schools, Durango, Colorado, has recently had his salary advanced from \$150 to \$190 per month.

Ben C. Porter was married to Miss Fannie Day of Grandville, Nov. 14, 1888. Mr. and Mrs. Porter have established their home on a farm about midway between Grandville and Grand Rapids.

A. F. Kinnan is superintendent of schools at Big Springs, Texas.

C. H. Eldridge, M. D., is practicing medicine at Toledo, Ohio.

'84.

Andrew Park has held his present position as foreman in the Wabash R'y Passenger yards for more

than two years, and writes that he is getting along nicely.

Wilford C. Stryker is a physician and druggist at Los Angeles, California, and thinks that region the finest on the globe.

Chas. Grimes is now teaching near St. Louis.

W. D. Barry, during the last two years, has been surveying railroad lines in Utah, Colorado, and California, and when last heard from was at Wilson's Point, Louisiana. His permanent address is Conway Springs, Summer Co., Kansas.

A. W. Sutton, of Morenci, has been married two years and is the proud possessor of a boy and a farm.

Milton Delano has removed from Oxford, Mich., to Lee Park, Custer Co., Nebraska, where he will engage in the seed business with his brothers.

WITH '84.

Arthur M. Knapp is farmer at Muir.

W. H. Preston is with the American Exchange Bank, at Duluth, Minn.

'85.

Frank M. Woodmansee is an attorney at Vermontville, also one of the circuit court commissioners of Eaton county.

John W. Mathews is Secretary of the Barry county Board of Examiners; he is located at Hastings, and was married on February 14th to Miss Dora E. Kennedy of that town.

R. M. Bates is attorney-at-law at Hastings, Mich.

James Y. Clark was married February 6th.

Wilbur I. Power received the degree of M. D. from the Detroit College of Medicine on March 25th.

J. R. Newton is teaching and farming at Liberty, S. C.

Edwin S. Antisdale is studying medicine at U. of M., in the Junior class. He writes that he has become stronger than he was at any time while at M. A. C.

D. J. Stryker is in the west, traveling for J. C. Ayer & Co.

F. L. Chappell is at Cooper, Barry county, engaged in reading the commentaries of Mr. Blackstone.

'86.

A. L. Nichols intends to give up farming in a short time and devote his energies wholly to teaching.

John Hooker of New Baltimore, Mich., graduated March 4th from the American Veterinary College, New York City.

W. R. Rummel is going in a law office again next summer. During the winter he was clerk of The Grand Hotel, Spokane Falls, Washington Territory.

Orrin O. Dunham spent last summer in the wheat business along the Red River of the North in Dakota. He is now teaching at Elsie, Mich.

C. F. Lawson is collection and discount clerk in the Peninsular Savings Bank of Detroit. His address is 21 Edmund Place, Detroit, Mich.

Jos. B. Cotton is junior member of the firm of Mc Gindley and Cotton, attorneys-at-law and notaries public, Duluth, Minn. He says he has passed through the "demnition starvation period," and looks hopefully toward the future.

WITH '86.

William M. Badcock is engaged in farming and gardening at Millington, Somerset county, N. Y.

'87.

H. L. Chapin is of the firm of Chamberlain & Chapin, civil engineers and surveyors, St. Ignace, Mich. He attended the annual meeting of the Michigan Engineering Association held at Lansing last winter.

George C. Crandall helped in vaccinating during the small-pox scare at Ann Arbor last winter.

George C. Hume has taken up a homestead claim in Estes, Walla Walla county, Washington Territory, and will build himself a log-house soon. Watch the '87 items in future issues of THE SPECULUM.

WITH '87.

Albert Woodmansee is principal of the school at Roxbury, Kansas.

'88.

L. A. Bregger is with F. A. Chapman, florist, Grand Rapids; he is said to be working thirty-six hours a day in the cutting and propagating rooms, which we can easily believe, barring the arithmetic of it.

Clark Hubbell is studying law in a Port Huron law office.

A. E. Bulson, Jr., has been studying during the winter at the Chicago Medical College. During his six months' vacation, he travels for a Chicago drug house at a very liberal salary.

Nelson S. Mayo graduated with honors on March 21st from the Chicago Veterinary College, receiving the degree D. V. S.

WITH '88.

Herbert Thurtell is traveling for a St. Paul, Minnesota, drug firm.

D. M. Meyers is principal of the school at Ada, Mich.

D. L. Davidson is in Chicago, studying in the law department of the Northwestern University. He expects to graduate in June next.

C. M. Underhill is attending a business college in Chicago.

WITH '89.

Will Needham is fireman on switch engine on the M. C. R. R. yards at Lansing.

E. E. Graham is foreman of a lumber yard at Berwick City, St. Mary's parish, Louisiana.

Married, on March 28th, at Albion, Ind., Mr. George Loomis Foote to Miss Mott Peterson, both of Albion. There, now, didn't we tell you?

I. B. Winsor went to Washington Ter., April 1st.

WITH '90.

Ben Jenks is at Canfield, Ohio, working in the lumber business.

P. P. Chapman is at Buckeye, Tenn., manager of a store run in connection with a coal mine.

W. R. Hawkins is attending a business college in Chicago.

WITH '91.

R. C. Smith is working for Bartlett & Co., machinists, at East Saginaw.

REVIEWS.

SILOS AND SILAGE.—By Prof. A. J. Cook.

One of the neatest little contributions to agricultural literature that we have seen was recently issued by Prof. Cook. Its title, *The Silo and Silage*, is alone sufficient at this time to attract attention, and the reader of its pages will not be disappointed. It gives in plain and easy language some of the advantages of the silo, the results of feeding silage as determined in practice, the cheapest way to raise the silage, size and method of construction of a good silo, its essential features, the most economical methods of cutting the fodder and filling the silo, and, last of all, some directions upon the feeding of silage and the stock for which it is best suited. It may be had of Prof. Cook by inclosing 25 cents, and is well worth the small outlay of money, particularly if the buyer have any lurking notion of building a silo, which he will be quite likely to do after reading this little "primer."

In conclusion he says: "This is a time of severe and unceasing competition in all industries: The struggle for existence is fierce in all departments of industry. Combinations and excessive division of labor cannot come to the relief of the farmer as they do to those of other pursuits, yet here, as elsewhere, the fittest alone survive. It, therefore, behooves the farmer to lay hold of any and every lever that shall aid him in becoming master of the situation."

THE FIRST REPORT OF THE STATE FORESTRY COMMISSION.—

This volume has appeared since the close of our last term and we copy a few notes from *Garden and Forest*, the ablest journal of its kind printed in the English language. "The report is a remarkably interesting and valuable document. It includes * * an account of a forestry convention at Grand Rapids, at which there seems to have been a much larger proportion of practical and sensible talk than is usual at such meetings, a list of trees and shrubs found in Michigan, and a large number of useful illustrations. The most important portions of the report are the brief and admirable discussions by Professor W. J. Beal of such subjects as forest management in southern Michigan, forest fires, the succession of forests in northern Michigan, cutting and removing logs for lumber, a lumber-camp, new uses for certain kinds of timber and the amount of pine yet remaining in Michigan.

"There are interesting communications from Professor A. J. Cook, Eugene Davenport, A. E. Glidden, A. A. Luce, T. T. Lyon, Geo. D. Moore, W. K. Sexton, Prof. V. M. Spalding, B. W. Steere, A. S. Kedzie, J. H. Moores, Geo. C. Nevins, Hon. J. T. Rich. If every public library in the country could have a copy of this report it would vitally aid the work of popular education regarding forestry."



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