"It is only by labor [illegible]
thought can be [illegible]
made hea[illegible]

The College Speculum

Agricultural College
Lansing,
Mich.

Adsth. Del.

The memory of our college days shall never pass away.

Michigan State Agricultural College.

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THE COLLEGE SPECULUM.

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POLITICAL ADVICE.

BY H. W. COLLINGWOOD.

The candidate stood by his doorway, with happy and radiant face,
The days of the campaign were over, his party had won in the race.
All day long his friends had been shaking his hand till it ached with the pain.
While visions of life at the city were dancing about in his brain.
The candidate stood by his doorway, when into the yard from the road,
With rattle and creaking and banging, there lumbered a curious load.
A rusty old rack of a wagon, with rickety, jingling springs,
The horse fit for nothing but crow-bait, the harness all tied up with strings.
A crusty old seed of a farmer was perched on the rickety seat;
Beneath him, a hole in the wagon, through which hung his ponderous feet.
A thin fringe of beard, like a mop-rag, just covered his square under jaw;
His gray hair broke jail through his hat band, in utter defiance of law.
The candidate stared in amazement, as, nodding his wrinkled old head,
The old fellow rose in his wagon, and, clearing his rusty throat, said:
"How are ye? I don't 'spose you know me, but my name is Jones, an' its true,
An' I aint a gonter deny it, that I didn't vote, sir, fer you.
But our man gut licked at the 'lection, an' our party 's all out of jint, I'm pint.
But still, I thought I'd jest come round here an' help set ye right on one
Your gonter go up thar to Lansing, an' come to the State fer yer pay,
An' sech men as I be pays taxes, an' orter hev somethin' to say.
Ef you go to foolin' our money, an' votin' fer bills ez aint right,
You'll find thet it aint payin' bizness, fer you'll git ketched up pretty tight.
There's one bill to come up afore ye, ef I've got the idee all straight,
To 'propriate six thousand dollars, or mebby it's more, 'praps its eight,
Fer thet Agricultural College, an' *this* is what I've gut to say:
Ye wanter vote right straight agin it, an' not let it pass anyway.
Thet College hez proved a big failure; it ain't wuth a cent to the State:
It's gut to be rooted up sometime, an' might's well be done soon ez late
We've kep the hull biz'ness a goin, an' helped it in various ways,
An' aint never got nothin' back, sir, an' I don't believe thet it pays
Ter pay them professors big wages ter live on the fat o' the land,
An' sit thar like bumps on a saw-log, an' never turn over their hand.
I hear there is men up there teachin' thet don't even know how to mow,
They hires men to do their own plowin', an' can't tell a spade from a hoe.
How sech men kin larn our boys farmin is more than I rightly kin see;
The hull thing is wrong and wants rightin', at least that is jest my idee.
I've got my idees about farmin', they warnt never larnt at no school,
An' tho I aint ben to no College, I 'low I aint nobody's fool.
Ye can't raise no wheat by Mechanics, an' Botany won't build no fence;
An' all of them outlandish studies aint nothin' besides common sense.
Ye can't hold a plow a mite better by figgerin' with x, y an' z;
Ye can't drive yer team by no science, but jest by a plain 'haw' an' 'gee.'
A boy aint wuth shucks in a cornfield ez hez to stop every half hour
Ter tell what the soil is made up of, or analyze every odd flower.
Ye can't make two shillin's at choppin' by stoppin' betwixt every blow
Ter run up a tree's philly-taxy, or see how the plaguey roots grow.
It may be all right fer a doctor, or lawyer sech larnin' ter know,
But when a boy's farmin', I notice, it stops the free use of his hoe.
A man ez will spend the hull mornin' ter see what pertater bugs do,
Won't never git rich at no farmin', and wont know no more when he's through.
The more thet he knows about science, the longer the course he may take,
When put onto good solid farmin', the harder his back's gonter ache.
Ye can't make no science of farmin', fer farmin' aint nothin' but work,
An' I don't believe in no system of larnin' our boys how to shirk."
Now, while the old farmer was talking, poor Dobbin stood patiently there,
Reviewing the arguments gravely, with thoughtful and studious air.
The harness hung loosely about him, nor did he once venture to pull,
But calmly and silently listened till both of his long ears were full.
But out of the grass just before him a bunch of sweet clover arose,
And temptingly lifted its blossoms, tho' just beyond reach of his nose.
Forgetting the speech and his master, he straightened away at his work;
He brought the old harness about him, and started the cart with a jerk.
The old man was growing excited, and giving his passion full vent,
But when the cart started he staggered, and over the end-board he went.
The old horse soon finished his clover, and then looked benignly around,
And watched with profoundest amazement the orator stretched on the ground.
The College was quickly forgotten, and painfully rubbing his head,
The farmer climbed into his wagon—with words that are better unsaid.

American Courtesy in Criticism

BY ARTHUR JONES.

It is only when books are written and published in the belief that some part of humanity can receive profit from them, that the labor can be considered commendable. There was a time in the history of the world when the publication of nearly anything might have been hailed with joy, by such a reading world as exists to-day; but that time is past. The world of living authors is not confined to a Wyatt, a Udall, a Skelton and a few minor minds as during one age of literature, and we can well afford to reject all that falls below a true standard. While doing this, the critic must not show himself impervious to the influence of real genius, and, if he be worthy of his task, he will detect its presence, even though it is not robed in the rich garments of a cultured and strictly musical language.

The dangers, however, are not all on one side. The *Edinburgh Review's* attack on Lord Byron after the publication of his "Hours of Idleness" would have completely overwhelmed a poet whose mind was less cynical, or whose store of sarcasm was not so great, even though he possessed as great poetic genius. It was Lord Byron's strong will power and non-retiring nature that saved Childe Harold and Don Juan, with all their splendid philosophy to the world.

English criticism has always been severe, and, at times, very discouraging and unjust; but it produced a literature that is strong and intensely national in every department. American criticism is more courteous and less severe. America began its separate existence, one hundred and five years ago, with but little that it could look upon as having the stamp of its own nature, and it has since attained a growth in literature due largely to the kindness with which authors have been received by the public. There seems to have been, from the first, a feeling of forbearance among the American critics; and they have trusted largely to the public for the encouragement of only what was worthy of a free and cultured literature.

Whether this policy in criticism has produced for America as good a literature as the more severe English method would have done, is an open question.

It perhaps encourages a quantity of literature that is unworthy the effort of its production, and which, like the helpless moths fluttering about our lamps at night, can only exist for a day.

The critic is the one who introduces the aspiring author to the reading public, and by his critical words impresses the public with the author's ability and worth, or weakness and presumption. If the introduction be encouraging to the author, it induces him to renew his efforts, and he comes to believe himself a genius before he has given the world enough to know the nature and depth of his mind. The honest but severe critic is the only one who can be of service to the reading public, and he is the one whom America most needs, now that her literature has a stable foundation.

We were reading, a short time ago, the review of a trashy summer novel, thrown in the faces of the public

with a romantic sounding title, by a popular publishing firm. Extracts were given, and opinions rendered in the usual manner. The author, in his preface, claimed no object beyond the most simple wish to please for the time spent in reading his book, and to gain the name "author." The tenor of the review with but few exceptions must have been quite encouraging to the ambitions author; and without doubt, we shall, ere long, be refreshed by another of his "Delightful summer novels."

Such tolerance, however needful in our early history, is no longer demanded to sustain and encourage a genuine American literature.

On the critics, to a great degree, depends the quality of books that are published, and as the critics largely shape public taste, we must look to them for the impulses leading to a higher standard. As much as we pride ourselves on the advancement of our age, if we take the critic as an exponent of public taste to-day, Americans can not but look with regret on the class of novelists they are encouraging; and when our reviewers persist in praising the works of such men as America's Hudson River Annualist, our educators may well send us back to the times of early English writers for instruction in training our literary tastes.

Goethe as a Scientist.

BY W. R. HUBBERT.

The common notion regarding Goethe, is that of a man of letters. We think of *Faust*, *of Wilhelm Meister*, *of Werther*, and are perhaps enraptured over *Hermann and Dorothea*, without remembering, and more probably without knowing, that some of the most important discoveries of modern science may be in part attributed to Goethe. And yet, as a poet, he will still continue to hold his high position among the foremost men of modern times.

What little he has done for science, has been done with a love for investigation: a desire to better understand some of the most common things around us. He appears as a thinker in science; other men could collect and preserve, Goethe could classify and systematize their labors. He was not simply a poet, but he sought to enlarge and perfect every element of his nature. In this sense he was pre-eminently a Greek in his ways. He was thoughtful and original, being in all a typical German.

In 1790, Goethe published his *Metamorphosis of Plants*, in which he maintained that all the parts of a flower, sepals, petals, stamens and pistils, might be considered as different modifications of one type, the leaf. Not that the parts are first developed into leaves, and then changed into pistils and stamens, but that the whole plant may be considered as being a succession of repetitions of the original type. To thus treat a petal, a pistil, or a stamen as a leaf, and consider it such in the light of its numerous forms, gave to botanical science a new method of study and comparison

The theory met with disapproval. Even his most intimate associates could not countenance such a seemingly hypothetical deduction, especially when they considered that it came from a poet. But later on, a few of the eminent botanists began to recognize in it something of which they had long been in need. Thus the theory of the metamorphosis, or morphology of plants rapidly gained supporters, until now, no text book on botany is complete that does not contain a chapter on morphology.

By some writers the theory has been attributed to Linnæus, by others to Wolff. Perhaps they may have anticipated the discovery, but the glory of enlarging it beyond the limits of a bare suggestion, and of publishing the results of such investigation belongs to Goethe.

The second of Goethe's scientific publications and perhaps the one of least inportance, is *Farbenlehre*, or the theory of colors. In this work he opposed Newton's theory, that light is composed of different colors. Goethe maintained that the use of mathematical science, and the prism in the investigations of light and color were productive of untrustworthy results. Accordingly he discarded both, and set out to solve the problem by experimenting with the effects of sun-light on different materials. According to Goethe, "The highest degree of light seen through a medium slightly thickened, appears yellow. If the density of the medium be increased, it assumes a yellow-red, which thickens into a ruby." So also, "The highest degree of darkness seen through a semi-transparent medium on which a ray of light has been thrown, appears blue, which becomes paler as the density of the medium is increased, but deeper and darker as the medium becomes more transparent." Goethe thus endeavored to treat darkness as a color, instead of the absence of all color, and he accordingly fell into many errors respecting the nature of light. It is said that this theory, faulty as it is, has been of some assistance to the painter on canvas. Goethe endeavored to have the French Academy acknowledge the theory as true, but without success.

Of Goethe's claims to the discovery of the intermaxillary bone, little may be said; *Vicq d'Azyr* in his *Traite d'Anatomie et de Physiologie* (1786), simply mentions it, thus leaving it for Goethe to treat of at greater length. Goethe found that in most animals, in the human fœtal, and in some children, the sutures of this bone could be traced.

The last and perhaps one of the greatest of Goethe's discoveries, (if we are justified in awarding the discovery to him), was advanced in his *Introduction to Comparative Anatomy*, published in 1795. In this article he maintained that all the different bones of vertebrate animals could be considered as being transformed vertebræ, or their appendages. By the publication of this theory, a new impetus was given to the study of comparative anatomy, which has been productive of many good results. In this same article we also find one of the most important laws of animal life, namely: "The more imperfect a being is, the more do its individual parts resemble each other. The more the parts resemble each other, the less subordination is there of one to another. Subordination of parts indicates higher grade of organization. For example, "Take a polyp and cut it in several parts, each will live and manifest the same plan of nutrition and sensibility which the whole polyp manifested. Turn it inside out like a glove, and now the interior part will become its skin, while what before was skin, will now act the part of stomach." "Take an animal higher in the scale, and then each part is dissimilar, and each has a different office." Like the other discoveries of Goethe, this one also had a claimant. Fifteen years after the death of Goethe, Ohen claimed the honor of the discovery of the vertebrate theory.

Thus we see that Goethe was not simply a man of letters, but that he showed signs of a mind capable of much original work in the sciences. He stands forth as a leading example of one combining with the poetic the clear discriminating mind of the scientist. The theory that the mind of man is made for certain undeniable tasks, to the exclusion of all others, is made more untenable in the light of such an example. The perfect man is the one who has developed every faculty of his nature.

SONG.

BY CHARLES MCKENNY, '81.

AIR: "John Brown."

Come, jolly seniors, one and all, we'll raise a joyful cry;
We'll shout till river, hill and dale shall echo the reply;
We'll make the strains of gladness wake the regions of the sky,
For college days are o'er.

CHORUS: Glory, glory, hallelujah!
Glory, glory, hallelujah!
Glory, glory, hallelujah!
Our college days are o'er.

We've wrestled long with Olney, and we've found him rather soon;
We've crammed in Peck's mechanics, till we're crazy as a loon;
We've breathed the fumes of acids foul, from nine o'clock till noon,
But those sad days are o'er.

We've breakfasted on science, and we've dined on English Lit.;
With Psychology for supper, the daintiest tidbit;
We've tried on Bascom's morals, but didn't seem to fit—
We'll try them on no more.

Many who began with us, four years ago to-day,
Grew weary in the journey, and have fainted by the way;
But we who've been so faithful have at last received our pay—
A sheepskin now is ours.

We now are out of college, but we won't have long to rust;
If mother Shipton's words are true, this year the world will bust;
Saint Peter'll take our sheepskin and will let us in on trust,
To wander out no more.

Co-Education at Our College.

BY JOHN EVERT.

The course of the age is leading on towards perfect liberty and equality. At no previous period of the world's history has there been so good protection from wrong and so much freedom to do right. Men think more than ever before, and have come to the belief that the only true aristocracy is the aristocracy of the intellect. The result has been progress in many directions; and in nothing, perhaps, has this been more marked than in the educational advantages afforded to women.

Fifty years ago it was thought that women could not pursue a college course with profit, and all of the higher institutions of learning refused to admit them. Now, however, they are admitted to many of our best colleges and universities, where they have proved themselves fully man's equal in the acquisition of knowledge.

If the best schools of the country and of the world practice co-education successfully, and if women can pursue a college course with profit, why exclude them from any institution of learning which they may desire to enter, especially if that institution is supported by the State? At our university ladies may study literature, science or art, law, medicine or pharmacy; and if they wish to work for a degree or take special studies here, it would seem that they have the right to do so. To refuse women equal educational advantages with men is contrary to the spirit of liberty, and implies minds devoid of the faculties of reason and judgment on the part of the "weaker sex." But women do possess as much common sense, at least, as men. Then why not acknowledge the fact by giving them full freedom in acquiring an education?

That the same right which admits ladies to the university should admit them here also cannot, we think, be doubted. But it may be urged that even though provisions were made to enable them to exercise this right, they would not take advantage of it. Facts prove this to be far from the truth. During the quarter of a century of the existence of the college, a comparatively large number of ladies have expressed a desire to be admitted. Thirty have applied in a single year. Only a few have even become students, however, as special arrangements had always to be made for their accommodation. All these applications were made when it was known that no course specially designed for ladies had been arranged. If so many desired to be admitted under unfavorable circumstances, is it not reasonable to suppose that a number sufficiently large to justify the establishment of a ladies' department would take advantage of circumstances more favorable?

It seems to be the intention of those most active in advocating a department for ladies, to have the course not unlike the scientific courses in most colleges, but with special reference to those studies thought to be most useful to women in the everyday affairs of life. In addition to this, they desire to have added a course of instruction in cookery and household chemistry. Suitable labor in the kitchen and in the gardens would probably be made compulsory.

There is certainly a demand for such a course, as is manifested by the large number of the people of the State who petitioned the Legislature for the necessary appropriation. Such men as Wells, Parsons, Luce and Woodman, are highly in favor of the project.

A good scientific course for women, with suitable manual labor, both indoor and outdoor, would be unlike that of any other college in the State, and would undoubtedly be productive of valuable results; for one of the needs of the times seems to be women of education and refinement, who are good housewives, and in whom the "blue stocking" tendency does not predominate.

It has been said that the Anglo-Saxon race in America is in danger of perishing from the earth for the want of strong, healthy mothers. In France and in Germany, where women do a great deal more outdoor work than in this country, they are noted for their hardiness. The reason why American women are weaker than in other countries must be because they lack knowledge, or fail to put it to practice, or both; for they are surrounded by circumstances as favorable for physical development as anywhere in the world. Any institution, then, that would impart to women an education enabling them to understand and teach them to put to practice the laws of health, could not fail to be of great usefulness.

The great want of the age is a harmonious development of individual powers. We want better men and better women. Too often are the graduates of our colleges characterized by a one-sided development. A student who leaves college stronger than when he entered is the exception, and not the rule. This should not be so with men; it should not be so with women. Here, where all the students labor three hours daily on the farm and gardens, the student who graduates a stronger man than when he entered is the rule, and not the exception. Under like conditions it is reasonable to conclude that the same results would follow in case of women.

Some one in writing about the education of American girls has said: "We have the best material in the world, and the best chances for its development. Our girls' schools ought to send forth the finest women that have ever blessed and beautified the world."

These results have not been reached, and the cause must be in education. The education most needed for American ladies is one that will make them stronger both in body and in mind. We want women who are educated and refined, who are strong and healthy and good housewives, who can and will work, and not regard it as degrading to do so. We have no need for a larger number of fashionable schools for ladies. But we have

great need for those that will impart to ladies a good, substantial education, at the same time teaching them habits of industry and a love for work.

As this institution was the first in the world to put manual labor into successful practice in a college for young men, would it not be eminently proper for it to carry out the same idea with reference to women? This question has been answered by one of the wisest and most influential men of the State, who says: "When in the Legislature I voted for the resolution which admitted ladies to the university, and I am sanguine that their admission to the Agricultural College would result in great good not only to the College, but to society, to agriculture and to the future welfare of our State and country."

Scientific.

History of the Natural History Society.

In the course of study in the Agricultural College from the start, the natural sciences have always found a prominent place. The pursuit of these studies with those of agriculture, horticulture, rural engineering, and the daily labor in the fields and gardens give a practical turn to all connected with the institution. Such training very naturally led to the formation of a Natural History Society, which has so far been remarkably successful.

On May 17, 1872, such an organization was formed by the students, aided by the members of the College faculty. Although called a Natural History Society, its objects have always been broader than this name would indicate, and include chemistry, mechanics, engineering, astronomy, and even a little pure mathematics has occasionally been tolerated.

At the first meeting, P. H. Felker was called to the chair and F. C. Wells was made Secretary. B. D. Halsted, C. Miller and D. P. Strange were appointed a committee to prepare a constitution and by-laws. On May 20, the first permanent officers were elected, as follows: President, W. K. Kedzie; Vice-President, J. L. Morrice; Secretary, C. E. Miller; Corresponding-Secretary, Prof. A. J. Cook; Treasurer, G. W. Mitchell; Curator, F. C. Wells; Librarian, C. L. Ingalls.

For a while the officers were elected every term, twice a year, but for some time past they have served one year. The meetings have usually occurred monthly during the academic year and are always interesting. They begin very promptly at seven o'clock and close after an hour and a half. In most cases there are communications enough for a longer session. The members work by sections, where they are placed by the president, usually giving each a choice where it is practicable. The chairman of each section is usually a member of the faculty, and helps start the members of his section in some appropriate investigation. The sections are botany, zoology, geology, chemistry and scientific methods. The communications are presented to the sections meeting as one body.

Until the present plan of working by committees was adopted, there was a tendency on the part of some members to give too much prominence to lectures from some one abroad, instead of making up a programme with original papers by the members. The meetings are held in the chapel, where from fifty to one hundred and fifty persons are present. There are now about fifty members. The fee is only fifty cents, which constitutes a person a life member. Occasionally a small tax has been levied, and some contributions have been solicited to purchase books for the library and materials for use in the museum. The society maintains both of these as a part of its work; they are of course distinct from the collections belonging to the College. The society has been fortunate in selecting curators who have been competent and have taken much interest in making collections. These include a fine number of building stones of our State, native coals, gypsums, iron ores, woods, birds' eggs and nests, Indian relics and skeletons. There are fine lots of geodes from Iowa, and several kinds of cloth made by the natives of the Sandwich Islands.

Some short excursions have been made by small companies to Grand Ledge, to Indian Mounds near Pine Lake, and in Shiawassee county and elsewhere for other purposes.

Some years ago Dr. Kedzie presented the society with a skiff, which was kept under lock and key, and was supposed to be used only by members of the society for making explorations on the dark and placid waters of the Cedar. The privilege of using this was once held out to freshmen as an inducement to join the society. But broken locks, missing oars, and numerous leaks soon made this inducement of little avail. Any one used the skiff at his pleasure. For some time the — (she was never named), has been quietly going to decay near the barn of Dr. Kedzie, where she serves a good purpose as a safe dummy boat in which the children of the neighborhood take imaginary perilous voyages over the briny deep. If we had a room large enough, it might be well to consider whether this old relic is not worthy of a place in the museum of the society.

For a time the society elected some honorary members, but for some reason this custom has been abandoned.

For the first few years only abstracts of the proceedings were kept in the records, but more recently many of the contributions have been printed in one or two of the city papers or other journals, copies of which have been placed on file.

Many interesting and valuable papers and discussions have been furnished the society. These cover a wide range of topics, and include reports of investigations and experiments made by the students and professors of the College.

The following persons have served the society as president:

1, W. K. Kedzie.*
2, P. H. Felker.
3, Dr. R. C. Kedzie.
4, B. D. Halsted.
5, R. F. Kedzie, twice.)
6, Prof. W. J. Beal.
7, J. Stannard.
8, C. W. Garfield.
9, Prof. A. J. Cook.
10, C. B. F. Bangs.
11, N. P Graham.
12, C. F. Davis.
13, Prof. G. T. Fairchild.
14, Arthur Jones.

* Deceased.

June Meeting of the Natural History Society.

On June 17th, Dr. Kedzie explained the presence of "sugar sand," which often appears in maple sugar. It is a sucrate of lime which comes from the sap of the tree,a nd not from any impurities which are introduced durin g the manufacturing process. It is generally most abundant where the trees grow on soil abounding in lime.

Prof. Cook described some Indian mounds which he had examined in Shiawassee county. There were several small mounds in rows north and south and east and west. East of this was one much larger. The latter only was excavated, and was found to contain the skeleton of a very large Indian. The mounds were covered with large trees before the field was cleared some years ago.

W. R. Hubbert gave a description of a whale which he had studied during the past winter.

Dr. Beal read from his diary some notes taken in 1862, while a student of Louis Agassiz. These notes referred to his mode of teaching special students. He gave each student specimens, calling every day or two to see how he was getting along. He requested beginners to use no books. He told them when he thought they were wrong, but he left them to detect the correct arrangement or construction of parts. He always intended and often succeeded in trying the patience of beginners. He wished students to learn to see correctly and become original observers. His favorite plan was to keep students comparing all the details of many specimens of one species and specimens of related species, orders or classes.

F. W. Hastings, of St. Louis, Mich., sent specimens of Indian pottery.

Some geological specimens from Kansas were presented.

At a special meeting held June 20th, Dr. W. J. Beal was elected editor to represent the society in publishing THE SPECULUM.

Michigan at the American Pomological Society.

Last winter the State Legislature appropriated $1,000 for making an exhibit of fruit in Boston this year. The Governor appointed T. T. Lyon, J. G. Ramsdell, W. K. Gibson, Dr. W. J. Beal, and E. H. Scott as commissioners to attend to this matter. At a meeting held in Kalamazoo, T. T. Lyon was elected president, Dr. Beal, secretary, Mr. Gibson, financier.

Each commissioner is to collect fruit in a certain part of the State and forward to Lansing, where it will be assorted and sent to Boston. Dr. Beal is to attend to the mode of exhibition and decoration, collect some nuts, wild fruits, wild flowers and berries. Secretary C. W. Garfield will prepare a pamphlet, on the advantages of Michigan, for distribution in Boston. No pains will be spared to make a first-class display, though it is not intended to make a large one.

The Society for the Promotion of Agricultural Science.

The annual meeting will be held in Cincinnati August 16, 1881, the day preceding the sessions of the American Association for the Advancement of Science. This is not intended to be a large or popular society, but is for co-operation in making experiments and investigations in science related to agriculture. It is intended to occupy a rather limited field, different from that of any other society which now exists or has existed in this country.

At present there are but twenty-one members, as follows:—

ARNOLD, Prof. L. B., Rochester, N. Y.
BARRY, PATRICK, Rochester, N. Y.
BEAL, Dr. W. J., Lansing, Mich.
BESSEY, Dr. C. E., Ames, Ia.
BREWER, Dr. W. H., New Haven, Ct.
CALDWELL, Dr. G. C., Ithaca, N. Y.
COLLIER, Prof. PETER, Washington, D. C.
COMSTOCK, Prof. J. H., Washington, D. C.
COOK, Prof. A. J., Lansing, Mich.
FARLOW, Prof. W. G., Cambridge, Mass.
FERNALD, Prof. M. C., Orono, Me.
GOESSMANN, Dr. C. A., Amherst, Mass.
HALSTED, Dr. B. D., New York City.
HILGARD, Prof. EUG. W., Oakland, Cal.
JOHNSON, Prof. S. W., New Haven, Ct.
KEDZIE, Dr. R. C., Lansing, Mich.
LAW, Prof. JAMES, Ithaca, N. Y.
LEDOUX, Prof. A. R., New York City.
STOCKBRIDGE, Pres. LEVI, Amherst, Mass.
STURTEVANT, Dr. E. LEWIS, South Framingham, Mass.
THOMAS, J. J., Union Springs, N. Y.

Committee on Meeting.

W. J. BEAL, Lansing, Mich, President.
E. LEWIS STURTEVANT, South Framingham, Mass., Sec'y.
G. C. CALDWELL, Ithaca, N. Y.

A limited number of members will be added at the coming meeting. A complete list of papers and some account of the meeting will appear in our next number.

The Association of Agricultural Teachers.

On the 18th of June the second annual meeting was held at this place. Prof. G. E. Morrow, of Champaign, Ill., was president, and Prof. S. Johnson, of Lansing, Mich., secretary. The other members present were Dr. N. S. Townsend, Columbus, O.; Prof. E. D. Porter, Minneapolis, Minn.; Profs. S. A. Knapp and J. L. Budd, Ames, Ia.; Prof. E. M. Shelton, Manhattan, Ks.; Prof. S. R. Thompson, Lincoln, Neb.; Prof. W. A. Henry, Madison, Wis.; Prof. C. C. Georgeson, College Station, Ts.; Prof. S. M. Tracy, Columbia, Mo., and Dr. W. J. Beal, Lansing, Mich. All the members of our College faculty were present more or less. The various departments of the College were visited. Interesting discussions and papers occupied over two days. One open session was held in the chapel, where the students and others seemed to enjoy short speeches from Professors Knapp, Morrow, Shelton, Tracy and Georgeson. The last three are alumni of this college. Some of the most important questions discussed were the management of student labor for profit or instruction, courses of study and uniting in experiments.

Papers were contributed by Professors W. O. Atwater, Middleton, Ct.; W. R. Lazenby, Columbus, O.

Professors Knapp, Beal and Shelton reported in substance as follows in regard to experiments:—It would not be wise to undertake jointly many, or complex, or expensive experiments, but such simple and practical ones as can be conducted with reasonable assurance of definite completion and results. The following were suggested, though some of them are not very easy to perform:—To test the vitality of swine, breeding hardier races, etc.; the introduction of carp; try to determine the source of nitrogen to plants; selecting and testing grasses and forage plants; breeding of Indian corn from selected parents; root pruning corn; some definite experiment in dairying; some one in horticulture; selecting and testing new varieties of wheat from other countries, such as Central Asia; some one point in drainage. These are to be written out in detail by different members.

The committee further report that in their opinion each State should furnish, besides buildings and apparatus, not less than $5,000 a year, to be used in making experiments in agriculture under the direction of the trustees of the agricultural colleges.

The meeting was a very profitable one in the opinion of all those present, and cannot fail to bring forth good results in many different directions.

Prof. Knapp was elected president, and Prof. Thompson secretary, for the ensuing year. The place for the next meeting is Iowa Agricultural College.

The Botanical Laboratory.

The building is situated on the west bank of the ravine, near the main drive, and north-west of the green house, to which it is connected by a rustic foot bridge across the ravine. It was first occupied in the Spring of 1881. The site is the same as the one occupied for some years by the apiary. As seen from the west, it is very conspicuous and adds much to the appearance of the grounds.

It is two stories high, and is modified gothic in style, being provided with a rose window and two towers. The extreme height is 66 feet; extreme length north and south, 66 feet; extreme width, 46 feet.

On the first floor is a large recitation and work room, 44 by 48 feet, fitted with cases and other conveniences. On the north is the teacher's desk, raised two steps, and back of this are three blackboards, each nine feet long, and hung on pulleys to raise or lower as required. There are three rows of tables, each 22 inches wide.

There is a drawer for each student. There is a pump and sink in south-west corner of the room. The ceiling is 13 feet from the floor, and is supported without the need of any columns in the room. The windows are quite high and numerous enough to afford an abundance of light on the darkest days. The windows in the south end are made of ground glass. The curtains are on spring rollers, and so arranged as to lower from the top to any extent, or raise from the bottom, thus placing the light under perfect control. The room is finished in native wood without paint, and presents a cheerful appearance. In the north-west corner is a study, which has doors leading to the hall and to the recitation room. In the north-east corner is a hall for entering the study, the laboratory and the museum up stairs. The lower rooms are heated with a number four Columbia furnace. The second story is intended, with the exceptions of a small work-room, exclusively for a museum of vegetable products. The ceiling of this room is nine feet high, ample for good exhibition cases. In the center is an open space in the ceiling, 13 by 30 feet. From the floor through this opening it is 31 feet to the ceiling near the roof. As will be understood, the museum has a gallery all around it. The amount of space in this new museum room is ten times as great as that now occupied by the general museum.

COLLEGE NEWS.—

The thorough and practical work of Prof. Johnson is seen all over the farm. The improvement in stock is especially noticeable.

Prof. Johnson is doing just the thing in improving the banks of the Red Cedar river above and below the bridge. He takes out the old logs and rubbish and thins the young trees a little. This adds much to the beauty of the farm. What can be more appropriate than these trees along the river?

The College apple crop will be fair this year; pears few; cherries and plums none; peaches a few, although the thermometer sunk to -20° last winter; currants and gooseberries light; also the raspberries and strawberries; grapes light, probably owing to the poor condition of the vines after a very wet season.

Small beds containing some 200 species of grasses and clovers have been laid out by Dr. Beal. They were established some years ago, but are being added to each year. Each species is labeled with common and scientific names, making them very interesting to farmers and all who visit the College. The Doctor has generally special students under him to whom the study of the grasses is a favorite one, especially to those who are to become farmers or teachers of agriculture. Some six or more colleges have been supplied with sets of seeds from these beds, Harvard University being among them. These plants are best seen and studied from June till August. They include both native and foreign grasses. Larger plats of from one to twenty square rods have been started east of the apple orchard. Some fifteen of the leading grasses are at present growing there.

The new library and museum building is progressing rapidly. It is to be all completed by Feb. 1st, 1882. The building stands a little distance north-east of Williams' Hall. It is to contain on the first floor double offices for secretary and president, reading room and fine library in the rear 40 x 50 ft. The second floor will be devoted to Prof. Cook's lecture room on the south, private study on the front (west), two dissecting rooms on the north, and a museum in the rear 40 x 50 ft. The building as a whole will be a fine one, stone and brick. Cost, $25,000. Part or whole of the present library will be given to Prof. Johnson for class room, agricultural museum, etc.; the secretary's offices to Prof. Harrower for living rooms, and the present museum, etc., will be used for various class rooms.

The College Speculum.

Published Quarterly, on the 1st of August, Oct'r, April and June,
BY THE STUDENTS
—OF—
THE MICHIGAN STATE AGRICULTURAL COLLEGE.

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☞ Advertising rates made known on application.

LANSING, MICH., AUGUST 1, 1881.

IT is with a feeling of assurance that THE SPECULUM makes its bow to the public; an assurance that it will meet with a hearty reception at the homes of students and alumni of the college, and of all who are interested in college topics. It is the determination of the students and editors to make a paper of general interest; it will contain such college news and personals of former students as to at once draw into a nearer relation the alumni and their alma mater; it will give to the public at large such scientific and general reading as may be interesting or useful, and the general conduct and contents of the paper will be indices of student work and character.

But THE SPECULUM is not an advertisement of the Agricultural College. It is a student's paper, organized and entirely controlled by them. The frequently expressed desire among the students for a college paper took form early in June, when at a general meeting it was decided to organize as soon as possible a periodical to which all might freely contribute, and through which they might learn of the alumni, and keep fresh the memories of classmates and of alma mater when they were no longer students. Committees were appointed to originate plans and to draft a constitution. It was near the first of July before all was in readiness for the beginning of the work. Less than a month remained in which to prepare the material for the first issue, and most of the editors were entirely inexperienced in journalism. Public sympathy was to be awakened, money raised, articles solicited and a publisher engaged, besides the arranging of scores of business items and obstacles which always appear in new enterprises. How far success has attended this maiden attempt the reader must judge. The immediate control of the paper is placed in the hands of the five societies—Natural History, Delta Tau Delta, Phi Delta Theta, Union Literary and Eclectic. Each of these societies elects its editor, and from one of this number the students at large select an editor-in-chief. This body constitutes the board of editors. Aside from these officers a business manager is elected from the body of the students, and a treasurer from the college faculty. The business manager and treasurer, together

with the board of editors, constitute the board of business control.

The general character of THE SPECULUM will be a reflection of the institution of which it is the organ. It is strictly a college paper. Its columns are open to all who have been students of the college, and from such we solicit material. We can give no space to "selected" material; we prefer originality to literary merit. After this issue the proceedings of the Natural History Society will be condensed for our Scientific department, giving us the investigations of students as well as of professors. It is needless to explain further. Those who have any knowledge of the institution we represent will vouch for the success of our enterprise, and will lend it their support, knowing that it will be but indirectly given to the oldest and best of industrial institutions.

THE SPECULUM greets you!

TO THE ALUMNI.—The honored president and the senior professor of the College have thought it impossible for them to address you at this time. As the opportunity for saying something seems too good to be lost, the pleasant task falls upon one of the editors of THE SPECULUM.

We keep a triennial catalogue constantly at hand, and almost daily have occasion to turn over its pages. With a very few of you the writer has no personal acquaintance, but regarding most of you he knows and thinks much more than you are aware. This is true of all officers of the College. You are her choicest gems. Very frequently some of your number are spoken of in meetings of the faculty. This is not limited to those who graduated a few years ago, but applies as well to those in the earlier classes, and to many who were students for only a year or more.

Some one has recently met an alumnus, or has received a letter from him, a friend has spoken of him, or some member of the Legislature makes inquiries; we never tire of answering of your achievements. Your names—yes, much more than names—your presence in large numbers at farmers' institutes is very cheering. Nothing at these and kindred gatherings inspires a professor with greater hope and enthusiasm than to hear good words from one who once attended the Agricultural College. These are some of the tangible fruits of our labors, and we are proud of them.

Some one has visited the farm of one of your number; it may be but a small farm, but he is delighted to dwell on your success. Some perished in the effort to save their country. Their memory we cherish. Some returned with honors, and these are not forgotten. A goodly number have been selected to give instruction in this and other agricultural colleges. Nearly all have been eminently successful in this difficult field. Of the first two hundred and eleven alumni, thirty-one have been or are still among the instructors in colleges. This is certainly very remarkable. None the less honorable are others who have become farmers, members of the Legislature, or trustees of this or other colleges, teachers in common schools, agricultural editors, bee keepers, engineers and veterinary surgeons. If he acquit himself honorably and is a credit to the business he follows, as we believe has always been the case, an alumnus, of whatever occupation, is highly esteemed by the officers of the college. True manhood will surely command respect in any honorable calling.

We are always glad to see you or hear from you. Do not forget your alma mater, as she can never forget her children. She improves with age. Unless you come often you will hardly be able to recall the old landmarks. Within ten years the number of students in attendance has increased threefold. Within that time large numbers of enemies among the farmers have united with its friends in support of the College. Without fear of contradiction, we tell what most of you already well know, that Michigan Agricultural College, at home and abroad, is very popular with all who favor a liberal education for the industrial classes.

Were it not for you, the alumni, THE SPECULUM would never have had an existence. The editors and proprietors invite your favor and support, and they intend to strive hard to gain them. Keep us informed of your own work—no matter how insignificant it may seem to yourselves; we want to hear from you, and hear from you often.

THE question of students' board is becoming a serious one at the College. Frequent as the complaints of students have been in former years, they appear to be as frequent and as vigorously maintained at present. The causes of these complaints lie in various directions. Our system itself is no doubt at fault. Two hundred different tastes and dispositions can never be satisfied with the same food. The wholesale preparation of victuals is objectionable. Food cannot be well prepared in large quantities, and with the haste that necessarily attends such preparation. The wholesale use of canned and prepared goods, which are nearly always unwholesome, is a feature which has been overlooked. The finest vegetables are now growing in the garden, and are literally wasting as fast as they become eatable. Canned beans, peas, corn, tomatoes, etc., take the place of fresh food in the dining hall. With these facts before us we do not wonder that so many students complain of ill health, and so many leave college on that account. Again, the huddling together of so many students, especially with no ladies among them, creates a decided tendency to boisterous conduct, and the more so when the food is not relishable. The remedy lies in the doing away with our present system, and in establishing boarding clubs. A few cottages might be erected for that purpose, or, what would answer as well perhaps, the present dining hall and kitchens, and the basements of Well's Hall might be used for club rooms. The dining hall and kitchens might be so remodeled as to accommodate two clubs, and the same could be done with the armory, and society halls in Well's Hall by giving the societies and cadets rooms in some of the other buildings. This would create four clubs at the outset, and would accommodate as many literary societies, as the clubs

would very naturally and properly be limited somewhat by society lines. Let each club hire its own help, and control the quality and price of its board. One dray could be engaged to bring articles for all the clubs, doing away with the present very expensive mode of cartage between the college and Lansing. This system would be alike economical to the students and to the college. Until some such reformatory measures are taken, and board supplied to suit the students' requirements, complaints will continue.

General sympathy toward education, and especially toward that sort which includes the physical sciences, is seen year by year to be permanently increasing. The application of science to practical industry is no doubt an important factor in this changing of general opinion. To the general reader, science is no longer synonymous with abstruse theories and vague, impractical hypotheses; it has discovered the laws which govern climate, vegetable growth, insect life and habits, the mutual relations of inorganic and organic nature, and the dependence of each branch of organic objects upon each other branch, and has contributed the practical results obtained from such discoveries to agricultural industries. Indeed, it was not until scientific education began to manifest itself that agriculture began its ascent from the slough of contempt in which it lay, and became at last sufficiently elevated to be thought a fit industry for talent and enterprise. The relations between the agriculturist and the forces and objects with which he came in contact were put in a new light, useless practices were abandoned, and easier and more effectual methods were employed in their places. The farmer of to-day knows nothing of the drudgery which characterized his profession a hundred years ago. This change has been wrought by no other force than the systematic and scientific efforts of educated leaders. In proportion as farmers have recognized these leaders, and have taken steps in advance of old ideas, has their vocation advanced With this advancement has come the education of farmers' sons, who are now becoming themselves the leaders of their own profession. Thus it is that this general sympathy is at last being awakened among the agricultural community. The farmer complains that he is not recognized in society, and that he is the tool of ingenious swindlers. It has been to a great extent his own fault. He has taken no pains to develop his head and heart; he has contented himself with ignorance and toil, and has actually invited the scorn and abuse of keener people. But the educated farmers of to-day are leading their profession to higher levels, and the rising generation of educated young men, full of talent and ambition, with broad views and keen minds, will extend the work still more rapidly. The principles of science that underlie their labors will be applied vigorously, and that too, with tact, discretion and foresight. If every county in the north had within its limits one business-like graduate of some scientific institution, and he a farmer, there would be just so many centers to which farmers would naturally look for leaders, and just so many centers of power for the elevation of agricultural industry.

One of the most interesting and beneficial objects in the publication of this paper is to draw us into closer connection with our alumni. We desire them to ever have a deep interest in the welfare of the college, and to know of its workings and advancement.

They leave here to enter into business, which occupies so much of their attention, in various parts of the country, that ere long they know but little of the doings of their class-mates and friends. The best interests of the College and its graduates demand that they understand each other's work, thus enabling them to receive aid from one another. To meet this and to obviate a further growth of indifference, no pains will be spared in making The Speculum as interesting and desirable as possible. We are especially endeavoring to make the "Personals" an attractive feature of the paper to the alumni. To do this successfully their hearty co-operation is needed and respectfully requested. This would enable us to have direct information, thereby making the items complete and correct.

S. M. Willard, Class '64, is one of the most influential of the Board of Regents which has control of the Industrial University at Champaign, Ill. Other States find, in the graduates of the Michigan Agricultural College, capable managers, while Michigan, which claims as residents more than three-fourths of the two hundred and four living graduates, has but one graduate on the State Board of Agriculture. Who knows so well the needs of our alma mater as her own sons? Who is so fully in sympathy with her peculiar features as her own graduates? Surely only good could come from having at least half of the Board alumni of the College.

Since the last official action of our Council, a question as to the efficiency of the present mode of proceeding of that body, has undoubtedly arisen in many of our minds. So much time has been required to carry on the trials, especially when they have been as complicated as some of the later ones, that there is a visible tendency to hurry over a case, and, either fail to convict the culprit, or do an injustice to those who are the least guilty. If this work of the students is worth doing at all, it is worth doing well; and the first question that presents itself is—have we, as students, the time to do this work well?

A discrepancy that has appeared to many of us is the extreme formality and pomposity that has characterized our trials. If one could close his ears, he might very well imagine himself in the presence of the judges of the Supreme Court. But when we open our ears to the cross-examinations and the pleas, the whole affair appears like an immense burlesque. After all, it is only an amusement for many of us who attend the trials when we have nothing else to do; invariably creating the more amusement when a dull attorney stumbles over a cute witness.

Again, the system of selecting the attorneys for the prosecution and defence from the Council, tends to limit the efficiency of that body. In almost every instance, the attorney for the prosecution, in his work of collecting evidence to make up his case, has unconsciously brought himself to believe the worst, by seeing only the evidence against the accused. And this is still more evident in the attorney for the defence. Besides the same likelihood of prejudice that affects the attorney for the prosecution, he acquires a sympathy for his fellow student, whom he is defending, and who may be a very good fellow; and if there is the least shadow of an excuse for the accused, this shadow is clutched and held up before the council with an eloquent pertinacity. Hence, in many instances, justice cannot be done. Our Council should be a calm, impartial body, not entering into the heat of examinations or debate; but should confine themselves to listening to the evidence, as it is presented by some other student, and then they will be more likely to be above prejudice.

If it is best to have a tribunal of students—and we all believe it is—let us, at least, do away with this police court pomp of prosecution and defence; this pettiness of questioning and examining; this pertness of witnesses; this attorney-like eloquence of summing up, so often addressed more to some invisible jurors in the audience than to the Council-men; and more than all, let us do away with this rabble of auditors that exhibit their approval or disapproval with as much tumult as a lot of boot-blacks or professional bruisers at a cock-fight. Let us have our trials conducted in decent privacy, for if we can put confidence enough in our students to constitute them our judges, we can trust them sufficiently to have them make their examinations in private. All the principles of students' government will then remain as intact as ever, and we will be more likely to entertain a higher respect for the dignity of our Council.

The present paper is not the first enterprise of the kind that has been undertaken by the students of our College, it being, in fact, the second which has been attempted as a contribution to college journalism.

Mr. Frank S. Burton kindly gave us the facts concerning the former paper, and we here give something relative to the "Bubble" and its short career. Some time in the spring of 1868 the members of a college society called the "Stoical Pen Yanker's Society" (S. P. Y. S.) proposed and finally carried into effect a project for publishing a sheet, designed mainly as an "escape valve" for the superfluous fun of the society. F. S. Burton, we believe, was chosen editor, and impelled by his vigorous "blowing" the "Bubble" soon sailed forth into a journalistic atmosphere, and its voyage was probably not less showy and sudden than would be that of its namesake. The first number was issued May 30, 1868, and was followed in the same year by issues on June 20, July 18, August 8, August 29, September 9 and October 24. The contributions were mostly from members of the S. P. Y. S., namely, Chas. E. Bessey, F. S. Burton, Roswell Lillie, William D. Place and Clarence Simonson. At the close of the year F. S. Burton and W. D. Place graduated, and for some reason unknown to us "the boys" did not continue the publication of the "Bubble."

Thus perished the first attempt at journalism in our College, and, judging from the persons who controlled it, it must have been a source of both profit and pleasure to its supporters and readers.

Why are we content with the present slip-shod organization of cadets? One of the objects in the grant of lands by Congress to sustain our College was the establishment of a school for instruction in military as well as in natural science. The patrons of this College cannot but admit that such knowledge is a very useful and important accomplishment to every man who expects to become an efficient American citizen. Congress has taken special pains in this grant to fill this need. Our own catalogue admits it, with, however, the parenthetical proviso—"when adequate means are secured"—and the majority of our students desire it. We are all dissatisfied with the loosely organized company—consisting principally of deluded freshmen, who imagine themselves on the high road to military distinction—that meets "semi-occasionally" and clumsily performs its unscientific manœuvres. Are we not entitled to a permanent military instructor from the Government, or can we not obtain one? It seems that if proper measures were taken we might secure a few companies of regularly drilled cadets that would be of much benefit to us and of honor to our College.

Correspondence.

We should be pleased to receive communications on various topics for this department, from time to time.

Anonymous articles will not be noticed by the editors.

All correspondence should be addressed to L. W. Hoyt.

The A. and M. College of Mississippi.

The youngest of the sisterhood of Agricultural Colleges is the Agricultural and Mechanical College of Mississippi, of which we propose to give a brief description. It is situated in the north east part of the State, on a branch of the Mobile & Ohio Railroad about two miles from the village of Starkville The College opened the 6th of last October, but, young as it is, in number of students and in the amount of work accomplished, it compares favorably with older institutions. Following are names of members of the Faculty:

Gen. S. D. Lee, President; G. S. Roudebush, A. M., D. D., Professor of English Language and Literature; D. L. Phares, A. M., M. D., Professor of Biology: R. F. Kedzie, M. S., Professor of Chemistry and Physics; F. A. Gulley, B. S., Professor of Scientific and Practical Agriculture and Horticulture; Lieut. E. B. Bolton, 23d Infantry, U. S. A., Commandant of Students; W. R. Harper, A. B., Professor in charge of Preparatory Department; W. T. J. Sullivan, M. D., D. D., Professor of Mathematics.

BUILDINGS.

The College buildings erected are: A main building, containing the chapel and recitation rooms and a well-equipped chemical laboratory; a dormitory, capable of accommodating 200 students; a dwelling-house for the President; and last, but not least, a barn, stable and granary, *all built by student labor.*

THE FARM.

There are about 800 acres of land in the College farm, and, under the energetic administration of Prof. Gulley, many miles of fence have been laid and ditches dug. About 250 acres were put into crops this year. Cotton, corn, oats, sweet potatoes, sugar cane, etc., are being raised, and many acres have been seeded with grass. The dairy interest takes a prominent place, and a large herd of cows, some of the pure breeds, but many of native stock, is giving a rich return in milk and butter for the money invested.

LABOR SYSTEM.

The labor system is the same as at this College. The students work three hours a day for five days of the week. But some one asks: "Do they go out in the hot sun and work as we do in the North?" They certainly do. While the average temperature of Southern summers is greater, the extremely high temperature of the North is seldom attained, and sun-stroke is of rare occurrence in Mississippi. No person need fear injury from the summer's sun of the "Sunny South," for the abundant moisture of the air robs the sun of its fierceness. But we digress. The general impression when the College first started was, that because much of the manual labor in the State is done by the negro, the Agricul tural College students would be above work. But it is exactly the reverse. The majority prefer to work, and many are paying their way through College by the eight cents an hour they receive for their labor. And they do not work to "kill time." During work hours there is but little "slouching," very little reclining on the end of a hoe-handle, or reposing in the shade of the trees. The students are "enthusiasts" on the subject of labor.

One prominent feature of the College is military discipline and drill. The students dress in uniform and are divided into companies, with student officers. The General Government has stationed an officer at the College to teach military tactics, and has furnished guns and equipments. Drill is required of all students two hours each week. Probably this is the only institution which complies strictly with the terms of the act under which Agricultural Colleges were established, viz.: "Including military tactics." In most Agricultural Colleges military tactics are not included.

During the past year 354 students have matriculated, and the average attendance has been about 200. All parts of the State have been represented and the majority are earnest, hard-working students, anxious to acquire an education.

We have not the time to go further into the detailed workings of this College. Its first year has been highly successful and the future is radiant with hope. It has surpassed the most sanguine expectations of its friends and silenced the sneers of its enemies. It will do much to work out for the South the problem of industrial education—education of the brain and the muscle, making the one more useful and the other more honorable. K.

Colleges.

Brown University, Providence, R. I., has a fund of $864,500.

Adrian College, Adrian, Mich., has an endowment of $105,396.

Denison University, at Granville, O., received endowments to the amount of $100,000 this last commencement.

Amherst College, Amherst, Mass., recently conferred the degree of LL. D. on Attorney-General MacVeagh.

There has been established a department of political science in the University of Michigan. The degree Ph. D. is given at graduation.

Persons visiting Tokio, Japan, state that the Imperial Engineering College has the most beautiful college building in the world.

At its last commencement, Harvard graduated 182; Yale, 127; Dartmouth, 61; Wesleyan University, Middletown, Conn., 30; Amherst, 71.

Prof. Lazenby, Assistant in Botany at Cornell University, Ithaca, N. Y., is to leave that position and enter the faculty of the Ohio Agricultural College.

Considerable dissatisfaction is expressed concerning the management of the Homœopathic Department of the University of Michigan.

The State Normal School at Ypsilanti is to publish the first number of a paper devoted to its interests at the beginning of the school year next September.

President Everest, of Eureka College, Eureka, Ill., has accepted the presidency of Butler University, Irvington, Ind., in the Place of President Burgess, resigned.

Prof. Henry, of Wisconsin University, Madison, Wis., is married. THE SPECULUM congratulates the genial Professor, and hopes that he may soon make our College a third visit.

G. E. Seney, of New York, has offered the Wesleyan University, Middletown, Conn., an endowment of $100,000 if others will contribute an equal amount. Seventy thousand dollars has already been obtained.

At the last meeting of the Indiana Oratorical Association, a gentleman from Ashbury University, Greencastle, Ind., carried off the $50 prize, and a lady from the Indiana University, Bloomington, Ind., won the $25 prize.

Prof. W. W. Bailey has been appointed to the chair of Natural History and curator of the Herbaria at Brown University, Providence, R. I. Prof. Bailey is author of a work on collecting and preserving natural objects.

Lately endowments have been received by colleges as follows: Rochester University, Rochester, N. Y., $150,000; Yale College, New Haven, Conn., $250,000; Dartmouth College, Hanover, N. H., $150,000; Tuft's College, College Hill, Mass., $120,000.

Dr. Asa Gray has been for some time in Europe collecting material for a new botanical work. He has been on the continent for some months, but is now again at Kew Botanical Garden, London. Although Dr. Gray is 73 years old, he is still hale and enthusiastic.

Japan has two agricultural colleges under government control. One at Azo, in Northern Japan, was established by Dr. Clark, former president of the Massachusetts Agricultural College, and is mostly practical in its instruction. The other is situated at Tokio, and gives the oretical instruction.

Four college presidents have recently resigned and taken professorships in their respective colleges: President Orton, of Ohio State University, Columbus, O., and President Le Conte, of the University of California, Berkeley, Cal., being among that number. Prof. W. Q. Scott, Easton, Pa., has been elected to President Orton's place.

Ground was recently broken for important additions to the botanical department of Cornell University, Ithaca, N. Y., consisting of—1. A large addition to the present laboratory, the whole to be used exclusively by specially advanced students.—2. A new laboratory for general students.—3. A range of five plant houses. With these improvements Prof. Prentiss will be able to make better a department already very efficient.

College News.

Commencement August 16th.

Our French course is abandoned, for the present at least.

The College claims the finest campus in the United States.

Wanted by the students—two wells of good drinking water.

There will be a three week's vacation at the end of this term.

Five ladies are now students at the College. Mrs. Merrill graduates this month.

The lawns are badly cut up by heavy teaming, etc., in connection with the building.

An elegant reception and banquet was given by the Eclectic Society to the Phis, July 16.

The new tool house will stand in place of the old one, just south of the farm horse-barn.

Our Japanese student says that Japan never gets as warm as Lansing. We should hope not.

Prof. MacEwan intends to make many improvements in the library, when moved into the new building.

Professor Stewart Montgomery, of Olivet College, is taking a special course in higher chemistry under Dr. Kedzie.

Mr. A. J. Root, of Medina, O., editor of "Gleanings in Bee-culture," gave an hour's talk before the Christian Union, July 17.

The new farm barn will stand just in the line east of the other barns. But little progress has yet been made in its construction.

The class of '81, which graduates the 16th inst., numbers 33 members, larger by two than any preceding class.

Acknowledgments are due to Mr. Will S. Holdsworth, class of '78, of Lansing, for the design and drawing for the first page of the cover.

A. A. Crozier, '79, is here now taking a two months' course in microscopic botany. He will devote his attention to wild rice (*Zizania aquatica*, L.).

The College Cadet Band numbers fifteen members. It entertains the students with music twice each week. Byron S. Palmer, Class '81, is the present leader.

July 28.—The joists are laid for the first and second floors of the chemical laboratory; the library building is not above the foundation; the new barns are not begun.

The College library contains the best assortment of periodicals of any library in the State. Sixty are bound each year, and nearly as many more are read and often kept on file.

Especial praise is due to Mr. Howard M. Holmes, class of '81, and to our exchange and literary editors, for their earnest endeavors in behalf of THE SPECULUM when it was undergoing organization.

The appearance of the comet excited considerable interest among the students, and caused the breaking of many midnight naps of Prof. Carpenter's with calls to "open up" the observatory.

At the request of President Abbot, Prof. C. S. Sargent, Director of the Department of Forestry of the Tenth Census, has sent the College a box of 261 species of woods of the United States.

The arboretum, which contains about 200 species of trees and shrubs, grows more and more interesting with age. The species of trees and shrubs on the lawn increase the number very largely.

The interest that students take in economic science is shown by the diligent work they do in entomology, the great majority of them making large collections of insects and working out their natural history and habits.

The College is now connected with Lansing by telephone. Two instruments are at this end, one in the office of the secretary and one in the steward's rooms. The lawn looks well with its ornamental telephone poles!

Mrs. M. J. C. Merrill, '81, has been studying the development of the stomata, and the shape of other cells of the epidermis of both sides of cotyledons, and leaves of various ages. She has for the past four weeks been studying the oat plant.

Prof. Richard Weibull, of Lund, Sweden, spent a day or so at the College the last of July. He is traveling in this country in the interest of the Swedish government, studying our agriculture. He has been here some six weeks, and returns next spring.

Prof. A. J. Murray, V. S., of Detroit, gave very general satisfaction in his lectures and teachings in veterinary science during the first half of the present term. Such instruction fills a long-felt want in the college curriculum. A more extensive course seems yet to be demanded.

The students maintain at present four literary societies—Delta Tau Delta and Phi Delta Theta, both branches of secret Greek fraternities, and the Union Literary and Eclectic Societies, which are open and local. Each of these societies has furnished rooms of its own in the dormitories.

One of the most interesting features of the College grounds is the wild garden, maintained for purposes of botanical study. About five hundred indigenous plants are now growing in the ponds and rockwork. The arrangement of plants into natural orders is gradually being made.

Prof. A. J. Cook, Class '62, is one of the editors of "Psyche," the organ of the Cambridge Entomological Club. This periodical, issued monthly, gives a very full bibliographical notice of all the current articles on entomological subjects, and so will prove a very efficient aid to students of this branch of science.

In farm crops, the wheat is very good, much above the average for this year; oats fine; corn promising; hay a good crop and well secured; roots thriving. Of the latter crop, only about six acres are raised. Their place is partially supplied by oil meal. For the root crop, rutabagas are sown, as beets have not kept so well.

The College Christian Union is now enjoying excellent health. The College is always proud to call attention to this, its best Society. Parents who, with many misgivings, send their sons to College, may rest assured that they will find a most excellent home in the Christian Union. It will furnish employment for all earnest working Christian students.

Prof. R. C. Carpenter deserves credit for getting a telescope and accessories in good working trim at the College. The instrument is a fine one, although rather small—5½ inches. It is manufactured by the celebrated Alvan Clark & Son. The observatory is located just northwest of the Professor's residence, is of brick, with movable roof. The telescope will soon be mounted on clock-work, the necessary means being now on hand.

Prof. Cook has learned that those erratic insect pests, the army worm (*Leucania unipuncta*, Haw.), are making a serious onslaught in the oat fields in St. Joseph County, about White Pigeon. There is one very strange peculiarity in this invasion. The army worm is notorious for making its attacks after very dry seasons, but last year was remarkable for its frequent and copious rains in Michigan. They also appear in Van Buren County.

C. C. Lillie, in the study of the twining of the wild morning glory, has discovered two plants which twine to the left, contrary to the prevailing fashion. Last year E. P. Clark discovered one, and the year before J. W. Beaumont. This year Dr. Beal has found within a rod or so of each other four different plants, all of which twine to the left. Many hundreds of plants have been examined at different times, where they are very abundant.

Prof. Kedzie has completed the extensive analysis of wheat cut every day for twenty-one days, beginning at the last of June, 1879, to determine the relative value of each sample for purposes of food. These specimens of wheat were cut at the same hour each day, from the time the grain began to mature until it was dead ripe. The results, which are not yet deduced, will throw much light on the perplexing question of when best to cut wheat for food. Like his extensive analyses of white and yellow dent corns, this will be of great service to farmers. Results will be announced next issue.

The field experiments on the farm this year consist of an experiment with special nitrogen fertilizers on corn, for the purpose of ascertaining the agricultural sources of nitrogen; an acre of broom-corn to be manufactured into brooms by the students next spring; small plats of Crossley's Ohio and Blount's Prolific field corns to test their value in this place; plats of one acre each of sugar cane and Minnesota amber cane to determine their value as sugar crops in this locality. Mr. W. C. Latta, class '77, has charge of these experiments. Dr. Kedzie will give accurate chemical analyses of the sugar canes.

The amount of labor involved in the taking of the daily meteorological observations is very great and should be appreciated by the public. This system at the College is due to the untiring energy of Prof. R. C. Kedzie. Observations are taken at 7 a. m., 2 p. m., and 9 p. m. They include temperature, barometric pressure, pressure of vapor of water, relative humidity or moisture of the atmosphere, direction and force of winds, kinds and amounts of clouds, amounts of rain, snow, hail, etc., and amount of ozone in the air. These thorough observations have been continued for eighteen years. They are published each year in the agricultural reports.

Last year Prof. Cook tried some experiments with a view of determining some better methods for the destruction of our most harmful insect pests. The results were very encouraging, and were embodied in a paper read before the American Association for the Advancement of Science at the Boston meeting. These experiments had reference to the use of London purple in fighting the codling moth, and bisulphide of carbon to destroy the various subterranean insects, such as bore into or eat the roots of plants. This year he is repeating these experiments, and is further seeking for some means to keep such insects as cannot well be destroyed while at work from making attacks. He is meeting with very encouraging results, and is making use of carbolic acid, which is one of the most offensive substances to all insects.

Commencement occurs Tuesday, August 16. The following students are the orators of the occasion:—Carroll Clark, of Orion, Oakland County; Arthur Jones, of Lansing; Josiah Knight, Lee's Park, Nebraska; Byron Palmer and Willis Palmer, of Orangeville, Branch County; Alva Sherwood, New Troy, Berrien County; Arthur Turner, Sturgis, St. Joseph County, and Jason Woodman, Paw Paw, Van Buren County. A class-day will be held on the evening of August 15, at which Mr. Howard Holmes, of Lansing, will give the president's address; Chas. W. McCurdy, Danville, N. Y., the oration; W. R. Hubbert, Detroit, poem; Sherman Upton, Big Rapids, the prophecy, and Jason Woodman, the history. This will be the first commencement ever held in August, and the members of the class are striving to make it a distinctive one.

There is no part of the College premises which shows so much improvement as the vegetable garden. It has been placed this year under the charge of Mr. Chas. W. Lee, formerly of Detroit, who is a practical gardener. Heretofore this important depart-

ment has been left to a person who had charge as well of all the lawns and orchards, and sufficient time could not be given to the garden itself. Mr. Lee, however, undoubtedly possesses more knowledge on running a garden for profit than any other man ever connected with the college. He made a visit last month to the best market gardens of Michigan, at Detroit, but says that he will challenge them or any one else to produce as good a patch of onions as he has. The whole garden is a model of cleanliness and order. The crops of lima beans, cabbages, string beans, beets, celery and potatoes are as fine as could be wished for. The garden is the envy of farmers.

The chemical laboratory is being so remodeled as to form one of the most convenient and complete buildings of its kind in the Union. The addition which is now being built to the south end of the old building is to contain on the basement or ground floor a quantitative analysis room to accommodate twelve students, also a similar room of two tables for private use, and two balance rooms for the delicate balances, books of reference, etc. The second floor has a lecture room 38 x 40 ft., which will accommodate 160 students, an instrument room, private laboratory and study. The old analytical room will remain essentially as at present. The north wing, which now contains the study and lecture room, will be converted into one large analytical room with accommodations for forty-four students, or for ninety-two students with the present analytical room added. Full facilities for organic analysis will be included.

The cattle on the College farm number about fifty head, including two Peri Duchesses, four Roses of Sharon, two Victoria Duchesses. The sire of the head of the shorthorns is from Booth foundation, with top crosses of Dukes and Roses of Sharon. Over half of the cattle are Shorthorns. Galloways and Devons are represented by one animal each; the Jerseys by three; the Ayrshires by quite a number. Some friends of the College would like to see the Holsteins and Herefords represented. All animals with defective pedigrees have been disposed of. The cattle are now much finer than ever before. The sheep on the farm have also received valuable additions. There is a flock of pure Atwood registered merinos. The stock was obtained from A. D. Taylor, of Romeo. The other merinos are improving every year. The long-wools have been nearly all sold. There are 30 southdowns which are fine specimens. The swine are represented by about forty head, most of which are Essex of excellent quality.

For twelve years Dr. Beal has been in the habit of speaking, writing and acting in favor of an improved method of teaching botany. To a considerable extent he follows the German method. He is pleased with what Prof. J. T. Rothrock, of Pennsylvania University, (who is now in Germany), says in the *Botanical Gazette:* "American laboratories give systemic botany greater attention than the German anatomical and physiological botany. I am persuaded the German is correct. The German school builds a solid foundation and leaves the student mainly to give the superstructure such shape as he will. The laboratories of Harvard, Michigan (two) and Iowa have taken the initiative in introducing needed reforms. First of all, students are indoctrinated with the idea that they will make the most substantial mental gains if they study each individual plant exhaustively. It is the idea, the student should be saturated with 'through and through.' It is the foundation of his foundation, and makes critical investigations press upon him with the weight of an ever-present duty. Yet this is just the hardest lesson every American teacher finds it to inculcate."

The experiments under the professor of botany and horticulture this year consist of the testing of the vitality of an assortment of vegetable seeds obtained from fourteen or more leading seedsmen; the testing of the seeds of all the clovers and grasses in the markets; the testing for the fourth time of the growth of Indian corn from seed of the upper ear on the stalk as compared with the lower ear; the testing of dark colored seeds of red clover as compared with light colored seeds; experiments with a view to improve the keeping qualities of yellow Danver's onions by planting seeds from onions which keep the latest in the spring, and experiments on the yield of corn as influenced by root pruning. He has also begun an experiment in common with several other professors in different States, on the yield and quality of corn which has been brought from places one hundred miles apart, and crossed with corn raised at Lansing, as compared with the same foreign corn which has not been crossed. Many seedling fruits and wild plants from seed supposed to be crossed are being grown, and experiments begun in former years are being continued.

James Satterlee, M. S., '69, owns a farm near Greenville, Mich. Everyone who has seen his place pronounces him a first-class farmer. He is respected by his neighbors. He is a member of the executive committee of the State Horticultural Society.

Personals.

THE Editor of this Department desires the earnest co-operation of the alumni in aiding him to fill these columns with interesting items. Give occupation since graduation, what offices held, whether married or not, etc., etc. Let this receive prompt attention from every alumnus.

J. R. Monroe, '78, is prospecting in Colorado.

Albert B. Simonson, '77, is a doctor at Minong, Isle Royal.

O. R. Foote, once a '78 boy, is an honest banker at South Haven.

Prof. R. C. Carpenter will spend his vacation in Orion, Michigan.

W. L. Simpson, once with the boys of '81, is a cadet at West Point.

Prof. Johnson will take a short vacation visiting friends in Cass County.

Dean F. Griswold, Class '75, is at Northville, devoting his attention to bees.

Joel S. Pardee, Class '78, is at present practicing medicine at Spring Grove, Minn.

A. J. Pierce, once with the Class of '68, is a prominent surveyor in South Haven.

Malcom Norton, formerly a member of the Class of '70, is a prosperous farmer near Howell, Mich.

Frank S. Kedzie, '77, assistant in chemistry, will spend his vacation in New York visiting his friends.

Frank W. Hastings, '78, is post master at St. Louis, Mich. The office pays a salary of $1,600 per year.

Orrin P. Gulley, Class '79, is a farmer and township superintendent of schools at Dearborn, Wayne Co.

Albert S. Osborne, once with the Class of '82, is instructor in the Rochester (N. Y.) Business University.

E. H. Hunt, '77, is engaged in farming at Saranac, Mich.; has held offices in the Grange and in other societies.

Wm. O. Fritz, '77, is a prosperous farmer at Pompeii. Has been superintendent of public schools. Unmarried.

O. E. Angstman, 75, LL. B., Michigan University, '77, was lately married. He is a prominent lawyer in Monroe.

Miss Eva Coryell, '79, has just finished a year's school near Grand Rapids, and is now at her home near Williamston.

"Billy" Sloss, '76, is selling dry goods at Dearborn during the day and calling on the young ladies of Detroit in the evening.

Charles Watson, '66, is principal book-keeper in the Northwestern Mutual Life Insurance Company of Milwaukee, Wis.

John J. Kerr, '71, is practicing law in Hubbardston. He is also a valuable correspondent of Brother Gardner's Lime Kiln Club.

Bion Whelan, '77, M. D. at the Michigan University '79, is practicing at Kent City, Mich. Is superintendent of schools. Married March 4, 1881.

Frank Hodgeman, Class '62, and Frank Davis, Class '68, are in Utah in charge of important and responsible work in the way of railroad construction.

J. D. Carpenter, one year with '79, graduated as M. D., '81, in the New York College for Physicians and Surgeons, and is now practising at Rolla, Wis.

Prof. MacEwan will spend most of his vacation at the college. He and Mrs. MacEwan intend making a short visit among their friends at Kalamazoo, Mich.

President Abbot will spend his summer vacation at Harbor Point. We hope that an occasional rest will enable him to fulfill his accustomed duties for many years to come.

Lyman A. Lilly, class '77, is an influential farmer at Allegan. His specialty is fruit culture. He is Yellows Commissioner and Treasurer of the Allegan County Agricultural Society.

Dr. W. J. Beal has been appointed by the Governor to represent the State in the American Pomological Society at Boston next September. He will present a paper on "Pear Blossoms."

Fremont E. Skeels '78, taught school until '80, when he engaged with Wesley Emery, of Lansing, in the book business, at which place he is still to be found. Married, February, 1881.

Prof. W. W. Daniells, Class '64, professor of chemistry in the Wisconsin University, is spending his vacation in Europe. He is accompanied by his wife, two children and his wife's mother.

A. G. Gulley, '68, spent his first three years in farming, and then three years in Rochester and Detroit learning the details of the nursery trade and has ever since been engaged in that work.

Chas. W. Sheldon, Class '75, till recently a prosperous farmer at Burr Oak, has sold his farm and has gone to California on a prospecting excursion.

Evert S. Dyckman, once a member of the Class of '78, is junior partner in the extensive peach orchards of A. S. Dyckman & Son, South Haven.

Secretary R. G. Baird, is compelled to spend most of his time at the college this summer, on account of the large amount of business. He will probably spend one week in the region of Petoskey.

Prof. F. A. Gulley, of Starkville, Miss., is expected here soon. He went to Mississippi with Prof. R. F. Kedzie last year as an instructor, and is now Professor of Practical and Scientific Agriculture.

Carl V. Hinman, '78, has been banking, book-keeping and clerking since graduation. He spent last winter in Chicago attending lectures on medicine. He expects to return to Chicago next winter to complete his course.

Eugene J. Rauchfuss, '79, has been with his father at Golconda, Ill., until this spring; he accepted a position with Bement & Sons, of Lansing. He is a member of Eight o'clock Club and the Knights Templar Band of Lansing.

Prof. E. M. Shelton, '71, remained at the College three months after graduation as post graduate. In 1872 took charge of the Government farm in Japan. Has been Professor of Agriculture in Kansas Agricultural College since 1874.

S. M. Millard, '64, M. S., '67, is a prominent lawyer in Chicago, Ill. He has an elegant country residence with pleasant surroundings. He is trustee of the Illinois Industrial University. He is developing a wheat farm in Dakota.

John E. Taylor, '76, has been engaged in driving the Indian over the plains of Kansas and Nebraska. At present he is driving cattle and is meeting with good success. It is probably a good thing for the Indian that he has changed his business.

Russell A. Clark graduated in 1876 and then took a law course; opened an office in Portland in 1878, but moved to Lansing in 1879 and is at present a member of the responsible firm of Dart & Clark. He is successful and making good progress as a lawyer.

Prof S. M. Tracy, '68, after graduation, was engaged in various pursuits until appointed editor of the *Practical Farmer*, of Philadelphia, Pa., in 1875. Since 1877 he has been Professor of Botany and Entomology in the State University of Missouri at Columbia.

W. C. Latta, '77, is an assistant on the College farm, but is mostly engaged in taking special studies. He has been studying the wheat plant in all its stages. Secretary of Ingham County Farmers' Club, 1879, and foreman of horticultural department of the College, 1880. Married in 1879.

Died, Saturday night, July 16, at about 12 o'clock, Lyman Mason, '69. After graduation in 1869, Mr. Mason went to the University of Michigan and has since been a surveyor. Lately he has been engineering at the Northern terminus of the J., L. & S. R. R., where he was taken sick.

Mr. Knapper, our efficient superintendent of the horticultural department, will remain at the college during vacation, to complete the large amount of work he has laid out. He has made many improvements in the looks of the grounds since here, and the students all join in wishing him success.

C. E. Bessey, M. S., Ph. D., '69, has for some time been Professor of Botany in Iowa Agricultural College. He has lectured on the subject in California and in Minnesota. He has studied some in the laboratories of Harvard. He is a first-class teacher and a live man. A notice of his text book appears in our columns.

Oscar Clute, '62, M. S., '65, is a clergyman in Iowa. He is also a noted lecturer, having written several lectures on scientific and other topics that met general approbation. He is author of "The Blessed Bees," which received favorable mention from many of our journals: The *Atlantic Monthly*, *Harpers' Magazine*, etc.

C. L. Ingersoll, M. S., '74, was foreman on the farm here where he soon after became Professor of Agriculture. In 1879 he was tempted by a larger salary and other considerations to accept a similar chair in Purdue University, Lafayette, Ind., where he has become very popular and has taken a prominent place in the faculty.

Prof. R. F. Kedzie, son of Prof. R. C. Kedzie, of Lansing, arrived here the 14th ult., for a two months' visit at his alma mater. Mr. Kedzie has been engaged for the past year at the Agricultural and Mechanical College of Mississippi, located at Starkville, where he was elected to the professorship of chemistry and physics during the present summer. The Mississippi College is modeled after our own, and although in the first year of its existence, is flourishing nicely.

R. T. McNaughton, '78, is in the real estate business at Jackson; also engaged in developing a tract of land (100 acres), which has been laid out for a cemetery near Jackson. He has lately visited several Southern cities for the purpose of inspecting their cemeteries. He was married in 1880 and has a "fat, energetic little girl baby."

C. C. Georgeson, '78, immediately after graduating, took a position as assistant editor of the *Rural New Yorker*, where he remained until July, '80, when he was appointed Professor of Agriculture and Horticulture in the Agricultural and Mechanical College of Texas. He still holds the position and receives a salary of $1,500.00.

W. W. Tracy, M. S., '67, was Professor of Horticulture here 1871-2. In company with H. G. Reynolds he engaged in the fruit business in the Grand Traverse country. For the past year or two he has been managing the experimental grounds of D. M. Ferry and Co. in Detroit, Mich. We are confident that he is doing an excellent work in this business.

Hon. C. W. Garfield, M. S., '70, is a farmer living near Grand Rapids, Mich. He has for some years been the efficient secretary of the State Horticultural Society, where he has done excellent work. At one time he was foreman for three years in our horticultural department. He was a member of the last House of Representatives, where he made his mark, (+)

James Troop, '78, took a post graduate course in '79. Has been superintendent of schools, and is now assistant in horticultural experiments. He devotes one-half of his time to the study of botany under Dr. Beal. He pays especial attention to the grasses, collecting some for his herbarium, and is making a collection of bundles to be exhibited at the State Fair.

Mr. Graham, though not fully recovered from the effects of the illness which prevented his graduation in '79, is slowly gaining strength and health. He spent the hot season of last year in Northern Michigan, and will return there this season if he is unable to stand the heat in Southern Michigan. Mr. Graham has many warm friends here, all of whom wish for his complete restoration to health.

Frank Benton, '79, married immediately after graduating, and in January following, left for Cyprus in search of the Cyprian bee. Since then he has been to Java, Ceylon, and adjoining islands, after a large black bee (*Apis dorsata*). The reports are that his search, which at first was fruitless, has at last been successful. Through his efforts the Palestine and Cyprian bees have been introduced in America, and probably the *A. dorsata* soon will be

Profs. Kedzie, Cook and Dr. Beal, will attend the Society for the Promotion of Agricultural Science, to be held in Cincinnati, August 16. Dr. Beal will give the president's address, and an article on "Testing seeds." Prof. Kedzie will present to the society, articles on "The ripening of wheat," and "Vesiculating test for wheat flour." Prof. Cook will present articles on "Methods of destroying injurious insects," and "New species and races of bees."

Henry G. Reynolds, '70, owns an extensive farm upon the peninsula at Grand Traverse. His orchard is young, he making apples and pears his specialty. From his premises is a delightful view of the bay. He is at present a member of the Michigan State Board of Agriculture. Reynolds and Garfield of the same class were inseparable companions, and their intimacy is still continued. Mr. Reynolds has been to Europe twice, once to study in Germany, and once in '74, as a pleasure trip in honor of his marriage.

B. D. Halsted, M. S., D. S., '71, spent four years in Harvard University studying botany and chemistry, and other subjects. For a year or so he assisted in editing the *American Agriculturist*, since which time for six or eight months past he has been the editor-in-chief. He has had experience enough in the editor's chair to be able to cut down long articles or draw his pen across pet sentences of some of his contributors with the greatest cold-blooded indifference. At one time he taught in the High School of Chicago, where they doubled his salary because he did so well. He is not married. He boards with his class-mate, Mr. Felker.

Literary Notes.

BESSEY'S BOTANY.—This work appeared some months ago, published by Henry Holt & Co. as one of the American Science Series. The author is referred to elsewhere as Class of '69, and his teaching is complimented under "Teaching Botany." This is an excellent hand-book for beginners in the use of the compound microscope in studying the minute structure of plants. Although many of the cuts and much of the text remind one of Sach's Text Book, yet the author has shown much that is original in treat-

ment of topics and arrangement of text. For the purpose alluded to we have nothing anywhere "up to it" for use in the laboratory. "The New Botany" in America is not yet ten years old. It is making rapid progress in a few places. Bessey's book is just the thing to help the good work along. Some are trying it as a text book without the aid of microscopes. The author, as well as all lovers of the beautiful science, will be sorry to know that this book is thus misused. The book to be used correctly should only be studied in connection with laboratory work, which should occupy most of the student's time in connection with these subjects. We are very fortunate thus early to have so good a book for the laboratory.

REPORT OF THE MICHIGAN HORTICULTURAL SOCIETY FOR 1880.—We have the report for 1880, and it is one of which the people of the State may feel proud. Secretary C. W. Garfield is a graduate of the Agricultural College, so we naturally take an unusual interest in his good work. The body of the report contains the papers and discussions of the two winter meetings, the strawberry meeting and the State fair. We are glad to notice that several professors of the University contribute papers. Those of the Agricultural College have always contributed something. The Secretary has been very efficient in aiding the formation of auxiliary societies in the several counties of the State. There are now twenty-one of these societies. The Secretary's portfolio, as usual, contains a fine selection of short "clippings" on pomology, floriculture, landscape gardening, arboriculture and the garden. The report contains an excellent and carefully prepared catalogue of the plants of Michigan, contributed by C. F. Wheeler and Erwin F. Smith. For accuracy and completeness the catalogue is easily ahead of anything of the kind ever made in the State. The authors have made many additions to former lists of plants, especially in the more difficult orders, such as Salicaceæ, Cyperaceæ and Gramineæ. The report we are considering is the tenth, and contains a general index to the previous volumes. This is a model for accuracy, completeness and arrangement, and must be of great service to those wishing to consult former reports.

CATALOGUE OF MICHIGAN PLANTS.—This work, the joint labor of C. F. Wheeler and Erwin F. Smith, of Hubbardston, Ionia County, assisted by all botanists in the State, is one of very great importance to botanical science and of much value to the public generally. It includes not only a bare list of plants found growing n Michigan, as have previous catalogues, but gives in addition, under each important species, remarks which are of real value alike to working botanists and to all others. The scientific names are brought down to the latest date, and all the popular names of each plant are given. Plants of value as timber, shade, ornament, and those possessing medical qualities, are designated. A well-written preface gives an account of the early botanists of the State, and of the distribution of forest trees and interesting plants generally, giving a general summary of the peculiar flora of Michigan. The catalogue contains 105 pages, neatly printed, with a fine colored map of Michigan, mailed post-free for 50 cents. Copies can be obtained of the authors or of Dr. Beal at the college. The work is indispensable to every botanist; it should also be owned by every educated farmer in the State. The authors certainly deserve very great praise for their labor.

BEE-KEEPER'S GUIDE OR MANUAL OF THE APIARY.—Sixth Edition; Eighth Thousand: Sent by author for $1.25. This work is unique in bee literature, as it treats thoroughly of the science underlying bee culture, as well as of the art of bee keeping. Under the scientific portion, the anatomy and physiology of insects in general, and of bees more especially, are thoroughly explained, with full and admirable illustrations. The practical part of the subject is thorough, clear, up with the latest improvements, and copiously illustrated. That the work meets a need among apiarists is shown by its sale. In 1876 the first edition of 3,000 was issued; in two years this edition was exhausted. In 1878 appeared the revised and much enlarged second edition. So great was the sale, that during the same year the third and fourth editions were demanded. Each year since has called for an additional 1,000, till now the eighth 1,000 is out. Each edition is revised to meet the requirements of this rapidly progressive art. The last edition gives the latest on wintering, and on new varieties of bees, which latter is called for, especially, from the hard and valuable labor of Mr. Frank Benton, Class '79, who has spent the last year in Asia, breeding and sending new races of bees to America.

THE HUMAN BODY.—By H. Newell Martin, John Hopkins University, Baltimore, Maryland. $2.75. This is the third of the Science Series, published by Henry Holt & Co., and is no whit inferior to the Zoology by Dr. A. S. Packard or the admirable Botany by Prof. C. E. Bessey, Class '69. It is another of the valuable contributions to American science from the great university at Baltimore. Prof. Martin treats of the human body, not simply as an anatomist or physiologist, but as a biologist, and so man is considered as a part of a great whole, and his relations to other animals considered. The work is much after the pattern of Foster's Physiology, whose author was Dr. Martin's old teacher, yet it is less full and abstruse, and so better adapted to the general student or for use as a college text book. The style is not so admirable as Dalton, yet the work is preferable, as more equable in its treatment of subjects. From Dalton we do not know that a man has any kidneys, and we are left equally ignorant of most of the glands. While some subjects, as Proximate Principles, and Corpora Lutea are dwelt upon far too extensively for the size of the work. This work is less cumbrous and far better written than is Flint's Physiology. The anatomical descriptions, and the practical hints on hygiene also commend the work. It is well illustrated, many of the cuts appearing for the first time. From the recent date of its publication, its fullness, its wise division in treating different subjects, it is perhaps the very best work extant for the general student, or as a work for our scientific and literary colleges.

Let us Smile.

College Pun and Conundrum Club.

MR. EDITOR: In making our first report, I would say that the club is in most excellent condition, socially, morally and physically. Some idea of the work done in the past term can be gleaned from the following figures: Number of puns and conundrums perpetrated during the term, 1527, of which 27 were fresh and 1500 stale. Number of abortive attempts at punning, 6725. Number of conundrums correctly answered, 0. Number of puns not understood at the present time, 637. Number of persons driven insane, 15. Number of jaws broken, 25. Number of cases of earache, 3112.

Desirous of lessening the number of cases of earache, and wishing to bring punning up to a science, the club has unanimously decided that the following shall not be used:—

In addressing a senior to remark, "I've *seen yer* face before." To pass the H^2O, and gently whisper, "*what a* man you are;" or to respond with "*eau* don't." To assume a thoughtful air and remark "I *knifer* can *fork* et it." To eye the cold meat at supper and ask, "is it *beef* itting that I should eat it?" To remark as the usual cup of strong hyson is placed by your plate that the waiter evidently wishes to *tease* you, or that "*teas* but a little faded flower." It is also suggested the so-called conundrum relating to the relative difference between the Prince of Wales, a bald-headed man, and a monkey's maternal parent be shelved forever.

We introduce for your inspection, a few of our latest "gems of thought," in the hope that some poor soul wandering from the fold, may be brought by their influences nearer to the paths of peace.

Why are New York politics like a chemical element?

Because there's a "Platt in 'm."

Why is a picture of Raphael's Madonna like a celebrated actress?

Because its "Mary and-her-son."

I will also present a few "creations" by some of our younger members, who, while they are not yet capable of making puns, are full of promise for the future:—

Ho! ye mighty senior! He |
Goeth forth with ye degree, |
His alma mamma gives to he. |

And the season now draws neareth,
When the freshy-fresh appeareth;
Come from all their mammas deareth.

The Professor said: "Only the female mosquito has mouth parts sufficiently developed to make it lively for man," and the junior leaned over to his lady seat-mate and sighed, "yes and the highest of animals have the same peculiarity."

Prof.—"Which comes first, the monoxide or the dioxide?" Soph.—"Why we *always* moan before we die." Chorus by the class.

We give the following as a specimen of the "fearfully and wonderfully made" puns that come from our senior class—the villian is still at large:—

If I should wake up in the night, and hear my partner sigh in his sleep, and fear that he was sick, why would it be like a chemical combination?

Because it would be "fear o' sigh at night." (Ferro-cyanide.)

SCRIBE.

COLLEGE CALENDAR.

1881.

September 6, College year begins; examination for admission into Freshman Class.

November 22, Autumn Term ends.

For entrance into College, September 6, 1881, students may present themselves for examination on May 17th, 9 A. M., or September 6th, 9 A. M., at their option.

1882.

February 21, Examination for admission at 9 A. M. Spring term begins at 8 P. M.

May 16, Spring term ends.

May 16, Examination for admission into Freshman Class, September 3.

May 23, Summer term begins 8 P. M.

August 15, Summer term ends.

August 15, Commencement.

August 16, Meeting of Alumni.

September 5th, College year begins 8 P. M.; examination for admission 9 A. M.

November 19, Autumn term ends.

For admission into College, September 5, 1882, students may present themselves for examination on May 16, 9 A. M., or September 5, 9 A. M., at their option.