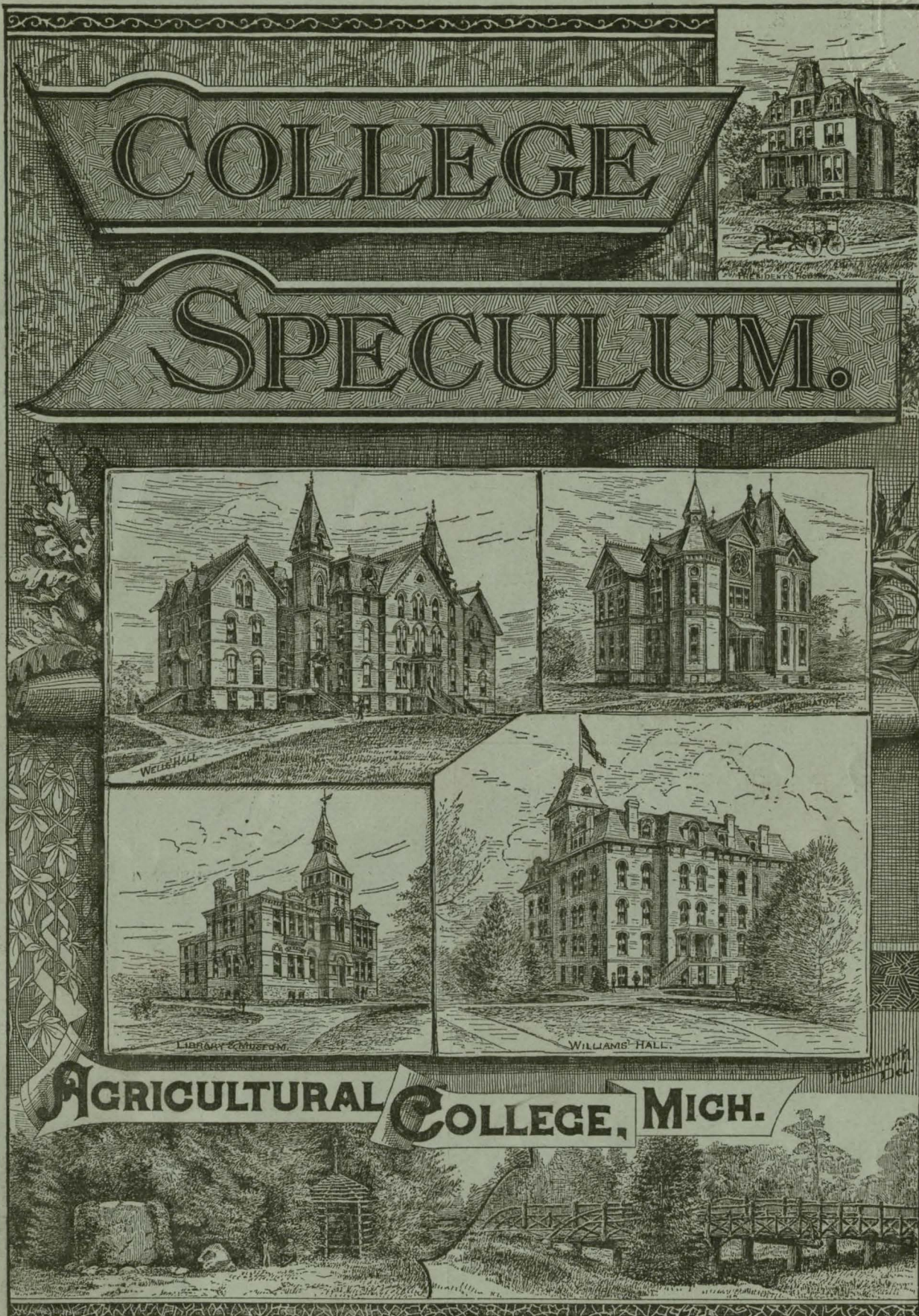




APRIL 1, 1886.



Entered at the Postoffice at Agricultural College, Mich., as Second-class Mail Matter.

THORP & GODFREY, STATE PRINTERS AND BINDERS, LANSING.



**BROAS, the One-Price Clothier, Undersells them all on Clothing,  
Hats, Caps, and Gents' Furnishing Goods.**

**CORNER MICHIGAN AND WASHINGTON AVENUES, LANSING.**

**GO TO**

**R. B. SHANK & Co., THE GROCERS,**

**OLD LAND OFFICE, LANSING, MICH.**

**For all kinds of Staple and Fancy Groceries.**

*Fruits and Vegetables a Specialty. The largest Wholesale and Retail Grocery House in Central Michigan*

**CASSEY & WHITNEY,**



**PHOTOGRAPHERS**

**OVER LANSING NATIONAL BANK.**

**Special Rates to Students.**

**U. H. FORESTER,**

**WHOLESALE AND RETAIL**

**Books, Stationery, Toys and Fancy Goods.**

**CORNER STORE, OPERA BLOCK,**

**LANSING, - - MICH.**

**CROTTY BROS.,**

**DEALER IN**

**STATIONERY**

Blank Books, Periodicals, Wallets, Pocket Books, Albums  
Bibles, Prayer Books, Law Blanks, Seaside Library  
for Summer Reading, Ink, Pens, Frames,  
Visiting Cards, School Books, etc.

Subscriptions taken for any Magazine or Paper published in  
the World.

**TWO DOORS NORTH OF POSTOFFICE,  
LANSING, - MICHIGAN.**

**FRANK WELLS,**

**HEADQUARTERS FOR**

**American Watches,**

**JEWELRY, AND PRESENTATION ARTICLES.**

**LANSING HOUSE.**

**Terms \$2.00 per Day.**

**J. ABERLE.**

**LANSING, MICH.**

**SEDINA & LICHTER,**

**— THE —**

**Nobby Tailors,**

*Have the Finest Selection of Suitings of any  
House in the City.*

**214 N. Washington Ave. SPECIAL INDUCEMENTS TO COLLEGE BOYS**

**IONIA CITY LAUNDRY!**

**COLLARS AND CUFFS A SPECIALTY.**

**GOOD WORK GUARANTEED.**

**COREY & OLMSTEAD.**

College Agents: **JANSON E. HAMMOND, BAILEY B. SMITH,**  
Room 76, Wells Hall.



# THE COLLEGE SPECULUM.

VOL. V.—No. 3.

AGRICULTURAL COLLEGE, MICH., APRIL 1, 1886.

WHOLE No. 19.

## Alumni Poem—An Epic of '61.

O. E. ANGSTMAN, '75.

The morning sun with brilliant rays,  
Adorns the dewy eastern hills;  
And gentle breezes stir the trees,  
Where dance the sparkling mountain rills.  
The little hamlet in the vale,  
Seems scarcely yet to be astir;  
Though morning light is far advanced,  
When rest must end, and work recur.

The water-wheel upon the stream,  
Is silent, useless and decayed;  
The whirling stones and busy looms,  
No longer turn with bustling trade.  
No traffic on the little mart,  
Its action, stir and life are gone;  
The streets seem like a holiday,  
With mirth, and joy, and cheer withdrawn.

And where are now those stalwart men,  
We always saw in former days?  
Here are but women and gray-heads,  
And little children at their plays.  
Alas! the year is sixty-one,  
Rebellion, war and civil strife,  
Are loosed on our beloved land,  
Threat'ning the very nation's life.

O brave Missouri, doubly grand,  
How melancholy is your fate!  
Traitors without, traitors within,  
A traitor at your helm of State!  
Hark, she commands her loyal sons,  
With speed to strike her cruel foes;  
Ere dark secession raise her flag,  
With quick, triumphant, deadly blows.

With rebel, fierce, guerilla raids,  
Her life-blood ebbs at ev'ry vein;  
Rise loyal sons! a world looks on!  
Her sacred honor you'll maintain.  
Down with her chief executive!  
Up with the banner of the brave!  
Though it shall cost her heart's best blood,  
The State and Union must be saved!

What wonder, then, her looms are still,  
Her mill-stones, wheels and busy marts;  
Her true sons heard their country's call,  
Quick to respond with willing hearts.

\* \* \* \* \*  
But whence those sounds of tramping steeds,  
Anon borne on the morning air,  
Which seem to come far up the hill,  
With faint drum-beat and trumpet's blare?

Again all's silent as the grave,  
Save still that muffled tramp, tramp, tramp,  
Causing the stoutest hearts to chill:  
Cov'ring the brow with terror's damp.  
The villagers with anxious eyes,  
Now see far up the sloping hill,  
A troop of horse, with manner strange,  
Moving so swift and yet so still.

Nearer, and nearer yet they come,  
Their forms they now can plainly see;  
All sit superb upon their steeds,  
With slouching hats armed cap-a-pie.  
A sable pennon, strange and weird,  
Now rolls out on the morning breeze;

No star, no stripe, no badge, no seal,  
Its murky ebon field relieves,—

But glaring from its inky folds,—  
Disclosed in ghastly white relief,  
The dreaded, fearful, deathly name,  
Of the guerilla rebel chief!  
All faces blanch, all lips are dumb;  
No seer now needs their fate to tell;  
That name upon the sable flag,  
One word tells all—it is, QUANTRELL!

No hope, no mercy, no escape,  
From this dread fiendish scourge of men:  
But like the mighty avalanche,  
Descending on the Alpine glen,  
He comes, a moving, living woe—  
Leading an outlawed madmen band,  
Whose mercy and compassion are,  
The carbine-shot and fire-brand.

But let not pen attempt to paint,  
The sick'ning horrors of that scene;  
Where brutal, calm, remorseless men,  
Themselves like savages demean:  
Where age and youth and innocence,  
Defenceless women, babes and all;  
Alike must meet a common doom,  
Mute, piteous, dumb, each one must fall.

\* \* \* \* \*  
The ev'ning sun with milder rays,  
Does now adorn the western hills;  
And gentle breezes stir the trees,  
Where dance the sparkling mountain rills.  
The little hamlet in the vale,  
Alas! is of the things that were;  
There's scarce a stone to mark the place,  
Where late was life, and joy, and stir.

Its altars, homes and firesides,  
Are silent desolation all;  
The smoke from its blackened ruins,  
Hangs o'er it like a sombre pall.  
Remorseless, the guerilla horde,  
Moves up the hill with brutal pride,  
For they went from that scene of death,  
Leaving not one single soul alive.

But who is this descends the hill,  
With quick'ning strides adown the gap?  
A soldier with the union blue,  
And captain's golden shoulder-straps.  
Too late to turn, he sees the band,  
Then yields with steps that never lag;  
For he too, knew the meaning well,  
Of that dread-omened sable flag.

Instinctively he casts his eye,  
Upon the little vale below,—  
The hardened outlaws even paled,  
To see that strong man's awful woe.  
He looked where once had stood his home,  
Now only ruin, dust and smoke,—  
One choking sob, a ling'ring moan,  
And he had calmed the heart that broke.

"It has then come to this," he said,  
"Our all, an offering must be,  
Our bleeding country asks it, as  
The price we pay for loyalty."  
The outlaw turned that evil face,  
Black with malignity and hate;  
"Tis thus," he said, "I'd have them all,  
Who would coerce this sovereign State!"



"We do not fear," the soldier said,  
 "The honest foe, however mad;  
 But such as you, who skulk behind,  
 A craven pirate's fell black flag!  
 And though you fire the homes, upon  
 The State's ten thousand hills to-day;  
 The patriot spark implanted here,  
 Shall rise, and still the Union stay!

"And though our homes and innocents,  
 A very holocaust shall be;  
 The stars and stripes upon the breeze,  
 Shall now and evermore float free!  
 Turn, ye insensate bloodhounds, turn,  
 Once more behold these ruined homes;  
 The desolation here you've wrought,  
 Faintly portrays your day of doom!

"May dreams of carnage, blood and crime,  
 Ne'er give you slumber, rest or peace;  
 May fiends and spectres rack your minds,  
 And furies' torments never cease!  
 May madd'ning fancies goad your brains,  
 Till earth can no more respite bring;  
 Until your inmost hearts shall feel,  
 The adder's fangs, the scorpion's sting!

"May deep, dark treachery pursue,  
 May dread make friends and comrades foes,  
 May apprehension sap each joy,  
 And each new day new woes disclose!  
 May guilt and agony conjure,  
 Assassins' blows, avengers' snares:  
 Till ev'ry hope of life become  
 The dust and ashes of despair!

"May horrors of your choice in life,  
 Attend you on your beds of death;  
 May mothers' shrieks and children's cries,  
 Accompany your latest breath!  
 The ghostly phalanx of your dead,  
 The sight your dying eyes shall see;  
 And the last sounds that greet your ears,  
 The death-rattle of your victims be!

"May each myriad woe you've wrought,  
 Return to you, a thousand worse:  
 Till all hell's legion fiends combine,  
 To wreak on you this father's curse!"

"Enough, enough, the leader cried,  
 "For what do we our patience try?"  
 But terror's sweat stood on his brow,  
 And he quailed beneath the soldier's eye.

\* \* \* \* \*

Ere yet the sombre shades of night,  
 With darkened forms the valley hem;  
 And while the sighing breezes played,  
 A soft funereal requiem,—  
 While yet the setting sun sent forth,  
 His ling'ring beams athwart the sky;  
 A sacred martyr to his cause,  
 They led the soldier forth to die.

\* \* \* \* \*

'Tis said the gods' mills do grind slow,  
 But they grind exceedingly small;  
 And we're taught that it is safest,  
 To judge our brother not at all.  
 We know also, 'tis written plain,  
 Vengeance is not for man to pay;  
 But says the Word not just as clear,  
 We'll know men by their works and ways?

At all events, do what we may,  
 Our minds will turn and speculate,  
 Upon the penalty that's due,  
 For deeds no life can expiate.  
 Who thus could wring the human heart,  
 Revile its speechless agony,  
 Rejoice in a demoniac's glee,  
 At such inhuman butchery,—

Who thus could murder innocence,  
 And add the worse—dishonor's stain,  
 Forfeits all claim to brotherhood:  
 Invokes man's clemency in vain.  
 No dark hades, no gehenna,  
 For such savage, revolting deeds;  
 No shoal and no tartarus,  
 Were fitting for such fiends as these:

For to the av'rage carnal mind.  
 A genuine revenge is sweet:  
 And for some crimes, we look in vain  
 For punishment that's just and meet.  
 Until the teachings of our youth,  
 Come o'er us like a sudden spell;  
 And our whole beings, long amain,  
 For the real, old-fashioned hell.

Yes, literal fire and brimstone,  
 With heat that ne'er consumes but burns;  
 The molten, seething, fiery lake,  
 Whose waves roll on, but to return.  
 Into whose bottomless abyss,  
 Stifling, the hot black darkness pours;  
 Where the lost souls in vain do cry,  
 And gnash their teeth forevermore.

Where the curling smoke of torment,  
 Shall never, never, cease to roll;  
 And the gnawing worm that dieth not,  
 With untold anguish, stings the soul.

\* \* \* \* \*

Inquiring minds will doubtless ask,  
 What useful purpose is subverted;  
 By strictures on those painful times,  
 However much they be deserved.

The purpose is a two-fold one,  
 And is not difficult to see;  
 For first it shows us brother man,  
 Both as he is and as should be.  
 'Tis said the lion in his path,  
 The crouching panther in his lair;  
 Met by the calm, determined eye,  
 Subdued, will turn aside and spare.

But let him once have tasted blood,  
 No power on earth his will can stay;  
 But ev'ry muscle taut with rage,  
 He springs resistless on his prey.  
 'Tis so, revered, majestic man,  
 Crowned as the lord of all he trod;  
 Controlled, enlightened, christianized,  
 He walks the earth the friend of God!

But once his evil passions rouse,  
 Give unregenerate nature sway,  
 No power but strength and force can quell,  
 And turn him from his bent and way.  
 The untamed beast crouched in his lair,  
 Is docile when compared with him;  
 For all his wondrous powers combine,  
 To forge ten-fold the bands of sin.

Resistless is his frenzied rage,  
 Brutal, savage, ev'ry desire;  
 His strength is the demoniac's will,  
 His mercy the volcano's fire,—  
 And he becomes the spectacle,  
 At sight of which the soul recoils;  
 The angels shield their eyes and weep,  
 And demons laugh! and close their toils.

The purpose is again to show,  
 A virtue than which none is higher;  
 It is that patriotism which,  
 Shrunk not at torture, death or fire.  
 Not with offense to those brave men,  
 Who lately were a gallant foe;  
 But justice to our heroes who,  
 Upheld our cause with blow for blow.

Though no hoarse slogan sounds the call,  
 Nor rattling drum the long reveille,  
 Nor hurtling shells nor bullets' ping,  
 With all war's horrors in their trail;  
 Our country does call earnestly,  
 To schools and colleges to-day;  
 For sterling, true, enlightened men,  
 Who this great government shall sway.

With such minds to direct her ways,  
 With such hearts ev'ry need to fill,  
 Her future life can only be,  
 One which shall voice her patriots' will.  
 'Tis for this, then, we do rejoice,  
 In this great, grand, united land;  
 That for all time, for weal or woe,  
 Our countrymen a unit stand.



From the frozen regions of the north,  
Where the great majestic lakes do flow,  
To the everglades and cotton fields,  
Where the southern sensuous breezes blow;  
Where the old Atlantic rolls in state,  
Where Pacific guards the Golden Gate;  
There may our freeman ever stand,  
To watch and ward our native land.

When the earth shall melt with fervent heat,  
And the canopy asunder roll;  
And the volcanic elements,  
Shall coil the heavens like a scroll;  
When the whole celestial dome shall sway,  
And in lambent glory pass away;  
When incandescent suns combine,  
In pyrotechnic war sublime;  
When angels poise their last to hear,  
The ling'ring music of the spheres;  
Then the memory *may* pass away,  
Of deeds now crowned with laurel-bays:  
But until then the muse shall sing,  
And with unending paeans ring;  
Till North and South shall not disdain,  
Till the whole world catch the refrain,  
To sing the matchless deeds of those  
Who, fearless, met the country's foes,  
Whose homes, whose blood, and all they had,  
Were sacrificed to save our flag.

### The Chinese Question.

W. E. GAMMON, ECLECTIC SOCIETY.

The question, what shall we do with the Chinese, is one that California has challenged our wisest legislators to answer for over thirty years. Going back to the year 1852 we find that in a special message to the California Legislature the Governor asks that body to devise means to prevent the immigration of the Chinese to her shores. He portrays in vivid language the evils to the State arising from this source. He calls upon the Legislature to do all in its power to prevent their coming or being permitted to reside in the State. That Governor submitted two distinct propositions to the Legislature. First, such an exercise of taxing powers as will check the indiscriminate and unlimited Asiatic immigration; second, a demand by the State of California for the prompt interposition of Congress to the same end. This was sixteen years before the Burlingame treaty.

In an editorial article in *The Independent* of Feb. 25th, a great deal is said about the protection of the Chinese in the Pacific States and Territories. Congress is severely complained of, and even the President is spoken of as not doing his duty in this regard.

The Governments of the United States and China, in 1868, stipulated with each other by treaty that both would "cordially recognize the inalienable and inherent right of man to change his home and allegiance, and also the mutual advantage of free migration and emigration of their citizens and subjects respectively from the one country to the other for purposes of curiosity, of trade, or as permanent residents." Both Governments mutually pledged themselves to the recognition and protection of the same privileges, immunities and exemptions, as to the citizens and subjects of each other, with reference to travel and residence in their respective countries, that are "accorded to the citizens or subjects of the most favored nation." It was thought in this country that a great victory had been gained over Chinese prejudice and exclusiveness when this treaty was negotiated, and that important advantages would accrue therefrom to the people of the United States.

In 1881 the United States made another treaty with China, which, though modifying the one of 1868 in some respects, nevertheless expressly declares that "Chinese subjects, whether proceeding to the United States as teachers, students, merchants, or from curiosity, together with their body and household servants, and Chinese laborers who are now in the United States, shall be allowed to go and come of their own free will and accord, and shall be accorded all the rights, privileges, immunities and exemptions which are accorded to the citizens and the subjects of the most favored nation."

Eastern people do not comprehend the importance of such legislation as will settle this difficulty of Chinese immigration forever. Above are our treaty stipulations with China, but they seem to be entirely one-sided as far as the progress of civilization has advanced. We talk about protecting the heathen Chinese in the West, when in reality they are given much better protection than even the State of New York would give were her people so abominably threatened by such a plague. Every time we encourage the immigration of Chinamen to California we do rob the sons of the Golden State of their rights. New York is a powerful State and whenever she cries out the world stops to listen, but here is a State—California—which has even begged untiringly to have her sons protected from this great devastating enemy. And what does the East say about it? She does not even pass peaceably by as an uninterested observer, which we could stand very well, but instead, comes out with this great saying, "California, you must protect the Chinamen" that we have invited to your land to ruin you or we will talk to Congress about it. O! doesn't that sound big?

California is approaching every day to the same condition that the South was in before the emancipation of the slaves. All the practical difference now is that California does not use the word "slave," and that such property in that region does not possess so great a degree of dark coloring matter as the negro of the South.

In a recent conversation with a friend who had just returned from California, the following question was asked:—"How do the young men of the West compare with those of the East?" The reply was that the great difference lies chiefly in the most deplorable condition in which we find the energy of the young men of the West. They can do nothing, and the circulation in the majority is so sluggish that they do not even exert themselves enough to find that out. What is the cause of this pitiable condition,—the Chinese? Yes, unquestionably, Chinamen are on every hand and the young white man, if he can possibly stir up an idea somehow, all he must do is to wink at one of these personages and the application is set on foot.

By what law of justice or equity shall we permit continuance of such proceedings? he

Man is not an infallible being. Then why might we not expect to find some errors in the actions of the founders of this government? Surely they were not expected to lay down principles in that comparatively remote day which should prove exactly fitting to the demands of society in any age. Is not a man justified in changing his opinions after he becomes convinced that they are wrong? If so, then why can not our legislators change such laws that have proved ineffectual to the demands of the present day?

Is there any other class of people who come here that will not or does not take the oath of naturalization but



the Chinese? Why might not legislation turn on this point?

The people of the West have at last lost all faith in the power of legislation in remedying this evil, and now they propose to organize into such bodies that do not and will not give labor to any of the Chinese. They propose to have nothing to do with them. No violence, whatever, is threatened, but it is to be optional with the white people, whether the Chinese die of starvation, or are compelled by this means to return to China.

Thus this question is a perplexing one, for nothing but a radical change "will fill the bill." Legislators are aware of this and so long as they can endure the heartrending cries of California, so long they mean to be indifferent. O, that there were a Demosthenes or a Cicero that would rouse these sleeping souls to action! Then would the dark veil that hovers over the youths of California be rent in twain.

### Chivalry.

IRVING BATES, PHI DELTA THETA FRATERNITY.

How often, after reading Scott's *Ivanhoe* or other of the tales eulogistic of my theme, have we all wished that those romantic days might return, so that we could put on an armor, decorated with the emblems of the conquests of hundreds of ancestors, and ride forth to the battles that are to identify our name with all that is good and brave.

There would certainly be a charm in such a life. Glory was the object; defense of the weak and oppressed the duty; and love the motive power to spur alike the laggard and the ambitious to feats of skill and daring. War was not and is not a detriment to the objects of the young and ambitious. Argue as we may in the days of peace, when the distant roar of the battle is heard, there is in man an irresistible desire to be present at the conflict, and, strange as it may seem, there is a fierce pleasure in the activity and uncertainty of the events which surround the battle field.

In the days of chivalry the young knight had the privilege of aspiring to the hand of the fairest of the fair. If he could gain the reputation of the bravest of the brave, the eyes of the world would be drawn from its various occupations to gaze on him who had raised himself a throne of honor, which royalty itself could not approach without a corresponding effort. But the aspirant to knighthood was required to serve a long, systematic apprenticeship before he had the slightest chance to gain a name. At an early age he was placed in the family of some powerful nobleman. He was constantly in attendance with the ladies, receiving, sometimes unconsciously perhaps, that refinement and courtesy with which the gentle sex has in all ages instilled her associates. After several years of this page duty as it was called, he was taken from this more pleasant duty and trained in the use of all weapons offensive and defensive, until at the age of manhood he took the oath of chivalry "To be loyal to God, the King, and the Ladies." This he did with the utmost confidence in his power to defeat the enemies which he might meet in the battle of life.

The education of the youth of to-day extends over nearly the same period as that which was necessary for the instruction of the Knight. There are exceptions

now as then, some completing their training in a much shorter time than others. The motive is the same, to fit the man for a successful life. But how different the methods. Then every effort was made to develop physical strength and courage, but very little attention was given to what we understand as education. Now the intellect is cultivated in the most perfect manner, that it may take the place of the manifold arms and accoutrements of the chivalric age. The contest is not now confined to the favored few who belong to the so-called upper circle, or to him whom nature has given great physical powers. The invalid from his couch may send forth to the world thoughts which will be received with as much admiration as ever greeted the warrior of old. The right to rise above the common mass is free to all, high or low, weak or strong, exactly in proportion as the brain is cultivated and used. Those who wield this weapon with the most courage and precision can win reputations as high, as mighty, and as unapproachable as were those made by the champions of the thirteenth century.

Success *may* be gained without that loyalty to the ladies which was so scrupulously required of the Knight. Yet, no matter how great the success in business or politics, if the man is without that inherent something, which is always found in a gentleman, and which is so necessary to a truly good and great character, we are constantly aware of something unsymmetrical in his composition. The gentleman of to-day does not receive special training upon fixed rules as to his conduct toward his lady, his companion, or his enemy. Yet, it is certainly easier to distinguish the real gentleman to-day by his truly chivalrous bearing and actions than it was in the most palmy days of Knight-errantry.

In comparing the Knights of the olden times with the gentlemen of to-day, we find that the duties are much the same, only modified by the customs of the different ages in which they lived. It surely takes as much courage to face the battle of life now as it did at any period from the time of Arthur and the Round Table to the decay of chivalry proper.

Opportunities are not wanting where it is possible to show courtesy to all, both high and low; to bestow love where it is worthy of being received, and even to defend the weak from oppression. The youth of the nineteenth century is constantly proving unconsciously, but no less conclusively, that the principles of chivalry are not dead, or dying, or even on the decline.

### The Tendency of Applause.

CLARE B. WALDRON, UNION LITERARY SOCIETY.

Who can but admire that custom of the ancients of launching a ship and allowing her to pass without pomp or ceremony from the yards in which she was constructed to her first voyage on the fitful sea? Without ornament of gay streamers, with nothing but the strict role of duty to occupy the minds and attention of her sailors, she passes from the sight of land. All distinction was reserved for the time when she should return, having successfully encountered the perils of a raging sea. Then her tattered sails and marred but worthy sides were emblazoned with bright trappings, while applauding throngs assembled to honor her triumph. What great lessons might be drawn from this custom, to apply in the world of to-day!



We see a person launching out on the sea of life; brilliant he may be as the ship is graceful. He may have the qualities of truth, manhood and honor. Wafted on by favoring breezes, and cheered by the applause of friends and that part of the world whose ports are set down in the sailing chart of his existence, he may glide serenely over places free from the reefs of care and shoals of disappointment. But is not the applause in such cases given too freely and injudiciously? Not taking into account the pleasant and advantageous circumstances that surround and support him, are we not apt to give him too much credit for his successful start? Should we not reserve this applause till he has proved himself as enduring in tempest as he is gallant in calm?

On the other hand we may see a person equally talented, having the same admirable qualities, but his life has been full of disappointments nobly borne. Some great care has claimed his attention and, not heeding the glittering prizes of the world, with true generosity and noble purpose he has faithfully achieved his undertaking. He has withstood bravely the dark hours of sorrow and difficulty; has suffered unflinchingly the lacerations from the "briers of this working-day world," and has accomplished that which entitles him to the honor and esteem and applause of all. But how tardy is this applause in reaching him! In the case of the first, the applause, while unmerited, may be a disadvantage, serving to "enfeeble all internal strength of thought." In the latter case, of course, too great commendation would have the same effect, but until we better learn to give honor where honor is due, we need fear nothing from that quarter. The chances are that he will be without not only the applause of all, but the support and sustaining influence of the few.

In later life, too, we may notice a person exalted by means that are questionable, supported in his position by trickery and fraud; but the simple fact that he holds such a position seems to be enough to command the applause of far too great a proportion of the people. We are too apt to measure a man by his station.

"O place! O form!  
How often dost thou with thy case, thy habit,  
Wrench awe from fools, and tie the wiser souls,  
With thy false seeming."

We look blindly toward the achievement, nor stop to question the crooked and slimy paths by which success was reached.

When a worldly position is applauded above the integrity and uprightness that prompts one to pursue the right rather than to use despicable means to obtain that position, or when any goal in life is held higher than the sterling qualities that are exhibited in the honest and manful attainment of that goal, we are fostering an evil to be dreaded; are harboring a vice of dangerous mien; one that "makes the meat it feeds on" and in its growth will effect that which no people working in the interest of culture and progress can afford to countenance, a compromise between worldly distinction unjustly obtained, and the qualities of truth and honor.

Prof. Bailey studied during the winter at Harvard under Professors Farlow, Goodale and Dr. Gray. He also delivered an address before the Agricultural Society of Massachusetts. This was quite a compliment to the ability of Prof. Bailey, for it is seldom a young man is invited to address this illustrious society. It was before this society that Agassiz delivered his last public address.

## A Century's Progress.

D. L. DAVISON, DELTA TAU DELTA FRATERNITY.

Great changes have taken place throughout the world during the past century, and in no part of it have more wonderful changes taken place than in the United States.

A little over a hundred years ago the aborigines roamed over the greater part of this continent where now we find one of the most thrifty, energetic, and highly civilized nations on the face of the globe. A hundred years is a brief period in the life of a nation, yet the past century has seen a marvelous growth in the United States. The area has expanded from the narrow strip east of the Alleghany mountains to the Pacific slope. The century has witnessed a growth in population more remarkable than the increase of territory. It has seen the three millions of 1776 multiply to more than fifty millions. The growth is due largely to emigration from the Old World, the emigrants being attracted by the hospitality of the Republic which offers to all civil liberty and equal rights. The inventive genius of our countrymen has brought forth appliances which have been of great benefit to the commercial, agricultural and manufacturing world. The cotton-gin is the invention of an American, Eli Whitney, and has been the cause of making the United States the greatest cotton growing country in the world. We are indebted to Robert Fulton, a native of Pennsylvania, for the first steamboat of any practical value. An American, Samuel F. B. Morse, is the inventor of the telegraph, while to another American, Cyrus W. Field, is to be given the credit of successfully laying the first submarine telegraph. Although the locomotive is the invention of an Englishman, yet we surpass all other nations in the extent and completeness of our railway system. No comparison can be made between our manufacturing industry of to-day and that of a century ago; then our manufacturing industry was undeveloped, to-day it compares favorably with that of any nation beyond the sea. Our cotton and woolen factories are on a level with those of Manchester or Leeds. Our great iron centers are rivals of Sheffield and Birmingham.

Compare the agricultural implements of an American farmer of to-day with the farmer of a hundred years ago. The sickle has given place to the self-binder, the flail to the steam thrasher, the "jumper" to the sulky plow; the slow plodding ox is no longer found on a "well regulated farm," the horse, and in some instances steam, has taken his place.

During this century many authors, scientists and inventors, of whom every American has reason to feel proud, have arisen. Such names as Edison and Bell alone are enough to make us feel certain that the century just past has been one of great progress.

Among authors and statesmen may be mentioned such names as Webster, Everett, Sumner and Calhoun. Among poets, Longfellow, Bryant and Lowell. Among miscellaneous writers, Emerson and Bayard Taylor.

Probably in no branch have we made more rapid progress than in education. At the close of the revolutionary war we had no school system, very few public schools, and no colleges worth mentioning except Harvard and Yale. To-day we have the most admirable system of public instruction in the world, while not a few of our colleges and universities are equal to



the celebrated educational institutions of England and Germany. A great deal of our progress and prosperity is due no doubt to the interest taken in educational affairs. Education is the "Gibraltar" upon which our nation was founded and upon which it rests. Our enlightenment depends upon our education; without enlightenment our present form of government could not long exist, and in no country except a republic could such wonderful progress have been made. The improvement that we make during the next century remains for the future to disclose; but it is safe to say that in a large measure our future prosperity depends upon the interest the government and each individual citizen takes in educational affairs.

## MISCELLANEOUS.

### Affirmative Religious Principles.

The College Young Men's Christian Association was never in a more prosperous condition. A number of full members have been added and the good work it is doing in this College is very gratifying.

On the average the meetings are so well attended that more room is needed, and if it were not for being obliged to climb three flights of stairs, a much larger number of students would doubtless attend.

It would be a great impetus to the Association if it could have the use of a room more easily accessible; but crowded as is the College, there seems no way out of the difficulty at present. At the regular meeting held Sunday evening, March 21, a large and appreciative audience gathered to hear the following address, by President Edwin Willits, on

#### AFFIRMATIVE RELIGIOUS PRINCIPLES.

I have no sympathy with a negative. I do not like negative men or women. The world may make something of a rascal, but of a fool never; the one has timber, the other has not. There is perhaps a place in the economy of all things for a negative person, but it is much like that for unreclaimable swamp and sterile deserts whose apparent only and prime purpose is to round out the globe and keep the fertile spots in place. A barren soil will scarcely raise weeds. It is only the soil capable of raising weeds that riots in fructification. Adam would have been a poor stick to stand at the head of a race if he had been capable of nothing but good; if he had been created holy and kept holy by the fiat of the Almighty, or with inability to known good and evil. Jehovah did not make any mistake in the make-up of the first man, though he and his descendants have been a source of considerable trouble since the day the creation and the created were pronounced good.

Again, I despise a man or woman who is neither affirmative or negative—that is sometimes affirmative and sometimes negative—affirmative to-day and negative to-morrow—blows hot and blows cold, so that the average don't count on either side. You recollect what the Revelator said about the church of the Laodiceans:

"These things saith the Amen, the faithful and true witness, the beginning of the creation of God. I know thy works, thou art neither cold nor hot; I would thou were cold or hot. So then because thou art lukewarm and neither cold nor hot I will spue thee out of my mouth."

There is some satisfaction in punishing an affirmatively bad man, and a royal pleasure in associating with an affirmatively good man, but there is neither satisfaction nor pleasure in the society of one that has not principle enough to be good, nor material in him to be bad. There is neither comfort with nor confidence in a man who has neither ability nor stability.

*Third*, I do not like a stagnant man or woman, one that has power but no momentum, ability but no energy, vitality but no life, resources but no impulse. The best measure of the being something is the doing something. I have no patience with a student that leaves the halls of learning without a hunger for more knowledge; that does not grow in mental strength with growing years, and does not at stated times take an account of stock with a consciousness that it is growing year by year, and that it is capital put to productive use. Poor, miserable beings, content to go the round and round of the tread-mill! I believe a man or woman should grow, should be a factor in any society, should be a running stream to drive the wheels of the industries of the world. When I see such an one a stagnant pool, I feel that a sluice should be placed underneath to set in motion the sleeping waters; the only fear I have in such a case is that it would soon drain the stagnant pond, so likely to be without live springs at its source.

*Fourth*, I pity a man or woman controlled by the passions, who has an unregulated energy that sweeps everything before it, followed by a calm that is next door to death, with stranded hulls, ragged sails, uprooted trees, devastation and ruin. What is more pitiable than a woman who loves so that her love brings disgrace, or a man who from lust or appetite has destroyed his manhood! The essence of direct misery always lurks in the sweetness of such a gratification. You cannot name an instance where the supposed transient joy bore any worthy compensation for the terrible years that surely follow. How rarely, Oh how rarely, are the husks of riotous living followed by the best robe, rings on the hand, shoes on the feet and the fatted calf for the one perishing with hunger. Repentance may sometimes bring forgiveness, but never restoration. Prodigal sons are generally graceless scamps who blast their virility and who are apt to change their course if at all, because they have exhausted their power, rather than from compunctions of conscience.

*Fifth*, I hate a man or woman without moral character, who despises the good, the pure; who scoffs at religion, good morals and upright life. A young man with whom it is not safe to trust a woman, deserves to be drowned as ruthlessly as we drown puppies. A young woman who has no sense of the proprieties, generally deserves all she gets from a wagging world. The worst investment on earth is a bad character. As a vile slander is the most terrible blow an honest and pure person can receive, so a character or reputation that deserves the slander, justifies it, is a weight on all true success in life.

So much for my dislikes, now a few points as to my likes.

*Sixth*, I like a manly man, a womanly woman. Young or old, boy or girl, true manliness or womanliness is the diamond in the sceptre of the kings and queens of this world. I like a boy or girl, man or woman, who can look one in the eye. What is there in that lurking meanness that dodges the open glance of the honest man's eye? What is there in the shambling gait of the uneasy conscience? What is the



cause of the failure of the brazen face, the conceited reprobate? Where are stowed away the scales that can weigh honest character and detect the counterfeit? Why is it that honesty and purity can look out of countenance dishonesty and impurity? Oh, conscience doth make cowards—not of all, but of those only who fight it, or disobey it. The best armor is the right; the best courage is manliness. Unquestioned virtue is true womanliness. The manly man looks the wild beast in the eye and he quails. Why? Because of manliness. The pure woman walks through the slums of the city in charity or follows the camp from soldiers' hospital to hospital unharmed. Why? Because of her womanliness.

*Seventh*, I like an affirmative man or woman, one who has convictions and the courage of conviction, who is not ashamed of his belief, or his duty. The affirmative man moves the world, fight its battles, and wins victories. The affirmative woman is a good worker. The wise woman buildeth her home, buildeth it; constructs, doth never pull down. It is positive personality that advances or retards civilization. It vitalizes humanity, moves dead men's bones. Indecision loses battles and crowns. Indecision in the school, the church or affairs in the world has been the cause of more failures than the absence of intellectual power. What avails power if its application be uncertain? Then I like to know where a man stands, where to find him. I thus can count on him either for or against me. The most humiliating place for an intelligent man, politically, is to be on the fence. The most senseless belief is no belief. I would rather be a Puritan and burn witches than be a Concord philosopher with a religion without virility, as thin as his degenerate blood.

There is a Scotch proverb: "Ye would na serve God, an' the Devil were dead."

These people kill off the devil and by so doing emasculate their religion. Religion has something affirmative left after the Devil is disposed of—love, duty, worth.

*Eighth*, I like a man or woman of principle. What is principle? It is "fundamental substance or energy, a fundamental truth or tenet, a settled rule of action, a governing law of conduct, an opinion or belief which exercises a directing influence on the life and behavior." Principle is the anchor that holds us in the storms of life. It is the strong substantial base upon which is constructed the monument of an individual life. This abiding principle is the material out of which your life is constructed. It is what you think, what you believe, what you are. Impulse acts upon it, religion consecrates it. It is the basis of character, and if it is broad enough, and deep enough, passion will be controlled, you will have an even, steady strength. A man of principle is a strong man and gives the impression of strength wherever he goes. His mere presence is a tower of strength. How gratefully men hide behind him. He is easily the leader, in church, in state and in parties. He formulates statutes. He makes laws, because he is a law himself, a man of principle, a man of character. I like such a man.

*Ninth*, I like a truly religious man or woman. Morality is not religion. Religion includes morality; it is morality plus principle, plus duty, plus reverence and impulse, and obligation and responsibility. It is the bond that ties us to the throne of God. Morality never rises higher than religion! religion strikes the stars. Men are never better than their religion, they

are always less. But mankind generally walk *pari passu* with their morals. Religion creates an aspiration, inspires an epic—morals never. Religion is a wider field and therefore commands a grander view, sweeps a broader sea and sounds the symphony of a booming tide. The man who travels is a broader man than he who has never gone beyond sight of his roof tree. The man who seeks his God and follows him in his mysterious pathway through nature and revelation catches the glow of a divine culture higher and sweeter than his whose narrow self is the be all and end all, and whose object is more grovelling than the Divine essence. Religion therefore supplements self-help with Divine aid, and it stands to reason that the religious man is a stronger man, a truer man a nobler man. A man or woman who walks with God, is good company, is safe company anywhere, at any time, but especially in the times that try men's souls.

*Tenth* and lastly, like the peddler, who never produces the best ware in his pack till the last. I like best the man or woman with all three combined, who is affirmative, is religious, has principle. But it matters little what I like, or you like, the main question for us all to consider is what ought we all to be? or to try to be? Would we be strong, courageous, successful, we must be positive, affirmative. Would we be stable, substantial, of real consequence in this world, we must have affirmative principles. Would we be sons of God, joint heirs with Christ Jesus, righteous men, the salt of the earth, the best type of manhood, capable of the best things and the greatest good in our day and generation, we should be endowed with affirmative religious principle. With all these there is safety and success. Without them there is not safety, there is sure disaster. With the affirmative will as an impulse, a substantial principle as the power, and with religion as an inspiration and a guide we may make the world better for our being in it. We shall avoid vacillation, backsliding and uncontrollable passion. We may round out our lives into the symmetry of true manhood, energetic, efficient, trustworthy, benevolent courteous, cleanly. We may have mental and moral health and sound muscle, capable of striking a sturdy blow. We may make converts and build men up in the faith; be builders, not the built; the potter, not the clay; the affirmative, positive motor, not the load to be dragged or lifted; the master musician, not the obedient key; in other words be live Christian men and women with something to do and willing to do our best in doing it, capable of results that count in this world not only, but in the eternity, which is included in the scope of our enterprise.

Go ye into all the world and preach the gospel to ever creature. Go! do not wait to be driven! Go! do not wait to be hauled to your work! Go and preach! You are to be preachers, teachers. Preach the gospel, the news, tell your own story, preach your own sermons, don't steal them or copy them; play your own music and not a hand organ set to a single tune. Be an affirmative factor, for good, wherever you go. Do not take the back seat in the discussion of any enterprise. You need not be forward or officious or impertinent; but be helpful and handy, know something, know a great deal; know more to-morrow than to-day. Know more in something worth knowing than any one else in the community, so that you will be in demand. But temper your knowledge with wisdom, with kindness, with Christian love and virtue, and when you die you will be remembered by many hearts



that you have helped and in helping have added to your own store of that treasure which is not counted alone in this life, but is rich in the glories of the life to come.

### College Co-operative Associations.

Among the many items of expense in a college education, that of books and stationery is of no small moment.

By its greatness students are prevented from enjoying the use of many necessary articles, and only by strenuous efforts do they succeed in getting through college with even a meagre supply of student commodities.

To bring about a change in this matter has been the earnest effort of students in a few colleges, and the problem of reducing this item of expense is at last solved by the establishment of Co-operative Associations.

These are organizations for the sole purpose of cheapening the prices of all articles used by the students. Members of the faculty, students, and all persons in any way connected with the college are entitled to membership on the payment of an annual fee of one or two dollars. This fee, together with the commission made on the goods, is used to defray the expenses of the association.

A room is procured in which the stock is kept and sold. All goods needed by the students are purchased at the very lowest wholesale prices, and a very small per cent is added to this cost for commission. Thus it will readily be seen that the commission of two or three merchants is saved to the students, and a great reduction in the cost of goods is thereby obtained.

In order not to necessitate the association to keep on hand a large and expensive stock of miscellany, arrangements are made with the merchants in town whereby all members of the association receive at the stores of these associated tradesmen a discount on retail prices of from five to fifteen per cent.

To insure against any deception on the part of the merchant in this discount each is placed under bonds of one hundred dollars.

The number of merchants thus uniting with the association is limited to one or two of each class. In some classes, such as the tailors, there is one tailor for each grade of work done, representing the high, medium, and low prices. By this means all classes of students are satisfied.

The association is under the supervision of a board of directors composed of one or two members from the faculty, and a member from each class and department.

This board chooses a superintendent who, with an assistant, does the purchasing and all other work pertaining to the successful operation of the association. He is obliged to deposit a bond or other security satisfactory to the board, and his accounts are to be open at all times to the inspection of that body.

For his services the superintendent receives a salary which is fixed by the board of directors, and cannot exceed the total commission made upon goods sold plus the membership fees.

The superintendent is usually a member of the college, who can work for the interests of the students, and upon whose business ability depends the success of the organization.

At present there are in successful operation co-

operative associations at Harvard, Yale, Ann Arbor and other like institutions, and one being started at Princeton.

At Yale, with which the writer is mostly acquainted, the advantages gained by the co-operative association may be enumerated under three heads. First: reductions in purchases made from the city associated tradesmen. From statistical returns, the average actual saving to members in this way for about six months was \$10.89, while the greatest individual saving was \$35. Second: reduction in prices of goods purchased at the co-operative store. These reductions from the regular retail prices varied from twenty to forty per cent.

Third: the co-operative store serves as a source of general information and increased convenience to the students. The work in this direction includes, ordering text-books and all other articles, distributing instructors' "tracts" and college papers, checking baggage and purchasing railway tickets, publishing athletic notices, and giving general information about college matters.

The association at Ann Arbor was but recently organized, but is now in a prosperous condition; and certainly it has been the means of greatly reducing the expenses of the students, both in the University and the high school.

This method of reducing college expenses is meeting with much favor, and ere long every educational institution will adopt it to a greater or less extent.

T. A. S.

### Bussey Institute.

C. S. CRANDALL.

Bussey Institute—the School of Agriculture of Harvard College—was founded by Benjamin Bussey, a Boston merchant, who gave a large sum (\$350,000) for its endowment, and for the maintenance of the Law and Divinity Schools. The fund is invested in Boston real estate, and of the income Bussey receives one-half; the Law and Divinity schools one-quarter each. The Institute is located about five miles from Boston on the line of the Boston and Providence railroad, and near the village of Jamaica Plain, one of Boston's most pleasant suburbs.

The site is elevated and the views obtained from the grounds, of hills and valleys thickly dotted with fine residences, and covered with trees and shrubbery in great variety are a source of pleasure not soon tired of by one accustomed to the monotonous level of our own State. The building containing the class-rooms, library, chemical laboratory and offices is a granite structure, tasty in design, and generally pleasing in appearance. The grounds are planted with trees and plants, and the lawns are intersected by well graveled walks and drives, the whole bearing evidence of the landscape gardener's handiwork. A short distance from the main building are the plant-houses and dwelling of the gardener; back of these the barns, hot-beds, cold-frames, and pits for winter storage of plants. The Institute has a farm of about three hundred acres; only a small portion is now tilled, the greater part being devoted to pasturage. The course of study embraces agriculture, agricultural chemistry, horticulture and botany. The course was at one time more extended than now, but owing to the Boston fire in 1872, and subsequent shrinkage in the value of



property, the much smaller income made it necessary to reduce the corps of instructors and abridge the course. Dr. Storer, Prof. of Agricultural Chemistry, is Dean of the Institute. Professor B. M. Watson occupies the chair of horticulture, and it is to his department that we wish more particularly to call attention. The course through which he takes the student is a most interesting one. Class-room work alternates with laboratory work through the week. The greenhouse is the horticultural laboratory. Here the student goes through all the indoor operations of propagating and caring for plants. Under the professor's direction he prepares the soil for potting, makes cuttings of leaves, of roots, of growing wood, of ripened wood, inserts buds, does grafting in different ways. Nor does he stop here. He must assume the entire management of these prospective plants, watch them daily, see that they are rightly supplied with moisture, heat and sunshine, and care for them until they establish themselves, and by their growth prove the student's skill in the performance of the preliminary operations. The lectures of the course and the laboratory work go hand in hand. In the class-room the student is told of theories, principles and methods; in the laboratory he with his own hands puts these into practice; he associates himself intimately with the objects of his study. This method induces thought and closer observation. Brain and hands work in unison, and the acquirement of knowledge is both faster and easier. The work room of the plant-house is provided with every convenience for this practical work, and plants in abundance are at the disposal of the student for practice and experiment. The work is thoroughly educational, and at no place in this country is provision for this most interesting and important aid to the student so well made as at the Bussey Institute.

The number of students attending the institute is small, owing in great part no doubt to the rather high fees, and expense of living, and in part perhaps to the fact that few young men care for just the course of study there offered.

Connected with the Institute, yet distinct as to management, is the Arnold Arboretum—embracing one hundred and sixty-five acres. Professor C. S. Sargent is director, and Mr. Jackson Dawson the superintendent. Here are propagated and grown forest trees and wild plants of all descriptions. One plantation, consisting of thirty-seven parallel beds ten feet wide and three hundred feet long, is devoted to shrubs, and contains representative specimens of over eleven hundred species and varieties. Many of the plants are rare and curious, and all are arranged in botanical sequence and neatly labeled. Another plat given to the pine family is filled with native and foreign conifers in great variety; other plats are used as nurseries for seedling forest and fruit trees, for native grapes and berries, and for various experiments which are being carried on from year to year. The Arboretum affords excellent opportunity to the Bussey student for the study of forestry, and is in every-day use by Prof. Watson as means of illustration. We have with us a good many students who are interested in horticultural matters; who are desirous of greater practical knowledge of horticultural operations. We have a labor system, and we hear these students express desire for labor more truly educational than hoeing corn or weeding onions, a desire to put more fully into actual practice the teachings of the lecture-room. They want just such labor as the Bussey Institute gives its students. They

should have it; and our College should have the means to give it. It would require no very large sum to secure all the necessary appliances, and this addition to the means of illustration would we are sure awaken new interest in the College among the many horticulturalists of the State. It would furnish students with purely educational labor, increase their interest, and be of lasting benefit to those students who are seeking knowledge in horticultural methods.

## SCIENTIFIC.

### New Apparatus for the Chemical Laboratory.

A short paragraph went the rounds of the newspapers a few months ago to the effect that there was only one College in the country that possessed the apparatus necessary to make liquid carbonic acid, and that this was used only once in two years.

Ever since a cast-iron generator exploded in Paris while liquid carbonic acid was being prepared, killing the Professor and several of his assistants, chemists have "fought shy" of this dangerous machine. Apparatus of enormous strength must be used to avoid dreadful accidents. Yet it is very improbable that there is only one College in the United States that has the apparatus for preparing this singular liquid. If it is true it will not long remain so, for an apparatus is being made for the Chemical Laboratory under the direction of Dr. Kedzie. The cylinders both for generator and condenser are made of cast-steel, and seem to be strong enough to resist the enormous strain to which they will be subjected.

For some years liquid carbonic acid has been made in a small way in this laboratory in glass tubes for illustration and experiment. One of these glass tubes exploded in the Doctor's hands a year ago, cutting his fingers and face, but fortunately inflicting no permanently injury. A few weeks ago another tube exploded in the hands of his son, cutting and bruising him severely, but inflicting no permanent hurt. The force of the explosion was so great that fragments of the glass tube were driven into window glass just as shot is fired into wood.

With the new apparatus this liquid can be made, not by the teaspoonful, but by the quart. If this larger quantity should explode —! and?

Other liquified gases have been made in the Laboratory, sealed up in glass tubes and stored away among the chemical curiosities, such as sulphur dioxide, liquid chlorine and liquid hydrochloric acid. Two of these can probably be found nowhere else in the State.

The Laboratory has lately received two assay furnaces (Judson's), Orr & Hess's gold and silver furnaces (the same as those used in U. S. mint) and a large assortment of muffles, crucibles, annealing cups, cupels, etc. These, in addition to Hibbs's furnace which has been many years in the Laboratory, furnish a good outfit for assaying for the public and for the use of students. The facilities for work in the Chemical Laboratory are of a high order.

President Willits spent a month last winter at Washington in the interests of a bill to appropriate \$15,000 to each agricultural college of the United States for the purpose of establishing agricultural experimental stations at each college. So influential a worker is President Willits that the House committee reported favorably on the bill. One of the professors remarked, *sub rosa*, to your scribe that the President came home very much elated over the prospects of the measure.



# THE COLLEGE SPECULUM.

Published Quarterly—August, October, April, and June,

BY THE STUDENTS

— OF —

THE MICHIGAN STATE AGRICULTURAL COLLEGE.

TERMS, 50 CENTS A YEAR; SINGLE NUMBERS, 15 CENTS.

ADVERTISING RATES MADE KNOWN ON APPLICATION.

All subscriptions will be regarded as continued unless we are notified to the contrary.

## BOARD OF EDITORS.

PHI DELTA THETA FRATERNITY.

T. A. STANLEY, Editor-in-Chief.....Literary Articles, Editorials

NATURAL HISTORY SOCIETY.

L. G. CARPENTER.....Science

UNION LITERARY SOCIETY.

J. B. COTTON.....College News

ECLECTIC SOCIETY.

J. E. HAMMOND.....Colleges and Exchanges

DELTA TAU DELTA FRATERNITY.

A. E. BROWN.....Personals

W. A. KINNAN.....Business Manager

PROF. S. JOHNSON.....Treasurer

AGRICULTURAL COLLEGE, MICH., APRIL 1, 1886.

WITH THIS our first number of 1886 we are pleased to spread the news to THE SPECULUM readers that at the present time the College is in a high state of prosperity.

With the spring addition of sixty students the ranks of the Freshman class have been swelled to one hundred and thirty-six, the largest class ever known at the institution, and we can but hope that four years will not serve to reduce this number one half.

It is a puzzling fact that the two upper classes, especially the Junior, have become so much reduced in numbers.

We are unprepared to give reasons for this state of things, other than ill-health or low pecuniary circumstances. If these be the reasons they will affect the present lower classes in a similar manner, but if they are not so affected another more potent cause may be ascribed to it. Time will tell.

SINCE THE last issue of THE SPECULUM the country has been much agitated by labor organizations, and just what effect these organizations will have upon the country is a matter of serious consideration. In most instances general demoralization has resulted. In others whole families have been compelled to starve; while in others there has been bloodshed.

It is evidently a strife between labor and capital as to which shall have the balance of power, or shall both exist on the same level. The numerous strikes are causing great annoyance in the business world, and it is a difficult matter to decide which party is in the wrong.

In some cases, however, it is very evident that the laborers are at fault. If, for instance, a manufacturing establishment is paying its employés all that is possible and still keep out of debt, a demand for an increase of wages is unjust.

It is perfectly right so to regulate wages, that the firm can pay at least five per cent. on the investment, to say nothing of the wear and tear, and risk involved, and if the laborers are not contented with corresponding wages, their only privilege is to leave, and others, who are willing, should have the liberty to take their places.

When the Knights of Labor, or any other organization attempt to dictate to the manufacturers whom they shall employ and what wages shall be paid, they are stepping on forbidden territory, are running contrary to the spirit of the freedom and independence of this country; and when a body of men forcibly prevent others from working, the former are simply taking away the wages of the latter. This is robbery and should be punished accordingly. The foreign element, which compose the majority of these labor unions, are endeavoring to exercise upon people in this country the very tyranny from which they themselves have but recently fled; and it remains for the native American element to decide whether or no such shall be allowed.

The ignorance that exists in these unions is in the majority, and it often manifests itself by the foolish and extravagant measures resorted to to gain the desired end. By these extreme and unjust measures the organizations will, if they don't kill themselves, at least so weaken themselves that by the combined efforts of the manufacturers they can be crushed out of existence. The great thing now in the way of such a movement is the feeling of strife and animosity existing between the manufacturers. When this feeling is banished and manufacturers are willing to stand by each other, then may we look for a united action that will certainly stamp out the evil rising in our midst.

But we do not wish to be understood as believing the laborers always in the wrong. We are aware that many rich and money-making concerns pay starvation wages, and in such cases justice should be insisted upon, but the demands therefor should be made within just limits.

These labor unions tend to put a premium on poor work, bringing its price nearer to that of skilled labor. A skilled workman can most always find employment, but an unskilled one should be contented with low wages or compelled to roam the world over in search of better.

However, this general increase in wages which at present seems evident, will only increase the price of goods, and what is gained in increased wages will be expended in the corresponding increase in the cost of daily commodities.



WITH THE introduction of a new administration and two new departments the College has received an impetus resulting in a large increase of students.

With the added mechanical and military departments, the question presents itself whether or no these will overshadow the agricultural department. There seems prevalent among many, the fear that this department will not figure so prominently as it has heretofore. At present we feel justified in expelling all such fears, yet as "forewarned is forearmed," it may not be out of place to call attention to the fact that only by every effort on the part of the Professor of Agriculture, and the active interest of all others in authority can that department be maintained as one of the prominent features of the institution.

We recognize the fact that to make the study of agriculture proper of interest to the ordinary student is no easy matter, and for that very reason those in charge should be abreast with the times, and by every new scheme, endeavor to present the lectures, dry though they may be, in an interesting and instructive manner. For instance: the description of tools, machinery and breeds of cattle is rather unsatisfactory when we are obliged to rely wholly upon our imagination. We think the interest might be enhanced, and perfect satisfaction given, by illustrating all these with the magic lantern.

This is but an example of what may be done in many other directions.

We believe the work system, if conducted properly, is one great means of sustaining the department, and trust it will ever be the redeeming feature of the school.

But, however important the work system may be, it must have some limitations. The work given to students should be as instructive as possible; and all that is absolutely uninteresting, hard, manual labor should be given to outside parties who are willing to do such work for ordinary day wages. In other words, the labor system should be a part of the instructive course, as inexpensive to the State as possible, but by no means carried on as a money-making department.

To further increase the value of the agricultural department, the barns and tool house should be replete with every new and meritorious machine for lessening farm labor, and all new devices for the better handling of cattle, old and young, should be on exhibition, either in actual use or hung up in the sample room.

In this way students could become acquainted with all the new inventions, and by seeing them in use could decide whether or no they are of practical merit. The farm should be more of an experiment station in this direction than it is.

We may cite the Massachusetts Agricultural College as an example of the point at hand. It is supposed to be an agricultural school, but agricultural studies are elective, work is entirely optional, while military drill

is compulsory. As a result, all students take military. None work save the few who are obliged to for pecuniary reasons, and the interest in agriculture is at a very low ebb. Visitors seem satisfied with the institution as a military academy, but think the agricultural part a mere farce. The College is possessed of one of the best agricultural professors in the country, and has connected with it the State Experiment Station, so that there seems no reason for the comparative insignificance of the agricultural department, other than lack of interest and enthusiasm in that direction on the part of the president and a few others.

Now then, should not the Michigan Agricultural College take warning from the above and so fortify and advance its Department of Agriculture that students coming from a distant State may find it equal to, if not beyond, their expectations?

---

WE CALL the especial attention of our readers, particularly the students and faculty, to the article on Coöperative Associations.

It has been and is to-day the aim of this institution to be as inexpensive as possible, and yet, reasonable as it is, there are many who complain.

Here is a method, which, if properly conducted, will very much reduce the existing expenses in the same manner that the club boarding system has done.

Situated as we are, we must either travel seven miles to buy goods from the town merchants, or purchase them from students on the grounds, paying them the second, third and perhaps the fourth commission.

From a personal knowledge of the business, we know that the profit of the student selling here, is in some instances one hundred per cent., while the average is from twenty to forty per cent.

This is in the line of stationery alone. Oil is sold for twenty cents per gallon, while down town it is fifteen. Here is a profit of one-third on retail prices.

Many other examples might be cited.

The coöperative system would save money to the student, not only on goods purchased on the grounds, but also on clothing and all other articles which we are obliged to purchase in the city. But some may say that by the present method of selling goods students in the business are enabled to pay expenses.

How far this is true we are unable to say, but certain it is that where many are engaged in the trade, no one student can pay his expenses, and what money is made by the very few is drawn from the pockets of the others.

With a coöperative system a saving is secured by all, while one, or possibly two, is sure of his ordinary expenses.

We will not argue further, but trust that some energetic students will take the matter in hand and push it to success, for if the system will work in any place, it certainly will here.



A small room could be partitioned off in College Hall for the purpose of a store, and the expenses of running the enterprise would be simply clerk hire and a few other minor items. The hours of business could so be arranged as not to interfere with recitations on the part of the Superintendent, and there would be no need of keeping open after 6 P. M.

WOULD IT not be of much benefit to the students if our library was open more on Sundays? With a great many, Sunday is the only day available for reading, and when the library seems to be most needed it is open the least. Two hours is a very short time for two hundred students to peruse the papers, to say nothing of book reading. Sunday forenoon is by many occupied in doing work that can be done at no other time, while there are others who have other time to spend in reading.

Now if the library could be open from 12:30 to 2:30 Sunday afternoons it would accommodate those who cannot go there in the morning, and furthermore it would give a better opportunity for consulting some particular work which must be used in connection with the Sunday school or the Y. M. C. A. We don't feel like asking our librarian to remain longer in the library, especially on Sundays, for already is her work tedious enough; but could not some arrangement be made whereby some person could open the rooms for two hours before church?

We feel confident that such a movement would meet with much favor among the students.

THE IRREGULARITY in ringing the College bell occasions much inconvenience to the students and all others whose time for work it governs.

The bell being rung by hand, it is an impossibility that the ringing should always be on time, and the sooner the present method is abolished the better for all concerned. The bell ringer is paid at the rate of eight cents per hour and is allowed three hours, or 24 cents per day. In round numbers this amounts to about sixty-five dollars a year, for simply pulling a bell cord, and in five years enough money is expended to build a tower and purchase a clock whose bell could be heard all over the grounds and in any part of the building. Accuracy in time would then be insured and with no further expense other than that of weekly winding the clock.

We believe a clock of this kind preferable to electric bells in the halls, for these reasons: it will be less trouble to construct, less liable to get out of order, in constant use day and night, year in and year out, but a trifle more cost, if any, at the outset, and there must be a large bell on the grounds for those working out of doors.

Another point: as it is now, if an extra class is to be heard or anything out of the regular hours, the

bell-ringer has to be told of the fact, or after the hour is past some one must hurry and ring the bell.

With a clock striking every hour or half hour, simply the time would have to be stated and all would know when that time came.

We hope to see this change brought about in the near future, since so long as it remains as it is, just so long is it a constant source of unnecessary expense to the State, and an aggravation to the student.

SINCE THE management of the green-house was transferred to the florist a continual improvement has been noticed. Facilities for the better running of the house have been increased, and the neat and beautiful appearance of the different apartments reflects much credit upon its manager.

The yield of flowers is very abundant, and members of the State Board and other State officials can now be supplied with the most handsome of bouquets *gratuitement*. Visitors are carried away with the grandeur and beauty of the place, and the patronage from town and other places is becoming of increased extent.

To the students and Faculty, the green-house is very convenient, so far as distance is concerned, but the prices charged for flowers, are in most instances, \_\_\_\_\_? and preference seems to be given to outside parties.

Whether or no the house pays for itself we are unable to state, but it certainly looks as though it should.

Aside from its being attractive, its real practical value to the students amounts to nothing. No instruction is given in the building, and very few experiments are conducted.

For the proper study of horticulture a well equipped green-house is necessary, solely for the purpose of horticultural experimentation. Therein could many of the principles of botany be illustrated. Students could study and observe the effects of cross fertilization, could practice the various methods of budding and grafting, and the propagation of our beautifully colored flowers. Further, it will not be long before the number of lady students will be much increased, and to them one of the most interesting and beautiful studies in our course of applied science would be Floriculture. This, to be properly taught, requires a green-house under the direct supervision of the instructor, whereby every method used in the art and science of cultivating flowers may be practically demonstrated.

W. H. Coffren, '82, whom our readers will remember as being in the signal service and located at the central station, Washington, is pursuing a course in medicine at Harvard University, besides attending to his duties in the instrument testing department of the service. The ability which he manifested while taking the course of study at Fort Wayne, graduating with highest honors, led the service to entertain the highest hopes for his future and to retain him at the central station in the physical laboratory, where the many instruments used in the service are inspected and carefully tested. The superior manner in which he has filled this position has fully demonstrated the wisdom of their action.



## COLLEGE NEWS.

Drill.  
 No hazing.  
 New cadets.  
 "Coeds," six.  
 A new band.  
 Hear them play.  
 Spring draweth!  
 A pleasant winter?  
 Class '89 numbers 136.  
 Three Japanese students.  
 Let's hear from the band.  
 Go to Jackson—for close shaves.  
 The seniors have ordered class rings.  
 Dr. Abbot has the senior rhetoricals.  
 Fruit promises to be plenty this season.  
 Dr. Grange has an excellent class-room.  
 The Forcing house is working first rate.  
 The cadets began drilling about March 15.  
 Considerable sickness in school at present.  
 Have you visited the new veterinary hall?  
 The greenhouse is in an excellent condition.  
 Common talk—"Such an excellent drill-hall."  
 Students' house-cleaning on that last of April!  
 Hale and McKee of '82 attended the stock sale.  
 Forty students are taking the Mechanical course.  
 Students in mechanical course make their own tools.  
 Call and see the admirable paintings of Mrs. Prof. Bailey.  
 Dr. Kedzie recently secured a fully equipped assay furnace.  
 The board have granted \$20 for copies and models for drawing.  
 The College bell has been moved to the top of Williams Hall.  
 Secretary Reynolds remained at the College during the winter.  
 Sixty Freshmen in one division in Geometry, and over fifty in the other.  
 Have you heard of the "ladies' serenade" in front of Williams Hall?  
 Lieut. Lockwood spent the winter at the Bermudas with an invalid sister.  
 A certain Freshman says he would sooner smoke tobacco than gunpowder.  
 Prof. L. C. Carpenter went to Detroit March 26, for treatment for his eye.  
 Prof. McLouth's office is on the ground floor of the tower in the Mechanical Hall.  
 Dr. Beal lectured in the chapel March 18, on "The Structure of a Blade of Grass."  
 M. A. C. is proud, and of right should be, of her President, Faculty and students.  
 Dr. Beal will exhibit some of the drawings of the Sophomores at the State Fair.  
 Just think of seventeen pins projecting through the seat of one Freshman's pants!!!  
 Mr. Helmore of '88 recently presented the College with an egg of an emu from Australia.  
 The lawn between the big stone and Williams Hall is to be plowed, and then seeded again.  
 Miss Harrison taught the children (of the smaller growth) of the College during the winter.  
 A part of the vegetable garden will be devoted to the growing of fifty or sixty sorts of wild grasses.  
 The Mechanical department lately had occasion to purchase \$75 worth of apparatus for the department.  
 Mr. C. H. Ward, two years with '82, presented the Geological Museum with a fine lot of minerals and ores.  
 Five Indiana students; the admirable workings of the College are being felt, not only at home, but abroad.  
 Mr. H. E. Thomas, '85, and late Editor-in-Chief of the SPECULUM, was on the grounds Friday, March 26.  
 Prof. Cook presented a paper on the "Pollen Theory" at the National Bee-Keepers' Association's meeting at Detroit.

Miss McLouth conducts an afternoon school of the Faculty children in the lecture room of the new Mechanical Hall.

The coming pathetic song, entitled: "Keep off the Grass."  
*L. H. Bailey.*

Did you hear any thing "drop" when "Prexy" planted himself on the smoking question in Chapel the other morning?

The College has added two new cases to the Zoölogical and Geological Museum, and has the materials on hand to fill them.

G. B. Sudworth, a resident graduate of Ann Arbor, is assisting Dr. Beal to instruct the "hilarious Sophomores" this spring.

Prof. Carpenter has moved over his engineering apparatus to his new office in the second story of the tower of the Mechanical Hall.

Everyone remarks the good arrangement of the books in the library, indicative of good taste on the part of our lady librarian.

And behold it has come to pass that that the *junior* eateth up his raiment with acids, and cutteth up *felines* with savage ferocity.

President Willits read an able paper on "Limitations of Agriculture" before the class in Political Economy the other morning.

B. T. Sturtevant of Boston, Mass., recently presented the Mechanical Department with a "Forger's Power Blower" worth \$100.

Prof. L. G. Carpenter also spent a portion of the winter at Johns Hopkins; but was obliged to leave on account of his eyes failing.

Public speeches were delivered in the chapel, March 24, by Seniors Clute, Rummier, Wigglesworth, and Juniors Himebaugh and Thiers.

We are under obligations to our successful and much respected librarian, Mrs. Merrill, for the "Library Notes" appearing elsewhere.

Ask Prof. Cook how loud the senior statesman talked in discussing the labor problem during President Willits's necessary absence on March 25.

Prof. Theodore Nelson, the State Superintendent of Public Instruction, will take charge of the Freshmen Rhetoricals from, and after, April 2, 1886.

Dr. Kedzie, in his trip to Washington last winter, took the opportunity to visit the Physical and Chemical Laboratories at Johns Hopkins University.

One of our Japanese students, Mr. Tamari, is experimenting on corn and various roots, with a view to prove some of the scientific facts announced by Darwin.

Mr. Macary of '89 has been very low with congestion of the bowels. We understand that he is now convalescing, and will soon be able to renew his College work.

It is quite probable that Gen. Francis A. Walker, President of the Massachusetts Institute of Technology, will come and deliver an address during the summer term.

President Willits has been invited to address the graduating classes of the High Schools at Union City and St. Clair next June, also the Farmers' Club at Mason April 10.

Prof. MacEwan has an office, Prof. Carpenter's old office fitted over. Prof. says he will be glad to receive calls from his many friends. Office hours not announced as yet.

The Equalization Board *has met*, and divided the students as follows: Club "A," thirty-six numbers; "B," forty-five; "C," forty-five; "D," forty, and "E" forty-four.

The lack of a suitable drawing room is much felt this spring. The class of ninety-five has to be divided into sections and only one-half the drill as expected given to each student.

We trust our literary society lecture committee will procure lectures of some note. We are getting tired of third rate humorists. Give us something that we can appreciate.

The newspapers have it that the Agricultural College was favored at the stock sale March 25, with four live and lively candidates for Governor. Can any College beat the record?

The seniors in Political Economy are very much pleased with their instruction. President Willits never fails to drive home his points, or to make himself thoroughly understood.

The mechanical building is now completed and the tools and machinery have been put in place. Practically the course is complete, and has been found to be well adapted to its purposes.

Prof. F. S. Kedzie and Miss Kate Marvin of Lansing, were united in marriage December 30, at the First Congregational church of Lansing. The contracting parties stand very high in society, and the marriage is spoken of by all as a very happy affair.



Our Mechanical Hall equipments are said by Prof. McLouth to be very fair when compared with those of Eastern schools, considering, of course, the fact that the department is only an infant.

Have you heard how the Freshmen rushed over to the Armory to confer with Lieutenant Lockwood in regard to drilling? For further information see Serjeant I. B. Bates, alias "Lieut."

A freshman mistaking Senior Whitney with facial appendages for a professor is heard to say: "Professor, I was present at class, but I did not get in till after roll call. Won't you please excuse me?"

Mrs. Merrill was landlady at President Willits' house last winter. Miss Harrison and Mr. Burns were the regular boarders. Mr. C. B. Collingwood was a welcome transient during the holidays.

W. F. Hoyt, '83, since M. D. at Medical College at Columbus, Ohio, attended stock sale, March 25. He will locate permanently at Grand Rapids. "Web," well deserves success in his chosen profession.

The Freshmen in Mechanics finish their book soon, when they begin laboratory work. Each student will be given a separate table and required to repeat the experiments mentioned in the text book.

Prof. MacEwan spent the winter at Johns Hopkins University, studying the early Anglo Saxon and other languages. While there he was made a Fellow, which fact, so we are informed, removes all fees.

Mr. C. P. Gillett, '84, made the College a flying call March 26. He will shortly return to College to resume his post graduate course, and assist Prof. Cook in his department. Rumor says, "Not alone."

Prof. Bailey is intending to cut out the second drive in front of the Library. The drive in front of the entrance will be made larger, and from that westwards, the ground will be converted into one unbroken lawn.

The Boarding Clubs are running in fine style. Good table board ranges from \$2 to \$2.50. The success of these clubs demonstrates the ability of the students to run and completely control their own boarding affairs.

Dr. Grange received a "Papier Maché" horse from France, March 23. This model is composed of ninety-five parts, and, free of duty, cost something over \$800. There is only one firm making these specimens in the world.

Dr. Grange lately received skeletons of a horse, ox, sheep and a hog from Ward's museum at Rochester, N. Y. Since our last issue the Doctor has also made a collection of bones illustrating nearly all the common diseases of bone.

Our popular and efficient foreman of the garden, Mr. C. L. Crandall, attended for several weeks the Bussey Institute, which is the agricultural adjunct to fair Harvard. He afterwards visited the Massachusetts Agricultural College.

The slides of the College took well at the institutes at East Saginaw and Grass Lake. The people were very much interested in them and especially in those representing the boys in "calico shirts and blue overalls" ready for manual labor.

The Department of Agriculture at Washington sent Dr. Beal about thirty kinds of wild grasses for him to determine their relative values as farm crops. These specimens are from the West and South, and have never been in the market.

The Professors are glad to notice the fact that there never was more earnestness among the students than at present. May this spirit of earnestness become more and more manifest, for truly, zealotry and seriousness are the mottoes of the age.

What can be the trouble with the Faculty? Fully five per cent. of that august body attended chapel exercises. Surely the members ought to set a better example; for, to a certain extent, that old adage, "As the teacher is, so is the school," is true.

A very important change in the manner of conducting the Farmer Institutes was introduced last winter. This was in the attendance of both the President and Secretary at each Institute. A full discussion was brought out and the College made hosts of friends.

This is an age of progression, a period of mud and bad roads. 'Tis now that we regret (sad indeed, is it not?) that the State has not furnished us with a sidewalk, or a street car line to the city. Who is the loser by this state of affairs? Professor, student, or —?

The mighty freshie is receiving Theoretical Drainage; ere long he will grapple with The Practical Drainage. Then his course in that line will be complete, for he will have the science and the art. How *soul-inspiring* the science; how *mudifying* the art!

Prof. McLouth took a hurried eastern trip during the winter to see various physical and mechanical laboratories. In his trip he visited Washington, the Naval Academy at Annapolis, Johns Hopkins, Yale, Massachusetts Institute of Technology, Harvard and Worcester.

Two P. M. Grammar classes in existence; one under Prof. MacEwan, the other under J. B. Cotton. The first, numbering fifty, is laboring to make up the fall term's work; the second, numbering twenty-two, is being prepared to pass the entrance examination. These classes meet at 3 o'clock.

The ladies of "faculty row" have organized a Literary Society and Reading Circle. We are in hopes that your scribe will receive an invitation to attend one of their meetings. First, because he is of a literary turn of mind, and second, in order that he may note the proceedings for the press.

Visitors from down town to the greenhouse go away very much impressed with the sights. Excellent authorities state that the greenhouse never was in better condition than at present. Call in and admire the beautiful. Our excellent florist, Mr. Knapper, thoroughly understands his work.

The seniors in Meteorology most sincerely and solemnly promise that no "Bill Nye Blizzards" shall devastate fair M. A. C. We understand that changes in the weather will not be made, except on majority vote of said seniors. If you speak to them do so in "accents soft and mild," for fear of rousing the angry elements.

The senior orators chosen by the Faculty for commencement are as follows: J. B. Cotton, Albion, Ind.; Miss Carrie M. French, Lansing; W. E. Gammon, Richland, Cal.; H. N. Jenner, Allegan; A. L. Nichols, Orangeville Mills; T. A. Stanley, New Britain, Conn.; Miss Jennie A. Towar, Lansing; E. A. Whitney, St. Louis, Mich.

It is very gratifying to admirers of the College to notice the many complimentary notices received by the College from the press. The New York *Tribune* lately made five brief, but happy notices of the workings of our will be "Alma Mater" in one week's issue. These facts indicate that the College is firmly establishing itself as a practical and industrial school.

A new faculty rule:

Whereas, Several of the young lady students have been found guilty of the unpardonable offense of chewing "Black Jack," the scientific name of which is gum, it is hereby ordained and established that no lady student will be allowed to chew said "Black Jack," or any other gum, except in her room and then only when the transom of said room is closed.

President Willits addressed the Y. M. C. A. Sunday evening, March 21, on the subject of "Affirmative Religious Principles." The address was very well received, and it is only fair to state that President Willits did the subject justice. In fact, this is also true of his every undertaking. No one who listened to his eloquence could come away without being benefited in a more or less marked degree.

President Willits has been invited to deliver an address at the Legislative reunion at Lansing in June, on the subject of "Schools and Colleges." He delivered an address in the Lecture Course at Litchfield March 19, on "Moslems and Mormons;" he also delivered a lecture in the Sunday Evening Course in the Episcopal church at Flint February 21, subject, "The Sabbath as Seen by a Layman."

The students taking the Mechanical course are divided into two sections, each working every other day. This is due to the fact that there are not enough tools to give all work every day. The students are mostly engaged in adding to the equipments of the two shops; the boys in the iron shops finishing up lathes and planing surfaces, and the boys in the wood shop making cases for their tools, tables for the Laboratory and racks for holding drawings in the department of drawing.

Prof. McLouth's well is a geological curiosity. It has been bored to the depth of ninety-three feet, and the striking peculiarity about it is that every time a heavy rain storm occurs the water is made roily—almost unfit to drink. The contract was that the well was to be put down at \$1 a foot until the water was satisfactory. However, the committee in charge has rejected the well, and it will be put down deeper.

*Student in Trig.:*

"I don't know whether it is 'h' divided by 'b,' or 'b' divided by 'h.'"

*Professor, very solemnly:*

"Yes, the old woman said she had eighteen children in six years, or six children in eighteen years, she did not remember which."

*Tableau—All shed tears.*

While there are a few cases of sickness, and a more or less general complaint in regard to colds, we are inclined to think that relatively we have been favored with good health. This



fact seems more apparent now since we are informed that 150 students at Albion College have been obliged to miss classes on account of sickness. Our College has long borne the reputation of being a very healthy place, and surely the history of the past demonstrates the correctness of our assertion.

Amherst College is fortunate in having many wealthy men among her alumni who still hold their college days in pleasant remembrance, and who do not cease to love their Alma Mater. This is evidenced in what they have done for the college. The new \$700,000 chapel is the donation of one. The library, art gallery, gymnasium, and one of the college halls are all monuments in great part to their generosity and love of the college.

All students are gently requested to notice the following proposed amendment to the constitution of the Students' Boarding Association:

*Whereas*, Our senior friend, commonly known as "Whit," has for some time inflicted his table-mates with his puns and many punning attempts, all punning is from now and henceforward absolutely forbidden, and any one guilty of three violations of this ordinance shall forfeit from the antrosuperior and inferior maxillary, all the stunted growth of modified cuticle.

The second annual public sale of Shorthorn, Jersey and Holstein cattle, owned by the College, occurred Thursday, March 25. Many breeders from all parts of the State were present. Twenty head were sold in the course of an hour or two. The total amount realized by the sale was \$2,150. The highest price paid for any one animal was \$235. A Shorthorn calf two months and two days old brought \$100. Considering carefully all the circumstances, the general opinion was that the stock sold fairly well. At least the State Board of Agriculture seemed satisfied with the sale.

A movement is now under way to have students under the instruction of Professors Cook, Beal and Bailey, prepare papers on assigned work, to be read before the State Horticultural Society which meets at Capital Grange in June. This is a move in the proper direction, and we are of the opinion that nothing would do the College any more good than to have the students take part in the meetings of these various State societies. It would disprove to a certain extent the growing opinion that the College, instead of turning out farmers and horticulturists, is sending out kid gloved dudes with mistaken ideas of labor and its true dignity. It would prove that the College, as well as its every feature, is in sympathy with agricultural pursuits, and that we are taught to rely on, and respect, labor in every sense of the word.

Hon. E. R. Tillman, of South Carolina, has been making things lively over the South Carolina Agricultural College and Farmer Schools generally. He sent for one hundred copies of President Willits's inaugural address, and has asked that fifty copies of the Reports of the Michigan State Board of Agriculture be sent him. He has a brother in congress from that State, who served while President Willits was a member of that body; and the latter, while in Washington last winter, hunted him up on the floor of the House. After shaking hands the former exclaimed, "Great God! are you the Willits my brother has been quoting all over the State of South Carolina? I did not imagine that you had been promoted." He said he had a son he should send here next year. We trust he will do so, and thus show that his words were well said.

At the students' meeting the other evening Mr. E. A. Whitney of '86 was elected manager of the base-ball nine; each member of the students' association was assessed fifty cents for field day and base-ball purposes; a committee of three was appointed to make arrangements for having a field day; and the following changes were made to the Students' Boarding Association: 1. A boarding club certificate shall not be transferable from one person to another, or from one club to another except on the payment of one dollar, unless a person is ordered to change from club to club by the Board of Equalization. 2. All certificates shall be made out by Sec. Reynolds, and the moneys received, divided equally among the five clubs. 3. The range between the highest and lowest club in membership shall be but ten. 4. The cooks shall be allowed board for three whenever the services of the third person are necessary. 5. No person unless a regular student for at least one year shall be eligible to the office of steward.

The list of fruits owned by the Horticultural department has been wonderfully improved. Wild species of plums, peaches, apricots and apples from China and Japan have been received. The growing of the native wild plum will be the special feature of the Horticultural department this season. Some forty varieties have been obtained. Prof. Bailey and his efficient foreman, Mr. C. S. Crandall, are carrying on some fifty general lines of experiments. Among which are the testing of

eighty varieties of tomatoes for the purpose of determining what are duplicates; the testing of one variety secured from all the seedsmen of the country in order to see if they send out the same thing under the same name; cross-fertilization in the apple orchard and vegetable garden; the propagation of native ornamental trees, and the keeping of records of every day's growth of various vegetables and fruits; best time of growth, difference of growth of different varieties, and influence on growth of the nature of the soil.

Dr. Beal's book on "Grasses of North America," with an appendix on "Clover," is now in press. The object of the book is to reach the farmer and the student. It will be fully illustrated, and the illustrations are all recent. Dr. Beal has secured the assistance of scores of the ablest specialists in this country. Among whom we might mention, Dr. Trelease of the Shaw School of Botany at St. Louis, who contributes a chapter on "Fungi Injurious to Grasses and Clover;" Prof. Cook, who has written a chapter, profusely illustrated, on "Insects Injurious to Grasses and Clover;" Dr. Armsby of the Experimental Station of Wisconsin, who is the author of a chapter on the "Chemistry of the Grasses and Clover." Some ten other able scientists are contributors to the book, which is designed to be something like a cyclopedia. As explanatory, we will say that this brief notice is but a prelude to our coming review of the work.

Have you heard of Prof. F. S. Kedzie's carbonic acid gas explosion? It seems that when a young down-town lawyer named Jeffries was riding past the chemical laboratory one day last winter, Prof. haled him and asked him in to do a little sight seeing. Not suspecting any danger, the young lawyer was happy of course to accept the kind invitation, and arm in arm the young professor and his young lawyer friend, sauntered up and down the laboratory, from one end to the other, up stairs and down stairs. Finally Prof. took his visitor into Dr. Kedzie's office, and among other things, showed him a Natterer's tube. To show the nature of the experiment, it was necessary to warm the tube slightly, and so the Professor stepped to the radiator for that purpose. To make a long story short, the tube exploded, cutting the faces and hands of the visitor and the visited and shattering the glass of the window adjacent. Pieces of the glass tube went through the window pane like so many small shot. A piece of the tube struck the lid of one of Mr. Jeffries's eyes, and this with his other cuts, scratches and bruises, had the effect to confine that gentleman to his room for about three weeks. Since that time the young men of Lansing have shunned Prof. Kedzie; and for some unknown reason, seem to be very reluctant about accepting invitations to visit the chemical laboratory.

A Mechanical Club has been formed. Two preliminary meetings have been held, and the first regular meeting will be held Friday evening, April 2. The purpose of the club is to study objects pertaining to the department, and thereby create a greater interest in all subjects relative to mechanics and mechanic arts. All students taking the Mechanical Course can become members by signing the constitution. Others not in the Mechanical Course can be elected, providing three negative votes are not cast against them. The society at present numbers about forty members. The officers for the present term are Prof. McLouth, President; Mr. Wiseman, Vice-President and Mr. L. C. Bartmess Secretary and Treasurer. The programme for April 2 is as follows:

Prof. McLouth—Inaugural address.

Mr. Bartmess—Essentials of Steam Engine.

Mr. Groesbeck—Denis Papin.

Mr. Hemphill—Early History of the Lathe.

Mr. Pagelson—The drawings for the evening.

Mr. Hinkson—Literary Critic.

The society meets in the Lecture Room of the Mechanical Hall on the first and third Fridays of each month. All are cordially invited to be present.

Mr. Crandall, who visited the Massachusetts Agricultural College and Amherst College during our winter vacation, thus briefly presents some interesting items concerning these institutions: The students of the Massachusetts Agricultural College will soon occupy their new chapel and library. The building stands in a prominent position, is constructed of rough dressed granite in gothic style and is exteriorly a handsome structure. The lower floor will be occupied by the library, the upper used as a chapel room. The appearance of the latter is rather peculiar; one would almost imagine himself in a finely finished garret. The effect is due to the fact that to fit the money appropriated, seven feet of the height of wall as planned by the architect was cut off, thus bringing the roof nearly to the chapel floor. It is, however, a grand improvement over their old quarters, and the students will especially appreciate the improved library facilities the new room will afford them. The building cost the State \$41,000 exclusive of cases and furnishing. At the Massachusetts Agricultural Col-



lege the Military Department takes a prominent place. One of its features is the room inspection. At 8:30 o'clock on Saturday mornings each student must appear at his room door in uniform to salute the commanding officer and his staff, and submit himself and room for inspection. Shoes must be nicely blackened, rooms swept and dusted, beds made, and everything in good order. The inspectors are critical and the system is a wholesome spur to students with lazy or untidy tendencies.

The following letter explains itself :

J. B. COTTON, PORTLAND, MICH., March 27, 1886.  
*Agricultural College, Michigan :*

DEAR FRIEND,—Knowing you to be one of the editors of THE SPECULUM, I send you the inclosed invitation which I received a few days since, and which may be of interest as a personal item. Suffice it to say, I expect to be present at the wedding.

Very respectfully,  
C. P. GILLETTE.

#### INVITATION.

DR. AND MRS. CHESTER SMITH  
invite you to be present  
at the marriage of their daughter  
CLARA,

—TO—  
CLARENCE PRESTON GILLETTE,  
Wednesday, March 31, 1886,  
at 3 o'clock P. M.

PORTLAND, . . MICHIGAN.

THE SPECULUM sends congratulations; and fondly trusts that life's pathway may be strewn with flowers, and illumined with the light of true happiness.

Read Our Poem !

Bill Nye drew *nye*,  
The boys did cry  
"Oh my, Oh my!"  
To hear him try  
With jokes so dry  
To tell a lie  
Of times gone by  
When in the rye  
He hid the pie  
And 'neath the sky  
Prepared to die  
With long drawn sigh,  
Then said, "Shall I  
Close up my eye  
Whene'er a 'fly'  
Kicks up too high?"  
Last, his ally  
A "Hoosier" spy  
With huge necktie  
And face awry  
Could not deny  
A strict reply  
Lest he belie  
His senior guy.  
So we espy  
That each did vie  
With words three-ply  
And mockery,  
And vain "O fie"  
To underly  
With senseless pry  
Humor's descry.  
J. Whitcomb Ri—  
He's gone for aye;  
Bill Nye, good bye.

— So ends our poem.

Dr. Beal remained at the College during the winter. He busied himself completing his book on "Grasses," and keeping a diary from which we clip the following :

"Nov. 23.—Barney and the cart ran away from young Marquat; damages, a barked horse leg, a broken thill, and a barked oak.

"Nov. 24.—Prof. Grange can't leave State to visit Philadelphia; was detained to inspect cattle throughout State.

"Nov. 25.—President Willits hunting around to see if he can find more rooms for new students in the spring.

"Nov. 26.—College boys and girls trying to get the Armory Hall for a skating rink.

"Nov. 27.—Dr. Beal takes Tamari into his office and shuts off the heat from his class-room.

"Nov. 28.—Tamari begins German and moves into town.

"Nov. 30.—President Willits and Dr. McLouth devise how to seat Armory for commencements, and find a room for the College band.

"Dec. 1.—State Board meets at Lansing.

"Dec. 2.—Board go through College from Botanical Laboratory to the new Horticultural hot bed; seem very much gratified at the general boom of the College. All members of the Board were present except the Governor.

"Dec. 3.—Small boys at College put on yellow and red stripes, paints and feathers, armed with wooden swords, whoop and scream and run like Indians. No scalping done, however.

"Dec. 4.—Young folks form a society for social purposes, meeting weekly from house to house; snows all night; sleighing on December 5.

"Dec. 8.—Prof. Cook attends National Bee convention at Detroit. President Willits attends same, and makes the welcoming address. Dr. McLouth attends opening exercises of a large mechanical department of the high school in Toledo, O. Dr. Kedzie went to Washington, D. C. Dr. Beal attends State Grange at Grand Rapids.

"Dec. 12.—Sec. Reynolds and Prof. F. S. Kedzie show slides of Egypt at Capital Grange to a delighted audience.

"Dec. 26.—A bee of young folks work to get sand off so as to skate in Armory. Prof. McLouth gets a load off at State Teachers' meeting as president.

"Dec. 30.—F. S. Kedzie marries in good style. C. B. Collingwood, '85, visits Mr. Burns (?) and Burns goes to see his mother (?)

"Jan. 1.—Masquerade at Armory; splendid time; Dr. McLouth runs foot-race on skates with his son, Farley, and wins the grand prize. Prof. Carpenter cuts some queer antics on skates as a pile driver; he could not turn corners and make curves—sequence, Carpenter lame several days.

"Jan. 8.—Young folks get so they must go to their meetings disguised. Prof. Johnson helps along several farmers' institutes before those of the College begin.

"Jan. 27.—Prof. Grange lectures at Capital Grange on 'Diseases of lower animals.'

"Feb. 2.—Begin holding institutes, two a week for three weeks. Full houses. Enthusiasm runs high.

"Feb. 20.—All professors at College, except Bailey, who visits parents.

"Feb. 24.—So passed the winter. Spring terms opens, and the mill begins to grind."

#### Library Notes.

A beautiful portrait of Burns is being framed for our walls. Rolfe's and Knight's Shakspeare, illustrated, are among the latest Shaksperiana purchased.

A few "winter books" are wanted. Look over your shelves and see if any library labels are to be found housed.

Prof. Bailey, while in Boston last winter, found for his department a number of rare old books at a mere trifle of their value.

The home reading of the students during the past year is shown by the following record of books drawn to be read in the rooms: Novels 500, poetry, essays, criticisms, etc., 390, orations 195, miscellaneous, including travels, description, etc., 180, scientific 165, history 165, biography 95, agriculture 60, making 1,750 books in all. Of books consulted in the library no record is kept but the number must pass some way into the thousands.

## 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. Let this receive prompt attention from every alumnus.

M. W. Gray, '77, is mayor of Pontiac.

W. A. Rowe, '73, has lately buried his wife.

Dr. H. L. Rosenburg, '81, reports a fine boy.

C. A. Dockstader, '81, has joined the Benedicts.

Ruckman, with '85, is a junior "lit." at Ann Arbor.

James J. Jakway, '86, will start for California soon.

Hal Sessions, with '70 in 1868, is banking in Dakota.

G. L. Spangler, '86, spent the winter in reading law.

A. A. Crozier, '79, is on a fruit farm near Grand Rapids.

A. J. Chappell, '82, is married and teaching at McBrides.

T. H. Rees, with '85, graduates from West Point in June.

Fred Schneider, '85, is at Fort Myers in the signal service.

F. E. Skeels, '78, has added agriculture to his horticultural work.



Daniel Strange, '70, is the possessor of a fine herd of short-horns.

R. M. Bates of '85 is a member of the junior law class, Ann Arbor.

"Kid" Walton, with '86, is married, and living at Three Rivers.

Chas. Humphrey, with '86, will get an LL. B. at the U. of M. this year.

John Breck, '84, graduates from the law department, Ann Arbor, this year.

F. E. Robson, '78, is married. Miss Chaffin, of Toledo, is the happy bride.

D. F. Griswold, '75, was secretary of the recent Wayne County Institute.

J. M. Smith, '82, was married last November to Miss Jennie Hall, of Watertown, N. Y.

Corbin, who was with '85 for a time, is now a member of the junior law class, Ann Arbor.

Charlie Williams, '70, is in the agricultural implement and carriage business in Owosso.

W. K. Prudden, '78, has returned to Lansing, where he intends permanently to abide.

J. H. Smith, '83, was married November 17. He is principal of schools at Rock Rapids, Iowa.

H. E. Emmons's, '78, certificate as member of the Detroit Board of Trade is marked No. 50.

J. R. Newton, '85, has returned to his old home at Pendleton, S. C., to help his father on the farm.

S. P. Tracy, '76, has graduated from a Chicago medical college, and begun to deal out little pills.

Albert Dodge, '77, of Fowlerville, is presiding officer of the State Grand Lodge of Good Templars.

Clarence M. Weed, '83, is now assistant to Prof. Forbes, the Entomologist of the Illinois University.

H. W. Collingwood, '83, is giving most perfect satisfaction in his position on *The Rural New Yorker*.

R. M. Bates, '85, says J. W. Matthews, '85, and his girl have called time—ten years, and quit courtship.

A. H. Finney, '70, is doing a large farming and lumber business at the new town of Ashley, Gratiot Co.

Joseph E. Coulter, '82, of Grand Rapids, avails himself of Lansing hospitality of an occasional *Sunday*.

C. D. Phelps, '81, has completed his second term of school at Archie and returned to his home at Manton.

W. E. Hale, '82, purchased two of the best animals sold at the recent shorthorn cattle sale at the College.

J. M. Hollingsworth, '82, has returned to his old home in Illinois. He has a bright boy a few months' old.

M. W. Clark, of Williston, Vt., nearly two years with '86, will graduate at Vermont University this year.

D. W. Andrews, with '79, is in the insurance business at Muskegon. He is doing a large and paying business.

R. B. Norton, '79, of Arkansas City, Kansas, married Miss Mary Beal, of Northville, last Thanksgiving day.

Fred Hodges, '84, is studying in the Chicago Medical College instead of the Eclectic Medical, as given in our last.

Lyman A. Lilly, '77, has quit dairy farming at New Sharon, Iowa, and is now on his Michigan farm, near Allegan.

Richard Haigh, Jr., of '69, is acting as general agent for his brother, Henry A. Haigh's Manual of Law and Forms.

Willis Leisenring, '84, is a junior pharmonic at Ann Arbor. He will spend the summer on the farm at South Haven.

E. C. McKee, '81, of Laingsburg, has a taste for fine stock, and at the College sale purchased College Belle for \$155.

C. J. Strang, '78, clergyman in the Congregational church, has been located at Charlevoix, Mich., since January 1st.

M. A. Porter, one year with '79, is married and engaged in the furniture business with his father-in-law at Northville.

R. W. Hemphill, Jr., '85, is still in the bank in Detroit. He seems to enjoy his position and expects to be promoted soon.

W. O. Fritz, '77, was present at the farmers' institute, held at St. Louis, Gratiot county, and took part in the discussions.

W. S. Baird, '85, acted upon Greeley's suggestion. He spent the past winter in the west, but has now returned to Lansing.

Alva Sherwood, '81, is discharging for the second year the duties of principal of the Three Oaks school. Last fall he was out in Nebraska, and entered a claim for 160 acres of land. His father and sister each have a claim adjoining his. He will go out there to live on his claim as soon as his school closes.

Byron D. Halstead, '71, Professor of Botany in Agricultural College, Iowa, spent the winter in advanced study at Harvard.

Frank Benton, '79, now owns an apiary at Munich, Germany, one at Algiers, Africa, and at Cyprus and Mt. Lebanon, Asia.

The patrons of the Elsie school, Clinton county, are unanimous in their unqualified praise of their principal, T. L. Parker, '85.

Michitaro Tsuda, '84, of Tokio, Japan, has lately ordered a large number of books from this country for his private library.

R. H. McDowell, '74, superintendent of the farm at the Reform School, Michigan, has been very ill, but is now convalescing.

Milton M. Marble, with '84, is highly commended by the Lansing press for skillful and efficient work done in the High School.

E. S. Antisdale, '85, is enjoying his farm life very much. He was present and took part in the discussion at the Quincy Institute.

J. S. Dixon, with '85, is six miles from Ludington teaching a six-months school. He expects to return to M. A. C. in July for his B. S.

Rev. O. Clute, '62, recently preached one of the Sunday sermons by distinguished ministers at the Illinois University, Champaigne.

W. L. Carpenter, '75, was married to Miss Lizzie Ferguson of Detroit in October last. His home address is now 23 McLean street.

Charles Lawson, '86, spent the winter at Ann Arbor in studying Pharmacy. He will go back to complete the course after finishing here.

H. P. Gladden, '85, made the College a visit a short time since. He had just closed his winter's term of school near Dimondale, Eaton Co.

Chas. McKenny, '81, is chairman of the Eaton county board of school examiners. He is principal of the Vermontville school, Eaton county.

H. A. Haigh, '74, is Secretary of the Michigan Club, and W. L. Carpenter, '75, is one of the directors. Their club house is located on Fort street.

H. J. DeGarmo, '88, comes back to join '89. His face is so disguised by a full beard that not a few of the old boys had to wait for an introduction.

J. A. Dart, '85, taught during the winter in a school about three miles from Harbor Springs. He is now back in his father's law office at Petoskey.

Eugene McClear, with '86 one year, is teaching near Lake City, Missaukee county. His brother, James L. McClear, '82, is practicing law at Lake City.

W. C. Stryker, '84, writes from his home, Dayton, Mich., to the "club" stewards that he is now preparing to fill orders for maple syrup in any quantities.

Archie T. Miller, with '85, has sold his interest in the drug firm of A. T. Miller & Co. of Chippewa Lake, and may return to College to finish the course.

"Oat" Merell, with '71 in 1869, is keeping a fine hotel in Owosso in partnership with his father. He has two black-eyed daughters, aged 9 and 11.

L. G. Palmer, '85, still retains his position as assistant in the school at Napoleon. He teaches rhetoric, algebra, geometry, general history and physiology.

Prof. Will W. Tracy, '67, has so far recovered from the fracture of his leg, sustained last fall, as to be able to walk with but occasional help from a crutch.

Donald H. Kedzie, '76, has sold out the Grand Haven *Herald* and left the State on account of poor health. He is now in Texas, and his health is improving.

H. M. Wells, '85, taught a small school this winter in Cohoctah, Livingston Co. He intends to work in D. M. Ferry's seed establishment the coming season.

F. L. Chappel, '85, was obliged to give up his school on account of ill health. He has "hopes of becoming an able LL. D. or perhaps mayor of Coopers town."

Secretary Garfield visited Jay D. Stannard, '76, at Whitewater, Wis., this winter, and found him one of the most successful and substantial farmers of that region.

Charles S. Crandall, '73, now foreman of the College gardens, spent the winter in the East, a portion of the time at Amherst College, engaged in microscopic study with Prof. Miles of that place; and a portion at Bussey Institute.



Prof. L. H. Bailey, '82, has been elected a member of the Executive Board of the State Horticultural Society. He is also President of the Ingham County Horticultural Society.

Fred C. Miller, with '71 in 1869 and 1870, and the builder of Wells's hall, is still engaged in his business in Grand Rapids. He was married to a Kalamazoo lady about a year ago.

C. B. Fisk Bangs, '76, after having completed all his plans for going to Washington Territory, has been obliged to indefinitely postpone matters owing to the sickness of his wife.

E. A. Bartmess, '85, is teaching a seven-months school near Lafayette, Ind. He says he has an opportunity of shaking hands with Profs. Latta, '77, and Troop, '78, occasionally.

C. L. Grimes, '84, is married to Miss Nettie Rogers, of Lansing. He has been engaged in teaching during the winter, but will soon enter the University for a course in pharmacy.

A. G. Gulley, '68, has been made a member of the Board of the State Horticultural Society. A very fitting appointment, as no man in the State is better versed in general fruit matters.

Card received reads as follows: Mr. and Mrs. John H. Nixon request the pleasure of your company at the marriage of their son, Harry C. Nixon, to Naomi Burke, at Bridgman, Mich., March 25.

Lieutenant J. P. Finley, '73, has completed another treatise on tornadoes which has been published by the Signal Service Bureau. It has been highly commended by the foreign press as well as our own.

E. G. Eldridge, '86, principal of the Mackinac school, intends to return to college about the last of April. He is already spoken for as principal of the school for another year at an increased salary.

H. V. Clark, '78, is preaching at Comstock, Kalamazoo Co. He reports a pleasant field of labor, and is much encouraged by successes during the winter. He may return to College soon to study for an M. S.

W. C. Latta, '77, Professor of Agriculture at Purdue University, is the right man in the right place if we may judge from the number taking agriculture there, which greatly exceeds that of any preceding class.

Charles Prichard, who entered the M. A. C. with Harry Thiers, '87, and slept under the bed and in the hay mow for fear of being hazed during his first and only term here, is now a freshman Lit at the University.

C. H. Hoyt, '85, will work his father's farm this season. He has resigned his position as principal of the Climax schools and is succeeded by his "pard," E. R. Lake, '85. Lake spent the winter teaching near Dayton, Mich.

F. S. Kedzie, '77, exhibited magic lantern views of the college at several of the institutes during the winter. It was a sort of a revelation to a good many, who had altogether a different notion of "The State Farm."

Prof. Cook recently visited Eugene Davenport, '78, at his farm in Woodland, Eaton county; and reports him as in successful circumstances, due no doubt to the efficient instructions received at the Agricultural College.

C. E. Miller, '72, is kept busy with a large medical practice at Cadillac. He contemplates taking in the near future a post graduate course in the East, with the view of perfecting himself in some specialty of his profession.

C. W. Garfield, '70, the Secretary of the American Pomological Association, has recently issued the proceedings of their last meeting held in Grand Rapids, and the last Secretary says it is the best ever issued by the Society.

The *Ouray Times*, Colorado, is edited and published by C. A. Ward who spent two years in study here. The last number contains an advertisement of George E. Kedzie, '73, who is doing a large business there in mining engineering.

F. S. Kedzie, '77, was married on the evening of December 26th, in the Congregational church, to Miss Kate Marvin, of Lansing. He has rooms in Lansing and drives out to the College each day to attend to his duties as assistant in chemistry.

Lynn Bonham of '84, as packer of Glenellen hams, Cincinnati, Ohio, is meeting with deserved success. His goods, though unknown to the market a year ago, now command the highest price of any on the market and are in constant demand.

Wm. Dothany and Charles Baker, of '84, and M. E. Jones, two years with '84, comprise three members of a quartet which furnishes fine music for various literary societies at the University, Ann Arbor. They are working up a great reputation in that line and their services are in great demand. They are all members of the junior class, pharmacy course. Dothany and Baker expect to make M. A. C. a visit during their spring vacation.

W. A. Bahlke and John T. Mathews, both of '83, were admitted to the bar last February. Bahlke is practicing with A. A. Ellis, of Ionia, the prosecuting attorney for Ionia county. Mathews is practicing with his brother-in-law, Clarence Cole, of Portland.

G. C. Lawrence, '85, now at the State Normal, is reported as enthusiastic and earnest in the service of Cupid. He is rooming with C. E. Smith, '84, who is also engaged in study at the Normal. We read with interest an article by him in the last *Normal News*.

Alumni visitors at Michigan Agricultural College since our last: A. F. Kinnan of '83, C. L. Grimes of '84, W. F. Hoyt of '83, H. E. Thomas of '85, H. M. Wells of '85, Charles E. Hollister of '61, Richard Haigh, Jr., of '69, J. W. Matthews of '85 and T. L. Parker of '85.

George Morris, '85, spent the winter teaching in a German settlement near his home. Lived on saur kraut and apple butter. Took one lesson each week of a German teacher. Is busy settling up his father's estate and will remain on the farm during the summer.

J. N. Estabrook, '87, who sailed for Germany a few days after College closed last fall, has not yet returned. He spent the winter at Leipsic in the study of German. He contemplates spending most of the summer in Italy, provided he does not sooner return to America and M. A. C.

Prof. C. C. Georgeson, '78, was recently appointed Professor of Horticulture and Agriculture in the Imperial College at Tokio, Japan. His second daughter was born in the morning of the day on which he left home for Japan, January 25. Mrs. Georgeson is now at home, Denison, Texas, but will join him soon.

"Doc" Stryker, '85, writes from Kirkville, Iowa, as follows: "I am still laboring with the young Kirkvillists and if they deviate from the straight path it is due to other influence than mine." He read a paper on "Elementary Science in our Public Schools" before the Teachers' Association at Eddyville, January 2.

H. E. Thomas, '85, began the study of law soon after leaving College, in the office of the Hon. H. F. Pennington, of Charlotte. He studied with him till December 15, when he removed to the office of John M. Corbin, of Eaton Rapids, where he is now employed as a stenographer, and continues his law studies.

T. D. Hinebauch, '85, stopped a few days at College on his way home for vacation. He is studying at the Toronto Veterinary College instead of Guelph, as given in our last. He will spend the summer at home, Vicksburg, helping his father on the farm and practicing veterinary. Next winter he will go back to Toronto for his V. S.

E. J. Rauchfuss, '79, has resigned his position in Wm. Springer & Son's carbonated water house in Louisville, Ky., in order to take charge of his father's farm at Golconda, Ill. His father being in poor health, occasioned partly by the loss of his youngest child, a girl, who was drowned this winter by breaking through the ice on the Ohio river.

A. W. Page, Jr., '84, after being confined to his bed for nearly three months with malarial fever, died at Flat Rock, Mich., on the morning of December 24. The deceased was married June 17 to Elizabeth C. Merrell of Flat Rock, and would have been twenty-four years of age December 27. His genial manner and even temperament won him many friends while in College.

Charles D. Wiley, who was a special here last year, is president of the junior pharmics, Ann Arbor. When through college he expects to set up in business for himself, and sell strychnine to suiciders at reduced rates, strictly cash. The privates of Company "B," Cadet Corps of M. A. C., not only wish him the success they would any of their captains, but a great deal more.

C. P. Gillet, '84, was married Wednesday, March 31, to Miss Smith of Portland, a sister to Dale Smith, now a student here in the class of '88. Gillet spent the winter at the Champaign University, Ill., engaged in study under Prof. Forbes, but will be here this summer as a student and an assistant in the Entomological department.

James Troop, '78, instructor in horticulture and entomology at Purdue University, is director of the Indiana experimental stations now being established by the State Horticultural Society. The work of these stations will be to carefully and thoroughly test all new fruits and vegetables before they are put on the market, so to enable the society to fortify themselves against the imposition of unscrupulous dealers, and to expose and lessen the sale of all worthless and inferior varieties. There are now eleven stations at work scattered all over the State, so as to secure all possible differences of soil, heat



and moisture. These sub-stations all make reports of their experiments to the central station at Purdue University, under charge of Prof. Troop, and he reports to the State Horticultural Society.

C. E. Sumner, '79, was visited by one of ye editors this winter and was cosily situated at 1408 Fourteenth St. N. W., Washington. C. P. Cronk, also of '79, is living in the same house at present with his mother. Mr. Sumner is in the Adjutant General's office engaged in searching old records in reference to pension claims. He soon expects to resign and enter the law firm of Swayne & Hayes at Toledo.

J. W. Gifford, '78, who has been for some time located at Shoshonee, Idaho, as a surveyor and mining engineer, and is now Michigan Superintendent of Construction on the United Lines Telephone Company, was in Lansing recently to establish an office for the company. The class of '78 will be interested to learn that he still resorts occasionally to his old trick of manipulating chairs about his head with his teeth.

A letter from W. S. Kedzie, '83, written at Ouray, Colorado, reads: "At present I am clerking for my brother in a stage and express office, so that he may devote nearly the whole of his time to assaying. We are 7,500 feet above the level of the sea, but I have never seen it very cold here, not more than ten degrees below zero since December 25, 1885. I like the place first rate, and think of staying here for some time."

The sixth annual reunion of the Agricultural College Students' Association of Ionia county was held at the residence of Mrs. L. C. Maynard, of Portland, on Friday evening, February 12. Officers were: President, W. G. Smith; Secretary, E. A. Murphy; Statistician, W. C. Hall; Historian, George Morrice; Poet, H. L. Benschotter; Orator, C. B. Collingwood; Prophet, E. B. Waldron; Toastmaster, A. J. Chappell.

Lincoln Avery, of '82, will graduate from the law department of University of Michigan this year. He will then resume business in the office of Avery Bros., Port Huron, in which office he has already practiced, having been admitted to the bar before entering the University. On the evening of March 27 he was elected president of the Webster Society. He expects to visit Michigan Agricultural College during the vacation at Ann Arbor.

Henry A. Haigh, '74, now a prominent lawyer of Detroit, has published a Manual of Law and Forms. The book is in part the outgrowth of numerous answers and articles contributed by the author to the *Michigan Farmer* and the *American Agriculturalist*, while he was conducting a legal department in those papers, and the subjects treated have been chosen with especial reference to the wants of the industrial classes. A careful examination of the book has so impressed Pres. Willits with its fitness for these classes that he recommends its use by the students in connection with his course of lectures on business law.

"Dr. Wilbur F. Hoyt, house physician at St. Francis Hospital, Columbus, Ohio, during the past year, is about to retire from the institution, his term of appointment having expired. It is the custom to appoint the house physician each year from the graduating class, one of those receiving highest honors being chosen. Dr. Hoyt was the recipient of one of the prizes a year ago, and his conduct in the office of house physician has demonstrated the wisdom of his appointment. He is a bright young man with a promising future. He is to leave in a few days to enter upon the practice of his profession at Grand Rapids, Mich., and will carry with him the well wishes of all his acquaintances." We clip the above from one of the Columbus papers. Our readers will recognize W. F. Hoyt as a graduate of the class of '83.

P. G. Towar, '85, has just started for Akron, Ohio, where he goes to enter the employ of Aultman, Miller & Co. as agent for their well known reapers. This winter he taught school in the same district as last, about seven miles northwest of Lansing, and when he wished to be well entertained (which was not infrequent) would visit a certain lady living in a small village six miles west of Lansing, or ten miles away from his home near the College. Now Perry is not known to cherish any insatiable love or even undue partiality for pedestrianism, and it is not to be thought for a moment that he would visit Delta of an evening for the purpose of embracing the opportunity of ten mile morning walks, yet we must concede that he deserves great commendation for the record that he made early one frosty morning last winter when his horse, not being as well attached to the place as he, had gone home first.

A recent letter from M. A. Porter, with '79, informs us of the death of his brother, James A. Porter, '77. His death took place at his home, Blissfield, Mich., on Christmas day, 1885. The deceased paid his own expenses while at college by teaching during the winter vacation. After graduation he still continued teaching, being engaged at different times in the States of Indiana, Ohio and Michigan, and also in the high

school at Greeley, Col. In the fall of 1884 he was married to Miss Alice Hodges, of Ogden, Mich., and took up his permanent residence there. He was a man that was ever guided in word and action by the golden rule, and entered heartily into all Christian work, being at the time of his death the superintendent of the Sabbath school at the Zion Church of the United Brethren at Ogden, of which church he had been a faithful and worthy member for fifteen years. He was thirty-one years old at the time of his death, and leaves a wife and child—a son—to mourn his loss.

## COLLEGES.

Germany has no college paper.

Next August, Heidelberg will celebrate its 500th anniversary.

The Mormons are about to establish a college at Salt Lake City.

The senior class at Williams College will graduate in cap and gown.

Purdue has recently expended \$15,000 for an electrical apparatus.

Five colleges have been established in Dakota during the past year.

Chapel orations have been done away with in the University of Minnesota.

More than one-fourth of the students in German universities are Americans.

The different colleges in the United States conferred 14,000 degrees last year.

During the year 1885 three comets were discovered at the Vanderbilt Observatory.

A Harvard student from New York carries \$15,000 insurance on the furniture of his room.

Union College has 3,000 graduates living. Harvard and Yale each have a greater number.

In round numbers it cost Yale \$7,000 for boating, \$5,000 for base ball and \$2,000 for foot ball.

There are now four daily college papers in the United States Harvard, Cornell, Princeton and Yale.

Leyden University, Holland, is the richest in the world. Its real estate alone is valued at \$4,000,000.

The class in mechanical laboratory work at Notre Dame are at work on a 10 horse power steam engine.

James Russell Lowell has taken his old place as Professor of Logic and Belles Lettres at Harvard University.

The Bowdoin professors are encouraging visits from the students by setting apart one evening each week for that purpose.

Harvard is still the largest college in the country; Oberlin comes second; and Columbia third, Michigan is fourth; and Yale, fifth.

The best salaried professor in the world is Prof. Turner, the distinguished anatomist of Edinburgh, who receives \$20,000 per annum.

Twenty million dollars, the largest sum ever given by a single individual for a public purpose, is the endowment of Leland Stanford, Jr., University.

Out of 3,500 graduates last year from various colleges in the United States, 500 became ministers, 500 doctors, 100 merchants and 1,890 base ball players.

The right of petition by the students has recently been abolished in the Wisconsin University and petitioning made an offense punishable by suspension.

The donation to Oberlin College for the year 1885 sums up to \$80,000. This does not include any part of the cost of the Warner Hall nor the Clark bequest.

A college is soon to be founded in Fargo, Dakota, by Hon. Geo. H. Barnes, the president of the Northern Pacific elevator system. It is to be called Barnes University.

Hillsdale College commences the spring term with a goodly number of students, about 600. Among the number are the usual pedagogues who have returned from their winter's work.

Dr. John Bascom has resigned the presidency of the Wisconsin University on account, it is said, of the bad feeling which has existed between him and several of the regents. The resignation has been accepted by the regents and a committee appointed to select his successor. He has held the position thirteen years.



Mr. F. B. Dickerson, of Detroit, offers a gold badge to the student at the Hillsdale Gymnasium who shows the most ability and grace in the use of Indian clubs at the close of the present term.

The dimensions of Dartmouth's new gymnasium are 50x100 feet, with a second story and a wing for special apparatus. It is in constant use by the students, many of whom are preparing for base ball and rowing matches.

Among Hillsdale's numerous attractions she now boasts a new and commodious gymnasium, well furnished with all the latest appliances for the *devel-op-ment* of muscle. Thanks to Mr. F. B. Dickerson, of Detroit, and her many students.

Oberlin College sustained a heavy loss last winter in the burning of the Ladies' Hall. No lives were lost, although more than a hundred young ladies were asleep in the building when the fire broke out. The building cost \$40,000, but the insurance covered over three-fourths of the amount. It will be rebuilt soon.

## EXCHANGES.

With this issue of THE SPECULUM a new man assumes the editorship of the departments of College News and Exchanges.

The *Normal News* ranks among the most lively and attractive of our exchanges. Its alumni, personal and local columns are ably conducted and adds much to its valor. The March number contains a short, but sensible, article on the subject, "Older than Methuselah;" also an excellent essay on the "Powers of the Imagination," from the pen of C. E. Smith, a graduate of this College in the class of '84. Mr. Smith was formerly an able contributor to THE SPECULUM.

We acknowledge the receipt of the following college papers, many of which have been sent regularly during the months of our winter vacation:—*Oberlin Review*, *Notre Dame Scholastic*, *Normal News*, *The Pleiad*, *Academica Hesperian*, *Acta Victoriana*, *Aurora*, *Academy Journal*, *Berkleyan Badger*, *Blackburnian*, *Rambler*, *College Index*, *Transcript*, *Campus Cabinet*, *College Days*, *College Journal*, *College Chips*, *Caliopean Clarion*, *Carletonian*, *College Student*, *Dennison Collegian*, *Delaware Review*, *Dilettant*, *Emory Mirror*, *Hesperian*, *Central Collegian*, *Index and Chronicle*, *Monmouth Collegian*, *Niagara Index*, *News Letter*, *Occident*, *Owl*, *Purdue*, *Sunbeam*, *Baldwin Index*, *Vanderbilt Observer* and *Xavier*.

The *Berkleyan* of February 23 is exceptionally entertaining. It faithfully reflects the college loyalty and enthusiasm which is so admirable among students of a good institution. And although its departments are all well sustained, the chief feature of attraction in this issue are the Notes on Physical Education in other colleges and universities in the United States. These notes are very complete and calculated to exhibit the various steps which have been taken by educational institutions towards the solution of this troublesome question. The notes include a study of twenty-four of the leading colleges, and plainly indicate a determination on the part of all to supply their students with suitable gymnasiums and a competent director, and most of them have for years been supplying such facilities and are much encouraged by the results.

The students who are interested in reading the exchanges will find them, arranged and classified according to States, in the space assigned them in the library. We will attempt to keep them in their proper places, so that they may be found and consulted without the trouble of looking over a miscellaneous collection. We are sorry that we have received no exchanges from Ann Arbor, Hillsdale, Olivet, or Adrian, but hope in the near future to furnish the students a paper from each of the Michigan colleges, and also from each of the leading colleges and universities of the country. Boys, look them over. Take an interest in the workings of our American colleges. Learn through their papers what they are doing. Com-

pare other colleges with our own, and be able to make an intelligent estimate of the Agricultural College as compared with the colleges of the Nation.

We do not desire to come forward with the usual blowing of horns and ringing of bells, and announce to our readers that great improvements are being made in this department, or that its columns will be more attractive than before. In accordance with the popular opinion of College graduates, our board of editors, during the present year, have deemed it necessary to throw aside the material prepared by the exchange editor, in order to make room for items of more general interest. On assuming our duties we find that a large number of excellent College papers, the accumulation of the winter, are awaiting a response. Some of them remember THE SPECULUM with complimentary notes, some pass criticisms on its size, style, or method of inserting advertisements, and others wonder what has become of the Exchange editor—if he is sick or has been expelled from College. For the benefit of all we will state that THE SPECULUM is still alive and that our predecessor in this department is a man who was faithful to his duties, but whose material for publication was omitted for the reason above given.

The question has arisen; Shall we neglect this part of our paper? Shall we read three or four pages of exchange notes in the various college papers that come to our table, and after admiring their mutual admiration for each other, or after becoming weary of the many disastrous attempts at sharp and high-sounding criticism, allow them to pass unnoticed? We have come to this conclusion, that inasmuch as the object of exchanging is for the purpose of becoming acquainted with the various colleges of the country, and for the promotion of a friendly interest in each other, we shall indulge in no criticisms that are intended to underrate or depreciate the value of any college journal. True, some of the papers are vastly superior to others, but for one paper like the *Academica* (Cincinnati, O.) to display its spirit of pomp and bombast by severely criticising the style, arrangement, and general make-up of another of equal merit like the *Hesperian* (Lincoln, Neb.) is as ridiculous as it is absurd. We dislike nearly as much the general tendency in all of the papers whose editors seem to think that some remark must be made concerning the excellent qualities of other papers, even though they possess none at all. Now, brethren of the exchange circle, perhaps you will be unable to understand our position, but send along your papers. We welcome them to our table, and only hope that THE SPECULUM will receive as hearty a reception as we trust it deserves. Our limited time has not admitted of a very thorough review of the exchange list, but we hope for the next number to be able to present some commendable notes expressing our appreciation of them in a more definite form.

## REVIEWS.

Since the last issue of the SPECULUM the following valuable work has been published: A MANUAL OF THE BOTANY OF THE ROCKY MOUNTAINS, by JOHN M. COULTER, PH. D. Publishers Iverson, Blakeman, Taylor & Co.

As its title indicates, the region covered includes Colorado, Wyoming, Montana and the western part of Dakota, Nebraska and Kansas. These rapidly settling countries are frequently visited by botanists, who will eagerly welcome this book as a timely aid in their researches. The author acknowledges the aid of Dr. Gray and S. Watson, of Harvard; of M. S. Bebb, the expert on willows; and L. H. Bailey for his aid on the sedges.

The latter is a young, enthusiastic professor of horticulture, and was first Editor-in-chief of the SPECULUM. He is fast becoming the leading American authority on that perplexing order *Cyperaceæ*, Sedges, which he elaborated for the above named work.

W. J. B.

TAYLOR & CO.'S  
ONE-PRICE BOOT AND SHOE HOUSE,

125 Washington Avenue, LANSING, Mich.



**J. H. SIPLEY,**

DEALER IN

## Fresh and Salt Meats!

Dried Beef, Hams, Poultry, and Game,

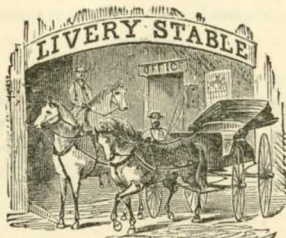
LANSING, MICH.

**EUGENE WILLIAMS**

PROPRIETOR OF

**LIVERY AND BOARDING STABLE.**

106  
GRAND STREET,  
NORTH OF  
CHAPMAN  
HOUSE.

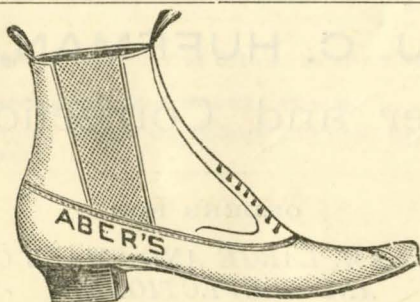


BUSINESS  
ON CASH BASIS,  
AT  
REASONABLE  
PRICES.

SPECIAL INDUCEMENTS TO STUDENTS.

First-Class Rigs at all hours of day or night.

Telephone in Connection with Office.



"NEVER TOO LATE TO MEND,"

SHOULD READ, BUY BOOTS AND SHOES AT

**ABER'S,**

THEN YOU DON'T HAVE TO MEND.

**MOFFETT,**

**DENTIST.**

*Nitrous Oxide Gas or Vitalized Air given for the  
painless extraction of Teeth.*

Southeast corner of Washington and Mich. Aves, Lansing.

**BEE-KEEPERS' GUIDE,**

—OR—

**Manual of the Apiary.**

13,000 sold since 1876. 4,000 sold since May, 1883. En-  
tirely revised. Fifty pages and fifty costly  
illustrations added.

Price by Mail \$1.25. Liberal Discount to Dealers and for Clubs.

A. J. COOK, Author and Publisher, LANSING, MICH.

**L. BECK,**

THE CLOTHIER.

## Headquarters for Fine Clothing!

*Hats, Caps, and Gents' Furnishing Goods  
a Specialty.*

STUDENTS AND OTHERS, GIVE US A CALL!

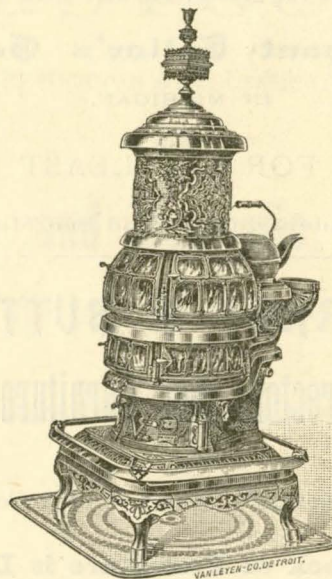
112 Washington Avenue North.

**W. D. SABIN,**

— DEALER IN —

**Heavy and Shelf Hardware,**

SOLE AGENT IN THIS CITY



FOR THE CELEBRATED

**Crown Jewel Stoves and Ranges,**

105 Washington Ave., LANSING, MICH.

The Best Goods! Latest Styles!

**PRICES THE LOWEST.**

**A. TURNER**

**Dry Goods and Groceries,**

117 and 119 Michigan Ave., LANSING, MICH.



---

WESLEY EMERY,  
—DEALER IN—  
**Books and Stationery,**  
WALL PAPER AND DECORATIONS,  
ALBUMS, BIBLES, MIRRORS, HAND SACHELS.  
*Picture Framing a Specialty.*  
116 Michigan Avenue, Lansing, Mich.

---

JOHN HERRMANN,  
Opposite Opera Block,  
**MERCHANT TAILOR,**  
KEEPS THE LARGEST AND BEST STOCK OF  
**Merchant Tailor's Goods**  
IN MICHIGAN.  
BEST FIT FOR THE LEAST MONEY.  
Students, Come and See Me.

---

**FERREY & BUTTS,**  
**Funeral Directors and Furniture Dealers.**  
OUR UNDERTAKER'S OUTFIT IS MOST COMPLETE.  
**Our Stock of Furniture is Desirable.**  
OUR PRICES ARE LOW.  
**FERREY & BUTTS, LANSING, MICH.**

---

---

**CANNELL & EDMONDS,**  
Manufacturers and Jobbers of  
**HARNESS, TRUNKS,**  
Saddlery Hardware,  
**Traveling Bags, Horse Clothing, Etc.**  
107 WASHINGTON AVE. SOUTH, LANSING, MICH.  
C. CANNELL. J. W. EDMONDS.

---

**FIRST CLASS LIVERY.**  
  
**STUDENTS' PATRONAGE SOLICITED.**  
  
JIMMY MARKEY.

---

**J. C. HUFFMAN,**  
**Baker and Confectioner!**  
ORDERS FOR  
*ICE CREAM, LARGE AND SMALL CAKES,*  
*AND CONFECTIONERY*  
FILLED ON SHORT NOTICE.  
Corner Washington Avenue and Ionia Street,  
LANSING, MICH.

---

---

== B. F. SIMONS, ==  
104 Washington Avenue,  
DISPLAYS THE FINEST AND LARGEST STOCK OF  
**DRY GOODS AND CARPETS**  
THAT HAS EVER BEEN OPENED IN THE CITY.  
YOU WILL ALWAYS FIND GOODS AS REPRESENTED AND OUR PRICES AT THE BOTTOM.



HEADQUARTERS FOR COLLEGE BOYS!

**GEO. T. DAVIS'S**  
**Bakery, Confectionery and Restaurant.**

ICE CREAM AND OYSTERS IN SEASON.

Lunches at all Hours.

CIGARS AND TOBACCO.

BANQUET ORDERS PROMPTLY ATTENDED TO.

103 Washington Avenue, Lansing.

**G. B. RICHMOND,**  
**— DENTIST. —**

ARTIFICIAL TEETH WITHOUT PLATES.

214 Washington Avenue, Lansing, Mich.

**HUDSON HOUSE,**

**M. HUDSON, Proprietor.** - **LANSING, MICH.**

**COLLEGE STAGE AND MAIL DELIVERY!**

JOHN MOORE, Proprietor.

Leaves College every day at 8:15 A. M. and 1:30 P. M. for Lansing.

Leaves Lansing at 10:30 A. M. and 4:00 P. M.

Those desiring to visit the College may avail themselves of this opportunity.

**AMERICAN HOTEL!**

TEMPERANCE.

**202 Michigan Ave.**

*Pleasant and commodious rooms, newly furnished.  
Parisian Laundry and Bath Rooms in  
connection with the House.*

T. G. KING, Proprietor, - Lansing, Mich.

**Drs. J. W. & A. D. HAGADORN,**

Physicians and Druggists.

Especial attention paid to Fitting and Furnishing Spectacles.

**WESTCOTT,**

No. 112 MICHIGAN AVE., LANSING, MICH.,

DEALER IN

**Foreign and Domestic Woolens**

AND GENTS' FURNISHING GOODS.

**TOM WESTCOTT, The Cutter.**



AMERICAN HOTEL  
202 West 12th St  
St. Louis, Mo.

DR. J. W. & A. D. HAZARDON  
Physicians and Surgeons  
102 West 12th St  
St. Louis, Mo.

WESTCOTT

Foreign and Domestic Woollens  
AND OTHER FURNISHING GOODS  
102 West 12th St  
St. Louis, Mo.

FOR WESTCOTT THE CHAIRS

AND OTHER FURNISHING GOODS

102 West 12th St

ST. LOUIS, MO.

AND OTHER FURNISHING GOODS

102 West 12th St

ST. LOUIS, MO.

QUARTERS FOR COLLEGE BOYS  
102 West 12th St  
St. Louis, Mo.

ICE CREAM AND CIGARETTES IN SEASON  
102 West 12th St  
St. Louis, Mo.

G. B. RICHMOND  
102 West 12th St  
St. Louis, Mo.

HUDSON HOUSE  
102 West 12th St  
St. Louis, Mo.

COLLEGE STAGE AND MAIL DELIVERY  
102 West 12th St  
St. Louis, Mo.

102 West 12th St  
St. Louis, Mo.

102 West 12th St  
St. Louis, Mo.

102 West 12th St  
St. Louis, Mo.

102 West 12th St  
St. Louis, Mo.

102 West 12th St  
St. Louis, Mo.



# THE M. C. LILLEY & CO.

HEADQUARTERS FOR

## MILITARY GOODS OF ALL KINDS.

REGALIA SUPPLIES, BAND EQUIPMENTS, AND

**Uniforms of all Descriptions.**

Special Inducements to Students and those getting up Clubs or Companies.

COLUMBUS, - - - - OHIO.

---

### **CAPITAL BARBER SHOP, TONSORIAL PARLORS,**

No. 119 WASHINGTON AVENUE.

SPECIAL ATTENTION PAID TO  
STUDENTS' CUSTOM.

FIRST-CLASS ARTISTS. EXCELLENT WORK.

J. W. DAVIS, Proprietor.

STUDENTS FIND AT

### **G. W. FRARY'S STORE**

A. Large and Fine Stock of

GENTS' HATS AND CAPS

IN THE LATEST STYLES.

No. 106 Michigan Ave.,  
LANSING.

STUDENTS SURE OF EXCELLENT WORK IN ALL ITS  
BRANCHES, BY FIRST-CLASS ARTISTS.

ELI BIDELMAN, Proprietor.

FINE CIGARS AND TOBACCO

IN STOCK AT ALL TIMES.

---

### **W. R. APLEE,**

WHOLESALE AND RETAIL DEALER IN

Jewelry, Watches, Clocks, Diamonds,  
Silver and Plated-Ware.

119 WASHINGTON AVENUE, - LANSING, MICH.

REPAIRING NEATLY DONE.

---

## **FURNITURE!**

A LARGE ASSORTMENT OF

WRITING TABLES, DESKS, CHAIRS, ETC.,

ALWAYS ON HAND.

SPECIAL FIGURES TO STUDENTS.

Opposite Opera House.

**M. J. BUCK.**

**CURTAIN DRAPERY AND TRIMMINGS A SPECIALTY!**



# SPRING AND SUMMER

STUDENTS AND OTHERS

WILL REMEMBER THAT

## LEDERER & SONS

ARE HEADQUARTERS FOR

### FINE CLOTHING,

AND ALL THE LATEST NOVELTIES IN

Hats, Caps, and Gents' Furnishing Goods.

LARGEST STOCK,

MOST FASHIONABLE GOODS,

LOWEST PRICES.

This is our reputation, and we have maintained it for twenty years.

H LEDERER & SONS, The Clothiers,  
WASHINGTON AVENUE.

## THE STATE AGRICULTURAL COLLEGE,

P. O., Agricultural College, near Lansing, Mich.

This institution is thoroughly equipped, having a large teaching force; also ample facilities for illustration and manipulation, including

Laboratories, Conservatories, Library, Museum, Class-room  
Apparatus, also a Large and Well stocked Farm.

FOUR YEARS ARE REQUIRED TO COMPLETE THE COURSE,

— EMBRACING —

CHEMISTRY, MATHEMATICS, BOTANY, ZOOLOGY, VETERINARY, ENGLISH LANGUAGE AND  
LITERATURE, MILITARY TACTICS, AND ALL OTHER BRANCHES OF A  
COLLEGE COURSE EXCEPT FOREIGN LANGUAGES.

Three hours' labor on each working day, except Saturdays. Maximum rate paid for labor, eight cents an hour.

RATES.—Tuition free. Club boarding, from \$2.00 to \$2.50 per week.

CALENDAR FOR THE YEAR 1886.

February 24th Spring Term begins. May 19th Spring Term ends. May 26th Summer Term begins.  
August 18th Summer Term ends; Commencement. August 25th College Year begins; Entrance examinations at 9 o'clock A. M.

For Catalogue apply to EDWIN WILLITS, PRESIDENT, OR HENRY G. REYNOLDS, SECRETARY.