

THE SPECULUM.

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The Wandering Singer and His Songs.

FRANK RODGMAN, '62.

A little prairie green and fair,
With sweet wild posies blooming there;
A little cottage by the way;
A loving couple turning gray;
A little laughing blue-eyed boy,
Full of mirth without alloy,
That's my wanderer and his home,
Before his footsteps learned to roam.

Sturdy, sunbrowned whistling lad
Driving oxen with his gad;
Carrying water, dropping corn,
Tooting on the dinner horn;
Spreading grass and raking hay,
Trampling on it in the bay;
Taking harvesters their lunch,
Carrying bundles to the bunch,
Digging 'tatoes, husking corn,
Milkng cows at night and morn,
Swimming in the crystal lakes,
Drowning gophers, killing snakes,
Picking apples ripe and red,
Coasting on his home-made sled;
Hurrying fast to get to school
In time to have a game of "goal,"
Helping Tom and kissing Kate,
Drawing pictures on his slate,
Slyly tickling Jimmy's ear
When the teacher is not near,
Snickering out as Jimmy tries
To brush away the pesky flies,
Futs crooked pin in teacher's chair,
Wonders if 't will make him swear;
Thinks the fun is just complete
When the teacher takes his seat;
Sheds his coat and takes his licking,
Never has a thought of kicking;
Learns his lessons, has them well,
Always had them, so they tell—
That's my wanderer, older grown.

Bidding loving friends good bye,
Brushing tear-drops on the sly,
Riding on the Jackson stage,
Every minute seems an age;
Walking up the muddy road,
Every footstep takes a load;
Resting at the half-way stone,
A cherry in the cleft has grown,

Straggling up the college green,
Settled down in 17.
Learning lessons, playing ball,
Rolling barrels down the hall,
Piling logs and pulling stumps,
Raising turnips in the swamp,
Harrowing with the great State drag,
Never lets the oxen lag;
Laying tile and digging wells,
Raising mischief with the bell,
Mounting birds and pickling snakes,
Pinched and blue with ague shakes;
Pitching hay and cradling wheat,
Gathering bugs for mice to eat,
Dissecting cats and playing rigs,
Cooking melons, feeding pigs;
Off to Okemos to dance,
Every time he gets a chance;
Sparking Sunday nights in it,
Thinks he's half way up to heaven;
Studies hard, at least he passes,
Standing well in all his classes,
Gets his sheep-skin, wanders round—
Every spot is sacred ground.
Boys are going—trunks are packed,
Wagon loads are ready stacked,
With quivering lips and moistened eye
He grasps their hands, "Dear friends, Good bye
We part at last. I go to night,
Where'er you go be sure to write.
That's my wanderer once again.
The wanderer left his college home,
With courage high, the world to roam.
The world should be his harvest field,
His sickle keen should make it yield
Him fame and fortune, joy and ease,
And thousand things the heart to please.
He'd build a castle, rich and grand,
On the fairest site in all the land,
A winding stream should wander by,
A snow-capped mountain tower high.
He'd have a stretch of dewy plain,
And wavering fields of yellow grain,
And shady groves and flowery dells,
And tinkling tones of cattle bells,
On summer days would wake the morn
With echoing notes of bugle horn,
Have all that's rich and sweet and rare
And dwell there with his lady fair.
The wanderer speeds him on his way,
With courage high and spirits gay
His morn of life's so bright and fair;
Such vigor in the fragrant air,

Such hopes to nerve his willing feet
 And urge him onward strong and fleet,
 No wonder 't is that here and there,
 He builds a castle in the air,
 Nor when the shades are growing long
 That love's the burden of his song.

SONG.

The evening sun with gleaming golden splendor,
 Has sunk behind the fading western hills,
 The shimmering moonbeams falling still and
 tender,

In silver wreaths the wavelets on the rills,
 My bark is moored beside the silent river,
 Where zephyrs sigh among the willow trees,
 Where water lilies bloom whose petals quiver,
 And waft their perfume on the fragrant breeze.

REFRAIN—Then come with me, love, in my birchen
 canoe,

And lightly we'll float on the Kalamazoo,
 The waters shall ripple 'neath hearts ever true,
 As lightly we float on the Kalamazoo.

Sweet evening bells in yonder church tower chim-
 ing,

Their tuneful tones float on the trembling air,
 And village maidens arm in arm entwining,

The chapel seek to pass the hour in prayer;
 My bark still waits beside the silent river,

Where drooping lindens lave their thirsty leaves,
 Where shining minnows rise among the lilies,
 And break its mirror into circling waves.

REFRAIN—Oh come with me, love, in my birchen
 canoe,

And lightly we'll float on the Kalamazoo,
 The waters shall ripple 'neath hearts ever true,
 As lightly we float on the Kalamazoo.

The partridge brown in yonder wood is drum-
 ming,

And robin sweetly warbles on the tree;
 Where is my love? And why so long in coming,

I listen for her foot-fall on the lea;
 The whippoorwill in yonder thorn is calling;

What care I now to hear his melody,
 She comes, I hear her footsteps lightly falling,

My love! My love! Oh now she comes to me.—

REFRAIN—Then come with me, love, in my birchen
 canoe,

And lightly we'll float on the Kalamazoo,
 The waters shall ripple 'neath hearts ever true,
 As lightly we float on the Kalamazoo.

The wanderer speeds him on his way,
 His castle still is far away,

Its shining walls are turning brown,
 Its turrets high begin to frown,

But still he sees it here and there,
 That fleeting castle in the air,

His face is toward the rising sun,
 And soon the flowing straits are won,

He passes Erie's sounding shore,
 And listens to Niagara's roar,
 Nor stops nor stays he on his way
 By lakelet blue or mountain gray;
 Till he has passed the Hudson's stream,
 And seen the flashing sunlight gleam,
 On old Monadnock's hoary sides,
 And dark Atlantic's swelling tides;
 From Berkshire Hills to Northern Maine,
 Long Island Sound to Lake Champlain,
 He wanders all New England o'er;
 Halts where his fathers dwelt of yore,
 And climbs a mountain gray and bare,
 And gazes on the valleys fair,
 The ranging hills which fade in hue,
 Till they are lost in azure blue.
 The winding rills and babbling brooks,
 The meadows green and shady nooks,
 The blue-eyed, whistling, barefoot boy,
 With sun-browned face and heart of joy,
 Who goes to call the cattle home,
 That by the brookside idly roam,—
 He sees them all and gazing long,
 His thoughts will forth in loving song.

SONG.

New England! New England! How dear are thy
 hills,

Thy bright sunny meadows, thy swift running rills,
 That wind through thy valleys and sing to the sea;
 How dear is this land of my fathers to me.

How wild are the waves on thy rough rocky shore,
 Their deep sounding song pealing on evermore;
 A jubilant anthem the hymn of the sea,
 Yes, dear is this land of my fathers to me.

There's a vine-covered cottage afar in the west,
 Where my parents are spending their last days at
 rest;

How oft they have told me, New England, of thee,
 Yes, dear art thou, home of my fathers, to me.

I can see every spot where in childhood they
 played,

Every house of a neighbor, each hill and each
 glade;

Each deep shady dell, every meadow and lea,
 And dear are these homes in New England to me.

But where are the people who used here to dwell,
 The tales of whose deeds I have long known so
 well?

Some have gone far away, some have passed to
 their rest;

Now dearer to me is my home in the west.

The few that are left are now aged and bent,
 All the strength of their manhood was long ago
 spent.

Their children have gone from the old home to
 stay

And aliens I find in their places to-day.

The meadows are choking with brambles and
briers;
Tumbled down and decayed is the home of my
sires;
There the foxes have holes and the ravens their
nest.

I will hasten me back to the great growing west.

New England with her humming mills,
Her busy towns and verdant hills,
Her rural homes, her soil decay,
Has little charm for him to stay,
No spot he finds that seems so fair,
That he would build his castle there;
With lingering looks he turns to go,
His watchword now is Westward Ho.

o o o o o o

Full many a weary year has passed,
Since that last lingering look he cast
Upon those wild New England hills;
A wilder land his bosom thrills,
A tent is for the time his home.
A mountain torrent flecked with foam
Goes rushing wildly, madly by,
And snow-capped mountains pierce the sky.
The valley here spreads out, a plain,
And there is narrowed down again;
By frowning cliffs with rocky ledge
Uprising from the water's edge,
Along the stream a willow wood,
With now and then a cottonwood,
While up the rocky ledges climb
The cedar and the piñon pine;
And join their boughs in friendly clasp,
With heartened oak and quaking asp.
The cactus grows o'er all the plain,
And under the desert bloom again
In graceful curves the cacti rise
Beyond the reach of human eyes,
Athwart the sky the ravens sail,
Like laboring fleets before a gale,
There's here and there a lonely hut,
From which the arid plain is cut
By lines like silver threads, which gleam
With water from the mountain stream,
In this wild land the wanderer stays,
And tunes at times his mountain lays;
And tells a tale, or sings a song,
As on his way he wanders along,
This is what the wanderer tells:

Troiled among the ragged rifts,
Made bare among the lofty cliffs
By scollen torrents rushing flow,
When springtime melts the fields of snow,
I sought to view the mountains old,
The valleys deep and castles bold;
When nature with gasping hand,
Has raised about this desert land,
A future thought on watching eye,
As perched upon a peak tall high

He scanned the broad expanse below;
And watched my motion as to know
What strange intruder now should seek
To scale his craggy mountain peak.
A moment more with pinions spread,
He soared away above my head,
With circles broad till in the sky
His form no longer I could spy.
I clambered through the cedar wood,
And climbed to where the vulture stood,
And sitting now where he did stand
I view the same wild mountain land,
Beneath my feet the valleys lie,
Where cactus blossoms greet the eye,
Fair blossoms in a desert land,
Where seldom comes the foot of man.
The Wasatch range before me frowns
With ragged sides and snowy crowns;
For centuries the bursting storms
Have worn the cliffs to phantom forms,
That now in strange unwonted ways
Attract the traveler's curious gaze;
Grim cliffs that look like castles old,
With dungeons deep and turrets bold,
With tower, dome, and battlement,
Might well defend a continent.
Great monoliths upraised and lone,
Like sentinels in clay and stone;
To right, to left, on every hand
These wizard forms before me stand,
From out the mountains I espy
A river sweeping swiftly by;
Along its banks the hand of man
Is building through these canyons grand,
A railroad with its bands of steel,
Its ties of oak and iron wheel,
For man will never be content,
Till these he spans the continent.
The winding grade, with many crooks
And curves to pass the hills and rocks,
Seems like a serpent, huge and strong,
To crawl its winding way along,
It curves around the river bend,
And climbs along the mountain trend,
Until it passes out of sight
Behind the craggy mountain height.
I see the workmen at their toil,
Mere creeping specks upon the soil,
Along the line those spots of white,
That barely reach my distant sight,
Are graders' camps—a single tent,
A ring of wagons round it bent,
Great sacks of grain and bales of hay,
Perhaps a little child at play.
Such are the homes where workmen stay,
Till they have built the iron way.
The sun is sinking east of sight,
And fast approach the shades of night;
Now out from quiet mountain dells,
The tinkling sound of cattle bells
Comes softly pleasing to the ear,

Some far away and others near;
 In wavy lines and single file,
 The cattle come for many a mile,
 To quench their thirst and lave their sides,
 And rest them at the eventide.
 A ranchman rides across the plain,
 With jingling spurs and loosened rein,
 And as he gallops on in haste,
 He seems a speck upon the waste,
 I leave the peak and seek my tent,
 To ponder on the moments spent
 In viewing all these mountains old,
 The valleys deep and castles hold,
 Now while I pick my way along,
 I'll tune my voice to mountain song.

SONG.

All alone I stray upon the mountain's side,
 Where the tall peaks gray in mystic silence bide,
 Every peak to my eye in the deep azure sky,
 Bears a glorious golden crown,
 As the sunlight flashes down,
 How it lights up the waves by the mountain caves,
 Where the torrent roars along its rocky shores,
 Oh! that deep, deep roar;
 Oh! that wild, wild roar;
 Scething torrents roar;
 I shall hear, hear it evermore.

Mid the lonesome pines the breezes moan and
 sigh,
 From yon towering crag the mountain lion's cry
 From his wild hidden lair cuts the quivering air,
 Through the moaning of the pines,
 And the rushing torrents roar
 Now its note dies away 'mid the crags so gray,
 Still that piercing cry and far resounding roar,
 Haunt my inmost heart. Haunt it evermore.
 Oh! that cry and roar, how they haunt, haunt me
 evermore.

Now the sun has sunk behind the mountain's crest,
 And the coyote's yelp robs twilight of its rest,
 From the dark mountain side quickly downward
 I glide,
 And beneath the moaning pines I am sheltered in
 my tent;
 Still I hear that cry, still the stream runs by,
 And that cry and roar are with me evermore,
 Yes that cry and roar haunt me evermore.
 Oh! that cry and roar, how they haunt, haunt me
 evermore.

* * * * *
 The busy years still fleet along,
 The wanderer's voice has lost its song;
 His steps that once were blithe and gay,
 Now feebly drag along the way,
 He never built his castle grand,
 Nor did a thing of all he planned;
 For all his life and work and thought,
 Have different been from that he sought.
 In different fields his seeds were sown,

On other soils his crops were grown,
 He dwells not in New England vales,
 Nor yet in Rocky Mountain dales,
 But where in youth a sturdy lad,
 He drove the team with beechen gad;
 The vine clad cottage now his home,
 From which he little cares to roam,
 His thoughts are often backward cast,
 And linger long upon the past,
 On little friends of childhood's days,
 And laughing boyhood's merry plays;
 But most of all his fancies dwell
 Among the scenes he loved so well
 About the College halls and grounds.
 He seems to hear the well-known sounds,
 And hurries to the dear old halls,
 At that old bell's sweet losing calls.
 The tones from out its swelling throat,
 Are tones to just the same old note;
 The boys go hurrying to and fro,
 Just as they did long years ago;
 They play the same old games again,
 And play them just as they did then;
 He sings the songs he used to sing,
 'T is all the same in everything,
 Except the toil and strife and care,
 That used to meet him everywhere;
 For now it seems it can't be true,
 That ever care or grief he knew,
 Until with sad and moistened eye,
 He bade the boys "Dear friends, good bye."

The Alumni Reunion.

By Wednesday night, Aug. 12, most of the alumni were here that participated in the reunion. Some came early in the week, to partake of the anniversary meetings of the various literary societies and fraternities. At 8 A. M., Thursday, the alumni began to gather about the chemical laboratory preparatory to attending the business meeting to be held at 8:30 A. M.

During the day the alumni carried out the following program: Business meeting, 8:30 A. M.; literary meeting, 10 A. M.; address and report, 2 P. M.; business meeting, 4 P. M.; banquet, 7 P. M.

The business meetings were held in the chemical laboratory. The meetings were presided over by Vice President D. C. Oakes, '74. At the business meeting in the forenoon the report of the Keasie testimonial committee was presented. Prof. B. M.

Shelton, chairman of the committee, sent the following report:

Total contribution by 96 persons, \$216.50. Total expenditures for picture, frame and stationery, \$169.84. The balance was sent by draft to the secretary, F. S. Kedzie, '77. The memorial was Dr. Kedzie's picture that hangs in the library.

As Prof. E. M. Shelton could not be here he sent the following greeting:

BRISBANE, QUEENSLAND, JUNE 10, 1891.

Alumni Assemblage, Michigan Agricultural College.

DEAR FRIENDS—This is written in a remote part of the empire on which the sunshine and consequently the darkness never ends, and in obedience to the promptings of love and duty.

When three years ago you made me your president I felt that you had conferred upon me the greatest honor of my life. In returning to your keeping the keys of office I shall yet retain as my own, precious and inalienable, the recollection of your esteem and confidence. In laying down the duties which are beyond my powers to fulfill I want to tell you how truly, as the day of the great gathering approaches, my heart turns to the old home and the mother who nourished us in the days long since.

Though oceans and continents may separate us on that August day, in the spirit I shall be with you, amid familiar scenes, among mine own. On that one day of the year we will dwell in our own Michigan. The flag of the God the cross on the blood-red field shall give place to the stars and stripes; our palms and leafless gums shall for the nonce be oaks and pines, and everywhere as we cast our eyes about we will see only the beautiful peninsula. But enough of this say we all:

I know something of the whole-hearted welcome that our mother basin store for her returning children.

so no prattle of mine shall interrupt the pleasures of the great triennial gathering. I can only wish for you all that the meeting, in numbers and in the privileges it affords for the renewal of old and long-sundered associations, may have no disappointments in store for you, but that each shall see in long-absent brother and sister, and feel in his own heart, that the college idea of work and duty, in things great and small, has been fruitful in the lives and characters of all.

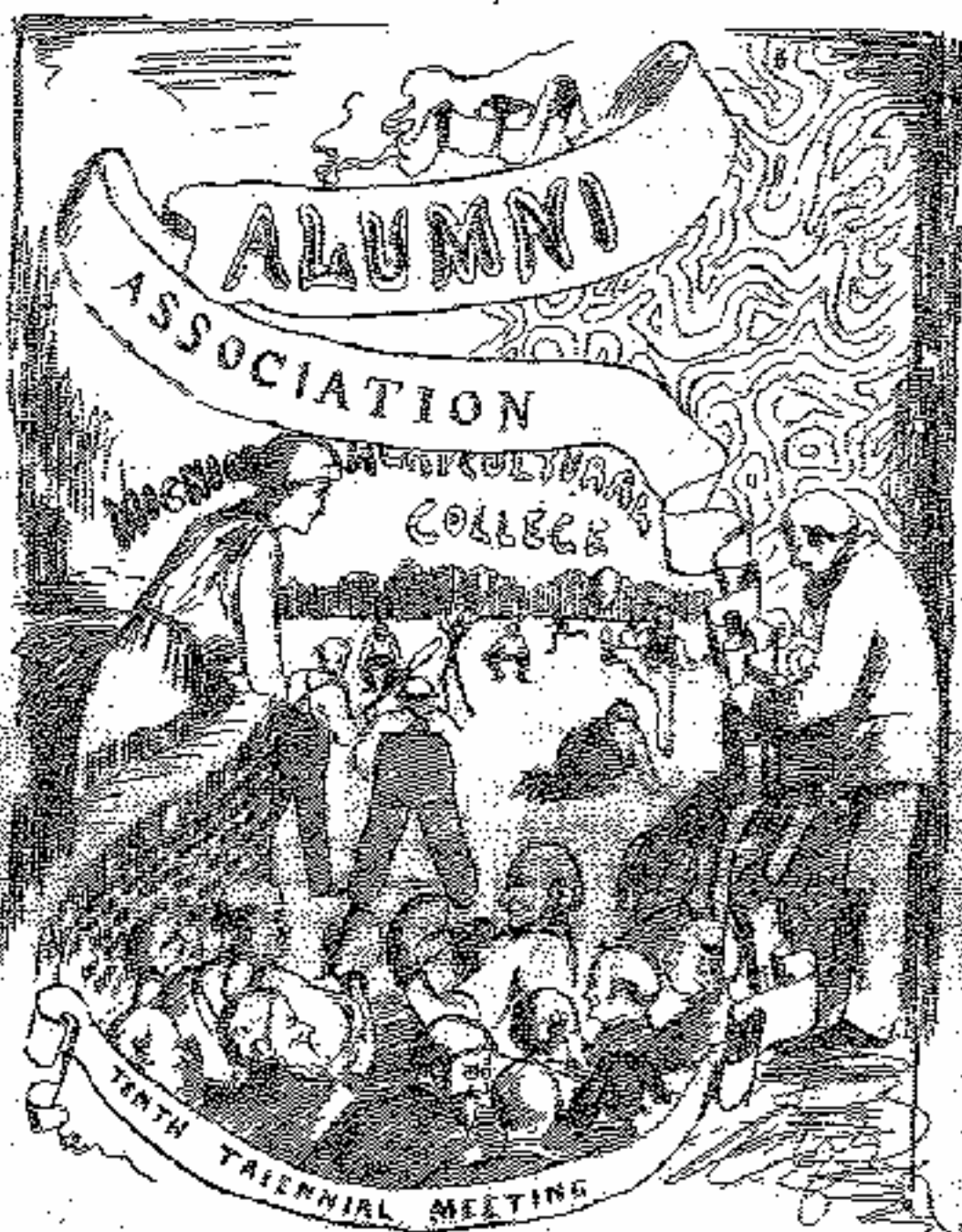
In the joys of social intercourse I am sure the old-time friends will not be forgotten, and least of all that once strong man, but now so weak, whose hand so often guided yours and mine. May peace and blessedness be his and yours.

E. M. SHELTON.

It was voted that a committee be appointed to make arrangements for the preservation of the various letters and papers that were brought up at the alumni business meetings.

After considering the memorial of President Abbott, the chairman appointed the following committees: On resolutions—C. H. Watson, '66, L. A. Bregger, '83, and H. Bamber, '81. On nominations—W. D. Place, '68, John

Strange, '69, H. W. Mumford, '91, A. C. Bird, '83, and W. C. Latta, '77. The alumni then adjourned for the literary meeting, which was held in the Armory. The program consisted of music by the college orchestra; prayer, Chas. McKenney, '81; violin solo, Prof. F. H. Hillman. Owing to the illness and consequent absence of the historian, C. P. Gillette, '84,



the history was omitted, and as a substitute memorial mention of the alumni who had died during the past triennial was made. Mention of Almond E. Calkins, '72, John T. Frazer, '72, R. M. Brooks, '73, by Prof. A. J. Cook, '62; of D. C. Holiday, '83, by O. C. Howe, '83; of F. L. Wrigglesworth, '86, by P. B. Woodworth, '86; oration, Geo. A. Farr, '70; music, college orchestra.

Owing to the lateness of the hour the suggestion of President Clute to adjourn till afternoon was heeded.

At 2 P. M. the following program was presented: Music, college orchestra; prayer, Clark; violin solo, R. C. Bristol, '93; poem of Frank Hodgman, '62, read by the alternate poet, J. B. Cotton, '86; music, college orchestra; address—President Williams, A. E. Macomber (with '61); music, college orchestra. The alumni then gathered in front of the chemical laboratory and were photographed. A. B. Peebles, '77, manipulated the camera.

At the business meeting in the afternoon, the report of the committee on resolutions and nominations were presented.

The committee on nominations made the following nominations: President, Daniel Strange, '67; vice-presidents, Albert Dodge, '77; Herbert Bamber, '81; Frank R. Smith, '87; secretary and treasurer, H. Thurtell, '88; orator, Chas. C. Georgeson, '78; alternate orator, C. E. Smith, '84; historian, O. C. Howe, '83; alternate, J. E. Stafford, '88; poet, H. W. Collingwood, '83; alternate, F. S. Burton, '68.

The committee on resolutions made the following report:

The Alumni of the State Agricultural College at its triennial reunion assembled, mindful and grateful for the inestimable benefits received from our "Alma Mater" express our high appreciation of those benefits and pledge our continued efforts and loyalty to her interests and success.

WHEREAS, Desiring to give expression to the thought suggested on this occasion, be it therefore:

Resolved, That we extend our heart-felt sympathy to the near friends and relatives of those brothers whom we miss to-day because of the hand of death,

and that we record our appreciation of their earnest and helpful lives.

Resolved, That this association wishes to again express its respect and admiration for its former president, T. C. Abbot, whose inspiring energy has been so deeply infused into the lives of so many of our body.

Resolved, That we hereby convey our greetings to Ex-President Wilfitts, now Assistant Secretary of Agriculture, and further that we heartily commend his appointment as chief of the Government Agricultural exhibit at the World's Fair.

Resolved, That we congratulate the State Board of Agriculture upon its action in the elevation to the presidency of this college of a brother alumnus, Rev. Oscar Clute, whose untiring devotion and ability coupled with his exceptional fitness for his position will make assured the continued and increased prosperity of this institution.

Resolved, That we view with pleasure the progress of the several departments of the college, especially that of agriculture, and of the very cordial relations existing between them. *Resolved further*, That we regret and condemn the unjust criticism appearing from time to time in the columns of certain State journals.

Resolved, That the system of manual labor identified with the history of this college has contributed much to the development of the capacity and manhood of its students, and that we pledge to it anew our approval and earnest support.

Resolved, That we appreciate the regular visits of our friend, THE SPECULUM, and pledge to it our continued support.

Resolved, That the thanks of this assembly be tendered the faculty and the various committees who have been so thoughtful of our material comfort, and to our brother alumni: A. E. Macomber, for his very able memorial address on the life of our first president, the late Joseph R. Williams; Geo. A. Farr, for his eloquent oration, and Frank Hodgman for the excellent poem. We regret that Mr. Hodgman was unable to be with us, and extend our sympathies, and the hope that he will soon become wholly convalescent.

We remember with special gratitude the indefatigable efforts of our secretary, Prof. F. S. Kedzie, '77, who has done so much to make our meeting so pleasant and profitable to us all.

The banquet, under charge of Henry Thurtell, '88, was a decided success, with the exception of its not being held at the time appointed. This was due to the fact that the ice cream man had a runaway while going after the luxury and was thus somewhat delayed. By 8 P. M. all were enjoying the alumni sapper. After everyone's hun-

ger seem to be satisfied, Toastmaster C. W. Garfield '70, proposed we all join in singing one of the songs that F. Hodgman, '62, and H. W. Collingwood, '83, had written. The following are the toasts: Denmark, New Jersey, Michigan, New York, Texas, Japan, Kansas—*which*, Chas. C. Georgeson, '78; Educated Farmer a Factor in Politics, W. L. Carpenter, '75; Aunt Mary, Daniel Strange, '67; The Co-eds, Ned S. Maya, '88; College Kitchen, H. A. Haigh, '74; Saint's Rest, S. S. Rockwell; Wet Fruit, H. P. Jenny, '74; Grand Ledge, J. J. Bush, '84; The Purpose of the Agricultural College, H. G. Reynolds, '70.

After the banquet the tables were rapidly cleared and removed for the dance which immediately followed. The dance continued till well towards morning when the alumni parted not to meet again in a body till 1894.

SCIENTIFIC.

The Future of Economic Botany.

The early naturalists delighted in dividing Natural History into kingdoms. They established the mineral kingdom, the vegetable kingdom and the animal kingdom. They placed barriers, sharply defined and high, around these separate kingdoms. Behind these imaginary walls supposed to exist around each domain retired the investigators, where each followed his own methods, frequently jealous if the workers in other departments should in the least encroach upon the others' territory. Happily for the advancement of true science this state of things has largely passed away.

At the present time these walls of division have mainly fallen, and to-day the true student of nature sees mineral, vegetable and animal bound together by the most intimate relations. During the last half century in Europe, the tendency in the study of botany has been in the direction of the minute exam-

ination of plant structure and function by the aid of the improved compound microscope. For the past twenty-five years this method of procedure has been gaining in favor among American teachers of biology. During the past dozen years there have been built numerous laboratories, botanical and zoölogical, at many of the colleges and universities in this country.

These have been fitted up after the European models mainly, with the most improved apparatus for the prosecution of the most fascinating and difficult study of biology.

Among the first institutions in this country to provide for this new instruction in botany, was the Michigan Agricultural College. This fashion, if it may be so called, has absorbed the best efforts of the best instructors in this country, until to-day nearly all instruction of a practical or economic character is almost entirely ignored. It does not need the eye of a prophet to note that the swing of the pendulum which marks this divorce between science and practice has reached its outermost limit, and will ere long return on its course. This college has never called for the divorce of science and practice, for they were its chief corner-stones. Here the practical end and aim of all sound instruction has never been lost sight of, and M. A. C. can point with great pride to many graduates who are workers in the broad fields of economic botany so long neglected. Bailey, Georgeson, Crosier and many others may be named who are well known not only in this country but in Europe. These are the men who are applying the latest and highest principles of botany and horticulture to the improvement of our fruits and vegetables.

The recent address at Washington, of Prof. Goodale, of Harvard, the retiring President of the American Association for the Advancement of Science, on the possibilities of economic botany was a notable event. Prof. Goodale has just returned from a trip around the world. He illustrated his address by speaking of the useful

plants which mankind may hope to employ in the future. He said that the cereal grains would probably remain with comparatively little change, except in the direction of better varieties for milling. He made the statement that if all our present cereals were swept out of existence we might replace them from our native grasses, by selection and hybridization, within a half century. In improving our fruits the tendency will be in the direction of producing seedless varieties, as pineapples, bananas, and some oranges are now. There is no good reason why we should not have seedless raspberries, strawberries and blackberries, and raise by cuttings, plums, cherries and peaches free from stones. The establishment of experiment stations has already quickened the study of the improvement of plants which is being fostered by the judicious care of the Department of Agriculture. Among food plants of considerable promise in future may be named the common thistle and the burdock. These are among our worst weeds at present. A great man has said that a weed is only a plant out of place. If cultivation can do as much for these two unpromising plants as it has done for numerous others which might be named, there is a possibility of storing the top roots of these cumberers of the ground with abundant nutriment for man and beast.

In this matter of improving our fruits and food plants something may be learned from a careful study of those species which the American Indian has domesticated.

At the time of the discovery of this country the natives were found cultivating corn, potatoes, squashes, sunflowers, beans, etc. There are many of our native fruits which ought soon to receive attention of the active horticulturist.

Our native species of blueberries, huckleberries and service berries are specially promising. The bush cranberry, the sand cherry, the elderberry and the wild plum all offer to

the skillful hybridist great promise of melioration.

Here is a field broad enough for the combined efforts of all the newly equipped experiment stations scattered throughout the land.

Let each station make a study of the native food plants in its vicinity and apply to their improvement the principles of selection and hybridization as now taught in our colleges, and we may hope ere long to see our native American fruits rivaling those of Japan.

Our native hickory nuts, walnuts, chestnuts and hazlenuts may be improved till they equal the famous English walnuts, Spanish chestnuts and filberts. The thinnest shelled largest sized hickory nuts may be collected from our fields and planted. From the best and most promising of these trees let further selections be made. Possibly something may be accomplished by hybridization with the thin-shelled foreign species.

The mushrooms and other edible fungi are waiting to be described by botanists in a plain way so that the scores of species which grow all around us can be readily determined. Our pastures and woods contain over one hundred species of "toadstools" which yearly go to waste for want of a little practical knowledge in selecting them from the few really poisonous kinds. An authority gives the following rule: "No fungus which, unspiced, being plainly cooked with dry heat, commends itself to the taste, can be dangerous to human life."

Photography may aid the botanist in diffusing a knowledge of edible fungi among the people.

It is along these lines that economic botany is to reach its highest development. To prepare the skillful hands and the active brains of the future workers in this broad field is a part of the duty, at least of the Agricultural Colleges of our land.

C. F. WHEELER.

Michigan Agricultural College, Sept. 1, 1891.

Economic Mycology.

L. R. TAFT.

To the average person the word mycology (from *mukes*, a fungus, and *logos*, a discourse, or the science that treats of fungi), has little significance, and their knowledge of the structure and habits of the plants of which it treats is but slightly greater.

Every one has noticed the rust on wheat and other grains, and although Sir Joseph Banks, a century ago, described it and presented drawings that showed its fungous nature, more than half the farmers believe that the pressure of the sap has ruptured the epidermis, and the water evaporating and the residue being deposited, the iron that it contains gives the rusty appearance to the stems and leaves.

For many years the scientists of this and other countries have been studying the various diseases that injure our cultivated crops with the idea of learning their life history and finding remedies for them; this is the work of the economic mycologist.

The work of the Department of Agriculture in this line is especially to be commended. The assistant botanist had the matter in charge for several years, but some five years since the section of Vegetable Pathology was created, with the officer in charge responsible only to the commissioner, now secretary, of agriculture; and one year ago it became the Division of Mycology or Vegetable Pathology, and now has the same standing as the divisions of Botany, Pomology, Chemistry, Entomology, etc.

The working force consists of the chief, six or seven assistants, from ten to twenty special agents, and a large number of voluntary experimenters.

During the last six years the diseases of such fruits as the grape, apple, pear, peach, plum, cherry, raspberry, blackberry, strawberry, gooseberry and orange have received attention, to say nothing of those of many of our farm and vegetable crops, trees and

flowering plants. The results of the investigations have been published in bulletins and in the report of the Secretary of Agriculture.

The present chief of the division, Prof. Galloway, and his predecessor, Prof. Scribner, have been quite successful in their work, and thousands of farmers have used the remedies recommended by them with good success.

At least half of the experiment stations have also been working in this line, and while some of them have confined themselves to the testing of various fungicides for the prevention or cure of the different diseases, others have devoted most of their time to a systematic study of the diseases themselves, and the working out of their life histories.

From an economic standpoint this latter work alone is of but little value, but when followed as it always should be by a rational use of fungicides in an experimental way, it becomes of great importance, as without it the experimenter would be working in the dark.

As noted above, nearly all the diseases of our plants, both wild and cultivated, are caused by fungi and similar organisms. They are generally microscopic plants with organs that correspond to the roots, stems, flower and seed stalks of the higher plants, and they feed on the tissues of animals or of plants, either alive or dead. The name parasitic fungi has been given to all those that obtain their nourishment from living plants. A portion of these fungi, among them some of our common powdery mildews live on the epidermis of their hosts, and obtain food by sending their short roots into the tissues beneath. This structure enables one to destroy all fungi of this class, as the fumes of sulphur or fumes from sulphur are fatal to it.

The larger part of the fungi live within their hosts, and may not manifest themselves until they are ready to burst out and scatter their spores. If these fungi have be-

come firmly seated little can be done to check them, and all remedies should be applied early enough to be preventive rather than curative. For the destruction of most fungi of this class the early application of Bordeaux mixture, modified *eau celeste* and copper carbonate has been found efficacious. In all of these copper carbonate is the fungicide, as, although each of the others is manufactured from copper sulphate, the addition of lime to one and sal soda to the other changes the sulphate to carbonate.

If these are applied in a thorough manner from three to five times during the summer the fungi will have but little injurious effect upon most of our fruits. In some of our grains it has been found that soaking the seed in blue vitriol, or water at 130°, will destroy the spores and greatly reduce the amount of rust and smut.

For two of the worst diseases of our fruits, viz.: blight in the pear and yellows in the peach, no remedy has been found. The blight is known to be caused by a micro-organism, but no effective way of combating it has been discovered. In the case of the yellows, however, even less progress has been made, as the most careful research has not revealed the cause of the disease.

The value of fungicidal treatment is rapidly being impressed on the minds of our more progressive farmers, and for many of the diseases of fruits and vegetables the fungicides are now extensively used. The thanks for this are due the economic mycologist.

It was with a feeling of the most sincere regret that the students learned of the resignation of Mr. Louis Knapper as florist. During the ten years which he has spent here he has won the respect and esteem of all who became acquainted with him. As he was so thoroughly acquainted with all the details of his work and so earnest in the performance of his duties, his resignation cannot be considered otherwise than as a severe loss to the college. Mr. Knapper will travel in Germany for the purpose of securing rare plants for American nurserymen.

Several large shade trees have been removed from the campus to afford a better view of the buildings.

THE SPECULUM.

PUBLISHED MONTHLY DURING THE COLLEGE YEAR,
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AGRICULTURAL COLLEGE, SEPT. 10, 1891.

THE readers will notice this SPECULUM is somewhat crowded with alumni matter and to the exclusion of other material, but we think it is for the best. The alumni have a larger subscription than the students, and and we think it is no more than right that the SPECULUM should be made particularly interesting to them. But we dare say all will be interested in the excellent articles presented at the reunion.

THE World's Fair occurs in 1893, and everybody that is able and some that are not will attend this to be greatest of all occasions. No doubt a large number of the alumni as well as students will be present and why not make some arrangements for the different classes meeting at some definite place and visiting the fair together. The class of '85, '88 and '90 have already made such arrangements, and we hope each class will take it upon themselves to see that the proposed scheme is carried out. There are

many advantages in this, besides the facts that accommodations could be secured cheaper and a more enjoyable time could be had.

THE various literary articles presented at the Alumni Reunion will be printed in the SPECULUM during the college year. Every alumnus that was not here will surely be interested in hearing an account of the reunion and the different articles presented. There is no better way to get the full proceeding than to subscribe for the SPECULUM. Every alumnus should take the SPECULUM, and all subscribers should see that their subscriptions are not in arrears. We would also say to the freshmen, subscribe for the SPECULUM, for it is the duty of every loyal student to help support the college paper.

WE think the faculty ought to be severely criticised for being so slow about getting the college catalogue ready. It should have been out by the middle of the summer term, and here it is nearly the middle of the fall term, and no catalogue. It gives them the lesson, however, that such work requires time and careful preparation.

WE are pleased to insert in THE SPECULUM a communication from H. A. Haigh, '74, on the matter of the compensation of our instructors. His ideas are probably the unanimous opinion of all interested in the progress of the college. But silent thought will encounter no action. Something must be done and at once. "As the teacher so is the school" and as Mr. Haigh says, if we wish to keep up the reputation of being the best Agricultural College in the world, we must have the best instructors and in order to do this we must pay the highest salaries. Scarcely a year passes but what there is a change of instructors in some of the departments. As soon as an assistant becomes proficient in his culture, higher wages demand him elsewhere. This is not

for the best interest of the college and the State Board should be made to think of the matter seriously.

To the Editor of the Speculum:

At the business meeting of the last alumni reunion I had it in mind to bring up a matter which lack of time then prevented, but which now from its importance seems worthy of reference to the columns of the SPECULUM.

I refer to the policy of the college with respect to the compensation of its officers and the effect which that policy must have on the future of the institution.

Argument is not necessary in support of the proposition that upon the quality and character of the faculty depends the success of the college; that the ability of the faculty to draw, hold and inspire students is more important than college endowments, equipments or traditions.

It is well known that the salaries paid at our college considering its strength in money and good will, are small. Hitherto it has been fortunate in securing the services of men of talent, who have labored with rare devotion from love for the institution and the work. In the early days when the college had limited means this was right; but now that the institution is rich and growing richer, and is backed by a generous and powerful state, it is wrong.

A great institution of learning cannot afford to set any example of ingratitude, parsimony or avarice. Nor can it afford to allow bright minds from its faculty to be attracted to other fields by sordid inducements.

That its young men and members of its faculty have been and are in great demand, and have gone to every quarter of the country to fill distinguished positions, is a great honor, but the policy which allows them to depart must surely in time cripple the college.

Viewed in this light the contemplated

withdrawal of Professor Cook, who has built up his department to a foremost position, who has attracted, and will continue to attract, the best students from every portion of the land, and special students even from beyond the seas, and who has the rare faculty of inspiring his students with a most devoted enthusiasm for their work, must be looked upon as a calamity which the management of the college, in the discharge of their duty to foster its best interests, should have averted.

Viewed too in this light, the recent action of the authorities in cutting down the salary of an efficient professor by the amount of a few hundred dollars which he had made by outside special work, must be regarded as niggardly and wrong. The policy which dictates such action must, if adhered to, deprive the college of its source of greatest strength, namely, devoted and capable officers of the highest rank.

The good taste of criticising the action of the State Board in the public press may be questioned, but since the college is public, and its success and reputation are the common property of us all, the right to do so cannot be denied.

The members of the Board of Agriculture, and all others in authority, are no doubt conscientiously anxious to do the very best that can be done for the welfare of the college. But it should be remembered that the college is no longer poor, that Michigan is a great, prosperous and wealthy State, and that the old students and all friends of the college very earnestly and properly desire that it be kept in the future, as it has been in the past, at the head of all like institutions in the land.

HENRY A. HAIGH.

Aug. 27, 1901.

The appointments of captains and lieutenants in the Military Department have been made and are as follows: Captains, L. C. Gibbs, B. W. Peet, L. W. Watkins, J. L. Peltier; First Lieutenants, J. E. Hinkson, W. E. Palmer. The other appointments have not yet been announced.

COLLEGE NEWS.

Freshmen versus "dancing-masters."

The early pears and plums have come and gone.

Professor Davenport visited his farm in Barry County during vacation.

Prof. Edwards's father and mother have been visiting their son here for a short time.

E. A. Burnett is still in the Eastern States, visiting some of the prominent stock farms.

There is now but one Japanese student in attendance. Three years ago there were eight.

Prof. Edwards will visit Europe during the winter, and return at the opening of the summer term.

The Botanic garden has been enlarged somewhat in order that more species of sedges may be introduced.

Lodges of the Farmers' Alliance from Pine Lake and Williamston picnicked on the college grounds, Aug. 29.

Club "F" has been discontinued by the Students' Organization, owing to the falling off in the number of students.

The officers of the students' organization for the present year are: President, L. Burnett; Vice President, E. McElroy; Secretary, Guy E. Mitchell.

The seniors who elect Botany are making a special study of parasitic fungi. Several new books on this subject have been purchased by the department for use in the class.

All of the land of the college farm that has ever been plowed, has been lately entirely cleared of stumps. Numerous other improvements have been made and more are to follow.

While at Washington, Dr. Beal met the president of the University of Wyoming, who spoke in the highest terms of the two men who recently went there from here: L. C. Colburn and F. J. Niswander.

At the last meeting of the State Board, President Clute was, at his own request, relieved from his duties as teacher. The classes in psychology and logic will hereafter be conducted by Professor Corbin.

The seniors who work on the Farm Department are employed in feeding all kinds of stock. This is a move in the right direction, and will tend to make the labor system of more interest to the students.

The new freshman class contains seventy-three members, forty-two being in the agricultural course and thirty-one in the mechanical. The non-appearance of the catalogue probably explains the small number who have entered.

The next report of the State Board of Agriculture will contain a paper on the Flora of Michigan, which has been prepared by Dr. Beal and C. F. Wheeler. It will contain considerable information on the subject of economic botany.

A company from the cadet corps will enter in the competitive drill at Jackson, Aug. 9 and 10. Two

years ago we took third prize, and we see no reason why we should not make as creditable an appearance now as then. F. W. Ashton has returned to take charge of the company.

The "Doris" made quite an extended cruise on Lake Huron during vacation, in their steam yacht, "Lata." Among many places of interest visited was one of the northern life saving stations. At the end of the trip the trim life steamer was left at Charlevoix to be used again next summer.

Mr. A. S. Pochler, who graduated in the class of '77 and has been here as Assistant in the Chemical Department for some time, has accepted a position as Professor of Chemistry and Physics at the Storrs School of Agriculture at Storrs, Conn. We predict for him the greatest of success in his new field of labor. His position here will be filled by W. L. Rossman.

Several members of the class of '91 have been retained here as instructors or assistants. G. A. Goodenough remains as assistant in the Mechanical Department. E. P. Safford will teach mathematics for a time, C. F. Baber is instructor in Zoology and W. O. Madrick is assistant in the English Department.

Mr. Geo. D. Soper, a senior at the U. of M., was here during vacation engaged in the special study of botany. He contemplates travelling and collecting in foreign countries, and came here for the sole purpose of learning the best methods of collecting and preserving specimens. The opportunities here offered for such work are greater than at almost any other college in the country.

Prof. Wray has resigned his position as Professor of Mathematics here to accept a position at Leland Stanford University, California, which will open in 1892. His successor Prof. Herman K. Vedder has been elected. He graduated from Cornell University in 1887, and has since been engaged in teaching at that place. He has had considerable experience in draughting and surveying, and is highly recommended by Prof. A. C. Carpenter. Prof. Vedder will begin his duties here in a short time.

The officers of the societies for the present term are as follows: Delta Tau Delta, J. L. Potter, President; W. D. Greenback, Vice President; G. E. Mitchell, Secretary; W. Stern, Treasurer. Phi Delta Theta, F. C. Bristol, President; John Ritterger, Secretary; H. D. Baber, Treasurer. Omicron, L. W. Watkins, President; H. A. White, Vice President; F. S. Payne, Secretary; J. P. Cherrish, Treasurer. Epsilon, L. C. Gibbs, President; T. S. Major, Vice President; R. Allen, Secretary. Union Literary, G. A. Hawley, President; L. E. Brooks, Vice President; E. A. Goodenough, Treasurer. Hesperian, H. N. Peck, President; Will Hawley, Vice President; - Night, Secretary; H. S. Hall, Treasurer.

The vacant chair of Mechanical Arts has been filled

by the appointment of Professor Breckenridge, of Lehigh University, Pa. Professor Breckenridge was born in Connecticut, and is now thirty-three years of age. He graduated from the Mechanical Department at Yale with the highest honors of any in his class, in 1881. Since graduation he has been almost constantly engaged in mechanical work of some description. He was for several years in the employ of one of the foremost manufacturing firms in Boston. For the past few years he has filled the position of instructor in Mechanical Engineering at Lehigh University. As a teacher he has always been very popular with the students in his classes. His recommendations are of such a character as to lead us to believe that no better selection for the Mechanical Department could have been made.

One of the happy events of the alumni reunion was the presence of Mrs. S. R. Williams, widow of President Joseph S. Williams. As there was to be a paper before the alumni on the Life and Services of President Williams it occurred to President Clark that the presence of Mrs. Williams would be a great pleasure to all the old students who should be at the reunion, for all were warm admirers of both President and Mrs. Williams. Mrs. W. accepted the invitation, and came on from Toledo, Ohio, with Mr. A. E. Macomber. They arrived on Wednesday evening during the president's reception and she was at once surrounded by a group of the "old boys" to whom her coming was a surprise and a pleasure. She attended all of the public alumni meetings and expressed much interest in them. She was driven over the campus, the gardens and the farms, and visited most of the buildings. Her surprise at the large development of the college was only equalled by her pleasure in seeing how her noble husband's plans and hopes were coming to such full fruition. It is to be hoped that we may see her here often in future years.

Professors Kedzie, Beal and Cook attended the meeting of the American Association for the Advancement of Science which was held in Washington, D. C. from August 10 to 25. These meetings are becoming more important each year, and the one this year was attended by nearly all of the prominent scientists in America. Dr. Kedzie, as President of the Association of Agricultural Chemists, delivered the annual address. He also presented a paper on the "Nitrogen Molecule." Dr. Beal was one of five chosen to present the subject of "The Action of Gases and Liquids in Plants." Professor Cook was secretary of the biological section of the meeting. He presented four papers before the different associations. The subjects which he discussed were "Abnormal Bees," "Enemies of Bees," "Bees as Fertilizers," and "Fighting the Rose Chafers." Several scientific excursions were made to different points of interest. While on one of these Dr. Kedzie and Prof. Cook visited Luray cavern in Virginia. This cave is much smaller than the Mammoth cave but is much grander in appearance. Prof. Madrick, a graduate of our own college, was elected

secretary of the biological section for the ensuing year. The professors gave a short talk on their trip to the students a few days after their return.

The Commencement exercises this year occurred a week earlier than they usually do in order that several of the professors might attend the scientific meeting at Washington. On Friday, Aug. 7, the Military Department was reviewed and inspected by President Clute and Lieutenant Durand. On Sunday afternoon a large audience composed not only of students and their friends, but many people from Lansing as well, assembled in the armory to hear the Baccalaureate sermon. President Clute's address was clear and forcible, and the members of the graduating class expressed themselves as being well pleased with his friendly words of advice. Monday was taken up with examinations for the three lower classes, while the seniors were arranging for their Class Day exercises. In the evening the armory was crowded, and shortly after 8 p. m., the exercises began. The literary program was as follows: President's address, G. C. Monroe; History, V. S. Hillyer; Prophecy, H. W. Mumford; Poem, A. C. Sly; Oration, A. T. Sweeney; Statistics, V. H. Lowe; Class Paper, A. F. Gordon. Music was furnished by the Flint orchestra. At the conclusion of the exercises all were invited to remain to the farewell ball given by '91. On Tuesday evening four of the societies held banquets. These were made the more pleasant by the presence of several of the alumni. The Commencement exercises began on Tuesday at ten o'clock. The eight orators and their subjects are here given: A Phase of the Labor Problem, F. W. Ashton; Reciprocity the Farmer's Duty, K. L. Butterfield; Some Influences of Mechanical Inventions, W. Emders; The Hundred Days, W. A. Fox; The Future of Agriculture, B. A. Holden; A Plea for our Forests, A. R. Locke; The New Education, E. P. Safford; A Defect in Our Social System, H. B. Winegar. At the conclusion of the last oration the degree of Bachelor of Science was conferred upon each member of the graduating class, and the class of '91 had passed out to be known hereafter as alumni. The degree of Master of Science was conferred upon Prof. F. H. Hillman, '88, of Reno, Nev., and C. F. Emerick, who has been studying here for some time. The degree of Master of Agriculture was given to Hon. John T. Rich, and Master of Horticulture to E. T. Lyon, of South Haven. The State Board of Agriculture also conferred upon Ex-President Edwin Willits, of Washington, D. C., and Judge Allen B. Morse, of Ionia, the degree of Doctor of Laws. On Wednesday evening President Clute's reception was largely attended by alumni, students and friends of the college.

How natural it is to hate the man who, when he hears that you have sworn to reform, reminds you that he has heard you take that same oath before—
Michigan Globe.

PERSONALS.

We desire the earnest co-operation of every person who has ever been connected with the college in trying to make this department an interesting one. Let every alumnus and every person who has been with classes here send in news to the editor of this department, often, thus making his work much easier and the department more interesting to all.

Col. Wm. B. McCreery, Consul at Valparaiso, was the first to officially report the overthrow of President Balmaceda, and the capture of the city by the insurgents.

Assistant Secretary Edwin Willits, of the Department of Agriculture, is greatly elated at the success of the rain making experiments in Texas. If he ~~did~~ throw up his hat before the staid scientists at Washington, no one wondered or disapproved.

'61.

Adams Bayley's visit to the college during the reunion was the first since his graduation.

'62.

Illness prevented Frank Hodgman from reading his poem at the alumni exercises. It was read by his alternate, J. B. Cotton, of '86.

'66.

Chas. H. Watson made his first visit since graduation, commencement week. The entire class of '66 was in attendance.

'67.

Daniel Strange made his usual visit during the reunion and was honored with the presidency of the Association for the next term.

W. W. Tracy, with D. M. Ferry and Co., Detroit, visited his three sons at M. A. C. Sept. 3d.

'68.

W. D. Place was the third to make his Alma Mater the first call since graduation.

At the Washington meeting of Experiment Station officers, Prof. S. M. Tracy reported excellent progress at the Mississippi Station, of which he is director.

'69.

After holding a number of professorships and other places of trust and honor, Prof. James Satterlee has returned to his farm at Greenville, Mich. Who said the Agricultural College led men from the farm or failed to instill a love for agriculture?

'70.

Geo. A. Farr gave a masterly oration at the reunion, while Hon. Chas. W. Garfield made a most genial and humorous toastmaster.

'71.

Prof. Byron D. Halstead, of New Jersey, read several papers at the Washington meeting of the A.

sociation for the Advancement of Science. He succeeds Prof. A. J. Cook as secretary of the Biological section.

'73.

Prof. C. S. Crandall, Fort Collins, reported to his colleagues at Washington that the Colorado Station was doing most excellent work. It "takes no back seat" among the experiment stations of the United States.

Jas. H. Tibbits was one of nearly a score of alumni to sign a telegram of greeting and regrets to the guests at the alumni banquet. Among others were W. A. Knapan, '86, W. A. Taylor, '88, L. H. Dewey, '88, and Jos. Freeman, '90.

H. A. Haigh's toast, "Aunt Mary," was thoroughly enjoyed by all who remember her and the kitchen of "Saint's Rest."

'75.

Those who were looking for the ghost of W. H. Smith were greatly surprised and happily disappointed to find a six-footer in the best of health and spirits.

'77.

W. C. Latta and wife were among the banqueters. Prof. Latta has entire charge of institute work for Indiana.

Rev. A. B. Peebles has left to assume his duties as Professor of Physics and Chemistry at the Storrs School of Agriculture, Storrs, Connecticut.

'78.

Rev. H. V. Clark was present at Commencement, and acted as chaplain during the exercises of the day.

The following telegram was received by Professor Davenport Sept. 5th: "Will you accept the position of President of the Agricultural School at St. Paul, Brazil? Salary \$6,000 per annum, house and living there. Expenses going and back can go one year to try.

LUIZ QUINOS,

Agent of the Brazilian Republic.

'79.

Frank Benton has returned from the Orient, and is now in the bureau of Entomology at Washington. His specialty is apiculture.

'81.

J. L. H. Knight is considered by the University of Nebraska the most prominent and energetic member of her board of regents.

The many warm friends of Sherman Upton will be deeply pained to learn of his sudden death at his home in Lexington, Neb., on the evening of August 11th. During his college days no student was more generally or favorably known than he. Nearly every classmate and professor has souvenirs from his ready pencil, for he was the college artist of his time. But, however numerous his caricatures, they never carried

a sting, and scores of friends treasure them still in remembrance of one of the brightest students and most amiable companions the college has ever seen. Even those who know him only by the work and the reminiscences he has left, join in sincerest regrets at his untimely death.

'82.

Prof. L. H. Bailey was lately offered the presidency of the Agricultural College of Brazil, at a salary of \$6,000 per annum. He has decided not to accept, hence the telegram to Prof. Davenport.

WITH '82.

R. B. Barbour writes from Pueb'o, Colo., that he is largely interested in Vineland, a town just east of Pueblo, in the finest vineyard land of the State. He enjoys the work, likes the west, and has fully regained his health which was very poor while in Michigan.

'83.

Prof. Allan C. Redding passed a large part of his vacation making a geological tour of the New England States. He was present at the meeting of the American Association.

W. S. Kedzie is employed in the Leadville mine at Ouray, Col., of which his brother, G. E. Kedzie of '72, is superintendent.

'84.

From the *Lansing Journal* of August 27 we take the following: "E. Carl Bank and wife left last night for Philadelphia, where Mr. Bank will enter upon his duties as assistant superintendent of the House of Refuge, to which position he was recently appointed."

WITH '85.

John B. Leonard, San Francisco, represents the King Bridge Co. of Cleveland, as civil engineer. He was for several months with the American Bridge and Building Co. of San Francisco, in the same capacity.

Will D. Watkins is traveling salesman for Sptagge, Warner and Co., wholesale grocers, Chicago. His route includes southern Michigan and northern Indiana.

Frank Landreth owns a ranch on Whisby Island, Washington. His address is 3001 Jackson Street, Seattle.

'87.

W. C. Hall is at Crofton, Mich., agent and shipper for Baroban and Co. of Grand Rapids. He expends the usual amount of energy collecting and forwarding material for the firm and declares "there is no business like the lumber business."

'88.

Of his work at Wyoming University, Professor Colburn writes: "I have the wood-working department nearly all fitted up, but will not put in any iron working this year. There is some prospect that a new building will be put up next summer for the mechanical department."

'88 was the banner class as regards attendance at the reunion. The following is the roll:

L. A. Bregger,	A. E. Bulson.
H. B. Cannon,	A. B. Cordley.
C. B. Cook,	F. J. Free.
A. B. Goodwin,	Miss M. L. Harrison.
H. E. Harrison,	Prof. F. H. Hillman.
Clark Hubbell,	Prof. N. S. Mayo.
Mrs. Mayo,	Glenn D. Perrigo.
D. A. Smith,	Geo. C. Stafford.
W. F. Staley,	Prof. Henry Thurtell.

After passing her vacation at the college, Miss M. L. Harrison has returned to Detroit for the winter.

WITH '88.

H. R. Case is located at Sault Ste. Marie. He is employed as civil engineer by the St. Paul & Ste. Marie R. R.

'89.

'89 was a close second to '88 in attendance at the Triennial, sixteen members being present.

E. N. Pagleson has given up mountain surveying and is now at his home in Grand Haven. He received, September 5, the offer of an assistant professorship in mathematics at Fort Collins, Colo.

B. K. Canfield arrived at the College Sept. 3d, for a few weeks' visit. Can's long stay in Paris has made him Frenchy only in the trim of his beard; he is as thoroughly American in his likes and language as ever.

Louis McLouth made the college a short visit August 31. He goes to a position at the Davenport, Iowa, Manual Training School, at a salary of \$1,000.

F. M. Seibert, B. S., M. D., is one of the latest graduates of the Wooster, Ohio, medical college. Seib. sports a diminutive "medicine chest" and a full beard as long as the handle of his name.

Geo. J. Jenks has completed his tests of apparatus for the extraction of bromine from salt "bitterns." The brine of the Sand Beach wells contains about forty times the amount of bromine that is to be found in the brines of Germany, from which it is profitably extracted.

Prof. F. J. Niswander hunts bugs, whist partners and antelope, indiscriminately, in his Wyoming home; while bears quake and flee from his "trusty Winchester" before he can get a bead on them. His bulletin on "Aphidae," the first regularly issued bulletin of the Wyoming station, is a very complete and neatly arranged pamphlet.

Jas. W. Tenney varies his botanical collections with an occasional wild-cat or two. He writes that ladies are even more rare there than here and that barbers soon starve at the Tucson station.

Howard E. Weed took an active part in the proceedings of the Entomological Section of the Association for the Advancement of Science. His discoveries

concerning the screw worm won much favorable comment.

'90.

Chas. Ferris has been studying at the college since his return from Kentucky, and has just entered the office of the city engineer at Grand Rapids.

Wm. Petrie is draughting for the Brush Electric Co., Cleveland. He will take electrical engineering at Cornell the coming year.

Ben. F. Simons and Frank Clark have passed a part of the summer in the northern Michigan resorts, from Sault Ste. Marie to Charlevoix; the former for recreation, the latter in search of health. Both return well satisfied with the trip.

WITH '90.

F. B. Plimpton is traveling salesman for the Kelly Moulding Co., Chicago.

'91.

Miss Grace Fuller has just begun teaching near Mason, Mich.

Fred W. Ashton has returned to M. A. C. to take command of the company which will compete for military honors at Jackson.

Geo. A. Goodenough remains as assistant in the Mechanical Department. He was lately offered a position in the Mathematical Department, at Fort Collins, Colorado, but preferred to retain his present position.

E. P. Safford is temporarily instructor in Mathematics and W. O. Hedrick has been assigned work in the Department of English.

Just too late for the August issue we received a very neat and interesting program of the Noble Co., Ind., Teachers' Institute, furnished by Supt. W. A. Fox. The name of Prof. H. R. Pattengill appeared often as instructor and lecturer on various topics.

WITH '91.

H. B. Fuller will return to the college in February and complete his work with '92.

If a man gets everything else he wants, he can't get any younger.

With no water in sight, any man will boast of his skill at fishing.

It is some men's ambition to be great men before they learn to be men.

The man who keeps his word has no trouble in keeping his countenance.

The genius of a man is admitted more readily after he is rich than it is when he is poor.

Men seem ashamed of everything natural in their instincts. Perhaps they have reason to be.

The average man takes up so much of his time talking about his ambition that he never has time to realize it.