

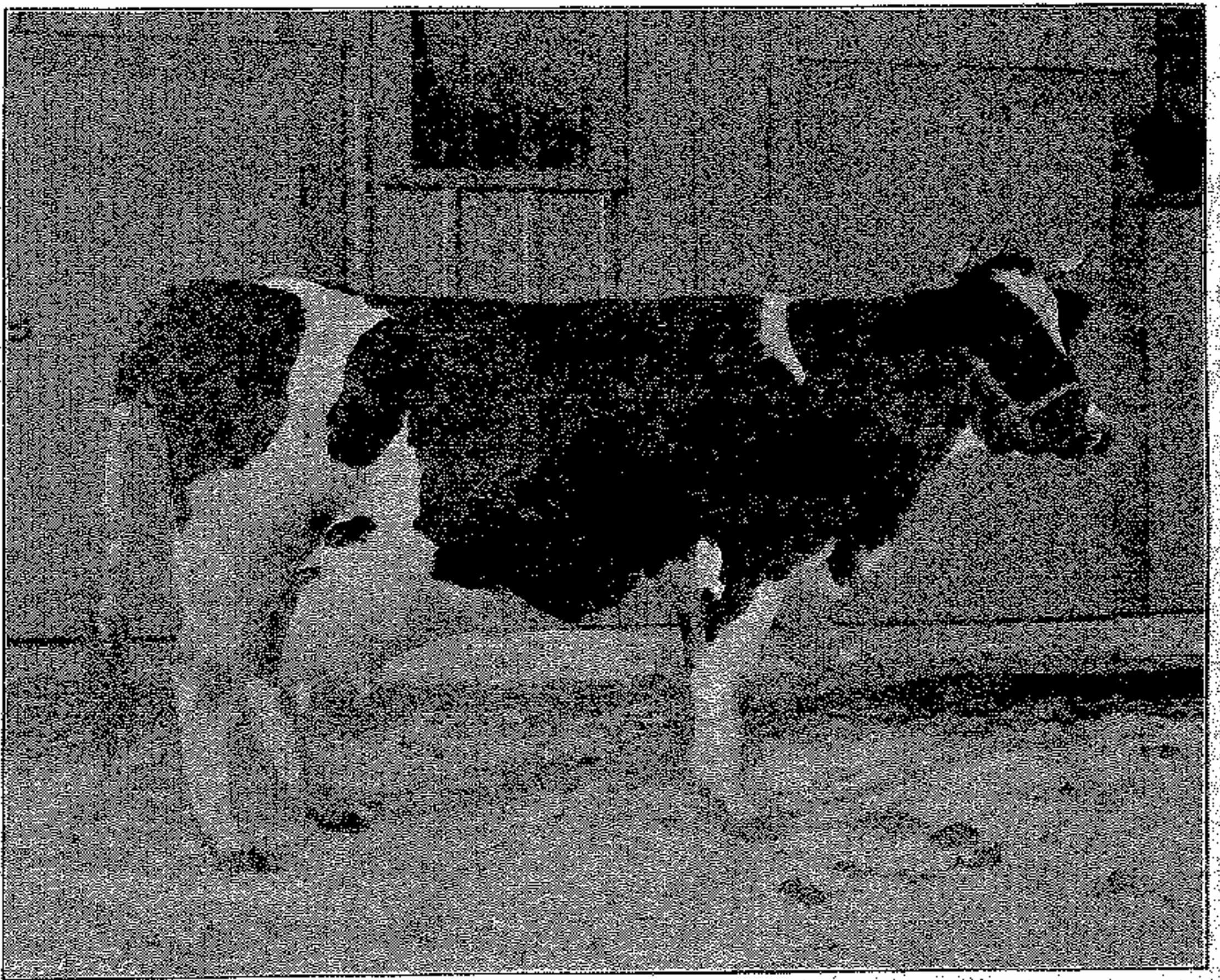
THE SPECULUM.

VOLUME XII.—No. 13. AGRICULTURAL COLLEGE, MICH., APRIL 10, 1894. WHOLE No. 75.

Rosa Bonheur V.

Rosa Bonheur 5th, the original of the photograph here reproduced, was six years old the twentieth day of March, 1894. She is recorded as No. 11,227 in the herd book of the Holstein Friesian Association, and belongs to the "strictest

In any herd Rosa would be conspicuous by her large size and by her ideally perfect dairy form. She weighs 1,750 pounds and yet has not one single indication of beef about her. Her head is long, her neck thin and tapering, her chin prominent and rough, brisket not prominent, back broad and strong, milk veins well



sect" of the Holstein breed, her dam, born in Holland from one of the grandest cows in that country famous for good cows, and imported into this country in 1879. Her sire was imported from the same country by the Hon. Edwin Phelps, Member of the Board of Agriculture and was a grand bull descended from the best milking strains of the breed.

developed and udder immense in size and of fine quality.

Her yield of milk and butter is phenomenal and merits a place in current college history. The account is as follows:—

Largest daily yield,	106.75	pounds of milk,
Largest weekly yield,	726.75	" " "
Yield in thirty days	2,989.75	" " "

Of worked, salted and packed butter the yields have been as follows:—

In one day, 3.5 pounds,

In one week, 22.25 pounds,

In thirty days, 90.25 pounds.

To appreciate the significance of these figures it must be remembered that the ordinary yield of the ordinary cow at this season of the year, when Rosa's record has been made, does not exceed fifteen pounds of milk per day or ten pounds of butter a week.

It is the office of the cow to transmute her food into butter, she has no creative faculty and hence to secrete a large yield she must eat and digest a large amount of feed. As might have been expected therefore, Rosa has an enormous appetite. She takes for a daily ration between 75 and 100 pounds of ensilage, 12 pounds of cornmeal, 8 pounds of oats, 4 pounds of bran, 40 pounds of roots, 2 pounds of hay and 9 pounds of oil meal.

She is milked thrice daily and each mess is tested in duplicate by the Babcock test. We find that she yields by far the greater part of her butter in the noon mess. The morning milk is invariably poorer in fat than the noon or night milk, but either mess taken alone would do credit to any ordinary cow for a day's yield. In disposition she is as phenomenal as in all other respects. She is as mild as a June day, perfectly gentle, very affectionate and in all things does justice to her ancestors.

Scottish Lawyers.

ALFRED R. LOCKE.

To one educated among the free institutions of the United States, and taught the principles of equality among all men, where both poor and rich are on the same plane, and rise by virtue of intelligence only, the regulations imposed upon Scottish candidates for the legal profession seem burdensome and unjust.

The Scottish youth is courageous, indeed, who independent of a moderate fortune, aspires to the legal profession.

The education of a lawyer in Scotland is no more thorough than that of a lawyer in America. It is the policy of the government that makes its attainment difficult. The certain formulas to be followed and fees to be paid, made necessary by act of Parliament, form the principal burdens. Had Abraham Lincoln lived in Scotland instead of the United States he never could have become so eminent a lawyer.

Scottish lawyers are denominated writers and advocates. The writer is described by comparing him to a Michigan lawyer who practices only in the circuit and inferior courts, if he were prohibited appearing in the supreme court. The advocate is he who would be permitted to appear in the supreme court of the state and also in any of the courts of the United States.

At an age of not less than seventeen the candidate must bind himself as an apprentice to a writer to serve for a period of five years, unless he shall have obtained a degree either of law or of arts in some university in the United Kingdom. If the latter be the case then the period of indenture may be for three years only. In conjunction with his apprenticeship he must either attend law classes in some university of Scotland, or by permission, conduct a private course of study and pass the required examinations at Edinburgh at the end of his indenture.

The apprenticeship and final examinations having been concluded, upon payment of a stamp duty of £55 (\$267.65), he is licensed to practice in the sheriff and inferior courts of Scotland. As notarial work constitutes a considerable portion of a writer's duties, it becomes necessary that he be made a notary public, which office is for life. This costs him £20 (\$97.72). Having paid the above fees (total \$365.37), if he wishes social and professional standing he must join the society of the Faculty of Procurators, admission to which costs £60 (\$291.96). This is a lawyer's association and possesses a law library, to the use of which he is en-

titled. Adding still to the burdens of the profession there is levied upon them by the government an annual tax of £6 (\$29.19). Nor are they exempt from other taxation. If business proves remunerative, he contributes a portion of his profits to the government as an income tax of two and eight-tenths per cent.

Unless the young practitioner meets with extraordinary success, or is wealthy, his ambition here rests. If, however, he desires to become an advocate, a special examination upon extra subjects must be passed, unless he possesses the degrees of M. A., LL. B. from some Scottish university. Also an extra stamp duty of £50 and other fees to the amount of £294 2s must be paid, making a total of £344 2s (\$1,674.55). This is the cost of becoming a member of a class, who are especially privileged to practice before the Scottish court of session and the supreme court of the United Kingdom; the House of Lords.

The professional business of the writer is confined to the practice in the sheriff and inferior courts, and a large amount of office work, the most important of which is conveyancing. When a case arises in which an appeal is taken to a higher court than the sheriff's court, then the writer becomes a foreigner so far as practicing before it is concerned, and in his turn must become client and employ an advocate. The writer prepares the case in every particular for the appellate court, and the advocate appears in gown and wig and presents the argument to the court.

From the court of session appeal with certain limitations may be taken to the House of Lords, of England. Here again a peculiarity of practice occurs, for here we have a court sitting in judgment on cases governed either by Scottish or English laws, according to the locality in which it originated; the Scottish law being derived from the Roman civil law, adapted to Scottish institutions, and the English being the same as our own com-

mon law, changed only by act of the British parliament since its adoption by the United States.

These features of Scottish law and courts are not devoid of good and ill results. Directly, they produce a revenue to the government, but bar the poor young man's legal aspirations. Indirectly the profession is benefited, competition is limited, and only wealthy or exceedingly industrious young men reach the profession. The privilege being dearly earned, higher fees are charged for services than in the United States, and very little attention is given to simplify the law and law forms.

Though the high fees are justified by the cost of the position, the public are slow to appreciate such costly justice. The effect upon an American is to fill him with admiration for the simplicity of American institutions.

Shall the State Board of Agriculture be Elected by the People?

VERNON J. WILLEY, CLASS '93.

The Board of Agriculture, who are the board of control of the Agricultural College, receive their appointments for a term of six years, from the governor of the State of Michigan. It is believed by many, that, for various reasons, a more satisfactory way would be to have the board elected by the people, making them similar to the Board of Regents of the State University.

The college has in the past, very much to the regard of all of its friends, been severely criticised by many. Some of this criticism, perhaps, may have been in a small degree just. It has been suggested that the Board of Agriculture did not hold a position of prominent innocence in bringing about the conditions calling for this very criticism. Certainly some of the uneasiness and dissatisfaction expressed by many students was caused by the actions of this board. Of course the student should have nothing, abso-

lutely nothing, to say as to the fitness or unfitness of his environment; he is to be built more or less, principally more, according to a stereotyped pattern prepared by a board of control. Or if he don't like it he can get out. And from the thinness of the college population it would seem that this last clause was not wholly disregarded. Moreover, the total absence of languages taught in the agricultural course, and the way in which the English department is circumscribed deter many from entering that course. To at least fifty-three per cent of the graduates of the institution, the training which they received in the English department is most valuable, and their great regret is that they did not have more of it. But I do not wish to belittle the Agricultural Department. There have been many changes in that department in the last two terms that can not be other than profitable and pleasing to the college and the student; and every alumnus and student must rejoice at the prosperity of the department that lies nearest to making the college a success. But let the others prosper also. Some have gone so far as to express an opinion that three-fourths of the students' time should be taken up with agriculture. Cut off from the Chemical, English and Zoological Departments and add to the Agricultural. Let the University teach sciences, languages and literature.

Now as to the manner of the election of the board. The college is a State institution. It is largely supported by taxation. Hence all tax-payers feel more or less interest in the college, and should feel that it is their college—dedicated to a higher education in the interests of agriculture. The people then should have a voice in the government of this institution, through their representatives, a board of control elected by the people. They would have less cause to complain, and would certainly criticise less if such were the case. It would bring the college more prominently before the people. It would give the alumni a chance to do

something for their Alma Mater. They could see to it that men were nominated who represented not only agricultural interests, but the interests of higher education. Possibly a man who was a college graduate, even a university graduate, who had been abroad and was acquainted with the methods of great European institutions; yes, a graduate from our own M. A. C., who had numerous qualifications in addition to an interest in agricultural pursuits. He should be a broad man, and a man who understands the needs of the people in connection with such a college; and above all, a man who has more qualifications than to simply say he was "largely interested in the breeding of Norman Percheron horses." With the proper kind of men on the board of control, with the right environment the college would make rapid strides, both in excellence and in number of students.

Let us now see if there are any evils in the present system. Are men always appointed because of their qualifications, or fitness to be members of a college board of control, or more largely because of political pull?" Is it possible for you to imagine that a newly elected governor might remember one who had helped him in his campaign, and appoint him to some position of honor and trust that this friend could acceptably fill, or at least fill without endangering his honor's future political influence. And might not such a man find his way into the Board of Agriculture? Again it has been observed that some of the members were appointed more to please a particular locality than because of fitness. Indeed, it has also been observed, that it became a habit for some to be re-appointed, holding the office until they attained their majority. Possibly this may not be an unwise thing—but it is often better to do things after careful deliberation, rather than as a matter of habit.

If such a change should seem desirable, a bill could be formulated changing the manner of electing the members of

the board, and presented to the next legislature. It is a change which must and will come sooner or later; and it is a change that need prove no hardship or injustice to any one, as the bill might provide for the election of members by popular vote at the elections previous to the time that the term of office of the different present incumbents should expire.

Idealism.

C. H. ALVORD, PHI DELTA THETA.

A man without a purpose in life may be compared to a ship, without sails or rudder, floating on a turbulent and tumultuous sea. He drifts aimlessly from one point to another and finds himself ere long stranded upon the shoals of regret, and he sinks below the surface unhonored and unknown.

As a lad at school he saw no good in history, geography or grammar, or anything else that associated with that odious term work. As a youth at college he succeeds no better than he did at the public school. He knows not why he is in school nor how to prepare a lesson that it may be advantageous to him. His only purpose in studying his lessons, if he studies them at all, is that he may give a fair recitation, if, perchance, the professor may call on him; but it does not require much inducement to prevail upon him to leave his lessons unstudied. He naturally falls into loose company, and keeps constantly adding to his already large stock of loose habits. He may float along with his class and at last get his degree, but he is no honor to his class or to his Alma Mater.

As a man his case is even more sad than as a youth. He perhaps starts out in some business, but he soon discovers his lack of training for this special vocation, and thinking he may succeed better at something else (instead of getting down to work and fitting himself for his business) he throws it up and plunges headlong into something else; but succeeding

in this no better than in the first, he drifts aimlessly from one thing to another—a rudderless vessel on the sea of life.

With this example contrast that of a man with a purpose in life, an ideal toward which he is striving. He bends every effort toward the accomplishment of this one purpose. He realizes the value of time and opportunity and improves them. While his neighbor was grumbling about the bad weather and the unpropitious prospects, he was sowing the seeds that are now bringing him an abundant harvest. His aim in life is constantly in the foreground, and he sees and plans far into the future. He is, in every sense of the word, the true idealist, and though he may never attain his ideal, yet, who will dare say his life was not a success.

In the selection of these ideals the natural tendency of the mind must be taken into consideration; but after once selected every energy must be given to the accomplishment of this purpose, and not something else.

How many men do we hear say, "My life has been a failure on account of my trying to do something for which I was not suited and which I did not like?" Their work was distasteful to them; it soon became a burden, and life itself was a bore. Happiness and contentment were as much strangers to them as vegetation is to the barren desert.

The first had no ideal, hence could not follow it; the last had his ideal, but did not follow its guidance. They both travel in the same direction and at length reach the same destination. They both reap a harvest of barren regrets.

Idealism is the central purpose of a man's being. It represents all that he is living for, the highest possible standard to which he can attain. As the sculptor conceives a great and noble thought, and with mallet and chisel fashions the rough marble into a sublime work of art, thus giving expression to his ideal, so men, crude workmen as they are, conceive their ideals, and bringing the material at hand to their assistance, work out in their

very lives the ideal which in their mind they have conceived.

Idealism has overthrown kings, has shattered monarchs, and has revolutionized thought and science.

The great men of the past, those men who have been the leaders in all revolutionary movements, whose names illumine with dazzling brightness the dark pages of history whereon they are written, have been true idealists.

Columbus was an idealist, but his dream of a new route to India, and the attempt to attain his ideal, gave to the world a new commerce, a new country, a new civilization.

Savonarola was a dreamer—a man that conceived a high ideal for his church and state, and gave himself up to the one great purpose of righting the then existing wrongs. He met opposition on every hand, but especially from the clergy, who heaped insult and opprobrium upon him; yet he did not waver. Behold him as he stands out in bold outline against the darkness of his times,—the first to conceive the independence of the human mind, the first to stand as an opposer of the evils of the church and state.

Savonarola fell a martyr before the decree of a jealous and haughty church, the very church which he had sought to benefit. But was his life in vain? Because Savonarola conceived a high ideal, yet failed to realize it, was his life any more a failure? Nay, the example of idealists such as Savonarola might move the very stones to admiration.

Such lives and tragedies are failures only in the sense that the cross was a failure. But for such aims and attempts the world would float on, a perfect halo of dust.

Savonarola, they cut short in the morning of his manhood, yet the influence of his life they could not quench. He was but the forerunner of that great upheaval in the church that resulted in the Reformation.

Again, I see from the cloister of Wittenburg, a lone monk emerging from the mist of ages, till like a steadfast planet

attracting the gaze of continents, Martin Luther sheds full luster on the galaxy of the great. Here we have another dreamer, an idealist. He saw the enslavement of the human mind under an ignorant superstition and the idolatry of a corrupt priestcraft, and striving for its emancipation, roused all Europe from its lethargy and kindled a flame of civilization that set the world on fire.

Louis Kossuth was an idealist. He saw his people groaning under the burden of the Austrian yoke and his heart burned within him to be able to liberate them from the power of their oppressors. His deeds are on record, his life work is done and history will write its verdict. Dare you say Louis Kossuth's life was a failure because he did not attain the ultimate end of his ideal? Nay; although Kossuth was not able to establish a republic for Hungary, yet through his efforts his people were raised to a standard of equality with the Austrians and to-day we have among the great powers of Europe the Austria Hungarian Empire.

The influence of the lives of these great idealists can never die and to say their lives were failures would be to say that History has been a failure, that civilization is a farce and justice an illusion.

No life can be a failure when ennobled by some high and lofty purpose. It is given to but few to reform empires but it is the privilege of all to do their best, and no man can deem his life to be poor or frivolous when he is concentrating it on high ideals.

Biographical Sketches.

PROF. COOK'S SUCCESSOR.

Professor Walter B. Barrows, who was recently elected to the position left vacant by the resignation of Professor Cook, comes to us as a man of culture, of broad, practical experience, a man well fitted to fill this responsible position.

Professor Barrows is 38 years old, a native of Massachusetts, and has a wife and two children. At the age of 16 he

graduated from the Reading, Mass., high school, and the same year entered the Massachusetts Institute of Technology, where he took the full course in natural history, graduating in '76 with the degree of Bachelor of Science.

He was then for three years general natural science assistant in Ward's Natural Science establishment in Rochester, N. Y. From here he went to South America, taught in the national college at Concepcion del Uruguay eighteen months and then went with the government zoological expedition to the Pampean Sierras. In 1881 he returned to the United States and was for a time teacher in science at the State Normal School, Westfield, Mass., then for four years instructor in biology in the Wesleyan University of Connecticut and lecturer on botany at Trinity College, Hartford, Conn., and during the last eight years has been assistant ornithologist and mammologist at Washington, D. C.

Professor Barrows speaks and writes Spanish fluently, and is also familiar with Latin, German and French. He is a member of several scientific societies, and is one of the forty-eight original members of the American Ornithologist Union. The most noted of his publications is a bulletin of four hundred pages on the "English Sparrow." He is now finishing a similar work on "Crows."—*The Union Lit.*

FOREMAN OF THE HORTICULTURAL DEPARTMENT.

Mr. Durkin was born in Geneva, N. Y., 1860. Here he received his elementary education. At the age of fifteen he left school and worked for the fruit growers, W. & T. Smith, of his native place. At the age of nineteen he became an employe of R. D. Chase, nurseryman, New York. After two years he severed his connection with Mr. Chase and went to Missouri, where he was employed by S. M. Bailas, a St. Louis nurseryman. He remained in Missouri one year after which he accepted a position as employe of T. K. Phoenix, Delevan, Wis., where

he remained three years. Mr. Wm. Perry, a New Jersey nurseryman, next secured Mr. Durkin's services, which he lost after two years, when the latter became manager of Mr. I. B. Seeley's fruit farm of 100 acres. This farm is situated in the best fruit growing section of New York and consists of 50 acres grapes, 10 acres plums, 20 acres peaches, 10 acres apples. It was after two years' labor in this latter capacity that he was called to the position he now holds.

B. O. LONGYEAR.

It is now three years since B. O. Longyear entered this college as a student, taking several terms work as a special student in the subjects—chemistry and botany. Not only in these branches did he distinguish himself, but also as an artist and a mechanic. All who became acquainted with him found in him a genial companion and an estimable friend. Mr. Longyear was born July 16, 1869, on a farm about three miles west of Leslie village, in this state. He remained here until eighteen years of age, attending the district school the period usually spent there by the average country boy. He next spent two years in the Leslie High School. His father being elected treasurer of Ingham county, then moved with his family to Mason, where his son Bert attended the high school one year. The next year he clerked in a drug store, and the year following he and his brother engaged in the drug business on their own responsibility. Mr. Longyear is a worker. He has always loved science and whenever an opportunity was given him he improved it by doing original work in some line of investigation or in study. Botany, chemistry and ornithology particularly interested him. He took a special course at this college in the two former branches in '90 and '91.

Although many were sorry to lose Prof. Hicks, all are glad to have his place supplied by a man so amiable and well informed as Mr. Longyear has proved himself to be.

A. A. CROZIER.

Readers of THE SPECULUM will be interested in the following sketch which we are able to present of Mr. Crozier, who was recently appointed to succeed Mr. Holden in charge of the field work in the experiment station, and who entered upon his duties March 15.

Mr. Crozier was born in 1856 in Ottawa county, Mich., and passed most of his early life upon the farm. At the age of nineteen, after a preparatory course at the Grand Rapids high school, he entered the Michigan Agricultural College, where he graduated four years later in the class with C. B. Charles, C. P. Crank and L. G. Carpenter. He then spent a year upon his father's farm, when he returned to the college for a short special course in botany. After this he entered Michigan University, where he received in 1885 the degree of M. S. Shortly afterward he was appointed assistant botanist in the U. S. department of agriculture, which place he held for two years, resigning to accept the position of botanist at the Iowa experiment station upon its organization under the Hatch act in 1888. This place he held for about two years when he returned to Michigan and purchased and developed his present farm near Ann Arbor.

His more important published works are "The Modification of Plants by Climate," "The Cauliflower," "Popular Errors about Plants," and "A Dictionary of Botanical Terms." He has also written a monograph on grafting and has in preparation a work on the cross-fertilization of plants. He is one of the editors of the new standard dictionary being published by Funk & Wagnalls of N. Y. He has contributed largely to the agricultural press, and is an active member of various agricultural, horticultural and scientific societies. He was for many years connected with The Michigan State Horticultural Society and the State Grange, a member of the Biological Society of Washington and secretary of the botanical section which he was instrumental in organizing, is a life member of

the American Pomological Society and was for two terms its secretary, and is a member and fellow of the American Association for the advancement of science.

SCIENTIFIC.

Some few weeks ago the Botanical Department received from Mr. I. M. Weston, of Grand Rapids, a sample of artificial silk. The silk was sent to Mr. Weston from a firm in New York who claimed that it was just as good as "real silk" and that it cost only one-fourth as much to produce it.

Mr. Bert Longyear, assistant instructor in this department, made microscopical sections of this silk and compared them with similar sections of the genuine silk. He gave his results in a short talk, illustrated with drawings, to the Natural History Society. He found that while both silks were structureless in the make up of the fiber, the artificial silk was fully five times as great in diameter as the genuine; also, that, notwithstanding this difference in size, a fiber of genuine silk was as strong as three fibers of artificial silk.

To the casual observer, however, the two silks are strikingly similar; and, as the new silk can be made from old rags, sawdust, paper, etc., it is probable, that artificial silk establishments will soon be counted among America's great industries.

Prof. Mumford of the Agricultural Department, has recently issued a valuable bulletin on the feeding of lambs. It is valuable in that, while some of the subjects treated are entirely new, it also draws conclusions which greatly deviate from the generally accepted theories. It has been taught in our text books and long been accepted as a fact by men of wide experience, that the value of a feeding material depends upon the amount of available protein present. Prof. Mumford finds in an experiment with one hundred and twenty-four lambs, divided into ten flocks, and extending through a period of twelve weeks, in which all were fed under precisely the same conditions,

except kind and amounts of food rations used, that the foods richest in protein did not produce the greatest gains; but, on the contrary, as the rations increased in the amount of available carbo-hydrates the gains also increased. This result is a complete turning of the tables; and while we cannot say it conclusively proves the old theory erroneous it certainly opens a field for investigation, which perhaps, has too long been taken for granted.

Another interesting thing about the bulletin is a chart showing the relation of temperature to gain. Throughout the whole period of the experiment, it was found that as the temperature became colder the rate of gain was greatly increased while a rise in temperature was invariably accompanied by gains decreased.

The Chemical Department has made a careful and complete analysis of oat straw, cut on successive days from time of heading to dead ripeness, to determine its value as cattle food. It is also gathering and analyzing a number of feeding stuffs, such as oil meal, gluten meal, bran, wheat scalps, etc. This is preparatory to a long institute next winter on cattle feeding.

The class in meteorology have each a mercurial barometer, and five sets of maximum and minimum thermometers. The weather would do well to be on its good behavior, for many are watching it.

The analytical class have found an old friend under a new name—the ancient depilatory powder, newly christened Modene. "A rose will smell as sweet with another name" and the same is true of Modene.

The Chemical Department is giving attention to securing a new and valuable kind of winter wheat for Michigan farmers. Four promising varieties have been secured and two more are promised. These wheats will be analyzed and their value from the chemical standpoint determined. Then the value of the flour for bread making will be tested by a comparative trial of its vesiculating power.

The aleurometer, used in France to determine the strength of the aleuron or gluten, will also be used.

The introduction of "blooded varieties" of wheat is worth more than blooded stock, because there are more wheat raisers than stockraisers, and grain can be propagated more rapidly than cattle. If wheat raising is to continue to be our leading cash crop, it will be by introducing better kinds and more bountiful producers.

One of the interesting plants in the greenhouse at present is a banana tree with a fine bunch of bananas on it. The bunch is just ripening, and the fruit is excellent.

Several experiments are being carried on in the greenhouse for the Botanical Club. In one of these, plants are confined in a cylinder with one end closed to ascertain the action of darkness upon chlorophyll. In another experiment, an endogenous plant, *Tradescantia*, has been grafted on an exogenous plant, a chrysanthemum, to verify a recent report that such a graft would grow. The grafts have been made three weeks; the plants are alive, and, seemingly, there is a union between cion and stock. There are also several grafts of tomatoes on potatoes and *vice versa*.

One of the forcing houses this spring is filled with Carnations, upon which experiments in regard to fertilizers, sub-irrigates, and fungous diseases are being tried.

The man who knows more about tomatoes than any other person in New England is Professor Munson of Maine State College, Orono. With a bold and scientific touch he has caused the different families of tomatoes to intermarry, and now has some very promising children. Not satisfied with picking one tomato at a time, the way his forefather did, he has wedded the common tomato to the currant tomato, and grows them in bunches like grapes, so a man can pick a dozen big luscious ones at one pull. He

is still busy at his task of cross-fertilization, and it is predicted that in the course of time, he will be able to cross a tomato on a tin shop, and raise his fruit all canned and labelled. Another possibility is that he may cross his tomato with its cousin, the potato, and grow a plant that shall raise canned tomatoes on the tops, and French fried potatoes on the roots under the ground. There is nothing impossible to science.—*Bangor Daily News.*

Power is being contracted for at Niagara at from nine cents to twenty-three cents per horse power per hour. The average cost of steam according to the United States census is \$1.15 per horse power per hour. The cost of water power at Niagara would seem to be at its highest rating only about one-fifth as much as steam. This holds good however, only for continuous power as the Niagara power is based on \$8 to \$20 per horse power for 365 days of twenty-four hours each, while the figures for steam is based on \$36 per horse power per year of 313 days of ten hours each.

The question of regulating engine speed with throttle governors instead of automatic governors is being discussed in engineering circles, and has some eminent advocates notable among whom is Charles T. Porter, frequently spoken of as "the father of high speed engines."

Carefully conducted tests on the Chicago, Burlington & Quincy Railroad, by C. H. Quereau, engineer of tests, shows a saving of fifteen per cent in fuel over the best record of any simple engine of the same class, fifty-two per cent over the poorest record of any engine of the same class, and twenty-nine per cent over the average of forty engines of the same class. The records for the comparison covered a period of a month, and the comparison was based on the consumption of coal per mile per loaded car. The compound used 3.27 pounds coal, the best simple engine 3.85 pounds, the poorest 6.32 pounds, and the average of forty engines including the compound 4.61.

A recent test of a compound and simple locomotive on the Long Island Railroad by Charles M. Jacobs, gave a consumption of coal per car per mile of 2.72 pounds for the compound and 4.32 pounds for the simple.

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AGRICULTURAL COLLEGE, APRIL 10, 1894.

WE miss Professor Cook.

WE appreciate the new walks.

ALL are glad the Friday evening lectures have been revived.

SOME very interesting matter has to be held back for the May number for lack of space in this issue.

ALL should gladly assist Dr. Beal in his efforts to get information concerning men who have been here at any time.

"HORTICULTURE IN SAN DIEGO CO., CAL.," an article by S. C. Dondore, '91, is held over for next issue, our space being limited.

THE News Editor will tell you about several sedate philosophers who were wounded by and succumbed to Cupid's dart. "May" all their future troubles be little ones.

MR. CHASE NEWMAN favors us with a brief account of what the Mechanical Department has been doing. It will be of special interest to the graduates from that department.

MICHIGAN schoolma'ams smiled benignly upon receiving beautiful bouquets during the State Teachers' Association last winter. Although we have n't co-education, President Gorton does n't believe in ignoring the fair sex.

LO, THE winter is past, the long vacation is over and gone, the students have appeared on the campus, and the time for intermingled labor and mirth has come, and the voice of the spring freshman is heard in the land. Cant. 2-11; revised.

WE were glad to learn of President Gorton's popularity at the Farmers' Institutes during the winter. Visitors to the college may feel assured that they will be cordially welcomed by its president. "Agreeableness of manner with firmness of mind" insure success.

THE chapel services are as popular with the students as ever, but "What's the matter with the faculty?" Only two or three faithful ones are to be seen some mornings on the chapel rostrum. Modesty prevents our suggesting a reform in this very important part of the regular exercises.

MANY men, not acquainted with our college, think it strange that our long vacation comes when other institutions are in the middle of their college year. Let

all such remember that the basis of this institution is Agriculture. M. A. C. does n't "take much stock" in mere theory. Conclusions here are drawn from repeated experiment, and facts are learned from actual practice. In all our efforts we try to get "near to Nature's heart."

DR. KEDZIE humorously remarked in his lecture, March 16, that when our professors distinguished themselves here some western institution holds out its hand, and in it a large purse, and our men at once recognize it as the hand of Providence, and bid their Alma Mater good bye. This time it is Professor Hicks, and Washington is the place to which he has been called. Uncle Sam gets a good man.

WE cannot speak too highly of the magnanimity of Prof. Edwards in taking upon himself the conducting of a Bible class for an hour every Sunday morning of the term. One hundred students (and the numbers are increasing) eagerly listen to the professor's excellent talks on the Bible. He is endowed with much originality and keen penetration. The boys are not slow to appreciate his worth and render "honor to whom honor is due."

A VISIT to the grounds in winter awakens peculiar sensations: the untrodden snow; the ice covered walks; the still, cold halls; the solemn demeanor of the few individuals who remain to hibernate—all making such a contrast to the beautiful grounds of summer; the throbbing life of the dormitories, when the college is in session; the animated countenances and the joyous "Hello!" as the boys gaily move to and fro, hither and thither, on their respective missions.

VERY few, on being interrogated, say they love teaching, but many of our students taught very successful schools the past winter. They taught, not for love, but for money; some received both.

The boys who spent their vacations in good, solid work of some kind, come back feeling and looking better than the fellows who dilly-dallied around and "chased their favorite phantom." Adversity, thou art bitter, but thy fruits are sweet.

NO LITTLE enthusiasm has been awakened by Professor Smith in the subject of dairying. Last winter's work was a complete success. The Agricultural sophomores and seniors are now thoroughly enjoying a few weeks in this same course. The methods are new, scientific and extremely practical. We would that every farmer's son in Michigan would take advantage of it. See picture and sketch of Rosa Bonheur, the celebrated Holstein cow.

EVERY man who has ever been a student at this college should be a subscriber to THE SPECULUM. Every man who desires to live an honest life should keep his subscription paid. We don't want to make money out of THE SPECULUM, but we want it to pay expenses. We are glad to give you our time and labor free that you may be kept in touch with your Alma Mater and ever and anon receive a new impulse from this life that has been the chief factor in making many of your successful careers.

AGRICULTURAL COLLEGE students may not spend as much time in religious work as do students of some other colleges, but to say that our fellows are not up to the times in religious thought, would be decidedly unjust. Religion is natural to man. It can not be suppressed. And while no church spreads over this college its protecting wings, we may be under the more immediate guardianship of the great Author of truth. Here men of every religious persuasion meet and interchange thought. Here, sectarianism and bigotry are laid aside. Here, as in few places, is a searching after truth, in material, in moral, yes, and in spiritual things as well. Such environment should make manly men.

COLLEGE NEWS.

The north gallery of the library has been completed.

The Feronians gave their first hop Friday evening, March 30.

The Western Union Telegraph Company now has an office here.

We hope soon to see our grounds and corridors lighted by electricity.

The Phi Delta Thetas entertained their fair friends Thursday evening, March 29.

Friday evening, April 20, the class of '95 will give the annual junior hop in the armory.

The inspector in Williams hall went through upon a wave of popularity the first morning.

Sheds for the accommodation of teams of visitors will be constructed just south of the tool barn.

Friday evening, April 13, the societies will give a union musical. A very pleasant entertainment is anticipated.

A great many repairs have been made in the dormitories in the way of painting the corridors and papering rooms.

The class in grafting this spring has made between four and five thousand grafts of about 125 different varieties of apples.

Friday evening, April 6, was celebrated by both the Hesperian and Eclectic societies, each society giving a "hop" on that evening.

Eleven acres of peas and some oats were sown on the farm the 23d and 24th of March, upon land which was plowed this spring.

Every alternate day a voluntary division of sophomore mechanicals goes to the botanical laboratory to receive instruction in woodology.

The farmers' institutes held this winter were very successful. Six long institutes and about fifteen short ones were held in various parts of the State.

Friday, March 16, President Gorton gave an address upon the Province of the Agricultural College, before Michigan Political Science Association at Jackson.

The wax models of fruits and vegetables of Michigan, representing over 700 varieties have returned from Chicago and are being used for class study.

Professor Holdsworth returned from his southern trip March 24. During his absence Mrs. E. M. Kedzee had charge of the classes in free hand drawing.

The agricultural laboratory is tastefully decorated with the State agricultural exhibit at the World's fair. This adds greatly to the attractiveness of the building.

There is a probability that one of the boarding clubs will run upon the European plan the coming term, a number of the students having expressed a desire to try this system.

At a recent meeting of the Students' Organization some important amendments to the constitution were adopted, looking to the more careful handling of money for athletic purposes.

Mr. Crozier, the new assistant agriculturist, who arrived March 15, is preparing a history of the various fields and experimental plots which will be very useful in future work of the station.

The plans are ready, and part of the material is on the ground for our new hospital. The building is to cost \$2,500 and will be located just north of Faculty Row, north of the Lansing road.

At last there seems to be a prospect of having an electric car line connecting Lansing and the college. Rumor says they will be here by the last of April, though it is difficult to decide which to believe, experience or rumor.

Friday evening, March 9, after an interesting program by the Natural History Society, President Gorton gave a lecture upon Yellowstone National Park. The lecture was made doubly interesting by a number of splendid stereopticon views of the scenery.

The Horticultural Department is preparing to send out about 3,000 fruit trees of the various varieties to those who wish them and who will observe and report upon their value. The different varieties of trees planted upon the department promise a good crop of fruit this year.

The plan of the course in dairy work on the Agricultural Department in the future will be somewhat as follows: The freshmen will have work in butter-making, the sophomores in cheesemaking, the juniors will have work in the care and feeding of cattle, and the seniors will have advanced work.

One student asked Dr. Beal for the use of the chronometer, another for his galvanometer. The doctor is expecting that any day others may call for a gasometer, thermometer, barometer, lactometer, or some other ometer, but in each case he will get the use of a micrometer, as that is the instrument needed.

The Farm Department will continue many of the most valuable experiments conducted during previous years. They are now collecting seed oats from various parts of the country to determine if possible the best locality from which to obtain seed. They will grow all of the different kinds of millet that it is possible to obtain, to experiment upon their usefulness.

Among the new faces that we see this spring are those of W. B. Barrows, professor of zoology and entomology; A. A. Crozier, assistant agriculturist of the Experiment Station; B. O. Longyear, assistant botanist, and Thomas Durkin of Geneva, N. Y., foreman of the Horticultural Department. Mr. H. S. Dunning has been appointed head of the department of Hencology.

Friday evening, March 16, Dr. Kedzie lectured upon "The Scholarly Habit." This was the second

of a series of Friday evening lectures being given. The third lecture was given by Dr. Baker of the State Board of Health upon "Our Greatest Danger and How to Avoid it." The fourth of the series was given by Professor Hedrick upon "Our Money System" March 30.

Professor Mumford has prepared one of the most complete and valuable bulletins upon sheep feeding, ever issued. Among the new features is a series of observations upon the effect of temperature. The results show almost invariably an increased gain by the sheep with a fall in the temperature. The experiment shows that the gain depends rather upon the amount of carbohydrates contained in the food rather than upon the amount of protein.

One of Professor Mumford's bulletins upon sheep feeding was handed to one of the "way-backs." After a careful persual he said that there were some good points, but that he thought he could do as well if he had the college farm to raise *ad libitum* on. He noticed that they fed lots of it to those lambs, but thought it would never be raised much on account of the climate. THE SPECULUM congratulates Professor Mumford upon the discovery of this new folage plant.

A great many improvements have been made in the botanical laboratory during the winter in the way of new shelves, new cases for seeds and herbarium specimens, and a great many little conveniences. The choicer parts of the State forestry exhibit at the World's fair are stored in the laboratory. They have a case containing 100 photographs of interesting features of botanic gardens in Europe. The department gave a course of ten lessons in the study of milk molds and bacteria to the dairy school class last winter.

The dairy school conducted here this winter was a complete success. The limit of 25 students was reached and a number were turned away, and there are already fifteen applicants for the course next winter. The quality of the butter made was excellent and brought a higher price than any other butter in the market. Nearly all of the students, who were mostly young men from the farms, have obtained good positions in creameries in various parts of the country. The work consisted of practical buttermaking, using the Babcock milk test, running engines and boilers, the feeding and care of cows, and veterinary science as related to cows.

A volume containing Bulletins 103, 104, 105 and 106 issued by the Horticultural Department is just out. The Bulletins treat respectively of "Peach and Plum Culture in Michigan," "A Year Among Fruits," which is a report of the South Haven Sub-station, "Michigan Fruit List," and "Strawberries and Raspberries." They are in a neat and tasty form and contain much valuable information upon the subjects treated. From them has been compiled a poster bulletin upon spraying as a remedy for insect pests and fungous diseases, giving formulas for the making of the vari-

ous remedies and the time of their application. A calendar bulletin has also been issued upon the treatment of potato scab.

Thursday, March 29, was the 21st anniversary of the Hon. Franklin Wells, as a member of the State Board of Agriculture. The faculty and the other members determined to give him a surprise. In the afternoon at five o'clock, President Wells and Governor and Mrs. Rich received the students in the chapel. The reception in the evening was held in the Y. M. C. A., and public parlors, which were beautifully and tastefully decorated for the occasion. Flowers and bunting were used in profusion, the tables were beautifully decorated, and over all was shed the soft glow of many electric lights. President Gorton acted as toastmaster, and the following toasts were responded to:

"The College, Child of the State, still needs her motherly care." Governor John T. Rich.

"The Governors of Michigan; no State can name a better line. Their uniform devotion to college interest, merits our kindest remembrance." Ex-Governor D. H. Jerome.

"The Membership of the State Board of Agriculture. Granite and marble may crumble, but their work will be everlasting." Col. Wm. B. McCreary.

"The State Board of Agriculture; the compensation they receive." Hon. Henry Chamberlain.

"The Boys of M. A. C.; the college yell is heard from ocean to ocean, from the lakes to the gulf, with an echo from Australia and the Old World." Hon. C. W. Garfield.

"Looking Backward." Dr. R. C. Kedzie.

"Looking Forward." President S. G. Gorton.

"The Agricultural Press." K. S. Butterfield.

"Our Present Views." Secretary Butterfield.

THE MECHANICAL DEPARTMENT.

Mr. Chase Newman deserves credit for the following:

During the past few months, the plant of the Mechanical Department has been the scene of many important changes, both in providing commodious laboratory space, and in the equipment of the sub-department.

The extension, including the foundry, 30x50 feet in the main, and the blacksmith shop, 30x40 feet, has been completed. The foundry has been equipped with a "Collian" hot blast cupola, 24 inches inside lining; and a modern and originally designed core oven. Regular instruction in the foundry has opened, and the cupola was successfully fired March 31st. The blacksmith shop has been equipped with twenty forges, and a blower and exhauster, operated by a "Case" engine, will respectively supply the blast and remove the refuse gases through underground pipes to a main smoke stack.

The wood shop shows most conspicuously the result of the vacation's labor. The well, formerly occupying

about 500 square feet, has been floored over, thus giving that much additional floor space, and a much more economical arrangement has been given to the benches. A new tool room has been constructed at the north end of the shop, and will be a receptacle for all tools, the old individual box system having been discarded. Many new hand tools have been added to the already large list. The old tool room will be used for gluing and varnishing purposes.

The engine room has been enlarged, and is now occupied by the new 70 H. P. compound engine, just completed by the students. The old shop engine will be removed to the boiler house, and is to furnish power for lighting the grounds by electricity. The room will be finished in oak when completed.

The machine shop has been given some attention in re-arrangement with the view of convenience and economy of space; and its equipment has been bettered by the addition of some new tools. An air compressor has just been erected by the students.

The designing room has received one of the most valuable additions. A scrap-book of about 700 pages, 18x24 inches, has been compiled from engine, pump, boiler, hoisting and mining machinery catalogues, and will be used by students in connection with the study of machine design.

The general result will be an increased capacity for at least fifty students, an additional course of instruction in foundry practice, and much more thorough instruction in forging and wood working. The college is fast attaining that ideal which inspired those wise legislators, of the time of our early statehood, to provide for Michigan, a College of Agriculture and Mechanic Arts; and the Mechanical Department of the Michigan Agricultural College can now complete with any College of Mechanical Engineering in the United States.

She simply worshipped college boys,
Of the sweater and pigskin type,
And found no corresponding joys
In men more polished and ripe.

So when the young professor sued,
For the gift of her slender hand,
He met a treatment cool and rude,
Which he scarcely could understand.

But undismayed, he pleaded hard,
In face of her ridicule,
Till she told him, "he was debarred
By the undergraduate rule!"

—E.

College Students wanting employment for the summer should address P. W. Ziegler & Co., Box 1801 Philadelphia, Pa., who offer great inducements for special work to which students are well fitted, and which pays \$75 to \$150 per month.

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 the department, often, thus making his work much easier and the department more interesting to all.

During the winter Dr. Beal began the task of collecting information concerning students who had attended the college but who had not graduated. The necessity for this information lay in the fact that the college authorities were frequently consulted with regard to such persons and a directory of their occupations and residences would be of inestimable value. As a result of his investigations the doctor has already collected a large amount of material which is now being arranged in a card catalogue. It is hoped that in a few years the directory may become complete.

The "Personals" department of the SPECULUM should be a valuable aid in completing this valuable work and in keeping it "up to date." One suggestion which Dr. Beal makes in the circular letter which he has distributed, may well be repeated here. He says, "In future, once a year or oftener, send at least a postal card to the SPECULUM, the editors of which will print all items of interest." If all who have ever been connected with the college will comply with this request, it will do a great deal toward keeping them in touch with each other and with the college.

James M. Sheaver, the first steward of the college, died in Lansing on March 11.

Concerning the death of another of the college "pioneers" we quote the following from the *Michigan Farmer* of Dec. 16, 1893:

"Mr. J. S. Tibbits passed away on Tuesday last. Mr. Tibbits was the first Professor of Agriculture at the State Agricultural College; was a member of the State Legislature and served as county auditor, making an enviable record for honesty and capability. He then went west spending some time in California, and later accepting a place in the Colorado Agricultural College. The closing years of his life were spent with relatives in the vicinity of his old residence at Plymouth. To the last he retained his keen interest in all matters pertaining to the farm—matters in which he was well informed through his habits of close observation and investigation."

James N. McBride was one of the lecturers at the dairy school during the winter. Professor McBride is extensively engaged in the dairy business near Owosso.

'71.

R. M. Sloan expects to visit M. A. C. during the summer. Mr. Sloan is publisher of the *Prairie Picayune* of Mound City, S. D., and is one of the leading G. O. P. men in his county.

WITH '73.

H. S. Hall is cashier of the National Bank at Rapid's City, S. D.

WITH '74.

John Galloway is postmaster at Palo, Mich.

'76.

W. L. Thomas is making a success of the dairy at Decatur, Mich.

WITH '76.

Zebedee Beverly is register of deeds at Cassopolis.

H. H. Miller is pastor of the M. E. church at Mattawan, Mich.

C. S. Hitchcock and C. E. Ingerson are both commercial travelers.

'77.

W. C. Latta was elected vice president of the American Shropshire Association at its recent meeting held in Detroit.

Dr. Mason W. Gray is a candidate for mayor of Pontiac. The doctor is one of the leading democrats of the city and attained great popularity as health officer. He is also a member of the State Board of Health.

WITH '77.

E. J. McAlpine is county superintendent of schools at Warsaw, Ind.

WITH '78.

Henry Perry is in the hardware business at Traverse City.

WITH '79.

Frank Renton is a specialist in the Department of Agriculture at Washington. His home is at Charlton Heights, Maryland.

'81.

Alva Sherwood is taking a course in veterinary at the Detroit College of Medicine.

We have received a catalogue of the Delano Seed Co. of Lee Park, Custer Co., Neb. The Delano brothers seem to be hustlers in the business. They are the largest seed-growers in Nebraska.

Dr. Albert E. Bulson of Fort Wayne, Indiana, is a happy man. Witness the following note: "Ten pound boy, Feb. 26. The nurse says it looks like its father. It is a lusty looking youngster and we are all happy over his arrival."

WITH '81.

F. H. Whitney is secretary of the Michigan Insurance Association.

L. L. Kinner is the agent of the C. & W. W. R. R. at Mt. Kernon, Iowa.

'82.

We have at hand a directory of the public schools of Saratoga Springs, New York, in which the name of J. Mace Smith appears as principal of school No. 4. Professor Smith says in explanation: "I moved to this place September 1, 1893, to accept my present position. I have ten assistant teachers and a registration of 490."

Fred C. Snyder died on November 29, 1893, at Stanton, Mich. At the time of his death Mr. Snyder was register of deeds at Stanton, having removed to that place from Eureka in January, '93. The funeral services were held in Greenville.

Lincoln Avery is prosecuting attorney for St. Clair County. Violators of the liquor laws are said to tremble at the mention of his name.

WITH '82.

Henry W. Rodenburg is a druggist at Breedsville, Mich., and Byron J. Robertson is in the dry goods business at the same place.

Ben Campbell is with the Burnham and Stoepel Co. of Detroit.

WITH '83.

H. A. Brown runs a flouring mill at Breedsville, Mich.

Will Bessie is teaching at Berlamont, Mich.

'84.

E. Carl Bank is now comfortably settled as superintendent of the Preston School of Industry, Ione, California. Mr. Bank writes that the climate is delightful, the outlook most favorable and, above all, the board of directors agreeable.

'85.

J. R. Newton is a successful planter at Pendleton, S. C. Mr. Newton has not visited the college since graduation but hopes to be able to do so soon.

H. E. Thomas is a veritable walking directory concerning the members of his class. He sends Dr. Beal the following list of men who were

WITH '85.

H. W. Wheeler is a farmer at Olivet.

Frank E. Storrs, fruit grower, North Muskegon.

Grant Rutherford practices law at Alpena.

Sylvester E. Jones is a travelling salesman with headquarters at Marshall.

E. A. Small is a travelling salesman with headquarters at Lansing.

Professor Waldo occupies the chair of history at Beloit College, Wis.

Charles Davis is a jeweller at Ypsilanti.

WITH '86.

C. F. Stilson is a commercial traveller for a Battle Creek firm.

Guy Osborn represents Morrison, Plummer & Co., wholesale druggists of Elkhart, Ind.

'88.

Clark Hubbell is the junior member of the law firm of Henen & Hubbell, Chehalis, Wash. He is also the attorney for the Washington Consolidated Mining & Development Co.

WITH '88.

Alex Moore is an attorney at law in Port Huron.

'89.

G. C. Davis and Miss Pearl E. Bank of Lansing, were married on Jan. 30. Professor Davis and wife

are now "at home" on Faculty Row. THE SPECULUM extends congratulations.

F. N. Clark writes from Milford as follows: "I have recently removed to Milford and am engaged in the artificial hatching and rearing of poultry. Chicks and ducklings for broilers and roasters, and fresh eggs the year round will be our specialties. Will add fruit culture in the near future. The outlook is very bright."

Alfred L. Marhoff and Miss Harriet L. Bock, were married on March 1, at Battle Creek. THE SPECULUM extends congratulations.

F. M. Paine is with F. J. Meech & Sons of Charlevoix, Mich. Their specialty is the *tuberosus begonia*.

'90.

Prof. W. J. Meyers of the Colorado Agricultural College reports the M. A. C. contingent at that institution as keeping up the reputation of their Alma Mater. Professor Carpenter and his family had a severe struggle with the typhoid fever during the winter but are now convalescent. Baker, Crandall and Meyers still hold on to their bachelor's quarters, but from the reports of their boarding house experience we would infer that some of them are sorely tempted to make a radical change in their affairs.

WITH '90.

Miss Mary McLouth is an employe of the Agricultural Department at Washington.

'91.

V. H. Lowe has been appointed assistant to Secretary Butterfield at the college.

'92.

Prof. H. B. Fuller of the Lewiston Schools, visited the college, March 31.

Harvey N. Peck has spent the winter travelling in California.

Dor N. Stowell is enjoying life at Woodland. Incidentally he spends his spare moments in raising turnips, pigs and onions.

A. H. Gillette is teaching at Bennington, Mich. He intends to take post-graduate work in Horticulture during the coming summer with a view to a master's degree.

G. E. Ewing is located at Ross, Michigan. "Buck's" family was recently enlarged by the arrival of a baby boy. We hope the heir has inherited the whole-souled, good nature of his pater and that the name of Ewing will grace a future class-roll at M. A. C.

WITH '92.

J. T. Shotwell is in a drug store at Linden, Mich. He expects to return to college in the near future and complete his course.

Carl P. Pray is specializing in the ancient languages at Olivet College.

'93.

W. W. Tracy has returned from New York to

Detroit. Since graduating he has been working for John Lewis Childs, the great seedsman. Tracy's father is superintendent of the D. M. Ferry seed house and needs Tracy, Jr., to help him. Hence the change.—*Union Lit.*

C. W. Leipprandt received his degree at the close of the fall term. Shortly afterward he accepted a position at Walkerville, Ontario, as foreman of the Walker farm, of which P. M. Harwood is superintendent.

Dwight Cole has entire charge of the classes in mechanical drawing and higher mathematics at the Detroit Business University. Mr. Cole's duties began at the first of January. Previous to that time he taught the same subjects at the evening school connected with the Detroit Y. M. C. A.

WITH '93.

W. S. Wiggins is studying medicine at the Michigan Medical College (Emergency Hospital), Detroit.

H. B. McCurdy is in the employ of an engraving and lithographing establishment in Grand Rapids. His address is 228 Scribner St.

WITH '94.

B. O. Longyear takes the position left vacant by resignation of G. H. Hicks ('92) as instructor in botany. Professor Hicks is now in the Department of Agriculture at Washington as a specialist in botany.

WITH '95.

Henry Colquitt is employed in the office of the Wayne county treasurer.

S. C. Laitner is studying at the Detroit Museum School of Art.

It is reported that "Pic" Nichols has entered the ranks of the Benedicts.

WITH '96.

C. M. Otis is studying at the South Haven high school. He expects to return to M. A. C. as soon as possible.—*Hesperian Star.*

G. E. VanAlstyne has accepted a situation as reporter on the Grand Rapids Press.—*Hesperian Star.*

ATHLETICS.

Athletics have taken a spring to the foreground in the past year that is surprising. No village is too poor to enjoy something of the athletic spirit. Those canvas-backed "ducks" suit the public taste well, and vast crowds come out to every important contest. Many athletic associations have found the game of foot ball a source of revenue.

Athletics without number by the most thoughtful writers have discussed the proper spirit for athletics, the places at which contests should be held, and the methods of supporting and regulating the sports. Even the State Teachers' Association was led by the popular trend of thought and in the College Section a paper with discussion on "Why Rhetoric should be Taught in Colleges" was actually put to one side in favor of a treatment of "Athletics."

Throughout the whole matter the same ideas prevail in general. It is not our purpose to review all argument advanced by thinkers on the subject; but it may not be out of place to give an indication of the points covered in nearly all of the articles. Those who are strongly in favor of athletics urge that: There are many influences tending to deteriorate the modern man—the college man is expected to be a leader—a good animal is the first requisite—enforced exercise not beneficial—better discipline follows a boom in athletics—furnishes a pure live topic for conversation outside of study hours—binds the student to his Alma Mater—improves the habits of the students—broadens the views of students by bringing them in contact with similarly occupied individuals from other institutions—brings students and instructors together on the same plane. Those of the opposition maintain that: Athletics detract too much from time for study—only a small per cent. of those who go to the field engage in the sport—the athletic ideal is a false one—turn attention from the truer and more worthy ideas—athletic distinction becomes greater than that due to scholarship—excessive training—overworked, even morbid state, from which it is difficult to return to normal ways of living—the spirit of anything to win—hesitancy of students to take the initiative in correcting abuses.

Following out the recommendation of the State Teachers' Association a meeting of delegates from the colleges of the State was called at Jackson, March 16 and 17. The delegates consisted of representatives from the students and faculty. Eight colleges were represented, President Gorton and Professor Hedrick going from here for the faculty and G. E. Simmons and F. R. Foss going for the students. With a seeming premonition of the nature of the meeting the student delegates were in every instance foot-ball men. By all that could be gleaned from reports nothing was accomplished beyond the passage of two resolutions; and from the very nature of the case nothing more was possible except the general shaping of public opinion with regard to the subjects discussed. No startling effects seem apparent at this place as yet from the conference.

The resolutions as passed are: "That we recommend to the institutions here represented that an earnest effort be made by all friends of athletics to improve the moral tone of athletic contests.

"That we recommend that the rules of foot-ball be so modified as to guard against brutality and to minimize the danger."

These are but the putting into words of previously almost universal opinions; for no one can defend field-day for a minute, except as a show analogous to a racing meet, when the any-thing-to-win spirit takes hold; when the rules of the game are closely studied for the purpose of infraction; and when brutality is taught as a valuable trait of the player.

The question of playing games outside of college supervision is also reported as having received consideration and Ypsilanti is given credit for being very

desirous that the athletic meets for students should be held at colleges only. Ypsilanti is an interested bidder for the coming meeting of the M. I. A. A.

The closing events of last season were two foot-ball games with Lansing players. On November 4 the Lansing high school came to the college and played the class of '96; '96 scored three times in the first half and four times in the last. The visitor scored once in the last and each side failed once to kick making a score of 40 to 4 in favor of '96. The best of feeling prevailed throughout the game and the sophomores showed the better training. Petley's plays around the end deserve special mention, and Vanderhoof deserves words of commendation for good management of the team. The game was viewed by a large crowd, many of whom were from the city. Many hacks were to be noticed.

November 10, or just as the fall term was breaking up, a game was arranged with the auditor general's office. The game took place in the city, though no preparation whatever was found to have been made when our team arrived on the grounds selected for the contest. The teams lined up and when the game was only twenty minutes old it went out with a score of 14 to 0 in favor of the college team. Many were in attendance at the game and its feature was Jones' work at full back for M. A. C.

The foot-ball fever was revived with the opening of the spring term, and considerable time has been devoted to its practice, mostly by '96 men. Indeed, the class of '96 is showing the best spirit of any. Mr. Bateson manages their base ball and Mr. Nellist negotiates their foot-ball business.

Atheletics in general have a promising outlook. We have an abundance of the material of which athletes are composed and our possibilities are limited only by the amount of effort we choose to make.

The running track is in good shape and is rolled for a time each week. The diamond is in need of some touching up, which will be done at once by volunteer labor. A supply of new materials has been procured for the ball team and regular practice will begin at once. Games for a few dates have been scheduled with outside parties.

The problem of money is the one that most concerns not merely athletics, but all departments of the Students' Organization. When orders on the treasurer of the organization fail to pass on the grounds for good money, it is a condition and not a theory that confronts us. The man who can devise a method of raising revenue from our resources will be Moses for he will lead us out of bondage. Taxes have been levied till they have become odious to many of the students and particularly so from the fact that a large amount of back tax remains to be collected. However, we may felicitate ourselves that hereafter a rigid system of accounts is to be kept and that with an occasional publication of receipts and expenditures will inspire a confidence on the part of the students that has not been felt for some months.

All purchases by the organization hereafter will be made through the consent of the purchasing committee, consisting of one member of the faculty and two students. All orders will be on duplicate blanks and all bills will pass the auditing committee as before.

A prospective constitution for the M. I. A. A. was sent to each of the five colleges for revision. The medium will be struck between all proposed changes offered to the board by various associations. The Board of Directors was re-organized at the February meeting and our representative, Mr. Simmons, was chosen treasurer. The board is soon to meet and decide on a location for the coming field-day. Should the sports come off in Jackson, with fine weather the various members should receive a dividend.

COLLEGES AND EXCHANGES.

Yale will not play with professional base ball teams this year.—*Polytechnic*.

Out of the 122,523 students attending colleges in this country 77,000 belong to Greek-letter fraternities.—*Thielensicon*.

Two thousand molecules can sit comfortably on the end of a pin. Herein the molecule differs from man.—*Ex*.

Harvard discourages students from taking more than twelve hours of recitations a week, but the professors demand thorough preparation of each lesson.—*Ossarist*.

A Freshman once to Hades went,
Some things he wished to learn;
But they sent him back to earth again,
He was too green to burn.

—*Ex*.

The faculty of Cornell University has decided upon a series of radical changes. After this term there will be no more examinations held at the close of each term. The student's knowledge will be decided by the character of his daily recitations and by short examinations during the term.—*Ex*.

Athletic associations in several eastern colleges are making extensive preparations for the opening base ball season. The possibility of modifying the existing code of foot ball rules so as to make the game less dangerous, is also under consideration.—*Ossarist*.

"How did your son do at the college last year, Mrs. Wilkins?"

"Very well, indeed. He did so finely that he got an encore."

"A what?"

"An encore. The faculty have requested him to repeat the year."—*Ex*.

The faculty of Johns Hopkins has passed a rule requiring the captain of athletic teams to hand in the names of candidates for athletic teams, and anyone not in good standing will not be admitted.—*Polytechnic*.

A petition was recently presented to the Massachusetts House of Representatives for legislation prohibiting the public exhibition of the game of foot-ball. A bill accompanying the petition provides punishment for any person who takes part in the game when such game is played in the presence of spectators who have paid an admission fee to witness the game. It is unnecessary to say that the petition was indefinitely tabled.—*The W. P. I.*

Professor Williams of Johns Hopkins University, says that the practice of hazing is an old one. He came across an old rule at Heidelberg University, printed in 1430, forbidding the practice of shaving the heads of the new students, and of filling their ears with wax.—*Ex*.

"Evil are thy tunes."—*Bell Ringer*.



About Advertisements.

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