The M. A. C. Record.

VOLUME 2. LANSING, MICHIGAN, TUESDAY, JUNE 8, 1897. NUMBER 22.

How Does the Economic Entomologist Aid the Farmer?

R. H. PETTIT, ASSISTANT ENTOMOLOGIST.

Many times the Entomologist is asked such a question as the following: "Just what kind of work falls to your department; we know that your work is carried on along very interesting lines and that insects are very absorbing from more than one standpoint, and many of them are pretty to look at, but how does your labor benefit the general public?" A few words briefly outlining the general duty of the department may serve to partially answer this question.

The work of the Economic Entomologist may perhaps best be considered under three heads: Investigation, experimentation, and dissemination of knowledge or facts bearing on the subject of beneficial, injurious and other insects in such form as to be available and useful to the general public, and especially to the fruit grower and gardener.

Research or investigation may take almost any direction, from the determination of the insects sent in by people desirous of ascertaining just what manner of insect they are dealing with, or trying to deal with, and how to control it, to the careful and painstaking work of tracing out the life history of some minute insect—and most of the worst insects are very small. This life history must be followed if possible from the laying of the egg to the formation of the perfect insect; it may take from ten days to seventeen years in the case of one insect, and must be repeated through an entire season if possible, for the history of one generation often differs from that of the succeeding one.

During all this careful work of investigation, the one thought uppermost in the mind of the Economic Entomologist is, to find some weak spot in the armor of the enemy, or some time and condition when the insect is susceptible to destroying agents of some kind. Thus in the course of the development of many scale insects it is found that there is a time just after the hatching of the egg when the young may easily be destroyed by spraying; this time extends over a day or two, and the remedies must be applied as soon as the critical moment arrives. In cases where we cannot wait for the more effective winter spraying this method is of much value. Here is the one weak point in the armor of many scale insects, or rather it is the only time that they are without an armor in the form of a shield or scale.

The practical benefit of investigations of this kind is felt only after careful experiments have been made, for however apparent it may seem that a certain course of treatment will prove effective against a certain insect at a definite time and stage in its development, it is never safe to recommend such a treatment before it has been tried and conclusively proven to be effective. Here again it is often found that our regular remedies will not do because while they may kill the bugs all right, they kill the plants as well, and then the experiments have to be carried on along some other line until a remedy is found.

The final object of all this work is attained when the results of experiments are sent to the people for whom they were intended, and the methods for controlling the pests and advancing our insect friends are set before the farmer or orchardist or anyone who may find them useful. This is accomplished in many ways, sometimes by means of bulletins, often by correspondence, occasionally by visiting the infested region and showing by example just how to apply the remedy employed, but always in the manner that seems the cheapest, most effective and direct.

The Library.

MRS. LINDA E. LANDON, LIBRARIAN.

The older members of the Alumni Association and former students of the College who may visit us during the coming triennial, some of them returning after an absence of many years, will find numerous changes about the campus. New buildings have been erected to meet the growing demands of laboratory and class room; new departments added, new sciences introduced, to enable us to keep abreast of the times.

IN THE LIBRARY.

In no department, perhaps, will changes be more apparent than in the all important one, the library. Many will remember that during the first twenty-five years of its existence, it was located in College Hall. In the spring of 1882 it was removed to the newly-erected library and museum building, and numbered a little more than 6,000 volumes, valued at about $15,000. At the present time it contains nearly 20,000 bound volumes, many thousand pamphlets, and is valued at $40,000. Two large rooms were set apart for the use of the library, and although the capacity has been doubled by the erection of galleries, it is rapidly outgrowing its present quarters.

Within the three years just past, the books have been classified, systematically arranged on the shelves, and newly catalogued upon a plan which renders it as easily consulted as a dictionary, and places the entire library within easy reach of all who desire to use it.

The arrangement of the library is quite simple. Cases are placed along two sides of the room, on the main floor and in the galleries, for the accommodation of the books, which are grouped together by subjects. The librarian's office is located on the north side of the room near the entrance; it is a pleasant corner, neatly furnished, and well supplied with everything necessary for the proper administration of the library.

The works on civil, electrical and mechanical engineering, steam and the steam engine, occupy the first case at the right. Following these are the agricultural, horticultural, and veterinary sections, and it would be difficult to find more complete collections upon these subjects than have been gathered here. Zoology, botany and chemistry; mathematics and physics, with their many subdivisions, next claim our attention and reflect great credit upon the professors who have selected them to broaden their work and extend the usefulness of their several departments.

The department of fine arts has recently purchased a number of works on the history of art and on artist biography, which are worthy of more than a passing glance.

Language, oratory, and the history of literature are generously represented; and the section devoted to economics and social science is so filled with good things that one interested in these subjects is reluctant to turn from it even to greet their old friends, the poets, who are here in great numbers.

The philosophical, biographical and historical collections, also literary essays, criticism, and works on Shakespeare and the drama, are particularly good and give evidence of most careful selection.

The new department of domestic science has a small but well chosen collection, as has also the department of bacteriology. Reference books, dictionaries and encyclopædias are plentiful.

No library would be complete without its fiction, so we have on our shelves just a few volumes, but they are of the best.

In the galleries are found the public documents, the bound library periodicals, an exceptionally fine pedagogical library, and the library of the Experiment Station, numbering nearly 1,800 volumes.

In the reading room are found the periodical literature which keeps us in touch with the most advanced thought of the day, and many agricultural and horticultural papers. The RECORD exchanges, representing almost every county in the state, also find their way into this room. Oil portraits of past and present college officials adorn the walls, while busts of Horace Mann, that prince of American educators, and of the Hon. Justin S. Morrill, to whom the agricultural colleges all over our broad land owe so much, add greatly to the appearance of the room.

It would be impossible in an article like this to enumerate all the advantages which our library affords. The various departments confine their work to their own particular branch of study—the library embraces them all. We are proud of it, not because of its 20,000 volumes, nor yet of its money value, but rather because the spirit of its founders, who planned a library that should be established on a broad basis and be far reaching in its influence, has dominated the minds of all who have come after them; and the one aim has been, not the greatest number for the money expended, but the best—not quantity, but quality.

The Relation of Civil Engineering to Agriculture.

HERMAN K. VEDDER, PROFESSOR OF MATHEMATICS AND CIVIL ENGINEERING.

Accepting the broadest definition of an engineer as "one who moulds and puts to use the materials and forces of nature," the farmer is an engineer, and the successful farmer is a successful engineer. If we restrict the discussion to modern technical lines, the farmer and the civil engineer have little in common.

The development of great commercial thoroughfares, the building of tunnels, bridges, waterworks, harbor improvements and other tools of commerce, constitute civil engineering; and these affect and interest the farmer no more than they do other elements of society. It follows that the farmer and the engineer have need of each other and will do well to make use of each other, but it is as plainly apparent that, owing to the limits of human life and capabilities, there can seldom occur a successful combination of the two professions in one person.

However, there are many principles that lie at the foundation of engineering art of which the farmer can and does make frequent use, and there are many of the simpler engineering problems that he attempts as part of his yearly duties. The annual experiments in road making, and the ditching or underdraining of considerable areas, now so often successfully undertaken by the owner of the land, are instances in point.

The construction of every little road bridge involves principles of engineering and the strength of materials, as does the building of any framed structure on the farm. The culvert which carries that stream under the road, raises questions of hydraulics and mensuration as well as of the resistance of the material used in making the conduit.

The division of the farm into fields of a certain size calls for a knowledge of surveying or the science of meas-

urement, and in this part of the country a farmer would be counted ignorant indeed who did not have a tolerable acquaintance with the methods and results of the government land surveys.

PROF. EDITH F. McDERMOTT.

It is true that the methods used in these problems are often those learned in the school of imitation, by watching how father or grandfather worked, and the underlying principles may never come to the surface. But the principles are there, and however well a pure imitation may serve its purpose, it must be remembered that an imitation is seldom an improvement on the thing imitated. To do things better than they have been done by others and to do them with the greatest economy are the requirements now a days. Advancement and the most profitable application of time, labor and materials are only possible to him who recognizes the governing principles of things desired.

The conclusion to be drawn is that while the farmer can hardly attempt extensive training in technical engineering, a study of the laws of mechanics and measurement will be valuable to him, for so much of civil engineering is a part of the work that may be required of him.

Political Economy in Farming.

WILBUR O. HEDRICK, ASSISTANT PROFESSOR OF HISTORY AND POLITICAL ECONOMY.

The need of the American farmer for economic information and training requires no demonstration. He has his own peculiar business problems to solve, such as, the "remedies for agricultural depression," the equalization of taxation, the transportation question, the conditions of land holding and the betterment of markets. Over and above the study of these peculiar problems as a man and citizen—representative of our greatest industrial class—he should be interested in the monetary question, the problems of capital and wages and the difficulties of governmental receipts and expenditures. As a means of business success, knowledge of the first series of problems seems essential to him. His responsibility for the proper solution of the second series is exacted of him whether he is prepared for it or not.

THE BETTERMENT OF MARKETS.

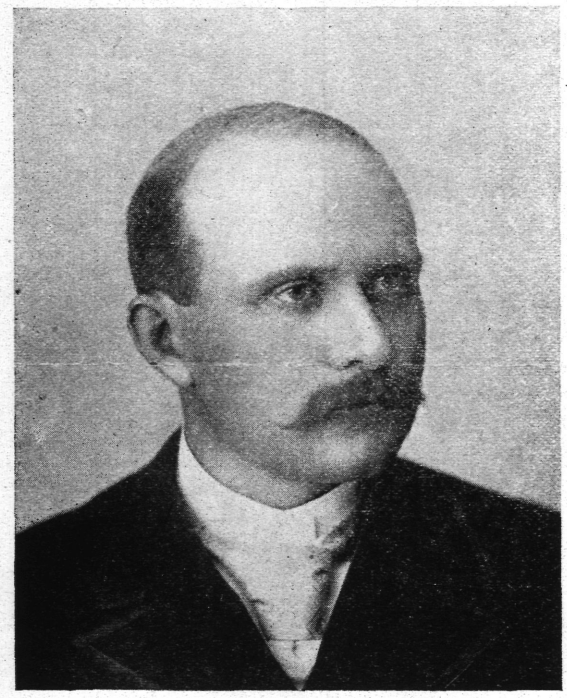
The farmer of the past has given less attention than any other of the producers of commodities to the development of markets for his commodities. Generally enough, we believe, to establish it as a rule, farmers have devoted themselves to getting from the soil its wealth, leaving to chance the possibility of a market or price for his commodities thus produced. "The wealth-producing energies of the farmer are not properly distributed, and the products of his labor are not adjusted in the proper proportion to the wants of society." As a writer in a recent agricultural paper ably says:

> "The demands of consumers, the conditions of markets, the handling and transportation of produce and the conditions of farming to meet present requirements are so changed that the methods of farming and marketing even twenty years ago are not adapted to the present time and the farmer of today has much to learn to keep up with the times."

Confirmatory of the above statements and suggestive of the remedy is the following quotation from the recent report of Sec'y Morton:

> "Agricultural Colleges and experiment stations are teaching the science of agriculture. But they are not generally teaching farm economics and the importance of markets. Science is constantly showing the farmer how to increase the annual product per acre in cereals and other staples, but the great question confronting each tiller of the soil is, how to secure satisfactory remuneration for his toil."

The Agricultural department of the federal government has done much within recent years to extend the demand for agricultural products abroad. Bulletins have been published concerning the leading nations abroad, describing their industries and resources, their leading imports and the sources of these together with any other information concerning a demand for farm commodities. A subdivision of the Agricultural department known as the Section of Foreign Markets, is occupied entirely with this work. In the course of twelve weeks devoted to economics at the College, an extended study of all these problems is not undertaken, but in the work of so short a time it is believed that the information and mental training along economic lines obtained, will be helpful in solving the agricultural problems.



PROF. L. R. TAFT.

The Importance of Good Cooking.

MISS EDITH F. McDERMOTT, PROFESSOR OF DOMESTIC ECONOMY AND HOUSEHOLD SCIENCE.

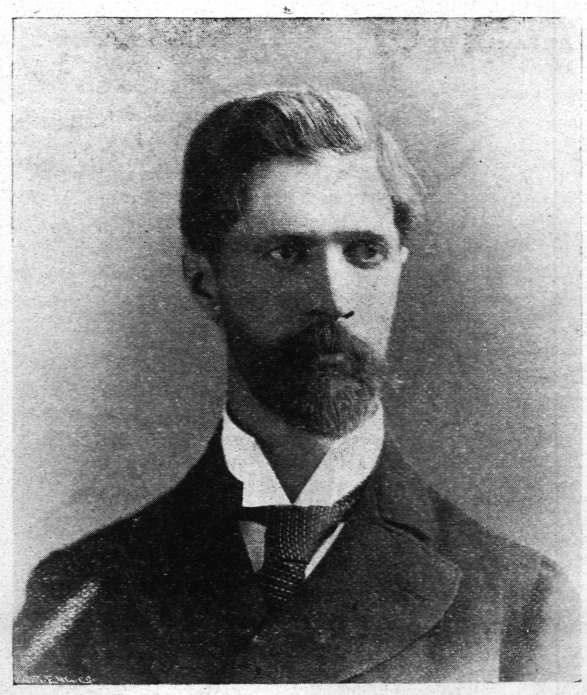
We understand better today, than ever before that, "The hand that rocks the cradle rules the world," and to that end are we training our young women.

We have educated our girls for every profession under the sun but the highest one she can fill, that of being a home-maker. You would not dream of employing a lawyer to plead a line fence case, who had not received a thorough training in law; nor a doctor to prescribe for a sick friend who had not demonstrated the fact that he knew his business, and in whom you had confidence; nor even a minister of the gospel who had not a thorough knowledge of Biblical lore; yet our young women take up a far more important calling than the lawyer, the doctor or the minister with no training whatever. Is it any wonder we have the number of divorces and miserable homes in our country today?

The Michigan Agricultural College realized this fact when it added a Women's Department to the College curiculum last fall. It realized that our girls need special training for their work, as much as do their brothers. It realized that the kitchen is to the home what the foundation is to the house. Unless good and intelligent work is done on the foundation, the house is very insecure; and unless the kitchen is rightly and intelligently conducted the family must suffer in health, mind, and morals. We are beginning at the wrong end of the temperance question. If the drunkards of today, had good comfortable homes (I don't mean the homes of luxury, for there is often more comfort in the cabin than in the palace), and good nutritious food, well cooked and well served, there would be but little need of Keeley cures and temperance societies.

Since the fallacy of the assumption that all women are born with an intuitive knowledge of everything that pertains to housekeeping has been demonstrated, it seems clear that a thorough education for the housekeeper should be demanded. Kate Field, in a talk before an eastern graduating class not long before her death, said: "Taking it for granted that many of you do not feel called upon to startle the world with the coruscations of genius, that you are going home to be a comfort to fond parents, let me ask whether you are good housekeepers. Can you cook? If not, in the name of common sense, of the man you propose to marry, of the friends who may visit you, of an innocent posterity, don't rest until you have learned the business of almost every woman's life, which is to keep house well and economically. The woman who can't turn her servants

(Continued on page seven.)



PROF. C. L. WEIL.

The M. A. C. Mechanical Engineering Course.

CHARLES L. WEIL.
(Professor of Mechanical Engineering, and Director of the Mechanical Department.)

"The engineer is he, who by art and science makes the mechanical properties of matter serve the ends of man."—*Rankine.*

A properly qualified engineer must be skilled in both the science and the art of some branch of construction.

MECHANICAL ENGINEERING. The peculiar province of the mechanical engineer lies in the designing, construction, and testing of all forms of machinery.

COURSE AT M. A. C. The course in Mechanical Engineering at M. A. C. is arranged to give the student a thorough training in the elementary work relating to the science and arts upon which the profession is based. Particular emphasis is placed upon the work in mathematics, the study of theoretical principles underlying the sciences of machine and mechanics, and the practical construction of machines. The word machine is here used in a broad sense.

CONDUCTED IN SEVERAL DEPARTMENTS. The work of the course is carried on mainly in the departments of engineering, mathematics and physics. The various engineering professions are so closely allied, that some knowledge of the different branches is desirable on the part of the student whatever his specialty may be, consequently M. A. C. students of mechanical engineering are required to undertake brief courses in civil and electrical engineering. Work is also required of the engineering students in chemistry, English literature, and modern languages. Among the more important subjects taught in the department proper may be mentioned: Steam engine, steam boilers, valve gears, machine design, strength of materials, kinematics, thermodynamics, and shop-work.

MODERN METHODS ARE EMPLOYED. In the methods of instruction adopted at M. A. C. special provision is made to economize the student's time, and to present to the student a broad view of engineering principles. Thoroughness in work performed is, however, rigorously insisted upon. In order to obtain the results desired a careful study has been made by the teaching corps of the methods of instruction employed in the leading technical schools of this country.

AN EXCELLENT EQUIPMENT IS PROVIDED. Visitors to M. A. C. are oftentimes surprised at the completeness and excellence of the equipment provided for teaching students engineering. The machine, wood, and blacksmith shops and the foundry are thoroughly equipped for the teaching of machine-tool work, pattern-making, forging, and founding. The shops are in charge of practical mechanics of large experience. The equipment for testing purposes includes machines for testing materials, indicators, gauge testing apparatus, various kinds of dynamometers, etc.

At the college power house are located engines, boilers, pumps and dynamos, and this apparatus, combined with the engines and dynamos at the mechanical and electrical laboratories, affords excellent opportunities for practical study and original investigation.

PRACTICAL RESULTS ARE OBTAINED. While it is expected that a considerable amount of experience will be required on the part of the engineering graduate in order that he may become a thoroughly competent engineer, still it is found possible for the student to accomplish, during his college course, results of great practical value, and at M. A. C. the students have constructed engine lathes, wood-working lathes, engines and dynamos, also many small tools. The apparatus constructed by the students is of sufficiently high grade to form a part of the working equipment. The students have also conducted a number of engineering tests of importance; of these perhaps the most notable was the test made of the engine and boilers of the freight steamer Rappahannock. The test was conducted during the maiden trip of the steamer from Detroit to Buffalo, and the results were published in the "Marine Review."

MODERATE ADMISSION REQUIREMENTS AND LOW COST. The requirements for admission to the college are not severe, and the cost of board and room rent is very low, consequently an excellent opportunity is afforded able young men of limited means, who are obliged to minimize their period of study and expenses, to prepare for practical life.

GRADUATES FIND PAYING POSITIONS. Inspection of the catalog of graduates of the college shows that a majority of the students trained in the mechanical course at M. A. C. are now holding positions of importance along the line of their chosen work. The number of graduates from the mechanical course is necessarily limited because, as stated by Dr. Thurston, "engineering schools usually offer more difficult and engrossing courses of instruction than the older institutions of learning, and exact severe work of their students; the general result being the elimination of those unfitted for the work and final entrance into the profession of but a small proportion of aspirants entering the schools."

YOUNG MEN OF MICHIGAN SHOULD NOT BE GUIDED BY A NAME ALONE. It is particularly desired on the part of our authorities that the young men of Michigan investigate with care the opportunities for higher education placed at their disposal at M. A. C. The college, originally founded as a school of *agriculture*, became also, through the acceptance of United States grants a school of *mechanic arts*, The work in mechanic arts has been advanced along the lines commonly adopted by the various "agricultural and mechanical" colleges throughout the country living under similar grants, it being found most expedient to give instruction in both the elements of the sciences and arts underlying the professions of engineering.

A LEADING COLLEGE IN AGRICULTURAL EDUCATION. Michigan Agricultural College has for a long period been recognized as standing at the front in agricultural education, and her graduates are found in positions of trust and honor throughout the world. This result is due, in no small degree, to the untiring efforts of unselfish men devoted to the cause of higher education and the interests of Michigan.

AIMS HIGH IN MECHANICAL ENGINEERING WORK. It is the aim of the authorities at M. A. C. that the same earnestness that has pervaded the work of agricultural education shall pervade in the work of the mechanical course, and it is intended that the results reached shall equal those obtained at any school conducting work in the mechanic arts and the elements of engineering under similar conditions.

Students' Societies.

H. E. VAN NORMAN, '97.

Text-books, lectures, laboratory, and field do not make the sum total of College training; nor do football, baseball and College pranks afford the only recreation; or faculty receptions and neighborly calls give the only social diversion for the student at M. A. C. One fraternity and six societies are important factors in the sphere of College life and work. Unlike the societies of any other College, they are a happy combination of the literary society for literary training and parliamentary practice; and the fraternity for social diversion and good fellowship.

Organized as literary societies, they hold weekly meetings at which well prepared programs are delivered; essays, orations, debates, soliloquies, poems, etc., furnish ample variety, and develop diversity of talent. This society work constitutes nearly half of the literary work in our College course, which is a scientific one. Each member is expected to respond to roll call by a quotation from a designated author, and to appear in his best "bib and tucker" and his "Sunday manners."

Extemporaneous speaking, in which the speaker is required to remain on the floor his alloted time, affords an invaluable training. This feature of society work is more often referred to with commendation than any other by visiting alumni.

The business meetings are private, conducted strictly according to parliamentary rules. The work on various committees affords valuable experience in practical business.

With the exception of the ladies' society, each has its suite of rooms furnished for entertainment and comfort. Each has its piano. The ladies have had to depend on the other societies for a meeting place, but will be comfortably situated in rooms of their own this fall.

To the society rooms the members come during the week to enjoy a game of chess, checkers, etc., to "swap lies," and enjoy a College song. On the parlor tables of some societies are to be found magazines not in the College reading room.

"Faculty evenings," "ladies' evening," and a formal hop two or three times a year, supplemented by occasional informal affairs, afford the opportunity for social intercourse and recreation, which all students need and must have to a reasonable extent.

Those unacquainted with our environment cannot appreciate the importance of society membership to the young man coming a stranger among strangers. The society whose invitation to become a member he accepts, has a large influence in determining who his close friends will be, the character of his work, and sometimes the length of his stay at College. Many a man would have given up, or failed to return another year, but for the encouragement, inspiration and helping hands of fellow members. Few know of the odd jobs thrown in the way of the man working his own way, of kindly care in sickness, and restraint in times of temptation.

While the ultimate aim of all societies is the same, they vary in degree of success, methods and minor details; each has an individuality and a character recognized by its fellows. Each has good men and true, each its faults and idiosyncrasies. In no other group of organizations does each individual stand so wholly on his own intrinsic worth, and so little on fame, fortune or fashion of dress, as in the student societies of M. A. C.

At the College.

Mrs. W. J. Beal returned from Chicago Saturday.

Mr. Chace Newman visited Portland Tuesday, June 1.

Miss Bellis visited her home in Ionia Friday and Saturday.

Mrs. Robb and Mrs. Ellsworth visited the campus last Saturday.

Miss Nellie Mayo is visiting friends at the College for a few days.

Thos. Sattler, a summer student here in '94, was at the College Saturday.

Pres. Snyder received a visit from his uncle, Mr. Hugh Braham, last week.

Mr. K. L. Butterfield made a flying visit to Grand Rapids, Tuesday, June 1.

Mr. George Richmond entertained his mother at the College last Saturday.

Miss Amy Vaughn visited her parents in Ionia during the field day intermission.

Prof. Wheeler was the guest of the Kent Scientific society Friday and Saturday of last week.

W. C. Parks of '00, greeted his friends as a convalescent from measles Saturday morning.

Prof. Smith delivered a lecture on "Dairy Farming" before the Felt's Grange last Saturday.

The Circle of King's Daughters meets with Mrs. Weil next Wednesday afternoon. Text, "Wisdom,"

Mr. L. D. Watkins of Manchester made his daughter, Miss Watkins, a brief visit last Thursday.

The friends of Mr. H. Rupert will be pleased to learn that he has found employment in Plymouth, Ind.

Mr. Vadim Sobenikoff started for his home in Siberia by way of Washington, Philadelphia and Antwerp, last Saturday evening.

Prof. Holdsworth, accompanied by his sister from Traverse City, leaves the College next Thursday morning for a summer tour through Europe.

Prof. Taft left the College, Wednesday, to investigate peach tree diseases in western Michigan and to speak at a meeting of the West Michigan Fruit Growers' association in Holland.

An extensive experiment is being made on the farm, of utility of the low pea as a soil renovator. Its use is quite general in the south for this purpose and it is hoped to be found useful in the north.

Sec'y I. H. Butterfield visited Delhi mills last Wednesday to attend the sale of Jersey cattle by W. E. Boyden.

W. E. Palmer, '92, made the College a short visit, Wednesday. He expects to attend the commencement exercises.

The joint committees of the faculty and experiment station consisting of Profs. Taft, Smith and Barrows of the Station, and Dr. Beal and Woodworth of the College, appointed to prepare bulletins for use in the public schools as nature studies, have received gratifying encouragement from the Department of Public Instruction.

The senior class by invitation attended the literary meeting of the Hesperian society, Saturday evening, May 29. The following program was presented: A story, Mr. L. Christenson; an original dialogue, Messrs. Avery and Parker; reproduction of Silas Marner, W. D. Hurd; select reading, J. D. McLouth; critic's report, Mr. D. J. Hale.

The M. A. C. Record.

PUBLISHED WEEKLY BY THE

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ASSISTED BY THE STUDENTS.

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For various reasons THE M. A. C. RECORD is occasionally sent to those who have not subscribed for the paper. Such persons need have no hesitation about taking the paper from the postoffice, for no charge will be made for it. The only way, however, to secure the RECORD regularly is to subscribe.

Official Directory.

PREACHING SERVICE — Sunday afternoons at 2:30 in the Chapel.

Y. M. C. A.—Regular meetings Sunday evenings at 7:30 and Thursday evenings at 6:30. C W. Loomis, President. E. M. Hunt, Cor. Secretary.

Y. W. C. A.—Weekly meetings for all ladies on the campus, Tuesday evenings at 8:00, in Abbot Hall. Sunday meetings with the Y. M. C. A. Miss Clara J. Stocoum, President. Miss Ella Phelps, Cor. Secretary.

KING'S DAUGHTERS—Meet alternate Wednesdays. Mrs. J. L. Snyder, President. Mrs. W. Babcock, Secretary.

NATURAL HISTORY SOCIETY — Meets second Friday of each month in the Chapel at 7:00 p. m. H. C. Skeels, President. W. R. Kedzie, Secretary.

BOTANICAL CLUB — Meets Monday evenings at 6:30 in the Botanical Laboratory. Thos. Gunson, President. W. R. Kedzie, Secretary.

SHAKESPEARE CLUB—Meets Wednesday evenings at 7:30. Dr. Howard Edwards, President.

COLUMBIAN LITERARY SOCIETY—Meetings every Saturday evening at 7:30, Middle Ward, Wells Hall. S. H. Fulton, President. H. Caramanian, Secretary.

ECLECTIC SOCIETY — Meetings every Saturday evening at 7:30, Fourth Floor, Williams Hall. C. D. Butterfield, President. W. A. Bartholomew, Secretary.

FERONIAN SOCIETY — Meetings every Friday afternoon at 1:00, West Ward, Wells Hall. Amy Vaughn, President. Katherine McCurdy, Secretary.

HESPERIAN SOCIETY — Meetings every Saturday evening at 7:30, West Ward, Wells Hall. C. B. Laitner, President. L. E. Sage, Secretary.

OLYMPIC SOCIETY—Meetings every Saturday evening at 7;30, Fourth Floor, Williams Hall. Elwood Shaw, President. W. K. Brainerd, Secretary.

PHI DELTA THETA FRATERNITY — Meetings every Friday evening at 7:30, East Ward, Wells Hall. R. W. Clark, President. A. B. Krentel, Secretary.

UNION LITERARY SOCIETY — Meetings every Saturday evening at 7:30, U. L. S. Hall. L. S. Munson, President. G. N. Gould, Secretary.

TAU BETA PI FRATERNITY — Meetings on alternate Thursday evenings, Tower Room, Mechanical Laboratory. G. A. Parker, President. E. H. Sedgwick, Secretary.

CLUB BOARDING ASSOCIATION — I. L. Simmons, President. H. A. Dibble, Secretary.

M. A. C. ATHLETIC ASSOCIATION—C. B. Laitner President. G. B. Wells, Secretary.

A Good Education Pays.

DR. W. J. BEAL, PROFESSOR OF BOTANY.

Some eighteen or twenty years ago, Dr. Hayes, president of a college in Pennsylvania, delivered the commencement address here and took as the title of his address words like those above. He gave results of extensive inquiries concerning graduates of many colleges in various parts of the United States, and in a great many cases showed that a good education pays in dollars and cents, as well as in other respects. It makes a man more capable; it increases his chances for securing remunerative work; he usually commands better places at better wages than the man with little education. His chances for good positions of honor and trust in society are vastly increased.

People of an economic turn of mind often object to investing money to enable their children to secure a good education, besides deploring the loss of four to six years of valuable time in the prime of life required for such a course. He showed that in nearly all cases the money required to pay expenses for such a course was an excellent investment, soon returned by way of better wages for the sons and daughters. He showed also that the time spent in acquiring an education was not lost—that in fifteen or twenty years the educated person not only gains or makes up the "lost time," but gains as much more, as he need not plod along so slowly in his chosen vocation. Education strengthens his mind, enables him in any business to quickly learn from persons or books and gain by the experience of others. By a thorough education his life is really prolonged, because he accomplishes and enjoys so much more.

Some months ago R. Morrill and E. C. Reed, respectively president and secretary of the State Horticultural society, chanced to dine with a young graduate (not then 21 years old) of the Agricultural College. They talked freely, the young man especially speaking of his delight in managing the farm for the two years previous—speaking of his plans, the profits, etc.

After separating, Mr. Morrill said he was pleased with the way young C. talked. His education will be of great and lasting benefit to him in enabling him to make a success in life in every sense of the word. Now at his age, he has the advantage of many a man who had little education, and he starts in with his work at a place where by practical experience alone he would be, after forty years of his life. Education of the right kind pays from a business standpoint, as well as for other reasons.

College Extension.

KENYON L. BUTTERFIELD, SUPERINTENDENT OF FARMERS' INSTITUTES.

There is an idea prevalent in some quarters that the chief work performed by the Agricultural College is teaching such people as may come to the College for a longer or shorter course of study. Indeed there seem to be some who believe that this is the sole function of the College. But in spite of this opinion of the fact and the theory, the truth is that the Agricultural College does, and legitimately too, a vast amount of work which has nothing to do immediately with the students within its walls, but which is designed primarily for the benefit of those who cannot, or will not, come to the College as students. This work of extending the College, of carrying its work out to the masses of the people, may very properly be called college extension.

The reason for such work is self-evident. If the College contained 2,000 students, all taking the agricultural course, and graduated 300 or 400 a year, all of whom went back onto Michigan farms; and if this were the only means of agricultural education, manifestly it would take several generations to properly educate the farmers of the state. But no educated man can live his best life without diffusing his knowledge and training; neither can an institution properly do its work without diffusing a vast amount of valuable influence and information. This is college extension. There is the same excuse for it that there is for the work of educating students. Indeed, there is even more, because when we educate a student in a college we, in some sense, educate the exceptional person,—all of which is eminently proper. When we carry results of college work to the masses of the people, we thus have even stronger grounds for expecting support to the work.

Although the extension work at this College is not, as yet, thoroughly organized and systematized, it is large in amount and great in value. Let us notice a few of the methods used to disseminate agricultural information among the farmers. Perhaps the chief reliance is placed upon the Experiment Station bulletins, for 20,000 of these are sent out about once a month, going into every corner of the state and distributing valuable information, without expense, to the recipients. These bulletins are becoming more and more popular every year, and have been a great influence in making the sentiment of the farmers favorable to the College.

The next method is by the individual correspondence of the professors. Each week hundreds of letters are answered by the professors of the College. Most of these letters contain answers to specific questions about things that are bothering the farmer and fruit grower, and are upon all manner of subjects. These are answered personally and thoroughly. Probably few realize the immense amount of labor involved in this correspondence and the valuable benefits thereby conferred upon the people of the state.

The next phase of extension work which proceeds from this College is the course of reading known as the "Farm Home Reading Circle." Under this, courses of reading on farm, stock and fruit topics are laid out and directed by the College. There are some 300 or 400 readers in the state who are pursuing these courses, and the plan is destined to still greater enlargement.

One of the oldest and most successful methods of carrying the College to the people is through the Farmers' Institutes. The institutes have the advantage over the bulletins and the reading course in that they bring into the midst of the farmers live men and women. The personal element thus adds its force to whatever of fact and experience may be presented.

We believe that this work of extending the labors of the College is the most popular of any movement in connection with the College, and is destined to an increasing growth and usefulness.

Object of Military Instruction in Colleges.

LIEUT. H. H. BANDHOLTZ, PROFESSOR OF MILITARY SCIENCE.

When the civil war broke out the North was seriously handicapped, not from lack of men, but from lack of officers. Material there was in abundance, and likewise ability, but experienced officers were acquired only after vast expenditures of blood and money. A large regular army is contrary to our customs and to our ideas of economy. In order, therefore, to have some reserve to draw upon, congress has encouraged the detailing of officers of the regular establishment as professors of military science and tactics at various nstitutions throughout the land. The umber was at first limited to twenty-ve, but now 100 officers are detached from their regiments on such duty.

In the case of the Agricultural Colleges military instruction is obligatory. Although the instruction is not required to be given by a regular army officer, yet all the institutions of this character have been glad to avail themselves of this privilege, as the officer's salary is paid by the government, and about $5,000 worth of ordnance and other stores and equipments are furnished in addition to the officer's services.

When an officer is detailed at a college he is required to have at least three hours duty per week in his department; two hours for practical work and one hour for theoretical. The former includes everything in the infantry drill regulations through the school of the battalion, and including ceremonies; mechanical manoeuvers and manual of the piece in artillery drill regulations; advance guard, outpost duty, military signaling, etc. The theoretical work includes drill regulations, military law, field engineering, minor tactics, etc.

The object of all this is to teach our youth habits of neatness, regularity, promptness, obedience, and discipline; to encourage love for the flag and country; and, in an emergency, to give us a reserve force of intelligent and educated men who would be qualified to officer our armies. At the beginning of the "late unpleasantness" all sorts of men were given exalted military rank with attendant responsibilities. Many were equal to the emergency, but a large majority were dropped by the weeding-out process, until the survival of the fittest gave us what we should have had in the beginning.

College students receiving this limited military education seldom realize of what inestimable value it would be to them in case of war. No dark clouds at present obscure our horizon, but wars grow out of trifling misunderstandings and will continue to occur as long as men are human beings.

A man may need a revolver but once in his lifetime, but when he does need it he needs it badly. As we have no enforced military duty as in European countries, it is the duty of all patriotic young Americans to prepare themselves as thoroughly as possible for any of our beloved country's emergencies. Although it is impossible to give thorough and technical military instruction at this institution in the limited time allowed, yet any student can lay such a foundation as will ensure his wearing shoulder-straps should we be so unfortunate as to become involved in war, and which will enable him to serve his country to the full extent of his ability.

The Experiment Station.

PROF. C. D. SMITH, DIRECTOR.

By its organic law the function of the Experiment Station is made threefold; first, to investigate the great principles of nature that underlie all agricultural operations and discover new manifestations and fresh applications of these laws; second, to carry on such experiments and tests as variety tests, feeding tests of new forage plants or new combinations of old ones, chemical examination of fertilizers, studies of fungous and insect enemies of crops, or other experiments of local or temporary value as are indicated by the demands of the season; and third, to disseminate information that is of value to the farming community of the state in which the station is located.

The field of the station is therefore very broad and its possibilities unlimited. The general government, recognizing the fact that the people as a whole must be fed and clothed by the products of the farm, has deemed it no class legislation to appropriate money to foster and support an experiment station in each state.

As a matter of necessity, in consideration of the rapid growth of the country and the changes taking place in agricultural methods, the energies of the

station must be expended largely, at the present time, in experiments aimed at results of immediate though local practical value. Before abstruse questions of general principles involving long years of patient investigation may safely be undertaken, the farming community itself must be educated to a point where it can appreciate and understand the results of such work. One of the misfortunes of a partly educated man is that he deems all knowledge very far beyond the limits of his own experience as useless. It is the evident duty, therefore, of the experiment station to keep in touch with the average intelligence of the agriculturists by performing experiments which they can understand and apply at once in their regular business.

It has been the aim of the Michigan Experiment Station while carrying on certain series of experiments from which no results can be expected in many years but which will, therefore, be of the more value, to undertake annually work which will give immediate results of practical value to the readers of the bulletins. While these lines of inquiry have been so numerous and so helpful that to name but a few of them is unjust to the others, still I may be allowed to refer, by way of illustration, to such as occur to me without an examination of the records. The carefully conducted comparison of the different methods and materials for fattening lambs has resulted in the saving of many thousand dollars to the sheep feeders in southern Michigan; the study of the treatment of small grains for the prevention of smut saved to one county in this state more money than it has paid in state taxes for a series of years; the introduction of new varieties of wheat and the demonstration of the value of certain older varieties have given the farmers larger crops and saved them from the unjust discrimination of millers; the variety tests of small fruits, tree fruits, and of vegetables, have performed a service for the fruit growers and vegetable gardeners of the state which is incalculable and which nothing else could replace; the investigations on the materials and methods of spraying, the results of which have been published, have led to the adoption by the fruit growers of protective measures that have saved the orchards and made reasonable crops possible where otherwise the destruction of the orchard would have been inevitable; the analyses of fertilizers have driven frauds from the state and compelled the sale of commercial fertilizers on their merits.

Through the Experiment Station the College offers instruction to the persons actually engaged in farming. The station thus becomes in one sense part of the College extension work.

Stock Judging and Stock Feeding.

HERBERT W. MUMFORD, ASSISTANT PROFESSOR OF AGRICULTURE.

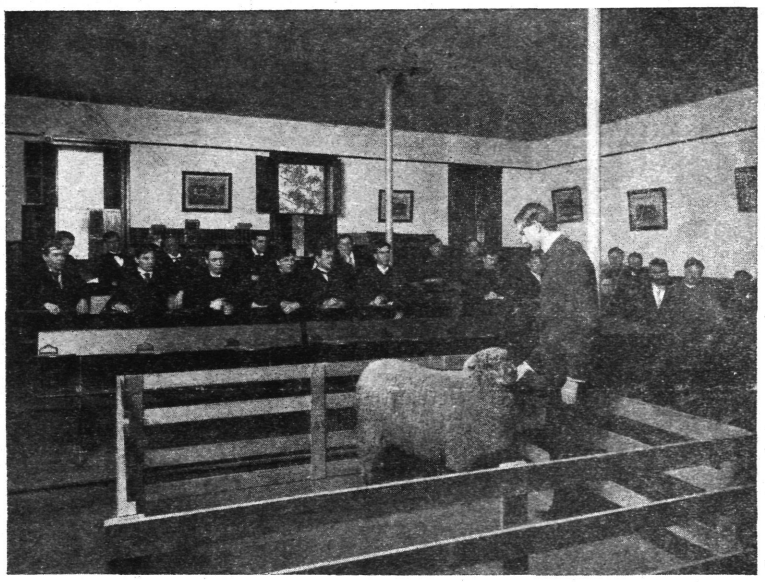
Intelligent farmers are not unlike other successful business men. Just as prudent manufacturers turn their attention to the production of those articles and materials which are likely to be wanted either by the general public or some certain class of individuals, so farmers promptly direct their attention to, and interest themselves in that branch of agriculture which promises the most profitable returns.

To do this successfully requires constant watchfulness and study. A thorough knowledge of markets, a perfect familiarity with all local conditions, necessary equipment, and amount of capital necessary to carry on the different industries of the farm to the best possible advantage.

It is an easy thing to say that the average farmer does not have this knowledge, nor does he seem concerned about obtaining it, and yet I venture to say that should you place the average individual who criticises the farmer for not keeping himself properly informed, in the same circumstances, with the same conditions which surround the majority of our farmers, by far the largest per cent would fail in this regard as does the farmer, for he would find himself at once in the midst of a multitude of difficulties and annoyances which he may have previously heard about, but never before fully realized.

One of the commonest criticisms which popular sentiment has made concerning the policy pursued by a large number of our farmers in their farm operations and management has been that they have been too conservative, or to use a more familiar expression, that they have got into ruts made by their fathers and grandfathers, and out of which they are unable, or at least unwilling, to get.

While this may be true of many



CLASS IN STOCK JUDGING.

men, we are still strongly convinced that great losses are continually coming to the farmer from a lack of constancy of purpose. Farmers are too easily inveigled into enterprises which, at the outset, promise extravagant profits but which soon fail to yield even a small profit, because many have rushed blindly into the same enterprise.

For the past few years it has not been possible to realize large profits from keeping sheep and beef cattle. As a consequence a large number of farmers have become discouraged and have disposed of nearly all if not quite all animals belonging to these classes of live stock. As a result we find that now, while we are on the eve of a revival of these industries of the farm, a majority of our farmers must be deprived either altogether of the profits accruing from these industries by not investing in them, or in part by having to obtain foundation stock at advanced prices.

It seems to be the prevailing idea among those who have studied present conditions that, for a few years at least, we shall witness renewed activity in nearly all branches of the live stock business. Add to this the fact of the scarcity of good stock in the country and we place the farmer at once in a position, where he must either display good judgment in the selection of stock or become a heavy loser in the years to come.

Unless present indications are misleading there is a general awakening among farmers, and especially among the younger farmers,—a thirst for more knowledge as to the best methods of selecting stock.

Naturally before a desire for such knowledge would come to the individual they must become thoroughly convinced of the great differences in live stock, and this too from the practical, economic standpoint of profit or loss when kept on the average farm.

The gilt edge of fashionable pedigrees has been worn off and the really valuable part of improved stock remains to make live stock husbandry not only a more pleasant feature of farming, because it introduces the possibility, I might well say, the necessity of the farmer putting more intelligence and skill into his work, but also a more profitable factor than is, or ever was possible with stock lacking in individual quality.

A thorough knowledge of the underlying principles of stock judging and stock feeding are year by year considered more and more important. It is not to be wondered that practical men have severely criticised the clumsy, unmethodical work of some socalled scientists of the past. But strong men with well trained intellects have been giving the best efforts of their lives to the development of these subjects. They have brought into requisition not only their well disciplined minds but also wide and varied practical experiences until these two, as well as nearly all branches of agricultural instruction, are becoming more and more tangible from a pedagogical standpoint.

Cost of the College.

What it has cost and is costing the State.

I. H. BUTTERFIELD, SECRETARY OF THE COLLEGE.

The first appropriation for the College was made by the legislature of 1855, the amount being $56,320, the minimum price of 22 sections of "salt spring lands."

This was used for the purchase of site and the erection of buildings preparatory to the opening of the College. The legislature of 1857 appropriated $40,000, for current expense. Each successive legislature since that time has made an appropriation the total to December 31, 1896, being $943,375.41. More than half of this has been used for the erection of buildings and improvements of the farm and grounds. In addition to the salt spring lands heretofore mentioned, the legislature of 1861 donated to the College several tracts of swamp lands located in the townships of Lansing and Meridian in Ingham county, and in the townships of Bath and Dewitt, Clinton county. From sale of these lands there has been received to date $44,925.84—a total from the State of $921,997.18.

The inventory of property belonging to the College June 30, 1896, amounts to $492,126.91; deducting this from the total cost leaves $451,248.40; as the net cost to the State for forty years, or a little more than $11,000 per year.

In 1862 congress donated to the State 240,000 acres of public land, the proceeds from the sale of which were to be used for the maintenance of the Agricultural College. The legislature accepted these lands and provided that the proceeds from their sale should be paid into the State treasury and placed in the general fund, but the amount placed to the credit of the Agricultural College fund on the books of the Auditor General, and annual interest computed thereon at the rate of seven per cent, to be paid to the State Board of Agriculture for the support of the Agricultural College.

But 235,682.46 acres of lands were located. Of these up to June 30, 1896, 135,059.42 acres had been sold (after deducting lands forfeited for non-payment), leaving still vacant 99,872.455 acres. The purchase price of lands sold amounts to $673,303.34. Of this there has been paid $547,279.10 to June 30, 1896. The total interest received from this fund including the interest on part paid lands is $660,460.96.

In 1887 congress passed what is called the Hatch experiment station act, granting to each state annually $15,000 to be used at the agricultural colleges for experimental work. From this source has been received to date $150,000. This is used for experiment entirely and not for instruction.

In 1890 congress passed what is called the second Morrill act, donating to each state from the sale of public lands for the support of agricultural colleges an amount beginning with $15,000 the first year and increasing by $1,000 per annum until it reached the amount of $25,000. The College has received from this source to date $146,000. This fund as well as the interest from the land grant fund can not be used for the erection, repair, or preservation of buildings, but only for apparatus and instruction.

The total amount received from appropriations by congressional land grant interest to June 30, 1896, Hatch experiment station, and second Morrill appropriation to June 30, 1897, is $812,423.71. Add to this the total appropriated by the legislature and we have a grand total of $1,883,880.49. Deducting from this the amount of property on hand as per inventory, leaves the net cost of the College to date $1,391,753.58. This expenditure covers forty years and includes $150,000 used for experiment work.

It will be seen that the College is now costing the State very little. It can not cost it much less, since the State must keep up the buildings and permanent improvements. If the remaining 99,872 acres of land could be sold it would give an abundant revenue for current expense for some time to come. The expenditures of the College must increase somewhat with its development.

About $10,000 per annum is received from students' fees, farm and garden receipts. The total expenditures exclusive of experiment station are

about $75,000 per annum. This does not include repairs of buildings, the cost of which is covered by special appropriation.

News from Graduates and Students.

THEY ARE COMING TO THE ALUMNI REUNION.

C. I. Goodwin, '77, Ionia, expects to come to the reunion.

J. W. O'Bannon, '89, is practicing law in Louisville, Ky.

Harry Wilcox, '79, with his family, will attend the alumni reunion.

Prof. James Troop, '78, La Fayette, Ind., will be here on Thursday of next week.

W. K. Prudden, '78, will run out from the city to attend the alumni reunion.

Dr. E. D. Millis, '82, Webberville, will be present at commencement, if possible.

C. H. Briggs, '96, has written that he will attend the commencement festivities next week.

Prof. W. C. Latta, '77, La Fayette, Ind., will begin with the society reunions and remain until Friday noon.

J. D. Hill, '84, Montpelier, O., who has not been here since '88, will be on hand the evening of the society reunions.

F. E. Skeels, '78, is in the vicinity of Kalkaska trying to keep the hemlock trees on College lands from shedding their bark.

H. W. Lawson, '95, declines a re-election by the Lawton school board as superintendent of schools, and expects to attend the University of Chicago next year.

C. C. Stocum, with '98, visited at the College several times last week while in Lansing placing agents for a fuel saver, for which he has the general agency in 23 states.

Among the former M. A. C. students at field day were: C. H. Alvord, '95; C. A. Jewell, '96; A. R. Rogers, with '97; B. A. Bowditch, with '96; H. B. Gunnison and F. B. Ainger, with '98.

Even the Record is not infallible. W. G. Smith, '93, writes "that the "acute symptoms" of approaching matrimony detected in him a few weeks ago by a correspondent of this paper, existed only in the imagination of our informant and not elsewhere. "I am still enjoying single blessedness, but wish to thank those who have sent letters of congratulations to me."

A recent letter from Mr. M. G. Kains, '95, to a friend at the College contains the following interesting news: "Last week I had a very pleasant surprise. I received word that I had been elected a member of the Sigma Xi. Society of Cornell University, an honor I had hoped for but had feared there was no hope of getting. It is of the same nature as the Beta Pi, but is a scientific society. Only seniors and graduates are eligible. I regret that I shall be unable to be present at commencement.

L. A. Bregger, '88, Chicago, says he and John W. O'Bannon, '89, who is visiting him, will attend the alumni reunion together. "We speak for a hook apiece to hang up on at night, for we both have a constitutional prejudice against going to any Lansing hotel during commencement and reunion festivities. Time, and especially time at M. A. C., is scarce and too precious to waste off the grounds. Give us a place and an armful of hay or, as I say, a hook apiece in a closet and we're all 'hunky-dory.'"

ATHLETICS

Field Day.

THE ANNUAL MEET OF THE M. I. A. A., AT HILLSDALE A GRAND SUCCESS. M. A. C. AGAIN IN THE LEAD—SCORES MORE POINTS THAN ANY OTHER COLLEGE. WELLS WINS THE ALL-AROUND DIAMOND MEDAL.

A year ago a disheartened lot of students returned from field day at Albion with three gold and three silver medals; this year a smaller number of students returned from Hillsdale with ten first medals, including the magnificent all-around diamond medal, and five second medals. When our special train pulled into the depot at Lansing we were reminded of the old days in '90, '91, '92 and '93—the days of Burnett and Poss, when M. A. C. used to return with the lion's share of glory. The whole College was there to greet our victorious representatives, whom they mounted upon their shoulders and, amid the blare of tin horns and the glare of fireworks, carried up and down the streets until fairly exhausted. Then taking cars for the College, the overjoyed students kept up their celebration until after midnight.

It was so entirely unexpected; so little had been hoped for that only thirty-one, including the ball team and athletes, took the train for Hillsdale Thursday evening. Thirteen more came down Friday morning and a few more Saturday morning—many more now wish they had gone. Then those of us who went down Thursday evening had our spirits much depressed when we reached Albion and were informed by Albion students that they had everything cinched, that we might just as well go back home if we were going down with the hope of getting any medals. A calm post consideration of the situation forces us to admit that they did have better wind than we had, but we evened up in part by scoring more points that will stand in the M. I. A. A. records.

Our boys were remarkably successful in getting points in every event they entered. Wells went for the purpose of getting the all-around medal if possible. He got it with 14 points to spare—32 points to 18 for his most dangerous opponent. He also won six other beautiful medals, three first and three seconds. Holdsworth thought he would see what he could do in the long runs. Two fine gold medals in his possession show that he won both events. Both of these men are freshmen of good habits, and are good students. They will be in evidence another year.

And so we might go on through the list of men who represented us so well. They did not noise abroad their skill but in a quiet, gentlemanly manner won medals. Too much credit can not be given our trainer, Henry Keep, for his work with the boys. It is safe to say that he had no better material than was in College last year, but he gave the boys the finishing touches that made them winners. A good athlete himself, and a good judge of men, he inspired confidence and told every man what he might expect to accomplish. Not only that, he showed them how to care for themselves while at field day, gave personal attention to their comfort, and encouraged them in every way. Lieut. Bandholtz made no mistake when he secured the services of Henry Keep.

FRIDAY.

Friday forenoon was cold and dark, the track was muddy and most of the records were below the usual standard. In the 100 yard dash, however, the M. I. A. A. record was lowered 1-5 of a second. The weather in the afternoon was much better and a large crowd witnessed the sports. Following is a summary of events for the day:

220 yard dash—First, Nufer, Albion; second, Wells, M. A. C.; third Terwilliger, Olivet. Time, 24 seconds.

Pole vault—First, Wells, M. A. C.; second, Brannack, Normal. Height, 8 feet 7 inches.

100 yard dash—First, Nufer, Albion; second, Wells, M. A. C.; third, Terwilliger, Olivet. Time, 10 1-5 seconds.

16 pound hammer throw—First, Williams, M. A. C.; second, Boyes, Albion; third, Betts, Kalamazoo. Distance, 83 feet 7 inches.

120 yard hurdle—First, Wells, M. A. C.; second, Whipple, Hillsdale; third, Hayne, Kalamazoo. Time, 18 4-5 seconds.

Standing broad jump—First, Krentel, M. A. C.; second, Dunster, Albion; third, Whipple, Hillsdale. Distance, 9 feet 8¼ inches.

One mile walk—First, Boyes, Albion; second, North, Olivet. Time, 8 minutes 35 seconds.

Putting 16 pound shot—First, Jacobs, Albion; second, Smith, Kalamazoo; third, Williams, M. A. C. Distance, 34 feet.

Quarter-mile bicycle—First, Bartholomew, Albion; second, Peck, Albion; third, Bailey, M. A. C. Time, 36 3-5 seconds.

Running broad jump—First, Hayne, Kalamazoo; second, Whitney, Hillsdale; third, Wells, M. A. C. Distance, 19 feet 10½ inches.

440 yard run—First, Stroebe, Kalamazoo; second, Shipp, Albion; third, Kirkwood, Kalamazoo. Time, 51 2-5 seconds.

One mile tandem—First, Peck and Clark, Albion; second, Westnedge and Bullock, Kalamazoo. Time, 2 minutes 35 seconds.

220 yard hurdle—First, Laitner, M. A. C.; second, Wells, M. A. C.; third, Dodge, Kalamazoo. Time, 28 seconds.

Friday noon the directors held a meeting at which it was decided that the baseball cup be returned to Brackett for one year. This decision was probably the best compromise that could be reached. If the case with the rules governing the same had been submitted to any impartial judge for decision, both Olivet and Kalamazoo would have been thrown out, the former on the time limit, the latter for violation of amateur athletic rules. The other colleges did not wish to create ill-feeling by giving the cup to a team that had not won it, hence the decision.

The last event of the afternoon was an exhibition five-inning game of baseball between Albion and M. A. C. It was an excellent game and presented one feature not often seen and not seen at all in the M. I. A. A. for at least eight years, viz.: a triple play. Albion had filled the bases, with no men out. A hard drive was sent to Ranney at second, who caught it about four inches from the ground. All base runners had started at the crack of the bat. Ranney stepped on second, retiring the runner between second and third, then threw to first in time to catch the runner who had left that base. The score:

Innings—	1	2	3	4	5	R	H	E
Albion	2	0	0	0	0	2	5	4
M. A. C.	0	0	0	0	0	0	4	1

Batteries—Jacobs and Hamblin; Warren and Adams.

THE INDOOR SPORTS.

The indoor sports were held Friday evening in the large pavilion at Bawbeese park. A large and enthusiastic crowd witnessed the events which were lively but not up to the average in scientific work. Becker's retirement from wrestling takes the best man out of the heavyweight class and the same may be said for Howe in lightweight. The prettiest contest of the evening was that in club swinging between Hawkins of Olivet and Howe of Albion. In the lightweight wrestling, Smith of M. A. C. showed fine form, winning two falls from Myers of Hillsdale, but afterwards losing to Waters of Ypsilanti. The last wrestle of the evening, the middleweight, was a lively bout. Woodworth of M. A. C. took two falls from Richmond of Ypsilanti in 16 seconds and 10 seconds respectively, and immediately afterward threw Hornbeck of Kalamazoo twice. This gave M. A. C. two medals in the indoor events. Following is the summary of events:

Running high kick—First, Hoxie, Ypsilanti; second, Whitney, Hillsdale. Height, 8 feet 10 inches.

Horizontal bar—First, Whitney, Hillsdale; second, Turner, Ypsilanti.

Club swinging—First, Hawkins, Olivet; second, Howe, Albion.

Wrestling, featherweight—Forfeited to Myers of Hillsdale; no other entries.

Lightweight—First, Waters, Ypsilanti; second, L. C. Smith, M. A. C.

Welterweight—First, Hornbeck, Kalamazoo; second, Richmond, Ypsilanti.

Middleweight—First, Woodworth, M. A. C.; second, Hornbeck, Kalamazoo.

Heavyweight—First, Wilson, Ypsilanti; second, Moody, Hillsdale.

SATURDAY.

Saturday was a bright, hot day but not a good day for records on account of a strong wind and slow track. Wells was much in evidence and a general favorite in the day's sports. Holdsworth was not discovered in the half-mile run by any but the M. A. C. boys until he began coming down the stretch; but when it came to the mile run everybody kept an eye on "the little fellow in black." He ran his own race, kept his pace in spite of repeated attempts to lead him out, was last man at the last quarter post, came into the stretch with no man in front of him, then amid the wildest enthusiasm sprinted for the tape at a clip that no other man in the race could follow. The events of the day were as follows:

All-around 100 yard dash—First, Wells, M. A. C.; second, Whipple, Hillsdale. Time, 10 3-5 seconds.

Half-mile run—First, Holdsworth, M. A. C.; second, Gilbert, Kalamazoo. Time, 2 minutes, 10 3-5 seconds.

Running high jump—First, Hayne, Kalamazoo; second, Whipple, Hillsdale. Height, 5 feet 5 inches.

Five-mile bicycle—First, Peck, Albion; second, Bailey, M. A. C. Time, 15 minutes 25 seconds.

Running hop, step and jump—First, Wells, M. A. C., second, Myers, Hillsdale. Distance, 41 feet 10 inches.

All-around 440 yard run—First, Wells, M. A. C.; second, Whipple, Hillsdale. Time, 61 seconds.

One mile bicycle—First, Peck, Albion; second, Fuller, Olivet. Time, 2 minutes 27 seconds.

One mile run—First, Holdsworth, M. A. C.; second, Schock, Kalamazoo; third, Gilbert, Kalamazoo. Time 5 minutes.

Relay—First, Albion; second, Kalamazoo. Time, 3 minutes 39 3-5 seconds. Albion's relay team in the order

of quarters run, were Shipp, Reid, Martin, Nufer.

Peck of Albion rode an exhibition quarter mile, paced, in 30 seconds, with flying start.

TENNIS.

Friday morning Perrine, Albion, won from Hagadorne, M. A. C., in tennis singles. Score: 6—1, 6—1. Saturday afternoon he won from Chase, Hillsdale. Score: 4—6, 6—4, 6—0, 6—2.

In the doubles Hillsdale and Albion were the only colleges represented. Hillsdale forfeited to Albion.

In ladies' singles, Miss Smith, Hillsdale, won from Miss Hunt, Albion, by a score of 6—1, 6—0; and from Miss Tracey, Olivet, by a score of 6—1, 6—1, 9—7. Miss Tracey won second.

In ladies' doubles Misses Smith and Marsh, Hillsdale, won from Misses Hunt and Campbell, Albion, by a score of 6—0, 6—0, 6—0.

The last event was a game of baseball between Albion and Kalamazoo, in which the latter won by a score of 5 to 3. Batteries—Jacobs and Hamblin, Johnsen and Waterbury. Johnson left the same evening for New Castle, Pa., where he will spend the summer at professional work.

The following table gives the score of points won by each college:

	1sts	2ds	3ds	Pts
M. A. C.	10	5	4	64
Albion	10	6	0	62
Hillsdale	4	9	3	41
Kalamazoo	4	4	7	35
Ypsilanti	3	4	0	23
Olivet	1	3	3	14

D. J. C.

Congratulations from Dr. Edwards.

The hearty congratulations of the whole College are due to our athletes for their brilliant successes at field-day, and we believe we are giving expression to the feelings of every person in any way connected with our institution when we say that we are frankly and unaffectedly proud of their achievements. They have earned and should receive the formal thanks of the Faculty for the way in which they have upheld the dignity and reputation of the College.

More than this—the report of our Faculty representatives at Hillsdale warrants us in feeling a high degree of satisfaction at the bearing of our whole College representation at the meet. Our students were all quiet, manly and chivalrous, and not one single incident occurred to mar our pleasure.

For the success of our men in the sports and for the highly commendable general attitude of our students we owe much to the capable, conscientious work and sensible suggestions of our trainer, Mr. Keep of Detroit. He did very excellent work, and has earned our gratitude.

We have only a word of criticism on the meet as a whole. There is in our amateur athletics still entirely too much of the spirit of professionalism. "Win—any way—but win!"

A prize that is the token of supremacy in strength or skill is an honor; a prize that has been obtained by fraud is a lie. Why should not college men always act on this principle?

We need, too, to cultivate more of the spirit of modesty and of chivalry toward rivals. The loud boastfulness of many contestants may have been becoming in the days of David and Goliah, but we should have learned better by now. These last words are not especially intended for our men. It may be that we have room for improvement along this line, but if there was any feature of the meet which gave a silent observer especial satisfaction it was the comparative absence of these faults in our boys.

The Importance of Good Cooking.

(Continued from page two.)

out of doors and do their work better than the best of them, has no right to marry unless she has money enough in her own right to employ a skilled housekeeper to carry out her orders."

Many Americans are dyspeptics because they eat the wrong foods, badly cooked, and often drowned in ice water or fat. They are dyspeptics because their wives or mothers do not know the first rudiments of their business, and resign their kitchens to incompetent servants, whose duties they cannot intelligently direct. Be cooks first, and anything you please afterwards. On you posterity waits.

Teacher—What are the three graces? Tommy, you may answer.

Tommy—Breakfast, dinner and supper.

He—What is the number of most girls' shoes?

She—Two, of course. You don't suppose girls are quadrupeds, do you?

In vain he plead,
She shook her head;
A flash!—he photographer her brain.
Strange to confess,
Her "no" meant "yes,"
Although the negative was plain.

—*Ex.*

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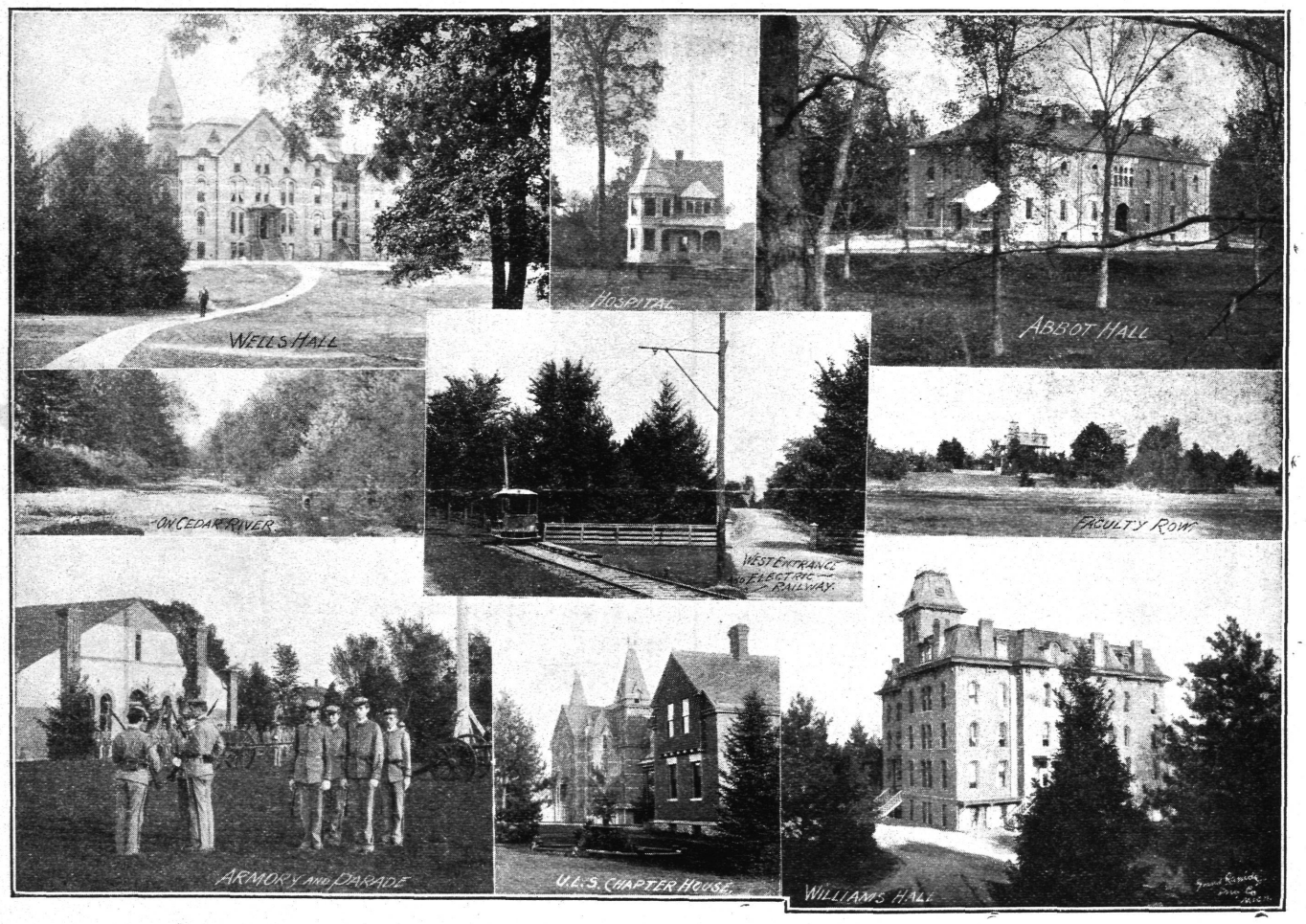

VIEWS AT THE COLLEGE.

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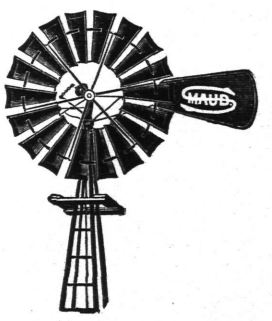

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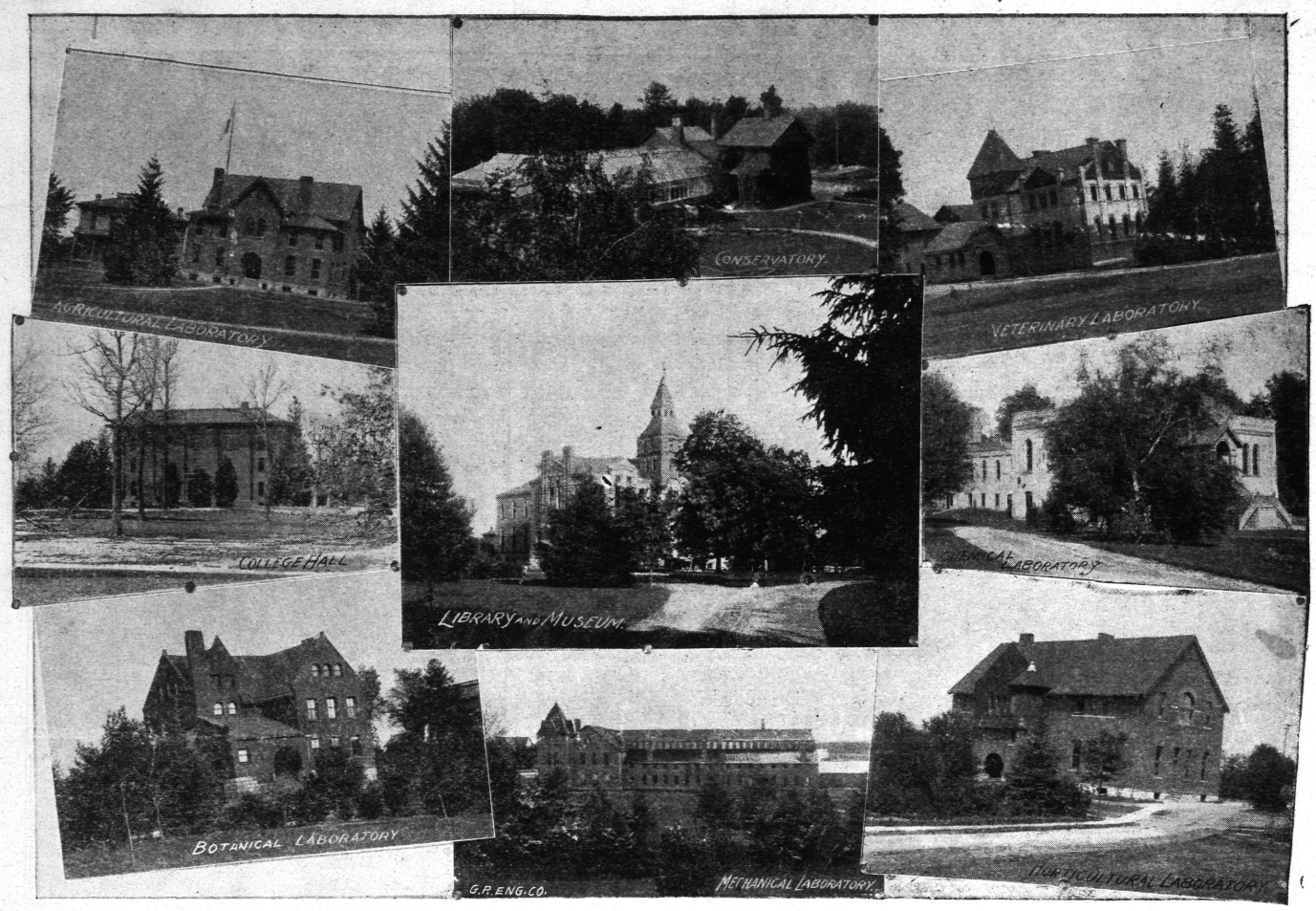

LABORATORIES AT THE COLLEGE.

Two Medals Given to Pullman.

George M. Pullman has received from Archduke Rainer two magnificent medals and a richly wrought diploma as testimonials of honor and merit in founding and building the most perfect town in the world. This distinction for the suburb came as a result of an exhibit in the International Hygienic and Pharmaceutical Exposition in Prague. The Archduke was the protector of the exposition. Pullman won against the settlements created by Krupp, the gun man, and Stumm, the great maker of steel, and Baron von Ringhofer. The verdict of the jury was unanimous, finding that Pullman was without a peer in the matter of comfortable homes for workingmen, streets, sewers, water system, shops, public halls, churches, grounds and the rules and regulations governing them.

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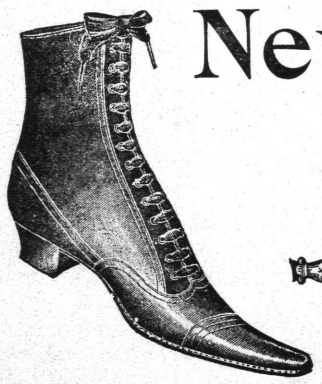

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