

The M. A. C. RECORD.

MICHIGAN STATE AGRICULTURAL COLLEGE.

VOL. 9.

LANSING, MICHIGAN, TUESDAY, DEC. 22, 1903.

No. 14

AGRICULTURAL COLLEGE.

The following article was published in the *Detroit Tribune*, Dec. 10.

"Ever been to the State Agricultural College? If you have not, you do not know one of the best institutions in Michigan. It is worth a trip to Lansing any time to see it.

"This College was established in 1857 and owes its foundation to the work of the State Agricultural Society. It is therefore of state rather than national origin and is the oldest and one of the best equipped Agricultural Colleges in the United States. Its graduates are found as teachers in nearly every State Agricultural College and many of the Universities.

At the present time it offers four-year courses in Agriculture, Mechanical Engineering, Forestry and in Domestic Art and Science. The requirements for admission to these courses are practically the same as for entrance to the different state universities. Five-year courses are offered to those who have not had high school advantages. During the winter special courses are offered in general farming, livestock husbandry, dairying, creamery management, fruit culture and beet sugar production. The Farmers' Institutes are under its direct control. In all these various lines, it attempts to acquaint the farmer with scientific principles. At the present time the man who knows his business thoroughly is the one who succeeds best. For a long time it was thought that the farmer had no use for an education. It is pretty generally accepted now that a farmer should understand the physics and chemistry of the soil, the nature of fertilizers, the soil and chemical elements needed by the various crops, balanced rations for beef and dairy cattle, the principles of stock breeding, the nature and remedy of plant diseases, the bacteriology of the dairy and the general care and culture of fruits.

The Michigan Agricultural College has worked hard to bring about this attitude and to disseminate this knowledge through bulletins, institutes and especially through its graduates. The college has introduced sugar beet production in Michigan, an industry which of itself is of enough value to the state to pay the running expenses of the college for the next fifty years. It has compelled the manufacturers of commercial fertilizers to produce a high grade article. It has done a large amount of work on Michigan wheats, weeds, insects and diseases of plants and animals. It inspects the orchards and nurseries of the state, conducts experiments with all kinds of feeding stuffs, fertilizers, cover crops, forage crops, etc., etc., and gives the farmers of the state the benefit of the work. It answers thousands of inquiries every year. It has conducted a dairy and cheese educational scoring contest which has done much to secure improved methods and better products.

The engineering department is recognized to be one of the best in

the country. The education is very practical and fits the young man excellently for the industrial world. Its graduates are eagerly sought for by the large manufacturing concerns, Detroit, Grand Rapids, Saginaw, Jackson and other Michigan cities have many of them. These young men establish a new standard in mechanics. They not only know how but also why. They need little supervision but can go ahead and do something, and above all they themselves do not become mere machines.

While the department of Forestry is still new, yet it is hard at work trying to show the benefits of trees to the farmer and to the community at large. Care, preservation and value of trees are emphasized. How to reforest certain districts and eventually give back to the state some of the millions of dollars from which it has been literally robbed. Thousands of acres are now an absolute waste. If people knew how, these lands could be made to yield a good return in one or two generations. The College is trying to educate people along this line and is co-operating with the Forestry Commission.

The Women's Course ranks high in its scientific training and general advantages. A woman's instincts are domestic. She should receive a general education but it is worth infinitely more to know how to bake bread than how to conjugate a Greek verb. It is better to know how to sew than to prate in Latin. This College not only gives a liberal education in literature, mathematics, pure science and modern languages, but it also looks after the care of the sick, emergencies, the principles of cooking, dietary value of foods and the bacteriology of the kitchen and everything connected with it. The ultimate desire of every true woman is to have a home. Why should she not be taught how to take care of it? The Michigan Agricultural College is educating young women for the home and asserts that the proper care of the home is the most important thing after all. It shows that it requires as much skill and brain-power to run a home as it does to run a school or a typewriter, in fact much more. The graduates from this department are finding no difficulty in securing positions as teachers of domestic science and art and at wages far in advance of the ordinary teacher. They have, moreover, the advantage that when they quit teaching they simply change places and not vocations.

To do all this work, the College has a teaching force of 70 and an annual income of over \$200,000.00. It has eleven well equipped laboratories. About 800 young men and women from Michigan are securing its advantages."

STATE TEACHERS' ASSOCIATION.

The fifty-first annual meeting of the Michigan State Teachers' Association will be held in Ann Arbor, Dec. 29, 30, and 31 next. Special railroad rates of one fare for the round trip, though not less than one

and one-half cents per mile where the regular fare is two cents per mile, have been made on all Michigan railroads. In the lower peninsula tickets will be sold Dec. 28 (evening trains), and Dec. 29 and 30, with a return limit of Jan. 1. In the upper peninsula tickets will be sold Dec. 28, with a limit for return of Jan. 2.

Many M. A. C. alumni and college people will attend this meeting and a reunion should be arranged. The program promises to be a good one. H. R. Pattengill is president of the association.

HORTICULTURAL SOCIETY.

The State Horticultural Society holds its annual meeting at Traverse City, Jan. 5 to 7, '04. The program consists of 25 addresses of which M. A. C. has the following:

Michigan Horticulture at the St. Louis Exposition—M. L. Dean.

The San Jose Scale Problem in Michigan—Prof. L. R. Taft.

Future of Michigan Fruit Raising—Geo. A. Hawley, '92.

Gleanings from the Boston Meeting of the American Pomological Society—Prof. L. R. Taft.

The Northern Michigan Apple Orchard—W. S. Palmer, '89.

Culture and Agriculture—E. O. Ladd, '78.

Lessons of 1903 in the Strawberry Field—C. B. Cook, '88.

Markets—Instructor Thomas Gunson.

Cherry Culture—Wm. B. Gray, Sp. Course.

C. E. Bassett, with '86, is secretary of the Association.

'79.

Dr. Corydon Pirnie Cronk, for ten years in charge of the Baltimore Weather Bureau, died Dec. 16. He had been ill for several months. Dr. Cronk was born at Flushing, Mich., about forty-five years ago. After graduating at M. A. C. he went to Washington, where he followed a course of medicine at the Columbian University, obtaining his degree of doctor of medicine in 1887. He next took a post-graduate course at the Johns Hopkins Medical School. Subsequently he became observer in charge of the United States Weather Bureau in Baltimore. While he had supervision of the bureau the Maryland state weather service was organized and Dr. Cronk became chief of that service in conjunction with his other work. He was transferred to Cape Henry station six years ago. There he also had charge of the telegraph service between Cape Henry and Cape Hatteras. Dr. Cronk resigned his post last September, and had since made his home at Cape Henry. Dr. Cronk was a member of the Royal Arcanum and of the Journalists' Club of Baltimore. He married Miss Carrie Patten, of Detroit, Mich., in 1886. His widow, and a son, Corydon Patten Cronk, who is a student at the Tome Institute, at Port Deposit, survive.

ALUMNI.

With '75.

F. B. Dickerson, postmaster of Detroit, is contemplating publishing a Farmer's Ready Reference. He has written to M. A. C. for certain articles and will issue a valuable book, which will undoubtedly have a large sale.

With '96.

Miss Nancie MacArthur, of the literary department in the University, is visiting her sister, Mrs. G. Masselink, during the holiday vacation.

'00.

H. B. Gunnison, who is with the Edison Illuminating Co. of Detroit, visited M. A. C. some little time ago. He was well and found his work very agreeable. He reported L. B. Littell, '01, well and as being pleasantly situated with the American Bridge Co., Detroit.

With '00.

L. H. Taylor is in the engineering department of the Chicago & N. W. R. R. He resides at 767 Washington Boulevard but spends most of his time inspecting the road.

Miss Lucy Monroe has been traveling in Europe the past summer. While in Berlin, she met unexpectedly Dr. J. W. Riegerink, '97, who was then on his way to Vienna, Austria. Hon. C. J. Monroe left for Europe recently, where he expects to spend some time visiting points of interest.

'01

A commendatory notice of some recent work done by E. W. Bennett of Storrs, Conn., on diseases of melons appeared in the December 16 issue of the Rural New Yorker.

V. M. Shoesmith, assistant agriculturist in the Kansas State Agricultural College, will be married to Miss Elsie Mae Morrison, a special student at M. A. C. in 1899 and 1900 and until recently head dietitian in the Homeopathic Hospital, Ann Arbor, on Dec. 23. The RECORD extends congratulations.

'02

A. G. Craig writes in a recent letter that his work at Muncie, Indiana, is progressing satisfactorily. He has charge of the grounds for a wealthy glass manufacturer and has done considerable work in beautifying them.

M. A. C. alumni were well represented on the Grange committees at the recent meeting in Lansing. Daniel T. Hall, with '73, chairman of the committee on agriculture; James Brassington, chairman of committee on forestry; E. N. Ball, '82, chairman of committee on resolutions. In all, 23 alumni attended the meetings. A. C. Bird, '83, took a prominent part in the primary reform discussions before the farmer's club and A. B. Cook, '93, was also on hand with resolutions bearing on that subject.

THE M. A. C. RECORD.

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MICHIGAN STATE AGRICULTURAL COLLEGE

EDITORS.

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TUESDAY, DEC. 22, 1903.

ALUMNI.

'92.

CRAMP'S SHIPYARD.

Phila., Pa., Dec. 12, 1903.

Editor of RECORD, M. A. C.

Dear Sir:—Delaware river is the center of the greatest ship building industry of the country. The plant of the New York Ship Building Co., at Camden, N. J., being the best equipped and most modern plant in the country, if not the world, and a few smaller yards perhaps, are the oldest. Cramp's yard is one of the oldest as well as the largest in the country.

In 1830, Wm. Cramp started a shipyard on the ground that is now known as "The Dry Dock." In those days wood was the only material for construction, and sails the chief means of propulsion, but the relics of beam knees, frames, etc., that we now see collected at navy yards show that the naval architects of those days could build ships to be relied upon. The capital required at that time was small, in fact, one tool in the present yard, valued at \$30,000, represents more money than the whole plant of Wm. Cramp in 1841, yet then his plant was the largest on the Delaware.

In 1872, the plant was reorganized and The William Cramp & Sons Ship and Engine Building Company was formed, the same as exists today, the present capital being \$5,000,000.00, and the water front being 2000 feet, over 4 times that of the original yard, with an area of 52 acres.

As may be expected, the buildings represent the oldest and newest of types, chief among the latter being the machine shop, which is 333 feet long, 142 feet wide, part of it having 3 floors, with a total floor area of 85,000 square feet. All of the tools are of the most modern and approved type, and driven by electric motors.

There are 3 ship building traveling cranes, with room for 6 large ships on the stocks at one time, although 8 slips are provided, one crane being able to take care of 2 large ships or three small ones.

There is a 150-ton floating derrick, which is the largest and most powerful in the world.

The yard is provided with a complete system of pneumatic piping underground, for drilling, clipping, caulking, riveting, rivet heating fires, etc.

The entire yard, including slips, shops, foundries, offices, etc., is lighted by electricity.

The maximum number of men employed is 8000 with a pay roll of about \$84,000.00 per week.

Of the 321 vessels built in the Cramp yards, 26 were steam men-of-war for the United States navy, and several for other countries, among which were the protected cruiser Variag, and battleship Retvian for the Russian navy.

The first important U. S. warship built at Cramp's was the "New Ironsides." She was 250 feet long, 56 feet 6 inches beam, 16 feet draught and 5,000 tons displacement. She was ship-rigged, her engines were of 1,800 horsepower and had a speed of 11 knots. She was protected by a 4-inch iron plating and was in action against Fort Sumter eleven months after the signing of the contract to build. She was in over 20 battles during the Civil War and lost only a port shutter.

Among the more recent ships built at Cramp's for the U. S. navy are the New York, Brooklyn, Columbia, Minneapolis, Indiana, Massachusetts, Iowa, Alabama, and finally, the Maine. Hence we see the name of Cramp is very closely connected with the American navy of today.

The work on hand at present includes several merchant ships of small size, a protected cruiser for Turkey, and 3 armored cruisers for the U. S. navy, the Colorado, Pennsylvania and Tennessee.

The Colorado and Pennsylvania are sister ships, being about 65 per cent completed, and will probably go in commission in about a year. They are 502 feet long, 69 feet 6 1/2 inches beam on L. W. L., 24 feet 6 inches draught at 13,400 tons displacement and 22 knots speed. The boilers are of the Niclausse type and estimated horse power of engines is 23,000.

The electric plant consists of three 100 K. W. sets and four 50 K. W. sets, 125 volts. There will be 1250 16 C. P. incandescent lamps, 12 arc lights, 6 search lights, 2 truck lights, 2 diving lanterns, 2 night signal sets and about 40 small desk fans.

At the present time, the majority of the auxiliary machinery, outside of the engine and boiler rooms, is driven by electricity. On these ships the electric auxiliaries consist of one laundry motor, one motor for machine shop, 2 fresh water pumps, 7 deck winches, 4 boat cranes, 26 blowers, 34 ammunition hoists, 35 water tight doors and hatches, and 10 motors in each of the two 8-inch turrets. The horsepower ranging from one-half for the No. 1 monogram fans, to 50 for the hoisting motors of the forward boat crane.

The main battery consists of four 8-inch guns and fourteen 6-inch guns. The 8-inch guns will be mounted in two electrically operated turrets, forward and aft, the motors being operated by the Ward Leonard system of control.

Both ships are fitted as flag ships, with accommodations for 785 crew and 45 officers. Hence it is seen that to provide the necessary sanitary system, fresh water, ventilation, lighting, hospitals, store rooms for provisions and repair materials, be-

sides coal and ammunition capacity, the problem is not small.

The Tennessee is one of the first ships to be built under the direction of the new bureau of construction and repair, with Admiral Bowles as chief. She is 502 feet long, 72 feet 6 inches beam, and 25 feet draught at 14,500 tons displacement, 22 knots speed, and 23,000 estimated horsepower, Babcock and Wilcox boilers. She will carry 44 officers and a crew of 814 men. Her main battery consists of four 10-inch guns and 16 6-inch guns. She will possess many new and valuable features, many of which are not entirely developed, and as she is only 12 per cent completed, and will not be finished for about two years, perhaps I may tell you more about her at a later date.

The office of the superintending naval constructor at a ship yard has for its duties, to see that proper specifications and instructions are issued to the contractors for doing the work, and to see that they live up to the requirements of the contract. Before going into commission the ship must be furnished with sufficient plans and descriptions, and instructions for the proper operation of the ship.

In April, 1902, I was sent here to take charge of the electrical work of the office, I having had 2 years training in the office at Newport News, Va. The balance of the force consists of the chief draughtsman and 12 draughtsmen of different grades, besides clerks.

My work in the electrical line was evidently satisfactory for last July they added to it the duties of assistant chief draughtsman. About four months of the time since the chief has been out, so you may see that I have been some busy. But in the midst of it they gave me promotion in salary, as well, so one feels that the hard work and application to duty of the past years has not been in vain.

I am very glad to note the progress of the College, and especially the Mechanical Department.

With best regards I am

Very truly yours,
L. C. BROOKS.

With '05.

Wm. M. Johnson spent a few days at M. A. C. last week. He has been engaged in survey work with the U. S. government in Northern Michigan, and is now anticipating contract work for the winter. If not successful in securing this, he may return to M. A. C. to take up drafting.

'01 and '02.

Hugh and Fred Baker are spending their vacation gathering material in the Salling, Hanson Co.'s camps about Grayling, Mich., for a report on lumbering methods as a part of their work in forestry in Yale University. G. E. Tower from the same university spends his vacation in Washington, compiling a report of his summer's work on proposed forest reserves.

'03.

Bronson Barlow, assistant bacteriologist at the Ontario Agricultural College, writes that his work and surroundings are pleasant. New apparatus and chemicals have been added to the department and a new building will probably be constructed.

The military department has four large companies captained by Messrs. Taber, Dodge, Adelman and Merritt. The spirit has been excellent all fall and a great deal of enthusiasm has been present. Major Vernou has given a series of lectures on Marches of Armies, Camps, Camp Hygiene, Organization of U. S. Army and Volunteers, Advanced Guards, Patrols and Outposts. The drilling has been hampered by darkness and has been interfered with several times on account of using the armory for a variety of purposes. Major Vernou has brought the military department on a substantial basis and desires the support of all connected with the College. If we are to have a military department we should have a good one. The Major and his officers are bending every effort in that direction, and have succeeded remarkably well in spite of serious obstacles.

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ABOUT THE CAMPUS.

Mrs. Mae Gingles spoke at De Witt Friday afternoon, on a Practical Education.

The M. A. C. Sunday school gave a Christmas entertainment this afternoon at 4 o'clock.

The district school closed with a fine entertainment last Friday for a two weeks' vacation.

E. H. Whitney, father-in-law to W. K. Prudden, '78, died last week. The funeral was largely attended.

Twenty-five cars of crushed stone have been received at M. A. C. to be used as concrete for the heating system.

P. H. Wessles, '05, had the misfortune to dislocate his wrist in playing basket ball last Thursday evening.

Mrs. C. D. Smith seems to be perceptibly improving. Her brother left for his home in New York state, Monday morning.

One thing peculiar about this year's football team is that with one exception all were students in the mechanical department.

The farmers' club has elected the following: President, C. B. Taylor; vice-president, R. J. Baldwin; secretary, C. F. Wells; corresponding secretary, P. N. Flint; treasurer, G. H. Shaefer.

The Feronian Society officers for the winter term are as follows:—President, Marguerite Barrows; Vice President, Bell Farrand; Secretary, Gertrude Peters; Treasurer, Florence Case; Marshall, Margaret Christie.

Themian officers: President, Grace Taft; vice president, Gertrude Slaght; secretary, Maud Minor; treasurer, Helen Andrews; marshal, Mae Kingsley; RECORD reporter, Anna Pickett.

Murray and Ayres, contractors for the new heating plant, have built a very convenient camp across the river near the P. M. R. R. About 60 or 70 men will be employed when the work is in full operation.

The following officers were elected by the Union Literary Society for the winter term: President, R. J. Baldwin; vice president, C. C. Ford; secretary, C. A. Lamb; treasurer, Frank Kratz; marshal, O. A. Kratz.

The State Dairymen's Association will meet the 23rd to 25th of Feb., and will hold a joint session with the Round-up Institute on the 24th. It is expected that joint meetings with other associations will also be held and that a large number of people will be here.

Mr. Glenn Briggs, of Stanton, is the new stenographer in the mathematical, horticultural, bacteriological and botanical departments. The work is of such wide diversity and the terms are so technical that the position is a very difficult one to fill, especially at first.

R. A. Pettit, entomologist of the experiment station, has nearly completed a bulletin on fruit insects. It will be a good sized bulletin and is adequately illustrated. The language will avoid scientific nomenclature as far as possible and will

put facts in a clear form so that he who runs may read and understand.

The Rhode Island College of Agriculture of which K. L. Butterfield, '91, is president, is sending out leaflets entitled "The Nature Guard." Lesson number 32 treats the subject, "From Seed to Plant." An illustration of a clam-shell garden appears on the first page.

The health officers of Michigan will meet for their annual conference at Ann Arbor, Jan. 7 and 8, '04. The sessions will be held in the new medical building. Dr. Marshall will read a paper on "Some Lessons to be learned from studying European Meat Inspection."

Another party of mechanical sophomores visited the Crystal Creamery and inspected the machinery, especially turret machines, the last Saturday morning of the term. Mr. Bachelor, the superintendent, has been very courteous to these parties and has done all in his power to make the visits both interesting and profitable.

Dr. Marshall gave an address before the State Live Stock Association on hog cholera and swine plague. The character of the diseases, their dissemination and methods of prevention were discussed. Dr. Waterman talked on parasitic diseases of the sheep and Prof. Shaw on the live stock experiments at the College.

Programs for next term's work are now ready. Each student can have a copy. The classes are so numerous, the work so varied and some courses so crowded that it is

well nigh impossible to secure a suitable program. In several instances classes had to be scheduled for Saturday forenoon. The shops are full and several departments will be severely taxed.

Last week's session of the Grange and Farmers' Clubs brought many visitors to M. A. C. Nearly every department of the College was inspected and much interest was manifested. Several made the remark that hereafter they would not begrudge the taxes paid to support M. A. C. Mr. Holbrook carried on a series of experiments with the X-ray and was kept, busy showing people the different bones of the hand and forearm.

The farm department has purchased 90 lambs for experiments in feeding dried beet pulp. The lambs averaged 61 pounds. They will be divided into 6 groups. Two will be used to determine the effects of dry pulp along with a light grain ration, two of pulp when it replaces a grain factor, while the other two will be used to determine the differences between dried beet pulp and dried molasses beet pulp.

The past week has been a busy one for both students and teachers. Examinations and reports make the last week of the term strenuous. There will undoubtedly be many disappointments, but if a student has worked conscientiously throughout the term and has done the best he could the fact of his getting a D or an F will not in the least affect the training he has derived. "Not failure, but low aim is crime."

MICHIGAN FARMERS' INSTITUTES—TWO-DAY.

Manton, Jan. 6-7; Inland, Jan. 8-9; Ludington, Jan. 11-12; Hesperia, Jan. 13-14; Zeeland, Jan. 6-7; Hart, Jan. 8-9; Ravenna, Jan. 11-12; Lowell, Jan. 13-14; Trufant, Jan. 15-16; Mt. Pleasant, Jan. 18-19; Ithaca, Jan. 20-21; Bay, Jan. 22-23; Freeland, Jan. 25-26; Midland, Jan. 8-9; Tawas City, Jan. 11-12; Harrisville, Jan. 13-14; Millersburg, Jan. 15-16; West Branch, Jan. 18-19; Standish, Jan. 20-21; Gladwin, Jan. 21-22; Ovid, Jan. 13-14; Corunna, Jan. 15-16; Clio, Jan. 18-19; Lapeer, Jan. 20-21; Caro, Jan. 22-23; Bad Axe, Jan. 18-19; Croswell, Jan. 20-21; Capae, Jan. 22-23; Richmond, Jan. 25-26; Carleton, Jan. 27-28; Brown (Manistee County), Jan. 25-26; Milton Center, Jan. 27-28; Traverse City, Jan. 29-30, and Suttons Bay, Feb. 1-2.

One-day institutes have also been arranged in the following counties: Sanilac county, Jan. 2-9; Ingham county, Jan. 6-8; Gratiot county, Jan. 5-9; Jackson county, Jan. 6-9; Huron county, Jan. 5-9; Montcalm county, Jan. 6-9; Tuscola county, Jan. 11-16; Kent county, Jan. 12-15; Barry county, Jan. 11-15; Lapeer county, Jan. 12-15; Macomb county, Jan. 12-14; Livingston county, Jan. 15-16; Calhoun county, Jan. 13-22; St. Clair county, Jan. 12-15; Alpena county, Jan. 18-19; Lenawee county, Jan. 19-29; Branch county, Jan. 21-29; Hillsdale county, Jan. 20-26; Iosco county, Jan. 26-29; Cass county, Jan. 27-29; Ionia county, Jan. 26-30; St. Joseph county, Jan. 26-29; Washtenaw county, Jan. 26-30.

AGRICULTURAL DEPARTMENT VISIT TO LIVE STOCK SHOW IN CHICAGO.

The Senior live stock students, who visited the International Live Stock Exposition recently held in Chicago, arrived in the city on the morning of Monday, Nov. 29th. Arrangements for securing rooms had previously been made at a comfortable and yet comparatively inexpensive hotel, conducted on the European plan. Morning and evening meals were secured at a nearby restaurant, notable for the excellent quality and preparation of the food supplied. The midday meals were secured either within the exposition gates or in the vicinity. Altogether the necessary daily expenses did not exceed \$1.75 per day per capita. The special round trip rate from Lansing to Chicago during the exposition week was only \$7.25.

Through the generosity of the exposition management all agricultural college students are furnished with passes. It will thus be seen that but a small sum of money is required to enable a college student to visit this the greatest of all live stock shows.

On Monday, the morning of arrival, the party proceeded at once to the Dexter Park amphitheater where the show is held, and were conducted through the various departments to get a general idea of the location of the various classes of live-stock and the rings where they were to be judged. After this the party broke up, each individual spending the remainder of the day alongside the ring in which he was most interested. Much interest

however was centered around the main judging pavilion where the long lines of red, roan, black and white faced cattle were contesting for the honors, some however, were to be found where the magnificent array of draft horses were being exhibited and others again at the sheep and swine rings.

On Tuesday morning the party visited Swift & Co.'s packing plant where they saw all the processes of slaughtering, dressing, inspection, meat cutting and preparation for market. The various departments in which all the by products were being converted into salable articles. Such as fertilizer, stock food, glue, soap were also visited. The remainder of the day was spent at the ring side. The following morning the party visited the stock yards going first through among the car-load exhibits of live stock and then into the yards where the buyers and sellers of butcher were transacting business. The next place visited was the "rally" in which feeders were offered for sale. Considerable time was spent here in connection with the quality of live stock offered and the methods of selling, weighing, yarding, shipping, etc. Visits were also made to the sheep and swine yards. During the three days' stay in Chicago most of the boys were enabled to see the operations of the stock exchange and visit some noted mercantile and industrial establishments. The trip was an exceedingly profitable one. A greater number should arrange to take advantage of the opportunity in the future.

Instructor Michels talked to farmers' institutes in Ottawa Co., and was at Galien, in Berrien Co., Dec. 17 and 18. Mr. Dean was also in Ottawa Co., and in Cheboygan and Otsego last week. Prof. Jeffery went to Clare and Reed City last week. H. P. Gladden was at Emmet and Charlevoix, Dec. 15 to 18, and C. H. Alvord was in Antrim Co. Dec. 14 to 18. H. B. Cannon spoke in Grand Traverse Co. R. J. Crawford will talk in northern counties.

The library has recently purchased the life of Wm. E. Gladstone by John Morley. The work comes in three volumes, each consisting of over 600 pages and well illustrated. The MacMillan Company are the publishers. It has been pronounced the most important biography of the year. The *Critic* says: "What we do get in this 'Life' is a very faithful and very intimate picture of the political struggles, defeats and triumphs, of the plans, fruitful or abortive, of Gladstone and the men associated with him between 1830 and 1894—in other words, of English party politics at close range during the Victorian era. As such it will probably remain a literary monument of enduring worth."

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