The Round-up Institute

The Round-up Institute was held at St. Louis, Mich., Tuesday, Wednesday, Thursday and Friday of last week, and was a grand success in every way.

The city provided a most excellent hotel, a commodious opera house, with facilities for the accommodation of the general assemblies; a large and elegant church for the women's section; a large store for the sale of provisions, etc., and, in short, a splendid attendance of citizens, intelligent and interested in the programs presented at the various sessions.

Notwithstanding the inclement weather of Tuesday and Wednesday, the crowd came and displayed the keenest enthusiastic interest in the program.

The College exhibit was supplemented by a creditable display of grain and vegetables from the surrounding country and several samples brought from a considerable distance. The display covering every seat in the College was especially conspicuous and valuable.

The constitute workers seemed to be on their mettle, and the papers presented were most excellent in substance and writing. In the presentations the papers a large number of farmers participated. One of the valuable features of the Institute was the "confer- ence of workers" in the Park hotel, each morning and afternoon. Methods of conducting institutes were carefully discussed by the local presidents and secretaries, on the one hand, and the workers on the other. From this the possession of views much good will result.

The attendance at the women's sessions was very large. The commodious church was crowded at every session and many were turned away.

We have the names of fifteen former students of M. A. C. who were in attendance at this Institute. They are: Hon. C. J. Monroe, with '61, Farmers' Institute, '67, Grand Lodge; Hon. C. W. Garfield, '70, Grand Rapids; F. W. Hastings, '78, St. Louis; A. A. Cradler, '79, M. A. C. Church, '83; C. D. Butterfield, '83, Clinton; C. L. Little, '84, Coopersville; W. E. Redman, '87, St. Louis; J. H. Brown, with '87, Climax; J. W. Ewing, '91, Alma; C. B. Cook, '93, Osceola; K. L. Butlerfield and H. W. Mumford, '91, M. A. C.; A. B. Cook, '93, Osceola, and M. W. Fulton, '95, M. A. C.

The Last Day

If doubt of the entertaining ability of the Feronians existed over the existence of its members, it was dispelled last Friday evening. Every seat in the chapel was filled when the hour came for the entertainment to begin, and every seat was occupied and crowded vigorously for a first and then a second encore, at the close of the evening.

When the curtain was drawn the interior of a country schoolhouse was disclosed. A moment later the pupils in short dresses and pinpas began to arrive, and with them came the teacher, Miss Bellis, with waterfall disclosed. A moment later the pupils to arrive, and with them came the

The Last Day of the "Berkeley hills," but much of the material was new and all of it was funny. The good little stories and the parodies and the boys were worked in, so that the audience was kept laughing from beginning to end of the performance. The Round-up Institute was an excellent assembly of 817, which will be used toward furnishing their society rooms.

Another matter of roadside decoration ought to be given some attention by the authorities, and that is the habit that is so prevalent among business men of advertising their lines of business by painting signs on the boards of the side fences or tacking up advertising signs in a way that will take sides along the roads fences, and on the bins of the property. Something similar is also needed on the public traveling along these roads as well as to the cattle. The attractiveness of the wayside and the large amount adds to the pleasures of traveling, and all blimens should be reduced.

We cannot bring about a reform in this matter at once, but it is certainly a matter of public concern. Hon. C. W. Garfield in Michigan Fruit Grower and Practical Farmer.

A Cheap Substitute for Paris Green as an Insecticide in Spraying Mixtures.

BY B. C. KEMPIN.

A large demand for poisons to kill pests is being made by young hopefuls, and the use of arsenical preparations for spraying mixtures, and the high price of arsenic at times when it is needed, lead farmers and fruit-growers to ask whether some cheaper and equally effective material can be found for a substitute. The arsenic of which I speak is a specimen of inquiries that come to the chemical department on this subject, and to answer many inquiries I reply to this through the Farmer.

Detroit, Mich., Jan. 25th, 1897.

Dear Sir—We had a great deal of trouble last season fighting potato bugs with poor Paris green. I see on page 46 of Bulletin 118, April, 1896, L. R. Taft speaks of using white arsenic in the orchard. Can we use it on potatoes if carefully dissolved and properly diluted? We have a machine with three good spay nozzles that will put on any desired quantity perfectly. I rejoice for reply, but if you prefer answering through the Michigan Farmer, others may be pleased to hear from you. Yours truly.

B. C. MILLER.

I immediately wrote for a sample of the Paris green for analysis, but none was sent that kind of particular kind.

ACTION OF ARSENIC IN SOLVENT PLANTS.

Arsenic in solution poisons plants, and even in dilute form it liable to burn the leaves and tender parts of plants. This is an objection to the use of

white arsenic dissolved in water as a spary for plants. This is not because of any acid property of the arsenic, for it is equally injurious when it is burned by soda, forming the very soluble arsenite of soda. I have heard of a farmer who ruined all his apple orchard by spraying with this arsenite of soda.

Arsenic and soluble arsensites should not be used for spraying.

Insecticides. Among the arsenites of copper, or arsensite of lime, are not injurious to plants when used for the purpose of destroying such insects as kill potato bugs, caterpillars, etc., but these insoluble compounds are equally effective as insecticides when eaten by these pests. They kill bugs and worms that eat them just as surely as the soluble compounds of arsenic would, if eaten.

THE CHEAPEST SAFE ARSENITE.

The arsenite of copper (Scheele's Green and the acetate-arsenite of copper) are sold for a very large amount of poisonous property in consequence of their content of copper; but there is no reason why on—the dead shot for bugs—is the arsenite they contain. The cheapest arsenite is arsensite of lime, which is also the safest for spraying because it is so insoluble.

Arsenious trichloride, "White arsenic" of the druggists, is very cheap, it can be sold for ten cents a pound and leave a fair gale in the doctor's pocket. A pound of arsenic is equal to two pounds of Paris green as an insecticide. Lime is worth about twenty-five cents a bushel, or less, a cent a pound. The materials for making a spray for insects are very cheap.

Some recommend boiling a pound of arsenic and two pounds of fresh shank lime in two gallons of water for two hours. This makes 400 gallons of solution. There are two objections to this method: 1st, The arsenic dissolves very slowly, and it takes a long time to tell when it has all dissolved and combined with the lime; 2d, If prepared in large quantity for use for the season, the arsenic on standing becomes solid and is unsoluble in water. The farmers throw this into a solid mass after keeping, and will not readily mix with the quantity of water required for spraying.

A BETTER WAY.


Dryen Sir—We had a great deal of trouble last season fighting potato bugs with poor Paris green. I see on page 46 of Bulletin 118, April, 1896, L. R. Taft speaks of using white arsenic in the orchard. Can we use it on potatoes if carefully dissolved and properly diluted? We have a machine with three good spay nozzles that will put on any desired quantity perfectly. I rejoice for reply, but if you prefer answering through the Michigan Farmer, others may be pleased to hear from you. Yours truly.

R. E. MILLER.

I immediately wrote for a sample of the Paris green for analysis, but none was sent that kind of particular kind.

ACTION OF ARSENIC IN SOLVENT PLANTS.

Arsenic in solution poisons plants, and even in dilute form it liable to burn the leaves and tender parts of plants. This is an objection to the use of
arsenic in this mixture is equivalent to four ounces of Paris green.

CASE FOR ONE HUNDRED GALLONS OF SPRAY MATERIAL:

2 pounds white arsenic... $0.25
8 pounds sal soda... $0.20
40 pounds lime... $2.00

Cost per barrel, 25 cents.

ADVANTAGES OF THIS METHOD:

1st. It is very cheap, and the materials can be found in any village in the state.

2d. The stock material (arsenite of soda) is easily prepared, and can be kept in a convenient state of readiness for use, ready for making a spraying solution at any time, and not vary in strength as Paris green.

3d. The arsenite of soda, in the quantity required for spraying trees or plants, will be uniform in quality and not vary in strength as Paris green often does.

4th. It makes a milky-colored spray and the color on the leaves will show how evenly it is distributed.

Every one using such deadly poison should be aware of the dangers that threaten him in using the materials improperly, and he should keep them from the use. The pet, the pig, and other apparatus for making and storing the stock mixture of arsenite of soda are made by the manufacturer of Paris green for any purpose of any kind.—Michigan Farmer, Feb. 13, 1887.

At the College.

The Hesperians entertained ladies informally Saturday evening.

S. J. Belofon, '97, entertained Misses T. J. Apps, Maple Rapids, last Wednesday.

President and Mrs. Snyder entertained students in the president's parlor, Thursday evening.

Messrs. P. K. Fuller, Northville, and O. Tolman, Bath, visited the College one day last week.

Kuttes W. Landen, '88, fainted when coming from the botany class last Thursday morning. He was out again Saturday.

Last Sunday, Rev. C. F. Swift gave in the chapel another of his sermons on "The Great Redeemer's Power." The lesson was "The Penalty Within," based on Hawthorne's "Scarlet Letter."

Notice.—All who have not passed the entrance examination in U. S. History are requested to call at the English office, second floor of College Hall, 10 a. m., next Saturday, for examination.

The Union Literary Society program, Saturday evening, consisted of a declamation contest between the freshmen members of the society. C. H. Hilton was awarded first honors and S. G. B. second.

Remember the informal military hop Friday evening, March 12. Music will be furnished by Roy Belofon and Miss Meach. The attendance of all students, alumni and family is desired. All students or others who have friends they wish present at the hop should call on R. L. Davis at once and secure some of the printed invitations which must be used in such cases. Come and have a good time. Music will begin at 8 p. m. as usual.

Dr. Edwards asked a新鲜man, not long since, to write an introduction to the "Life of Luther." The freshness looked somewhat pained, but said nothing. The next day he approached the doctor, and, scratching his head, said "excusingly." "Would you mind telling me who is the author of that book?" It transpired that he had spent considerable time in the library in an unfruitful search for such a book beginning with "L." the name of which he had forgotten.

Some two years ago Mr. A. A. Crozer contracted a very severe cold from which he has never fully recovered. His case is, as well as common this winter, the cold and close weather, to his work having affected his general health to such an extent that it threatened wise that he should avoid himself, the benefit of a change of climate for a few months. He started last Thursday morning, with the sincere wish of all his many friends that he may come back to us fully restored to health.

The sophomores had been given careful directions for making and testing chlorine gas, and had been warned not to escape into the open air after a short absence from the laboratory, the professor in charge returned soon the room filled with chlorine gas and the student's coughing from the effect of it. At a white heat he rushed up to the student whose generator was giving the mischief, asking: "What do you mean by this? What are you made of, Mr. C. ?—I am afraid you have studied chemistry long enough to know."—Alumnus Reunion.

SECOND ANNUAL EDITION OF THE CHICAGO M. A. C. ASSOCIATION.

Reported by R. S. Baker.

Twentieth anniversary celebration of "The Chicago," the members of the Chicago M. A. C. Association, held their second annual reunion and banquet on Saturday evening, Feb. 27, at the Union League Club. They began to gather at six o'clock, and for the next hour there were many hearty greetings and hand shakings, which only perchance were loved Alma Mater can give. Some of the "boys" were gray-haired and looked with the special interest of their having passed the prime of life to escape into the prime of a golden age. After a short absence from the laboratory, the professor in charge returned soon the room filled with chlorine gas and the student's coughing from the effect of it. At a white heat he rushed up to the student whose generator was giving the mischief, asking: "What do you mean by this? What are you made of, Mr. C. ?—I am afraid you have studied chemistry long enough to know."—Alumnus Reunion.

We have during the last quarter of a century observed the effect of a broad frame of education which has been accepted by the business man of the West. We should be impossible to return to the older methods and the processes, and to force a public sentiment and a public demand for a broader education. From this first spring the idea of educating the farmer and of making him an applied science.

It is history—that the first experiment station was established in a small town near Leipzig, Germany, in 1813. Now there are three hundred such station.

We all know that our Alma Mater was the first agricultural college established in America, and that was more than one hundred years ago. There is an old saying that they who do not forget the good days are not wise, and that they who forget the college are then ready to conduct a reformation. Many and many of these men and of our departed brethren grow more beautiful and their deeds appear more splendid. Their memory is within the memory of every alumni. His address, in the presence of the great university, was received with enthusiasm, and the time and the dead, may our recollection of him be of our parted brethren find they are known as men of energy, culture and honor. These men and of our departed brethren find they are known as men of energy, culture and honor. These men and of our departed brethren find they are known as men of energy, culture and honor. These men and of our departed brethren find they are known as men of energy, culture and honor. These men and of our departed brethren find they are known as men of energy, culture and honor. These men and of our departed brethren find they are known as men of energy, culture and honor. These man who were our guides and our counsellors, and whose memory we honor and revere; and as time increases the distance between the living and the dead, the memory of these men and of our departed brethren grow more beautiful and their deeds appear..

We do not forget the co-workers who have been the creators of modern education. We are honored tonight by the presence of the most notable of them. Dr. Henry Tolman, Bath, visited the College one day last week.

The Agricultural College had birth in the early fifties. The old fashioned classic college had for centuries furnished the sole source of a higher intellectual training. During the predominance of these older institutions, the farmer, the mechanic, the artisan and the mercantile man were left to depend on physical processes, and only by common sense and handicapped by reason, superstition, while the opposed a heartened man a motivated boy who learned to do his work, as the trip hatter ascends and descends with mechanical regularity and with a grace behind it. That these men and of our departed brethren grow more beautiful and their deeds appear more splendid. Their memory is within the memory of every alumni. His address, in the presence of the great university, was received with enthusiasm, and the time and the dead, may our recollection of him be of our parted brethren find they are known as men of energy, culture and honor. These men and of our departed brethren find they are known as men of energy, culture and honor. These man who were our guides and our counsellors, and whose memory we honor and revere; and as time increases the distance between the living and the dead, the memory of these men and of our departed brethren grow more beautiful and their deeds appear even more splendid. Their memory is

We shall gladly welcome you all to the Triennial Alumni Reunion which will be held at the College next June. The secretary then read greetings which he had taken the initiative in the formation of an alumni
always on top....

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and Winter Russia

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**mistake

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Should Students Use Tobacco?

If the student wishes to increase his weight, height, chest girth, and lung capacity, and presumably, therefore, his general health and his ability to do his work properly, he certainly should not use tobacco, if he heeds Modern Medicine, which publishes the following remarks on the use of tobacco in American colleges. It says:

"A crusade against the use of tobacco has recently been started in a number of the colleges here and other American institutions. It is a recognized fact that tobacco, when taken into the system in any form, not only does not aid to physical health, but to the intellectual development as well. The results obtained in schools where the use of tobacco is allowed is not only discouraging, and show clearly the harmful effect which this poisonous weed has upon the system. It is to note that some of the best colleges of our country have taken a decided stand against its use by its students. The University of Virginia has issued an ordinance that those students who are unwilling to forgo the use of tobacco shall not take an academic degree. It will have their fees returned, and their names taken from the books. The Ohio Wesleyan University has published an official notice forbidding the use of tobacco in any form, and other universities have made similar ordinances.

That to this opposition to the use of tobacco by the lad who is growing both in body and mind is solidly founded. Students who observe the following facts are held to show:

- In some of the higher educational institutions of this country, studies have been made to obtain statistics as to the effects of tobacco on the educational efficiency of a student. In 1899, Dr. Hyman, a physiologist of Yale published the results of observations on the undergraduates of that university. In a class of one hundred and forty-seven students, he found that in four years seventy-seven students did not use tobacco surpassed the twenty who did. It is said that the increase in the average height of seventy students was 0.34 per cent in increase of weight, 24 per cent in increase of height, and 34 per cent in increase of chest girth. The advantage is not only physical but moral. In point of lung capacity, the abstainers showed an average gain of 7.5 per cent over that of smokers or chewers. Among the undergraduates at Harvard it was found that during the four years the abstainers from tobacco gained 24 per cent in increase of height, 42 per cent in chest girth, and 75 per cent in lung capacity over those who used tobacco."

Real Education.

H. CARABASIAN, '99.

Among the long series of important questions that confront intelligent, thoughtful man, there is one which has a place of prominence for itself; a question that is born with the baby, follows it along the troublesome path of life, and after its death remains to its heirs as a blessed or cursed inheritance. This question asks: What is the value of a person individually and that of a nation collectively? It is education that should be aimed to answer to the question, for in order to be effective, it must, and will be in the future, the great factor of the civilization of the world. But what is real education? The object of the mind, the object of life, makes him clothed and shod, and makes him to fear and respect the power of the strong. Then education to be rightly called real must contain the important branches mentioned above; those are its consistuting parts; any one of them is deficient by itself alone; and an education that is not worthy to be called Real Education.

Gymnasiums in Eastern Colleges.

EDITH A. SMITH, '90, of the Feminian Society.

Some people are inclined to connect physical training with the "new woman," and hence consider it un­womanly.

Let us go back through history and we will find that it is no newer than Plato's Republic, wherein he says, "We shall soon have a system of physical training as that, the race may be continued in the highest perfection of useful and physical vigor.

Spartan girls were subjected to a course in physical training the same as their brothers, and as a result they were handsomely and more attractive than the delicately nurtured Athenians.

As time went on, women autocratically undertook to do, the same thing; and now, until they were practically weak fanged, narrow chested, wasp waisted bodies. Girls who attended college were not encouraged to do so, men, because of their delicate health; but this is being overcome by the physical education that has been introduced into nearly every college, and they are becoming stronger bodied and brighter minded as a class. For this reason the Judo form is the best from all stand­points.

Colleges especially are directing their attention along this line, and nearly every one has a gymnasium where each student exercises at least one hour a day. In the eastern colleges in Vassar, I will try to describe the method pursued there. The physical system is used.

Each student is dressed in a uniform of blue flannel, which consists of a loose blouse and a short, full, divided skirt.

From the time a girl enters college, she is obliged to take gymnasium work three times or more of out door exer­cise daily.

In preparation for their exercise, they are allowed to dress directly in front of the other, and "want coats." They then take exercises to use nearly every muscle in the body. If there is over any complaint that an exercise or movement causes pain, that movement is rejected until it is painless. They are encouraged to explain the exercise in practice.

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whole well dried before the fire. A print thus prepared, when exposed to light, receives the rays on the phosphorescent sulfid beneath, which becomes luminous in proportion to the number of rays which have taken place; it is therefore luminous in the dark by the light transmitted. A silver print is soon destroyed by this process, for the solid attains the image; it can be applied to the carbon or other processes not having silver as a basis. Moonlight pictures and landscapes give the most striking effects as luminous photographs.

A Bee That Stows Its Honey Away in Bags.

The following description of the leaf-cutting bee, which packs its honey away in underground burrows, in tiny bags made of bits of leaves, is given in Knowledge (November 27) by Francis M. Duncan:

"The leaf-cutting bee (Megachile centuncularis) is by no means a remarkable looking insect, and from its humble exterior no one would imagine it to be gifted with a high sense of intelligence; it does, however, display a surprising amount of ingenuity in the construction of the cells in which it places its eggs.

"These bees are black in color, with reddish hairs on the thorax and white upon the head. They are somewhat smaller than the hive bee, and are to be seen in most gardens during the summer months mostly engaged cutting rose leaves with their strong-toothed mandibles.

"The bee burrows a hole in the ground or in decaying wood, forming a tunnel in which to place the cells; it then flies away to the nearest rose bushes, and, selecting a leaf, cuts a portion from it, which it carefully rolls up and flies off with to the burrow. This maneuver is repeated several times until ten or twelve pieces have been cut; the bee then enters the tunnel, and begins to twist and fold the leaves, making them fit together into a sort of funnel-shaped core, something like a thimble. In this form are these cells constructed that they may be removed from the burrow without falling to pieces, although the leaves of which they are composed can neither sewn nor gummed together.

"As soon as the cell is finished, the bee proceeds to make a cake of honey, covered with pollen, on which the future inhabitant will live. It then lays an egg beside the cake, and flies off to find another leaf with which to close the entrance of the cell.

"A circular piece is cut from a leaf, and the bee flies home with it, and so closely has this little circle been cut that it exactly fits the opening, into which the bee pushes it, closing the cell completely. So that there may be no fear of any honey leaking out, the bee flies off again and cuts two more circular pieces from the rose which it fixes securely over the first one. When this cell is finished a second one is constructed which joins the first, so that eight or ten cells are usually to be found together in one burrow. When all is finished the leaftcutter closes the perpendicular shaft leading to the burrow and flies away.

"The larva, when full grown, spins a silken cocoon within and united to the sides of the cell."

On passing Harper's College to his way to his first inauguration, President Lincoln remarked to a friend:

"Ah! This is what I have always regretted—the want of a college education. Those who have it should thank God for it."

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EVERYTHING NEW
Special Rates to M. A. C. Boys
R. ENNEN, Proprietor

How is This? ..SUITS.. MADE TO ORDER
FOR $15.00 AND UP
Come in and examine our goods and get prices. They will astonish you.

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The Cost of the salt you put in butter is a small matter; the effect poor salt has upon the quality of the butter is a big matter. The butter salt question will be settled for all time, for you, after you've once tried Diamond Crystal Salt.

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The purest salt, and finest in quality and flavor. At all dealers in barrels (280 lbs.) and bags (56 lbs., 28 lbs., and 14 lbs.).

DIAMOND CRYSTAL SALT CO., St. Clair, Mich.

Read Examinations
For Admission to
The Michigan Agricultural College
In Your Own County

Examination questions will be sent by your County Commissioner of Schools in time for the Regular Examination of Teachers, March 25 and 26.

By taking the examination now you will avoid all delay when you enter College.

The next College Year begins Sept. 13, 1897.
ATHLETICS

Some of the boys are working a little too hard. A few baseball enthusiasts indulge daily in light practices in the armory.

Warren and Fisher are getting their pitching arms in condition. Both are in excellent form and will make this year's team strong in the box.

The next game will be played on home grounds, Saturday, April 17, M. A. C. at Albion. According to Miss Mary Proctor, the senior, the M. A. C. Athletic Association has arranged games for the coming season as follows:

Saturday, April 24, Albion at M. A. C.
Saturday, May 1, M. A. C. at Kalamazoo.
Monday, May 3, Hillsdale at M. A. C. Saturday, May 8, M. A. C. at Olivet.
Saturday, May 15, Kalamazoo at M. A. C.
Saturday, May 22, M. A. C. at Hillsdale.
Monday, May 31, Olivet at M. A. C.
Saturday, May 29, is as yet an open date.

A meeting of the M. I. A. A. directors was held at the Thibbs Hotel in Jackson last Friday evening, and the following officers were elected: President, F. E. Dunster, Albion; first vice president, H. L. Becker, M. A. C.; second vice president, H. C. Jackson, Kalamazoo; secretary, H. D. Leonard, Olivet; treasurer, H. F. McDonald, Ypsilanti.

The next field day will be held June 4 and 5, but the place has not yet been decided upon. Albion, Kalamazoo, Ypsilanti and Hillsdale are all working for it.

A proposition was brought up to play the baseball games on the percentage plan, and a committee composed of Bowen, Jackson and Leonard was appointed to arrange a schedule of games. McDonaldson of Hillsdale will try to arrange a series of sports in such a way as to allow those contesting for the all-state medal longer rests between events. A gymnastic team has also been added to the list of sports.

One of the most hopeful signs to the members entering the athletic plan, and a committee composed of Bowen, Jackson and Leonard was appointed to arrange a schedule of games. McDonaldson of Hillsdale will try to arrange a series of sports in such a way as to allow those contesting for the all-state medal longer rests between events. A gymnastic team has also been added to the list of sports.

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I am always glad to hear from the College and shall always be pleased to do what I can for the agricultural education of the state.

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"Some of my happiest days were spent at the old College and I wish that continued prosperity and success which it so well merits."

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"Be assured my remembrance of the College, though attended in the darker hours of the civil war, is like a dream of yesternight. It has become more than a brick wall in the midst of oak stumps. It is a far and dear memory."

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