

The M. A. C. Record.

VOLUME I.

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NUMBER 31



CLASS OF '96.

THE GRADUATING CLASS.

The class of '96 numbers 28 members, of whom only one is of the gentler sex. There are representatives from 17 counties in Michigan, one from Utah and one from Japan. A rather poor photograph of the class resulted in an indifferent cut which appears above. Two or three faces are not shown in the picture; those of W. K. Clute, Wahey Matsura and J. H. Steele. The names of the graduates following are arranged by courses for convenience of reference. Those receiving the B. S. degree in agriculture are W. T. Barnum, J. T. Berry, C. H. Briggs, J. H. Briley, R. B. A. Buek, R. L. Clute, W. K. Clute, R. E. Doolittle, L. P. Fimple, A. F. Hughes, L. J. Hughes, F. N. Jaques, C. A. Jewell, L. R. Love, W. J. McGee, N. M. Morse, L. D. Sees, J. E. W. Tracy, S. W. Tracy, Miss Bertha M. Wellman, O. P. West and S. B. Young; in mechanical engineering, Wahey Matsura, C. E. Meyers, E. D. Partridge, H. E. Smith, J. H. Steele and G. W. Williams. The names of the literary officers of the class will be found in an account of the class-day exercises.

HIS "FINAL EXAMINATION."

Last Sunday evening, at the residence of the bride's parents in Lansing, Ernest D. Partridge, of the present graduating class, was married to Miss Elizabeth M. Truman, the Rev. H. S. Jordan officiating.

The ceremony took place in the front parlor under a canopy of green mingled with flowers, and was witnessed by about sixty invited guests. The bride, in pale blue silk and carrying a bouquet of Marechal Niel roses, was charming; and the groom—well, he was just plain, honest, brilliant "Pat," just as we all love him best. The presents were numerous, nice, and useful.

Mr. and Mrs. Partridge leave tomorrow morning for their future home, Provo City, Utah, where Mr. Partridge has been elected professor of mathematics in the Brigham Young Academy. Their many friends unite in wishing them God-speed.

COMMENCEMENT WEEK AT M. A. C.

Work of a Successful Year Closed by a Pleasant Week Full of Appropriate Exercises—Many Old Students Visit Their Alma Mater.

The memory of the class of '96 goes not back to the time when Nature has made such a strenuous and successful effort to please as she has this year. Not in many years have the lawns been so green, the flowers so bright; never have the walks and drives, the gardens, orchards, and fields been in such good shape, or refreshing rains fallen so bountifully at Commencement time as in this year of our Lord 1896.

BACCALAUREATE SERVICES.

The exercises of the week began with the Baccalaureate Services on Sunday afternoon. The armory had been appropriately decorated for the occasion with plants from the greenhouses, and flags and bunting; and the fierce heat of the morning was slightly modified by a cooling breeze. Nevertheless, those who attended the exercises dressed as coolly as possible, and fans played an active part in the exercises.

While the organist, Mr. Stone, played the "March Romaine," the Seniors marched to seats reserved for them immediately in front of the platform. The singing of the Doxology was followed by an invocation by the Rev. Fayette Thompson, of the Central M. E. Church, Lansing, and music by the College choir. Bible reading, the fifty-third chapter of Isaiah, by Rev. Thomas Chalmers, was followed by music by the First Presbyterian Quartet; prayer by Rev. H. S. Jordan, of the First Presbyterian Church, Lansing, and music by the College choir; after which the Ninetieth Psalm was read responsively, the Rev. O'Dell, of the Baptist Church, Lansing, leading. Following an anthem, "Will Praise Thee," by the choir, President Snyder gave the announcements for the week; and the congregation united in singing "Praise to God."

The Rev. Thomas Chalmers, of Port Huron, delivered the Baccalaureate address, taking for his subject

"The American Problem." It was a magnificent effort, full of earnest thought and valuable suggestion; and the large audience listened attentively as the young orator proceeded in a clear, ringing voice to send every word of his address home to their hearts. We give portions of the address in another column, and only regret that we have not space for all of it.

After music by the First Presbyterian Quartet, and "America" by the congregation, the Rev. Zimmerman, of North Lansing Presbyterian Church, closed the service with a benediction.

JOINT CELEBRATION OF SOCIETIES AND FRATERNITIES.

Owing to the heavy rain which came about 8 o'clock Tuesday evening, many Lansing people who would have attended the medal contest were obliged to remain at home. The program consisted of three contests, interspersed with music. Part first was a declaimer's contest for a silver medal and included two declamations: "The Boat Race," by Miss Sadie Champion, Feronian Society, and "The Diver," by C. D. Butterfield, Eclectic Society. Part second was an oratorical contest for a gold medal. The subjects and contestants were, "Our Politics," N. M. Morse, Olympic Society; "The Abolition of War," O. P. West, Columbian Society; "The Universal Brotherhood," L. D. Sees, Hesperian Society. Part third was a debate for a gold medal, subject, "Resolved: That U. S. Senators Should be Elected by Direct Popular Vote." B. A. Bowditch of the Phi Delta Theta Fraternity, had the affirmative, and L. S. Munson, of the Union Literary Society, the negative. With one exception the contest was good—four of the contestants had to be prompted. This should not be. The sooner young men are made to depend on themselves the better for them.

REVIEW OF THE BATTALION.

From 3 to 4:30 o'clock Wednesday, occurred the annual inspection of the Cadets Corps. Before the hour for inspection had arrived, several hundred vis-

itors had assembled, in carriages and in groups where shade could be found, around the parade ground, to witness the exercises.

Promptly on the hour the four companies marched out and formed in battalion. Colonel P. D. Vroom, Inspector General of the United States Army, accompanied by Colonels Cook and Shiebel and Major Sanford of the Michigan National Guards, took positions on the east side of the parade ground. Then the battalion marched in review, after which the various companies and the band were inspected. Next followed battalion and company drill, and the publishing of orders. The officers and non-commissioned officers for next year are as follows:

Captains Amos, Van Norman, Simmons, Hart; First Lieutenant and Adjutant, Chittenden; First Lieutenant and Quartermaster, Shaw; Lieutenants, Herrmann, Goodwin, Hagadorn, Patriarche, McLouth, Munson, Elliott, Lowry, Redfern, Rigterink, Fulton; Lieutenant and Chief of Artillery, Parker; Lieutenant and Signal Officer, E. A. Robinson; Lieutenant and Chief Musician, McElroy; Sergeant Major, Morrow; Color Sergeant, Robb; Drum Major, E. A. Calkins; First Sergeant, Warren, E. R. Austin, Nichols, F. T. Williams, H. A. Eldridge, Marsh, Gunnison, Lapham, Kedzie, Robison, Kling, Rose, Sanderson; Corporals, A. S. Eldridge, R. W. Clark, Bolt, Hoag, Osborne, Wallace, Christensen, Bartholomew, Boyer, Flynn, Libby, Winegar, Gagnier, W. Green.

After reading the promotions, Adjutant Buek, in a few well chosen words, presented Lieut. Lewis with a handsome sword—a present from the Cadets, as a mark of the esteem in which he is held by the students, and as a souvenir of the four years spent by the lieutenant at M. A. C. Lieutenant Lewis was taken entirely by surprise, and responded feelingly in a few words of thanks. Both sword and scabbard are handsomely mounted in gold and silver. On the scabbard plate is engraved, "Presented to Lieut. E. A. Lewis by the Students of M. A. C., 1896," and on the blade of the sword, "E. A. Lewis."

Lieut. Lewis was not himself again until drill was resumed. After maneuvering the companies a short time, he gave them skirmish drill, the squads firing as they advanced across the parade ground toward the president's house. At the top of the hill they fixed bayonets, and with a yell that could mean nothing but victory, charged in the direction of the pear orchard. The yells and the noise of both soon died out, and it was not long before the tired "vets" came marching back without the loss of one, to be mustered out for the year—for the last time by their beloved Commandant, Edson A. Lewis.

SOCIETY REUNIONS.

Wednesday evening was devoted to Society reunions. This year only the Olympic and Union Literary Societies held formal parties in their respective rooms. The other societies, after having literary programs in their rooms, united in an informal hop in the armory. The Lansing City band furnished music during the early part of the evening. When time for refreshments came, however, through some unfortunate oversight, no provision was made for refreshing the band; and when the dancers came back their music had started on foot for Lansing.

The tenth annual reunion of the Olympic Society was held in its rooms, which were nicely decorated by plants, green sprigs and other decorations, which together with the new floor made the rooms appear better than at any time since the society was organized.

The program opened by the president's address, by Mr. C. A. Jewell, which was followed with a history by Mr. W. M. Backus, and a poem by Mr. Patriarche.

After a selection of music by the orchestra, the Society listened to an oration by Mr. W. H. Marsh, and a prophecy by Mr. W. R. Goodwin, which was also followed by a selection of music.

The Society then enjoyed its "Annual Hop" till a late hour and departed to a banquet in Club A dining hall.

There were present at the reunion, B. A. Holden, '91, of Hastings; E. A. Holden, '89, of Lansing; H. W. Mumford, '91, and C. C. Pashby, '94, of the College, all of whom belong to the Society Alumni.

The Union Literary Society celebrated the twentieth anniversary of its existence. The program consisted of an address by President T. T. Berry, a poem by W. J. McGee, a prophecy by R. H. Slocum, and a society paper by G. N. Eastman. After dancing a short time, the society and guests repaired to Club D, where a

banquet was served and toasts were given. Then dancing followed until a late hour.

Among the guests from outside were Mr. and Mrs. Briggs, Lacey; Mr. and Mrs. Berry, Belding; Mr. and Mrs. M. A. Jones, with '84, Lansing; Mr. and Mrs. Henry Wellman, Ypsilanti; Miss Gertie Maxfield, Coopersville; Miss Anna Weaver, Marlette; Miss De-laforce, Detroit; Miss Anna Wellman, Okemos; a sister of R. H. Stocum; three sisters of L. R. Love, and S. F. Scott, '94, Washington, D. C. Bristol's orchestra furnished music.

CLASS DAY EXERCISES.

The program on Thursday afternoon was well rendered. The officers are to be complimented for the excellent spirit manifested throughout. There were no low jists, no thrusts at any one to mar the good feeling which prevailed. Besides the address of the class president, Geo. W. Williams, the history by L. P. Fimple, the oration by C. A. Jewell, the paper by N. M. Morse, the poem by L. D. Sees, and the prophecy by R. B. A. Buek, the address to undergraduates by R. E. Doolittle was to us a novel feature. Mr. Doolittle concluded as follows:

"You, the students of this College, have a double responsibility; while upholding your own individual honor you are also sustaining the fair reputation of our beloved Alma Mater. Let no action of yours ever stain her honor or dim the bright lustre of her glory. But may you all have courage and strength to do what is just and right, without apology or complaint; remembering that education is not a simple acquisition of knowledge, but a cultivation of living forces; that without excellence there can be no success, no real progress, nothing worthy of mention. Let not the question be, 'how shall I get through with the least effort?' but 'how many I honorably reach the grandest success possible for me to obtain?'"

PRESIDENT'S RECEPTION.

The president's reception, given Thursday evening, from 8 to 10, marks the last social function in which the members of '96 will figure as a class. About two hundred guests were present, including the members of the graduating class, their visiting friends, and the faculty. The rooms of the president's residence were beautifully decorated with an artistic arrangement of potted plants, flowers and smilax, with electric lights shining between. The large hall was divided by a screen, back of which a mandolin orchestra of five pieces played during the evening. Masters Plummer and Elgin Mifflin, Jr., acted as ushers. President and Mrs. Snyder received in the library. Refreshments were served in the dining room, which was divided from the parlors by a gate of smilax, and was presided over by Mrs. Elgin Mifflin. At the hall entrance to the dining room Misses Wheeler and Kedzie served cooling draughts of lemonade. The evening passed so pleasantly that all forgot the probability of its being the last, a farewell meeting of president and faculty with the class.

COMMENCEMENT EXERCISES.

Friday morning was ushered in by a heavy shower, followed by bright, cool weather, which put everybody in condition to thoroughly enjoy the final commencement exercises.

By 10 o'clock a large crowd, composed of faculty, students and alumni, and their relatives and friends, had assembled in the Armory. Shortly after 10 the Lansing City band struck up the "Detroit Journal" march, and faculty and seniors took seats on the platform. Prayer was offered by Rev. P. J. Maverty, of Jackson, followed by another selection of music by the band.

The first address was on "Transportation," by Ernest D. Partridge, of Provo City, Utah, the College representation of the Mechanical department. Mr. Partridge gave a review of the development of transportation facilities in the United States in a carefully prepared, well read paper.

The next address was by Clifton H. Briggs, of Lacey, Mich., representative of the Agricultural department, who took for his subject, "Sir John Lawes." Mr. Briggs spoke clearly and at some length of this eminent pioneer in agricultural experimentation.

After another selection of music, Dr. Edwards announced the winners in the Society contest, which took place on Tuesday evening. The winner of the silver declaimer's medal was Miss Sadie Champion, of the Feronian Society; of the gold orator's medal, L. D. Sees, of the Hesperian Society; of the gold debater's medal, L. S. Munson, of the Union Literary Society.

President Snyder then made a short but impressive address to the graduating class. He said to them that they had been struggling for years, and as a class had done their work well. "I may be permitted to say that the few months I have spent with you have not been marked by a single unkindness or discourtesy. I shall always feel grateful to you for your friendly greeting at the outset and your considerate treatment throughout our short journey together."

He reminded them that they must now cut loose from their moorings to meet the stern realities of life; that success does not always come at bidding; that a successful career is not always attended with political preferment or financial gain; and that he who works simply for either of these ends can scarcely ever be really happy, and in the highest sense successful.

"One of the great lessons that our American people have yet to learn is how to live economically and keep within their means. Some of you, and perhaps all of you, have learned this lesson; and, if you make every dollar in the future do as much for you as the dollars you have spent at this College, you certainly will be successful from the economic standpoint."

True success does not necessarily include financial success. Better be known to a few as an honorable, honest, upright citizen, than to many as a financial king without feeling and without conscience. There is but one road to true success, and that is through work. We should dispel the idea that we have special endowments which will make for us a short route to fame and fortune. Your records here have been made; the fairest and most comprehensive of these are not those put down on paper, but those written on the hearts of your teachers and fellow students.

"In view of the education and training which you have received, may I not entreat you to make this record worthy of your Alma Mater, which stands ready to give you encouragement and aid in any laudable undertaking, and which in turn hopes to merit your laudable support. May I not entreat you to make a record worthy of the state and nation whose liberality has given you so many educational advantages. May you at all times show your appreciation of these special privileges and ever support and uphold the dignity of the laws of this nation and commonwealth."

Be true to yourselves; make records worthy of yourselves, and cultivate a Christian spirit. Write your records so plainly that he who runs may read, there need be no flourishes, but your records should be legible. Let your light shine by having plenty of it—shine because it cannot help it. May you be faithful followers of the Meek and Lowly one. Let Him be the foundation of your life. Build upon Him the gold, silver, and precious stones of a beautiful character. Build such materials into the superstructure of your life, that when the day of testing by fire comes, they will not be destroyed, but only revealed and glorified.

"We bid you farewell with the assurance that our eyes shall follow you, expecting much, and with the prayer that your record may have your own approval in your best moments—may be clean and clear and Christlike."

The degree of Bachelor of Science was then conferred upon the twenty-eight members of the graduating class. The degree Master of Science was conferred upon C. J. Foreman, '94, and G. E. Hancorne, '91; and Master of Agriculture upon Warren H. Goss, '82, of Bangor, Mich.

With a benediction by President Caviness, of Battle Creek College, the exercises of a very pleasant commencement week was closed—the last time we shall have commencement in August.

ALUMNI AT COMMENCEMENT.

'61.

C. E. Hollister, Laingsburg, a member of the first class to graduate, who has been present at all but two or three commencements.

Judge M. D. Chatterton, with '61, M. S. '87, Lansing.

'67.

Will W. Tracy, with D. M. Ferry & Co., called to say a good word to two sons of '96.

'70.

Hon. Chas. W. Garfield, member of the State Board of Agriculture.

'77.

Prof. F. S. Kedzie.

'78.

E. D. A. True, Armada, Mich.

'79.

A. A. Crozier.

- '81.
W. W. Palmer, Vinton, Iowa.
- '82.
Warren H. Goss, Bangor, Mich., who was granted the degree Master of Agriculture. He is a prosperous farmer, and takes the Michigan Farmer, Western Rural, Scientific American and five other papers.
- '84.
M. A. Jones, Lansing.
- '85.
H. P. Gladden, G. C. Lawrence.
- '86.
Prof. P. B. Woodworth.
- '88.
Prof. P. M. Chamberlain; W. F. Staley, Washington, D. C.
- '89.
Prof. L. A. Clinton, Ithaca, N. Y.; G. C. Davis, W. L. Rossman, Lansing.
- '90.
Prof. W. Babcock, Prof. F. B. Mumford, Columbia, Mo.
- '91.
K. L. Butterfield, Prof. W. O. Hedrick, H. W. Mumford, Prof. C. F. Wheeler.
- '92.
D. W. Trine, Corvallis, Oregon.
- '93.
Daisy Champion, Lucy (Clute) Woodworth, A. B. Cook, Owosso; Jennie M. Cowley, Lansing; D. J. Crosby, W. L. Cummings, R. B. Pickett, East Springport; Lillian Wheeler, V. J. Willey, Lansing.
- '94.
C. J. Foreman, C. C. Pashby, S. F. Scott, Washington, D. C., Orel S. Groner.
- '95.
C. H. Alvord, Hillsdale, C. P. Close, Geneva, N. Y., M. W. Fulton, Robt. L. Reynolds, Pasadena, Cal., Thorn Smith, Frank Yebina.

BACCALAUREATE ADDRESS.

THE AMERICAN PROBLEM.

BY REV. THOMAS CHALMERS OF PORT HURON.

"The first impulse of every loyal son of America when he speaks the magic word that symbolizes the land of his love, is an impulse of praise. From the day our national independence was solemnly declared and the news was rung to the listening world by the old bell in the town hall tower, we have felt the deepening spell of America's goodness and America's glory coming over us. We love her for what she has done, for what she has thought, for what she has suffered. We have been entranced by the romance of her history; we have been subdued by the songs of her poets; we have listened in reverent silence to the voices of her prophets. To us America is the memory and tradition of the best that our fathers have done and said. It is something more than one of the geographical divisions of the earth. It is the story of worthy deeds and high intentions. The misfortunes and struggles of the little Jamestown settlements; the landing of the Pilgrims at Plymouth Rock; the checkered experiences of the Dutch on the islands and peninsulas at the mouth of the Hudson; the story of the Quakers in Pennsylvania, the Scotch in New Jersey—all this is a part of America. The sound of the farmers' muskets at Lexington and Concord, the ringing voices of colonial orators in the halls of the Continental congress; the midnight scene of Washington crossing the Delaware, the construction of the federal government, the later struggles for the defense and preservation of the union—all this, too, is part of what goes to make up the meaning of the term America. The motives that led these men and women from their European homes into this wilderness, the principles and impulses that controlled and moved them, the purposes and hopes that inspired them are like the life blood of American history. When men are in earnest they make history. Our fathers were not heroes for dramatic effect upon future generations. They were not acting a spectacular play.

"My young friends, you and I are not to go to sleep in the lap of the history of the past. We must make some history now. These, too, are earnest times. To us they are the most earnest times the world has known. What the past is, has been settled. Our fathers took care of that. But they cannot take care of the present nor the future. Future students of history will talk of these days. But whether they do or do not is of small concern to us. We are all interested, perhaps, in the question that will call for decision at the polls next November. But that is not the American problem. It may be a matter that we shall never have

another occasion to concern ourselves with. The financial question is not a perennial problem, though momentous for the time being. Slavery was not a perennial problem. But I want to present to you, young men, the one problem that will be as fresh in your old age as it is today and that will, Proteus-like, assume a new form at every appearance. The problem which America must solve is simply this: how to be rich and virtuous, how to be good, though possessed of all the opportunities for wrong doing, how to be unenervated by luxury. This is our problem and the forces that aggravate it are manifold and rapidly multiplying. If a current of prosperity should flow in upon us and we were suddenly possessed of all the means of a luxurious civilization, with little to do, but recline in languid leisure, and be amused by current art and literature, and the constant hearing in piquant newspapers of what wicked people than we are doing, it is questionable if our condition would not be far more miserable than the latest drama—yes, there are things more important than the ability to dress in Parisian fashion, than to provide velvet carpets for our feet, than to have hot and cold water at every turn, than to be able to hear the latest drama—yes, there are things more important even than three meals a day, or learning how to read and write, and these are the things that must be preserved. The grief of a ruined soul is bitterer than the grief of a ruined credit. If we cannot as a nation learn to be virtuous first, with a determination that the tides of prosperity can never sweep away, we pray the Lord that riches may never come, for until then we are not prepared for them. The curse that falls when virtue is lost is irrevocable. Riches can purchase no exemption. The soul that sinneth it shall die. The city that sinneth, it shall die. This is the word that is written in the soul of every moral being. It stands on the pages of Holy Writ. It flashes from the sign-boards at every turn. We may stand over the ruins of imperial Rome and on every shattered fragment of her ancient glory, we can read the inscription: 'Here lies Rome. She sinned. She learned not how to be rich and virtuous.' In the graveyard of nations this is the one repeated epitaph.

"In the presence of all these facts and standing over the ruins of shattered temples and palaces we declare that America shall not go the way of death. If she is ever to be rich she will be virtuous too. If she is to be powerful she will also be merciful and just. If she is to be learned she will be good also. She will learn this lesson. She will solve this problem, and the evil forces that resist her shall be ground in the dust. He who stands in the way, whether with vicious intent or no shall die.

"When the world has needed strong men she has found them in awkward, stammering, bashful boys. Moses, the slow of speech, was called from quiet obscurity to lead his people from the depths of degrading slavery to the dignity of an independent nation. Demosthenes was a bashful, stammering boy. Nor was it the pebbles picked by the wayside that trained his speech. It was a soul that feared for the approaching woes of his people. When England in the greatest crisis of her history needed a deliverer she found him in the uncouth Cromwell far back in the country districts. And when our own union needed a savior in the dark days of our rebellion she found him ready in the awkward, ungainly Lincoln. But what shall we do when the refining and luxurious influences of our civilization are in every home, when every boy and girl shall be accustomed from infancy to all that wealth and society can give, when the pleasures that money can purchase will be in reach of every American youth? Shall we have any Lincolns then? Or will the things that completely change the manner and purposes of living change the character also? I fear it. The average American youth is apparently not strong enough to be both rich and virtuous. The influences of destruction are more various and more powerful than they need to be for the sake of discipline. There is a surprising willingness among large sets of American youth to commit wrongs against society which only a lack of opportunity prevents—wrongs which blacken the pages of every newspaper, that leave human souls in the depths of eternal ruin, that shatter the peace of happy homes, and fill the earth with the bitter cries of broken hearts. I would sound this note into the American ear with the trumpet of alarm. There is a willingness to do evil that should send a shudder of horror through this civilization. This statement is too painful to dwell upon, but the men that know life know that it is true. They also know that though there are vast numbers of young men whose moral strength may be invincible, those young men are not as likely to be found among the idle rich as they are among the industrious middle

classes, and they know also that the sentiment of willingness to do evil too seldom meet with sturdy, denunciatory expressions of surprise among young men, all this I say is a constant source of alarm and bitter shame. And the people of this country are hardly lifting voice or hand to show whether or not their souls are stirred. And all the while the influences of ruin wax stronger.

* * * "One more lesson that we must learn in our industrial life is how to be powerful and just, how to be able to make exorbitant exactions but not do it, how to be able to grind labor without doing it, how to be able to have humanity in our power and be merciful. Otherwise when by the changes of fortune certain men become rich and others poor, as it will perhaps be to the end of our natural history, there will be misery and destitution, hatred and hunger, starvation and curses. The feudal lords of old learned not how to be powerful and just and their power was taken from them, and the sober, earnest men that make and change history buried feudalism in the grave of the 'fried and found wanting.' This is the lesson of history to the rich men of our day. If they are powerful they must also be merciful and just. The lately organized coal combine must not take advantage of their power to exact exorbitant prices for fuel in these days. They have the legal right to do so if they will, but it will mean that weak women and hungry children will shiver with cold. It will mean a harvest for the hearse. I know a great deal I am saying will be regarded as visionary by many men who are not familiar with the impressive facts of history, who are unaware that America has any particular problem to solve. They ask us what can be done about it and precisely there we confess is the problem. While our laws are as they are we shall protect men who have the power and the inclination to do so in crowding smaller and weaker men to the wall. Yes, we shall respect law, but we shall assign them a problem that they too must solve in the years that are upon us. They must learn to be powerful and just. The industrial peace of a great nation hangs upon it. The men who hold great power in their hands must not be the men who would betray us if they could. Do they love the people as Baron Hirsch loved his? Do our great monopoly barons love the people? If they do the people will trust them. There too is the question to apply to every politician who is lifted to a place of power where his voice or vote will deeply concern the welfare of the people whom he serves. Is he thrust into office because he is bright and promising, because he is trying to get up in the world or because he can be powerful and just? Our national aim is therefore not so much one of leveling the ranks. The ranks are intrinsically level already. It is not to make all men equally rich and equally powerful. It is that we must learn to be rich and virtuous, powerful and just, good above our opportunities to do evil, loving mercy, seeking justice.

"In the solution of this problem the Christian religion will be the controlling factor. 'All power both in heaven and in earth is given unto me,' said our Savior, and with Him the power shall remain. Whatever our distrust of other men we shall never distrust Him. He will be both powerful and merciful. There is an inseparable connection between christianity and virtue. A certain warning of declining morals is a decay in religious faith. Unbelievers do not have strong sensitiveness on moral questions. Point me to the young men whose soul feels moral questions intensely and who is an unbeliever and I will point you to a young man who will become a believer when he takes a good long look at the delinquencies, perils and aspirations of human life. He will either become a believer or a pessimist. The future is in the hands of the children of faith. It is in your hands. The staff of our old banner as it passes from generation to generation is being handed down to you. Our fathers who have carried it to honor and victory are tottering with feeble step and falling one after the other into the grave. The word they leave with us to carry the standard on. Though it may be stained by the blood of defeat we shall learn to turn defeat into victory, surrender into triumph and when we too fall beneath our burden we shall send along the message 'carry it on.' Scorn shall not dishearten us, perils shall not unnerve us, the proffer of peace shall never silence us, the threat of battle shall never subdue us. We love our land, we love our homes, our mothers and our sisters, we love our God and shall have other homes that we will love in years to come. We weep with those that weep and rejoice with those that rejoice; our hearts are often heavy when they might be glad, because men have not yet learned, though they will in years to come, how to be rich and virtuous, how to be powerful and just."

The M. A. C. Record.

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REASONS FOR GOING TO COLLEGE.

In the first place it will give you a wider acquaintance with men and the world. Companionship with fellow students from various parts of the country and from foreign lands cannot but be valuable in its influence on your present and later life. In every college there will always be some students who are to occupy prominent positions when they become men. The stimulus of associating with such persons in youth, and the value of their acquaintance in manhood are worth seeking.

In the second place, you will be in the current with all the most enterprising young men and women of your generation. It is a significant fact that more young people are seeking a college education now than ever before. Can you afford to be out of this wholesome current?

In the third place the demand was never stronger for college trained men for all positions of trust and influence. The mental discipline, as well as knowledge gained by such a course of study are the very best qualifications for success in any pursuit, whether industrial, business or professional. The farmer and mechanic, as well as the teacher and the preacher, can succeed better, be more useful, and certainly enjoy life better, with well stored and trained minds.

In the fourth place you should go to college because it is, comparatively, so easy to go. If you are without present funds, you can (1) either by teaching or other work, earn enough to begin with, trusting for the way to open as you go on; or (2) you can hire the money from some friend or acquaintance, securing them by an indorsement or by taking out a life insurance policy; or (3) you can start on pure faith and will, as many a boy has done, finding opportunities enough about the college to earn your way.

There can be no doubt that such a course of study directly helps a boy to become all that he is capable of becoming. It is with a boy much as it is with a piece of iron. The boy is worth so much in the natural state, and so is the piece of iron. We will say it is worth \$5. The same piece of iron worked into horseshoes is worth \$10.50; made into needles it is worth \$355; made into penknife blades it is worth \$3,285; made into balance springs for watches it is worth \$250,000. A college course, with its struggle and discipline, will do about the same thing for a boy, provided that he has the right stuff in him to begin with, that all this hammering and twisting have done for the piece of iron. He is worth all of fifty thousand times as much, to himself and the world, as he would be without it.

Finally these considerations are addressed as cordially to girls as to boys.—*Hillsdale College Herald*.

In many respects the alumni of every college are a great source of strength, and M. A. C. is by no means an exception to the rule. One way of showing their appreciation of their alma mater is by sending their sons to pursue a course of study. After an existence of thirty-nine years, this College has fairly made a beginning towards reaping benefits from this source. If we have made no mistake, twelve have graduated and thirteen others have been in attendance more or less, besides a number of nongraduates have furnished students from their families. C. E. Hollister, '61, furnished O. C. Hollister, '89; C. J. Monroe, '85, furnished G. C. Monroe, '91; Oscar Clute, '62, furnished Lucy M. (Clute) Woodworth, '93; A. J. Cook, '62, furnished Albert B. Cook, '93, and Katherine

Cook, '93, Will W. Tracy, '67, furnished Will Tracy, jr., '93; Harry W. Tracy, '94; S. W. Tracy, '96; and John Tracy, '96; C. F. Wheeler, '91, furnished Lillian Wheeler, '93; H. G. Reynolds, '70, furnished Robert L. Reynolds, '95; C. A. Jewell, '62, furnished C. A. Jewell, jr., '96.

INDUSTRIAL EDUCATION THE NEED OF THE COMMONWEALTH.

BY WILLIAM KENT.

An Address at the 39th Annual Commencement of the Michigan State Agricultural College, Aug. 14, 1896.

Shortly after my acceptance of the invitation of your president to make an address at this commencement, he sent me a copy of the catalogue of the College, and at the beginning of the descriptive matter I find this sentence: "The constitution of Michigan requires that the Legislature shall provide for the establishment of an Agricultural school for instruction in Agriculture, and the natural sciences connected therewith." [Revised Constitution, 1880, Art. XIII.]

These words fill me with profound respect and admiration for the makers of the revised constitution of this state. It seems remarkable that as early as the year 1850 they should have foreseen the need of the state for such a College, and that they should have been so strongly impressed with that need that they incorporated a provision for the College in the constitution. And, although five years passed before the Legislature obeyed the mandate of the constitution by passing an act for the establishment of the College, and two years more elapsed before the College was opened, still the date 1857 was so early that it enables Michigan to claim that it has the oldest College of its kind in the country.

That date was five years earlier than that of the Morrill Land Grant Act, passed by the U. S. Congress in 1862, which has been the foundation of the Agricultural Colleges, or of the departments of agriculture and mechanic arts in the universities in most of the other states, and which has largely supplemented the endowment of this College.

IN ADVANCE OF THE AVERAGE SENTIMENT.

Both the provision of the Michigan constitution of 1850 and the Morrill Act of 1862 were far in advance of the average sentiment of the people. It often so happens in legislative enactments. The makers of the constitution of the United States, the grandest political instrument ever framed, builded so well that their far-seeing wisdom is a matter of astonishment to us today, but it was with the utmost difficulty that their work was adopted by the states, and only the pressure of necessity compelled its adoption. It was far in advance of the average wisdom of the people. So it is usually with legislation connected with educational matters. The establishment of public schools was opposed by a large portion of the community. "If a man wishes to educate his children let him pay for it. It is not right to tax the public for his benefit," said the objectors. Later, when high schools were proposed, the same argument was used, slightly modified. It is all right, said they, to teach a boy the "three R's," but the public should not be taxed for teaching them the higher branches. This argument against the high schools is still occasionally heard, but it has never, so far as I know, prevailed to such an extent as to cause the abandonment of a single high school after it has been established. The Morrill Land Grant Act of 1862, through which the general government presented to the several states millions of acres of the public lands to aid in the establishment of schools of agriculture and mechanic arts, was so little appreciated in some of the states that the proceeds of the sale of the lands were frittered away or badly administered, so that the benefits derived from the Act were far less than they should have been. I am glad to know that this was not the case in the state of Michigan, and that the grant of the government has been so well administered that the present annual revenue from it is \$42,000, or more than four times as much as is contributed this year by taxation of the people of the state, while the United States' supplementary grant of 1890 contributes \$22,000 additional. Thus, \$64,000 of the revenue of this College is due to the far-seeing and beneficent paternalism of the United States government and only \$10,000 to the state of Michigan. This latter burden of taxation upon the people of the state is so heavy, as is stated in a recent number of the College RECORD, that a property owner whose property is assessed at \$4,000, pays a little less than 4 cents a year to the College.

This burden, however, is so heavy, in the opinion of

the editor of a Michigan country newspaper, that he would be willing to sacrifice the College in order to get rid of the burden. He says: "This institution should be merged into the State University, to the end that the \$3,000,000 tax may be whittled down. Were the voters of Michigan permitted to take action upon the matter they would vote either for consolidation or for the wiping out of the expensive Lansing concern altogether." I have no doubt that the editor represents the opinion of only a small portion of the least intelligent of the community, and that his statement is a slander on the voters of Michigan. The support of higher education has never gone backward in the United States, and it is inconceivable that the state of Michigan, which was wise enough 46 years ago to put in its constitution a provision for founding its Agricultural College will ever be so foolish as to abandon it.

The College is here, and is here to stay, but, although it is nearly 40 years old, has, as far as I can judge, a good location, ample endowment, splendid equipment, well qualified teachers, an admirable system of instruction, free tuition, and very low expenses for board, everything in fact which such a College should have, it is still so far in advance of the times and of the popular sentiment that it is not appreciated as it should be by the citizens of the State in general, and by the farming community in particular. The proof that there is this want of appreciation is this single statistical fact: The College has in its Agricultural Department 269 students, of whom 39 are from outside of Michigan, while the last census shows that 208,444 men over 21 years of age are engaged in some form of agricultural work in the State. That is, there is only one student from the state in the College to every 900 men of full age engaged in agriculture. If each family has on the average five persons, only one family engaged in agricultural industry out of every 180 has a boy in the College. Making every allowance we please for the poverty of many farming families, and for the fact that many families do not contain boys of College age, still the figures show that the reason there are only 269 agricultural students here is that the farmers in general are not willing that their sons should come here.

SMALL ATTENDANCE NOT THE FAULT OF THE COLLEGE.

That the farmers' sons do not come here is not the fault of this particular College, of its methods or its teachers. If that were the trouble we would find the farmers sending their sons to Agricultural Colleges in other states, which they are not doing. It is not due to the fact that it is not right to give a farmers' boy such an education as this College affords, for there is no such fact; the fact is just the reverse. It is not at all probable that the reason is that the farmers are parsimonious; I do not believe that they are. The only reason, in my estimation, is that the farmers in general are not yet educated up to the belief that the course of instruction given in this College would be of benefit to their sons; in fact many of them are decidedly prejudiced against such a course of instruction.

The farmers are not to be blamed for this lack of education or for this prejudice, for in the case of the vast majority of them there has been nothing in the whole course of their lives or of that of their ancestors which would tend to free them from such a prejudice. We might as well condemn the men of the middle ages for their neglect of and disbelief in the natural sciences, the men of the 15th century for their disbelief in the theories of Columbus, and the men of the 18th century, even after the electrical discoveries of Franklin, Volta and Galvani, for failing to invent the telegraph. There is nothing in the whole realm of human opinion in which the majority of men are so conservative as in matters of education. How many years it required from the time of Froebel until the idea of the Kindergarten was so generally accepted that it became adopted in even a few of our public schools. After the excellence of the Russian system of manual training was shown in our Centennial Exhibition in 1876, how long it was before the manual training idea became at all popular in this country. It was not until after millions of dollars had been spent by some of our philanthropic rich men in establishing private manual training schools, many books had been written and lectures given upon the subject, that public boards of education began to consider the system, and manual training was introduced into the public schools.

It is not only among uneducated men that prejudices in educational matters exist to such an extent as to impede progress, for manual training was opposed by some of our most eminent educators. The fetish of the study for years of Greek and Latin as necessary for all educated men still exists in the

nings of many learned teachers, and their theories and prejudices in favor of the old classical education are still responsible for wasting the time of thousands of young men and for preventing them from acquiring knowledge in other branches which would be of vastly greater benefit to them.

So the farmer is not to be blamed for his lack of knowledge of the benefits of an Agricultural College course. We must have patience with him. He will grow to this knowledge, or his successors of the coming generation will, and the College will be crowded with students, and it will be asking the state for increased appropriations in order to provide buildings to accommodate them.

THE DAY OF THE AGRICULTURAL COLLEGE IS COMING.

Let not the advocates of the Agricultural College be discouraged. Its day is coming just as the day of the technical engineering college has already one. It is just 20 years ago since I graduated from a mechanical engineering college in the east. There were then probably not over 50 graduates of such colleges in the country, and they were a drug in the market. It was panic times then, but the workshops of the country did not appreciate the graduates, and the few who obtained work in these shops had to go in at the very bottom, as apprentices. Now the conditions are entirely different. There are some thousands of such graduates in the country and there is a steady demand for them. They soon rise to hold the best positions in the shops, and the owners of the shops are sending their sons to these colleges to obtain the kind of education that will be of most use to them. Some of the graduates are now old enough to have sons of college age, and they are sending them to the same colleges. Such, I predict, will be the course of the Agricultural Colleges. The graduates of this College will become the superintendents and owners of the best farms in the country, and they will send their sons here in ever increasing numbers.

AGRICULTURAL COLLEGES NOT CHARITABLE OR CLASS INSTITUTIONS.

Meanwhile, it is the duty of those interested in the College, as professors, instructors and graduates, not to cease from their work of educating the farmers of the State as to the usefulness of the College. Let them, through their College paper, through the agricultural papers of the country, and through Farmers' Institutes and fairs, cause the work of the College to become known, and in due time the farmers will come to believe in the College, not only as a place to which they should send their sons, but as a direct benefit to the whole State, as an institution which is so important to the welfare of the State as a whole that it will never fail to receive their support when its needs compel it to ask additional appropriations from the Legislature.

Let us now consider a few thoughts which lead up to the belief that the Agricultural College is not in any sense a charitable institution for the benefit of its students, nor even a class institution provided for the benefit of the agricultural interests at the expense of the taxpayers at large, but rather that it is a state investment which will return to the State its cost hundreds of times over, an institution designed to safeguard the state against the dangers of the industrial and commercial wars of the future, just as West Point is designed to safeguard the nation against foreign invasion.

In New York city there exists an apprentices' library, founded by the Society of Mechanics and Tradesmen, which was instituted over a century ago. On the walls of the library hangs the ancient banner of the society with its emblem and its motto. The emblem is an uplifted right arm with the hand grasping a hammer, and the motto is the quaint couplet, "By hammer and hand all arts do stand." Such was the honor given a hundred years ago to the hammer and the hand as the foundation of the industrial arts. If one were asked at the present day to frame a motto for the foundation of the industrial arts it would read about as follows: "By the steam engine, and by the brain of man guiding the hammer and the hand, all arts do stand." The change is made necessary by the industrial revolution that has characterized the present century. The hammer and the hand are now only minor tools. The steam engine is the great power which is doing the mechanical work of the world, and it is the brain of the captain of industry which determines what work the steam engine, the hammer and the hand are to do, and which today is the chief factor in increasing the wealth of the race. The revolution has now been in progress for over a hundred years, ever since the general introduction of the steam engine and of labor-saving machinery into factories. So long has it continued, and so steady and gradual

has been its progress, that but few are able to realize its extent.

POSITION OF AGRICULTURE.

One great consequence of the revolution is that agriculture has been relegated from the first to the second place in the industries of the United States, and manufacturing industry has taken the first place. Of all the material and marketable things which man in this country produces and consumes or uses, manufactured goods form the chief part, measured in money value, and agricultural products the second. The application of machinery to farming, the migration of farmers from the sterile lands of the east to the fertile lands of the west, the improvement in character of the crops, and the increased application of fertilizers, have all tended to make a smaller fraction of the population necessary to produce the food for the whole country and to discharge men from the farm and turn them into other pursuits. One reason why great cities are growing at such a remarkable rate is that factories are built in the cities and the average working man can make more money in them than he can on the farm. He is discharged from the farm where the demand for his labor is relatively diminishing and he is welcomed by the city, where the demand for labor is increasing. The agricultural industry of the country is now going through a transition stage which is in many respects similar to that through which the iron manufacturing industry went in the 20 years preceding 1890. In that period the production of pig iron quadrupled, while the number of furnaces in blast decreased about one-half and the cost of making a ton of pig iron was also diminished by half. The average product of a blast furnace was multiplied eight-fold in that period; not that any given furnace in 1890 produced eight times as much as it did in 1870, but new furnaces were built which caused the abandonment of the old ones, and in many cases the bankruptcy of their owners. New districts were developed in which iron could be made more cheaply than in the old, the furnaces in the old districts were allowed to fall into ruin, and millions of dollars worth of invested capital were thus wiped out. The period of 20 years was one of readjustment and relocation of the industry, and it was one of severe competition in prices and of struggle for existence, in which the law of the "survival of the fittest" operated most disastrously to the unfit. I have already spoken of some of the causes which tend to make a smaller number of farmers relatively to the whole population, necessary to provide food for the country. There is another cause tending in the same direction, and it is one which is not peculiar to this country, but is world-wide in its operation. Hitherto a considerable portion of the farmers' market has been furnished by the demand for export. This demand is gradually diminishing. Southern Russia, both in Europe and in Asia, Egypt, India and the Argentine Republic are becoming every year more vigorous competitors of the United States in the grain markets of Europe. With the building of railroads in these countries and the development of their farming industry, it is only reasonable to expect that the United States will grow less and less important as a contributor of heavy agricultural staple to Europe, and it is not at all improbable that within ten years our export of wheat to Europe will have practically ceased.

There will of course be an increasing demand for the great food staples within the United States, coincident with its increase of population, but the development of the great grain belt of the northwest is still in progress, the wheat, corn and oats will be grown in the districts best fitted for them, and the gradual abandonment of their growing in the districts least fit will continue. The law of the "survival of the fittest" is operating in the farming industry as it is in manufacturing, and the farmer who would survive the struggle must learn how to adapt himself to the changing conditions of his environment.

NOT TRUE THAT THE RICH ARE GROWING RICHER AND THE POOR POORER.

The prospect now in view is one of hard times for the average farmer during the years in which the changes referred to are taking place, but we may with hopefulness look forward beyond the immediate present to a new era of prosperity in which the intelligent farmers will share probably in greater measure than any other portion of the community. If we can divest ourselves for a time of the despairing feelings engendered by the recent period of depression and make a calm survey of the development of the industries of the country as shown by statistics for long periods of time, we shall find much to give us encouragement for the future. In this connection a

study of some figures of the census of 1890, giving a comparison of the production of the manufacturing industries of the country in the years 1880 and 1890, is most instructive. I am not going to trouble you with the figures—those who wish can find them in the Census Bulletins—but I may mention a few conclusions which the figures prove. Between the years 1880 and 1890, there was a vast increase in the production of every manufacturing industry, measured in dollars and cents as well as in weight and bulk, notwithstanding the fact that prices of commodities greatly decreased. The increase in production and consumption was far greater than the increase in population. It took place in finished lumber, in furniture, in boots and shoes, in cotton, wool and silk fabrics, in made-up clothing, in books and newspapers, in iron, machinery and hardware of every variety, in pianos, carriages, railway cars and locomotives, and in manufactured articles of luxury of every description. The great bulk of consumption of perishable articles and the storing up for use or ornament of articles not perishable, such as pianos, books, pictures, fine furniture and the like, is by the common people. The purchasing power of a vast majority of the common people must have greatly increased, or this increased amount of manufactured articles could not have been made. The statistics further prove that wages increased, as did also the savings of the common people, as shown by the records of life insurance societies, savings banks and building and loan associations. There is abundant evidence that the era of prosperity from 1880 to 1890 showered its benefits upon the poor man as well as upon the rich, and that the ordinary workingman contributed to the general prosperity of the industries of the country by purchasing a greater quantity of manufactured articles than he was ever before able to do in the history of the world. The figures of the census of 1890, compared with those of 1880, prove the falsity of the saying so commonly heard from the lips of the professional agitators and of the ignorant that "the rich are growing richer and the poor are growing poorer." The figures show, on the contrary, that in the ten years considered, the whole people were growing richer and the poor were growing fewer.

I have seen no figures of the consumption of farm products other than the great staples, but I have no doubt that if the statistics could have been obtained they would show that there was in the same period a great increase in the consumption of those articles produced by the farmer which are usually considered luxuries, such as spring chickens and lamb, green peas and asparagus, the finer fruits, early vegetables, melons, the finer cheeses, cream and ice cream. The increased use of flowers for decorative purposes is a matter of common knowledge, as is also the increased purchase of fine fruit trees and of shade trees by the suburban cottager. I have no doubt also that a comparison of these years, if it could be made, would show an improvement in the breeds of horses, cattle and sheep.

CONCLUSIONS.

The conclusions which I wish to draw from the foregoing facts are these: 1. The increase in purchasing and consuming power of the people of the United States, growing faster than the increase of population, as shown by the comparison of the figures for 1890 and 1880, is the normal condition. If temporarily suspended for a few years, by financial depression, it will again take place in even greater degree. 2. The people will consume more of the finer products of the farmer, those which may be classed as luxuries, while the consumption of the staple grains, wheat, corn, oats and rye, per capita, may remain about stationary. 3. The increased development of manufacturing, which is the chief cause of the increased wealth of the community, will continue to make our cities and towns grow larger, and provide a larger home market for the near-by farmer of those products, chiefly perishable ones, which he can supply to better advantage than the more distant farmer; while the staple grains will be supplied from the lands best fitted to produce them, even if they are a thousand miles or more distant from the manufacturing cities.

The farming of the future in the great manufacturing states, of which Michigan is one, will be characterized by greater variety of crops and by finer grade of products, both vegetable and animal. This will call for a more varied and extensive knowledge of how to produce these finer products than the average farmer now possesses.

THE FARMER OF OLD AND THE MODERN FARMER.

The farmer of the olden time had plenty of hard work, with his lack of modern machinery. His edu-

cation in the science of farming was such as he obtained from his father while at work on the farm, and his methods were those of his grandfathers. His farming education, such as it was, was sufficient for his needs, for if he learned how to raise corn and hogs as well as his father did, what more was there to be learned? No need then for books on agriculture, for Farmers' Institutes, still less for an Agricultural College. What good could chemistry do on a farm in those days, and what farmer then ever heard of entomology or of bacteriology?

Now, everything has changed. The community as it increases in wealth demands a larger variety of food products, and is willing to pay for the finest that can be grown. The farmer, to meet this demand, finds the education of his father and his grandfather no longer sufficient. He must learn how to do more things and better things than ever they did. His education must be of a broader and more varied kind than theirs was. The successful farmer of the future will not spend his life in manual drudgery, working with his hands from sun to sun, as his ancestors did, while his wife drudges from sunrise till dark at night to do her share of the work and at the same time board the farm laborers. He will work less with his hands and more with his brains. Much of the old time drudgery will be done away with by the use of machinery, and what remains will be done by common laborers, which like the poor we will always have with us, although like the poor they are becoming fewer, as machinery pushes them up in the scale of humanity.

THE FARMER OF THE FUTURE MUST BE EDUCATED.

Above all, the farmer of the future must be an educated man. He must have a cultured brain and know how to use it in his business. There are two things which characterize a well educated man. First, natural brain capacity which he inherits from his ancestry; and, second, culture, which is obtained only by systematic training. The first is possessed in large measure by our farming population, as is seen by considering the fact that thousands of our most eminent lawyers, legislators, bankers, and merchant princes began life as farmer boys. How is the farmer of the future to get the second, namely, brain-training, or culture. The experience of the race for a thousand years shows that the best, if not the only practicable way of giving the highest kind of brain-training, is a course in college. If we take a farmer's boy and wish to make a minister, a doctor or a lawyer of him, we send him to a college of theology or medicine or law. If we wish to make him a superintendent of a machine shop or a designer and builder of locomotives or electric light machinery, we send him to a mechanical college. The day is coming when if we wish to make a successful farmer of him we must send him to college. Not to the old-fashioned college where he will spend his best years in Latin, Greek and mental philosophy, which will be of no use to him, and in foot ball and rowing, which may be useful as an antidote to the Greek and Latin, but to a college where he will study English and mathematics, two most essential elements of practical brain-training, and the natural and physical sciences which have a direct application to agriculture. In the college also he will learn the scientific and only true way of making experiments and of drawing conclusions from his own experiments and those of others. In the agricultural college he will not only obtain the broad foundations of an education, but he will be taught by actual practice in the field the best way of doing things on the farm. In its library he will have access to books and periodicals which contain the latest information concerning the progress of the science and practice of agriculture throughout the world, and he will there acquire habits of study and of scientific thinking which will cling to him through life, which will not only be a constant source of pleasure in the intervals of rest from toil, but will also be of material benefit in assisting him to solve the numerous perplexing problems which will arise in the ever-changing and ever-advancing progress of the farming industry.

BENEFITS OF THE AGRICULTURAL COLLEGE TO THE COMMONWEALTH.

Thus far we have chiefly considered the benefit of the agricultural college to the individual farmer, who is fortunate enough to become one of its students, but its benefits are much farther reaching and apply to the whole commonwealth.

It was truly said a long time ago that "he who makes two blades of grass grow where one grew before is a public benefactor." Not merely a benefactor to himself, but to the whole community, a public benefactor. Take a bright boy from one of the poorer

farms of the state, furnish him a couple of hundred dollars to help pay his way through the college. The college gives him an education. He goes back to the farm and begins to improve it. Studying the course of the markets and the capabilities of the farm, he learns what to grow and what not to grow. He applies the kind of fertilizer best adapted to his land, changes the breed of stock, builds a silo, plants the best varieties of fruit trees, raises some shrubbery and flowers for the Detroit market. In twenty years or so he has amassed a moderate fortune, builds a fine house, furnishes it with a library, musical instruments and pictures, and lives as a wealthy, country gentleman should. He attributes the foundation of his success to the education he received at the college. But is he the only gainer from his education? He has made two blades of grass grow where one grew before, he has been a public benefactor whether he desired to be one or not. Not a dollar of his wealth has been made except by the increased value of the products of the soil, and his becoming richer has made no man poorer. He has furnished the people of the city with the finer products of his farm, at good prices, which they were willing to pay. He has hired more workmen on the farm, and has been compelled through the general prosperity of the country to advance their wages. When he builds new barns or a new house, buys improved machinery, wears better clothes, drives in a better carriage, he has to give employment to more high-priced workmen. He pays more taxes, gives more work to the railroads. Every dollar of profit he makes he must do something with, and whether he spends it to improve his property, or puts it in the savings bank where it will be loaned to do useful work for someone else, he improves the financial condition of the community. But more than this, every improvement he has made on his farm or in his farming methods has been made under the eyes of his neighbors. He cannot keep a farming secret if he would. They profit by his example and by his experiments, and as far as they are able, improve their farms and their methods also. If the whole farming community becomes rich it furnishes a more valuable market to the manufacturers who thus share in the farmers' prosperity. Rich farmers, who have made their riches by the cultivation of the soil, are good citizens, and the more such citizens the country has the better. In so far as the college course can assist in making of a farmer's boy a broad-minded, intelligent, well-educated citizen, in so far as it can teach him how to grow two blades of grass where one grew before, it performs a work which is of far greater importance to the commonwealth than it is to the individual himself. The college is the great public benefactor, in that it turns out men fitted to become public benefactors.

SCHOOLS OF MECHANICAL ENGINEERING.

The foregoing remarks have had relation chiefly to the agricultural college, but much of what has been said might be repeated in regard to value of technical schools of other kinds than agricultural. This College has established a mechanical department, wisely following the example of other states which have endowed schools of mechanical engineering. The results achieved by these schools during the last twenty years in turning out thousands of graduates who now hold prominent positions in our mechanical industries, are well known; and their value to the nation is beyond calculation. The usefulness of these schools is now generally appreciated by the public. They are crowded with students—many of them have been liberally endowed by the states, and by the general government, and millions of dollars have been contributed to them by private individuals. Already the alumni of some of them are showing their appreciation of the benefits they have received from them by raising funds to provide them with additional buildings and equipment. There is no need to further discuss the schools of mechanical engineering. Their position and their purpose are secure.

The progress of the agricultural schools has hitherto lagged behind that of the schools of engineering, but there can be no doubt that it will ere long receive a new impetus, and that the agricultural schools will obtain that measure of public appreciation and that increase of endowment which they deserve.

The position of the engineering schools of the United States is now in advance of that of similar schools in any other part of the world, and probably the same may be said of our agricultural schools, but in other branches of technical education we are far behind Europe, and in fact have scarcely made a beginning. I wish to quote in this connection the words of ex-President Willits, of this College, spoken in 1885. He said:

"Continental Europe, older in these industries, long since saw the necessity for special attention to the matter, and during the last fifty years has expended large sums on schools of technology and the promotion of science lying at the base of all the industries. The result has been marvelous. England, that once ruled the industrial as imperially as she did the commercial world, at last became anxious over the competition of nations that for half a century or more had been her lavish purchases, and began to inquire how this ability to compete in her manufactures had been brought about, and was after a full investigation into the primal causes compelled to admit that it was to be attributed more than anything else to the schools of technology and mechanic arts which those countries had the foresight to establish." He further says: "Our industries are an important factor in our body politic, and our future is to be largely shaped by our ability to manufacture as well and as cheaply as anyone else. To do this we must put intelligence into our shops and theoretical instruction into our schools. We must occupy the ground ourselves with our own brains and muscle. Two-thirds of our foremen and master mechanics are foreigners educated in the technical schools of Europe or instructed by an apprenticeship that is not germane to our institutions."

I doubt if the statement made by President Willits eleven years ago that two-thirds of our foremen and master mechanics are foreigners would hold true today, and it surely would not in the case of our iron-working establishments, but it is probably true in most of the skilled industries outside of iron working, and especially in those in which artists and designers are engaged. The great bulk of our artistic designing in metals, in textile fabrics and in wood is done by foreigners. Michigan is famous for its furniture industry, but I venture to say that its best furniture is designed by foreigners and is but a servile copy of the French and English furniture of the last renowned for its genuine artistic merit as it is for its quality and its cheapness? I remember reading a fugitive piece of poetry in a newspaper which described the delight of a wealthy American in finding an antique bedstead in the store of honest old Mynheer Vandaam in the quaint old city of Amsterdam, 200 years old, and princes had slept on it. After making the purchase and taking it home he found a label on it with the words: "Patent Antique, Berky & Gay, Grand Rapids, Michigan, U. S. A."

If we had a technical school of furniture design, instead of making copies of antiques, we might make Michigan furniture of the beginning of the 20th century as intrinsically valuable as the French furniture of the 18th century. Our designers and artists are mostly foreigners, and the best designers and artists stay in Europe. If an artist is born here, whether a musician, a painter, a sculptor or a worker in wood or metal or textile fabrics, he must go to Europe to get his training. Such things should not be, and will not when this country is properly provided with schools of industrial art and design.

SKILLED WORKMEN NEEDED.

Another need of our times is for well skilled workmen. Common mechanics, able to earn \$2 to \$2.50 per day, are plenty enough, but the highly skilled fine workman worth \$4 or \$5 per day is a scarce article. Our shops, as at present organized, with their lack of an apprenticeship system, and our trades unions with their methods of leveling all members to one grade, are not calculated to make highly skilled and high-priced workmen. A man who gets \$2 a day in a shop is worth to his employer but little more, for he can easily be replaced by as good a man at the same pay, but the man who gets \$4 is usually worth to his employer, and to the community which receives the finished product of his skill, far more than his wages, and if he dies or moves away his place is not easily filled. If we get highly skilled workmen from Europe they are not apt to be the best. The best have good positions in Europe and are content to stay there. The greater the number of highly skilled and high priced workmen the state has the more prosperous is the state. How are we to get them? The shops do not make them, the trades unions do not, the apprenticeship system by which they were once made is dead, and Europe will send us only the second best. If we wish the best there seems to be no way left in which to obtain them but the establishment of trade schools. A beginning in such schools has been made in New York and Philadelphia, through private munificence. No doubt they will in time be established all over the country, but a public opinion must be created in their favor before they will multiply to any great extent.

The State of Michigan has done a noble work in founding the Agricultural College. She has done

wisely in adding to it a mechanical department. Let us hope she will soon continue the good work by founding a school of industrial art and design, and a system of trade schools for the training of highly skilled workmen. She has a grand geographical situation, surrounded by the great lakes, an ideal position for commerce, a fine climate, a fertile soil and wonderfully rich resources of the forest and the mine. What more does she need? A race of broad-minded, well-educated and highly skilled men. Such men it is the province of the schools to furnish. Let Michigan give a generous support to the technical and industrial schools she now has, and provide liberally for those trade schools and art schools she will need in the days to come. She can make no better financial investment, and nothing else that she can do will contribute so much to her development as a prosperous and happy state.

AT THE COLLEGE.

W. J. McGee's father visited him last week.

The next number of the RECORD will appear September 15.

The Library hours for vacation are from 10 to 12 a. m. each day.

Lieut. and Mrs. Lewis left Saturday afternoon for Hart to visit Lieut. Lewis' sister, Mrs. Rollins.

Miss Anna Weaver of Marlette visited at M. A. C. during commencement.

A. B. Cook, '93, and Miss Otie Cook, with '94, were the guests of Dr. Beal and family on Aug. 8 to 11.

The Union Literary Society alumni enjoyed a very pleasant informal hop in the society rooms Friday evening.

Mrs. Wm. Shakespeare and Miss Monroe, daughters of Hon. C. J. Monroe, were guests of Mr. and Mrs. Gunson during commencement.

Mrs. O. C. McLouth and Miss Florence, mother and sister respectively of J. D. McLouth, spent several days with the family of Dr. Beal.

Miss Gertrude Maxfield, Coopersville, sister of W. A. Maxfield, '93, was the guest of Prof. and Mrs. Woodworth during commencement week.

It seems good to see a crop of red clover coming on, though in some places on the farm the root borer is putting in his work in a thorough manner.

At the farmers' picnic held in Leadley's Park, last week, Prof. C. D. Smith addressed the people on "Farm Dairying," and G. C. Davis on "Injurious Insects."

According to present indications, this will be a year for great stories about tall corn, and most likely large yields also. At the College and in vicinity corn smut is abundant.

The vegetable gardens are cultivated once a week, and as soon as dry enough after every rain, if oftener than once a week. Clean cultivation prevails in the apple orchard.

Miss Edna Smith, who has been visiting Mr. and Mrs. Westcott for several weeks, left for her home in Toledo, Saturday morning. Mrs. Westcott's sisters, the Misses Greening, will remain here for some time.

The Speculum. From August 1, 1887, beginning with number 25, a few complete sets remain, also extra copies of some of the other numbers preceding that date. Those desiring copies can have them at 5 cents per copy. Address M. A. C. RECORD.

Some of the older trees of Northern Spy have a spread of branches in one direction of twenty-one feet. The trees were set by the first president of the College and were generally thirty-three feet apart. In many instances the branches of adjacent trees interlock.

Owing to numerous fine showers during the season thus far the plans for sub-earth irrigation of celery mentioned in THE RECORD a few weeks ago, have not been carried out. Super irrigation has taken the place of the one contemplated. Nothing is more uncertain than the weather.

The annual catalogue for the thirty-ninth year has recently been published. It gives much information that the prospective student would naturally seek. There are one hundred and twelve pages including twenty-seven illustrations. The number of students enrolled for the year is 393.

Not long ago a farmer from Delhi visited M. A. C., accompanied by the members of his family. He said he had worked hard all his life, and wanted to give his children a better opportunity than he enjoyed. He thought well of the College, visited it with his family every year and expects to send his boys here at no distant day.

A writer of a thesis in making notes of a variety of

apple (Northern Spy) heads a paragraph, "Mod Em Eck," which Professor Taft explains as follows: Among the Northern Spy trees in the orchard are some conspicuously marked for experiments in spraying "Mod. Eau Celeste." This was a puzzler, and was evidently mistaken for the name of the variety of apple.

Mrs. Nellie S. Kedzie returned last week from Chautauqua, where she read a paper on Domestic Science in Agricultural Colleges. She met at Chautauqua Miss McDermott, Prof. of Domestic Science in M. A. C., and had an interesting interview with her about her work in this College. She was much pleased with Miss McDermott and her views in regard to her proposed work. Mrs. Kedzie left for Kansas last Monday evening.

In these days there are so many visitors appearing singly and in groups large or small at all times of the day and week that it is almost impossible to keep track of them. Lansing is a city of conventions, and some of the delegates of most of them call at M. A. C. It would seem as though the reports of visitors, the numerous copies of the RECORD mailed each week, the large numbers of farmers' institutes held during the year, together with reports of our present students and alumni, that there was now scarcely any excuse for ignorance so far as the work of the College is concerned.

The Experiment Station has undertaken one neat experiment regarding Hungarian grass. Seeds in market are often, usually we might say, light and dark mixed, one being just as good as the other, though purchasers generally prefer the dark seeds, as the light-colored seed is very much like seeds of true millet, which is not often grown. The seed of true millet is yellow. In the Experiment reports for three years plants bearing dark seeds have been selected and grown apart from the other sorts. This block is very pretty and even the spikes are dark as well as the seeds. The plants are in rows and have been cultivated. Look out for a strain of seed of Hungarian in which the seeds are all dark! The same rule holds good regarding seeds of red clover. A selection can be made and after a little all the seeds will be dark. Dark colored seeds are produced by dark green plants usually bearing leaves destitute of light spots, or nearly so.

WHAT COLLEGE PEOPLE WILL DO DURING VACATION.

President Snyder will remain at College most of the time, as will also Secretary Butterfield, Prof. Barrows, and Messrs. Mumford, Davis, True, Kenney, Lyman, Smith, Wescott, True and Durkin.

Dr. Kedzie goes to Cleveland this week to read a paper before the Society of American Florists on "The Chemical Tripod in Floriculture." Thomas Gunson will also attend this meeting at Cleveland.

Dr. Beal will perfect his book on the "Grasses of North America," look over the surrounding country a little in a botanical way, make preparations for the fall campaign at M. A. C., and make some improvements in the Botanic Gardens.

Dr. Grange will be at the College doing Experiment Station work.

Prof. Taft will spend most of the time at College. Will visit the sub-station at So. Haven and inspect orchards at Kibbie's and Berlin, where a new peach disease is at work.

Dr. Edwards will make a business trip to Virginia, to be gone about three weeks.

Prof. Vedder has not decided what to do.

Prof. Smith, "Stay here and grind."

Prof. Weil will be at College fixing up steam apparatus.

Prof. F. S. Kedzie will spend the time near Traverse City, sailing and bicycling.

Prof. Holdsworth will join Mrs. Holdsworth in the Traverse region and will spend the time sketching.

Prof. and Mrs. Noble will spend vacation with the Holdsworths.

Profs. Woodworth and Wheeler, with their families, and Misses Bertha Wellman and Lu Baker, and Messrs. D. J. Crosby, J. T. Berry, and G. N. Eastman left yesterday for a three weeks' camping at Saugatuck.

Prof. Hedrick is already at work on the "farm," Harbor Springs.

Prof. and Mrs. Chamberlain will visit Detroit and possibly several eastern cities.

Prof. and Mrs. Babcock—ten days at Petoskey, Mackinac and other places of interest in northern Michigan, and then a visit to the old home in Washenaw county.

Mrs. Landon—a part of the vacation in Niles.

B. O. Longyear is recruiting at home.

C. C. Pashby, at Constantine—farm labor.

Mr. and Mrs. Fulton will visit their home—Highland Park.

C. E. Hoyt, at his home in Wayland and at Gun Lake.

Chase Newman will spend a part of the time at Gun Lake with Mr. Hoyt, a week at home in Portland, and will take a bicycle ride to Grand Rapids.

C. J. Foreman goes to his home in Harbor Springs until Sept. 8, when he begins school work at Centreville.

H. P. Gladden—Home, "Hort," and Northern Michigan.

J. S. Conway, a week or ten days in Kalamazoo and Decatur.

College will reopen on Monday, September, 14, 1896. Examinations for entrance, and specials, will be given on that date.

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NEWS FROM GRADUATES AND STUDENTS.

G. E. Simmons, '94 m, is in the employ of the Illinois Central Railroad, Chicago.

Albert Nelson Prentiss, '61, for a long time professor of botany in Cornell University, died Friday, Aug. 14.

Silas F. Scott, '94, is a page in the national house of representatives. He is spending his vacation at his home in Romeo.

Henry A. Danville, '83, principal of the Essexville school, had a sad misfortune in the death of his wife on Tuesday, the 11th of August.

R. L. Reynolds, '95 m, spent several days of commencement week at M. A. C. He is on his way to Cornell, where he will study next year.

A. T. Cartland, with '96, spent the week at M. A. C. He has been attending Allegheny College during the past year, but will return to M. A. C. in the fall.

Married: Sunday, August 9, 1896, in Milwaukee, Wilford J. McGee, '96, to Miss Alice May Bickford. Mrs. McGee was at M. A. C. to see her husband through commencement exercises.

E. T. Gardner, '85, writes from Arcadia, Neb.: The papers are booming Nebraska just a little too hard this summer. Crops are fair to good, but when threshed, I think, will be found to yield no more than the average.

Fred B. Smith, who was here two terms in 1887-8, died at Pickford, Aug. 9, of consumption. He had spent a year or more in Utah in search of health, but did not get expected relief. He had taught school most of the time since leaving College, and was said to be one of the best teachers in Chippewa county.

E. R. Russell, '99 m, sends us the following clipping regarding an encounter that Jerry Mandigo, with '98 m, had with lightning last Tuesday: Vicksburg, Mich., August 11.—Lightning played queer pranks here yesterday morning at 3 o'clock, striking the house of Mrs. Mandigo, a mile and one-half west of town. The bolt seemed to separate, one portion passing down the chimney through the ceiling of a bedroom, run down the wall until it struck the base board, when it passed about the room and splintered to pieces a bedstead upon which Jerry Mandigo was sleeping. He was let down to the floor by the breaking of the bed without being awakened and receiving no injury. His grandmother, Mrs. Emily Parker, was sleeping in the next room, the lightning running in there and splintering her bed to pieces also, one corner of it dropping to the floor. She was not injured by the lightning either. They think their remarkable escape from death to be due to sleeping on feathers. The second portion of the bolt run down the side of the house into the cistern, which it demolished. Other persons in the house were uninjured also.

WHAT SOME OF THE GRADUATES WILL DO NEXT YEAR.

R. E. Doolittle will work in the laboratory of the State Food and Dairy Commissioner, Lansing.

L. R. Love has a position in the Bogue nurseries, Batavia, N. Y.—landscape gardening and general nursery work.

C. E. Meyers will assist his brother in the publication of the *Litchfield Record*.

Wahey Matsura returns to draughting in the office of Fraser & Chalmers, manufacturers of mining machinery, Chicago.

E. D. Partridge will be professor of mathematics in the Brigham Young Academy, Provo City, Utah—\$1,000 a year.

L. D. Sees will go into his fathers store, Unionville.

S. W. Tracy will work for R. H. Morrill, at Benton Harbor.

Bertha Wellman will attend school at the Normal, Ypsilanti.

S. B. Young will work on the farm at home.

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