#### Agriculture vs. Botany in the High School.

Note—A lady who was at one time a student at M. A. C. is now a teacher in a normal school in Wisconsin. She is asked to speak at a meeting of their State Teachers Association on "The Value of Science in the High School," which follows a paper on "More Practical Agriculture in Our High Schools to Take the Place of Some or all of the Botany." I sent her the following:

W. J. Beal.

Agriculture consists mainly of an art, with a little help from some of the sciences, such as botany, entomology, animal physiology, chemistry, physics, civil engineering, bacteriology.

There are probably less than one hundred persons in the United States who are well able to teach agriculture in its broad sense, even with a good equipment. As now managed in the largest agricultural colleges, more or less of agriculture is taught by fifteen to twenty different persons.

Agriculture proper is so difficult, even for students in college, that most of the subjects are placed in the last two years of a four-years course, that it may follow some knowledge of botany, chemistry, physics, entomology, and other topics. Under agriculture proper, come these topics: soil physics, farm fertilizers, breeds of live stock and judging them, principles of stock breeding, stock feeding, making of butter and cheese, farm equipment, rural economy and more or less of several other subjects, which do not look very suitable for lads of ten to fourteen in the district schools.

Many of the common schools in the smaller villages and rural disricts of Germany have a small garden as a part of the equipment. From this garden and in it, the teacher can draw many illustrations. In some instances, pupils perform much of the work under the instruction of a male teacher, working two hours a week, but in nearly all of the schools, the chief use of a garden is to help out the table supply of the instructor. The instruction in agricultural subjects is mostly theoretical. The tendency is to confine the work largely to the school room and not to the garden.

Through the efforts of farmers and fruit growers of a few regions of the State of New York, money was appropriated liberally by the State to Cornell University to enable the professor to introduce agriculture into the country schools. They began in 1894, and a good force from the University faculty spent four weeks or more during two or more years making the experiment. They exhibited great enthusiasm, tact and ability. They have thoroughly tried five methods:

(1) The itinerant or local experiment as a means of teaching.

(2) The readable expository bulletin.

(3) The itinerant horticultural school.

(4) Elementary instruction in the rural schools.

(5) Instruction by means of correspondence and reading courses.

In 1896, they reported that the greatest good which had then been accomplished came through the bulletins, and one of the most useful exercises in connection with these schools, and which they uniformly employed from the beginning of their work, consisted in observation lessons. Some small objects like leaves or roots, flowers or seeds, are put in the hands of all the attendants, and after they have examined them for a few minutes, the instructor begins to ask questions concerning them. This exercise drills every participant in observation, in the drawing of proper inferences from what he sees. This kind of teaching was made a prominent feature at every session of their schools of horticulture (a department of agriculture), that was held in the country. It is true that most persons do not see what they look at, and still fewer persons draw correct conclusions from what they see. After two years, a Cornell report says, "As a result of the holding of many of these schools, I am now of the opinion that they cannot be used as primary factors in University extension. \* \* \* These observation exercises were uniformly well received by both the pupils and the teachers, and to the minds of our instructors this work has awakened more inspiration than any attempt which we have yet made to reach the people. In fact, all the instructors whom we had in the field during the present year are fully convinced that the fundamental method in improving the agricultural status is to begin with genuine and attractive natureeducation in rural schools.'

"The great need in this work is teachers fitted for it."

And later, they report in 1898, and hold to the same opinion in 1900, that, "The district school cannot teach agriculture any more than it can teach law or engineering or any other profession or trade, but it can interest the child in nature and in rural problems."

Nature-study is seeing the things which one looks at, and the drawing of proper conclusions from what is seen. It consists of the first steps in botany, zoology, entomology, geology. Nature study, has become a prominent feature in Cornell University, where it was introduced by Professor Bailey, a graduate of Michigan Agricultural College, who got his training from one who received it long before, under the great Agassiz at Harvard. For thirty years now, all the students in the agricultural course at M. A. C. have had daily, for at least one term, thorough work in nature study, always with an abundant supply of plants which were diligent before any use was made of books or any instruction was given by the teacher.

The subject of botany has to deal with every attempt to answer any question about plants. It has no superior as a study for training the observation and developing the power of arriving at correct conclusions. When well taught, it gives culture and strengthens the mind, to as great an extent as any other

subject which is pursued for the same length of time with the same amount of application.

#### Seed Germination.

The seniors in plant physiology have been working industriously with improvised apparatus in crowded quarters trying to determine for themselves the wonderful secrets of plant growth. At Ann Arbor, where a class does similar work, each student performs every experiment for himself. At M. A. C. the class has no large room for their exclusive use or even desks for each student, but only one corner of one room and three tables for the whole class of thirtren. Consequently, everything has to be common property. Each student is assigned an experiment which he performs and reports progress to the class from day to day. The class takes notes daily on each experiment in progress until the experiment is completed. Then if results have not been satisfactory another student repeats the operation, carefully avoiding the mistakes made in first performance. Many of the most important are repeated that the class may become more familiar with the details and may be in no danger of suspecting the operator of juggling "to make it

One of the latest experiments has been in different methods of seed germination. Five methods were tried.

In No. 1 the seeds were placed in an ordinary deep plate and covered with saturated "drying paper." This drying paper is kept in the laboratory to be used in drying and pressing plants for mounted specimens. It was very difficult to saturate and cannot be recommended on this account; moreover, it would be quite difficult to obtain outside of a botanical laboratory.

No. 2 was quite similar only very thin drying paper was used and the seeds were placed between two layers. The paper had to be sprinkled with fresh water each day to keep it sufficiently moist.

In No. 3 the seeds were placed on a plate of moist pine sawdust, care being taken that no free water was in the sawdust. This cannot be unqualifiedly recommended because clean pine sawdust is very difficult to obtain, and other kinds of sawdust are apt to contain a strong per cent. of tannin, which would destroy the tender seed.

No. 4 is the oldest method in use, having been introduced from Scotland. A small circular disc of unglazed pottery, having on one side a large number of pockets for seeds, was placed in a deep plate of water, care being taken that the water did not come in immediate contact with the seeds. The disc, being porous clay, soon became saturated with water and moistened the seeds sufficiently for germination.

Over each one of these plates another plate was laid to check evaporation and make conditions as uniform as possible.

No. 5 was quite essentially diferent and employs what is known as the Geneva tester. It consists of a rectangular basin about two inches deep, a number of wires long enough to reach across the basin, and a strip of cloth. The wires are laid across the basin about one inch apart. Over these the cloth is laid and crowded down between the wires far enough to make quite a fair sized pocket. The ends of the cloth are allowed to hang down to the water in the bottom of the basin but the pockets are kept above the water. Different kinds of seeds are placed in the different pockets and then the wires crowded as closely together as possible. The whole mass is moistened by the capillary action of the water on the ends of the cloth. This method is now quite generally employed in experiment stations and seed testing firms in the U.S.

After the experiments had been in progress for several days the class took a vote for first and second choice of the different methods as to which could be best recommended, everything considered, to the farmer who wishes to test his seeds before planting, or the school teacher who wishes to germinate seeds for a class. The results gave ten votes for No. 5, eight for No. 2, and six for No. 3. Numbers 1 and 4 receiving no votes whatever.

C. P. R.

#### Campus Notes.

Prof. F. S. Kedzie and Mr. H. S. Reed went to Alma last Thursday night and spent the next day visiting the sugar factory. The Alma factory has made more than 4,000,000 pounds of sugar thus far this season. In the evening the professor and Mr. Reed attended the banquet given by the citizens of Alma to the Alma College football team in honor of their victory over Albion. Such delicious dishes as "Canape, a la quarter-back," "Boiled Ox Tongue, Tomato Sauce on side," "Roast of Prime Beef, a la halfback," "Roast Young Turkey, formation tackle," "Haunch of Cub Bear, center rush," appear upon the

Thanksgiving Day passed quietly and pleasantly in the Women's Building. About thirty club members and guests sat down to dinner at 1:45. The tables, arranged in a hollow square, were decorated with potted plants kindly loaned by Mr. Gunson. The menu was as follows: Oyster soup; crontons; roast turkey, cranberry sauce; stuffing; creamed celery; mashed potatoes; gherkins; olives; plum pudding, hard sauce; celery; cheese; wafers; salted nuts; coffee. At six tea was served by the students in the parlors. During the evening there was dancing in the gymnasium, music in the music rooms, and a marshmallow roast and reading in the Dean's office.

"The Students' League of Mt. Holyoke has passed a new law to the effect that any student who wilfully breaks the rules of the League, governing the conduct of girls in the college, will thereby forfeit her right to a room on the campus, the president and faculty to give final decision in all cases."

# THE M. A. C. RECORD.

PUBLISHED WERKLY BY THE

EDITED BY THE FACULTY, ASSISTED BY THE STUDENTS.

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

The most interesting subject to the average young man is, how to succeed. He fixes his eye on some one who, to his mind, has succeeded, and ponders over the secret of that success. In nine cases out of ten, he will attribute it to some mysterious, some occult capability that he calls genius or talent, and in nine cases out of ten he will be far from the actual fact of the matter. That there are no such things as genius and talent I am far from affirming; but that success in the average successful man demonstrates genius or even talent is by no means true. The longer I live the more I become convinced that success is a matter of barter and sale, sometimes in an entirely unworthy sense, sometimes in a sense which permits of consideration by men of the highest honor and integrity. The first sense needs just now very few words. The man who pays for success with his self-respect, his honesty, his moral integrity, pays a price that no kind of success is ever worth; pays a price that means invariably a bankrupt life. As I once wrote a dear friend, defeated in a race for an office in New York City: "Better a thousand times, defeat with selfrespect, than victory through alliance with foulness and corruption." But the other sense needs longer treatment. What I mean to say here is that the man of average ability in this our day may fix his eye on some honorable ambition and almost surely honorably attain it, provided he is willing to pay the price. And the price is self-denial, persistency, singleness of purpose, a plan wisely adapted to the conditions, quickness to take advantage of circumstances, and, ever and through all, work. Do not mistake—success is a commodity always on the market, but it is never sold at the bargain counter. You will never stumble upon it by accident and buy it for a song. It costs; and like the diamond, its cost, always heavy, rises in geometric proportion with its size, Macaulay would succeed as a great historian; he devoted all the energies of his mind to the acquisition and coordination of facts; he ransacked libraries; he wrote innumerable letters; he traveled over half of Europe; he spent more time and brain-matter over the investigation of one little illustrative town-history than the average student spends over his doctoral thesis. He devoted himself, his time, his thought, his life-and he had his reward. Let us sum up the matter. Take yourself by the hand; sit down in a corner together, you and yourself all alone, and coolly talk it over. Determine what you

would win; then reckon up the cost, and resolve whether you will pay it H. EDWARDS. or not.

MIGHIGAN AGRIGULTURAL GOLLEGE. Our Matrimonial Mobile. (Concluded.)

BY FLOYD W. OWEN.

It required a great deal of work to extricate the automobile, but it was at last brought back to the house, and as all was now ready, we were soon on our journey across Kansas. At Topeka, I wrote to Joe Bates, asking him to make arrangements for entertaining the employees of the works, at our house in the evening of the day on which we should arrive.

For the remainder of our journey, we had no trouble with the carriage and nothing of interest transpired until one bright morning when we reached a small village about fiftyfive miles west of Moberly, Mo. On the main street of the little town, we saw about twenty determinedlooking men on horse-back, all gathered in a group, talking. Very soon several others joined the party, and going up to one, I asked why so many had assembled. "Read that," he replied, giving me a news-paper, whose chief head-lines read: "\$430,000 stolen last night from the Colorado Limited Express! Express messenger shot dead! Robber escaped! \$1500 reward for his capture!" The detailed account said that one man had robbed the express-car a few miles from Moberly and escaped near there. As the robber was likely to be not far from Moberly, we were not very auxious to proceed, for our road led directly through the city, but as these men on horse-back were forming a posse to go in that direction, we started The road was hard and level, and we ran very fast, left the posse in the rear and passed through Moberly where we found considerable excitement, it being only a few hours since the robbery. When we were about 25 miles beyond the city, our road became narrow and led through a low woods. We had reached the top of a little hill from which we could overlook a long, low stretch of the road to another hill covered with trees, where, although I said nothing to Bertha, I thought I observed a person by the side of a rail fence. After stopping a few minutes to inflate a tire, we started on, and were just nearing the top of the further hill when we overtook a man, who was limping slowly along with a cane in the narrow road. Very soon, when we came close to a pile of rails, which had been recently laid across the road, he stopped us and said in an aged voice. "I am started for my son's house, Jake Fenley's, you know, an' I wish you'd just gimme a ride, please, for I'm gettin so old that I can never walk there, although I used to could. Say, I'll take them rails outer the road for a ride." The man did not appear to be poor, for his clothes were good; nor did he look old, as his only appearance of age was his lameness and feeble voice. Bertha, who had said little during the whole morning, looked very pale and nudged me with her foot as a hint to be careful with the man.

I said to him, "I don't believe you can ride, for there is no room in the seat, and the space back of it is covered by our grips." He was determined on riding, however, for he

believe he put there himself to stop us, and said he would ride on the dash-board. He threw away his old stick, climbed on in front, and sitting on the dash-board, hooked his feet to the front springs and said, "Let

The road from this hill on was fine, and as a strong wind was blowing in our rear, I did "let her go," at 30 miles an hour. We went so fast that our man in order to keep his seat, was obliged to hang with both hands to the side lamps. were glad that his back was toward us and that he said nothing, not even as to where he wished to stop. Neither Bertha nor I spoke a word, but I thought, and from her looks, she did also, that our man might be the one who had shot the express messenger, and if so, he was riding with us to hurry out of the country. He had been with us only a short time, when Bertha suddenly shivered and as I looked toward her, she pointed to his hip-pockets, in which we could see the outlines of two revolvers under his coat. In an instant, we both realized that he was a dangerous man and very likely to be the train-robber. We dared not speak, but I increased our speed to its utmost that he might not have the opportunity to attack us. In a second we were tearing along at such a terrible rate that I was compelled to leave the throttle and use both hands to keep the carriage in the road. I could do nothing else, scarcely think, so great was the nervous strain; but I saw Bertha, after hesitating a moment, thrust both hand's under the man's coat and snatch the revolvers, then pressing one to his head, she said: "Off goes your head at your first move, sir. You are our prisoner, so take care of your life." He ap-peared surprised to hear this from a woman, but she spoke so sharply that he drew down his head, breathed very fast, and hung on the tighter. Making sure that both revolvers were ready to fire, Bertha held one just back of his head and laid the other in my lap, while I drove the carriage as fast as I could.

I was in constant fear that the water or oil would give out before we could reach the next town, but it was not long until we came to a crossroad which led to the left, and turning into this, we soon reached the little city of Macow. Going in on the main street, we dared not stop with that desperado in front of us, but slowed down and rang the gong furiously, which brought after us several deputy sheriffs on horse-back. I stopped then, and the leader coming up, I told him briefly whom we thought we had. Our man was so much exhausted from his cramped position that he did not offer any resistance to these men, who soon had him hand-cuffed and into a jail. The deputy in command took our names and asked a few questions, after which, as there was quite a crowd gathering about the carriage, we replenished our boilers and left the town. I might say that our captive was finally proven to be the train-robber and murderer, but as to the \$1500 reward, we received just \$500 as only one-third the money which had been stolen was ever recovered.

When we reached Peoria, I received a letter from Joe, saying that by the time we should arrive, the arrangements would be completed for entertaining the employees, and had cleared away the rails, which I that Mrs. Bates had seen that everything would be in the best of order within the house.

What remained of our journey soon passed and we reached Detroit on the morning of the appointed day. I was very glad that I had been fortunate enough to secure a location and house which were both so much better than our first choice. However, it will be remembered that as yet Bertha knew nothing of it. Just as we were nearing our new home, which was not far from Joseph Bates, Bertha said "Oh! Are we to stop at Joe's?" "No," I replied, stopping at our own curb, "this is to be our home, Bertha, if you like it." She said very little but it made me happy to see by her looks that she was pleased. We were met by Joe and his wife, who had made everything very homelike for us. There was a cheerful fire in the library grate and a bright little Swiss clock ticking above it. The day's paper, together with several magazines, lay upon the writing table. There were also many flowers brought from the garden back of the house, and when we came to dinner and Bertha poured the tea, it seemed very much like home, indeed. In the evening, our guests came, in squads of 50, and all the employees were there, including the old Irish janitor, who had just as jully a time and was just as welcome as Mr. Grose, the superintendent.

After they had all gone, and Joe and his wife, who were to stay with us, had said goodnight, we two sat by the fire in the library, and after

a while Bertha said:

"How nice it is to have so many friends, and I hope we appreciate them; but yet, after all, John, the truest happiness we shall find in the quiet life of this lovely home, which you have provided."

## About Our Street Cars.

A person who, though not a resident at the College, frequently finds occasion to spend a day with us, sends the following observations to the RECORD which we are glad to

"Lansing is a city of some eighteen thousand souls. Its streets are wide, well kept and well lighted, and there are several miles of excellent brick pavement. Its public buildings surpass in beauty and size the buildings of any other city of its size in the State. Its schools are first class. Its churches are justly the pride of the city.

"But by far the most remarkable 'institution' in the city of Lansing is the street railway system. I say remarkable, because I doubt if any other city in Michigan can claim a street car system so novel and inter-

"In the first place, a very peculiar kind of electricity is used. I understand that the electricity is put on the trolley wire in chunks and tied on in such a way as to leave some parts of the wire bare. The result is that in going from Lansing to the College, the car is almost sure to come to a standstill at several places along the line, causing considerable delay until the motorman can climb on top of the car and pull the pieces of electricity together. I was amused to hear one of the new students attempt to explain the stop by saying that the power was off. He had evidently come from a town where the regular orthodox kind of electricity was used. But he was wrong, his explanation causing considerable laughter on the part of the older students.

" Another interesting thing about these cars is that some of them run at night without headlights. I was much shocked to observe this, as there had been some very heavy rains. I thought of the danger to the passengers in case of a washout along the line, or any other obstruc-tion on the road. No power under heaven could save the car from wreck and the passenger from injury in such a case. But then I learned that the motormen on these cars have owl's eyes and are able to see a hundred yards ahead in the darkest night. I was interested in looking into the faces of these men. Sure enough they had owl's eyes, and all my fears subsided.

"Then there is 'a strange queerness' in the appearance of these cars as they come rumbling down the track towards you. They look so odd. One wonders 'why?' and finds the explanation in the fact that they have no fenders in front of the wheels-nothing to save a person who perchance should fall in front of one of these machines from being ground to death under the wheels. I could find no one who could explain this. Owl's eyes would not save from disaster here.

"But the most remarkable features of the Lansing street cars cannot be seen from without. They have an inner loveliness divine. Only when one gets inside of the thing and feels it starting, twisting, jerking, jumping, and hears its frightful din and rattle, and sees the stove slanting like Pisa's leaning tower in instant danger of being knocked off the seat-only then does one's admiration transcend all bounds.

"I'hese cars run to and fro between the College and Lansing every twenty minutes and manufacture their own time on the way. You can depend on them about as well as you can depend upon the weather. You must pay your money full fare on the start, though like as not the beast will balk before the journey's done, leaving you to finish the trip on foot.

"The cars are well patronized. The line pays. A large number of persons depend upon it for transit to and from the College. The Capital City deserves better service from its street cars; the College needs it; the patrons pay for it. But alas!-"

# Botanical Club.

We have not space to quote more.

Mr. Jewell gave a paper on "Seed Industry," in which he recounted the beginning, growth, and development of the seed industry in this country. Since its first establishment, there has been a continued increase, until now many large fortunes are invested in the business. During the discussion some seven or eight M. A. C. men were mentioned who are in the seed business some getting a salary as high as \$3,000 a year.

Mr. Miller then read a paper on the peppermint industry in which he gave an account of the work of raising and distilling the mint for the oil. Mr. Miller has lived in a vicinity where mint is grown in considerable quantity, and spoke largely from observation. As a peculiar soil and climatic conditions are required for the profitable production, the industry is confined in this State mainly to the southwestern counties. Through this agency extensive tracts of otherwise waste land have been made to yield a R. L. B.

Thurston's Economics and Industrial History.

SCOTT FARESMAN & CO., CHICAGO, ILL.

This is a work adapted to the use of our public schools and is representative of the newest methods of studying society. Emphasis upon inductive methods of study, upon going from the "known to the unknown" is the innovation of this book. Categories of skillful and suggestive questions are presented by the author, the answers to which can be found by any observant youth in his own neighborhood. Questions, for instance, concerning the nature of neighborhood businesses, distribution of occupations among the people, the proportion of wealth-producing persons to nonproducing persons and the requirements of the neighborhood for food, clothing and luxuries are among those asked. It is hoped by the author that the materials of economic science may thus be dealt with at first hand and their reality and naturalness better established in the mind of the student. Having accustomed students by these means to the right standpoint from which to regard society, in another portion of the book the author depicts our industrial history, and thus the student is guarded from shallowness in his judgments concerning economic phenomena.

A last portion of the book-and the smallest of the three-is the customary descriptive and explanatory political economy. Money and markets are here described and economic laws and beliefs are explained. Withal the book is a small one though beyond doubt more means are afforded to put the young student in touch with his social and industrial surroundings than in any other collection of similar size thus far made. W. O. H.

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"The total income of the colleges of agriculture and mechanical arts supported wholly or in part by the government was for the year 1898-99, \$6,193,016; 35,458 students were registered."

#### Exchanges.

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#### Former Students and Graduates.

C. E. Parsons, '01, is employed as a missionary of the Sunday School Union. His work extends over several counties in Southern Mich-

C. A. Dockstader, '81, of Three Oaks, Mich., was elected probate judge of St. Joseph county at the late election.

Laverne Seelye of Hadley, sp. '00 in live stock, had his left hand badly mutilated in the snapping rolls of a cornhusker last Friday.

R. B. Buek, '96, stopped at the College a few hours last Tuesday on his way to Topeka, Kan. where he will engage in newspaper work.

H. E. Rupert, with 'oom, spent Thanksgiving with friends at the College. He has a good position as tool-maker with the Daisy Manufacturing Co. Plymouth, Mich,

Geo. B. Hannahs, '75-'76, is one of the proprietors of "Idylwilde," one of the most beautiful mountain summer resorts in Southern California. He is also one of the members of the Native Lumber Co. of San Jacinto in which city he resides.

W. A. Bahlke, '83, is a prominent lawyer of Alma, Mich. Prof. Kedzie found him up there the other day doing duty as chairman of the citizens' committee who gave the Alma College football team a banquet on Nov. 30 in honor of their victory over Albion.

We quote the following from a tter dated Nov. 25. "Robert letter dated Nov. 25. Sprague Mayo, ten pounds in weight, but valued above ten millions came 'to make our hearts rejoice' on Nov. 19-Mollie Carpenter Mayo '88, and N. S. Mayo '88." Dr. Mayo is secretary of Extention Department of the Storrs Agricultural College, Storrs, Conn.

C. B. Smith, '94, spent a few days last week visiting friends in Lansing. He is Horticultural Editor in the office of the "Experiment Station Record" in the Department of Agriculture, Washington, D. C. "C. B." and H. W. Lawson, '95, have recently started up a large sheep ranch in the northern part of the state.

John D. Nies, '94m, stopped over Sunday and Monday at the College on his way to Holland, Mich., where he has a position as electrician for the Holland Municipal Lighting Plant. Mr. Nies has been doing post-graduate work at Cornell University for several months past and hopes to return and complete his work there in the near future.

Quite a large number of former students were present at the military hop last Wednesday. The following list is given by the State Republican: "Miss Vera O'Dell, Jones; W. C. McLean, Jackson; Harry Rupert, Plymouth; Homer Clark, Coldwater; Ben Liubach, Grand Rapids; B. P. Rosenbury, Oak Park, Ill; C. B. Lundy, Detroit; and C W. Christopher, O. H. Reed, A. C. Krentel, and F. H. Thoman, Lansing."

Mrs. H. N. Turrell, wife of H. N. Tu. rell, with '61, died Nov. 13, at their home in Litchfield, where they had lived for 38 years. She was an earnest christian worker, a member of the Congregational church, and greatly loved by those who knew her best. She leaves a precious memory to a sorrowing husband and their daughters, who mourn the loss of such a pure, true and beautiful life.

R. L. Reynolds, '95m., writes from Sacramento, Cal., under date of Nov. 25: "I am in the drafting room of the So. Pacific Co.'s principal shops, and very pleasantly located. The office is pretty busy just now, and we are doing some work in the evenings. I am on car work at present, but my work will include both car and locomotive designing. There are about 2,500 men employed in the railroad shops, and as Sacramento has only about 35,000 population, the railroad men form a considerable element in the same. "I find Sacramento a very pleasant place though this is the rainy season and in the two weeks I have been here it has rained half the time. "My address is Drawing Room, S. P. Shops, Sacramento, Cal."
"Rob" adds that his brother F.

Llewellyn Reynolds (sp. 92-93) is employed as assistant superintendent by the Mexican Gold & Silver Recovery Co. His address is La Mina, Colorado; Matape, Via Ures; Sonora; Mexico. Latcha Waters, M. A. C., '90, is superintendent of this mine and smelter.

#### About the Campus.

Mrs. Nellie Kedzie spent Sunday at Dr. Kedzie's.

Club C recently enjoyed a venison roast, the gift of Professor Smith.

Professor Weil was in Detroit Friday and Saturday of last week.

Professor Ferguson went to Chicago Monday to attend the fat stock show throughout the week.

Prof. Smith made a tour through several of the southwestern counties of the State last week preparing for institutes.

Professor Mumford went to Chicago last Thursday to look after his work as secretary of the Intercol-legiate Live Stock Association. He will also attend the fat stock show.

The "At Home," December 7, in the Women's Building is to all members of the College and is given by the entire Women's Department who will be the hostesses of the evening.

A large number of the students went home for Thanksgiving. Many who are too far from home went with students living nearer to the College. Few that went away returned for Friday, so that classes were small that day.

Messrs J. H. Skinner, Geo. Severance, G. C. Humphrey, M. V. Shoesmith, N. A. McCune, and J. B. Strange are in Chicago representing M. A. C. at the Chicago Stock show. They will take part in the stock judging contests. The farm department has sent a carload of stock-three steers, three mutton sheep, five bacon hogs and eight fat hogs-to the show.

The Art Department of the Youth's Companion has recently sent to the College some material illustrating three processes of engraving, wood-engraving, zinc etching and half tone engraving. There are four cards ready to hang upon the wall and each contains the block, or engraving, and a proof from the same. The material, which is finely prepared, is very good indeed, and serves admirably in explaining processes in graphic reproduction to the class in graphic arts.

# We Welcome

# THE STUDENTS' RETURN AT THE M. A. C.

It gives new life to the Capital City. We cordially invite all to make their home at our store. Mr. Homer Burton and Mr. Arthur Hart will make daily trips to every one who desires to see them on the M. A. C. grounds or in the vicinity. If you are not called upon drop us a postal and we will call. Samples sent on application.

We Guarantee Satisfaction.

# Donsereaux's Department Store.

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DIAMONDS, WATCHES, JEWELRY, GLOCKS, SILVERWARE, ART GOODS.

Repairing Nneatly Done.

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May look alike to you, but there is a very great difference in the quality we handle and that sold by some other markets. We handle none but the very best. Like the pudding, the proof of good meats is in the eating. A trial will convince you that you ought to trade with us.

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BOTH PHONES, Careful attention given to 'phone orders.

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The names in this Directory, as well as those of all our other advertisers, are of reliable parties. We hope that the faculty and students will take pains to patronize those who patronize us.

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R W. MORSE, D. D. S.
Hollister Block, Room 517.

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DONSEREAUX'S DEPARTMENT STORE is the place to trade, You can get a warm lunch in our cafe for 10c. See ad.

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TAKVORIAN & JEWELL. Agents for STAR LAUNDRY, We return your work on Thursday p, m. Either high polish or dull finish. No day p. m. Either saw-edge collars.

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A D. HAGADORN, M. D.—Office hours, 11 to 12 A. M., 2 to 4 and 7 to 8 P. M. Office at 212 Washington Avenue S.; home 419 Seymour St.

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GILBERT M. HASTY, Proprietor Hasty's Gem Lunch, Best meals and lunches in the city, Quiet place for adies, 118 Wash, Ave. S.