The M. A. C. RECORD.

CINCAR STATE AGINCETONAL COLLEG

VOL. 17.

ENGINEERING SOCIETY.

A full house greeted the late comers at the engineering meeting in 117 Engineering Hall last Tuesday evening. The new President Groothuis called the meeting to order, and, after a few preliminary remarks about the society for the benefit of the new men, turned the meeting over to Dean Bissell. The Dean's talk dealt with the history of the profession, and particularly with the system and projects of the water supply of Rome in the time of Caesar. The Romans had a very extensive water service for both private and public uses, and elected a water commissioner, or superintendent, to care for it and put in extensions and improvements. The speaker read some extracts from the diary report written by one of these superintendents, showing a knowledge of some of the principals now recognized, and also some of the tricks for stealing water which are used even today.

A business meeting followed, in which the following officers were elected: Sec'y, G. Allen; Treas., Joe Meyers; Executive Council Members, G. M. O'dell, H. W. Schneider and F. E. Andrews.

Next meeting in two weeks.

HORT. CLUB.

At the meeting of the Hort. club, held on Tuesday evening, K. D. Van Wagenen gave a very interesting talk on "The Care of Orchards in Irrigated Regions." Van spent the spring and summer in the west, and is familiar with conditions that prevail there. He was employed by an orchard company which operates 9,500 acres of land at Mosida, 50 miles south of Salt Lake City. The soil, known as "loess soil," is very fertile, but deficient in organic matter. The land was obtained by homesteading and buying out the ranchers. It is now being set to apples, pears and cherrics. Rome Beauty and Jonathan apples, Kieffer pears, and Napoleon cherries are the principal varieties being planted. In setting, the hexagonal system is used. Irrigation, of course, has to be practiced, and the water is obtained from Utah Lake and pumped by electric power to the orchards. Van said that the most striking thing he had noticed since he had left school was the need of practical experience.

Fameuse apples were served after a short talk on its history had been given by A. W. Eidson.

Among the older "boys" to see the game on Saturday were, Geo. A. Farr, 1870, of Grand Haven; J. R. McCall, '90, of Detroit; E. N. Pagelson, '89, and Wm. Lightbody, '89, of Detroit.

'06.

T. F. Locke has changed locations from San Francisco to Oakland, Calif. His private address is 872 Broadway. EAST LANSING, MICHIGAN, TUESDAY, OCTOBER 17, 1911.

M. A. C. HOLDS MICHIGAN TO LOW SCORE.

VISITORS WIN IN LAST FEW MINUTES OF PLAY.

["We are not confident of a victory, but we will do our best."-Capt. Stone]

No one who witnessed the big game on Saturday would question for one moment the fact that the team did do its best, and M. A. C. is more than satisfied with the showing made. Never has a team entered a contest with a finer spirit and determination than did the bunch that represents M. A. C. this season.

Holding their big opponents time after time, pulling off several brilliant plays, and punting out of danger with ease, the home team kept the visitors guessing and the spectators wondering what would come next. It was an intensely interesting contest for the onlookers, for it was anybody's game until the last few minutes of play, when the superior weight and continued training of the visitors began to tell, resulting in two touchdowns with goals for each.

Large delegations were present from Grand Rapids and Detroit, and Michigan also sent a large number of loyals to cheer her team on to victory. It is estimated that 6,000 persons saw the game, —by far the largest number ever seen on the field at one time.

M. A. C. kicked off in the first quarter and Thompson returned 10 yds, and lost on a fumble. M. A. C. was held and tried for a place kick, which just missed the mark. The ball then see-sawed across the field, no long gains being made, and punting resorted to frequently. The quarter ended with M. A. C. in possession of the ball on her own 10 yd. line. M. A. C. showed up stronger than ever on defense in the second quarter, and the big team was held for downs repeatedly and forced to punt. Securing the ball on the 20 yd. line, Conklin tried a place kick, but failed. In this quarter Gifford made 40 yds. around right end on a fake, and prospects looked good for a score. On the next play, however, a forward pass was intercepted by the visitors, and the half ended with the ball in Mich. hands on their 25 yd. line.

In the beginning of the third, Michigan lost on downs, and through the help of brilliant playing on the part of Hill, Riblet and Gifford, the ball was placed within striking distance. Hill then dropped back and, kicking a field goal from the 35-yd. line, made the first score in the game. Shortly after, the visitors secured the ball on the 20-yd. line and succeeded in tieing the score. The rest of the quarter punting occupied the greater part of the time.

In the last quarter, the weight and endurance of the visitors began to tell, and two or three successful forward passes and the running back of punts by Thompson, coupled with several severe penalties imposed upon M. A. C. resulted in two touchdowns for Michigan, and the game ended 15 to 3.

Great credit is due Prof. Macklin and his assistants, Profs. Hus-ton and Halligan, for the splendid showing made, as they have been untiring in their efforts to produce a team which should at least make a creditable showing against a team of hardened players-a team which is recognized everywhere as one of the strongest, if not the strongest in the west. That M. A. C. played as good ball as did the visitors is admitted by every one who saw the contest. It was not a better knowl-edge of the game or brilliant playing on the part of the visitors that won-it was simply weight and endurance. Michigan won the game fairly and cleanly, and we congratulate her. Our team made a better showing than we had a right to expect under the circumstances, and we are proud of the work accomplished. We still have one of the very best in the west.

Öfficials.—Referce, Hacket, West Point; umpire, Eskersall, Chicago; field judge, Allen, Northwestern; head linesman, Yeckley, Penn. State. Time of quarters, 15 minutes.

'o.t.

G. C. Morbeck, who has been homesteading for some time, has proven upon his ranch, and is now engaged in forestry work near Santa Fe.

111.

E. C. Lindemann is the new managing editor of The Gleaner, of Detroit, which is the official organ of that organization known as "The Gleaners." In the October number of this paper, Editor "Lindy" outlines his new plans for the paper in terse paragraphs which are very characteristic of himself. In introducing the new managing editor, Mr. Slocum has the following to say : "Mr. Lindemann not only comes to us well qualified for this very import-ant position through his college training, but brings the energy, enthusiasm, and heart interest so necessary in successfully carrying forward The Gleaner's progressive policies in the interest of better farms, better farming and better business farmers." His college friends certainly wish him success, and The Gleaner is to be congratulated on securing his services in this most important position.

ALUMNI

No. 4

'S2.

J. H. Irish, of the above class, has given up his law practice at Detroit, Minnesota, and is now on his ranch near Eugene, Oregon. His son is in the university there, and a daughter in the grades. His house address is 338 W. 11th St.

Wm. F. Pack, governor of the mountain provinces in the Philippine Islands, recently returned to the States, and will spend his six months leave of absence at his old home at Centerville. He has been in the islands ten years. The 500,-000 people within his jurisdiction are rapidly adopting civilized ways. Gov. Pack served as 1st Lieut. in the Spanish war.

Gov. Pack was a college visitor yesterday.

'9S.

Announcement was recently received of the birth of a daughter to Capt. and Mrs. Mark Wheeler, at Ft. Davis, in Alaska. Mrs. Wheeler was formerly Miss Jennette Carpenter, '98. Capt. Wheeler is with the 16th Infantry, now stationed at Ft. Davis, near Nome, Alaska.

'05.

C. C. Ford is an engineer with the Jeffery Mfg. Co., of Columbus, Ohio. Mr. Ford's residence address is 38t E. Oakland Ave.

A son, Philip G., was born to Mr. and Mrs. Claud I. Auten, of Detroit, on September 16. Both Mr. Auten and wife (Bessie Phillips) were graduates of above class.

'07.

C. H. Goetz, instructor in forestry at Columbus, Ohio, reports a pleasant trip through northwestern Montana the past summer, where he worked with the U. S. forest service men in reconnoissance work—surveying and the making of yield tables. On account of "lack of fires," the work was both pleasant and profitable. Mr. Goetz states that the work at O. S. U. starts off very nicely, and with a large increase in the snumber of forestry students.

'08.

Lloyd E. Wood is now with the National Brake and Electric Co., of New York City.

A good word from "Pat" (Francis) O'Gara is always welcome. Mr. O'Gara is still with the Commissioners of the Transcontinental Railway in the great Northwest. In mentioning the subject in which U. S. and Canada have recently been so much interested, he says: "It would not be advisable to mention 'Reciprocity,' even if I had a thirty-five mile walk and a ride of another fifty on a construction train to get to the polls to cast my little vote."

"Pat" was one of our famous football managers, and closes with best wishes for a successful year in that particular branch of athletics.

The M. A. C. RECORD

PUBLISHED EVERY TUESDAY DURING THE COLLEGE YEAR BY THE MICHIGAN STATE AGRICULTURAL COLLEGE B. A. FAUNCE. MANAGING EDITOR

SUBSCRIPTION - 50 CENTS PER YEAR

Entered as second-class mail matter at Lansing, Mich. Address all subscriptions and advertising matter to the M. A. C. RECORD, East Lan-sing, Mich. Address all contributions to the Macaging Editor.

Remit by P. O. Money Order, Draft or Registered Letter, Do not send stamps. Business Office with Lawrence & Van Buren Printing Co., 210-212 Grand Ave, No., Lansing, Mich.

TUESDAY, OCTOBER 17, 1911.

"HE editor takes this opportunity to acknowledge the many letters and items which have come to his desk from alumni recently. We have been quite unable to answer each one by letter, hence this acknowledgment. We believe that the alumni are becoming better acquainted each year, and are drawn to the old school by her many recent achievements and through the many loyal sons and daughters who are "making good." It is with a source of much satisfaction that we are able to publish this week so many interesting letters concerning M. A. C. people. We are sure the RECORD readers enjoy them. Whenever you have anything good to say, let's have it. Each one, you know, wants to know what the other is doing.

A LOYAL NAUGHT NINER.

Missouri State Normal School, Cape Girardeau, Mo.

M. A. C. RECORD :- Enclosed is my subscription for the RECORD. No alumnus can be without the RECORD or the Holcad, who has true college spirit, I believe. My subscription to the Holcad has not gone in yet, but will very soon. I suppose many of the faces have changed even from last year; it hardly seemed the same place then with hardly a 'oger around. If it hadn't been for the faculty members I knew so well it would really have been a dreary place. I don't know how it will seem next year if I get back. However, the campus gets more beautiful every day; it is an ideal spot, and I wish more people could see and appreciate it.

You may have heard before this reaches you of Gerald's good fortune. He and his wife (Harriet Weston) sail a week from Wednesday for England on the Lusitania, to be gone two or three months. Gerald is to institute a plant for the Ford Motor Co. in Manchester. Hurrah for '09! 1'm almost as excited as though it were myself. As it is, I must stay contented at my new work, which is very interesting. I have charge of the physical training here, and it keeps me pretty busy. I have twenty three classes a week; ten in lectures on personal and school hygiene and thirteen gym classes. The hygicne classes meet twice a week. The playground side of the work is to be emphasized this year, and it is great fun, except when my classes are so large. One class has over forty, another over sixty, and the other two are quite small. We are to have indoor base ball this week if I can complete arrangements. My smaller classes are playing tennis. School work here keeps us pretty

busy, but we manage to enjoy ourselves. It is an "Adamless Eden," however, as the art teacher remarked, but she is going, with two others and myself, to housekeeping this month, so may forget her trials. I am planning to go to St. Louis next week and see "Pinafore." We are thinking of staging it down here, and the music teacher is going to see if it is adaptable to our singers. I will have a principal part — as I had in the "Mikado" last year, which was very successful.

Wishing the RECORD and all of M. A. C. students, faculty and alumni all success for the coming year, 1 am

Yours for M. A. C., MARY G. ALLEN.

WYOMING LETTER.

POWELL, WYOMING, October 9, 1911.

Ye Editor. Dear Sir :- Enclosed is my subscription for another year. I was noticing the Western letter in your October 3 number, by Mr. W. M. Treadwell. I have been in the I have been in the West for over four years, myself, on the Williston Project, North Dakota, the Flathead Project, Montana, and, at present, the Shoshone Project, Wyoming. I have seen the Lower Yellowstone Project. Montana, have lived in Helena, and have seen more or less of the country from the trains.

Mr. Treadwell is correct. There are opportunities for young men here. If a man has \$500 to \$1,000 to start on, and is willing to live for a few years in a tent or cheap shack, and economize as he would not do in Michigan, he can take up some vacant land, and probably make good, if he keeps his health. Some of this land is pretty good. This Shoshone Project, for example, has the makings, I believe, of a good dairy country. The Flathead country has a climate almost as nice as Michigan. And if, after living here for five years, he should decide he has had enough of it, he can make a nice little stake by selling out to some Eastern sucker.

And right here is where I want to warn my friends not to be the sucker. A farm on this project was sold a few weeks ago for \$100 per acre. This is a 40-acre tract, with a good house, a shed (which in this country goes for a barn) and possibly some other little shacks, and is, I think, all in alfalfa. Unless I am greatly mistaken, you can still buy land in Michigan for less money which is as good soil or better, the buildings are as good or better, and it is closer to market. Moreover, when you raise nothing but hay in Michigan you sit down and watch it grow. Here you have to irrigate it.

The reason for all that difference in price is that the railroads, the real estate men, and everybody else out here is engaged in a gigantic boom, and you pay for the advertising, not For example : Williston, the land. North Dakota, is in a treeless country. They burn lignite coal in their kitchens. There are, however, a try. few cottonwood trees along the river, the poorest kind of stuff for lumber. Somebody put in a little saw mill on the bottoms near Williston, and somebody else took a picture of a little pile of logs, put it on a postcard, and labeled it "Lumbering near Williston, N. D., ' and

I suppose that card went all over the east. The railroads fill their exhibition cars with the fruit of some favored sections, like the Bitterroot Valley or the Flathead country, and then take them back east and say, "This is what we grow in Montana," and it is.

1 don't want to be understood as knocking this country, because there are still lots of good opportunities for the right kind of young men. I do wish, however, to warn any friend of mine to "get in on the ground floor."

GEO. HENRY ELLIS, '07.

M. A. C. BANQUET.

In connection with the Michigan State Teachers' Association Institute, held in Detroit, Nov.2 and 3, M. A. C. Alumni will hold a reunion. The banquet will be held at the Hotel St. Clair, Nov. 3, at 5:30 p. m., and a royal good time is planned.

The parlors of the St. Clair will be headquarters for M. A. C. people during the association. alumni, and their families and friends, are cordially invited to attend and help make this reunion a success.

AMHERST LETTER.

DR. W. J. BEAL.

The officers of the Massachusetts Agricultural College meet with excellent success in securing men of foremost rank to attend gatherings and participate in the programs. I recall a few who appeared within the past year : L. A. Howard, Chief of the Bureau of Entomology; Dr. C. F. Chandler, professor of chemistry at Columbia University for forty-six years; Dr. W. E. Stone, president of Purdue University: C. W. Eliot, Harvard's famous president; Dean Eugene Davenport, 78, of Illinois, and Dean Bailey of Cornell.

I recall a few sentences by Dr.Eliot : "Agriculture has been made over in thirty years; so has the fish industry. Medicine has been made completely new. Agriculture has come to be highly intellectual; the work is varied, while in a factory the work is exceedingly monotonous: Work in agriculture is healthier than in factories."

By no means all the good things are manufactured in New England. Ray S. Baker and wife, on visiting Boston, were taken by an architect some miles distant to see a certain new dwelling. At the close of the trip they were anxious to see the brand of the vehicle which had carried them. It was a "Reo." happened to note some of the lettering on the gasoline engine that was running the mixer of mortar for our new house. It was the "NEW-WAY", of Lansing, Mich.

Recently in looking over the Annuals by the juniors of M. A. C., I came across, in several places, a familiar phrase, the origin and meaning of which was mis-interpreted-"keep on squintin." For long years - from 1878 to 1910 - it was a familiar sight in the botanical laboratory to see all the members of a section of sophomores, when beginning to use the compound microscope, exhibiting, apparently with a great deal of pride, their skill in the ability to close one eye while they used the other looking through the tube. This notwithstanding the previous specific directions to always keep both eyes open. The sarcastic professor occasionally repeated, as he passed from one to the other, "keep on squintin," thinking by this gentle reminder (?) to prevent the students from fixing this unfortunate defect as a habit.

Early in August, at the earnest solications of Prof. A. G. Gulley '68, and his good wife, I visited them at the Connecticut Agricultural Collegc, where Mr. Gulley is the senior professor of horticulture, and superintendent of the gardens and grounds since August, 1894. Director L. A. Clinton, '89, and assistant A.T. Stevens, '93, were absent during a part of the summer vacation. At this college I saw more that was good than I had reason to expect, considering its age. They have a good farm of over 450 acres, and lease 200 more. They boast of a fine piece of virgin forest, which has been difficult to preserve from the saw of the manufacturer.

As formerly mentioned regarding some of the orchards near Amherst, so there in Connecticut deer frequent certain crops of the farm, much to the annoyance of the farmer. They are about as easily frightened as a calf. The grounds were spacious and well kept, also the orchards, vinevards and gardens. They have seven greenhouse rooms, covering about 12,000 square feet.

I was especially impressed with one of these houses, in which had been placed a good number of plants of economic value, including the cinnamon tree, pepper, date palm, papaya, bamboo, cocoa, fig, banana, tea, coffee, zante currant (a grape), and a tree that produces annatto, a substance used for coloring cheese and butter. Of course I was much in terested in the botanical garden, and looked this over with Prof. Blakeslee, professor of botany, who is giving it a trend in practical agriculture as well as in botany. The premises everywhere were of a neat and thrifty appearance. I was assured that C. L. Beach, the young president, was a reliable, popular and efficient man. They are three miles from a railway station, with no trolley and with some hills, but no clay such as M. A. C. had when young. By paying the freight you could secure a group of tremendous boulders, a big hill or two, a lake of clear water fed by trout streams which would be worth thousands to your campus, and Connecticut would have a plenty left for all practical purposes.

HAS THE FARMER TIME TO READ?

When we say "we have not time" to do certain things, it would be well to think reasonably long enough to be sure that the thing being left undone is not of more importance than the things which keep us from doing it. It is true that every business has its busy season, when all surplus energy is used in the day's work, and there is little time and less inclination to read. Especially is this true on the farm, but there is no business man who has more valuable material at his command than the farmer, and no business which is advancing more rapidly in methods than agriculture.

The only way to keep in touch with the latest knowledge along a man's line of business is to secure (Continued on page 4.)

The M. A. C. RECORD.



The Varsity plays Buchtel College at Akron, Ohio, on next Saturday.

The all-freshmen team play the Mt. Pleasant normal on the home field Saturday afternoon.

The construction work on the East Lansing church has progressed quite satisfactorily the past summer, and it is expected to hold dedicatory exercises next Sunday.

The first meeting of the M. A. C. Women's Club for the year was held at the home of the president, Mrs. Warren Babcock, on Monday, Oct. 9. The affair was in the nature of a reception, and every M. A. C. lady was invited.

The formal dedication exercises will be held in the new East Lansing People's church building on next Sunday morning at 10:30. A program has been arranged and special music prepared. The following week will be fully occupied in various ways, and an attempt made to introduce each student to the new church and its activities.

F. G. Cornell, Jr., who spent two years at M. A. C., special student, sends a sample of mineral to our chemical department from a mine on the southern line of Lee county, Kentucky. In order to get to the strata of coal, a deep layer of rock must be passed through, which has proven too hard, almost, for any drill. Mr. Cornell has applied the heat test, and believes it contains a percentage of sulphur, and asks for further assay. The demand for men to judge at the county fairs is just now greater than the supply.

Prof. Thomas Shaw, of Minnesota, is the guest of his son, Prof. R. S. Shaw, this week.

Editor Lindemann, of *The Gleaner*, was a college visitor over Sunday. "Lindy" wishes his paper might be moved to Lansing.

The Delta Club tender a reception to the members of the faculty this (Tuesday) evening. A program of entertainment will be provided, and light refreshments served.

A fine large silo has been built at the northeast corner of the dairy barn, and the filling of same was completed last week. The silo is known as "The Imperishable," and is constructed of vitrified tile. It is, in size, 14x36 ft., and has a capacity of 100 tons.

Dr. Bessey reports that he now has ten sections in freshmen botany for men, two sections having been added but recently. There are on an average 22 men in each section. There are also 90 women in freshmen botany, and 95 students taking advanced work in this subject.

The Farm Mechanics Department have received a load of machinery, including manure spreader and grain harvesters, which will be set up in the laboratory and used for exhibition and demonstration purposes. The machines are loaned to the department by the International Harvester Co. Remie Cools, class of '10, is now with the Packard Motor Co., of Detroit. His private address is 26 Walnut Ave.

Instsructor Dunford, of our Economics Department, has moved into the residence owned by Mr. Reed, our former Asst. Prof. of Chemistry.

Messrs. Pyke and Von Tungeln, instructors in English at M. A. C. last year, are both studying at Harvard this year, both gentlemen having fellowships in that institution.

J. E. Shaw, 'to, who instructed in Civil Engineering during the spring term of last year, is now drafting for the Olds Motor Works, in Lansing. Residence address, 528 Carlton Terrace.

R. E. Thompson, '10, was a college visitor the past week. Mr. Thompson is with the State Forestry Commission. His work consists of estimating, surveying, etc. His headquarters are at Charlevoix, Mich.

Mr. Geo. W. Hood, of Ohio, has been elected to the position in the Hort. Dept. made vacant by the resignation of Mr. Gregg. Mr. Hood is a graduate of Ohio State Hort. Department in 1909, and the following year was spent in post graduate work in the same institution. The past year he served as instructor in his alma mater. As stated before, Mr. Gregg has entered commercial work in the west, after doing four years of splendid work at M. A. C. Wm. Sproat, of last year's class, is studying forestry at Yale Forest School this year.

K. B. Stevens, 'o6, has entered M. A. C. for advanced work in civil engineering.

Here are the weights of the men who upheld M. A. C.'s football honors on Saturday :

L. EStone 167	lbs.
L. TBekman 185	66
L.GMartin 176	44
CMcWilliams_208	
R. GCulver 174	54
R. JMcLaughry_173	66
Q. —Riblet155	44
R. HHill	46
F. BMarkham 153	24
L. HJulian	54
Campbell 179	66
Day	44

On Thursday afternoon the senior pomology students, accompanied by Prof. Eustace and Messrs. Gunson, Hood, and Coons, inspected the large Smith orchard north of Pine Lake. This orchard was planted by Prof. L. H. Bailey, of Cornell, and is one of the largest in this part of the state. Part of it is under cultivation and the remainder in sod, thus affording an excellent opportunity for comparison of the two methods. The cultivated trees showed marked vigor, this being especially apparent in the foliage. Scale and other insects were found, and Mr. Coons pointed out many diseases common to the orchard. Each one in the party was provided with a bag in which to collect a specimen of each variety for study.



Three years ago a portion of field number five on the college farm was seeded to alfalfa, with a slight sprinkling of orchard grass and alsike clover in addition. The part of the field thus seeded consisted of a gravelly slope, which was inclined to wash badly. The stand procured represented the three crops about in the proportions sown. All of the crop was cut for hay the second year, while the third year part was pastured and part made into hay. The yields of hay from the first cutting were enormous, the orchard grass aiding materially in the curing and keeping in the mow. Second cuttings consisted almost entirely of alfalfa. This year a large percentage of the alfalfa is missing where the mixture was pastured closely and persistently by calves last summer, and in its place there seems to be a large amount of June grass. The percentage of orchard grass seems to be unchanged. Directly across the fence, where the crop was not pastured, the proportion of

WIN, 04.)

Prof. Anderson has moved into the Hagadorn house, on Grand River Ave., which he recently purchased. Dr. Hibbard, of our Botanical Department, will occupy the house on Abbot Ave. just vacated by Prof. Anderson.

grass had taken complete possession.

This seems to be the general results

from such attempts under Southern

Michigan conditions. The June

grass pasture now remaining is fur-

nishing abundant pasturage, but the hill tops have been dressed with

stable manure once or twice since

the seeding was made.

Hon. Pat Kelley spoke before the class in economics Monday morning upon the subject of taxation. The subject had to do with the scheme which the tax commission are trying to get the legislature to adopt, and involves particularly the taxation of corporations.

CROCKERY AND GLASSWARE. H. LARNED.-China, Glass & Lamps. 105 Washington Ave. S. DENTISTS. N. H. MOORE, D. D. S. Office 411-413 Hol-lister Building, Lansing, Mich. Citi-zens phone. Automatic 9499. D. E. PARMELEE, Dentist, 117½ Wash-ington Ave. S., Lansing, Michigan, Automatic phone, office 3402; residence, 3403. J. E. STOFFER, D. D. S. Office 200-5 City National Bank Bidg. Automatic phone 561; Bell phone 61. Former M. A. C. student. DRUGGISTS. R^{OUSER'S} CAPITAL DRUG STORE. Up to date. Corner store. Opposite Hollister Block. DRY GOODS. J. W. KNAPP CO.- Dry Goods and Fur-nishings. 220-224 Washington Ave So. M ILLS DRY GOODS CO.- Dry Goods, Suits, Coats, Waists, Art Needle Work, Etc. 108-110 Washington Ave. South. ELECTRICAL SUPPLIES. CAPITOL ELECTRIC ENGINEERING CO. - Full line of Electrical Supplies, including students' shades and cords, car-bon, fantalum and mazda reading lamps. 117 E. Michigan Ave, FURNITURE DEALERS. M. J. & B. M. BUCK.-Furniture. Corner Washington Ave. and Ionia Street. See ad. HARDWARE, STOVES & TINW'RE. NORTON'S HARDWARE.-General Hardware, Tinware, Graniteware, Cut-lery, Stoves, etc. 111 Washington Ave. S. See ad. MANUFACTURING AND HAIR-DRESSING.

that does as it advertises

M RS. O. T. CASE. – Manufacturing, Shampooing & Hairdressing Parlors. Switches made of cut hair or combings, also colored and renovated to look as good as new. The Franco-American Hygienfe Toilet Requisites A SPECIALTY. Automatic phone 551. 220% Washington Ave. S.

MUSICAL INSTRUMENTS.

G RINNELL BROS.-"Michigan's Leading Music House." High Grade Planos and Player Planos, sold on converient terms. Everything in music and musical merchandise. Lansing Branch. 219 N. Washington Ave.

PHYSICIANS.

PROFESSIONAL MEN.

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

BARBERS.

COLLEGE BARBER SHOP. - In Bath House, Andy-Dell-Ernie, You get the best work here. Try it and see.

BOOKS AND STATIONERY.

A. M. EMERY, 116 Wash. Ave. N. Books, Fine Stationery, Engraved Calling Cards, Fountain Pens, Pictures, Frames, Fine Framing a Specialty. Up-to-date styles. Cut Glass-cut in Lansing.

BOOK BINDERS.

G EO. G. BLUDEAU & CO.-Bookbinders, account book makers, paper ruling, library and fine art bindings, file boxes, map mountings, albums, pocket books, etc. Citizens' phone No. 489. In City National Bank Building

CLOTHING.

ELGIN MIFFLIN.-Ladies and Gentle-men's Furnishing Goods. See ad.

THE MAPES CO.—Hart, Shaffner & Marx Olothes and Men's Furnishings. 207-209 Washington Ave. South.

those who patronize us.

D.R. OSCAR H. BRUEGEL, Hours, 7 to 83% a.m.; 2 to 4 and 7 to 8 p.m. Sun-days. 12 to 1 and 5 to 6 p.m. East Lansing Mich. Citizens phone 1344.

D.R. H. W. LAN DON, East Lansing, Mich. Office hours: 7 to 8:30 a.m., 12:30 to 2 7 to 8 p. m. Sundays, 10 to 11:30 a.m., 7 to 8 p. m. Oftizens' phone 9228.

PRINTING.

L^{AWRENCE & VAN BUREN PRINT-ING CO.-210-212 Grand Avenue North. Fine Printing. Both Phones.}

LLEN PRINTING CO.-111 Grand Ave-nue south. Printing and office supplies. Bell phone 1094. Automatic phone 4006.

R^{OBERT} SMITH PTG. CO.-Cor. Wash-ington Ave. and Ionia St.

SHOE REPAIRING.

TRY KENDALL'S SHOP for Shoe Re-pairing. All work guaranteed. Ma-chine or Hand Sewed Soles. Rubber Heels while you wait. Fine line of Confectionery Walter's old stand. Michigan Ave.,

UNIFORMS.

J ACOB REED'S SONS.- 1424-26 Chestnut St., Philadelphia, Pa. Makers of "Gold Medal Uniforms."