

# The M. A. C. RECORD.

MICHIGAN STATE AGRICULTURAL COLLEGE.

VOL. 13.

LANSING, MICHIGAN, TUESDAY, DECEMBER 24, 1907.

No. 14

## WHAT THE SHORT COURSES ARE.

The short courses which begin on the 7th of January next and continue for six or eight weeks are the result of an honest and sincere effort on the part of the college to make its activities of immediate use and value to such young men of the country or town as want to learn something more of farming yet have not time to take a full four or five-year course. Because many of these young people have not had long training in the schools, there are no entrance examinations whatever, nor is the work of the course



PROF. C. D. SMITH  
DEAN OF SHORT COURSES

very largely reading from books. The dairy students make butter and cheese just as they will later in the factories. The fruit men trim trees, graft and spray as they will in the orchard or vineyard later, the live stock men handle the cattle, weigh them and study them in the yard and not primarily from books. All along the line the work is made practical and the information given applies to the regular farm operations as soon as the student returns to his home.

The fruit course lasts but for two weeks and is given over to addresses by prominent horticulturists and to practical demonstrations in making spraying materials, budding, grafting and similar operations. The program is so arranged that a person can come for a few days only, if he cannot get away from home for a longer period, staying just long enough to get training along some particular line.

The first year of the course in agriculture begins the day with an hour and a half of stock judging, sending the boys out into the barns and yards where they study individual animals until the eye and hand become expert in recognizing breed characters first and afterward the superiority of one animal over another by comparing with the proper breed type. The value of this work, the establishment in the mind of an ideal breed type, cannot be exaggerated. All through life our boys have an intelligent judgment concerning all kinds of domestic ani-

## THE SHORT COURSES

AT THE

### MICHIGAN AGRICULTURAL COLLEGE

WILL BE GIVEN THIS YEAR AS FOLLOWS:

GENERAL AGRICULTURE, First Year, Jan. 6, to Feb. 28.  
GENERAL AGRICULTURE, Second Year, Jan. 6, to Feb. 28.  
CREAMERY MANAGEMENT, Jan. 6, to Feb. 15, 1908.  
CHEESE MAKING, Feb. 17, to March 14, 1908.  
FRUIT GROWING, Jan. 7, to Jan. 18, 1908.

mals simply because they have constantly with them a mental picture of the popular type with which they can compare the animal presented to them for judgment.

After the stock judging comes an hour and a half of shop work, one day in the carpenter shop, the next at the forge. Here again the eye, the hand and the judgment are trained in the very lines in which expertness will be called for later.

Just before dinner, an hour is given over to the study of the anatomy and physiology of domestic animals and the recognition of most common diseases with proper remedies. In this department, the work is intensely practical and many men who have taken the special course in the past report this as one of the most valuable features of the whole program. Men are enabled to save life and to save money also by being able to note the premonitory symptoms and by treatments nominated in this series of lectures and demonstrations, apply the needed remedy.

After dinner the great questions of the construction of the soil, the ways of nature in allowing the principle of life to convert the dead mat-

ter of the earth into living forms, the methods of growing crops, how and when to sow, how to cultivate and harvest and finally how to select and treat the seed are given attention. At two, stock feeding is made the order of the day, a series of lectures and careful studies of books, bulletins and actual materials constitute the program.

From three to five an election is allowed between fruits and garden work upon the one side and agricultural chemistry on the other. Concerning the fruit work nothing need be said. The man who has a good orchard or who proposes to have one later will appreciate the importance of knowing just how to spray, to graft and to prune, will want to know how to recognize at sight the many varieties and will be sure to cultivate the judgment as to indications of disease. He who, however, will live on a general farm without orchards or vineyards will not miss the opportunity of gaining a clear insight into the mysteries of agricultural chemistry, the foundation science upon which his methods are predicated. This work will be largely laboratory demonstrations and studies, little or no text book reading being suggested or required. Before coming to the college, the boys will have read in all our rural press much about protein, phosphoric acid, potash, nitrogen, but the words have been almost meaningless. Here will be given an opportunity to receive training and information which will make the reading of the best agricultural journals a pleasure because of the clear understanding of the technical terms and methods named in the articles.



VETERINARY LABORATORY.

Men who have taken work at the College one winter will be allowed a wide election all through the day suiting their studies to their individual needs. At eight, either dairy work or seed judging followed by rural engineering, at ten either plant life, advanced veterinary or a lecture on milk and its products, at eleven either poultry, or bookkeeping and business methods followed by bacteriology.

Men, whose inclinations are toward livestock, will take advanced

(Continued on page 2.)

## WHAT HAVE THE SHORT COURSES DONE?

The work of these courses has continued regularly since 1896. In these eleven years over twelve hundred young men have visited the College for at least one winter. The total number of graduates of the regular courses scarcely exceeds this total. Most of the students have come directly from the farm and returned to it or have come from butter or cheese factories to return to the same line of work.

Of the young men coming from farms, the greater number have been sons of farm owners and have returned to the paternal home. The benefits accruing from the course have not been, fortunately, such as to be conspicuous, to be clearly



BACTERIOLOGICAL BUILDING

recognized, but are none the less effective and valuable. The state which pays the bills gets its return from the gradual uplift of farm life, the gradual increment to farm profits, the gradual, perhaps almost imperceptible, adoption of intelligent methods, an evolution not a revolution in the rural homes. A thousand young men with vision broadened, with minds and hearts touched with the fire of intellectual growth and ambition cannot be scattered through a state like Michigan without spreading the ferment of mental unrest and without originating definite mental growth. It is in this grand evolution of a better rural life in Michigan that the special courses find their greatest usefulness. The financial benefit accruing to the students themselves is a less important matter. Instances are not wanting, however, where the whole life of the student has been evolutionized by the course.

A young man coming from Oakland county, from a farm, with school training to the eighth grade only, developed a distinct ability not only in the care of stock but in business, went from the college to the management of the farm of a large mining company. He has done his work splendidly and has become an invaluable factor in the business of the concern. Another young man from the same county has continued the breeding of Shorthorns, finding the training here quite indispensable to both success and economy. A third young man without previous training except that best of all training, birth and

(Continued on page 2.)

THE M. A. C. RECORD.

PUBLISHED EVERY TUESDAY DURING THE COLLEGE YEAR BY THE MICHIGAN STATE AGRICULTURAL COLLEGE

W. J. WRIGHT, '04, MANAGING EDITOR

ASSOCIATE EDITORS.

F. P. FELT, '11

HELEN ESSELSTYN, sp.

D. L. BOYD, '09

G. S. VALENTINE, '08

F. F. BURROUGHS, '09

MILDRED FERGUSON, '10

GLENNA PANCOAST, '10

LETTA HYDE, '08

W. D. FRAZER, '09

H. L. CANTRICK, '09

R. P. HOLDSWORTH, '10

FRANK DANES, '10

CHAS. C. WATERMAN, '10

ATHLETIC REPORTER

E. C. KREHL

Subscription, 50 cents per year.

Remit by P. O. Money Order, Draft or Registered Letter. Do not send stamps.

Address all subscriptions and advertising matter to the College Secretary, Agricultural College, Mich. Address all contributions to the Managing Editor.

Business Office with Lawrence & Van Buren Printing Co., 122 Ottawa St. E., Lansing, Mich. Entered as second-class mail matter, Lansing, Mich.

TUESDAY, DEC. 24, 1907.

What the Short Courses Are.

(Continued from page 1.)

stock judging for the first two hours of the afternoon followed by either fruit or chemistry from three to five. Others may take physics, greenhouse work or entomology or any two of them followed by either chemistry or fruit.

The six weeks' creamery course is one continuous grind from morning to night of a kind most helpful to the man who has worked in a creamery. The forenoons are given over to the technical side, bookkeeping, bacteriology, general lectures on milk and its products, judging butter, and grading gathered cream. The afternoons are devoted in their entirety to hard work either with separator, cream ripener, churn, Babcock tester, lactometer, or other test, boiler and engine or some phase of the daily operation of a creamery.

As to cost it is enough to say that the college charges a fee of \$5 to residents of Michigan, \$10 to non-residents. Then there is the board and room which may be reckoned at \$4 per week, and finally some necessary incidental expenses amounting usually to something like \$5.

The courses do pay the students who attend many times over in actual cash besides broadening their lives and makes better citizens of them.

EQUIPMENT FOR THE SPECIAL COURSES.

Some one has said that he who could sit on one end of the log with Mark Hopkins sitting at the farther end of the same log was receiving a college education. This statement may have the substance of a great truth in it but at the same time, if Mark Hopkins wanted to economize the time of his student he would be exceedingly anxious to have some apparatus with him whereby he could illustrate what he had to say. Moreover, such education as legitimately falls to the special course student, demands emphatically the training of hands and eyes and not the brain alone. For this reason the Agricultural College has provided a magnificent equipment for the special courses.

In the Live Stock department

there are, among the cattle, most excellent specimens of Short Horns, Polled Angus, Herefords among the beef breeds; Jerseys, Guernseys, Ayrshires, Holsteins among the dairy breeds; Brown Swiss, and Red Polled, two breeds partaking of the qualities of both the beef and dairy. The college has an unsurpassed flock of sheep illustrating the best types of Black Tops, Rambouillets, Southdowns, Shropshires,



CHEMICAL BUILDING

Hamshires, Lincolns and Cotswolds any many others. This flock has been selected to illustrate the several types of the different breeds and probably no other flock of sheep could be found in the country so useful in exhibiting to young men the essential characteristics of the several breeds. Among horses the College has good types of both draft and driving animals. Among swine the leading breeds are well represented.

Not only have we animals useful for instructional purposes but the barns in which these animals are housed have been recently remodeled with the view to using them

including forges on the one hand and the usual kit of carpenter tools on the other. One and a half hours per day in the special course in agriculture is devoted to work in these shops. There is in addition a traction engine, various gasoline engines, and several types of steam engines for use in the work with the second year men in the special course in agriculture. Various additions have been made to this branch of the

equipment during the past year.

A special building is set aside for the veterinary department. Besides the lecture room with its abundant models and specimens, there is a dissecting room where clinics are performed before the classes and the young men are trained in the anatomy of the bodies of our domestic animals. This work cannot be done by textbook or lecture, but depends for its value, very largely on the dissections and clinics.

The department of agronomy has spent several years in getting together collections of corn and other grains for use in judging and in the



for the purpose of instructing the special course students in the different kinds of equipment now used by them and farmers. For instance, there is in the cattle barn a full line of the different makes of cow ties, of mangers, of floors, and all other appurtenances of the dairy barn. The horse barn, sheep barn and piggeries are full of devices for economizing time and making the work of the attendant more efficient.

The live stock department has a regular equipment of meat-cutting blocks, cleavers, knives and such apparatus to illustrate properly the methods of cutting up meat on the farm or in the butcher shop.

The carpenter and blacksmith shops have been overhauled and now possess full kits of tools for carpenter and blacksmith work, in-

work with field crops. These collections are stored in the barns and in the office of the Professor of Agronomy, where they will be accessible to the special course students.

A set of new poultry houses will illustrate the methods of building such structures on the farm devoted to general farming and also the style of buildings to be used by the specialist, who depends very largely on poultry for the support of his family. There are on exhibition for the use of the special students, several types of incubators and brooders.

The creamery class will find this year the newer styles of churns and separators with the usual cream ripeners and other machinery. Contracts have been let for a ton of

(Continued on page 4.)

What Have the Short Courses Done?

(Continued from page 1.)

rearing on a farm, left the special course to take charge of a herd of Jerseys in Maine, was transferred from there to the south to do similar work and now controls a large plantation with profit to its owner. In all these cases the student has received a satisfactory salary. Another young man, fortifying his past experience by a special course here has fitted himself to manage one of the largest dairy herds in California. Another is taking a leading part in the milk supply of Los Angeles; another has managed one of the largest farms in Indiana. These men are mentioned because, having had the benefits of a long experience on the farm before coming here, they have appreciated each detail of the work, have profited by the course and have found an opportunity to make themselves useful to the world. Space is not allowed for recounting the instances where young men have returned to their own farms to do splendid work in their several communities as well as upon their own properties.

It is undoubtedly true that half at least of all the cheese makers in the state have been trained in our cheese course. Certainly the quality of Michigan made cheese has improved in the past ten years and no small credit for this improvement is due to cheese course.

Not less than two-fifths of all the creamery buttermakers in the state were trained at the College. The influence of this fact on the quality of Michigan butter cannot be recognized because of the introduction of the gathered cream system which has necessarily lowered the quality. These buttermakers receive a broadening in the short course which makes them distinctly better members of the community. They are interested in things other than the mere making of butter. They have some training at least in the care of cows, in feeding, in cow selection, all factors of the utmost importance to the creamery.

A young man with little practical experience along dairy lines, after taking a special course went into business for himself in St. Clair county, supplying cream and butter to the Detroit markets. He has amassed a fortune for himself besides being a cogent force for good in his community. Another young man in Monroe county has developed a splendid dairy business. In a letter to the College he ascribes his success as does the man in St. Clair county very largely to the special course.

Instances of this kind might be multiplied without number. The course condenses into six or eight weeks the experience of a lifetime. Whoever takes such a course, therefore, adds to the length of his life by absorbing the experiences of a dozen trained men. C. D. SMITH.

A FEW "WANTEDS."

Wanted.—A young man to take care of a pair of mules of a Christian disposition.

Wanted.—Two apprentices who will be treated as one of the family.

Wanted.—Experienced nurse for bottled baby.

Wanted.—An industrious man to take charge of 3,000 sheep who can speak German.

A FEW THINGS FROM  
**NORTON'S**  
POCKET KNIVES, RAZORS,  
RAZOR STROPS  
EVER READY SAFETY RAZOR  
WITH 12 BLADES  
\$1.00  
SHEARS, ETC.

On this line of goods we claim to have the best that can be had, and any will be replaced that is defective. We would be pleased with your patronage.

**NORTONS HARDWARE**  
111 Wash. Av. South.

EVERY KIND OF  
**FURNITURE**  
FOR YOUR ROOM.

Cots Folding Beds  
Mattresses  
Book Cases Desks

All Goods Delivered Free.  
**M. J. & B. M. Buck.**

WOULD like to have you look at some late styles we are showing in Cravettes and Overcoats. Might save you some money—at all events you will get a snappy, up-to-date garment. ¶ Now showing all the late things in Hats, Caps, Sweaters, Ties, Pennants, and Underwear. Nothing but new things find place here. ¶ Cordially invite all students to make our store headquarters while in city.

**ELGIN MIFFLIN.**

**THE JEWETT & KNAPP STORE**

Where you will find the largest and most complete stock of

Women's Misses' and Children's Ready-to-wear Garments, Knit Underwear, Hosiery, Gloves and Ribbons. All the new things in Laces, Embroideries, and Wash Goods. : : :  
See our New Silks, Dress Goods and Trimmings. If you want an Exclusive Gown or Suit, go to Lansing's Reliable Store. : : : :

**JEWETT & KNAPP**  
220-222 AND 224 WASHINGTON AVENUE SOUTH, LANSING, MICHIGAN.

**HOLIDAY SLIPPERS**

WE ARE SHOWING MANY PRETTY PATTERNS

*The*  
**WOODBURY STORE**  
Hollister - Block

PRICES 50c to \$2.00 A PAIR

**GRANGER & GULLETT**  
PROPRIETORS

**ABOUT THE CAMPUS.**

An indoor baseball team may be organized next term.

Prof. and Mrs. Sacket are spending the Christmas vacation at Columbus, Ohio.

Secretary Moon of the Y. M. C. A. will act as toastmaster at the Annual Men's banquet at Alma, Jan. 11.

Lost.—A watch fob last Tuesday. Finder please leave at Y. M. C. A. rooms. Liberal reward. G. W. Satterlund.

R. C. Benner, at M. A. C. in '02-'03 is now Instructor in Chemistry at the University of Arizona. The university is situated in the heart of the mining district and affords excellent opportunity for practical work.

F. M. Boyles who began the year as instructor in the chemical department resigned some time ago to accept a government position in cane sugar investigation at New Orleans, La. R. R. Towar, '03, has been filling the position for the fall term.

A thousand delegates are expected at the annual meeting of the Michigan Improved Live Stock Breeders' and Feeder's association which will be held at the college Jan. 14, and 15. Senator W. A. Harris of Kansas, will speak on the subject of Beef Cattle; Prof. H. H. Dean of Guelph, Ont., will deal with Dairy Cattle and Dr. C. D. Smead of Logan, N. Y., will handle the subject of sheep. Other speakers of national reputation will be present.

Club G. will be open during vacation.

Coach and Mrs. Brewer are spending Christmas in Wisconsin.

One pound of learning requires 10 pounds of common sense to apply it.

C. G. Woodbury, '04, is spending the Xmas vacation with his parents here.

Pres. and Mrs. Snyder attended the New England Society banquet at Detroit Thursday evening.

Miss Marguerite Barrows of Keypport, N. J., is spending the Xmas vacation with her parents here.

The co-eds celebrated the term-end Thursday night with a midnight houseparty in the gym. Dancing, songs and apples assisted in the merrymaking.

Miss Elvena Hoover of Harbor Springs will represent Alma college and Henry D. Hughes will represent Olivet at the State Oratorical contest at Hope College next March.

Director Brewer will be busy during vacation putting the gymnasium apparatus in shape for the winter term. The hockey rink may also be built before the opening of next term.

The sophomore class sweaters were sprung just previous to the closing of the term. This year it is a sweater vest with the numerals '10 on the left side. The class athletes are distinguished by an arrow running through the numerals.

**ALUMNI.**

Mamie L. Crosby, special student at M. A. C. '98-'99, now in the employ of the department of agriculture, has been sent to Lincoln, Neb., to open a seed testing station at that place. '02.

Lyman Carrier has been recently elected to the position of Assistant Professor of Agronomy at the Virginia Polytechnic Institute at Blacksburg, Va. He will begin his duties there Jan. 1.

E. R. Bennett of the above class made the college a short visit last week. Mr. Bennett is now connected with the experiment station Ft. Collins, Col. His work is largely horticultural. '05.

R. F. Bell called on old college friends last week.

E. C. Place, '05, has severed his connection with the chemical department of the Colorado experiment station. '07.

H. L. Brown is engaged in creamery work at New Market, Indiana.

When Adam in bliss  
Asked Eve for a kiss,  
She puckered her mouth up with a coo;  
With a look quite ecstatic,  
She said most emphatic,  
I don't care Adam if you do.—*Est.*

**CHINESE FOOTBALL.**

"The first game of football I witnessed upon my arrival in China," one of our consular representatives, at home for a visit, remarked recently, "I mistook for a very serious riot, and you wouldn't have blamed me either.

"In the first place, I was not aware that the Chinese had any such game, but later found that it is very popular in North China. It is not played as is the American game, and instead of eleven players to the side there are fifty. These northern Chinese are almost giants, and every man on the team will be six feet or over in height, and weight on the average 200 pounds. There are no goals, side lines, or halves. The game lasts until one side is the winner, and frequently this is not accomplished before two or three days.

The idea of the game is to force a small wicker basket, which takes the place of the ball, into the territory of the other side—this territory being one-half of the town, and up and down the town the fight rages. Each man is equipped with a whistle with which to summon assistance when too hard pressed.

"Stealth, as well as main force, may be used to get the ball into the enemy's country, and I know of one clever player who did so by passing over the roofs of the houses. As you may imagine, one hundred giants yelling and fighting in the streets create some excitement."—*Harper's Weekly.*



POSTOFFICE AND DEPOT

**Equipment for the Special Courses.**

(Continued from page 2.)

milk per day, with a sufficient supply of cream for the instruction with gathered cream. The testing room is well equipped not only with Babcock testers and appliances but with tests for measuring the water in butter, lactometers and other safeguards against imposition, and scientific apparatus in use in creameries.

Creamery machines will receive more attention this year than heretofore. Engines and boilers will be provided for the instruction along these lines.

Nothing need be said at this late date concerning the bacteriological laboratory and its equipment. It stands unrivaled among agricultural colleges, as the best building of its kind in the country.

The horticultural department has taken unusual pains to have ready samples of the different varieties of fruits and appliances for instruction in horticultural manipulation, such as grafting and pruning. There is a line of power and hand sprayers. Practical work will be given in the manufacture of sprays, and all needed apparatus is kept ready for use by the department.

Since more attention than heretofore will be given to chemistry, the department of chemistry has equipped itself with all apparatus and supplies needed for their work.

Besides these specific helps to the student, there is the library with its thousands of bound volumes and many thousands of pamphlets, ready for the use of the special student. The gymnasium opens its doors to him with the swimming pool, shower bath and other aids to make him healthy and wise.

**DR. FLETCHER RESIGNS.**

Will Accept Directorship of the Virginia Experiment Station.

Dr. S. W. Fletcher, who for the past three years has been at the head of the horticultural department at M. A. C. and has gained an enviable reputation among the horticulturists of the state, has resigned to accept the more responsible and more lucrative position as director of the Virginia experiment station. He will not leave for his new field until his successor is appointed here.

The position is one which Dr. Fletcher has had under advisement for some time. While loth to leave his work and associates here the greater responsibility and consequent greater salary together with the many opportunities for original investigation in a comparatively unworked field have led him to make this choice. Virginia is awakening to her agricultural possibilities. Fruit growing and trucking are be-

ginning to be large industries, and the Agricultural college is well supported, a \$100,000 agricultural building having been erected last year. Aside from his executive work he will continue his original investigation along horticultural lines.

**PARKER-LOSEY.**

At 5 o'clock this afternoon at the home of Mr. and Mrs. James B. Losey, 318 Butler street, south, was solemnized the marriage of their daughter, Miss Sarah B. Losey, and Mr. Ward H. Parker, of Flint. Presiding Elder W. P. French officiated. The guests were the immediate relatives. After a trip to Buffalo Mr. and Mrs. Parker will be at home with the bride's parents until June, when they will go to Flint to make their home. Mr. Parker is a member of the senior class at the Agricultural College, and was right guard on the College football team. *State Republican*, Dec. 20, 1907.

**USEFUL CHRISTMAS GIFTS**

We purchased a large sample line of belts which includes every style of **Black and Colored Jet Belts, Leather and Silk Elastic Belts.**

Also the finest line of hand cut and studded elastic belts from \$2.00 to \$30.00 each.

Ladies Collar and Cuff Sets and fancy stocks on in a box. "Hoppin" Holders, Back Combs and Handkerchiefs in endless variety.

**Cameron & Arbaugh**  
Company

**ALL MEATS . . . .**

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.

We make daily trips to the College.  
BOTH PHONES. Careful attention given to phone orders.  
**GOTTLIEB REUTTER.**  
Washington Ave. South.

**ALLEN PRINTING CO.**  
305 Michigan Ave. E.  
Bell 1094 Citizens 1006  
We make a specialty of  
Odd Things in Programs.  
See us for Macey Filing Appliances and  
Sectional Bookcases.  
Engraved or Printed Cards.

CALL ON  
**LAWRENCE & VANBUREN PRINTING CO.**  
WHEN IN NEED OF  
**DANCE PROGRAMS or SOCIETY PRINTING.**  
122 Ottawa St. E.

**A**VERAGE men are as colorless as average clothes. College men are outside the average—their togs *have* to be—College Brand Clothes *are*. Just a bit more dash to 'em, a great sight more style—and the precisely right amount of fit. Though exclusive their price isn't enough to *exclude* you from wearing 'em. For the young man and the "like-to-be-young."

**O'CONNOR, Clothier.**

Sole Agents for College Clothes.

**Dairy Employment Agency**  
Lansing, Michigan.

F. O. FOSTER, Proprietor.

Office 511 Oakland Bldg. Cit. Phone 1590 Bell Phone 204

**SKATES**

We handle the PECK and SNYDER skates.

We consider them the best.

Our customers agree with us.

Our stock is complete.

**HOCKEY STICKS**  
25c, 60c, 75c

**J. H. LARRABEE**  
325 Washington Ave. S.  
LANSING

**DIRECTORY**

LANSING BUSINESS and 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 those who patronize us.

**BARBERS.**

M. A. C. BARBER SHOP, Rooms in New Bath House, H. A. Sias, Propr.

**BOOK BINDERS**

GEO. 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. 56. In City National Bank Bldg.

**BOOTS AND SHOES.**

C. D. WOODBURY.—Boots and Shoes. We shoe the students. See ad.

**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.

**CLOTHING.**

LOUIS BECK.—Clothier. Gents' Furnishings, Hats and Caps. 112 Washington Ave. North.

**CROCKERY AND GLASSWARE.**

H. H. LARNED.—China, Glass and Lamps. 105 Washington Ave. S.

**DENTISTS.**

A. F. GORDON, D. D. S. M. A. C. '91, U. of M. '01. 218 Washington Ave. S. Phone, Citizens 68.

J. E. STOFFER, D. D. S. Office 301 City National Bank Building. Citizens' Phone 1049. Former M. A. C. student.

N. H. MOORE, D. D. S. Office 411-13 Hollister Building, Lansing, Mich. Citizens phone 475.

R. W. MORSE, D. D. S. Hollister Block, Room 517. Citizens Phone 52, Bell Phone 396.

D. E. PARMELEE, Dentist, 117½ Washington Ave. S., Lansing, Michigan. Citizens Phone, office 275; residence, 261.

**DEPARTMENT STORES.**

CAMERON & ARBAUGH CO. Largest and best lighted store in Lansing.

**DRUGGISTS.**

ROUSER'S CAPITAL DRUG STORE. Up to date. Corner store. Opposite Hollister Block.

ROBINSON DRUG CO., successors to Aisdorf & Son, Drugs and Druggists' Sundries. 102 Washington Ave. N.

**DRY GOODS.**

THE JEWETT & KNAPP STORE. Dry Goods. 222-224 Washington Ave. S.

**ELECTRICAL SUPPLIES.**

CAPITOL ELECTRIC CO. Electrical Supplies, Telegraph Instruments and Telephones. 11 Mich. Ave., E.

**FURNISHING GOODS.**

ELGIN MIFFLIN.—Ladies' and Gentlemen's Furnishing Goods. See ad.

**FURNITURE DEALERS.**

M. J. & B. M. BUCK.—Furniture. Cor. Washington Avenue and Ionia Street. See ad.

**HACK AND BAGGAGE LINES.**

ORDER your hacks for parties at Carr's Hack Line. Livery in connection. 410 Washington Ave. N.

**HARDWARE, STOVES AND TINWARE.**

NORTON'S HARDWARE—General Hardware, Stoves, Tinware, Graniteware, Cutlery, etc. 111 Washington Ave. South. See ad.

**JEWELERS.**

CHAS. A. PIELLA. Jeweler and Optician, 121 Washington Ave. N., Lansing, Mich.

LEAVE your Fine Watches and Jewelry with J. J. Heath for repairs. He will please you.

**MANICURE AND HAIRDRESSING**

MRS. O. T. CASE—Manicure and Hairdressing Parlors. Maquerade Wigs for Rent. Switches made of cut hair or combings. The France-American Hygienic Toilet Requisites a specialty. New 'phone 118. 222½ Washington Ave. S., up stairs.

**MUSIC, PIANOS, ETC.**

GRINNELL BROS. Pianos, Organs and everything in the line of music. 219 Washington Ave. N.

**OCULISTS.**

CHAS. G. JENKINS, M. D. — Diseases of Eye, Ear, Nose and Throat. Hours, 9 to 12 a. m., and 2 to 5 p. m. Citizens Phone No. 1030. Rooms 2/4-204 Prudden Block.

JOSEPH FOSTER, M. D., Eye, Ear, Nose and Throat. Hours 9 to 12 a. m.; 2 to 4 p. m.; Sundays, 12 to 1; Evening 7 to 8. Corner Allegan St. and Capitol Ave., Lansing. Both 'phones.

**PHYSICIANS.**

DR. H. W. LANDON. Office and residence, M. A. C. Office hours from 7 to 8:30 a. m., and 12:30 to 2, and 6:30 to 8 p. m. Sunday office hours 4 to 5 and 7 to 8 p. m. New phone 1560.

DR. OSCAR H. BRUEGEL. Hours 8 to 11 a. m.; 2 to 4 and 7 to 8 p. m. Sundays 12 to 1 and 5 to 6 p. m. Agricultural College, Mich. Citizens phone 1502.

**PLUMBERS.**

SHIELDS & LEADLEY. Plumbing and Heating, 300 Wash. Ave. N., Lansing. Both Phones.

**SPORTING GOODS.**

J. H. LARRABEE, Base Ball Goods, Foot Ball Goods, Tennis, Golf, Guns, Ammunition and Fishing Tackle. 325 Wash. Ave. S.