

WOOD PULP MARVELS.

Manufacture of Silk Directly From Wood Pulp.

Also Car Wheels, Paving Brick, Window-Panes, Drain Tiles, Telegraph Poles and Paint.

The announcement made simultaneously in France and England that the discovery of a process for the manufacture of silk directly from the wood pulp has proven an unquestionable commercial success, means not only that the silk worm raising industry, as well as the silk worm itself, is doomed, but it marks the latest step in that wonderful advance, within the last few years, in the use of wood pulp as a material for manufacture. Very few people probably are aware of the various uses to which this product technically known as "cellulose," is now put - that from it now comes the larger part of the paper which we use, and most of the car wheels, and rails for railways, and wagon wheels, and horsehoes, imitation porcelain ware, barrels, boats, window panes, furniture of many kinds, telegraph poles, drain pipes and tiling, paving brick, coffins, carpets, thread, heavy guns, matches, yes, and even bicycle tires, artificial teeth and even bicycle frames.

It would require a long catalogue to tell of the products which wood pulp is now made to assume. To it we owe the penny blank sheet newspapers, and the marvelously low priced magazines, and cheap books and cheap wrapping paper. There are in the United States two newspapers which alone use up in a year more paper than was produced in the whole country twenty-five years ago, and there are five or six newspapers in the United States which together use up more paper than was made in the whole world at that period. To-day great forests are being annually slaughtered to furnish material for the wood pulp machines. An enormous industry has been built up in this and other countries, whose capitalization and annual product runs up into the hundreds of millions. And still those engaged in the industry regard it as yet in the stage of short dresses.

The latest application to the manufacture of silk, seems to confirm this view. Almost all the uses of cellulose, indeed, aside from that for paper making, have come within the last ten years, and probably the last year has seen more new uses made of this remarkable substance than all the other ten put together. New patents are being taken out every month, and with the enormous extensions that will be made by the invasion of the vast spruce and fir forests of the north Pacific coast in this country, and of Siberia, it is entirely probable that the next few years will witness a still more remarkable advance.

This late development is somewhat curious in view of the fact that the idea of grinding wood up into pulp and employing it for various purposes is not nearly so new as most people suppose. As far back as 1748, a Frenchman named Beaurun published an essay upon the subject, taking his hint from the wasps, whose paper-like nests are literally made from wood pulp manufactured by these insects. But it was only something like thirty or forty years ago that any practical trial of the matter was made, and it is almost wholly within the last quarter of a century that the industry has begun to assume any importance. Its first and still its principal application, was in the manufacture of paper. In the beginning it was used purely as an accessory to rags and straw fiber, it being originally the belief that a paper of sufficient strength could not be made from wood pulp alone. Now, however, not only the paper upon which this article is printed, but the magazines and every other proportion of the books now published are made wholly from pulp.

Of the latter, however, there are two distinct varieties, that of wood pulp proper and that which is more properly described as wood fiber. The first is obtained by a purely mechanical and the second chiefly by a chemical process. The process of making wood pulp is simply itself. The logs, usually of spruce or fir, are cut into suitable length, from a foot and a half to four feet long, and these are then ready for the "grinders." These pieces have been carefully freed from knots and denuded of bark, and care is taken that they shall be free from any defects or rot. The grinders are made of wood, usually driven directly by a water wheel, and very much resemble a wheat-grinding burr very much enlarged and set on its side. They consist of large rotary grindstones of special strength, and of grinds to hold the blocks against these stones. Hydraulic pressure forces the blocks of wood against the grinders, while a strong jet of water prevents their being burned by friction, and at the same time carries off the ground-up pulp. The latter is either fed directly to the paper-making machine or else carried to dryers and compressors, known as "wet" machines. In case of the latter the pulp is made up in blocks, consisting of about three or three and one-third pulp, and in this shape is ready for shipment.

If, however, the pulp is fed directly to the paper-making machine, it is first taken in hand by engines or beaters, very much similar to those which handle the rags in rag paper making, which reduce the fibers to the proper length and give them the desired consistency. When a vat of pulp has been properly treated the mash is transferred to a receptacle, where it awaits its use by the paper-making machine. By the latter it is taken up on an endless brass wire cloth, the meshes of which permit the water to escape as the cloth slowly travels forward. A simple contrivance keeps the wire cloth vibrating and assists in the knitting of the fiber. Next an endless web of felt takes this thin layer of partially dried pulp and runs it through several large rollers, which remove the moisture and press the fibers into a closely knit strip. From this point to the hot rollers the paper is carried without assistance of further webs, and as the successive hot rollers pass over the paper becomes dry and firm. A set of calendar rollers next take it in hand and give it the desired smoothness and sheen, and from thence it is cut up in sheets or wound on rolls, as desired.

Now, it is worth noting at this stage that the calendar rolls are very of themselves made of paper, since, paradoxical as it seems, paper rolls possess a hardness and yield a finish which is impossible with rolls of steel. These calendar rolls are made up in a very simple way by taking a countless num-

ber of sheets and fitting them over a steel core set on end, almost identically in the fashion that you stick a pile of bills over a sharp-pointed bill file or holder. Between each of these sheets is a preparation of glue, and when the pile has been covered, the whole is subjected to enormous hydraulic pressure, which gives them a wonderful hardness. The edges of the paper are then turned in a lathe precisely in the same way that a steel roll would be turned, and so firm is the surface which the edges of the paper thus prepared present that a sharp flint, scabbie passed through the rolls will be ground to pieces without making the slightest mark. Thus, in a literal sense, is paper made to make paper.

With the wood pulp thus prepared, it happens that it is impossible to secure the same strength and texture of rag-made paper, and for a long time at the beginning rag and straw pulp was mixed with the wood pulp, in order to obtain this desired strength for high grade papers. But at this point the chemists took up the problem and discovered two processes by which these wood rolls reduced to the required state without destroying the fiber, as is the case in grinding. These processes consist simply in the treatment of the wood, cut in small chips, with alkaline or acid solutions. The wood is cut up into bits about an inch thick and thrown into vats containing one of these solutions, and then boiled at a high temperature. This process reduces the wood to a soft, saponaceous mixture, when it is readily handled for the making of paper or any other desired article. This is of course much more expensive than simply putting the wood through a griststone, and at the present time it is found up wood pulp and the chemically prepared wood fiber are usually mixed, in certain proportions, to make the different grades of paper.

But as already indicated, paper is now only one of countless forms in which this wood pulp or wood fiber is made up. Probably the next and most important employment is that for car wheels. These are, as a rule, made from straw pulp and directly from straw board. A solid disk or wheel, made up of a number of layers, much in the same way as the calendar rolls are made, is forced under strong pressure into a steel tire. Then into the center of this disk an axle hole is turned under similar pressure. When the straw board discs are put together they are thrust under a hydraulic weight of 8,000 kilograms, for an hour, and a pressure of ninety to 120 tons is employed in fitting the tires. In this way a wheel is made that is about three times as durable as those made of steel, and furthermore, far more elastic.

This elasticity not only greatly increases ease of railway travel, but it diminishes the vibration of the axle and bearings, the effect of these vibrations being to crystallize iron or steel, where the wheel is made of these latter materials. At Pullman Ill., the chief seat of manufacture in this country, a pair of paper wheels have a record run of almost a million and a half miles, a record which is exceptional for any kind of metal.

This same wonderful hardness which is obtainable with paper has very recently been turned to account in Berlin, Germany. In the making of paving brick, these latter are made from ordinary wood, or straw pulp, with sulphate of zinc is added as a preservative. The material being thoroughly mixed, it is put into a vat where other chemicals are added and then subjected to a pressure of 2,000 pounds to the square inch. The bricks thus formed are placed in a kiln and baked for forty-eight hours, such as bricks of clay. These wood pulp bricks weigh about three pounds, and are practically indestructible. Furthermore, they are said to make very little noise. Under this same process conduits for the use of being made, and telephone cables are now being made, and used as well.

Among the advantages claimed for the latter is its exceeding hardness, its light weight, its non-conductivity of heat or sound and sufficient elasticity to meet all requirements. The dampness, experienced usually in the case of stone, is also absent, and in price and appearance the tiling takes rank over that made of brick. The inventor, a dentist in Lubek is a maker of paper or wood pulp teeth, said to be of fine quality.

A slightly different process is employed in the manufacture of wood-pulp screws. They are usually of the larger size and are made of a compound of fine pulp, clay, alkali, salisoda and glue. After casting, or rather pressing, the screws are first drawn through a lock then treated to a bath of sulphate of copper. An oil varnish finish completes the work, and a tough, elastic screw valuable for various uses is the result.

Yet another successful application of this curious substance is in the manufacture of telegraph poles. The latter are hollow and very much lighter than those that are made of wood; they are stronger and are said to be unaffected by sun, rain or any other causes which shorten the life of the ordinary wooden pole. The pulp is cast in a mold with a core in the center, forming a tube of the desired length. Coffins, too, are now made in Europe of wood pulp, which are susceptible of high polish, look as well as the finest woods, and are much less expensive. Still another German genius has constructed a good-sized cannon out of the pulp, it having a steel core, and the exterior being bound by five layers of metal wire. It is far lighter than a steel gun, and is likewise said to be much stronger than a similar thickness of metal. Not to be behind the times, the bicycle industry has constructed a bicycle frame entirely of wood pulp, and would like to start a factory for the manufacture of paper bikes. Bicycle handles, made out of blotting paper, which in turn comes from pulp, are now not uncommon.

HER CURIOSITY WAS SATISFIED. "Hiet the Man Who Had Only 'Hister' on His Card." A Vienna paper relates an amusing incident which occurred to a great lady who had just recovered from a long and severe illness. Seated in her boudoir, she was looking over the cards of condolence that had been left for her while ill. Among the names of Counts, Barons and other aristocratic sympathizers emblazoned with coronets and coats of arms, she came across a simple card with the plain inscription, "Hermann Berger."

In vain the lady asked her Hermann Berger was. None of her servants could give her any other information than that the individual was a remarkably handsome young man. The lady's curiosity became excited, and she gave orders to admit the stranger if he should call again. The order was punctually obeyed, and on the following day she received a really charming young man, dressed in the most exquisite style, who evidently appeared greatly embarrassed at the honor of a letter-a-tete with the still brilliant, though somewhat faded beauty. "I can hardly find words," said the lady, with a blush, "to thank you for the sympathy which you have manifested for a stranger."

MOVING A BIG BUILDING.

A Great Freighthouse in Baltimore Rolled Out of the Way.

The largest building ever moved in this country was a freight warehouse of the Baltimore and Ohio Railroad, in Baltimore, which was moved September 8th to 12th. The building is 440 feet long, 120 feet wide and 60 feet high. It is a wood and iron structure, and was moved to make room for a new dock. The work consumed five and a half days.

The building contained a great quantity of freight, among which were 3,000 cases of china and crockery, but not a dish was cracked in the moving. The men were engaged five weeks making preparations for the move. On top of the old and the new foundations were placed the sills on trucks upon which the building was to run. These tracks numbered forty each consisting of two 6x12-inch timbers. On top of these were placed the 1,000 rollers, each a piece of five-inch pipe three feet in length. There were twenty-five rollers to each of the forty tracks. Between the rollers were placed the floor beams of the building were arranged, most of the 6x12-inch timbers. In all, 6,600 of the 6x12-inch timbers were used, each about thirty feet long.

The 255 wooden pillars which supported the warehouse were then sawed away and the structure rested upon the rollers. Along one side of the building were placed forty five-ton screw jacks. A heavy brace, made of a railroad track, an adjoining warehouse and the tracks upon which the rollers ran. Two men stood at each jack. At a given signal the men responded with military precision, and each jack was given a quarter of a turn, moving the great building a fraction of an inch. Afterward the progress averaged two feet an hour for five and one-half days.

The structure arrived at its new foundation without a strained timber or a bolt. The jacks were again used in raising the warehouse enough to allow the removal of the rollers, after which it was lowered to the new foundation. The structure cost \$35,000 ten years ago, and it cost \$15,000 to make the removal.—New York Journal.

THE HOD-CARRIER'S PROTEST. Was Willing to Supply 'Mort,' But Had Only One Pair of Legs.

"In making some changes in my cottage last summer," said Cornelius E. M. Holland, "it became necessary to call in the services of a brickmason. On the morning that he put in an appearance he brought with him as an assistant a little undersized, bow-legged man, whose every feature stamped him as a descendant of Brian Boru. It was this little chap's duty to carry the mortar to the top of the house, where the improvements were going on, and in his journey to and from the roof on a ladder he had to pass an open window in which stood a cage containing brother Joe's parrot. This bird of Joseph's is an inveterate talker, and quickly initiated anything he hears, if it is repeated a few times.

"Our little hodcarrier had just descended from his third trip heavenward, and was in the act of lighting his pipe, when a shrill voice cried, 'More mort!' 'All right, O'm coming,' he hastily stowed his pipe away, he filled his hod and scrambled up the ladder. This continued for some time, and our little Hibernian was getting very red in the face. At last he tried again to ignite his duddeh, when just as he was about to do so, a voice from above, which sounded hoarser than ever, yelled out: 'Mort, mort; hurry up there! More mort!' 'Pat looked up at the roof, and with anger sticking out of every crevice on his little wizen face with the distinctiveness of a gas bill, he screamed: 'More mort, more mort, Phwat th' devil do ye think O'm on me? The legs of a clintfidd!'—Chicago Times-Herald.

Six Eggless Puddings.

During the winter season eggs are usually scarce and expensive, and no doubt a recipe for cooking without them will be acceptable to many readers. The following are all reliable. Chocolate Pudding—Boil one pint of milk, then add one-half cupful sugar, two teaspoonfuls grated chocolate and one heaping tablespoonful of corn starch. Boil until thick and pour into a mold. Serve with sugar and cream flavored with vanilla.

Suet Pudding—To one teacupful of finely chopped suet add four teacupfuls of flour, in which a tablespoonful of baking powder has been sifted, half a cupful of milk, one teacupful of molasses, one teacupful of milk and a pinch of salt. Flavor with cinnamon. Boil two and one-half hours. Serve hot with the following sauce: Pudding Sauce—Stir one tablespoonful of corn starch in half a teacupful of boiling water, add two tablespoonfuls of vinegar, one of butter, half a grated nutmeg, and one teacupful sugar.

Rice Pudding—To one quart of rich rice milk add one tablespoonful of butter and one-half cup rice. Sweeten to taste, flavor with nutmeg and bake two hours. Graham Pudding—Take one cupful of Graham flour, one cupful of sweet milk, one of molasses and one of chopped raisins; add one teacupful soda, stir, and stand for three hours. Orange Pudding—Strain through a coarse sieve the juice and pulp of eight oranges, add the juice and strained pulp of two lemons. Dissolve one ounce of gelatine in a teacupful of hot water. When cool add to the oranges a pint of clarified sugar. Stir and pour in mold. Set on ice.

NO FREE ADS.

No free "want" ads. are taken in THE RECORD UNION. Births, deaths and marriages also charged for. NO PREMIUMS GIVEN. NO CATCH-PENNY DEVICES. The paper is worth the money you pay for it, although higher priced than most others. Published Sundays also. The class who pay money to spend all take it. Rich and poor like it. Classified ads. by the month, Want, For Sale, To Let, Personals, etc. 50c per line.

MEETING NOTICES. ATTENTION, EXEMPT! You are requested to meet at your Hall THIS SUNDAY, November 15th, at 1 o'clock p. m. JOHN R. SHELLER, M. A. HOWARD, President. L. B. Sattif, Secretary.

MUSIC AND ART. GEO. C. HOLBROOK & A. LOTHAMMER, piano tuners and repairers. Work done by yearly contract if desired. Office and workrooms, 1021 Eighth street.

PHOTOGRAPHS—CABINETS—2c PER DOZEN; no agents employed, 67 J street, corner of Seventh street.

Fair Oaks Wood Yard. Best and cheapest wood in the market. Tenth and J streets. Telephone your order. Orders left at Aisp & Co.'s will be filled.

Hot tamales. Welsh Bros., 9th & J.

TO-MORROW

We commence a special offering of HOUSEKEEPING GOODS.

75 pieces Soft-finished Lonsdale Muslin; worth 10c a yard. TO-MORROW 6c.

20 pieces 36-inch Ecru Curtain Scrim, in desirable open-work patterns; worth 10c a yard. REDUCED TO 6c.

50 pieces 18-inch Linen Crash; the best value ever offered at the price; worth 12 1/2c a yard. REDUCED TO 7 1/2c.

Short lengths of Eiderdown Flannels, in 3 to 5 yard lengths; worth 60c a yard. REDUCED TO 28c.

50 6-4 Fringed Tapestry Table Covers, in new and desirable patterns. If you see them you will certainly buy; worth \$2.50. NOW REDUCED TO \$1.75.

Fine Sateen-Covered Comforters, filled with best quality of cotton batten; a bargain at \$3.75. REDUCED TO \$2.65 EACH.

50 pairs 11-4 All-Wool White California Blankets; full size; worth \$5 a pair. REDUCED TO \$3.85 A PAIR.

B. WILSON & CO. Corner Sixth and J Streets.

WANTED—FURNISHED HOUSE SIX or seven rooms near Capitol. Address "E. F. G.," this office. n15-2*

WANTED—YOUNG LADY (MUSICAL) preferred to act as assistant in refined musical entertainment. Musician, 84 K street, room 3. Call 1 to 4 p. m. n15-2*

WANTED—TO PURCHASE FOR CASH cheap, a light spring wagon; also horse and harness. Apply at Tremont Hotel, J street, First and Second. n15-3*

I PAY LADIES GOOD WAGES TO work for me; light work; good pay; part time. Write, with stamp, MRS. E. E. BASSETT, suite 24, Marshall Field Building, Chicago. n15-5*

W. A. WALL, PLAZA EMPLOYMENT OFFICE—Ninth and J. Capital Tel. 360. Sunset 564 black.

Wanted—At 921 SIXTH STREET, waitress, housekeeper, and girls for city and country. MISS BRUDER.

WANTED—A STUDENT TO BOARD and lodge; nice home and terms reasonable. 518 Eleventh street. n15-3*

WANTED—SITUATION AS NURSE by a competent woman. 1615 Third street. n15-3*

WANTED—LADY OR GENTLEMAN of good business qualifications to take orders in city or country, and collect; will make good order to the right party. Address "M. L. A.," this office. n15-1*

WANTED—TWO GENTLEMEN TO room and board, or a gentleman and wife, in small family; good location; reasonable terms. Address "MRS. B. W.," this office. n15-1*

JAPANESE WANTS JOB CHOPPING wood and grubbing. Address R. Nakahata P. O. Box 65, City. n15-1*

WANTED—FOUR ACTIVE MEN. Apply at 1001 J. 5 p. m.

WANTED—TO BORROW \$4,000 ON good city property. P. O. box 48.

LOST—FOUND. STRAYED OR STOLEN—FROM 914 N street, a dark brown horse. Finder return to H. C. Chipman and be rewarded.

LOST—SPOTTED BLACK AND WHITE COB, about 9 years old; strayed from Peter Burns' pasture. Return to 1717 Eighteenth street and be rewarded. n15-1*

SPIRITUALISM. MRS. I. DARRALL CLAIRVOYANT and trance medium, 8 to 12 o' 1411 P.

BOARD AND LODGING. OPPOSITE CAPITOL—PLEASANT SUNNY front room, with board. 1224 Tenth.

NICELY FURNISHED ROOMS, WITH or without board; home cooking. MRS. KLEINSON, 903 L.

ROOMS AND BOARD AND TABLE board, first-class, at 1127 Tenth street.

THE BEST BOARDING PLACE IN Sacramento, 905 L street.

THE TURCLU, NORTHEAST CORNER of Eighth and K streets; coolest building; finest rooms in city; newly furnished; porcelain bath tubs; second floor reserved for offices; terms very low; janitor and light free. FRANK MEYER, Manager.

BUSINESS CARDS. CURTAINS DONE UP, 6c CENT A pair and upward; fine flannels laundered without injury to the garment. French Laundry, 912 L street.

ROOT, NELSON & CO., UNION Foundry; Iron and Brass Founders and Machinists, Front street, between N and O; Castings and Machinery of all kinds made to order. H. E. ROOT, ALEX. NELSON, J. DRISCOLL.

FOR ROOFING, TIN AND SHEET-IRON work, W. D. Bessey can be beaten. 69 J street. Sunset Tel. No. 77.

JOHN D. SHEARER, ARTIFICIAL stone walks and concrete foundations. 318 N street.

GENERAL NOTICES.

DR. G. W. NEWSOM AND D. B. BAKER, Dentists, removed to 4th and K, over Hammer's Drug Store. Best of work. A VALUABLE BOOK ON FRENCH dyeing and cleaning at home, by M. Deshayes, reduced to 25 cents. Dye Works, 1008 Eighth street.

BLOCK WOOD FOR SALE AT Twelfth and B. Telephone red 475.

MISS FLORENCE HASTINGS' DANCING class meets every Saturday afternoon at Pythian Castle at 2 o'clock. n15-1*

GENERAL TRUCKING AND JOBBING; cut rates by E. Hawes, 1211 C street.

NOVELS AND BOOKS—BOUGHT, SOLD, exchanged at reduced prices. 726 K street.

VIENNA CAFE—OYSTER AND LUNCH Parlors, 707 J st. Wm. Boedefeld, Prop.

THE ANNUAL MEETING OF THE stockholders of the People's Savings Bank of Sacramento will be held at the office of the bank, 1008 J street, on Tuesday evening, December 1, 1896. Call on GEO. W. LORENZ, Secretary.

J. DONLEY, THE UP-TO-DATE Plumber, has resumed business at 102 Tenth street, opposite his old shop.

MEDICAL BATTERIES, BOTH SOLD and repaired, at Electro Works, 824 K st.

UPHOLSTERING AND FURNITURE repaired by F. L. Thomas, 502 Sixth st.

FRESH CLAMS AND OYSTERS EVERY day at Suey Sang, 624 Third street. These are the best.

WOOD AND COAL—NOW IS THE TIME to lay in your winter fuel. A liberal discount and delivery. Call on J. S. McCaw, 518 L street, and get prices. JAS. McCAW, Prop.

FOR A GOOD AMERICAN-MADE T-male go to F. M. Sanford's, 1119 J street.

LATEST PERIODICALS AND FICTION, Stationery, Notions, etc., at Doane's, No. 202 K street.

FOR SALE—THE ENTIRE FIXTURES in one of the best paying and best located retail cigar stores in town; will also sell, if desired, enough of stock to start purchaser in business. Inquire this office. n15-1*

FOR SALE—27x10, WITH A GOOD 2-story frame dwelling, 9 rooms, bath and modern conveniences; finely located for boarding and lodging. 92 L street. Price \$5,500. EDWIN K. ALSIP & CO., 1010 Fourth street.

FOR SALE—WE HAVE CONCLUDED to subdivide that beautiful high lot at Twelfth and F streets. So now is given an opportunity to get on easy terms a 40x50 that is not to be duplicated anywhere in the city for the money. EDWIN K. ALSIP & CO., 1010 Fourth street.

FOR SALE—GROCERY AND SALOON doing first rate. Apply this office. n15-1*

A CHANCE TO MAKE MONEY—FOR Sale—One of the best paying restaurants in town; reason for selling, ill health and musical entertainment. Musician, 84 K street, room 3. Call 1 to 4 p. m. n15-2*

FIRST-CLASS SECOND-HAND CARRIAGE, new car, and second-hand light wagon cheap. 1115 Second street.

SOMETHING NEW—PAIRBANKS' Patented Steel Wind Mill, built on the only correct principle, costs nothing to see it and only \$30 if you buy it. WESLEY ROSE, 1021 K street.

ROSES, COLEUS AND BEGONIAS, 10c each. H-street Nursery, 2806 H street.

FOR SALE—AN OPPORTUNITY FOR A man with a little money; an old established fur business; no competitors; a good business at present time. Apply at this office.

OAK STOVE WOOD, \$5 PER CORD; cottonized Steel Wind Mill, built on the only correct principle, costs nothing to see it and only \$30 if you buy it. WESLEY ROSE, 1021 K street.

EXPERIENCED NURSE FOR CITY OR Country. Mrs. L. G. Holbrook, 1514 9th.

J. W. BIRD'S NEW GROUND FLOOR Photograph Gallery, 1023 1/2 Fourth street.

PHYSICIANS AND SURGEONS. DR. W. H. WENTWORTH, 1009 Seventh st. Hours—8 to 9 a. m., 1 to 3 to 5 p. m. Telephone, red 821, residence, red 752.

DR. MARY M. CRONMILLER, REMOVED to 622 J and 117 F. Hours, 9 to 10 a. m.; 1 to 3 and 7 to 8 p. m. Tel. Residence, 406; Office, 473.

DR. B. F. FENDERY—OFFICE AND residence, 702 K st. Sunset Tel. Red, 81.

DR. SIMMONS, 511—HOURS, 9 TO 10 a. m., 2 to 3 p. m., and 7 to 8 p. m. DR. SIMMONS, JR.—HOURS, 11 TO 12 a. m., 4 to 6 p. m., and 7 to 8 p. m. Telephone home, 125; office, 125.

DR. FAY, 627 1/2 J ST.—10 TO 12 A. M., 2 TO 4 P. M. Res. 1729 G. Tel. 293.

DR. F. M. REITH, OFFICE WITH Drs. White & Ross, southwest corner Sixth and J streets, Sacramento. Office hours: 9 to 11 a. m., 12 to 2 and 7 to 8 p. m.

DR. L. S. JADAROLA, 204 K—OFFICE hours: 9 to 12 a. m., 2 to 4 and 7 to 8 p. m. New Telephone No. 10.

DR. CARTWRIGHT, OFFICE AND RESIDENCE, 913 K street, between Ninth and Tenth. Office hours: 9 to 11 a. m., 2 to 4 and 7 to 8 p. m.

DENTISTRY. DR. W. O. GIRARDEY, DENTIST—Office and residence, 622 Fifth street.

DR. A. H. HAWLEY, DENTIST—1009 Seventh street. Hours, 9 to 12, 1 to 5 p. m.

TO LET OR RENT.

6-ROOM HOUSE, BATH AND STABLE. Call Hartford House, 1022 1/2 Fifth.

ADDE SWAIN'S LECTURE EVERY Sunday night at Forester's Hall, 25 cents admission. Subjects: "Christ and Other Philosophers." Bring flowers to be psychometrized. Removed office to 405 1/2 J, between Fourth and Fifth. Hours—1 to 8 p. m. Ladies only. Free lecture Friday at Forester's Hall.

FINE FARM TO RENT—PLACER FOOT-hills; salubrious; picturesque; improved 160 acres; 100 in olives; selected fruits and vines; stone wall enclosures; commodious out-buildings; plentiful water; farm machinery, etc., and fine dwelling; such a place. Address C. J., "Record-Union" office, n15-1*

HOUSE TO LET OF 5 ROOMS, PANTRY, closets, bath. Inquire 417 F.

322 K ST.—EMPIRE HOUSE; NICELY furnished rooms en suite and single.

TO LET—A FURNISHED HOUSE OF 7 rooms. Apply to 1520 O street at noon or after 6 o'clock p. m.

1108 FOURTH STREET—NICELY FURNISHED rooms, \$1 per week and upward.

919 16th STREET—7-ROOM HOUSE; newly painted inside. Inquire 1601 J.

600 M STREET—NICELY FURNISHED front and other rooms, with bath.

911 B L STREET—FURNISHED 6-ROOM flat; entirely modern; rent \$40.

TO LET—7 ACRES OF RICH BOTTOM land in northeast corner of Oak Park; 6-room house, barn and out-buildings; alfalfa. 211 K. n15-1*

TO LET—A 5-ROOM HOUSE ON THE southeast corner of Fourth and O street; modern building. 211 K. n15-1*

TO LET—50 ACRES, ONE-HALF cleared; 10 acres in trees and vines in full bearing; all necessary buildings; some fruit trees; alfalfa; 3 miles north of Orangevale. A small cash rental; a very nice place. 211 K street.

\$9 PER MONTH—NICE 5-ROOM COTTAGE, N. Twenty-ninth and Thirtieth; 6-room house, 1008 1/2 J. JAMES E. MILLS, 501 J street.

1515 K STREET—MODERN DESIRABLE flat of six rooms and bathroom. Apply 1113 K or 719 L. No children.

418 O STREET—NICELY FURNISHED front room for light housekeeping.

612 K STREET—NICELY AND NEWLY furnished front suite, 1500 and rooms; electric lights; hot and cold water, bath. THE ECKHARDT BUILDING.

728 SEVENTH STREET—TWO LARGE furnished rooms for housekeeping.

1115 EIGHTH ST.—FURNISHED ROOMS for housekeeping; also single rooms.

222 M STREET—3 NICE UNFURNISHED housekeeping rooms; rent only \$10.

HOUSE OF EIGHT ROOMS; ALSO UP-per flat. Call at