

RECENTLY PATENTED INVENTIONS.

Agricultural Machinery. COMBINED HARROW AND SEED PLANTER.—A. C. PALMER, West Union, Iowa. In this machine the seed-planting mechanism may be combined with harrow devices or the latter may be used separately, thus saving the farmer the expense of buying two machines and enabling certain kinds of seed to be planted in the soil to the best advantage. The mechanisms are so arranged that the machine may be turned in a narrow space at the end of the row. An improved dropping mechanism is provided and also a means for throwing the dropping mechanism out of service.

Electrical Contrivances.

STARTING DEVICE FOR ELECTRIC MOTORS.—T. M. PUSEY, Kennett Square, Pa. The invention relates to improvements in devices for starting electric motors, the object being to provide a simple automatic means for regulating the flow of current in starting the machine, and thus prevent burning out. This is accomplished by means of a solenoid wound with two coils. One of these coils which is wound to high resistance acts to raise the core as the speed of the motor increases and thus cuts out the resistance in the rheostat.

ELECTRIC MOTOR OR GENERATOR.—J. A. TITZEL, Sr., Franklin, Pa. Mr. Titzel's invention relates to electric devices capable of use either as motors or as generators and has for its object to provide a construction by which a strong, and uniform magnetic field is obtained, so that the apparatus would be very efficient in either of its capacities.

STORAGE BATTERY.—H. P. KING, Osgood, Ind. The design of this storage battery is neat and compact and of such form as to combine the highest efficiency with the greatest economy of space. The battery plates are protected to some extent by their form and are arranged to be conveniently housed in an ordinary battery jar.

ALARM DEVICE FOR TANKS.—M. KUBITZKY and R. B. STEWART, New York, N. Y. These inventors have produced an economic form of electric alarm, especially adapted for use in connection with drip-pans, tanks, wash-tubs, and other receptacles, to indicate when the water or other liquid therein has risen to a predetermined level and thus tend to prevent an overflow from such receptacle.

Mechanical Devices.

ESCAPEMENT FOR TIMEPIECES.—F. H. VOIGT Philadelphia, Pa. The object of this invention is to provide certain improvements in escapements for watches, clocks and other timepieces whereby the action of the escapement is rendered more positive and the friction of the working parts is reduced to a minimum to insure long accurate life of the escapement.

SAWING APPARATUS.—J. A. BRINES, Fresno, Cal. The apparatus comprises an essentially U-shaped frame around which an endless saw is adapted to travel. The frame is adapted to swing from a center, so as to bring the saw into proper sawing position. The saw is driven by a motor. The operator may permit the frame to drop slowly and follow the action of the saw mill until the log is cut entirely through.

VALVE MECHANISM.—OLE SWENSEN, Sr., Cresco, Iowa. Means are provided in this invention for removing grit from a valve-seat and permitting the valve to be reground without necessitating its removal from its mounting. The valve is provided with two stems, one of which is hollow, and which serves to raise and lower the valve from the seat, and the other which serves to rotate the valve and grind its surface on the seat.

DUMPING VEHICLE.—G. R. WERNER, Colby, Kans. This dumping vehicle belongs particularly to that class used in connection with a grain header. The invention provides a device of this character which will operate to dump the grain on the ground in even rows, so that the grain will be in convenient shape for drying out before stacking.

APPARATUS FOR USE IN RAISING WRECK.—T. JOHNSON and C. JACOBSON, Chinook, Wash. The invention belongs to that class of apparatus employed for raising wrecks in which hoisting devices are applied to some form of float and connected with chains adapted to be passed around the submerged wreck. This improved form of apparatus may be easily manipulated and is adapted to maintain its position upon the float.

COTTON-PRESS.—W. H. MECOM, Columbia, La. This cotton-press is provided with an improved bale-box revolvably supported on a frame in an improved manner. Improved reversing means are provided for driving the bale-box follower alternately in opposite directions.

BORING AND TENONING MACHINE.—A. A. KACH, Montezuma, Iowa. The invention provides an improved boring and tenoning machine which is of simple and durable construction and may be easily manipulated to accurately form tenons on the ends of wheel spokes and to bore fellicies and other articles.

TURN-TABLE FOR USE IN MINES.—W. L. EPPERS and J. HAMILTON, Mount Washington, Md. These inventors have provided an apparatus by which the shaft cars may be transferred to and from the galleries or levels with ease and rapidity, so that the transfer of the mined product is unnecessary. In brief, a car once loaded in the gallery or level is run to the shaft and then transferred to the shaft track and hauled out of the mine.

NOTE.—Copies of any of these patents will be furnished by Munn & Co. for ten cents each. Please state the name of the patentee, title of the invention, and date of this paper.

Business and Personal Wants.

READ THIS COLUMN CAREFULLY.—You will find inquiries for certain classes of articles numbered in consecutive order. If you manufacture these goods write us at once and we will send you the name and address of the party desiring the information. In every case it is necessary to give the number of the inquiry. MUNN & CO.

Marine Iron Works. Chicago. Catalogue free. Inquiry No. 3280.—For parties to manufacture electro-magnets and cores of special design.

AUTOS.—Duryea Power Co., Reading, Pa. Inquiry No. 3281.—For the makers of "Pegulose" or similar article for waterproofing paper. "U. S." Metal Polish. Indianapolis. Samples free.

Inquiry No. 3282.—For makers of headed wire pins (tempered) for perforating machines.

Dies, tools, models. Am. Hardware Co., Ottawa, Ill. Inquiry No. 3283.—For makers of dust pans.

Coin operated machines. Willard, 284 Clarkson St., Brooklyn.

Inquiry No. 3284.—For the manufacturers of a combined shirt and collar ironer. Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.

Inquiry No. 3285.—For makers of oil burners for furnaces, heaters, etc.

Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt.

Inquiry No. 3286.—For makers of mills for grinding wood.

Sheet, bar, rod or wire, cut, formed, any shape. Metal Stamping Company, Niagara Falls, N. Y.

Inquiry No. 3287.—For dealers in Kieselguhr.

Machine Work of every description. Jobbing and repairing. The Garvin Machine Co., 149 Varick cor. Spring Sts., N. Y.

Inquiry No. 3288.—For dealers in dividing engines.

Manufacturers of patent articles, dies, stamping tools, light machinery. Quadriga Manufacturing Company, 18 South Canal Street, Chicago.

Inquiry No. 3289.—For manufacturers or dealers in wire netting.

The largest manufacturer in the world of merry-go-rounds, shooting galleries and hand organs. For prices and terms write to C. W. Parker, Abilene, Kan.

Inquiry No. 3290.—For a machine for shelling peas by hand power.

We manufacture anything in metal. Patented articles, metal stamping, dies, screw mach. work, etc. Metal Novelty Works, 43 Canal Street, Chicago.

Inquiry No. 3291.—For dealers and manufacturers of asbestos goods.

The celebrated "Hornsby-Akroyd" Patent Safety Oil Engine is built by the De La Vergne Refrigerating Machine Company. Feet of East 138th Street, New York.

Inquiry No. 3292.—For manufacturers or dealers in machines for manufacturing indurated fiber wire from wood pulp.

WANTED.—First-class machinery draughtsman. One with gas engine experience preferred. Address giving references. To Holland Torpedo Boat Company, New Suffolk, Long Island, N. Y.

Inquiry No. 3293.—For manufacturers of sugar grinding mills.

WANTED.—Engineer, carrying first-class license, to take charge of power plant and general power machinery in factory. Must be experienced man. Salary \$25 to \$30 per week. Apply 91 Front Street, Brooklyn.

Inquiry No. 3294.—For manufacturers or dealers in rubber novelties, such as balloons, rubber balls, etc.

Gasoline Automobile Batteries. William Roche's "Autogas" used properly will carry vehicle twice as far as any other battery of same weight. William Roche, inventor and manufacturer, 42 Vesey Street, New York, N. Y., U. S. A.

Inquiry No. 3295.—For an electro-plating outfit.

WANTED.—Capable instructor in scientific studies. Salary \$1,800 per annum. Must be first a man of character. Fair knowledge of science. Address John Brisben Walker by letter only, with references, Room 180 Times Building, New York.

Inquiry No. 3296.—For machinery for making tin fruit and jam jars.

WANTED.—Parties to carry out and pay all expenses in patenting automatic pump for pneumatic tires. Half interest given. Address J. H. M. Michon, Sharon, North Dakota.

Inquiry No. 3297.—For manufacturers of double-action water pumps.

Inquiry No. 3298.—For manufacturers of incandescent gasoline lamps.

Inquiry No. 3299.—For manufacturers of cook stoves using coal oil or gasoline as fuel.

Inquiry No. 3300.—For manufacturers of self-heating flat irons.

Inquiry No. 3301.—For manufacturers of engines of about 100 horse power using oil as fuel.

Inquiry No. 3302.—For manufacturers of the Columbia cipher.

Inquiry No. 3303.—For manufacturers of soft sheet rubber.

Inquiry No. 3304.—For manufacturers of collar buttons.

Inquiry No. 3305.—For manufacturers of the small hand mirror with puzzle on back.

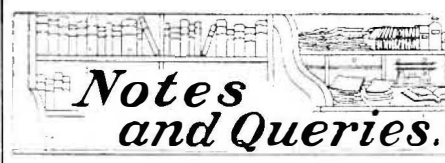
Inquiry No. 3306.—For a plant for the manufacture of steel freight cars.

Inquiry No. 3307.—For manufacturers of wooden hand rakes.

Inquiry No. 3308.—For dealers in dried herbs and roots.

Inquiry No. 3309.—For manufacturers of a machine for winding telephone magneto coils.

Inquiry No. 3310.—For machines for cutting straw for bushel baskets.



Notes and Queries.

HINTS TO CORRESPONDENTS.

Names and Address must accompany all letters or no attention will be paid thereto. This is for our information and not for publication. References to former articles or answers should give date of paper and page or number of question. Inquiries not answered in reasonable time should be repeated; correspondents will bear in mind that some answers require not a little research, and, though we endeavor to reply to all either by letter or in this department, each must take his turn. Buyers wishing to purchase any article not advertised in our columns will be furnished with addresses of houses manufacturing or carrying the same. Special Written Information on matters of personal rather than general interest cannot be expected without remuneration. Scientific American Supplements referred to may be had at the office. Price 10 cents each. Books referred to promptly supplied on receipt of price. Minerals sent for examination should be distinctly marked or labeled.

(8722) K. T. asks: 1. Is it possible to synchronize a dynamo and a motor, the latter run by the former, with reliability as to small variations of speed? A. The single-phase motor must closely synchronize with the dynamo which furnishes the current. Direct-current motors need not do so. 2. If so, will you give directions for building a simple and inexpensive model to illustrate the fact? For my purpose the minimum speed would be about 600 revolutions a minute and the maximum 2,400. The sensitivity ought to be such that any small variation of speed in the dynamo is transmitted to the motor with reasonable accuracy. A. The simplest model you can have to illustrate this is two similar machines, one driven as a dynamo and the other turned by it as a motor. 3. Can a 110-volt direct-current readily be transformed to a 52-volt alternating of any frequency, and how, with the least expense? A. A direct-current 110-volt is readily transformed into an alternating current of 52 volts pressure by a rotary converter such as is used in stations for this purpose. 4. Can a 100-volt direct current be used for heating metals by immersing in water, and how? A. A 110-volt direct current is not of a pressure high enough to heat metals quickly in water, as in the water pail forge; 220 volts are needed. Salt water is put into a pail in which a lead plate forms the electrode, while the iron attached to the pole is inserted into the water. It is instantly made red hot.

(8723) W. A. B. asks for a formula for glaze or glazing used in the manufacture of candles and crackers. A. Boli sugar and water to a point just before it will pull out stringy between the fingers. Dip in this solution.

(8724) W. M. C. says: I have a brass coil boiler, in which there is a great deal of sediment and scale and which is steaming poorly; please advise me what preparation I can clean it out thoroughly with. A. You can clear the sediment and incrustation in your boiler by injecting a strong solution of caustic soda, say 10 per cent of the contents of the boiler, using it for the day; then blow out while steam is up, and repeat for a few days.

(8725) C. R. says: If I were to take a cannon 3 inches in diameter and 1 inch bore and fit a screw cap firmly on the mouth of it, and then explode a piece of gun-cotton within, while the cap is screwed on: 1. Would the cannon burst? A. Plugging up a cannon charged with gun-cotton is a dangerous experiment. The charge would burst the cannon or blow out at the vent. 2. After cooling it would there be any explosion upon unscrewing the cap? A. There will be no danger in opening the cannon after explosion if it did not open itself. 3. Do you think the heat generated within the cannon would be sufficient to melt an iron or brass screw 1/4 inch or 1/2 inch in diameter? A. The heat of the explosion is too quick to melt the screw.

(8726) C. G. asks: How can I remove nitric acid stains from a blue cloth coat and bring it back to its former color? The acid having been dropped on the cloth and pressed with a smoothing iron, causing the part of the cloth where the acid dropped and was pressed to turn yellow. A. The stain caused by nitric acid on blue cloth can be removed by the immediate use of ammonia, in case the acid was weak. Strong acid will usually give a permanent stain. With an old stain from nitric acid nothing can be done.

(8727) A. K. B. wants a receipt for canning corn that will make it keep in tin cans and not ferment. How is it canned to make it keep? A. It is necessary to cook the corn sufficiently to destroy all bacteria that would produce fermentation. Seal while still hot, so that no air can gain access to the corn. Salicylic acid is commonly used as a preservative; the failure to secure good results has probably been due to the fact that salicylic acid does not dissolve readily in cold water, and hence it may have separated out. Borax, and especially boric acid, are used most largely to-day. The bulk of testimony seems to indicate that moderate amounts of these produce no injurious effects upon the human organism, but seem to be thoroughly eliminated through the action of the kidneys.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending

October 14, 1902, AND EACH BEARING THAT DATE. [See note at end of list about copies of these patents.]

Table listing various inventions and their patent numbers, including items like Accumulator, Acid and making same, Adding machine, Adjustable chair, Alkaline hydrosulfides, Animal shears, Annealing apparatus, Arsenic, etc., Axle, Axle spindle, Bailing press, Ball, see playing ball, Balls, manufacture of playing, Basin, wash, Basket, cotton, Bell, electric, Belt roller support, Bicycle hub clutch, Bicycle saddle post, Billiard or pool table, Binder case, Bobbins, cops, Boiler pipe cleaner, Bolster spring, Bolting machine, Book and study table, Book, file, G. W. Buskirk, Boot or shoe, A. F. Littlefield, Boot or shoe cleaner, Bottle closure, Bottle washing machine, Bottles, cans, etc., top for tooth powder, Bottles, etc., closure device for, Y. B. Yerby, Bottles, machine for forming narrow neck, J. Haley, Box, H. L. Averill, Box contents indicator, E. K. Zaring, Box for packing rings, etc., E. L. Toy, Box form, expandible, C. W. Hobbs, Box machine, F. G. Penlock, Brake for street car railways, etc., H. T. Brown, Brooder, M. J. Mapes, Brush, A. R. Wiens, Brush making machine, J. F. Mumford, Brush, tooth, F. C. Rensch, Button fastener, collar, W. B. Emery, Button, metallic, R. McKay, Button, turning, H. Higgin, Button turning machine, pearl, J. Loog, Buttonhole and button location marking machine, Powell & Vaughan, Camera, photographic, F. W. Merrick, Can cover, Bravo & Miller, Can cover, M. J. Lawless, Can opener, H. Sidman, Can washing machine, J. Kellington, Car brake, J. Toner, Car brake, C. M. Haynes, Car coupling, G. A. Hermanson, Car draft and bung frame, combined, L. T. Canfield, Car draft rigging, R. V. Sage, Car, dumping, Farlow & Schimpf, Car fender, street, R. A. Bettler, Car loader, box, G. F. Bartlett, Jr., Car, railway, H. M. Hoover, Car step, T. Kendrick, Carbureter, G. M. Schebler, Carbureter, T. H. J. Leckband, Card holder and score card, playing, H. H. Freeman, Carriage, folding child's, S. R. Evans, Cartridge shell recapper and decapper, H. G. Robinson, Case, See Bindery Case, Cashier, mechanical, Dement & Hull, Chair head rest, B. Pickering, Christmas tree holder, J. C. Kimesy, Churn, P. S. Henthorn, Cigar, E. A. Kline, Cigar-tip cutter and lighter, combined, F. L. Miller, Circuit closer, trolley signal, W. M. Chapman, Closet basins, device for securing seats and lids of, N. Rubenstein, Cloth steaming apparatus, W. Heaton, Clutch, friction, H. Muir, Coat hanger, H. L. Wright, Cock attachment, gas, A. E. Kraeger, Coffin sides, apparatus for making, L. G. Kregel, Coffin sides, making, L. G. Kregel, Coke oven, retort, Wilcox & Wagener, Combination lock, H. C. Lawrie, Condenser, steam motor, A. P. Dodge, Connecting rod key, automatic, E. J. Brewster, Conveying and hoisting machines, cable carrier for, G. E. Fitcomb, Copper from copper precipitate, recovering, metallic, D. McKechnie, Cooking utensil, G. P. Coyle, Cotton chopper, W. B. Castles, Cotton compress, J. L. Sheppard, Counter, word, T. A. Smith, Covers for pots, etc., attachment for, M. J. Cameron, Crane and hoisting apparatus, T. D. Hollick, Cream, etc., apparatus for tempering, D. T. Sharples, Cultivator, J. W. Alexander, Currycomb, Greene & Wood, Cycle brake operating handle, A. Sharp, Dampier, stovepipe or drum, C. C. McCurley, Demijohn holder, A. B. Park, Dental manurel, G. J. Paynter, Denture, artificial, W. P. Lacy, Derailing switch, J. C. Hare, Desk lid support, W. Holt, Detonator and catapult, combined, A. Delgrande, Dish cleaner, J. W. & E. C. Read, Display clip, hat, A. Martin, Distilling apparatus, H. Hirzel, Distributing and dispensing device, W. A. Freise, Diving apparatus, E. B. Petrie, Draft gear and buffing apparatus, Raebers & Meier, Dress shield fastener, J. Seligman, Drivers, See rotary mechanical drier, Drilling machine, A. W. Wigglesworth, Drinking fountain, poultry, F. Pohley, Dye and making same, dark sulfur, E. Culmann, Earring protector, M. Wolfberg, Egg beater holder, W. B. Smith, Electric battery, A. J. Cook, Electric circuits, device for locating breaks and grounds on, M. J. Myers, Electric conductor, underground, C. Borel, Electric current rectifying apparatus, G. B. Batten, Electric switch, C. J. Doran, Electric time switch, W. B. Coulter,

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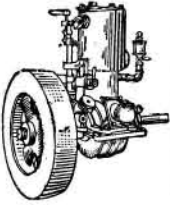


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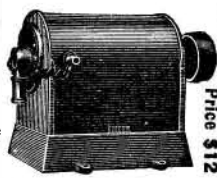


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Oil from fish livers, extracting, A. S. Hamilton 711,307. Oil separating apparatus, E. M. Thacker 711,446. Miller, machine or engine, G. J. Kraushaar 711,114. Spectrometer, E. Clarke 711,999. Ore roasting furnace, W. Naef 711,323. Ore separator, A. H. Stobbing 711,015. Organs, etc., treadle for, J. Wieser 711,190. Oven, H. S. Welker 711,029. Oven, portable, J. R. Carter 711,285. Owner of lost articles, etc., ascertaining the, C. Geigenmuller 711,393. Oyster tongs, C. K. & W. T. Shaw 711,351. Packing, piston rod, R. P. Vivian 711,986. Packing piston rod, J. Neptune 711,117. Pans, kettles, etc., scraper for, J. W. Crawford 711,955. Paper bag machine, J. West 711,369. Paper hanger's kit, P. H. Clinton 711,951. Paper pulp screen, J. A. Decker 711,041. Paste holder, E. Pomeroy 711,120. Paving material, utilizing old, W. H. Lober 711,115. Paving plant, portable asphalt, G. & H. Merriman 711,327. Pen draining device, P. D. Horten 711,316. Penholder, E. E. Blakeslee 711,278. Petroleum sulfuric acid, and lime, manufacturing a self-combustible from, Bentrop & Hulsbosch 711,380. Photographic plate holder slide, Robertson & Wright 711,347. Photographic printing frame holder, T. E. Deekand 711,199. Piles, driving, C. Seaysmith 711,013. Pin, G. W. Dever 711,152. Planter, potato, T. L. Good 711,306. Planting machine, G. W. Jarmin 711,980. Plate or plaque hanger, J. E. Larkin 711,056. Playing ball, F. H. Richards 711,177, 711,227 to 711,230. Plow, J. W. Barnes 711,091. Plow adjusting device, wheel, W. B. Michael 711,987. Plow fertilizer distributor attachment, C. T. Thomas 711,023. Pneumatic despatch tube terminal, F. R. Taisey 711,367. Pocketbook, J. Goerk 711,156. Precious metals, from their ores, apparatus for use in extracting, Smith & Brown 711,236. Printer's quoin, E. L. Anslinger 711,033. Printing machine and mechanism for controlling same, paper carriage for type, R. A. Fowden 711,154. Printing, make ready for, A. S. Allen 711,147. Printing plates, means for securing, H. Hamlin 711,970. Printing press, movable chase, D. E. Hunter 711,109. Printing surfaces manufacturer, O. Peester 711,101. Projectile, E. J. Hill 711,209. Projecting apparatus, H. M. Reichenbach 711,440. Propeller, reversible, S. W. Thaxter 711,021. Pulp vessels, apparatus for making closed, F. B. Howard 711,165. Pump, suction, D. Schurman 711,350. Putting out machine, J. H. Bickford, W. N. Patten, and W. H. Downs 711,034. Puzzle, P. Reichenbach 711,439. Railway block signaling system, W. M. Chapman 711,037. Railway or tramway, electric, G. F. Cornwallis-West 711,292. Railway switch, A. A. Strom 711,363. Railway tie, S. J. Gibboney 711,305. Railway tie, cement, W. J. Bell 711,277. Railway trains, apparatus for electrically lighting, A. B. Gill 711,421. Railway water tank attachment, R. T. Cummings and W. W. Wikoff 711,293. Ram, hydraulic, J. Richards 711,076. Refractory material and manufacturing same, object of, C. B. Jacobs 711,319. Regulator. 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Canadian patents may now be obtained by the inventors for any of the inventions named in the foregoing list. For terms and further particulars address Munn & Co., 361 Broadway, New York.

**NEW BOOKS, ETC.**

**FOREIGN TRADE REQUIREMENTS.** Published annually with quarterly supplements. New York: Lewis, Scribner & Company. 1902. Pp. 532.

Our present industrial expansion renders the publication of a work such as "Foreign Trade Requirements," timely. In order to pass a critical opinion upon the work, it would be necessary to use it some time as a reference book. But a careful examination convinces us that its pages are replete with matter which should be of extreme value to the exporter. The information contained in the book is carefully classified, condensed and arranged in the following sections: Trade Conditions, Traveling Salesmen, Credit Customs, Commercial Law, Trade-Marks and Patents, Patent Laws, Transportation Facilities of the World, Coins and Currencies of the World, Miscellaneous, Cable Rates to all Countries, Weights and Measures of Foreign Countries, and Commercial Cities of the World.

**DIAGNOSIS BY MEANS OF THE BLOOD.** By Robert Lincoln Watkins, M.D. New York and London: The Physicians Book Publishing Co. 1902. 8vo. Pp. 388. Price \$5.

Physicians are apt to look rather askance on examinations of the blood in diagnosing cases. Nevertheless it must be admitted that a work of the character such as Dr. Watkins has written should refute all doubts of the efficacy of blood diagnosis. The system which Dr. Watkins describes is one which he has evolved himself. The work is, therefore, eminently original in its character, and for that reason extremely valuable. So far as we know, no similar work has appeared in medical literature. In order to elucidate his text, the author has introduced a very full series of reproductions from photographs taken by himself.

**TRADES WASTE: ITS TREATMENT AND UTILIZATION.** By W. Naylor. London: Charles Griffin & Co., Ltd. Philadelphia: J. B. Lippincott Co. 1902. 8vo. Pp. xv, 267. Price \$6.50.

This is the first publication of any length which is devoted to the subject of trades waste, as a whole. Although the work bears more the character of a compilation than of original research, it is, nevertheless, of rare merit. The fact that it contains almost everything that is worth knowing on trades waste is in itself sufficient commendation.

**LIST OF REFERENCES ON RECIPROcity.** Books, Articles in Periodicals, Congressional Documents. Compiled under the direction of A. P. C. Griffin. Washington: Government Printing Office. 1902. Pp. 38.

**THE BADGER PHARMACIST.** Published in the interests of pharmacy in Wisconsin. By the students of the School of Pharmacy of the State University, Madison, Wisconsin. 1900. Pp. 292.

**COAL, LIGNITE AND ASPHALT ROCKS.** Bulletin of the University of Texas. No. 15. Issued semi-monthly. Pp. 138.

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