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, washtubs, 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 WRECKS.—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 revolubly 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. KOCH, 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 fellies 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.

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Dies, tools, models. Am. Hardware Co., Ottawa. Ill.

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

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Handle & Spoke Mchy. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O.

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

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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 Engines built by the De La Vergne Refrigerating Machine Company. Foot 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 zither.

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.

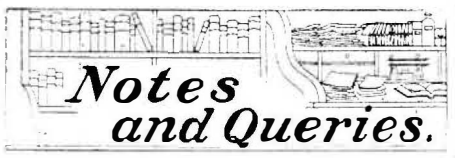
Inquiry No. 3306.—For a plant for the manufacture of steel freight cars.

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.



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.

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(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 candies and crackers. A. Boil 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 guncotton within, while the cap is screwed on: 1. Would the cannon burst? A. Plugging up a cannon charged with guncotton 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 ¼ inch or ⅛ 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 boracic 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.

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