RECENTLY PATENTED INVENTIONS.

Bicycle Appliances.

PEDAL.—ISAAC A. BRADDOCK, Haddonfield, N. J. The pedal is a combined "rat-trap" pedal and ordinary swinging pedal. The swinging member is to be used when the roadbed is uneven, very muddy or obstructed by loose sand, and when the bicycle is running on an upgrade. The increased leverage afforded by the swinging members of the pedals enables the rider to propel his machine easily. On a good roadbed the rat-trap combination is used.

Mechanical Devices.

COMBINED COTTON-PLANTER AND GUANO-DISTRIBUTER.—SIMEON S. CUDD, Kelton, S. C. This combined cotton-planter and guano-distributer is a very simple and practical seed-planter. Although specially designed for planting cotton-seed the machine can also be used for other kinds of seed. The fertilizer-distributer is completely under the control of the operator, so that the guano can be controlled and cut off at will.

PROCESS OF SEPARATING GARLIC FROM WHEAT.—JACOB K. SCHEIRER, Northampton, Pa. When wheat is harvested, the garlic growing among it is still green and the seeds are pulpy and juicy. Both garlic and wheat are threshed together before the garlic seeds have become entirely dry. The garlic juice forms a glutinous glaze on the wheat and communicates a garlic odor to the grain. Moreover, many unbroken garlic seeds of the same size and weight as the wheat kernels are delivered to the miller, for the reason that they cannot be removed by an air-blast. The present inventions effects the complete removal of the garlic seeds, whereupon the grain cuticle is removed, so that flour obtained by grinding the wheat has no trace of garlic.

MECHANICAL TOY.—JOHN W. MACKIN and JULIUS ZWEIGART, Chicago, Ill. The mechanical toy represents a monkey walking on the top of a rolling ball. When the ball rolls along the monkey appears to walk on top of the ball, especially as the several joints of his body are loosely connected and hence are free to vibrate with the ball.

CLUTCH-PULLEY. — CHARLES NEWSOM, Portland, Colo. On the shaft a sleeve is splined, loosely carrying the pulley. Clutch members are mounted on the sleeve at each side of the pulley, one of the clutch members having connection with the sleeve to be moved therewith. A connecting member works between the other clutch members and the sleeve to press the parts and cause both clutch members to engage the pulley.

Vehicles and Their Accessories.

HORSELESS CARRIAGE.—ENRIQUE SANCHIS, Madrid, Spain. The invention is a horseless carriage which belongs to that class in which the motor is mounted on a fore-carriage. The novel features of the invention are a running-gear having on each side driving ground-wheels mounted to rotate upon axes capable of swinging about vertical pivots, and motors mounted to swing with the wheels in their steering movement and having their drive-shafts located centrally of the wheels.

COMPENSATING GEARING.—JOSEPH F. KRAMER and JOHN H. BLUM, Gunderson, Mont. The compensating gear is particularly adapted for wheeled vehicles, the object being to permit the rotation of the two opposite traction wheels at different rates of speed while turning corners. On adjacent ends of two sections of a shaft ratchet-wheels are mounted. A sleeve surrounds these ends of the shaft sections, in which sleeve the ratchet-wheels are arranged. Double-arm pawls coact with the ratchet-wheels, and are in turn acted upon by springs. On the sleeve a driving-wheel is mounted.

Railway Contrivances.

AUTOMATIC MAIL-BAG CATCHING AND DELIVERING APPARATUS. — CHARLIE E. LOCKE, 1,202, 12th Street, Louisville, Ky. Mr. Locke has invented a very simple and ingenious apparatus which includes an automatic mail-bag catcher arranged on a postal-car and another catcher arranged and suspended outside of the track. The invention includes trustworthy means for suspending and automatically releasing and catching mail-bags on cars and at stations in general.

SPARK-ARRESTER.—LARKIN L. CRUMP, Westpoint, Miss. Within a casing an inner shell or drum is fitted, converging toward its upper end and having openings in its lower end. Discharge-flues communicate with the lower end. Between the drum and casing are guides, converging toward their respective outlet openings. A steam-pipe within the drum and casing is provided with steam-discharge openings. A separating wheel is journaled upon the steam-pipe between the openings and above the inner shell or drum. The wheel discharges the sparks or cinders outwardly so that they will be thrown out of the current of heat and will drop between the casing and the drum. The steam extinguishes the sparks.

Miscellaneous Inventions.

SNATCH-BLOCK.—GUSTAVE AMUNDSON and JESSE E. KNIGHT, Blue Canon, Wash. This invention is an improvement in snatch-hooks which are made to open automatically by fastening or forming on the rope which is used with the block, an enlargement of some kind which, upon engagement with the block, will throw open the movable check and permit the rope to run off the block.

SASH-LOCK. — JOHN H. GRACEY, Westfield, N. Y. This improved sash-lock and window-fastener securely fastens the sashes together when the window is either closed or open for ventilation and when the sashes are open to prevent either being moved.

COMPOSITION FOR REMOVING BOILER-SCALE. — BENJAMIN PEÑA, Laredo, Texas. The boiler-scale compound consists of an extract of the plant *Larrea Mexicana*, which extract is added to the water in the boiler. The solution prepared and used as directed by the inventor is said to prevent reincrustation without any effect whatever on the metal of the boiler.

FINGER-RING.—JOSEPH L. HERZOG, Manhattan, New York city. This finger-ring is constructed so that a stone or gem can be securely or removably held in place. The stone is removed inwardly and the fastening or holding devices are invisible from the outside of the ring, so that in outward appearance the ring does not differ from those of ordinary construction.

MEANS FOR APPLYING SOLDER TO METALLIC ARTICLES.—EMILE BESSE and LOUIS LUBIN, Rue d'Angoulême 93, Paris, France. The lid or bottom of a can previously suitably shaped either with a groove around its periphery or with a flange has a number of small holes punched in its periphery, and upon its inner face is laid a circular or oval ring of soldering metal. The ring of solder is preferably so crushed or compressed as to form a groove into which the edge of the body of the can fits so that a proper position is maintained.

GAME-TABLE.—SYLVESTER B. COMSTOCK, La Colorado, Mexico. The table is provided with a pit or pits into which dice may be passed while playing a game, so as to be in plain view of the person acting as counter for the game. The table has a rim to prevent the dice from rolling off, the rim being removable to permit the cleaning and repairing of the table.

FOLDING CATAFALQUE. — ADOLPH M. SMITZ, West Depere, Wis. This collapsible catafalque comprises two main parts or frames and a series of connecting frames which are hinged to and adapted to fold into the spaces in the main frames, so that the entire device can be readily stored away in a small space.

QUILTING-FRAME. — SIDNEY S. RUSSELL, P. O. Box 193, Memphis, Tenn. The end frames of this quilting-frame can be folded into a compact form and can be readily operated to secure and tighten the lining and cover of the quilt.

HAIR-FASTENER.—LOTTIE BASSETT, Cedarville, Cal. The patent describes a clamp which can be attached to the hair when braided and serve not only to tie the hair tightly and prevent its unbraiding, but also to carry a ribbon or bow, so that the ribbon may be permanently attached to the clamp. The necessity of frequently tying and untying the ribbon is thus avoided.

CLASP.—CLARA A. BARROWS, Bethel, Vt. The clasp is designed to hold the ends of shoe strings, and is composed of a body portion provided with a yielding tongue, and a clamping member hinged on the body portion and provided with a yielding tongue coacting with the tongue of the body portion, and also having a finger designed to engage a part of the body to hold the clamping member in engaged position.

PLATE FOR USE IN STEREOTYPING.—FREDERICK A. RINGLER, Manhattan, New York city. By means of this plate, half-tone line-etched engravings or duplicate electrotype plates are securely held in position in the matrix while the metal for forming the stereotype plate is poured into the mold. The plates are secured in their proper position in the stereotype plate to form integral parts thereof.

SHOW-CASE.—FRANK J. and JOHN A. BANK, Manhattan, New York city. The construction of the show-case is such that the side rails of the door are concealed by the corner posts or uprights of the body of the case, thus permitting the glass in the door to extend to and within the inner vertical edges of the corner posts. A maximum of display surface is obtained.

BOUTONNIERE.—THOMAS L. MCCORMACK, Danville, Ark. The invention is an artificial boutonnière which has a device representing a bird movable in and out of the flower and under the control of the person wearing the boutonnière.

SHAFT AND JOURNAL THEREFOR.—FRANK M. KENNEDY, Clarendon, Ark. Heretofore in mounting tubular shafting much difficulty has been experienced in adjusting the journals. To overcome this difficulty a conical journal and a body portion of a semi-circular contour integral therewith have been devised.

Designs.

RING.—CHARLES P. GOLDSMITH, Manhattan, New York city. The leading features of the design are two opposing buffalo heads on the upper periphery of the ring.

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 your name and address to 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. 551.—For compound engines for launches of about 5 and 10 by 8 or 6 and 12 by 10 inches.

"U. S." Metal Polish. Indianapolis. Samples free.

Inquiry No. 552.—For plant protectors of waterproof paper, 15 to 18 inches high and 15 to 18 inches broad, for keeping frost from tomato plants.

WATER WHEELS. Alcott & Co., Mt. Holly, N. J.

Inquiry No. 553.—For dynamos for a private plant.

Yankee Notions. Waterbury Button Co., Waterb'y, Ct.

Inquiry No. 554.—For manufacturers of rubber flooring.

Turbines.—James Leffel & Co. Springfield, Ohio, U.S.A.

Inquiry No. 555.—For parties in Canada to make a three-piece metal novelty.

Dies & Special Machinery. Amer. Hdw. Mfg. Co., Ottawa, Ill.

Inquiry No. 556.—For manufacturers of small brass tubing known as hollow wire.

Sheet Metal Stamping: difficult forms a specialty. The Crosby Company, Buffalo, N. Y.

Inquiry No. 557.—For manufacturers of model engine castings, marine and stationary.

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

Inquiry No. 558.—For manufacturers of steam brickyard apparatus.

Our number 4 Catalogue of Automobile parts, write us, Standard Welding Co., Cleveland Ohio.

Inquiry No. 559.—For manufacturers of agate marbles.

Rigs that Run. Hydrocarbon system. Write St. Louis Motor Carriage Co., St. Louis, Mo.

Inquiry No. 560.—For wholesale dealers in harness.

SAWMILLS.—Variable friction feed. Send for Catalogue B. Geo. S. Comstock, Mechanicsburg, Pa.

Inquiry No. 561.—For manufacturers of novelties.

FOR SALE.—Patented invention, "Nut Lock." S. Koralewski, 19 Eagle Block, 20th Street, Pittsburg, Pa.

Inquiry No. 562.—For the present address of the Aluminium Novelty Mfg. Co.

Foundry Machine, Pattern and Blacksmith shop for sale. Address M, Box 772 SCIENTIFIC AMERICAN.

Inquiry No. 563.—For parties to make lamps in quantities.

Ten days' trial given on Daus' Tip Top Duplicator. Felix Daus Duplicator Co., 5 Hanover St., N. Y. city.

Inquiry No. 564.—For manufacturers of apparatus for sleight of hand tricks.

Kester Electric Mf'g Co's, Self-fluxing solder saves labor, strong non-corrosive joints, without acid, Chicago, Ill.

Inquiry No. 565.—For oil heating and cooking stoves for use with crude oil.

Inventions developed and perfected. Designing and machine work. Garvin Machine Co., 149 Varick, cor. Spring Sts., N. Y.

Inquiry No. 566.—For ¼ inch seamless steel tubing, with bore of hole ⅛ and ¾ inch.

For sale and introduction in Scandinavia, of American goods, any and all. Apply to O. P. Jespersen and Sonner, Copenhagen, Denmark.

Inquiry No. 567.—For Ferris or pleasure wheels about 40 or 50 feet for fairgrounds or street fair use.

FOR SALE cheap, in perfect condition, SCIENTIFIC AMERICAN and SUPPLEMENT, 1894 to 1900 inclusive. J. Elliott Shaw, 632 Arch Street, Philadelphia.

Inquiry No. 568.—For parties to make a barrel similar to a common sugar barrel, made of clear bass-wood without knots, and to be grooved like washtubs.

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

Inquiry No. 569.—For manufacturers of round wooden boxes with screw tops for mailing purposes.

The best book for electricians and beginners in electricity is "Experimental Science," by Geo. M. Hopkins. By mail, $4. Munn & Co., publishers, 361 Broadway, N. Y.

Inquiry No. 570.—For manufacturers of spooling fishing reels, also parties who make spiral gear to fishing reel.

Sheet Metal Novelties, Articles and Stampings of all sizes. Tools and dies manufactured on contract. Address Standard Stamping Co. Cor. 7th & Hudson Sts., Buffalo, N. Y. U. S. A.

Inquiry No. 571.—For manufacturers of X-ray plants for hospital work.

WELL DRILLERS.—St. Landry Oil and Mineral Co., Opelousas, La., will receive proposals until May 20, for drilling oil well. Bond required and usual rights reserved. St. Landry Oil and Mineral Co.

Inquiry No. 572.—For manufacturers of asphalt mastic mixers.

Government Relics—guns, swords, revolvers, saddles, cannons, etc, from Goverment Auction are now being sold at ridiculously low prices. Send for illustrated lists. Francis Bannerman, 579 Broadway, N. Y.

Inquiry No. 573.—For manufacturers of sand driers.

WANTED.—An experienced specification writer and patent expert having a thorough knowledge of the patent practice and preferably one competent to handle electrical cases. Munn & Co., Solicitors, Office of SCIENTIFIC AMERICAN, 361 Broadway, New York.

Inquiry No. 574.—For a second-hand, one horse water motor or gas engine.

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Inquiry No. 575.—For a manufacturer of metal novelties to make a small mechanical typewriter eraser (automatic).

Inquiry No. 576.—For manufacturers of automatic fire sprinklers.

Inquiry No. 577.—For manufacturers of machinery for making wood screws.

Inquiry No. 578.—For manufacturers of furnaces for burning oil.

Inquiry No. 579.—For manufacturers of glass "stars" for holding photographs.

Inquiry No. 580.—For manufacturers of pocket match safes with a hinge on the side and shut at the end.

Inquiry No. 581.—For a lathe having a 6-inch swing and 12 inches between centers being a foot power lathe, but also do screw cutting.

Inquiry No. 582.—For manufacturers of steam toys.

Inquiry No. 583.—For manufacturers of electric cauterizing instruments.

Inquiry No. 584.—For manufacturers of a small ice plant of about 2 tons capacity.

Inquiry No. 585.—For the manufacturer of the "Kitchen Ice Machine."

Inquiry No. 586.—For manufacturers of aluminium numbers and letters.

Inquiry No. 587.—For manufacturers of water motors for pumping pipe organs.

Inquiry No. 588.—For sod cutters.

Inquiry No. 589.—For special files, 1⅜ inches long by ⅝ inch wide by three thirty-seconds inch thick.

Inquiry No. 590.—For a water still, filter, fountain pen, invalid's chair, watch, artificial diamonds, etc., for the mail order business.

Inquiry No. 591.—For a friction electric machine, such as the Holtz, Voss or Wimshurst, for experimental purposes.

Inquiry No. 592.—For a manufacturer or dealer in square gilt wire such as is used in making letters and pins.

Inquiry No. 593.—For manufacturers of tools for repairing pianos, harmoniums and other musical instruments.

Inquiry No. 594.—For machinery for making cloth circles such as are used in making cheese.

Inquiry No. 595.—For the manufacturer of a receiving box for spice and sugar grinding mill.

Inquiry No. 596.—For manufacturers of railroad and boat spike machines.

Inquiry No. 597.—For manufacturers of chains for the transfer of power similar to a bicycle chain with a sprocket.

Inquiry No. 598.—For small dynamos for 10 or 12 lights.

Inquiry No. 599.—For the present address of the Linney Air Churn Co.

Inquiry No. 600.—For wholesale dealers in laundry and toilet soaps.

Inquiry No. 601.—For the present address of the metal polish "The Yankee Cleaner."

Inquiry No. 602.—For a gasoline burner with a cap 6 or 7 inches in diameter.

Inquiry No. 603.—For manufacturers of cotton-threading machines.

Inquiry No. 604.—For manufacturers of an apparatus for feeding crude petroleum into furnaces.

Inquiry No. 605.—For manufacturers of the "straight-way" generator for party line telephones.

Inquiry No. 606.—For waste paper receptacles, flatted at the side so as to take up less space against the wall.

Inquiry No. 607.—For dealers in racks or gears, either new or second-hand; in New England preferred.

Inquiry No. 608.—For information as to the "French Tailor System" and the "Paris Glove Fitting Machine."

Inquiry No. 609.—For a spring motor machine which can be operated by one man.

Inquiry No. 610.—For manufacturers of wooden spigots with locks.

Inquiry No. 611.—For manufacturers of permanent magnets.

Inquiry No. 612.—For manufacturers of machinery to make portrait frames.

Inquiry No. 613.—For parties to make hoisting machines and clamshell buckets.

Inquiry No. 614.—For an engine with a capacity for running a small ice machine of about 5 tons daily, also with sufficient power to run a small laundry (washing machine).

Inquiry No. 615.—For machinery for small laundry complete.

Inquiry No. 616.—For complete machines for making ice, of about 5 tons daily capacity.

Notes & 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.

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Minerals sent for examination should be distinctly marked or labeled.

(8182) J. J. R. asks: 1. About what is the proper amperage and voltage of an open arc? A. The open arc has a drop of about 45 volts in it. Such a lamp, if rated at 2,000 candles, has 10 amperes flowing through it. 2. How many candle power per watt, and how is it rated? A. A 2,000-candle lamp is one which consumes 450 watts as defined by the National Electric Light Association. This gives a little over 4 candles per watt. 3. At what ratio with each other should the two carbons be consumed (direct-current arc)? A. The positive carbon wastes about twice as fast as the negative. 4. Could you recommend a good treatise devoted entirely to the arc light and the different systems; also issues of the SCIENTIFIC AMERICAN? A. Crocker's "Electric Lighting," Vol. I.; "The Generating Plant," price $3. Vol. II. is soon to be out. This will be a standard work. SUPPLEMENTS 1047 to 1052, six numbers, at ten cents each, contain a series of articles on the arc lamp. We also recommend SUPPLEMENTS 694, 695, and 696. 5. Could I double the power of the motor described in December issue by making the field and armature ring twice as wide and not change the number of turns or number of wire? A. You may do so. 6. If I increase the num-