

RECENTLY PATENTED INVENTIONS.

Electrical Devices.

COMBINATIONAL TELEGRAPH INSTRUMENT.—F. GONZÁLEZ-BARROSA, Panama, Panama. The invention relates to communication by wire, and more particularly to the production of a combinational instrument which may be used at will as a key, a sounder, a repeater, or a commutator. The invention also has reference to a system of wiring whereby this instrument may be connected for use in various relations. The apparatus is suitable for both open and closed circuits.

Of Interest to Farmers.

COTTON CHOPPER AND CULTIVATOR.—J. A. BARTLETT, W. S. DOWNS and J. B. TILLMAN, Dardanelle, Ark. In this patent the invention relates to agricultural implements, and especially to the class of cultivators. The object of the inventors is the provision of an implement of simple construction intended for the purpose of chopping or thinning cotton in the field, the invention adapting itself readily to be applied to an ordinary cultivator as an attachment.

ANIMAL-FEEDER.—P. E. HOWARD, Hitchcock, Oklahoma, and C. F. HOWARD, Deepwater, Mo. The invention refers to improvements in devices for supplying feed to animals, particularly hogs, an object being to provide a feeder adapted to supply shelled corn, bran, meal, or other food to a trough from which animals feed and so arranged that the flow of feed to the trough may be adjusted for the food it contains.

ANIMAL-STALL.—W. M. UNDERHILL, Oconto, Wis. One purpose of this inventor is to economize in the cost of construction of stalls and to provide each stall with an adjustable front bar placed far enough back to touch in front of the withers when the cow is eating from the floor or a low manger and to touch the lower part of the throat when the head is above the bar, such cross-bar being also placed so far back as to render it necessary for the cow to swing her head to the right or left crosswise of the stall when changing from one position to the other.

Of General Interest.

DIE.—G. KEPPEL, New York, N. Y. In this instance the invention of Mr. Keppel has reference to an improved apparatus for stamping articles from flat metal stock. It is especially intended for stamping in high relief images and the like on metal plates or disks for jewelry or for various other purposes.

CONSTRUCTION OF FALSE BEAMS, INTERIOR CORNICES, OR THE LIKE.—W. NIELSON, New York, N. Y. The object here is to provide certain improvements in the construction of false beams for ceilings, interior cornices, and like structures employed for embellishing the appearance of a room, the arrangement being such that the structure is fireproof, can be given any ornamental shape, can be readily placed and secured in position on the ceiling or wall, and cheaply manufactured.

PORTABLE DARK ROOM.—E. L. HALL, New York, N. Y. The purpose in this invention is to provide a collapsible dark room, one which can be compactly and flatly folded and conveniently carried in a dress-suit case, for example, and quickly and readily set up and braced in said set-up position. Further to provide sleeves at the ends of the device constructed of pliable material and arranged to fold into the body of the device when it is collapsed and so that when the arms of the operator are introduced the hands are free, yet a light-tight connection obtained between the arms of the operator and the sleeves.

Hardware.

DOOR-BRACE.—F. DAHLUND, Esmond, N. D. The object here is to provide a brace for trap doors, such as used in cellars and other places, arranged to permit of conveniently swinging the door upward into an open position and to automatically hold it therein. It is easily adjusted to suit different sizes of doors, as well as the weight thereof.

WRENCH.—W. V. GAGE, Omaha, Neb. Mr. Gage's invention relates to wrenches and spanners and is especially adapted to the form known as "S-wrenches," as well as to straight wrenches. The objects are to provide a wrench which will be adapted to operate upon nuts and bolt-heads of different sizes and thicknesses without the use of complicated adjusting devices and with a corresponding simplicity and cheapness of construction.

Machines and Mechanical Devices.

MACHINE FOR LAYING CABLES ON WINDING-DRUMS.—A. F. WHEATON, Menlo, Wash. This invention relates to improvements in mechanism for laying cables on the winding-drum of logging-engines, hoisting-engines, and the like, the object being to provide an automatically-controlled device by means of which the cable will be placed on the drum in even layers while moving in either direction along the drum, thus preventing injury to the cable by overlapping.

Pertaining to Vehicles.

FELLY-JOINT.—J. B. HIGGINOTHAM, Norman, Cleveland County, O. T. In this instance the invention relates to an improved device for connecting the sections of a wheel-felly so that the necessary tension may be exerted on said sections to draw them forcibly together and produce a rigid, self-sustaining felly, which with the addition of the tire encircling it forms a most secure and durable structure.

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 the 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. 6318.—For manufacturers of mud guards or fenders made of paper or similar substance, for use on automobiles.

AUTOS.—Duryea Power Co., Reading, Pa.

Inquiry No. 6319.—For manufacturers of wall paper printing machinery.

Forhoistingengines. J. S. Mundy, Newark, N. J.

Inquiry No. 6320.—For manufacturers of or dealers in shot tower machinery.

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

Inquiry No. 6321.—For makers of punch machines, benders and presses, complete, for making "H. S.," also for the present address of the Chabai Boiler Co.

Perforated Metals. Harrington & King Perforating Co., Chicago.

Inquiry No. 6322.—For makers of glass paper weights and other novelties of a like kind.

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

Inquiry No. 6323.—For makers of aluminium pin trays, also other aluminium novelties.

Adding, multiplying and dividing machine, all in one. Felt & Tarrant Mfg. Co., Chicago.

Inquiry No. 6324.—Wanted, the address of the following concerns: Eclipse Gun Co., Laclede Arms Co., Royal Gun Works, Burgess Gun Mfg. Co.

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

Inquiry No. 6325.—For manufacturers of potters' wheels and general machinery for manufacturing porcelain.

Robert W. Hunt & Co. bureau of consultation, chemical and physical tests and inspection. The Rookery, Chicago.

Inquiry No. 6326.—For manufacturers and exporters of bungs for kegs, barrels, etc., also for shoe pegs.

We manufacture tripoli stones of all dimensions, disc, cylinders, etc., samples free. Seneca Filter Co., Seneca, Mo.

Inquiry No. 6327.—For machinery for boring and filing brushes in general for scrubbing, store and household use.

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

Inquiry No. 6328.—For parties engaged in manufacturing Indian clubs, balls, etc., from cork.

Any metal, sheet, band, rod, bar, wire; cut, bent, crimped, punched, stamped, shaped, embossed, lettered. Dies made. Metal Stamping Co., Niagara Falls, N. Y.

Inquiry No. 6329.—For the present address of the Brown Cochran Carbonic Gas Machine Co.

I have every facility for manufacturing and marketing hardware and housefurnishing specialties. Wm. McDonald, 130 Main St., East Rochester, N. Y.

Inquiry No. 6330.—For an automatic telegraph transmitter.

We manufacture gasoline motor and high-grade machinery, castings best quality gray iron. Select patterns, and let us quote prices. Frontier Iron Works, Buffalo, N. Y.

Inquiry No. 6331.—For makers of gasoline machines.

Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, machinery and tools. Quadriga Manufacturing Company, 18 South Canal Street, Chicago.

Inquiry No. 6332.—For makers of electric thermostat.

The SCIENTIFIC AMERICAN SUPPLEMENT is publishing a practical series of illustrated articles on experimental electro-chemistry by N. Monroe Hopkins.

Inquiry No. 6333.—For the manufacturer of the Ideal Spline Cabinet for blacking shoes.

Drawings, Estimates, Tools, Dies, Sheet, Wire and Rod Specialties (all metals). Stamping, Spinning, Turning and Screw Work. Tin Plating, Nickel Plating, Bronzing, etc. The W. S. Burn Mfg. Co., New Haven, Conn.

Inquiry No. 6334.—For makers of the handy potato and fruit slicer, having a plain bottom with fluted corrugated knife, with sliding holder for holding the vegetable.

Inquiry No. 6335.—For information as to supply of industrial earth, calcined and free from grit or impurities.

Inquiry No. 6336.—For makers of pocket cigar lighter.

Inquiry No. 6337.—For an air pump to be used by hand for exhausting a glass tube.

Inquiry No. 6338.—For makers of railroad tricycles or hand cars.

Inquiry No. 6339.—For machinery for making baskets, boxes, crates, etc.

Inquiry No. 6340.—For makers of square copper tubing.

Inquiry No. 6341.—For makers of hardware specialties for household use.

Inquiry No. 6342.—For makers of mechanical and scientific toys.

Inquiry No. 6343.—For makers of stationary specialties.

Inquiry No. 6344.—For makers of reversed gas burner and novelties in gas and oil lighting and heating apparatus.



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.

(9509) R. W. M. says: Has not electricity been used long enough as energizing force for running machinery and power plants, so that machinery and power plants thus worked, operated, energized, and installed should be expressed by a different word than "electrify" and its derivations? The common meaning of "electrify" is "to thrill," technical meaning "to charge with electricity." Now what is wanted is a word meaning "to work, operate, energize with or by electricity," and it is not hard to find it in the Greek compound "electron" and "ergon," the latter being well anglicized in the word "energy" and its derivations. Am I not right, thinking that a machine would run longer, stronger, and steadier electrized than it would if only electrified, that is, simply charged with electricity? A. It is all right to make a new word as a name for a new thing or fact. People will use it or not, however, as they choose. "Electrize" does not suggest its derivation from "ergon" and "elektron," the two Greek words, since the essential letter "r" of ergon does not appear in it. We hardly think people will take to the proper form of the derivative, which should be "electrize." It has an awkward sound.

(9510) C. S. asks: 1. I have a small induction coil. Length between end pieces 3 inches; core, 3/8 inch thick. Primary, three layers No. 18. Secondary, 5 ounces No. 30. Condenser, twenty sheets tinfoil 3 x 3 inches. This coil gives powerful shocks, but will not spark at the secondary. The vibrator does not buzz good. Is the core too small? I use one dry cell. Is it possible to work it with a telephone generator, thus doing away with the vibrator? A. Your little coil may give a spark 1/4 inch long if you put on more battery. Two or three cells of dry battery will be required for it, since dry cells are very weak affairs. The vibrator will work more forcibly if more current is given to it. The core is not magnetized strongly enough to make the vibrator move far and fast enough to break the circuit quickly. 2. How can you tell the proper amount of zinc sulphate and blue vitriol in a Crowfoot cell without a hydrometer? A. The copper sulphate solution in a Crowfoot battery must be saturated, and there must be crystals of the sulphate still remaining undissolved in the bottom of the jar on the copper plates. No zinc sulphate need be put into the cell at first. Put only water round the zinc at the top of the jar, and short-circuit the cell. Zinc sulphate will soon be formed, and the cell be ready for action in perhaps twelve hours. 3. Why is it that two Crowfoot cells will not ring a bell? A. Two Crowfoot cells will ring a bell whose resistance is low. If the resistance is high, more cells will be required to send current enough through the bell to ring it. 4. Is the powdered carbon that is packed around the carbon stick in a dry cell fit to use over again? A. The powder in a dry cell should not be used again. It is a mixture of carbon and manganese dioxide, and is rendered useless by the running of the cell. If it were only carbon, it might be used for any length of time.

(9511) T. J. W. says: 1. What is the reduction in volume of compressed air to 100 pounds? A. Compressed air at 100 pounds pressure fills 0.128 of its free volume. 2. What reduction in volume at 50 pounds? A. At 50 pounds pressure 0.227 of its free volume—isothermally. 3. (a) How many cylinders of a given size (say 3 x 6) would be required to compress air sufficient to run an ordinary reciprocating slide-valve engine of the same size, all running at same speed, engine carrying load at 200 revolutions per minute, compressors to maintain pressure of 100 pounds? (b) How many compressor cylinders could be cut out by reducing pressure to 50 pounds? A. The loss by the transmission of compressed air depends upon its use while hot from the compressor or after having cooled to atmospheric temperature. If used at the temperature of compression, the loss may be 50 per cent, or require twice as many compression cylinders as motor cylinders. If used cold, three times as many will be required to keep up the air supply. The same relation of cylinders will be required at any pressure.

NEW BOOKS, ETC.

WIRE AND WIRELESS TELEGRAPHY. By Edwin B. Moore. Springfield, Vt.: Springfield Reporter Publishing Company, 1904. 12mo.; pp. 38. Price, 50 cents.

This little pamphlet was written by a boy of sixteen years of age. In it he endeavors to give a brief but intelligible description of the science and mystery of the electrical telegraph, its practical applications and developments. The book is illustrated with a number of cuts, and is an interesting résumé of the subject.

FORGE PRACTICE. By John Lord Bacon. New York: John Wiley & Sons, 1904. London: Chapman & Hall, Ltd. 12mo.; pp. 257; 272 figures. Price, \$1.50.

This book is intended for the aid of students in shop work. It contains many practical illustrations of methods employed in all kinds of forging, welding, tempering, etc., as well as an interesting chapter on the metallurgy of iron and steel, which is illustrated with cuts from the SCIENTIFIC AMERICAN. The book will be found a practical aid to beginners in the working of iron.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending December 13, 1904

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 Acid manufacturing, Advertising device, Alarm device, Amalgamator, Ammunition wagon, Animal trap, Article carrier, Assay button dropper, Augur twisting machine, Automatic lubricator, Automobile safety switch, Automobile stepper attachment, Axle, Bag closure, Bag fastener, Bag turning machine, Bait, Bait holder, Baling press, Barrel holder, Basins, Battery case, Bearing, Bearing roller, Bed, Bed attachment, Beer cooler, Beet tapping machine, Bird trap, Blank feeding mechanism, Blanket or strap fastener, Blast furnace, Blind fastener, Block signal system, Boiler furnace, Bolt anchor, Book, Boot, anticaking, Bottle, Bottle, non-refillable, Bottle, non-refillable, Bracelet or belt, Brake beam, Brazing, Brazing compound, Brewing, Brick mold washing machine, Brick molding machine, Bucket, Buckle, Building block, Bung holes, Burglar alarm, Button, Cabinet, kitchen, Calipers and dividers, Callipers, Callipers, taper, Creamer, Call box, Canceling stamps, Caney pulling machine, Cans, tongueless tearing strip, Car coupling, Car diaphragm, Car door fastener, Car, dumping coke, Car fender, Car, railway, Car sign, Car, stock, Car vestibule and step, Car vestibule diaphragm, Cars, magnet contact for propulsion of, Carbueter, Carbureter, explosive engine, Card or label holder, Carrier, Cartridge, Carving, imitation wood, Cash register, Casting apparatus, Casting, metal, Chair bottom weaving tool, Chalk holder, Chalk holder and sharpener, Charring wood refuse, Check, traveler's certified bank, Check row chain, Cheese cutter, Chuck for holding articles to be dressed, Chute, wagon bed discharging, Cigar lighter, Clay working machinery, Clothes rack, Coat pad, Cock, cylinder, Coin controlled apparatus, Coin holder or change maker.