

RECENTLY PATENTED INVENTIONS. Of General Interest.

ANIMAL-TRAP.—J. KERNS, West New York, N. J. In the present patent the object of the inventor is to provide a new and improved animal-trap, more especially designed for trapping alive fish, crabs, and other animals, the trap being simple, easily set, and quick in action.

PLUG.—E. M. HALL, Raymondville, N. Y. Mr. Hall's present invention is an improvement in plugs for use in rolls of paper, and has for its object the provision of a novel construction whereby to prevent the plug from slipping out of the roll during storage and shipment of such paper-rolls.

DUMB-WAITER SHAFT.—G. GERARDTS, New York, N. Y. In this patent the invention relates to masonry; and its object is to provide a new and improved dumb-waiter shaft or like structure formed mainly of building-blocks or tiles and arranged to insure the formation of light but exceedingly strong and durable walls.

CUFF-HOLDER.—A. P. GILLEN, Chicago, Ill. The invention relates more especially to that type of cuff-holders which are secured within the coat-sleeve and secure the cuff independently of the shirt-sleeve. The principal object is to provide a holder in which the cuff may be readily adjusted without changing the position of the holder within the sleeve. A further object is to provide a holder operated by pressure upon the outer surface of the sleeve and which is so constructed that it may be set and held in open position ready to receive the cuff, so it may be introduced and secured with great ease and rapidity.

DENTAL TOOL.—E. FORUIGNON, New York, N. Y. The inventor's object is the provision of a dental tool to be used for scaling off calcareous deposits from the teeth and also to enable the dentist to conveniently and quickly form and scrape a tooth-carrying rubber plate to accurately fit the same against the hard palate or roof of a person's mouth.

PAY-ROLL.—C. T. CHICHESTER, Placerville, Cal. The intention of the inventor is to provide a new and improved pay-roll for the use of merchants, contractors, lumbermen, or other employers of labor arranged to embrace a time-book, a ledger, and a receipt-book to show at a glance how an account between an employer and an employee stands at any time.

SINGLE-TRIGGER MECHANISM FOR DOUBLE-BARREL GUNS.—J. C. BROYLES, Birmingham, Ala. The invention relates to locks for double-barrel guns, and particularly to that class wherein a single trigger controls and operates both hammers. The trigger is so arranged that by sliding forward or back it is adapted to come in contact with the respective sears of the two hammers. Thus either barrel may be fired at will, according to the position in which the trigger is set, or the barrel may be fired successively without such shifting of the trigger.

PASTE FASTENING FOR RUGS OR CARPETS.—C. C. CONNER and T. GRIMLER, New York, N. Y. The invention of Messrs. Conner and Grimler relates to fastenings for rugs or carpets, their more particular object being to produce a fastening of suitable form to be held in place by paste and, if desired, to utilize a partial vacuum as an auxiliary means for securing the fastening in position.

SPRING-ROLLER.—W. A. HADEN, New York, N. Y. In this case the invention refers to improvements in spring-rollers particularly adapted for use with heavy shades, displaying fabrics, and the like. With a spring-roller as usually constructed it often happens that in rolling up, the end of the shade or other material will, through the spring force, pass over the roller several times, thus weakening the spring force and making it necessary to remove the roller to rewind the spring. The invention provides suitable means to obviate the above difficulties.

Hardware and Tools.

WRENCH.—H. PHELAN, Jimenez, Mexico. Mr. Phelan's invention relates to improvements in wrenches of the type having a fixed jaw and a sliding jaw, an object being to provide a wrench of this character that will be comparatively light yet strong and that may be quickly adjusted to a nut or pipe.

Prime Movers and Their Accessories.

EQUALIZING-GEAR FOR RECIPROCATING PRIME MOVERS.—M. NEUMAYER, New York, N. Y. The inventor's object is to provide a power-equalizing gear for prime movers having a pair of cylinders and pistons reciprocating therein, arranged to give the piston which has passed a central position a rapidly increasing mechanical assistance from the other piston to eliminate all danger of the prime mover stopping when a piston reaches the central critical position referred to.

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. 6404.—For manufacturers of the electric candy machine known as "Fairy Floss" or "Cotton Candy."

For logging engines. J. S. Mundy, Newark, N. J. Inquiry No. 6405.—For makers of decorative glass spangles or ornamental cut glass.

"C. S." Metal Polish. Indianapolis. Samples free. Inquiry No. 6406.—For manufacturers of copper plated sheet iron and steel.

Perforated Metals, Harrington & King Perforating Co., Chicago. Inquiry No. 6407.—For paper decorative panels for tapestry work, also for theatrical scenery from which to paint.

Handle & Spoke Mch. Ober Mfg. Co., 10 Bell St., Chagrin Falls, O. Inquiry No. 6408.—For makers of a pneumatic drag saw.

Adding, multiplying and dividing machine, all in one. Felt & Tarrant Mfg. Co., Chicago. Inquiry No. 6409.—For information concerning "Patrick Metal."

Sawmill machinery and outfits manufactured by the Lane Mfg. Co., Box 13, Montpelier, Vt. Inquiry No. 6410.—For disks of prepared paper for igniting wicks of pocket cigar lighters; the disks are about 1 inch in diameter, having on the face small patches of chemical substance.

Special Machinery to order, manufacturing, metal stampings, etc., Brickner Machine Co., Tiffin, Ohio. Inquiry No. 6411.—For makers of fancy paper shades for electric light globes.

Robert W. Hunt & Co. bureau of consultation, chemical and physical tests and inspection. The Rookery, Chicago. Inquiry No. 6412.—For makers of wooden blocks containing spirit plumb.

Patent for sale or on royalty.—Combination watch, fob chain, key and chatelein bag protector. D. Summa, 129 Thompson Street, New York City. Inquiry No. 6413.—For makers of wooden thumb screws.

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. 6414.—For dealers in patented novelties.

I have every facility for manufacturing and marketing hardware and housefurnishing specialties. Wm. McDonald, 190 Main St., East Rochester, N. Y. Inquiry No. 6415.—For makers of steam engines from 1/2 to 1 h. p.

THE SCIENTIFIC AMERICAN SUPPLEMENT is publishing a practical series of illustrated articles on experimental electro-chemistry by N. Monroe Hopkins. Inquiry No. 6416.—For machines for making briquettes from marsh mud, or who control the process.

WANTED.—Revolutionary Documents. Autograph Letters, Journals, Prints, Washington Portraits, Early American Illustrated Magazines, Early Patents signed by Presidents of the United States, Valentine's Manuals of the early 40's. Correspondence solicited. Address C. A. M., Box 773, New York. Inquiry No. 6417.—For machinery for cleaning clothing.

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. 6418.—For makers of ice machinery and outfit; also for makers of corrugated iron arches for building.

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. 6419.—For large quantities of draw knife with 6-inch blade.

Manufacturers of patent articles, dies, metal stamping, screw machine work, hardware specialties, machinery and tools. Quadriga Manufacturing Company, 10 South Canal Street, Chicago. Inquiry No. 6420.—For makers of bottles for soda water with Codd's ball stoppers.

WANTED.—Having a thoroughly organized agency force, we are desirous of securing Exclusive Pacific Coast Agency of Articles of Merit, where personal solicitation is required. Address Suite No. 2, 47 Geary Street, San Francisco, Cal. Inquiry No. 6421.—For makers of earthen baking utensils containing asbestos.

Calculating Machines.—Wanted, first-class firm willing to take up the agency and sale in the United States and Canada of a well-known calculating machine. Terms very favorable. Apply Grimme, Natalis & Co., Braunschweig, Germany. Inquiry No. 6422.—For makers of fiberloid.

Rowe's Automatic Carpenter's Hammer Device.—United States, Canada and Great Britain patents granted. Will sell same outright, consider royalty or correspond with some one with capital. Send for descriptive circular. Geo. H. Rowe, Patentee, Box 442, Ennis, Texas. Inquiry No. 6423.—For machinery for the desiccation of coconut.

Inquiry No. 6424.—For makers of call boxes similar to those employed by the Western Union Co. Inquiry No. 6425.—For makers of woven wire bed springs, also spiral springs.

Inquiry No. 6426.—For machinery for evaporating sweet corn for table use. Inquiry No. 6427.—For makers of art metal furniture.

Inquiry No. 6428.—For makers of electric storage batteries, such as are used for propelling automobiles and recharged by electricity. Inquiry No. 6429.—For parties to build 1,000 or more autos per year, complete, on contract, drawings and samples furnished.

Inquiry No. 6430.—For an estimate of cost of small plant of machinery for making tin boxes of all sizes. Inquiry No. 6431.—For makers of hollow wire, small pressure tank and gasoline lamps.

Inquiry No. 6432.—For machinery and appliances for oil refining. Inquiry No. 6433.—For makers of door openers and closers.

Inquiry No. 6434.—For machinery for crushing and grinding green foodstuffs, to prepare same for drying, also for machinery for such drying.



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.

(9520) W. A. T. asks: Would you kindly give me directions for a spark coil for 3-horse-power gasoline engine? Size of core, feet and number of wire for primary; also feet and number of wire for secondary. I have 550 feet of No. 18 cotton-covered wire that I would like to work into the coil. Want coil to give about 1/2-inch spark. A SUPPLEMENT No. 1281, which we have sent you upon your order, gives full information concerning a coil for gas engine ignition, if one has general knowledge of the work of construction. Lacking this, it would be best to get Norrie's "Induction Coils," price \$1, which gives detailed instruction in this work, together with tables of data for all the parts of coils of all sizes up to a 12-inch spark. Do not use so coarse a wire as No. 18 in a secondary coil, and use a coarser wire in the primary. Two layers of No. 14 will be right for primary, layer 6 inches long. Three-fourths pound of No. 36 silk-covered will be right for secondary to give a half-inch spark. Core should be 1/2 to 1 inch in diameter and 7 inches long. 2. If a person sparked his engine with a magneto, would he need a coil also? A magneto can be made which will render a coil unnecessary, but a battery and coil are necessary till the machine has speed enough to enable the magneto to generate.

(9521) C. S. J. asks: I wish to learn the cause of trichina in pork. A. The trichina spiralis is a worm, a parasite of the hog. It is often found in great numbers in the flesh of these animals, in the encysted condition but still alive. If such meat is eaten without cooking thoroughly, the parasite is taken into the body and is rapidly propagated. The worm came originally from the rat. As hogs eat rats, they pass into the hog and thence into man. The only preventive is thorough cooking. This kills the trichina. No rare or underdone pork should ever be eaten. The risk is too great. The cost of immunity is so little, that anyone may be safe. Cook all pork thoroughly. 2. The cause of ptomaine poisoning by eating pork. What causes the presence of the poison, how the poison can be prevented, and whether or not there is any way of detecting the presence of poison before using the meat? A. Ptomaines are formed by decomposition. If only fresh food is used, one will be safe from these poisons.

(9522) H. S. N. asks: I have been a reader of your paper for several years, and always enjoy reading it. I should like to submit a problem for solution. The problem is this: Several years ago I took a picture of a fast train while running, a Michigan Central flier, at a point about two miles east of Decatur. On development the plate showed a blur of 1-32 inch, i. e., the pilot did. I used a Vibe extra rapid plate; the focus of the lens was 6 inches; the distance of the engine, the pilot, from the camera, 50 feet; the length of exposure, 1-100 of one second; camera was placed at an angle of 15 deg. with the track. What was the speed of the train? The camera was a Vibe, 4 1/4 x 1 1/4, meniscus lens. A. The solution of your problem of the speed of the train is not difficult, at least so far as a sufficiently close approximation is concerned. Start with the fact that the image of the pilot moved 1-32 inch during exposure. Since the lens is 6-inch focus and the pilot is 50 feet away, the pilot moved across the line drawn through the center of the lens, 100 times 1-32 inch, or 3.125 inches, since 50 feet is 100 times 6 inches. And since the camera made an angle of 15 deg. with the track, we must divide the 3.125 inches by the sine of 15 deg. to find the distance the pilot moved during the exposure. This gives 12.07 inches as the distance the train moved in the time of exposure, or 1-100 second. In one second it moved 1,207 inches, or 100 feet 7 inches. This is a speed of somewhat over 71 miles per hour. As we said above, this is an approximate solution, but still not far from the result which an exact solution would give.

(9523) J. S. M. asks: Will you kindly answer in your column of Notes and Queries the inclosed questions relative to Roman computation? I suppose the matter is simple enough, but I have never come across any work explaining it, nor any person whom I have asked who could throw any light on the

subject. A. Very little is known concerning the method by which the Romans used their very inconvenient notation for performing the ordinary calculations. They are supposed to have used the abacus for all except the most simple problems. This instrument is in common use now by all Chinamen, and it is not difficult for any one to see it used wherever these men may be found. A description of the abacus may be had from any encyclopedia. There was a rod for each denomination of numbers to millions, seven rods each carrying five balls. Another set of short rods corresponded to these, and had one ball sliding on each. They could thus count by fives and carry by tens. Other rods supplied their need for calculating ounces. Further than this their business did not require them to go; they never needed to divide the distance of the sun by the velocity of light. They died in total darkness in regard to both of these data of the universe. As we said at the outset, we do not know the detail of the method by which the Romans made their calculations. Their mode of writing numbers was not like ours by placing like denominations in the same column, but each letter had its significance, and each number could be added by itself on the abacus, since each rod meant a denomination.

INDEX OF INVENTIONS

For which Letters Patent of the United States were Issued for the Week Ending January 10, 1905

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 Abrading machine, Acid making apparatus, Air cooling apparatus, Amalgamating apparatus, Animal dipping machine, Animals, freese, Anvil, Auger, Automobile, Bag, Barrel, Basket, Battery, Belt conveyor apparatus, Belt fastener, Belt guide, Bill block, Bin gate, Binder, Binder reel, Binder, temporary, Blank feeding apparatus, Blank holder, Blinds rising by the wind, Blotter, Boat, Bobbin, Boiler furnace, Bolt, Book, Book, credit coupon, Book stack, Books, Boring device, Boring machine, Bottle, antiseptic feeding, Bottle closures, machine for applying, Bottle nipple holder, Bottle, non-refillable, Bottle, non-refillable, H. P. Hall, Bottles, apparatus for simultaneously corking a number of, Bowls, Bowling alley, automatic, Box or receptacle, Brake hanger, Brake operating mechanism, Branding apparatus, electric, Brush holder, Bucket, clamp shackle, Buggy foot attachment, Buggy top support, Bundle carrier, Burglar alarm, Button attachment, Button fastener, Cable reel, Cake icing machine, Calculating machine driving mechanism, Camera drop-front, Camera, panoramic, Can-testing machine, Canning machine or apparatus, Candlestick, Case, A. Wagner, Car, P. P. Sturdevant, Car brake mechanism, railway, Car coupling, Car coupling, railway, Car door fastener, Car draft gear, Car life preserver, Car roof, Car spring, railway, Car ventilator, Cars, etc., bracket stop for street, Cars or other road vehicles, life guard for electric tram, Carbueter, Carpet sweeper, Carriage top box loop, Carrier. See Bundle carrier.