RECENTLY PATENTED INVENTIONS.

Railway Appliances.

CAR MOUNTING. — Horace Resley, Cumberland, Md. This invention provides for a thrust connection interposed between the side edges of the car and the sides of the truck whereby the motion which takes place between the two in rounding curves is made to adjust the trucks automatically to the curve, so that their axles shall be positively adjusted to a radial position instead of being allowed to adjust themselves.

RAILROAD GATE. — William Zeller, Moorhead, Minn. Lateral lugs, adapted to be depressed by a passing train, are pivoted to sections of the rails, with connections therefrom to a gate-operating mechanism, which is thus adapted to be automatically operated by passing trains so that the roadway will be open when no train is passing and closed by the gate as the train is passing.

CAR COUPLER TOOL.—Jasper B. Lewis, Alexander, N. Y. This is a coupling rod with forked end, the forks being turned at a right angle at the end, while at the other end is a spring hook by which to suspend the tool from the person, whereby the brakeman may stand at the side of the cars and conveniently operate the link and pin, the device being designed to prevent the maiming and loss of life which occurs to so large an extent from brakemen going between cars to couple them. The device has received the indorsement of the New York Board of Railway Commissioners.

TRACK WALKER'S TOOL. — Gabriel Rohrbach and James Shaughnessy, Del Rio, Texas. This is a combination sectional tool which may be conveniently carried, including a claw bar, a spiking maul, a gauge and a level, whereby a single track walker may work effectively alone in doing many things for which a section gang now has to be called.

Electrical.

AUTOMATIC SIGNAL.—Robert O. Owen, Lynchburg, Va. This is a telegraphic railway signal in which the passage of each train past each station or section of track will automatically send a signal to the train dispatcher's office recording the fact, the invention covering a novel construction and arrangement of circuits, contacts and signaling devices.

GALVANIC BATTERY.—Candido G. De Peralta, Havana, Cuba. Combined with zinc and carbon electrodes separated by blocks of insulating material and bound together is a metallic containing vessel, and a paste containing an active and a deliquescent material surrounding the electrodes, forming a compact paste battery of inexpensive material and convenient form, suitable for telephonic, telegraphic and other uses.

HIGH WATER ALARM. — Isaiah H. Simpson, Brunswick, Me. This device consists of a spring-supported bucket with apertured bottom and siphon, the downward movement of the bucket being arranged to operate an electric circuit closer, the alarm being designed especially for use with water towers and tanks in freezing weather, to give instant notice at the engine room in case of high water.

Agricultural.

HARROW AND CUTTER. — Thomas L. Flanagan, Vicksburg, Miss. This is a combination implement, capable also of use as a rake or cultivator, the main frame having an inner frame which can be raised and lowered, there being journaled in the latter frame shafts carrying sickle-like teeth with convexed and concaved edges, providing a durable machine which can be readily manipulated.

Miscellaneous.

CLOTHES LINE SUPPORT. — Henry Clayton, Hoboken, N. J., and Lewis Bried, Union Hill, N. J. This is a safety device consisting of a bracket plate adapted to be attached to a window jamb, with other novel features, for the support of the inner bight of an endless clothes line, whereby the placing of the washed goods on the line is made easy and safe, it being effected within the apartment through the window of which the line is extended.

CLOTHES DRIER. — William Holt, Milwaukee, Wis. This invention consists of a bracket on which is pivoted an adjustably held arm, while a cross bar supporting drying rods is fastened on the pivoted arm, forming a simple device which can be readily applied to a wall and conveniently folded up when not in use.

GAS STOVE BURNER — Warren L. Cort, Brooklyn, N. Y. This burner is formed of two plates screwed or bolted together, and having upwardly extending and inwardly inclined waved edges, whereby a large amount of flame area is obtained in a given circle, to secure a high heat and the most complete combustion, without clogging or smoking, the device being simple and inexpensive.

WASHING MACHINE. — David D. Weisell, Fort Wayne, Ind. This invention provides a machine in which a tub or other receptacle has a concaved false bottom, in which is revolved a self-adjusting conical rubber above the concave bottom, with gearing for operating the rubber, the machine performing all the operations of washing by hand, such as rubbing, pressing and rinsing.

SUSPENDERS.—Jacob Katzenburg, New York City. These suspenders have laterally curved shoulder straps each formed of a single piece, with back plates attached to the backs of the straps at their converging points, with cross lacings and covers, forming an inexpensive support for the trousers that will conform to the movements of the body of the wearer and fit easily.

VEHICLE WHEEL.—Henry Q. Maurino, Albuquerque, New Mexico. The hub of this wheel is mainly metallic, and the hub box is engaged by a concentric sleeve whereon two loose hub sections are mounted, a radially undulating endless band being located between the hub sections and supported on spaced radial saddle frames, whereby the spokes are securely retained in the hub and adapted to be radially projected to tighten the wheel rim in the tire.

SYSTEM OF ROAD DRAINAGE.—Alexander Mitchell, Waldrip, Texas. The drain is arranged longitudinally under the roadbed, with outlet pipes at suitable distances, each adapted to be closed at its outer end, while branch pipes extend from the drain adapted to be connected with an air pump for pumping the air out of the drain, in order to quickly dry the roadbed after a heavy rainfall.

PAPER HOLDER AND CUTTER. — George M. D. Manahan, New York City. This is a device mainly designed for holding and cutting heavy rolls of wrapping paper, received with a close wrapper around them, the roll being supported to turn around a vertical axis while an upright cutter is arranged to cut or tear off the paper in desired lengths as it is unreeled from the roll.

GLAZIER'S DIAMOND.—John E. Lloyd, Brooklyn, N. Y. This invention provides an attachment readily applied to the ordinary diamond, whereby it may be conveniently used by an inexperienced person, the handle and block of the tool automatically assuming the proper angle for successful work the moment the diamond is placed on the glass and pressure is exerted.

STOPPING SEAMS IN DRILL HOLES.—Matthias Garvey, Hammondville, N. Y. This invention covers a method of stopping veins leading to drill holes by depositing a cartridge of paraffine in the hole and then applying pressure to the top of the cartridge to compress it and force the paraffine into the vein, the cartridge being of such size as to extend above the vein.

AIR GUN. — Stephen D. Engle, Hazleton, Pa. This invention covers an improvement in air guns in which the air by which the projectile is expelled is compressed by a spring-actuated plunger, the invention embracing novel features of construction in a gun of few parts, not liable to get out of order, easily operated, and by which a missile is expelled at high speed and with great precision.

NOTE.—Copies of any of the above patents will be furnished by Munn & Co., for 25 cents each. Please send name of the patentee, title of invention, and date of this paper.

Business and Personal.

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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.

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.

(2655) E. P. H. asks (1) how to burnish photographs. A. Use a burnishing machine sold by dealers in photo. materials. 2. How hot do you heat the burnisher? A. Heat the iron until the finger previously dipped in water sizzles when in contact—about the same as flat irons are treated. 3. What is used for a lubricator? A. John R. Clemons, an authority, recommends in Wilson's *Photographics* the following lubricator:

A.

Paraffine..... 8 drs.
Benzine,.....10 oz.

B.

In a mortar grind
Gum ammonicum.....30 grs.

and add alcohol sufficient to keep the gum from sticking to the pestle. Add A and B together, shake well, and apply with a flannel rag or sponge. 4. Will you recommend some book (suitable for the amateur photographer) that is up to the very latest development of the art? A. The "Amateur Photographer," by Ellerslie Wallace.

(2656) J. M G. asks (1) how to mix one gallon of paint that will be fireproof. A. There is no fireproof paint. Probably as good an approach as any would be oxide of iron (metallic) paint. Some books give a whitewash under this title. 2. A receipt to stop hair from falling out of the head, in which there is no dandruff. A. See our SUPPLEMENT, Nos. 388 and 396. 3. How to cure chapped hands? A. Try camphor ice, rubbed on at night, with gloves worn over it. 4. How to kill fleas on a collie dog (long hair). A. Try Persian powder or buhach. 5. A good book on bookkeeping. A. We recommend Bryant & Stratton's "New Counting House Bookkeeping," price $2.50, which we can supply by mail.

(2657) J. F.—The metallic-looking spots on the samples of silver paper sent we think are due to an unfiltered bath, as there is a scum which settles thereon, no matter how long it may be sunned. Filter through cotton just before using, and sprinkle the floor before hanging up to dry. Sometimes particles of pyrogallol or iron dust in the air cause the spots.

(2658) B. S. H. asks: 1. Is there as much strength in a hollow cast iron column of any thickness of shell as there is in a solid one? A. There is greater strength in a hollow column of proper proportions than in a solid column of equal weight. 2. Is there as much strength in a pulley with straight arms as one with crooked? A. The straight-armed pulley of the same weight is stronger than with curved arms. The curve is put in pulley arms to prevent shrinkage cracking.

(2659) W. H. H. says: I have been told that oak fence posts should be cut during the summer or while the sap is up to insure their lasting. Are there any reliable data on the subject? A. Trees of any kind should be cut in the fall or winter in middle and northern latitudes, or at the fall of the leaf, for natural preservation.

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