

RECENTLY PATENTED INVENTIONS.

Railway Appliances.

CAR COUPLING.—Nicholas J. Hopkins, Owen Sound, Canada. The coupling link of this device is flat, and has on each end a latch notch, adapted to be engaged by a spring-pressed vertical pin, the pin pressing against the side of the link to hold it in position to enter an approaching drawhead. A yoke engaging the ends of the pin is connected with a lever at the side and a hand wheel at the top of the car, whereby the pin may be drawn out of the path of the latch hook to uncouple the car. The device is quite simple and inexpensive, the coupling being automatic and the uncoupling being effected from either the top or the side of the car.

RAIL SUPPORT.—William N. Morrison and Thomas P. Swin, Brooklyn, N. Y. Two patents have been issued to these inventors for rail-supporting devices, one of the patents providing for a series of base plates or chairs to be secured on the ties to support the stringer, over which are fitted casings, one for each chair, the ends of the casings having flanges to engage recesses in the sides of the chairs, while the tops of the casings form shoes or rests for the rail, the sides of the casings extending upward to prevent lateral displacement of the rail. The spikes which secure the rail to the casing fasten the latter to the stringer. The other patent provides a support to securely hold the rail in place without spikes or bolts. The support is provided with a cap of approximately inverted U shape, its top portion having a rail seat formed by longitudinally extending integral flanges, while the rail web has longitudinal interlocking flanges adapted to engage the flanges of the cap.

Agricultural.

PLOW.—William B. Wherry, Overton, Texas. An improvement in land sides for plows has been perfected by this inventor, the land side being adapted to be quickly and conveniently removed from the shank plate, while the latter is so made that the share when placed on it will be firmly held in position and prevented from slipping vertically. There is an interlocking connection between the land side of the shank plate and the land side proper, bolts firmly uniting one part with the other, and yet admitting of the ready removal of the land side.

STUMP PULLER.—Thomas A. Terrell, New Whatcom, Washington. This is a machine of but few parts, very durable, which can be readily moved from place to place, and which can be quickly and conveniently operated. A drum mounted on a frame has ratchetwheels on the ends of the drum shaft, segmental frames extending over the ratchet wheels, while levers pivoted on the frames have a virtually hinged connection with dogs engaging the ratchet wheels, the latter being also engaged by pawls pivoted on the frames. The levers are worked up and down to draw upon the drum the rope or chain attached to the stump to be pulled.

THRASHING MACHINE ATTACHMENT.—Richard Keeling, Waltham, North Dakota. This is a separator device to receive the straw from the thrashing cylinder of the machine, thin out and loosen it, and fan it in such manner that the chaff will be separated from the straw, permitting the grain to more readily fall down through the straw and rattle rake of the machine. The invention is very simple, and capable of application to any form of thrashing machine, providing for a quick and ample separation of the grain from the straw without in any way injuring the latter.

Miscellaneous.

TYPE WRITING MACHINE.—Edgar H. Berry, New York City. This invention consists principally of a single key lever connected with two type bars and having a changeable fulcrum. Two oppositely pivoted type bars are adapted to act on the same impression cylinder or surface, in combination with a single key lever and two rods connected with it on opposite sides of its fulcrum, and pivoted at their upper ends to the type bars on opposite sides of the fulcrum of the latter. The machine is designed to be of simple and durable construction, not liable to get out of order, and is arranged to print two different type characters by the use of the same key.

PLUMB LEVEL.—Lee J. Rogers, Pomona, Cal. This is a combined plumb and level in which the stock casing has a central socket in which is fitted a metal casing open at its top and bottom, a weighted pendulum carrying an upwardly extending pointer being pivoted on a ball longitudinally adjustable in the lower part of the casing. By this means the bearing of the pendulum can be quickly adjusted so that the index point will register true with the gauge line on the upper plate.

PUMP GEARING.—Stanley L. Fulford, Los Angeles, Cal. This gearing is designed to successively and rapidly actuate a number of pumps with the full power of the motor, the invention consisting of a series of cross heads mounted to slide in stationary bearings and connected with the pump plungers to successively reciprocate them. Any desired number of pumps may be actuated in this manner, the several plungers being successively moved by the full power of the motor.

OIL WELL AGITATOR.—Thomas H. Gallagher, Olean, N. Y. This invention affords means for agitating the large cavity often formed by blasting in drilling a well, thus facilitating the cleaning out of all the sand at once. The working sections of the improvement correspond somewhat to an ordinary drill jar, but there are hung in these sections radially swinging arms which normally lie vertically, these arms being thrown violently out in a radial swing as the working section is churned up and down by the working of its connections from the top of the well.

MACHINE FOR COLORING SKINS.—Albert F. Jones, Salem, Mass. Revolving coloring brushes are, by this invention, arranged in pairs, in combination with tanks and attached perforated sprinkling pipes discharging coloring fluids upon the brushes, while an endless skin carrier has cross rods or wires over

which the skins may be folded, the carrier passing between the brushes of each pair. The machine is more especially designed to operate on sheep and goat skins, the brushes rubbing the coloring liquid on and into the skins most effectively, and none of the coloring material being wasted.

VEHICLE RUNNING GEAR.—John Q. A. Haney, Buckhannon, West Va. In the construction designed by this inventor, half axles are used, there being a single independent axle for each wheel, each axle being fixed to the wheel at its outer end, and the bearing box supporting the outer end of the axle is pivotally connected with a bed or bolster, so that the wheel may turn laterally. The invention also covers other improvements, the gear being especially adapted for rough and uneven roads, and means being provided for automatically turning the rear wheels when the forward wheels are turned.

REIN HOLDER.—Homer C. Davis, Normalville, Pa. This is a device to be attached to the dashboard of a vehicle, and consists of an upper presser bar operated on by a spring to hold the reins between it and a lower bar or frame. The right and left hand reins are laterally introduced between the clamping devices from opposite ends.

WINDOW.—Everett C. Horton, Jersey City, N. J. This invention provides hinged and laterally spring-pressed closing strips to be held on the side bars of the sash in a window casement, thus automatically closing the crevices at the sides of the sashes, and also affording means for the support of the sash at any desired point of adjustment. The improvement facilitates the easy movement of the sashes, while insuring tight joints and compensating for changes in thickness of the sashes due to expansion or shrinkage.

ROOFING AND SIDING STRIP.—James W. Hammett, Eureka, West Va. These strips are formed of inner and outer sections pressed at their adjacent faces against sheets of tin or other material, the adjacent faces having corrugations, the ridges of which come opposite each other, forming hollows or dead air spaces, which prevent the wind from carrying rain, snow or cold air through the roof or siding. The sections are drawn together upon the roofing or siding material by clamps or screws.

GUITAR.—Christian F. Hartmann, Bethlehem, Pa. The neck of the guitar, according to the improvement provided by this invention, may be quickly and conveniently removed from connection with the body, thus facilitating the storage or carrying of the instrument. Means are also provided whereby the neck of the guitar may be adjusted to cause the strings to approach as close to the frets as may be desired.

ORGAN ACTION.—William Schwarze, Brooklyn, N. Y. An action mechanism designed to give a quick response from the pipes or reeds of an organ when the keys are touched is provided by this invention. In the pressure box is located a valved bellows, and a trip mechanism opens the valve when the bellows is compressed, so that the bellows will be inflated by the air in the pressure box, so that upon the slightest pressing of a key the proper tone of that key will be immediately sounded. This action may be conveniently applied to an organ of any description. A further patent, embracing especially means for operating pressure box bellows or organs, was granted this inventor, providing means for obtaining a quick response between the keys of organs and their pipes, and enabling organ keys to be manipulated with the same facility as piano keys.

COFFEE MAKING POT.—Cordula Ackerman, Pekin, Ill. This pot has a lower hot water and steam reservoir, and an upper compartment for the coffee, the latter compartment having in its top a perforated metal sieve-like receptacle in which the ground coffee is placed to be infused. Fitted loosely in the bottom of the hot water compartment is a close metal hot water retainer, a tube from which passes upward through a sleeve and has on its top a bent spout that passes steam and water on the coffee to infuse it. The apparatus is continuous and self-feeding, and the coffee can be kept hot without cooking it over again, thus especially recommending the improvement for use in hotels, restaurants, etc.

STOOL AND FOOT REST.—John K. Phillips, South Orange, N. J. This is an article of furniture of neat appearance, especially designed for use in shoe stores. The foot rest is so arranged that when not in use it may be readily swung under the stool, out of the way. A front panel is also provided in the stool, to receive an advertisement, the panel in a measure concealing the foot rest when the latter is not in use.

CLOTHES DRIER.—Elihu H. Thomas, Brattleboro, Vt. This is a device for attachment to the outside of a window, and consists of a frame carrying parallel guide rods and a rack, together with a series of clothes-receiving rods having each an independent sliding connection with the guide rods, and also adapted for engaging the rack. The lines or rods upon which the clothes are to be placed may be drawn into the room and supported while the clothes are being hung in position, the rod with its clothes being then carried outside and locked in place with the clothes suspended.

FISH HOOK DISGORGER.—Frank T. Verharen, Spencer, Iowa. This device has a shank by which it may be conveniently held in the hand, and at its outer end is a hook adapted to fit closely upon the fish hook, there being on the shank, opposite the hook, a guard or shield, preventing the hook of the disgorging from being caught in the membranes of the fish's mouth while the fish hook is being dislodged.

Designs.

SPOON.—Austin F. Jackson, Taunton, Mass. The leading feature of this design consists in the ornamentation surrounding the edge of the head portion of the handle, there being continuous head and side scrolls and bead-like representations.

NAPKIN HOLDER.—Joseph Walter, New York City. This design is of a holder provided with a base having four ornamented legs, the curved

band extending upward from a perforated flat bottom portion being also highly ornamented.

WAGON HUB BAND.—Charles C. Field, New York City. This design provides an annular internal bead or flange on the inside of the hub band at its front edge, the bead or flange being approximately half round in cross section.

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.

NEW BOOKS AND PUBLICATIONS.

SUBURBAN AND COUNTRY HOMES. Contain ing designs for houses of moderate cost contributed by various architects, together with "Suggestions on House Building." By A. W. Cobb, Architect, and "How to Plumb a Suburban House." By Leonard D. Hosford. New York: William T. Comstock, 23 Warren Street. 1893. Price \$3.

This very handsome work is a collection of plates, with brief descriptions giving a great variety of country houses from the plans of different architects, whose names are stated in each case. The price is also given in many instances, so that the prospective builder of a home has a good chance of knowing in advance just how far he is going if he follows the plans. In some cases, of course, it is given only approximately, and in other cases it is undoubtedly very close to the truth—for all the prices are not given. Where stated costs generally range from \$4,000 to \$6,000, and exceedingly good results seem to be reached thereby. Yet one very pretty cottage with six rooms only costs \$1,500.

MUNICIPAL IMPROVEMENTS. A manual of the methods, utility, and cost of public improvements, for the municipal officer. By W. F. Goodhue. New York: John Wiley & Sons. 1893. Pp. viii, 129. Price \$1.50.

The subject of municipal improvements is one which is every day acquiring importance in this country. The subject seems to be excellently treated by Mr. Goodhue, under different headings, sewerage, street sprinkling, water works, municipal franchises, paving, bridges, assessments, and city finances, as well as the board of health work all being included in it. Lack of an index mars the work, although its place is taken to a certain extent by an alphabetically arranged contents.

THE MEASUREMENT OF ELECTRIC CURRENTS. Electrical measuring instruments. By James Swinburne. Meters for electrical energy. By C. H. Wordingham. Edited by T. Commerford Martin. Illustrated. New York: D. Van Nostrand Company. 1893. Pp. ii, 237, iv. Price 50 cents.

This volume includes two papers presented before the Institution of Civil Engineers, and they embody an excellent and practical treatment of the titular subject. The book forms an excellent addition to the well known Van Nostrand Science Series.

ABROAD AND AT HOME. Practical hints for tourists. By Morris Phillips. New York: Brentano's. Pp. 365. Price \$1.

This discursive work is really best described by its title. In it some general points about a number of popular points of travel and resort are given with adequate illustrations. A summer resort guide with hotel rates and other information of that character fill the last of the 365 pages of the book. The preface is by A. Oakley Hall, appropriately dated from the Lotos Club. London, Paris and the United States are the principal subjects treated. The book, from its sketchy and graphic character, is excellent reading. In addition to the illustrations in the text, it contains a portrait of the editor.

ELECTRICAL TABLES AND MEMORANDA. By Silvanus P. Thompson and Eustace Thomas. London: E. & F. N. Spon. New York: Spon & Chamberlain. 1893. Pp. v, 128. Price 50 cents.

This tiny work, of vest pocket size, will be found acceptable by the engineering profession. It naturally is written from the English standpoint, and is adapted largely to English practice.

OUTLINES OF FORESTRY; OR, THE ELEMENTARY PRINCIPLES UNDERLYING THE SCIENCE OF FORESTRY. By Edwin J. Houston. Philadelphia: J. B. Lippincott Company. 1893. Pp. 254. Price \$1.

Professor Houston in this book has departed from the realms of physics and electricity and given us what he terms a series of primers, 18 in number, upon the forest. The subject seems to be excellently classified, very practical, is illustrated by numerous quotations, and will be found, with its appendix and very full index, an excellent contribution to a very important subject.

ELECTRICAL MEASUREMENTS AND OTHER ADVANCED PRIMERS OF ELECTRICITY. By Edwin J. Houston. New York: The W. J. Johnston Company, Limited. London: Whittaker & Co. 1893. Pp. 429. Price \$1.

Professor Houston here gives us 18 primers on his titular subject. As in the book just reviewed, the last section is termed the primer of primers, a sort of summarization or collection of points which did not fall within the preceding chapters. The work will be found a creditably written one and a very acceptable addition to the literature of electricity.

CATALOGUE OF SWEDISH EXPORTS. Edited by Wilhelm Tesch. Stockholm: Royal Printing Office. P. A. Norstedt & Soner. 1892. Pp. 219.

STANDARD TABLES FOR ELECTRIC WIREMEN. By Charles M. Davis. New York: The W. J. Johnston Company, Limited. 1892. Pp. 100. Price \$1.

This work, with its simple, clear illustrations and concise directions, will be found an excellent addition to the working equipment of the practical electrician. It is written entirely from an American standpoint. In the advertising department, an alphabetical list of works on electricity is not the least valuable part of it. Among the books cited certain are marked with an asterisk "as most likely to furnish reliable information on the subjects of which they treat." We strongly suspect that a different distribution of the asterisk might have been made without doing the system any injustice.

ALTERNATING CURRENTS OF ELECTRICITY: THEIR GENERATION, MEASUREMENT, DISTRIBUTION AND APPLICATION. Authorized American edition by Gisbert Kapp. With an introduction by William Stanley, Jr. New York: The W. J. Johnston Company, Limited. 1893. Pp. 166. Price \$1.

Gisbert Kapp, whose efforts have so often taken the form of reducing electrical mathematics to a practical shape, in this work attacks the subject of alternating currents. From its brevity and practical treatment the work will be a favorite one with the working engineer. The alternating current system is of growing importance and much remains to be done before it will be on the same footing, as regards formulation, with the constant direction current.

The Moslem World is the title of a singular description of paper to be printed in the English language, which has just been started in New York City by Mohammed Alexander Russell Webb, an American who has lived several years in Mohammedan countries. It is the purpose of the paper to diffuse a knowledge of Mohammedanism, as it is known to its editor, and to urge the establishment of missions throughout the country for the conversion of people to the doctrines of Islam. Whatever may be the success of such a project, Mr. Webb has at least succeeded in getting himself widely talked about by his efforts, and the first number of his paper is very creditable to its publisher.

Any of the above books may be purchased through this office. Send for new book catalogue just published. MUNN & CO., 361 Broadway, New York.

SCIENTIFIC AMERICAN BUILDING EDITION.

MAY, 1893.—(No. 91.)

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2. Plate in colors showing a handsome residence at Rutherford, N. J. Two perspective views and floor plans. Mr. F. W. Beal, architect, New York. An attractive design.
3. A handsome dwelling at Plainfield, N. J. Perspective views and floor plans. A model design. Messrs. Hartwell & Richardson, architects, Boston, Mass.
4. A dwelling at Utica, N. Y., erected at a cost of \$4,700 complete. Floor plans, perspective view, etc. Mr. W. H. Symonds, architect, New York. An Old Colonial style of architecture.
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11. Miscellaneous contents: A Pacific coast bathing establishment.—An improved spring hinge, illustrated.—The Lewis open fire base burner, illustrated.—The J. A. Fay and Egan Co.—The H. W. Johns paints, etc.—An adjustable sash holder, illustrated.—A labor saving screw driver, illustrated.—A self-feed rip saw, illustrated.—Shipping a factory across the Atlantic.—Architectural wood turning.—Tunneling the Simplon.—New resawing band saw machine, illustrated.—The Wheeler wood filler.—An improved hip shingle, illustrated.

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