

ENGINEERING INVENTIONS.

A car coupling has been patented by Mr. Chancey C. Haskin, of Waltham, Iowa. The invention relates to a former patented invention of the same inventor, for which it provides an improved form of drawbar and coupling hook, whereby cars of different elevations may be coupled together, and when so coupled will be free to turn the sharpest curves.

A railroad cross tie has been patented by Mr. Henry Clay Draper, of Oswego, Kansas. It is a composite tie, made partly of wood and partly of iron, in combination with a track bolt of peculiar form, for fastening the rail thereto, having a solid wooden middle portion, whereby less metal will be used than with an all iron tie.

The construction of ships forms the subject of a patent issued to Mr. Thomas J. Hanlen, of Macon, Ga. The invention covers a vessel whose hull has two keels, joined by arched plates, forming a channel which extends longitudinally throughout the entire length of the vessel, the water surrounding the screws being confined to the channel, in which smaller screws than ordinarily employed may be used.

A method of and apparatus for ventilating railway cars has been patented by Mr. Hiram R. Adams, of Boston, Mass. Combined with a frame having a telescopic screen, the inner section of which is connected thereto, is a doubly swinging sash, to one end of which the outer section of the screen is secured, with various novel features of construction and arrangement of parts.

A valve gear has been patented by Mr. Nicholas R. Brady, of New York City. The main object of the invention is to so place and arrange the valves that they may be adjusted while the engine is in motion or without moving the crank shaft when the engine is at rest, the working parts being in full sight, so that every movement of each valve may be followed by the engineer, and the governor and valve operating mechanism being so connected that the throw of the valves will be automatically regulated.

AGRICULTURAL INVENTIONS.

A combined cotton gin, scale, and press has been patented by Mr. Pitt Edward Williamson, of Washington, Ga. This invention covers a novel construction of portable machine, which may be conveyed to any part of the field, where the cotton can be taken in its natural state at one end of the machine, and ginned, compressed, and delivered as a tied bale ready for shipment from the other end.

A cultivator shield has been patented by Mr. William M. McGaugh, of Converse, Mo. It is designed for use of cultivators of ordinary construction, to prevent the covering of young plants, while permitting some fine earth to fall over them, and consists essentially of a main supporting frame and a series of longitudinal strips carried thereby, having outwardly bent rear ends, with other novel features.

A corn harvester has been patented by Mr. John R. Wilson, of Farmersville, Ohio. It is designed to cut the corn stalks, carry them back in a vertical position, collect them into a shock, and deposit the shock upon the ground, there being a rhomboidal frame connected with the platform and cutting mechanism, with carriers and adjacent shock former, and a pushing mechanism at the open end of the shock former.

A narrow cultivator for listed corn has been patented by Mr. Rollin Woods, of Mankato, Kansas. It is made in three sections and designed to harrow three rows of corn at a time, each section having two beams, the forward ends of which are placed at such a distance apart as to pass along the opposite sides of a row of plants, it being designed to use when the corn is small, and readily be adjusted to cut down more of the ridges as the corn increases in height.

MISCELLANEOUS INVENTIONS.

An obstetrical supporter has been patented by Mr. Joseph J. Stephens, of Coalesburg, Mo. The invention provides a combination of straps, stirrups, and hand pieces designed to ease the labor and materially shorten the time of suffering of the patient.

A thill coupling has been patented by Mr. Theodore Hunger, of Brooklyn, N. Y. The construction is such that the coupling locks automatically through an attached spring, and a set screw may be dispensed with, and the thills removed at pleasure without touching the wheel or using a wrench.

A barrel carrier has been patented by Mr. John W. Shewmaker, of Terre Haute, Ind. It consists of a pair of longitudinal bars hinged to a pair of cross bars, the longitudinal bars being concaved at their centers and having spurs projecting from their inner faces for engaging the sides of barrels, boxes, etc.

A folding bed has been patented by Mr. Karmell Brooks, of New York City. The construction is such that when the bed is to be opened a movable part is swung down into a horizontal position, a foot section is extended, which causes legs to swing downward to support the movable part, when the bed bottom frame is unfolded, and the bed is ready for use.

A plaiting machine has been patented by Mr. George C. Parker, of Buchanan, Tenn. The construction is such that with this plaiter plait may be laid upon material already made up into garments, and plait can be renewed or replaited without removing from the garment, and in cotton as well as woolen goods.

A folding music stand and rack has been patented by Mr. Clarence L. Peak, of Binghamton, N. Y. This invention covers a novel construction and combination of parts, whereby both the stand and rack may be compactly folded for transportation, and in which the rack may be used independently of the stand.

A flexible wire gate has been patented by Mr. Theodor Raediger, of Chaska, Minn. It is

designed to have its front or movable bar connected by a diagonal strut brace in such manner as to strengthen the gate, brace the wire strands, and at the same time permit the free movement of the gate and prevent any entanglement of the wire strands.

A shutter for photographic cameras has been patented by Mr. William H. Lewis, of Brooklyn, N. Y. It is adapted for both instantaneous and time work, and with fixed or adjustable lens tubes, the invention covering certain novel constructions and combinations of parts and mechanism for controlling the shutter.

A fence post has been patented by Mr. David Bowen, of Topeka, Kansas (Mary Bowen administratrix of said Bowen, deceased). It is formed in two parts, a foot piece to be driven into the ground, and of such shape as to give the fence a substantial support against strains, and a top or body portion to be held to the foot piece, and adapted to hold fence wires or rails.

A wheel and axle improvement has been patented by Mr. John Pettinger, of Carpinteria, Cal. The invention consists in a wheel and axle made with the hub cast solid, with a hollow spindle and an annular flange and a cup flange, the spindle carrying a hollow axle, while with the hub and its solid flange is connected by bolts an annular plate for clamping the spokes in place.

A carburetor has been patented by Mr. Ferdinand Weil, of New York City. It has a carbureting chamber so made that it cannot be flooded by the accidental escape of oil from the reservoir, with other novel features of construction and arrangement, for commingling the rich vapors of liquid hydrocarbons with ordinary illuminating gas, to increase its illuminating power.

A stethoscope has been patented by Mr. Frank M. Blodgett, of New York City. This invention consists of the application to the interior walls of a stethoscope, and parallel therewith, of a sound-amplifying diaphragm, intended to give a sounding-board effect, thereby augmenting the sound and improving the efficiency of the instrument in detecting sounds within the human body.

A garment supporter has been patented by Catherine Sisson, of Garnett, Kansas. It is designed for ladies' wear, as a support for skirts and hose, the parts being so arranged that the skirt support and the hose support are each adjustable, shoulder strips having hose-supporting clips, and shorter shoulder strips, moving upon the longer strips, having devices for engaging the waistband of a garment.

A combined door plate, knocker, and letter receiver has been patented by Mr. William A. Moore, of Washington, D. C. This invention covers a peculiar combination of parts, in which the name plate is especially adapted for use as a knocker, and all the parts are secured from the inner side of the door, so that the main plate and name plate cannot be removed except by releasing bolts from the inner side.

A wagon tire coupling has been patented by Mr. James J. Pinkham, of Stillwater, Montana Territory. The tire has lugs projecting beyond its ends, with a tongue and groove connection on their adjacent vertical inner sides, and longitudinally apertured ears on their lower faces, with a screw engaging the apertures for adjusting the lugs, whereby the tires may be set or readjusted without heating.

A lock for pocket books, satchels, etc., has been patented by Mr. Louis B. Prahar, of Brooklyn, N. Y. The invention consists in a bent lip and slotted construction of the bottom and flange plates of the lock, in combination with the stud of the lock, riveted to assist in uniting the plates, so the plates may be simply slipped into engaging position and secured by the riveting of the stud of the lock at a single operation.

A feed mechanism for saw mill carriages has been patented by Mr. Newton Hoffman, of Elizabeth, West Va. It consists of a pair of friction cone pulleys arranged in peripheral contact and placed between the source of power and the carriage pinion, one of the pulleys being mounted in adjustable boxes, whereby different portions can be so brought in contact as to produce faster or slower motions.

A wooden basket has been patented by Mr. Thomas L. Lee, of Memphis, Tenn. Combined with vertical staves are an inner and an outer hoop arranged at the bottom and nailed together through the staves, the inner hoop having an inner peripheral groove containing the bottom, thus making a light and strong receptacle to be used as a cotton basket, or for fruit, waste paper, etc.

A can labeling machine has been patented by Mr. Andrew J. Lockhart, of Marshfield, Oregon. It has an inclined chute, about a third of the way down from the upper end of which is a paste tank, across which are mounted rollers, in connection with which is a belt mounted in adjustable boxes, with other novel features, whereby cans may be labeled rapidly and automatically.

A double seaming machine has been patented by Mr. Frank J. Farner, of Armourdale, Kansas. This invention relates to the process of fastening tin bottoms on the cylindrical part of tin buckets, such as commonly used for packing lard, and is designed to do the work in a thorough and speedy manner, and in the same operation to swage or bead the cylindrical part of the bucket.

A musical chart has been patented by Mr. Isaac G. Withers, of New York City. It consists of a revolving tablet, with combinations of the usual musical symbols printed thereon, in connection with figures correspondingly arranged and printed upon a fixed card beneath, to be read through openings in the revolving tablet, to assist in teaching pupils the theory employed in producing harmony in music.

A buckle has been patented by Mr. William Seabrook, of Edisto Island, S. C. It is a buckle in which the tongue and frame are disconnected, and one or the other attached to a separate strip of leather or other material, or to different strips, so that

the buckle will be flexible to pass around wheels or pulleys of machinery, in coupling flat belts, or be useful on harness.

An ambulance spring has been patented by Messrs. John A. Hauser, Jr., and Joseph A. Ritzler, of Dayton, Ohio. Brackets support standards from which springs are suspended, hooks supported by the springs having projections which extend through slots formed in the standards, the projections carrying anti-friction rolls, and the invention covering other novel features, to make a spring which will not give undue shock or jar.

A combination tool for squaring, leveling, etc., has been patented by Mr. David W. Warnock, of Lexington, Ky. The body of the tool has a longitudinal groove in one edge, in which is secured a square blade, cut away on its inner edge at an angle of forty-five degrees, and there are various other novel features, making a tool which can be used for squaring, leveling, plumbing, centering cylinders, laying off angles, and other purposes.

A fire arm has been patented by Mr. Athanase Chuchur, of Bahia, Brazil. It is an improved breech loader designed to afford quick, simple, and convenient means for loading, firing, and extracting the cartridge shell, and is also so made that the operative parts, which are few, are contained in the breech block, which may be quickly and readily removed, for cleaning and other purposes, from all connection with the arm.

A method of making dress armpit shields has been patented by Messrs. Moses Stonehill and Moses Kilsheimer, of New York City. It consists in securing two pieces of stockinet or knitted fabric together at one edge by loop stitches, to form an elastic joint or seam, then placing two such united pieces face to face with an interposed layer of waterproof cement, folding the united pieces along the seam, and shaping and finishing.

SCIENTIFIC AMERICAN
BUILDING EDITION.

APRIL NUMBER.

TABLE OF CONTENTS.

1. Elegant Colored Plate of a Country House, costing \$1,800, designed for future enlargement, with two floor plans in colors, a large sheet of details of same, with 15 diagrams showing elevations and details of construction, with full specification of same, bills of estimate, etc.
2. Elegant Colored Plate of a Dwelling at Orange, N. J., costing \$5,000; with plans of floors in colors, sheet of details, elevations, etc., 12 figures, specification, etc.
3. The American School of Classical Studies at Athens. Half page engraving.
4. Page Drawing of a Country Dwelling in brick, costing \$5,000, with floor plans.
5. Perspective Drawing of St. Andrew's Church, Phenix, R. I., of moderate cost, with specification and floor plan.
6. Drawing of an Ornamental Business Front and City Residence.
7. Elevations and floor plans of a Cottage costing \$1,000.
8. An Ornamental Entrance Porch. Half page engraving.
9. Illustrations of the Mode of Filling Floors, Roofs, Side Walls, and Partitions.—Tests of Plumbing illustrated.—Hot Water Plumbing.—Illustrations of Fireplaces.
10. Perspective and floor plans for a Summer Hotel, two pages.
11. Two pages showing Stark's Design in perspective of proposed Monument to General Grant, New York, with plans.
12. Page drawing of the Great Nave, Cathedral of Mexico.
13. Drawing of the Pulpit, Church of the Holy Cross.
14. Design for an Ornamental Gate.
15. Two pages of Designs and Working Drawings of Ornamental Plaster Work, with directions for execution of same.
16. Perspective drawing of an English Country House.
17. Miscellaneous Contents: Floors and Ceilings, Ancient and Modern. By E. Powell Carr, Consulting Architect, New York; a valuable paper.—Useful Hints on House Building.—Shingles in Modern Architecture.—Diamond Point Nail Set.—Adjustable Wood Measuring Rack.—Redwood Logging.—Grano-Metallic Stone.—Black Birch.—Maple Flooring.—Water Tight Roofs.—Slate Roofs.—A Small Ice House, illustrated.—Mineral Wool as a filling for floors and walls, illustrated.—The use of mortar during frost.—Practical remarks on House Painting, exterior and interior.—Together with a variety of other interesting articles and illustrations, too numerous to mention; and a Compendium of Manufacturers' Announcements, illustrated by upward of one hundred engravings.

The Scientific American Architects and Builders Edition is issued monthly. \$2.50 a year Single copies, 25 cents. Forty large quarto pages, equal to about two hundred ordinary book pages; forming, practically, a large and splendid MAGAZINE OF ARCHITECTURE, richly adorned with elegant plates in colors and with fine engravings, illustrating the most interesting examples of Modern Architectural Construction and allied subjects. The Fullness, Richness, Cheapness, and Convenience of this work have won for it the LARGEST CIRCULATION of any Architectural publication in the world. Sold by all newsdealers.

MUNN & CO., PUBLISHERS,
361 Broadway, New York.

NEW BOOKS AND PUBLICATIONS.

REPORT OF THE COMMISSIONER OF FISH AND FISHERIES FOR 1884. Washington: Government Printing Office. Pp. lxxi. and 1204. Illustrated.

It is evident from the size of this work that a satisfactory review within our limits would be impossible. The report of the commissioner, [paged in Roman numerals, introduces the] reader to forty-two special reports on subjects connected with fishes. They include reports of steamers and stations on the fisheries, on fish culture, on scientific investigation, etc. The setting of gill nets for cod fishing, with illustrations, is elaborately described; the apparatus of Swedish fisheries, the Jutland system of cleaning and drying fish, and pond culture, are typical titles. Although nominally a report for 1884, its date of publication is 1886.

COMMERCIAL ORGANIC ANALYSIS. By Alfred H. Allen, F.I.C., F.C.S. Vol. II. Philadelphia: P. Blakiston, Son & Co. 1887. Pp. 583. Second edition.

We note with pleasure the present volume, the second of the set of three which will complete the work. In it the subjects of fixed oils and fats, hydrocarbons, phenols, etc., are treated at great length. In the author's preface the promise is made for the third volume, that it will comprise the subjects of aromatic acids and tannins, coloring matters, cyanogen compounds, organic bases, albuminoids, etc. In the volume before us the very full treatment of the subject of fats and fatty oils, including some thirty kinds, butterine, butter, Japan wax, shark liver oil, etc., is noticeable. Under Terpenes we find camphors, copaiba balsam, thymol, and others described. These two samples will give some idea of the thorough treatment of the subject. Little needs to be said on this subject, as Allen's organic analysis is a work so well known that encomium is out of place.

** Any of the above books may be purchased through this office. Address Munn & Co., 361 Broadway, New York.

Business and Personal.

The charge for insertion under this head is One Dollar a line for each insertion; about eight words to a line. Advertisements must be received at publication office as early as Thursday morning to appear in next issue.

We desire the services of a thoroughly competent man to take the place of our present secretary, who is obliged to retire on account of ill health, and to assist in general management. Experience and first-class business qualifications will be required, and to the right person excellent inducements will be offered. Great Western Mfg. Co., mill furnishers and manufacturers of general machinery, Leavenworth, Kans.

Machine shop and foundry for sale, cheap, at a railroad town. F. M. Mossman, Columbia City, Ind.

Editor of trade publication wants articles on all the trades and use of tools. Writers with practical experience preferred. Address Hand, P. O. box 773, New York.

Parties wanting special machines or machinery built to order, write to Christiania Machine Co., 206 N. 4th St., Philadelphia, Pa. Large shops, improved tools.

Wanted, secondhand hard wood Surface Planer about 24 in. knife. Pennell Block Co., Lockport, N. Y.

The Knowles Steam Pump Works, 113 Federal St., Boston, and 98 Liberty St., New York, have just issued a new catalogue, in which are many new and improved forms of Pumping Machinery of the single and duplex, steam and power type. This catalogue will be mailed free of charge on application.

Vices.—No screwing. T. C. Massey, Chicago, Ill.

For the latest improved diamond prospecting drills, address the M. C. Bullock Mfg. Co., 158 Lake St., Chicago, Ill.

Link Belting and Wheels. Link Belt M. Co., Chicago.

The Railroad Gazette, handsomely illustrated, published weekly, at 73 Broadway, New York. Specimen copies free. Send for catalogue of railroad books.

Protection for Watches.

Anti-magnetic shields—an absolute protection from all electric and magnetic influences. Can be applied to any watch. Experimental exhibition and explanation at "Anti-Magnetic Shield & Watch Case Co.," 18 John St., New York. F. S. Giles, Agt., or Giles Bro. & Co., Chicago, where full assortment of Anti-Magnetic Watches can be had. Send for full descriptive circular.

Woodworking Machinery of all kinds. The Bentel & Mergedant Co., 116 Fourth St., Hamilton, O.

Guild & Garrison's Steam Pump Works, Brooklyn, N. Y. Pumps for liquids, air, and gases. New catalogue now ready.

Presses & Dies. Ferracute Mach. Co., Bridgeton, N. J. Nickel Plating.—Sole manufacturers cast nickel anodes, pure nickel salts, polishing compositions, etc. \$100 "Little Wonder." A perfect Electro Plating Machine. Sole manufacturers of the new Dip Lacquer Kristaline. Complete outfit for plating, etc. Hanson, Van Winkle & Co., Newark, N. J., and 92 and 94 Liberty St., New York.

Iron Planer, Lathe, Drill, and other machine tools of modern design. New Haven Mfg. Co., New Haven, Conn.

Curtis Pressure Regulator and Steam Trap. See p. 45.

Best Automatic Planer Knife Grinders. Pat. Face Plate Chuck Jaws. Am. Twist Drill Co., Laconia, N. H.

Chucks—over 100 different kinds and sizes in stock. Specials made to order. Cushman Chuck Co., Hartford, Ct.

The Improved Hydraulic Jacks, Punches, and Tube Expanders. R. Dudgeon, 24 Columbia St., New York.

Friction Clutch Pulleys. D. Frisbie & Co., N.Y. city.

Vener Machines, with latest improvements. Farrel Fdry. Mach. Co., Ansonia, Conn. Send for circular.

Tight and Slack Barrel Machinery a specialty. John Greenwood & Co., Rochester, N.Y. See illus. adv., p. 28.

Timber Gaining Machine. All kinds Wood Working Machinery. C. B. Rogers & Co., Norwich, Conn.

Band saws, with tipping table. All kinds woodworking machinery. Rollstone Machine Co., Fitchburg, Mass.

Lick Telescope and all smaller sizes built by Warner & Swasey, Cleveland, Ohio.

Send for catalogue of Scientific Books for sale by Munn & Co., 361 Broadway, N. Y. Free on application.