

## ENGINEERING INVENTIONS.

**A car coupling** has been patented by Mr. John H. B. McCray, of Kellerville, Ill. This invention consists of a drawbar with curved face coupling hook, connected by a chain with a lever pivotally mounted in a slot formed in the end timber, with other novel features, whereby cars may be coupled without danger of accident to the train men.

**A pressure regulator** has been patented by Mr. George W. Lawton, of New York city. It has a main piston cylinder and a valve chamber connected, the latter being connected by a pipe to a reservoir, boiler, or conduit, in which pressure of water, air, steam, or gas is maintained; and the construction is such that when the pressure rises above the required point it will operate the valve in the valve chamber.

**The operating of mine doors** forms the subject of a patent issued to Mr. Peter F. Snyder, of McKeesport, Pa. A rock shaft is arranged alongside the track, and pivoted to it is a guard or push bar, rotated by contact of the cars as they pass along, the mine door being connected with the shaft by a peculiar mechanism, which raises the latch and swings the door open when the shaft turns in consequence of the lateral pressure of the cars.

**A compound water gauge for steam boilers** has been patented by Mr. David Pyke, of Philadelphia, Pa. It consists of three parallel glass tubes, with elbow couplings at their ends, having offsets in their inner arms, with valves and cocks and a three-way globe valve connected with the ends of the center tube and with the elbow couplings, with other details, to surely indicate the state of the water should one or more of the connections become clogged.

## AGRICULTURAL INVENTIONS.

**A feed trough for poultry** has been patented by Mr. Milo D. Beach, of Litchfield, Conn. It has a series of upward projecting spaced wires, curved inward toward each other at their upper ends, the trough holding feed and water, but so arranged that the fowls cannot light on the top of the trough.

**A band cutter and feeder for thrashing machines** has been patented by Mr. Jacob W. Turner, of Middle Point, Ohio. It is so constructed that the rake frames shall receive a lateral and an up and down movement at the same time, with other novel features, the invention being an improvement on a former patented invention of the same inventor, to make such machines more convenient and reliable.

**A harrow** has been patented by Mr. Joseph Hildesheim, of Alton, Iowa. Such arrangement of the draught chains is provided as will make the harrow either vibrating or non-vibrating, as desired; and the construction is such that the harrows will readily adjust themselves to the surface of uneven ground, while they can be readily adjusted to serve as pulverizing or as smoothing harrows.

**A combination plow** has been patented by Mr. August A. Weinmann, of Ennis, Texas. The frame is of iron, in which are two plows that form a ridge, and a shovel makes a furrow, shallow or deep, as desired, in which seed are dropped through a seed spout, after which the seed are covered by shovels and the earth pressed down by a roller, the plow being one which can be used as a corn, cotton, or sugar cane planter, and also as a cleaner and chopper.

## MISCELLANEOUS INVENTIONS.

**A folding table** has been patented by Mr. Alonzo B. Jones, of Jeffersonville, Ind. It is more especially designed for use as a lady's work table, and the invention covers a novel construction, wherein the legs are arranged to be folded beneath the top of the table.

**A combined latch and lock** has been patented by Mr. Edwin R. Ferry, of New Haven, Conn. It consists of a suitable case, a tumbler, a bolt with a horizontal slot and spindle, in combination with a lever and locking device, and is so constructed and arranged as to be operated from either side of the door.

**A spring and nose piece for eyeglasses** has been patented by Mr. George W. Hassellund, of Newcastle, N. Y. The eyeglass frame has a clamp for holding a round wire spring and round wire nose pieces, and combined therewith is a spring with nose pieces inclosed in a cylindrical covering of cork.

**A combined baby jumper, rocking chair, and crib** has been patented by Mr. Owen S. M. Cone, of St. Paul, Minn. The invention covers novel features of construction and combination of parts for the making of a simple, inexpensive, and substantial article of furniture, readily adaptable for all these uses.

**A clothes drying apparatus** has been patented by Mr. James W. Miller, of Central City, Neb. This invention covers a clothes pin suspended from the line, and the clothes held by it, but not clamped on the line, so that articles may be suspended and moved freely along the line without actually coming in contact with it.

**A musical top** has been patented by Mr. Robert Richardson, of Detroit, Mich. The top is so constructed that its rotary motion will move perforated music paper across the apertures of one or more reed organs, similar to the ordinary mouth organs, the rotary motion of the top gathering sufficient air to operate the reeds of the organs.

**A brick machine** has been patented by Mr. William E. Talcott, of Croton Landing, N. Y. This invention covers an improvement on brick machines formerly patented by the same inventor, and covers modifications in construction and combination of parts intended to make the machines more convenient in use and more reliable in operation.

**A musical box** has been patented by Mr. Paul Lochmann, of Gohlis, near Leipzig, Germany.

It has a plate with pegs or pins and a two-part comb, the pins or pegs so arranged that those of half of the plate engage with the corresponding part of the comb, and those of the other half avoid such part and engage with the other part of the comb.

**A daubing brush** has been patented by Mr. David G. Lawrence, of New York city. It is of that kind in which the bristle block is pivoted to revolve when in use, to avoid uneven wear, and is so made that there will be no strain on the bolt which extends down through the center of the brush block, and on which the brush revolves.

**A grain weighing and registering apparatus** has been patented by Mr. Joseph S. Marshall, of Clearwater, Kan. The invention consists of a measuring wheel, into which the grain is discharged by an elevator from the thrashing machine, there being a device for weighing the grain within the wheel and a device for registering the grain weighed.

**An alphabetical toy** has been patented by Mr. William F. Hopkins, of Sturgis, Dakota Ter. It is a device in which, by the reciprocation of a cover plate on the turning of a crank, different letters will be made to appear in succession, and thus give them an interest calculated to enable a child to rapidly learn letters and numerals.

**A brick kiln** has been patented by Mr. George M. Harris, of Pawnee City, Neb. It is heated by hot air admitted to the kiln from a furnace by ducts or eyes, the admission of both hot and cold air being controlled and regulated by adjustable dampers, which are so arranged that they can be controlled by means of chains from the outside.

**A capstan** has been patented by Mr. Samuel Montgomery, of West Toledo, Ohio. This invention covers novel features and combinations of parts for an inexpensive, durable, and effective machine for operating a draught chain for hauling a ditching machine or heavy timber, or pulling stumps in clearing land, or for similar uses.

**A pantaloons protector** has been patented by Mr. James D. Hanan, of Brooklyn, N. Y. It is made of a wire bent to form a tongue to go inside the shoe over the back, and having a band which also goes down and upon the outside in such way as to afford a support for the bottom of the trousers legs, keeping them from the ground when the walking is bad.

**A telephone transmitter** has been patented by Mr. Herman Ehrlich, of Jersey City, N. J. It has novel features of construction, such as to admit of a very delicate adjustment of the carbon in position relatively to the contact points, and so that this adjustment may be easily maintained, and there is little danger of the parts getting out of order.

**A self-inking hand stamp** has been patented by Mr. Louis K. Scottford, of Kansas City, Mo. Combined with a reversible plate carrying dies or type is an additional plate held on the first by adjusting screws to regulate the distance between the two plates, whereby the type or die plate may project a greater or less distance from the reversible frame on which it is held.

**A frying pan and baker** has been patented by Messrs. Harry C. Crawford and Edwin W. Mundy, of Duluth, Minn. It is a folding baker with a hinged cover and triangular end pieces having pivoted clips, one of which will hold the end pieces folded against the cover when articles are to be baked, and providing a simple and effective portable device for baking, roasting, and frying food.

**A thill coupling** has been patented by Mr. Frank P. Johnson, of Eyer's Grove, Pa. It consists of a clip having in one arm a T-shaped slot and set screw with polygonal boss, and the fork for receiving the thill iron has a T-shaped head fitted to the slot of the clip, and adapted to be held by the set screw, there being also a spring of peculiar form to prevent rattling of the thills.

**A gearing for windmills** has been patented by Mr. Henry G. Newell, of Orwell, Pa. It is designed to transmit the full power of the windmill to the work shaft, besides keeping the wheel always in the direction of the wind, the invention consisting of trains of gear wheels connected with the wind wheel shaft and operating two shafts which impart motion to the transmitting shafts.

**A vegetable cutter** has been patented by Mr. Stephen D. Wetherby, of Bolivar, N. Y. It is so made that the vegetables have only to be thrown into a hopper and the crank revolved, which causes a knife frame to be rapidly reciprocated, one knife cutting the vegetables vertically and another slicing them horizontally, so they may be reduced to chunks or narrow strips, suitable to feed to stock.

**A farm gate** has been patented by Mr. Theodore P. Skellenger, of Morristown, N. J. The gate is attached to a post at one side of the road by means of hooks, on which are sleeves or collars, and between its upper boards is a diagonally arranged board that supports the gate, which slides up on the hooks as it is shoved backward to open the gate, the downward movement on return assisting to close the gate.

**A lamp burner** has been patented by Mr. Thomas C. Phillips, of Sedalia, Mo. It has a slotted wick tube, a spring sliding plate with points projecting into the tube, and to be operated by a rack and pinion, with a slotted wedge or cam for disengaging the points carried by the spring plate from the wick in the tube, thus making an improved device for raising and lowering the wicks evenly.

**A windmill** has been patented by Mr. Andrew J. Lindquist, of Bertrand, Neb. It has a central revolving standard or tower, and the wheel is mounted slightly to the left of the axis of the tower, so that when the wind becomes too strong the wheel will turn out of the wind, while there are devices by which the mill may be regulated to run faster or slower, and run automatically, practically regulating itself.

**A rotary lamp** has been patented by Mr. Charles H. Loper, of Hickory, N. C. It consists of a globe having wings on its outer surface and a lamp within it, pivotally secured upon a suitable support, with various novel features, whereby the lamp will be perfectly safe when turned by the wind, it being designed for use in front of hotels, theaters, and public buildings, to attract attention.

**A method of soling and heeling boots and shoes** has been patented by Mr. Arthur Chambers, of New York city. It consists in attaching to the outer edges of the sole on its upper side a marginal strip of flexible metal, projecting beyond the edges of the sole, which is to be bent or folded over a similar marginal strip attached to the welt, both the heel and outer sole being attached after this manner.

**An article of felt foot wear** has been patented by Mr. Walter P. Hyatt, of Matteawan, N. Y. It is provided with an upper and a clearly defined projecting sole, the sole or heel not being sewed or glued to the upper, but united by the felting process, and so that the edges of the sole may project beyond the sides of the upper if desired, and the soles and heels made of any desired thickness.

**Shoe pinchers** form the subject of a patent issued to Mr. Robert B. Beach, of Philadelphia, Pa. They are formed of two pivoted levers terminating in curved jaws, the outer face of the lower jaw having a shank, with a head curved upon the front edge, and the face of the head serrated or roughened, making a tool whereby lasting at the shank is made easy, and the whole upper may be lasted with the same tool.

**A window ventilator** has been patented by Messrs. Daniel C. Cawley and Charles P. Wall, of Pittsburg, Pa. Perforated pipes are at the bottom and sides of the window, and a pendent draught pipe extends down into the cellar, with a gas burner at its lower end, delivering hot air through the perforated pipes into close proximity with the window glass, in order to prevent vapors from condensing and freezing on the windows.

**A fence post** has been patented by Mr. James Hunter, of Ruff's Dale, Pa. It is a tubular fence post, consisting of two tapering sections, having serrations at the top, flared at their lower ends, with beveled edges on the inner sides of the lower ends, and notches in the sides of the sections, combined with clamps for securing the parts together, making a post not easily affected by frost, and that will hold firmly.

**An apparatus for stretching and drying cloth** has been patented by Mr. John H. Varney, of Hallowell, Me. This invention covers a complete arrangement of apparatus for economically heating the air and conducting it to the cloth drying chamber of the machine, which also has novel features in its construction and operation, to promote economy in the stretching and drying processes, and to give a better stretch and finish to the fabrics.

**An electric annunciator target** has been patented by Mr. Morris Ullman, of Washington, D. C. The target is divided into sections which have separate electrical connections, through a connecting cable, with the annunciator, which corresponds with the target, and is thus made to indicate the spot on the target struck by the bullet, the invention being an improvement on a former patented invention of the same inventor.

**A protector for boots or shoes** has been patented by Mr. Levi C. Rodenberger, of No. 812 Folsom Street, San Francisco, Cal. It is a plate shaped to adapt it to the form of the sole of the boot, and with its edges turned up, with straps for fastening it in position, while a heel plate is used on the heel, the improvement being especially designed for miners' rubber boots.

## NEW BOOKS AND PUBLICATIONS.

**ABRIDGMENTS OF UNITED STATES PATENTS ON UNDERGROUND LINES, TO JANUARY 1, 1886.** By James W. Lee. Hamilton, O.: The author, 1886.

The question of underground electric conductors has recently become of immense commercial importance, on account of the constantly increasing use of electricity, and the consequent legislation that has already, in several cities, made its underground conveyance obligatory. The author of the present volume has therefore rendered an acceptable service in presenting so convenient an abstract of all that has been done in this direction up to the beginning of the year. It is the first attempt, we believe, that has ever been made to submit a thoroughly analytical digest of a given class of patents. The great importance which now attaches to certain classes of inventions will probably make such works more common in the future. Mr. Lee presents abridgments of all the patents in underground lines taken out during the period under consideration. Including reissues, these number 323. In each case, every exhibit of the patent, whether involved in drawing or specification, has been recited, and the claims quoted in full. The arrangement is chronological, with the one exception that reissues follow their originals. A full digest and index are given at the end of the volume. The book is one that will be found very useful to those working in this line of invention, and perhaps still more so to those interested in the subject in either its commercial or legal aspect.

**THE BATTLE FOR BREAD.** Sermons by T. De Witt Talmage, D.D. New York: J. T. Ogilvie & Company.

**HEALTH CULTURE, AND THE SANITARY WOOLEN SYSTEM.** By Gustav Jaeger, M.D. New York, 1886.

Starting with the comparatively harmless proposition that wool is the most wholesome covering for the human body, the theory has flourished and expanded, under the skillful culture of its chief disciple and exemplar, to such a marvelous degree that now it completely envelopes its followers in the chosen material. From head to foot, those who want may now employ the one and only suitable fiber that nature, according to Dr. Jaeger, has provided for the protection of their

persons. Though we are disposed to regard this small volume of essays as a most successful work of the imagination, we can fancy that by calling attention to the necessity of exercising more thought in the matter of our clothing, and the propriety of admitting more air into our sleeping apartments, it may accomplish some compensating good. But when, in discussing the sanitary effects of colors on woolen goods, he gravely states that he could run from eight to twenty-four hundred meters in a brown suit, while he could only run eight hundred in a black of indigo dye, and was completely exhausted at five hundred meters when the dye was of logwood, our belief in the unlimited powers of his imagination is apt to affect the context as far as both covers. It is such stuff as this that has given the author the sobriquet of the woolen clothes crank.

## 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.*

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

See Burnham's turbine ad. to mill owners next week. Model engine and boiler, 3 1/4 inch stroke, well built; for sale cheap. J. A. Rogers, Fort Worth, Texas.

"Is it Lost Forever?"

—the youthful bloom, the freshness of health, the buoyancy of spirits, and all that goes to give pleasure and contentment to a heart made happy by health? No; not lost forever. There is hope for all. For those whose lives have been a burden, and for those who are now groveling in the very sloughs of despondency. Dr. Pierce's "Favorite Prescription" will cure all chronic diseases peculiar to females. It will build up the system, and restore health, strength, and beauty. Try it and be convinced. Send ten cents in stamps for large illustrated "Treatise on Diseases Peculiar to Women." Address World's Dispensary Medical Association, Buffalo, N. Y.

Engines, B's, all sizes. Lock Box J, So. Windham, Ct.

Wanted—Some one to manufacture two counting-room articles. Patents No. 343,796, June 15, and No. 344,624, June 29, 1886. Address J. V. Charpentier, No. 6, Carondelet St., New Orleans, La.

The Knowles Steam Pump Works, 44 Washington St., Boston, and 93 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.

Presses & Dies. Ferracute Mach. Co., Bridgeton, N. J. Machinery for Light Manufacturing, on hand and built to order. E. E. Garvin & Co., 139 Center St., N. Y.

A Catechism on the Locomotive. By M. N. Forney. With 12 plates, 227 engravings, and 600 pages. \$2.50. Sent on receipt of the price by Munn & Co., 361 Broadway, New York.

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

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.

Haswell's Engineer's Pocket-Book. By Charles H. Haswell, Civil, Marine, and Mechanical Engineer. Giving Tables, Rules, and Formulas pertaining to Mechanics, Mathematics, and Physics, Architecture, Masonry, Steam Vessels, Mills, Limes, Mortars, Cements, etc. 900 pages, leather, pocket-book form, \$4.00. For sale by Munn & Co., 361 Broadway, New York.

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

Planing and Matching Machines. All kinds Wood Working Machinery. C. B. Rogers & Co., Norwich, Conn.

Nystrom's Mechanics.—A pocket book of mechanics and engineering, containing a memorandum of facts and connection of practice and theory, by J. W. Nystrom, C.E., 18th edition, revised and greatly enlarged, plates, 12mo, roan tuck. Price, \$3.50. For sale by Munn & Co., 361 Broadway, New York city.

Combination Pliers, Gas Pliers, Wire Cutters, Wrench and Screwdriver combined. Billings & Spencer Co., Hartford, Conn.

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

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

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

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

Supplement Catalogue.—Persons in pursuit of information of any special engineering, mechanical, or scientific subject, can have catalogue of contents of the SCIENTIFIC AMERICAN SUPPLEMENT sent to them free. The SUPPLEMENT contains lengthy articles embracing the whole range of engineering, mechanics, and physical science. Address Munn & Co., Publishers, New York.

Veneer 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. 23.

If an invention has not been patented in the United States for more than one year, it may still be patented in Canada. Cost for Canadian patent, \$40. Various other foreign patents may also be obtained. For instructions address Munn & Co., SCIENTIFIC AMERICAN patent agency, 361 Broadway, New York.

Iron and Steel Wire, Wire Rope, Wire Rope Tramways. Trenton Iron Company, Trenton, N. J.

Grimshaw.—Steam Engine Catechism.—A series of thoroughly Practical Questions and Answers arranged so as to give to a Young Engineer just the information required to fit him for properly running an engine. By Robert Grimshaw. 18mo, cloth, \$1.00. For sale by Munn & Co., 361 Broadway, N. Y.

"Illustrations and Descriptions of Recent Locomotives"; enlarged edition; 525 engravings; ready Sept. 1. Price, \$3.50. Send for circular to the Railroad Gazette, 73 Broadway, N. Y.