

NEW PUBLICATIONS.

**A PRACTICAL TREATISE ON METALLURGY.** Adapted from the last German Edition of Prof. Kerl's "Metallurgy." By William Crookes, F. R. S., and Ernst Rohrig, Ph. D., M. E. In three volumes. Vol. II. Copper and Iron. Illustrated with 273 Wood Engravings. New York: John Wiley & Son, No. 2 Clinton Hall, Astor Place.

It is impossible, in the brief space allotted for new publications in our paper, to give even the most cursory review of the volume before us. The well-known excellent reputation of the first volume of the series is fully sustained in this volume, which is devoted to the metallurgy of copper and iron. One of the many praiseworthy features of this work, is the attention paid to minute details. It is what it claims to be, "practical," and thus is suited to the exigencies of the unlearned. At the same time the scientific metallurgist will find all that is useful. The original treatise of Prof. Kerl has long occupied the front rank among works upon this subject. The mechanical part of the subject is sufficiently treated, although it is not made a prominent feature. We regard this as one of the most valuable additions to metallurgical literature that has issued from the scientific press. From the miner and smelter, to whom it is of the first importance, through all departments of iron and copper working, it cannot fail to be of great service.

We are indebted to the publishers, Messrs. Lee & Shepard, Boston, for two interesting and instructive pamphlets. "The Controversy Between True and Pretended Christianity" is a tersely-written essay, originally read before a Massachusetts Methodist convention, by Rev. L. T. Townsend, Professor of Historical Theology in the Boston Theological Seminary. Price, bound, 50 cents; in paper, 25 cents. "Woman as God Made Her; the True Woman," by Rev. J. D. Fulton, the popular, wide-awake pastor of Tremont Temple Church, Boston. Its aim is to set forth the divine ideal or women in her various relations, and under such heads as Woman as God made Her, Woman a Helpmeet, The Glory of Motherhood, Woman's Work and Woman's Mission, he presents his views in the pungent, epigrammatic manner characteristic of him either as pastor or author. Price, \$1 bound; paper, 50 cents.

Recent American and Foreign Patents.

Under this heading we shall publish weekly notes of some of the more prominent home and foreign patents.

**MANUFACTURE OF PIPE ELBOWS.**—Edwin Norton, Toledo, Ohio.—This invention relates to improvements in the manufacture of pipe elbows, whereby it is designed to simplify and cheapen the cost of the same, and it consists in the production of the blanks, of the proper form, for both parts of elbow, from one sheet of metal, by dies so arranged as to cut the same at one blow, and without waste of metal.

**MACHINERY FOR WASHING WOOL.**—John McNaught and Wm. McNaught, Jr., Rochdale, England.—This improved machinery consists of a series of two or more rakes, or other equivalents, for traversing the wool, or other fibers, along the cistern to an inclined plane, up which they are moved by an improved cradle, or other equivalent, and delivered to a series of rollers which convey them to the squeezers.

**QUILTING FRAME.**—Josiah O'Neill, Petroleum Center, Pa.—This invention relates to improvements in quilting frames, designed to make them more conveniently and useful, as such, than any now in use, and to adapt them also for use as a clothes frames. It consists in certain improvements in means for clamping the bars of the frame together, and arrangement of the said bars calculated to adapt the frame to the said double use.

**MACHINE FOR BENDING FELLOES.**—De Lyon & Werner, Canton, Miss.—This invention relates to improvements in machinery for bending felloes, and consists of a curved former, mounted on an axis and working over a movable carriage, whereon the stick to be bent is placed between the face of the former and a metallic strap, which is bent up with the stick and secured to the former, to hold the bent stick until it becomes set.

**GOVERNOR VALVE.**—W. W. Gilbert, New York city.—This invention relates to improvements in governor valves for steam or other engines, whereby it is designed to provide an arrangement whereby the valve may be opened or closed, either by a movement in the direction of its length or a rotary movement; also, to provide an arrangement whereby the valve will be automatically closed when the governor ceases working from any cause; and also, an arrangement to facilitate the increasing or diminishing the volume of steam through the medium of the said governor valve without effecting the operation of the valve by the governor.

**MEDICAL COMPOUND.**—Henry Adolph, Clinton, Kas.—This invention relates to a new and useful composition to be used as a liniment for external diseases in sheep, horses, and cattle, also valuable as a remedy for leprosy, and other diseases to which the human system is subject.

**HEATER AND VENTILATOR FOR RAILROAD CARS.**—Asa Weeks, Minneapolis, Minn.—This invention is an improvement upon the one patented by me January 5th, 1869, No. 85,712. It differs from it in the construction of the large heater, and the means for adjusting its draft, and for cleaning it out when foul.

**RAILROAD CHAIR AND TIE.**—Thomas F. Fouts, Albia, Iowa.—This invention relates to new and improved method of constructing railroads, and consists in the peculiar form of the chairs and ties, and the manner of securing the rail thereto, and of preventing the spreading of the rails and the settling of the track.

**MACHINE FOR PICKING CURLED HAIR ROPE.**—H. R. Hildreth, Lynn, Mass.—This invention relates to a machine for untwisting and picking hair rope, thereby rendering it suitable for use in upholstering or other purposes.

**SUBSOIL PLOW.**—James B. Pullman, Los Angeles, Cal.—This invention consists in the combination of a share of peculiar construction with a coulter having a concave cutting edge, both being affixed to a plow stock of the usual construction.

**TOY GUN.**—W. I. Blackman, Columbus, Miss.—This invention relates to that class of articles which are designed for children's use and amusement, and consists of a barrel, and stock, and rubber springs, combined and arranged so as to form a gun, the projectile being impelled by the recoil of the springs.

**STRAW CUTTER.**—Ellis Douty, Colomsville, Pa.—This invention relates to those straw-cutting machines, in which a straight knife or cutter is employed in a reciprocating frame sliding vertically on the front uprights, and operating to bring the edge of the knife downward across the end of the box.

**MASH TUB.**—Marshall J. Allen, New York city.—The object of this invention is to provide an improved means for heating and cooling the contents of mash tubs, such as are used in distilleries and breweries.

**MAIL-BAG FASTENING.**—J. A. Truitt, Oakland, Pa.—This invention consists of a sliding chain arranged in one part of the bag, capable of receiving the staples of the fly through its links, and provided with a staple in each link, which will, when the said chain is drawn transversely of the bag, engage each of the said staples of the fly and thereby fasten the two parts together.

**REGISTERING COUNTER FOR BILLIARDS.**—W. A. Hough, St. Johnsville, N. Y.—This invention relates to improvements in connecting and registering apparatus for billiards, and has for its object to provide a simple and reliable apparatus that will keep the count for each game, and register the number played by each party, and the whole number played during a day or other stated periods.

**PISTON PACKING.**—Wm. Ord, Brooklyn, Ohio.—This invention relates to improvements in piston packing, designed to provide an arrangement of simple, and cheap construction, capable of more perfectly fitting the cylinder, simple of adjustment, and less liable to spring away from the cylinder after being set out than any arrangement now in use.

**FARM GATE.**—J. T. Moxley, Owasso, Mich.—This invention is to provide a farm gate which is simple and effective.

**CLEVIS FOR PLOWS.**—G. W. Holton, Berlin, Ky.—This invention consists in making the end bar of the clevis considerably longer than the present construction, preferably arranging the elongation below the part engaging the plow beam, and providing at the said end as many hitching rings as it will support by passing through transverse holes and preserve a sufficient amount of strength. The projecting end is strengthened by suitably bracing it.

**APPARATUS FOR DISPLAYING GOODS.**—John D. Chambers, West Lebanon, Ind.—This invention relates to improvements in apparatus for displaying goods in mercantile establishments, generally woven fabrics; and it consists in the yard arms on which the goods are to be spread, adjustably supported on a stationary vertical shaft, so arranged that they can be raised up or let down, and turned to any point around the axis of said shaft desired, provided with a wire or cord above them for supporting covering for protecting goods.

**STEAM PUMP.**—W. W. Gilbert, New York city.—This invention relates to improvements in steam pumps, having for its object to provide an improved arrangement of the steam valve mechanism, designed to insure a better and more reliable action of the same; also, an arrangement of the pump valves to facilitate the removal of the same for inspection or repairs, as may be required.

**GRAIN DRILLS.**—H. B. Dean and S. A. Baker, Ludlowville, N. Y.—This invention has for its object to improve the construction of grain drills so as to make them more durable, convenient, and satisfactory in use.

**WINDLASS.**—L. M. Knowles, Owatonna, Minn.—This invention has for its object to improve the construction of windlasses for raising water and for raising and lowering light weights, so as to make them more convenient and reliable in use.

**DERRIQUE.**—Newton Matlick, Williamstown, Mo.—This invention has for its object to furnish an improved derriker, which shall be simple in construction, easily moved from place to place, and conveniently operated, raising the hay or other weight, and, at the same time and by the same operation, swinging it into the position it is to be placed.

**RAILROAD BAR.**—James Myers, Jr., Williamsburgh, N. Y.—The nature of this invention consists in constructing a rail or railway bar, such as is used for the track upon which railway locomotives and cars are ordinarily moved, in such a manner that the rail or parts of the same shall consist of an interior core of ordinary wrought or malleable iron, and an outer envelope of steel, formed from a homogeneous bar of wrought or malleable iron by the conversion of the outer portions of such bar into steel by chemical processes.

**HAY LOADER.**—Winfield Denton, Iowa City, Iowa.—This invention has for its object to furnish an improved device, by means of which the hay may be easily and conveniently loaded upon a wagon or cart without the necessity of hand pitching.

**SEED PLANTER.**—W. W. Haupt, Mountain City, Texas.—This invention has for its object to furnish a simple and convenient seed planter, which shall be so constructed and arranged that it may be easily and conveniently adjusted to plant various kinds of seeds.

**WASHING MACHINE.**—David Graves, Spring Valley, N. Y.—This invention has for its object to furnish an improved washing machine, which shall be so constructed and arranged as to do its work quickly and thoroughly, under the combined operation of pressure, rubbing, and rinsing.

**ELEVATOR ATTACHMENT FOR FAN MILLS.**—Newell Hinman, Sparta Center, Mich.—This invention has for its object to furnish an improved elevator attachment for fan mills, by means of which the cleaned grain, as it runs from the mill, is raised up, and discharged into the hopper, from which it may be allowed to flow into bags or other receptacles.

**MOWING MACHINE.**—Wm. H. Knight, East Machias, Me.—This invention relates to a new mowing machine, in which the motion from the driving wheel is transmitted to the cutter bar or bars entirely, by means of levers, without the use of any cog wheels whatever, so that thereby a large amount of friction is saved and much power gained. The invention consists in the arrangement of the levers for transmitting the motion in the manner of connecting them for use on double cutters, and in the application of means for regulating the height of the cutting apparatus and for throwing the same out of gear.

**METALLIC BEAMS AND GIRDERS FOR BRIDGES.**—Joseph Gill, Cincinnati, Ohio.—This invention consists in the adoption of one, two, or more series of polygonal, or circular cells (measuring those of an hexagonal shape), formed out of flat bars of wrought iron, steel, or other metal, with the ends when turned into shape, either welded together, or left meeting in a butt open joint; and, having each of their sides perforated by punching, or drilling with one, two, or more holes for the reception of rivets, or screwbolts, to fasten them together; said cells, when so united, forming a rigid beam of metal, and which beams may be so built up to any height, as to obtain any desired strength.

**SYRINGE.**—James J. Essex, Newport, R. I.—The object of this invention is to so arrange the discharge pipe of an elastic bulb syringe, that the admission to, and the consequent discharge of air from said pipe, cannot take place as long as liquid matter is forced through the same.

**DECK STOVEPIPE FOR VESSELS.**—John Hall, Boston, Mass.—This invention relates to a new device for making the stovepipes on the decks of vessels flexible, to prevent their being injured when struck by swinging booms, yards, or other devices. When they are rigidly attached, as heretofore, it often, or generally happens, that, especially on cabins, galleys, and forecastles, they are bent, broken, or otherwise injured by booms or yards, or that the decks from which they project become leaky by the strain brought to bear on them.

**APPARATUS FOR PROPELLING VEHICLES.**—Peter Robert, New York city.—This invention relates to new machinery for operating the propelling apparatus of canal boats and other kinds of machinery, and also to a new kind of propelling apparatus for the same. The invention consists chiefly of a series of floats, or propelling feet, which are vertically lifted out of, and vertically carried back to the position which they operate. The invention also consists in the use of certain machinery for propelling the carriages from which the aforesaid floats or feet are suspended, and for elevating and lowering the said floats or feet at the end and commencement of each stroke.

**COOKING STOVE.**—Wm. C. Durant, West Troy, N. Y.—This invention relates to a new cooking stove, in which a new device for heating the air that is brought to the fire box is provided by the peculiar construction of a hollow door, and in which a circulation of air is provided through the oven into the fire place, so that the oven may receive a constant supply of fresh hot air and transmit a constant supply of hot air to the fire place; thereby the oven is kept fresh and clean, and does not emit disagreeable vapors when opened.

**SOLDERING APPARATUS.**—Charles Pratt, New York city, and Conrad Seimel, Greenpoint, N. Y.—This invention relates to a new attachment to soldering apparatus, of that kind in which the cans to be soldered are supported on a base plate, shield, or platform, the same being either rigidly secured to, or adjusted on a frame, or floating on the solder. The object of the invention is to prevent the can from adhering to the said supporting platform or shield, and to facilitate its removal when soldered. In the present apparatus, air is caught and confined between the lower end of the can and the supporting platform, or shield, and as the joint between the latter and the can is, by the liquid solder, generally made air tight, the removal of the can is made extremely difficult and connected with much loss of time.

**VELOCIPÈDE.**—Wm. H. Smith, Newport, R. I.—This invention relates to a new velocipède, which is provided with a steering apparatus of novel construction, and also with a new brake attachment, its object being to simplify the construction of the parts and to obtain higher and steadier motion. The invention consists chiefly in connecting the rear steering wheel or wheels by a novel system of leverage with a steering handle in front of the frame, and also in providing to the front of the frame an up-and-down sliding brake and starter

APPLICATIONS FOR THE EXTENSION OF PATENTS.

**CANDLE-MOLD APPARATUS.**—Willis Humiston, of Troy, N. Y., has petitioned for the extension of the above patent. Day of hearing, July 5, 1869.

**BOTTLE STOPPLE.**—Thomas Allender, of Westhampton, Mass., executor of the estate of John Allender, deceased, has petitioned for the extension of the above patent. Day of hearing, July 5, 1869.

Official List of Patents.

Issued by the United States Patent Office.

FOR THE WEEK ENDING APRIL 27, 1869.

Reported Officially for the Scientific American.

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- 89,267.—DEVICE FOR CUTTING BOLTS.—Geo. Adair and J. F. Pool, Monroe, Wis.
- 89,268.—ROTARY PUMP.—M. L. Andrew (assignor to himself and Geo. Burrows), Cincinnati, Ohio.
- 89,269.—ROTARY PUMP.—M. L. Andrew (assignor to himself and Geo. Burrows), Cincinnati, Ohio.
- 89,270.—HOLDER FOR CANDLES AND ORNAMENTS ON CHRISTMAS TREES.—Gustav Anton, Philadelphia, Pa.
- 89,271.—VAPOR BURNER.—S. D. Baldwin (assignor to himself and Daniel Leonard), Chicago, Ill.
- 89,272.—SASH LOCK.—R. R. Ball, West Meriden, Conn. Antedated April 24, 1868.
- 89,273.—SASH LOCK.—R. R. Ball, West Meriden, Conn. Antedated April 24, 1868.
- 89,274.—SURFACING FABRICS WITH BRONZE OR METALLIC POWDERS.—J. B. Batchelder, Boston, Mass.
- 89,275.—SEWING MACHINE FOR SEWING LEATHER.—E. E. Bean, Boston, assignor to David Whittemore, North Bridgewater, Mass.
- 89,276.—FASTENING FOR CARRIAGE SEATS.—William Beers (assignor to himself and William McMillen), Milan, Ohio.
- 89,277.—BLIND-SLAT TENONING MACHINE.—Henry Bickford, Cincinnati, Ohio.
- 89,278.—STOVE-COVER HOLDER.—J. E. Blodgett, Oswego, N. Y. Antedated April 15, 1868.
- 89,279.—METHOD OF UTILIZING THE WASTE PRODUCTS OF SUGAR REFINERIES.—V. G. Bloede, Brooklyn, N. Y.
- 89,280.—STOVE GOVERNOR.—Reinard Blum, Champaign, Ill.
- 89,281.—FENCE-BOARD GAGE-HOLDER.—Daniel Bordner, Canton, Ohio. Antedated April 22, 1868.
- 89,282.—CHAIN.—J. F. Brewer, Plantsville, Conn.
- 89,283.—NUT LOCK.—Kennedy Brown, Gardner, Ill.
- 89,284.—ADJUSTABLE GATE FOR GRAIN ELEVATORS.—Simeon Brown, Utica, Ohio.
- 89,285.—COMPOSITION FOR PRESERVING EGGS.—W. C. Brunson (assignor to himself and Geo. Rowan), Chicago, Ill.
- 89,286.—BURGLAR ALARM.—I. N. Batek, Elgin, Ill.
- 89,287.—HAMES.—W. H. Bustin, Watertown, Mass.
- 89,288.—HAMES FOR HARNESS.—Wm. H. Bustin, Watertown, Mass.
- 89,289.—STEAM-ENGINE CUT-OFF.—Chas. Carr, Boston, Mass. Antedated April 17, 1868.
- 89,290.—TWISTING AND DRAWING HEADS FOR SPINNING MACHINES.—Cyprien Chabot, Philadelphia, Pa.
- 89,291.—STEAM GENERATOR.—James C. Cochrane, Rochester, N. Y.
- 89,292.—SPRING-BALANCE HAMMER.—John Collins, Parma, Ohio.
- 89,293.—VELOCIPÈDE.—Edwin Cowles and George R. Metten, Cleveland, Ohio.
- 89,294.—TABLE CAR OR CASTER.—Eli L. Crandall, Williams-town, N. Y.
- 89,295.—DOOR FASTENER.—W. F. Davis, Boston, and C. E. Broad, Milton, Mass.
- 89,296.—TRACK CLEANER.—Augustus Day, Detroit, Mich.
- 89,297.—SWING.—C. M. Dillon, Philadelphia, Pa.
- 89,298.—MACHINE FOR CLEANING COFFEE.—W. H. Elton, Baltimore, Md.
- 89,299.—OIL CAN.—W. A. Fenn (assignor to himself and H. B. Beach), Rochester, N. Y.
- 89,300.—ANIMAL TRAP.—W. A. Fenn, Rochester, N. Y., assignor to H. B. Beach, Meriden, Conn.
- 89,301.—GATE.—Benjamin Franklin Fisk, Fredonia Township, Mich.
- 89,302.—FELT SUSPENDER END.—T. J. Flagg (assignor to "Fisk, Clark & Flagg") New York city.
- 89,303.—CULINARY STEAMER.—Israel Forman, Fairmount, W. Va.
- 89,304.—STOVE GRATE.—Calvin Fulton (assignor to N. H. Galusha), Rochester, N. Y.
- 89,305.—FLY TRAP.—Benjamin Glasscock, Hillsborough, Ohio.
- 89,306.—TRESTLE.—Jonathan Goodher, Burlington, N. J.
- 89,307.—BOOK HOLDER.—W. D. Gridley, New Britain, Conn.
- 89,308.—ELECTRIC SIGNAL FOR RAILROADS.—Thomas Hall, Boston, Mass., assignor to himself and William Dillon, Stamford, Conn.
- 89,309.—FISHING TORCH.—George Haneline, Akron, Ohio.
- 89,310.—OSCILLATING FURNACE FOR PUDDLING AND REFINING IRON.—John Heatley, Etna, Pa.
- 89,311.—COMPOUND FOR FORMING BUILDING BLOCKS.—Geo. Heim (assignor to himself and John Ruchty), Napierville, Ill.
- 89,312.—MANUFACTURE OF SHEET IRON.—C. C. Hinsdale, Cleveland, Ohio.
- 89,313.—APPARATUS FOR SCOURING AND DRYING SHEET METAL.—C. E. L. Holmes, New York city. Antedated April 20, 1868.
- 89,314.—MEDICINE FOR CATTLE AND OTHER ANIMALS.—O. E. Hornidy, Chauncy, Ill.
- 89,315.—DRESS PROTECTOR FOR CARRIAGE WHEELS.—P. G. Hubert and J. W. Pitney, New York city.
- 89,316.—DENTAL IMPRESSION CUP AND SUCTION MOLD.—G. H. Hurd, Memphis, Tenn.
- 89,317.—ROCKING CHAIR.—Henry Hursh, Sen., Mansfield, O.
- 89,318.—PROCESS OF DISTILLING SPIRITS.—C. B. Jarvis, New York city.
- 89,319.—MACHINE FOR WRAPPING SUGAR KISSES.—T. Laramie and J. A. Scott, Wheeling, W. Va. Antedated April 17, 1868.
- 89,320.—PREPARATION FOR RAISING BREAD.—R. P. Leonard, Keene, N. H.
- 89,321.—SPRING-BED BOTTOM OR CUSHION.—H. E. Maker (assignor to himself and H. C. Hoyt), Newton Upper Falls, Mass.
- 89,322.—HUB AND SPOKE FOR CARRIAGE WHEELS.—J. Maris, Marietta, Ohio.
- 89,323.—OYSTER DREDGE.—T. F. Mayhew, Port Norris, N. J.
- 89,324.—HARVESTER.—L. J. McCormick, W. R. Baker, and L. Eppelring, Chicago, Ill.
- 89,325.—WASH BOLLER.—T. McMullin, I. N. Mendenhall, and M. Mendenhall, Jr., Osgood, Ind.
- 89,326.—MACHINE FOR MAKING TIN-LINED LEAD PIPE.—H. Merrie, Cincinnati, Ohio.
- 89,327.—FRUIT CAN.—Henry Mitchell (assignor to himself, G. W. Getzlander, and J. H. Protzman), Osborne, Ohio.
- 89,328.—WATCH.—C. S. Moseley, Elgin, Ill.