# TREATISES AND INVENTIONS DESIRED IN FRANCE

We find in the last number of l'Invention a list of the prizes offered by the Industrial Society of Amiens, and though it is too late for competition from this country, the list may be interesting; we accordingly present a brief translation.

First-Memoir on the fabrication and sale of bricks in the department of the Somme. Silver medal.

Second-Memoir on the construction of the buildings and the arrangement of the machines for the manufacture of linen, cotton and wool cloth. Gold medal

Third-Memoir, with designs on machines, for raising the materials in constructing buildings. Sil ver medal.

Fourth-Prize for the invention of a pyrometer for measuring the temperature of the gases escaping from the furnaces of steam boilers. Silver medal.

Fifth-Prize for the best heaters of steam boilers in the department of the Somme. \$100.

Sixth-Prize for the invention and application of a good meter for measuring the water fed to steam boilers. Gold medal.

Seventh-Prize to be distributed to a certain num ber of workmen of the department, remarkable for their conduct, labor, morality and devotedness.

Eighth-Construction of a power loom in which the feed and take-up shall proceed regularly without requiring any manual adjustment from the beginning to the end of the work. Gold medal.

Ninth-Construction of an automatic knitting loom making the return stitch. Gold medal.

Tenth-Construction of an automatic knitting loom, making the return stitch and narrowing. Gold medal and \$20,

Eleventh-Prize for the best description of a spinning of wool mixed in all its parts. \$60 given by M. Vayson.

Twelfth-Prize for the best description of a dyehouse for dyeing woolen yarn in the skin; the heating to be done by steam, which must also supply a small engine. \$40 given by M. Vayson.

Thirteent/i-Prize for the invention of a good dress ing or facing for linen cloth. \$20 given by M. Boudard.

Fourteenth-Memoir on the improvement of lands Silver medal.

Fifteenth-What will be the advantages of the cultivation of tobacco in the department of the Somme. Silver medal.

Sixteenth-Indicate new means for the preservation of grains in store. Gold medal.

Seventeenth-Present the finest and richest collec tion of woods of the country, worked and in the rough. Silver medal.

Eighteenth-To find for the velvets of Utrecht, a dressing filing the following conditions :- 1st, To be without odor; 2d, Not to alter, either in color, softness or brilliancy; 3d, To preserve the softness of the tissue; 4th, Adapted to any length of nap. Gold medal and prize of \$20.

Nineteenth-To find the means of producing the bitartrate of potassa, otherwise than by deposit from wines. \$200.

Twentieth-For a composition which in dyeing woolens will replace with a notable economy tartar in colors requiring the employment of the salts of tin. \$200 and a gold medal.

Twenty-first-To find the means of giving immediately and with economy to the decoctions of Campeachy the tinctorial force which they acquire only by age. Silver medal.

Twenty-second-To find for dressing cotton velvet a preparation which will replace animal glue, at the same time giving suppleness to the tissue, and preserving to it the strength necessary for sale. The mucilage must be economical, without odor, and without action on the colors. Gold metal.

Twenty third-For specimens of cotton velvet hav ing the qualities of English velvet in color and solid-Gold medal. ity.

Twenty-fourth-For an easy means of detecting the adulteration of oils. Gold medal.

Twenty-fifth-For a better means of bleaching cotton velvet, cut and not cut. Silver medal.

Iwenty-sixth-For a lubricating oil. Gold medal.

measure in a practical manner the lubricating qualities of oils. Twenty-eighth-A means of applying in a practical

manner hydrate of alumina to the filtration of sugars. Twenty-ninth-A memoir on the use of trade marks,

and the means of rendering them practically efficacious. Thirtieth-To set forth the advantages and the inconveniences which result, in both a moral and material point of view, from an increase of the working population in the great manufacturing centers, in consequence of the development of industry. Gold

medal Thirty-first-Study on the industrial arts in the department of the Somme, and on their progress or decline from the thirteenth century to the present time. Gold medal.

Thirty-second-Study on the habitual maladies of the workmen of the department of the Somme, following their diverse professions. What are the hygienic measures to be employed for each class of workmen ? Gold medal.

# "Cannel Coal."

About a century ago the celebrated Duke of Bridgewater was the proprietor of a large estate situated at a place called Worsley, seven miles from Manchester. This estate contained numberless valuable coal seams. casily to be got at, but nevertheless comparatively worthless, in consequence of the great expense and difficulty of transporting the coal to market. The Duke, being a singularly enterprising individual. determined, if possible, to remedy this defect, and by one of those happy coincidences which so frequently reward a praiseworthy effort, he found, in the selfinstructed genius James Brindiey, the very man to contrive the means for securing the desired end. Suffice it to say that Brindley constructed an excellent profit paying canal between Liverpool, Manchester, Worsely, and the Great Wigan district. This canal appears to have been finished about the year 1766, and store-houses were built at various points at its course, where the Duke's coal was deposited, for the purpose of supplying the immediate neighborhood. At this time the word "kennel" or "kannel" we. generally employed in Lancashire and Cheshire to designate an artificial watercourse; and even Brindley himself, in some of his letters, speaks of a new undertaking as "the Duke's kennel." It is not, therefore, surprising that the Duke's coal should have received the name of "kennel coal," being, so to say, kennel borne; and this name would be peculiarly applicable at Liverpool, where sea-borne coal from Whitchaven. in Cumberland, had long been in use, and was, moreover, an article differing in many of its qualities from the Duke's coal. That this is the true origin of the name now applied to this kind of coal is further established by the fact that the eminent geologist Werner, who visited the coal districts of England not long after the above period, has adopted the very word, and in speaking of the Wigan coal calls it "kennel kohle." This word has indeed been lately written ' cannel" in this country, and some ingenious persons, finding themselves quite at a loss to discover the source of such a name, come to the conclusion that it is derived from the word "candle," and to support this they have asserted that slips of this kind of coal will burn like a candle; an assertion which we need hardly say is altogether tabulous .- Newton's Journal of Arts.

# SPECIAL NOTICES.

JAMES WARREN, of Springfield, Mass., has petitioned for the extension of a patent granted to him on the 15th day of July, 1851, for an improvement in revolving breech-loading fire-arms.

LEWIS LILLIE, of Troy, N. Y., has petitioned for the extension of a patent granted to him on the 15th day of July, 1851, for an improvement in fire-proof safes.

Parties wishing to oppose the above extensions must appear and show cause on the 26th day of June next, at 12 o'clock, M., when the petition will be heard.

WHITE-WASHED walls which are to be papered should be well brushed over with strong vinegar previously, or the paste will not adhere.

It is asserted that the disbandment of Lee's army has Twenty-seventh-The invention of a machine to reduced the expenses of Government \$1,000,000 a day.



ISSUED FROM THE UNITED STATES PATENT-OFFICE FOR THE WEEK ENDING APRIL 25, 1865. Reported Officially for the Scientific Amer

ar Pamphlets containing the Patent Laws and ful particulars of the mode of applying for Letters Paten t specifying size of model required and much other in formation useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the SCIENTIFIC AMERICAN, New York.

47,374.-Slide for Extension Table.-Erastus P. Allyn, North Canan, Conn.: I claim a slide for extension tables manufactured of malleable cast-iron or other metal, with its parts fitted together by the dove-tail projections and recesses, and provided with stops, substantially as herein described.

[This invention consists in having a series of slides of malleable -iron, and fitted together by means of dovetall projection grooves, and provided with stops, whereby a very economical and desirable silde for the purpose specified is obtained, and the annoy-ances and embarrassments occasioned by the ahrinking, swelling

and warping of the ordinary wooden slides are avoic. (a) 47,375.—Coffin Handle.—Ira Almy, Farmer, N. Y. : I claim a detachable coffin handle, secured to a coffin through the medium of a plate applied in the manner substantially asshown and describe J.

[The object of this invention is to obtain a han chmay be readily applied to a coffin, and detached from it in a moment of time, and without the aid of any mechanical tools, whereby a set of ilesmay be applied to an indefinite number of coffins, er being applied to a coffin when the body is plac d in it, i ormer being app removed when the coffin is to be encased or deposited in its final place.)

7,376.—Paper Bag.—James Arkell, Benj. Smith and Adam Smith, Canajoharie, N. Y.: We claim as a new article of manutacture a quadrangular paper g, w th a double bottom produced by folding and pasting in the rite dar manner horein described. 47.370 Adam We claim

[This invention consists in making or preparing paper bags in such

way as to give to them at their upper ends a flexible character, so that when properly filled with flour or other substances the si the bags at their upper ends will come together after the manner of the sides of a cioth bag.]

47,377.—Steam Engine.—John Baird, New York City: I claim, First, A bonzontal engine, provided with a box framing near and attached to the cylinder, and containing vertical pumps, substantially as described, said framing also constituting the con-denser, or the channel ways thereof. Second, I claim a horizontal engine, having a box framing, con-taining pumps and an independent pillow block framing, when the latter is combined with the former by wrough throws, when the latter is combined with the former by wrough the characteristics set forth in the second claim, on opposite sides of a vessel, when such appropriate throws the first substantially as how openings through the framing for the passage of a propeller shaft or shafts, substantially as her enbefore described.

47,378.-Table and Desk.-Cyrus Baldwin, Manchester, н

 $\mathbf{N}_{\cdot}$ ,  $\mathbf{H}_{\cdot}$ : I claim the combination of the table and writing desk, when arounged to operate substantially as set forth.

47,379.—Hay Rack.—Goldsmith Baldwin, Blufton, Ind.: I claim the binder, B and C, or their equivalent, for the purposes

set forth. 47,380.—Cultivator.—Lester B. Barton, Metamora, Ill.: I claim the hinged or jointed frame, E. placed within the main frame, A. as shown, in combination with the laterally-swinging shovel or plow standards, g.g. levers, J., with stirrups, K.X. at-tached, and the curved or bow-shaped bar, M. all arranged to ope-rate substantially as and for the purpose herein set forth.

This invention relates to an improved cultivator. of that class in I has investion textes to an improve click and text of the case which the plows or shovels have a lateral adjustable movement, order that they may be made to conform to the sinuosities of rows of plants, and cast the earth up to the same or cast it there from, without the liability of plowing out the plants or mjuring the roots thercof.]

47.381.-Coal-oil Barner.-W. W. Batchelder, New York

City: I claim the employment, in combination with a tabular wick holder and vapor or gas-generating and air-mixing chamber, of a perforated plate, or the equivalent thereof, together with a metallic or other heat conductor or conductors projecting downwards and disping into the wick, substantially in the manner herein described, for operation as herein set forth.

2. Microscope. J. J. Bausch (assignor to Bausch & Lomb), Rochester, N. Y.: aim the combination of the object piece, A, eve piece, B, and c, substantially as and for the purpose here in set forth.

47,483. I clair

7,483.—Churn.—Charles F. Baylor, Clinton, N. J.: I clsim the combination of the belt and rollers, substantially as de-cribed, with the stides, S and T, attached to the dasher shafts, and he block or attachment, J, deriving its motions from the hand rank asd its connections, as described and represented.

crank and its connections, as described and represented. 47,384.—Shaking and Rocking Table for Amalgamating Gold, Etc.—Adolph Behr and Wm. James Ward, Black Hawk, Colorado: We claim a shaking or rocking table, with amalgamated copper or brass rifles or grooves, which may be charged with more or less ad-ditional quicksliver, alone or in connection with one or more wooden riffee or grooves, in the shape and manner above described, or con-surcted in any manner, substantially the same, which will impart os sublecharces suspended io water both the alting and splashing motion which throws and forces the particles in contact with the amal-gamated surface of the copper or brass riffies or grooves.

gamated surfaces of the copper or brass riffies or grooves. 47,385.—Manufacture of Soap.—Jacob B. Bennett and James S. Gibbs, Buffalo, N. Y.: We claim the agitation and comminging by any suitable ma-chinery of the ingredients used for making soap in a closed yessel while under heat and pressure sufficient to insure the desired new combinations, and produce cheaply and quickly a uniform good quality of soap. 17,38

86.--Straw Cutter and Feed Mixer Combined.-- E. F. Bishop, Burton, Ohio: jaim the special arrangement of the hopper, H. mixer, F. shaft,

J çia

, wit in its arms, f, and spout, g, in combination with the straw atter, when operating conjointly, substantially as and for the pur-

47,387.—Press.—Louis Boudreanx, Thibodaux, La.: In combination with the toggies, I I, and beater, H, I claim the shaft, C, and jacket, F, so constructed as to be coupled and un-coupled by the lever, G, and adapted to permit the rope, K, to be unwound and the beater to be raised without reversing the motion

This invention relates to a new and improved press for compress ing substances such as cotton, hay, etc., for the purpose of baling the same. The invention consists in the employment or use of togglelevers and a windlass arranged in a novel manner, so that press may be used in either a vertical or horizontal position and by any convenient power.)

47.388 -Coupling for Shafting.-Robert Briggs, Phila

delphia, Pa.: I claim the construction of couplings for shafts of a cylindrical asting or forging, C, with a slot or opening, n, along one side, and lamped together by bolts, b, as described.

 Claimed together by bolts, b, as described.
 47,389.—Galvanic Battery.—Daniel J. Brown and Cyrus W. Baldwin, Boston, Mass.:
 We claim the arrangement of the separate iron positive bars or rods, C G, radially around, and in combination with the carbonaceous negative plate, D, substantially as and for the purposes herein specified. ceous neg

47,390.—Engine for Operating Rock Drills.—James D. Butler, North Adams, Mass.: I claim the combination and arrangement of the piston, E, the openings, c<sup>2</sup>, the piston rod, F, its packing, b<sup>a</sup>, the piston, G, and the openings, d, with the cylinders, K A, the tubular piston rods, C D, and the hollow cones, I and L, and the gibs, J J, the whole being constructed in manner and so as to operate substantially as de-scribed.

scribed. I also ciaim the combination of the crosshead, Q, and the slides  $Q^{\nu}$  (constructed and operating substantially as described), with th drill, N, and the tubular piston, C. And I also claim the combina tion of the colar, Q', there with, the same being for the purpos specified.

drill, N, and the tubular pistoï, C. And I also claim the combina-tion of the colar, Q, therewith, the same being for the purpose specified. A also claim the connection of the crosshead, Q, with the piston rod, C. In such manner that there may be a freedom of transverse and retary motion with reference to one another, as and for the pur-pose hereinbefore described. T also claim the combination of the curshioning space, X, and the piston extension, b" b", or their equivalents, with the port, r', ar-arged in the cylinder, and with reference to such space, substan-tially in manner as specified. T also claim the construction of the cylinder, A, with the reduction of bore, as shown at a 4, and with the biston, B, with the part, b b', to operate in such reduction, the port, r, being disposed with re-ference thereto as specified. T also claim the combination of fine spring, M, the nut, II, and the series of notches, h h, or their equivalents, with the hollow cone, I, the same being substantially as and for the series, P P', of a conical ring, the cylinders, p, P and D" P', the ring, P', and the hollow cones in the the ombination of the spring, W, the pin, w, and the stantally as and for the purpose described. Also claim the combination of the spring, W, the pin, w, and the piston, E, the piston rod, F, its packing, b', and the piston G. Also, the combination of the spring, W, the pin, w, and the piston, E, the piston rod, F, its packing, b', and the piston G. Also, the combination of the whole being arranged substantially as described. T also claim the combination a well as the arrangement of the piston, E, the piston rod, F, its packing, b', and the piston rods, D F, arranged, with a tubular space between them, the piston rods, D F, arranged, with a tubular space between them, the piston, Ed, d T, and the packing, b', the whole being arranged substantially as described.

-Artificial Skating Pond.-M. C. Campbell, Phil-47.391

7.391.—Arthuckii Skatning Pond.—M. C. Cuppbell, Phil-adelphia, Pa.: I claim the preparation of a surface with a congealed material of omposition substantially as described and for the purpose specified

47,392.- Curtain Fixture.-James Chase and Wm. S. Longhborough, Rochester, N. Y. Antedated April 15, 1865: We claim the combination and relative arrangement of the guide loop, i, on the bracket, b, with the spool and bilong journal socket, c, and stop, e, the parts being constructed and operating in the manner and for the purposes shown and described.

maner and for the purposes shown and described.
 47,393.—Apparatus for Obtaining Extracts from Vegetables, etc.—John Chilleott, Brooklyn, N. Y. Antedated April 20, 1865:
 First, I claim subjecting the substances to the action of heat in a steam tight chamber or box in which they are separated by perforated she lives and in which they are surrounded by an atmosphere of steam, but protected from direct contact with the steam during the whole or any portion of the extracting process substantially as herein described.
 Second, Providing between such chambers a connecting steam of preshibited aurong usy stage of the process, substantially as herein in specified.

pecinea 394.—Process for preparing Grain for Distillation.— John Chilleott, Brooklyn, N. Y. Antedated April 15, 1865: rst, I claim the process of preparing grain for distillation by ming and crushing it between rollers substantially as berein

47,395.—Mode of Splicing Timbers.—H. M. Claffen, Cleveland. Ohio: Furst, I claim the knobbed plates, C', as and for the purpose se forth.

second, I claim the knobbed plates, C', in combination with the link. C, or its equivalent substantially as and applied to the purpose specified.

47,396.—Breech-loading Fire-arm.—John W. Cochran, New York City: Iclaim the safety pin.b, applied and operating substantially as herein described in combination with the hammer and with a spring catch applied to lock the harrel opposite the breech as herein set forth.

10rn. 47,397.—Horse-shoe.—William Coes, Worcester, Mass.: I claim the hars, A C C, connected by joints and provided respectively with a toe plece or cap. B, and lips, D D, and the bars, C C constructed or secured by a suitable eatch or fastening substantially as and for the purpose herein set forth.

This invention relates to a new and improved horse-shoe of that class which are secured to the hoof without the aid of nalls, so that they may be removed from and secured to the hoof at any time out the services of a smith or shoer.]

47,398.—Mop Head.—Stillman Cooper, Antwerp, N. Y.: I claim the used or permanent jaw, A. provided with oblong slots, h.b. and noches, d.d. in combination with the morable or adjusta-ble jaw, B. provided with plus g.g. and tech. e. and the sliding col-lars, C. C. thread or placed on the slids c. cf. f, of the jaws, substan-tially as and for the purpose set forth.

47,399. —Oil Elector.—Erastus Crooker, Buffalo, N. Y.: Iclaim a steam pipe covered with guitn percha or other equivalent material fitting closely thereto, in combination with an ejector and discharge pipe, substantially as and for the purpose set forth.

and discharge pipe, substantially as and for the purpose set forth. 47,400.—Device for Well Boring.—James Donnell, Alle-gheny City, Pa.: I china the combination of two teethed rings, the teeth of which have one side parallel and the other side at an angle to the axis of the rings, with the bevelled arms, o o', of a shaft which has a recip-rocating motion between the rings, for the purpose of producing an intermittent rotary motion of the shaft, or rings, according as one of them is fixed and the other capable of rotation, at each stroke of the shaft, the length of the arc of motion at each half stroke being an barein, before described

47,401.—Sap Pans.—Henry Earl, Edwards, N. Y.: I claim, First, The combination of the receiving pipe. A. 

steam pipe. D, substantially as and for the purpose set forth. Second, The combination of the movable pan, H, with the pipes, A and D, substantially as and for the purpose set forth. Third, The combination of the steam box, K, with the movable pan. H, substantially as and for the purpose set iorth. Fourth, The combination of the main pan, M, will the steam box, K, substantially as and for the purpose set forth. Fifth, The combination of the elideor gate, o, with the main pan, M, substantially as and for the purpose set forth. Sixth, The winding arrangement or channeling the pan, by means of which the sap, being admitted at the central or hottest par. of the pan, is conducted to the outer or cooler parts of said pan substantially as described and ior the purposes set forth.

pan substantially as described and for the purposes set forth. 47,402.—Process for Treating Sirup and Saccharine So-lutions.—Edward P. Eastwick, Baltimore, Md.: I claim the use of acids, acid saits or neutral saits for the purpose of decomposing and alterng the coloring compounds in molasses, and analogous sirups, the products of mother liquor remaining after the crystalization of the sugar manufacture or reding. 47,403.—Awl.—R. Egan, Brooklyn, N. Y.: I claim, First, Constructing awl hafts in the manner substantially as above described. Second, In combination with the serve threaded socket piece, B, constructed as specified, I further claim forming a serve thread upon the shank of the awl as and for the purpose set forth. If his invention consists in a novel manner of fastening an awl

[This invention consists in a novel manner of fastening an aw

nio its haft, whereby it is easily and securely fixed in place with strain upon the awl and without the usual liability of splitting the hand!e.l 47.404

17,404.--Sawing Machine.-William Emris and Henry J. Bosworth, Hudson, Mich.: We claim the lever, 8, in combination with the spring, V, when onstructed and operated substantially as and for the purpose here-

Conn.: lelaim the combination of the connecting rod with the hammer when they are constructed and attached, substantially as herein de cribed. Second. Jelaim the combination 47.405.—Drop Hammer.—John Evans, New Haven

scribed. Second, I claim the combination of the connecting rod with the crank pin, when they are constructed, arranged, and fitted for a 1 justment substantially as herein described and set forth.

47,406.—Pencil and Eraster.—W. R. Evans and L. D. Benner, Thomaston, Maine : We claim the combined pencil and erastr above described, con-structed substantially in the manner above set forth. 47,407.—Smelting Copper Ores.—Wm. L. Faber, New Vorth Citra

York City: I claim the within described process for expelling antimony and rsenie from copper and copper ores by rossting with some sub-tance developing chlorine during the process of roasting, substan-ially as herein set forth. I cla

[The object of this invention is to remove from copper and copper ores during the processof smelting such impurities as antimony and arsenic, and this purpose is effected by a process which is strictly confined to copper and copper ores, and which has to be modified materially for treating other ores.]

47,408.—Carriage Jack.—Austin W. Field, Vergennes

VL: I claim the stock or standard, in, perservated sliding bars, B B, and lever, D, in connection with the pin, E, all arranged substantially as shown and described to form a new and improved carriarc jack. [This invention consists in the employment or use of two paral-

lel shiles fitted in a suitable stock or standard, and having a level placed between their upper ends, all being arranged in such a man ner that the device may be readily applied to axles of any hight, and the latter elevated and secured in such position with the greates facility, to enable the wheels to clear the ground or floor, so that ay be removed from and placed on the axle for lubricating they m

purposes.]

purposes.] 47.409.—Coal Brenker.—Jacob Fox, Philadelphia, Pa.: I claim a stationary hopper, B R, adjustable at the bottom, to regulate the size of coal, substantially as described and for the pur-pose specified. Second, I also claim the vibrating plates, c c, in combination with picks, D D, substantially as described and for the purpose specified. Third. I also claim a stationary hopper, B B, with picks, D D, in combination with vibrating plates, c c, or their equivalents, as and for the purpose specified.

47,410.—Mode of Treating Oil Wells to Remove Parafine, Tar, etc.—J. Fraser, Buffalo, N. Y.: I claim the method of treating petroleum wells with hot liquids for the removal of obstructions composed essentially of parafine, sub-stantially as set forth. 47,411.—Apparatus for Delivering Paper from Printing Presses.—C. O. Furbush, Machias, Mc.: I claim the bars, D E., provided respectively with jews, c d, the projection f, and pin, e, in combination with inclined planes, g f. the spring, F, and the bolt, C, by which the jaws are opened and return, substantially as above described and represented. This invention consists in the employment or use of ninners ar-

This invention consists in the employment or use of nippers arranged in such a manner as to have a reciprocating motion to con vey the sheets from the press.]

47,412.—Winding and Setting Watches.—Frederick A. Giles, New York City: I claim the combination of the wheel, C, having two series of teeth, a and c, turning on a fixed pivot, n, the two pinions, b d, movable lengthwise upon the arbor, the spring, f, and the silding pin, h, the which arranged and applied in relation to the wheel, A, and the cannon pinton, subtantially as herein specified.

47,413.—Ventilator.—Henry A. Gouge, Brooklyn, N. Y.: I claim, First, The ventils ting apparatus described, with the sev-eral parts arranged and acting together substantially as set forth. Second, The combination of light, F, Aues, B and C, and ventilator E, constructed and arranged substantially as and for the purpose: E, constru described.

described.
47,414.—Coffin.—Thomas Graham, Philadelphia, Pa.: Iclaim the vessels, G, containing alcohol or other equivalent fluid, and arranged in a coffin so as to be detachable therefrom, as set forth, for the purpose specified.
47,415.—Grape Wire Support.—F. B. Green, Seneca Falls, N. Y. Antedated April 17, 1865.
Iclaim making the frame or support, B, aljustable vertically be-tween the posts, A A. by means of the adjusting holes and pins, df, used in the manner and for the purpose herein set forth.

47,416.—Roofing Composition.—Nicolaus Groh, Helen-ville, Wis.: I claim a roofing compound made of the ingredients herein de-Reribed, and mixed together about in the proportion and substan-tially in the manner herein set forth.

[This invention relates to a roofing compound which is perfectly impervious to water, and which is also fire-proof.]

impervious to water, and which is also fire-proof.] 47,417.-Grain Scparator.-John H. Hamaker, Trease's Store, Ohio: I claim the construction of the carrier, with the close and open portions together, with the transverse grooves, a a, and projec-tions, d a, substantially as and for the purpose herein specified T also claim conveying the straw and grain forward and upward on a single carrier, by giving the said carrier a rapid ibratory mo-tion through the means of the double sets of cranks and auxiliary connecting rod, substantially as and for the purpose set forth. T also claim communicating the vibratory molion to the shee di-rectly from the vibrating carrier by means of the connecting rod, G, or its equivalent, as herein described. 47,418,-Lamp-shade Holders.-James Hanley, New York: substantially as and for the purpose herein set forth.
47,434 — Apparatus for Inhaling Vapors.—A. P. Light-hill, Boston, Mass.:
I claim the exhalation apparatus, substantially as and for use in manner as described.
47,435.—Churn.—John B. Lindsay, Davenport, Iowa: I claim, first, Arming the blades of the dasher of the or inary

47,418, -Lamp-shade Holders.-James Hanley, New York: Firet, I cialm the making a ring attachment with clips, for the purpose of holding the shade and connecting with the lama.

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Second, I claim the clips. Third, I claim the mode of connecting the shade to the lamp ass by suspension. Fourth, I claim the loose hanging of the shade, and the conse-nent horizontal action. Firth, I alm the creasing of the paper. Each claim substantially the m aber and for the purpose as herein described and set Fifth, I

297

orth

47,419.—Marine Propeller.—Austin S. Hatch, Addison N. Y.: I claim the combination and arrangement of the double screws or wheels, C D, revolving in opposite directions, and the taper form of the hull or bottom of the vessel before and behind the said screws or wheels, and in combination of the form of their blades, substan-tially as and for the purposes herein Specified.

47,420.—Removing Foreign Substances from Sugar.— Jonas Hoover, Oscaloosa, Iowa: First, I claim treating crude sugar to alcohol and sweet mlik, sub-stantially as and for the purpose specified. Second, I claim subjecting sugar to a second pressure between cloths, after the same has been moistened with alcohol and mlik and pressed once, substantially as described.

and pressed once, substantially as described. 47,421.—Implement for Cutting Rubber, etc.—Emil Hubner, New York: First, I claim an adjustable circular packing cutter, constructed as herein described, as a new article of manufacture. Second, The movable head, C, bolding the knife, d, in combination with the rule, A, erew handle, D. and stationary center, a, con-structed and operating substantially as and for the purpose set forth.

forth. Third, The swiveling or stationary arm rest, b, in the stationary head, B, in combination with the center, a, and adjustable knife, d, constructed and operating substantially as and for the purpose de-

scribed. 47,422.—Stair Rod Fastening.—Henry Jackson, Brook-lyn, N. Y.: I claim the spring, D. dish, E, and the supplemental shoulder, c, applied to one or both buttons, in connection with the fast stair rod, having its fanges, a, provided with curred notches, e e, all arranged substantially as and for the purpose herein set forth.

[This invention relates to an improvement in the ordinary fasten ing hitherto employed for securing flat stair rods to the "risers" of the stairs, and it consists in the application of a spring to one of the buttons composing the fastening, whereby the rods are securely

fastened, being prevented from casually slipping off from the but tons by a longitudinal movement.]

47,423.—Fire I'lace.—Wm. H. James, Cincinnati, Ohio: I claim as a new article of manulacture the fire-place composed of the elements, A B C D E F and G, the same being formed, com-blued and adapted to operate in the manuer set forth. 47,424.-Steam Engine.-Henry Johnson, Pittsburgh,

Pa.: I claim the use of a movable disc or independent piston seated in the steam cylinder above the working piston, with a steam space be-tween it and the cylinder head, through and into which the live steam from the bolier is caused to pass on its way to the steam chest of the engine, for the purpose of a steam cushion, and to in-crease the efficiency of thesteam engine, substantially as hereinbe-foredseerible redescrib

47,425.—Machine for Grinding Paper Pulp.—John F. Jones, Rochester, N. Y.: Iclaim the machine for grinding paper pulp, having the grinding surfaces, d. d. made dishing or in clined upward from the center to the periphery, and used in connection with the case. H, the whole arranged and operating substantially as and for the purpose herein set forth.

47,426.—Gas Heater.—J. H. Jones, New York City: I claim the combination and arrangement of the concave or in-verted conical-shaped screen, C, and tube, A, in conne ion with a gas jet or opening, G, for the purpose herein set forth.

gas jet or opening. G, for the purpose herein set forth. 47,427.—Machine for Oiling Wool.—James Kelly, Troy, N. Y.: I claim the two rollers, A A' one of which dips in a cistern con-taining oil, while the other serves to spread the wool, when used in combination with a can, C, and pipes, b.c. arranged substantially as herem set forth, for the purpose of keeping up a uniform sup-ply of oil to the lower roller.

(This invention consists in olling the wool between two ruller of which runs in a cistern containing the oil, in such a manner that by the action of the two rollers the wool is spread in a thin sliver or sheet, and the oil taken up by the lower roller is communicated uniformly to all the fiber.

47,428.-Universal Chuck.-Wm. Haskell King, Troy,

N. Y.: I claim a concentric or other chuck, provided with one or more aterally adjustable plates, substantially as herein shown and de-scribed, for the purpose of converting a concentric chuck into an eccentric chuck, as set forth.

This invention relates to a new and improved chuck for lathes, by which the eccentric and concentric chucks are combined and the chuck rendered capable of being adjusted to suit any kind of work to be operated upon in the latine.]

47,429.—Hanging and Latching Farm Gates.—Ira Kin-man, Freeport, III: I claim, First, The arrangement and combination of the adjusta-ble hunges, P and K, operating on the rings, H and I, on the back post, as herein described, and for the purposes set forth. Second, I also claim the construction and combination of the up right bolt, A, with the movable fatch, B, as operating on the staple E, and movable prop. G, as herein described and for the purpose set forth.

Set forth. Third, I also claim the construction and combination of the self-acting prop. G, and staple, E, as herein described, and for the pur-pose set forth.

47,430.—Jewel Case.—G. F. Kolb, Philadelphia, Pa.: I claim the within-described jewelry ease, composed of the lower portion. A, the upper portion or lid. A. the leaf, B, and spring, D, the whole being constructed and operating substantially as and for the purpose herein set forth.

47,431.—Mctallic Skeleton Hat Frame.—Albert Komp, New York City: I claim for nuing the frame for a hat body of hoop-skirt spring wire. by forming two boops, and by connecting the same with three or more vertical stays, by means of clasps formed of thin metallic stilps, each of said clasps being "shaped into a horizontal part, O P, and a vertical stays, substantially in the manner and for the pur pose substantially as described.

47,432.-Fountain Pen.-R. J. LaMothe, New York

(1432.--roundarin ren.-iv. 5. Latitute, New York City: I claim, First, The spring ink-conveyor, formed as a trough, pass-ng through an opening near the pen, in the manner and for the surposes sprended. Second, I claim the peckil, x, formed in the manner setforth, and combined with the plunger of the fountain pen, as specified.

47,433.-Washing Machine.-Andiew F. Lapham, New

York City: First, I claim the spring, M, combined and arranged relatively to the rocking box, D, and bed, A, or its equivalent, substantially in the manner and for the purposes herein set forth. Second, I claim the hinged boxinds, HH, and springs, I I, in com-bination with a rocking box, D, adapted for washing or churning, substantially as and for the purpose herein set forth.

burn with leaves set vertically upon their upper faces, substantian as described. Second, The combination of the twisted shank of the dasher with a dasher constructed of vertical and horizontal leaves and blades, substantially as desci ibed.

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[The object of this invention is to produce a churn which shall mbine the simplicity and convenience of form of those in co a cheapness of construction and increased capacity for suc cessfully doing its work, and it consists in arming the blades of th dasher with leaves of metal or other suitable material, set at right angles to them, and also in Combin ng therewith the SCrew shank the dasher.]

47,436.—Gear-cutting Rules.—C. B. Long, Worcester

47,437.-Hay Spreader.-Davd Lyman, Middlefield

47,437.—Hay Spicauci.—Data 2, \_\_\_\_, \_\_\_ Conn.: First, I claim in combination with the teeth for scattering the hay of a pring attachment so arranged as to allow the teeth to yield up-wardin a cordance with the irregularities of the ground, substan-tially in the man er berein set forth. Second, The method herein described of (attaching the teeth of hay making or spreading machines to blocks, or the equivalents thereof, capable of sliding up and down, substantially as set forth. Third, In hay making or spreading machines in which levers are used hav ng an up-and-down and back and forth motion, I claim the teeth when constructed and combined with springs, giving them elas-ticity both back ward and upward, as described. used hav n teeth when ticlty both

47,438.—Photographic Name Plate.—James E. Macker-ley, Paint, Ohlo :
 I claim as an improved article of manufacture, an adjustable photographic name plate, made substantially as herein shown and de

scribed. I also claim the employment, in combination with the said name plate, of the movable letters or cards, substantially as and for the purpose set forth.

(This invention relates to a novel device to be used by photograph the object of which is to secure, in addition to the photograph ing of the sitting person or of a picture or view, and upon one and

the same negative plate, the full or any desired portion of the per son's name or the title of the picture view.] 47,439.—Cultivator.—Roswell Marsh, Steubenville,Ohio; I claim the combination of 'he rotating cylinder with the digging forms and the clearer, substantially as described and for the purpose

forlas 47.440.-Railroad Car Brake.-A. F. McCrone, Ellicott'

Ar, 40.—Rithford Car Drake.—A. F. McCrohe, Enforce Mills, Md.: I claim the coupling and brake-operating bars, extending through the length of the train and operated by the steam from the engin to rotate the , inions to whose shafts are attached the crosshead which connect by suitable rods and levers with the rubber bars, the whole described arrangement being constructed and operated sub stantially as described.

47,441.-Oil Press.-Wm. V. McKenzie, Jersey City

47,441.—Oil Press.—W III. V. MULLAULA, N. J.: I claim, first, The combination of the separate slides. D D, and mortises, gg, with the sldes, B, of the press boxes, when constructed and array preste as herein specified. Second, The lips, c. in combination with the slides, D, grooves, d, and sides, B, of the purpose described. Third, I claim the purpose described. Third, I claim the pipes, 12 ½, with bran h pipes, c f, arranged in combination with the movable sides of a press, substantially as spe-cified, so that said branch pipes retain sufficient spring to allow of the motion of the sldes of the press boxes.

47,442.—Beer Faucet.—John Miller, Buffalo, N. Y.: I claim the combination with the plunger, C, of the valve nozzle P, discharge nozzle, D, operating for the purposes and in the man ner described.

47.443.—Hot-air Furnace.—Joseph A. Miller, New York

47,443.—Hot-air Furnace.—Joseph A. Miller, New York City: Iclaim, first, Forming a heat reservoir between or within the tubes of a hot-air furnace by means of lamps or pieces, L L, of brick or other majerial which is a poor conductor of fhest, so applied that the fiame and heated gaseous products of combustion may circulate through interstices between the said lumps or pieces, substantially as herein specified. Second, De arrangement of the horizontal flue, C, drop flue, I, forward and backward circulation pipe flue, J, in combination with each other and with the cold air chamber, H, tube sheets, D D, air tubes, G G, and air-distributing chamber, E, substantially a herein specified.

47,444.—Oil Ejector.—Geo. E. Mills, New York City: I claim, first, The use of corruga'ed metal for tubing oil wells, the same being supported on a perforated bulb, and cone-pointed base, substantially asherein described. I claim the tube, C C, put together in sections, and secured by screws in sockets, on the air pipe, E, so that the point where the air forms in contact with the fluid, may be adjusted in hight, as and for the purposes set forth.

AT THE P REPORTS SET FORTH.
47,445. — Washing Machine. — Jurvis T. Mudge, Cleve-land, Ohio :
First, I claim the plunger, C. moving in a vertical plane upon the plvetor binges, c', and operated by asystem of levers, substantially as herein described.
Second, I claim the use of the tubes, C', in connection with the plunger, C, to prevent the water from overflowing and adding weight to the latter, as explained.

47.446.-Ratchet Brace.-L. H. Olmstead. Newark.

N. J.: I claim, first, The combination of the frame, B, and handle, S, of he ratchet brace, constructed and arranged substantially as set

the ratchet brace, constructed and arranged south a part of forth. I claim making the main spindle of a ratchet brace, with a part of the thread cut away between the socket for the drill and the upper end of the spindle, as shown and described, and for the purpose set

-Manual Power.-I. E. Overpeck, Overpeck's 47,447 17,447.—MADDAI FOWER.—I. E. Overpoon, Station, Obio : Station, Obio : I claim the arrangement of the connecting rods, c c, at an angl so a vertical line drawn through the center of the crank shaft o wheel, b, to operate incombination with levers, d and c, of my man nal power sawing machine, substantially as described for the pur poses specified.

47,448.—Chimney.—C. C. Phelps, Janesville, Wis.: I claim the construction of chimners of cast iron or its equiva ent, in sections substantially as described and for the purpose spe

47,449.—Shingle Sawing Machinc.—C. L. Pierce, Buffalo, N. Y.:

1410, N. 1... I claim the combination of two pair of "dog." C C, with the re-ciproceting table, A, said dogs being so arranged as to clamp the block above and helow upon each wide o' the saw kerf, in a mainer to prevent the block from pinching or binding the saw, when con-structed and operating substantially as set forth.

47,450.—Bread Cutter.—John T. Plass. New York City I claim the knife, D, and bar, E. In combination with the auto matcally moving gage, J, all arranged to operate in the manner substantially as and for the purpose specified. [This invention relates to a device for cutting or slicing bread

cat, vegetables, etc., for family or table use, and it consists in the employment of a knife and gage, arranged with or applied to a box so at to operate in a very efficient manner, for the purpose speci **Cert**. 1

-Coal-oil Lamp.-A. H. Platt, Yellow Springs, 47,451 Ohio

UDIO: I claim the combination of the downwardly iconyex perforated basilar partition, B, and the perforated cap, C, having a degree of convexity downward less than the former, substantially as and for the purpose herein specified. I also claim the combination of the faring open base, A, perfora-ted partition B, peri orated cap, C, and deep fame 'opening, d, ar-ranged and operating together, substantially as and for the purpose herein set forth.

herein set forth. 47,452.—Pum p.—Alex. F. Porter, Philadelphia, Pa.: Ichim, Brst. Constructing and arranging a cylindrical double-acting pump, having inlet through and exit passages, substantially as horein described, and adapting the same to the raising of oil or other liquids from deep wells, as set forth and explained. I also claim fastening and supporting or securing a pump in a deep well, by accurately fitting it to the bore of said well and resting it upon legs or other supports, at the bottom of the well, through which legs or support the liquid is drawn into the pump, thus rendering the pump firm and steady, preventing vibration, the opening of the joints, and other injurious consequences arising from instability, substantially as herein described and represented. 47,453.—Balongoad Sildo Vielro.

47,453.—Balanced Slide Valve.—James Rankin, Detroit. Mich.: much.: I claim the lever, D, rocker, E, link, F, and lever, G, in combina tion with the piston, H, and shide valve, B, constructed and operat ing substantially and for the purpose set forth.

The object of this invention is to balance the pressure of the steam on the back of a slide valve in such a manner that the same works equally free under a pressure of a hundred pounds or more to the square inch as it does in the open atmosphere. This object is ob, tained by combining with the valve a piston, through a series of in-tervening levers, rockers and links, in such a manner that the upward pressure of the steam on the piston counter balances the downward pressure on the back of the valve and the valve is per-fectly balanced. Patented in this country and in Europe through

the Scientific American Patent Agency.]

47,454.—Printing Press.—Henry Redlich, Chicago, Ill.: I claim the peculiar manner of constructing the type cylinder, C, to wit, by means of the metal heads, F F, wooden heads, e e', nuts, G G, wooden segments, f, and removable types, h, substantially as berein described.

47,455.—Car Coupling.—John H. Reed, New Haven, Conn.: I claim the combination of the bar, B B, with the lever, E E', and catch, b, when constructed, arranged and fitted to produce the re-quired result, anostantially as herein set forth and de cribed. Second, I claim the combination of the bar, B B, with the levers, I and k, and the spring, a a, when constructed, arranged and fitted for uncoupling, subtantially as herein described. Third, I claim the combination of the lever, E E', with the coup-ting pin, c, and link, F, when constructed and fitted for use, sub-stantially as herein described on of the lever, G, with the bar, Fourth, I claim the combination of the lock lever, G, with the bar, B B, when combined, and made to operate substantially as herein described. Fifth, I claim the combination of the draw head with the limb F.

scribed. Fifth, I claim the combination of the draw head with the link, F, inen constructed and fitted for use, substantially as herein de lien

Sixth, I claim the combi<sup>n</sup>ation of the link, t, with the pedal, g when fitted to prevent com<sup>pli</sup>ng, substantially as herein described.

47,456.—Horse Power.—J. Wyatt Reid, New York City: I claim the combination of the master wheel, F, arms, a a; sta-tionary tubuar spindle, A, platform, G, shaft, C, and one or more horizontal shafts, H, when constructed and arranged to operate as herein specified.

[This invention consists in constructing or arranging the several parts of the device in such a manner that power may be taken from different shafts having different degrees of speed, and machi-nery driven with a grater or less application of power, as circumstances may require.]

stances may require.) 47,457.—Manufacture of Hard Rubber Articles.—George Samuel Rice, New York City: I claim as a new article of manufacture, First, Watch cases or lockets made of hard rubber or vulcanite, in the manner hertinbe-fore set forth. Second, In vulcanite watch cases or lockets, I claim the method of scuring the binge, substantially as de scribed. Third, In vulcanite watch cases or lockets, I claim forming an an-mular groove, with a thin overlanging rim, for the inserting and bolding the glass, substantially as set forth. Fourth, The method of securing the hard rubber shank to the hard rubber beel, substantially as described. Fitth, In combination with vulcanite watch cases or lockets, I claim the use of varnishes, in the manner and for the purpose set forth.

forth. 47,456.—Exploding Torpedoes in Artesian Wells.—Ed-ward A. L. Roberts, New York City: I claim, First. The priming chamber, b. in combination with the flask plug and nipple; substantially as described. Second, The arrangement of the tube, r, or its equivalent, com-posed of india-rubber or other similar material, with the guard, und bolt, e, substantially as described, in combination with the thask.

47.459 -Vibrating Piston Engine.-John B. Root, New

7,459. — V IOTALING FISTON ENGINE. — JOHN D. 1000, NEW York City: First. I claim the combination of a cylinder, A, of a form sub-tantially as herein specified, and two vibrating pistons, D P\*, oc-upying reversed positors within the said cylinder, and both con-nected with the same crank shaft, to operate substantially as herein a forth

Sector whith the same crunk shalt, to operate substantially as herein set forth. Second, So arranging the connections between the said vibrating pistons and the crank, that each piston, though being only sing le-acting, may act upon the crank during more than half of each re vo-lution of the latter, substantially as a prein described. Third, The crank, E', arranged directly between the vibrating pis-tons, and within the cylinder of an engine, substantially as herein described, with a separate and independent connection with each piston, substantially as herein setforth. Fourth, The connection of the side-packing strips, c', and end-packing strips, c2, of the piston, by means of pins, f, and slots, e, in combination with morise and tenon joins, substantially as and for the purpose herein specified.

47,460.—Coffee Settler.—Wm. F. Rossman, Hudson, N.Y.: First, I claim the hollow cone, A, w th open base, having funnel, B, attached in combination with the periorated cup, C, all con-structed substantially in the manner and for the purpose set forth. Second, The open space between the base of the cone, A, and top or upper margin of fuunel, B, and for the purpose described.

47,461.—Street-sweeping Machine.—Daniel Sargent, New York City: I claim the adjustable scoop, E, and box, I, in combination with the three-armed hougers, F, adjustable brush, H, rock shafts, tt, hand levers, t, movable pinion, c, and wheel, B, constructed and op-crating substantially in the manner and for the purpose herein set forth

[An engraving and full description of this invention have beenpub iished in the SCIENTIFIC AMERICAN.]

47,462.—Adju table Tension Device for Sewing-machine Shuttle.—Frederika Schenkl, Boston, Mass., ad-ministratrix of the estate of John P. Schenkl, deceased:

deceased : f c'aim the arrangement and combination of mechanism herein escribed, when made to operate substantially in the manner and w the nurnose snecified.

1 or the purpose specified. 47,463.—Ships of War.—Charles Slater, Brooklyn, N. Y.: First, I claim the bloged adjustable keel, C, applied in combina-ti n with the main keel, B, of a vessel, and with the vertically-ad-justable rods, f, and ropes, c, all constructed, arranged and operat-ing substantially as and for the purposes specified. Second, The combination of the purposes the line, H2, constructed, arranged and operat-ing substantially as and for the purposes specified. Second, The combination of the purposes H, piston, H', and steam cylinders, H2, constructed, arranged and operating as and for the purpose specified.

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Third, The scuttling augurs, I, applied in combination with the prizontal shaft, i, and adjustable gear, p3, substantially as and for a purpose tasely chown and described.

Alter and the set of the set o

ished in the SCIENTIFIC AMERICAN.]

47,465.—Barrel-rolling Device.—Henry W. Stephenson, Cincinnati, Ohio: I claim the frames. A A, crossed and pivote lat c, in combination with the disks, B B, the whole constructed and arranged so as to be capable of being applied to a barrel, substantially as and for the pur-pose described.

[This invention relates to a new and useful device for rolling barrels, designed more especially for the use of porters, laborers at railroad freight depots, etc., in order to facilitate the removal of barrels into and out from houses, freight depots, etc.]

47,466.—Coffee Pot.—Jnmes H. Swing, Cleveland, Ohio ; First, I claim the cup, d, and fange, b, in combination with the forth. Second I claim the distribution of the purpose set

forth. Second, I claim the disk, h. strainer, f, and filter, B, in combination with the section, A, and cover, D, as and for the purpose herein described.

47,467.—Forge.—Charles N. Taylor and Elijah J. Holines, Upton, Dedham, Mass.: We claim the haproved lorge herein described with its removable plates, for the purpose of adopting it to the size and shape of the ar-ticle to be heated.

47,468.—Corn Planter.—James [C. Thomas, Redpoint, Md.: I claum, First, The forked seed box, B. in combination with the wheel A, and the hollow tooth, C, when constructed substantially as and for the purpose specified. Second, The circular rack, A, sector, B, lever, C, and arm, D, when the several parts are constructed and arranged substantially as and for the purpose herein set forth.

for the purpose herein set forth. 47,469.—Reclining Chair.—Hopkins Thompson, New York City: I claim in combination with a clamp fastening on the stationary part of a reclining chair, a hinged brace br jointed to one of the movable parts of a jointed reclining chair, substandally as de-scribed, whereby the movable parts may be clamped and braced rigidly to the stationary parts, substantially as stored and rigidly to the stationary parts, substantially as stored.

47,470.—Lock.—Benj. M. VarDerkeer, Clyde, N. Y.: 1 claim the traverse or key dog, with its bolt, operated by the keys in locking and unlocking the latch, together with the spring catch in the head of the latch, which holds the dog in its linear or central position after having accomplished its mission.

central position atter having accomplished its mission. 47,471.—Pulley Block.—S. Van Hennick and T. Allen, New York City: We claim the combination in a single pulley block of the small sheaves, a a', for carrying the rope or chain, B, to which the weight is attached, and the larger slicarc, a', attached rigidly to the first two, and carrying the rope or chain, D, to which the power is ap-plied, all the parts being constructed and arranged to operate us herein specified.

(This invention consists in providing a pulley block with an extra d with an independent chain or rope, whereby considerable power is gained in operating the blocks, or in raising weights thereby.]

47,472.-Feed Rack.-John M. Van Nest, Claytown, Iowa: Iclaim the combination of the sliding trough with the granary, the latter being provided with a spout or opening to discharge tho feed into the trough, which moves beneath it, substantially as de-scribed

47.473.-Vehicle.--Zalmon B. Wakeman, Rockford, Ill.: I claim, in combination with the tongue, C, the swireled box or earing, F, having an eye or aperture increasing in size from front o back, and exployed to receive and support the end of the brace od, E, substantially in the manner and for the purpose explained. Second, 1 claim the combination of the collect spring, F, and nut, with the supporting rod, E, the nut, permitting the spring to be outracted and expanded at will, for the purpose of varying the posl or of the turnue.

ontracted and expanses at why to one re-re-on of the tongue. Third, I ciaim the tongue, L, employed in combination with the oring, E, rod, E, tongue, C, and nut. I, substantially as herein set

Fourth, I claim the adjustable springs, K K, adapted to operate in nn cotion with the knuckles, L I, in the manner and for the pur-

connection with the knuckles, L 1, in the manner and for the pur Fifth, I claim the spring or springs, J, wrapped around the tongue rod, and with their ends secured under the tongue bounds, and the forward axie or sand board adapted for adjustiment in any manner, and employed for sustaining the tongue, C, as set forth.

47,474.—Stove.—George W. Walker, Boston, Mass.: I claim a stove constructed with a sub-base separated from the main base by an air chamber or passage, and operating in the man-ner and for the purpose substantially as described. Also the construction of a stove, with flues formed of the material of the outside of the stove body, and of the sheets within the body, when such flues are urranged to convey the products of combustion to heat a hollow extension of the base in front of the stove,

to heat a hollow extension of the base in front of the stove. **47**,475.---Rolling Mill.---Edwin Wassell, Pittsburgh, Pa.: I claim the use of a flanged guide roller. placed in front of a pair of rolls, when such roller is tapered between the flanges, for the purpose of causing the iron bar to side sideways when it drops out from one pass between the rolls to the proper position in front of the next adjoints pass, substantially as described. The use of a guide holder, consisting of the combination of a cylin-der or box, d, rod, c, spring, 1, add pressure screw f, constructed substantially as and for the purpose hereinbefore set forth. **47**,476

substantially as and for the purpose hereinbefore set forth.
47,476.—Apparatu for Separating Ores.—James Watson. Cliff Mine, Mich.:
I claim, First, The looper, A, provided with the deflecting board, C, chute or trough, D, and the opening, a, at its bottom, substantially as and for the purpose set forth.
Second, The clamber, B, below the hopper, communicating with the pipe or tube, E, provided with one or more plugs or faucets, and having water admitted into it under pressure, substantially as and for the purpose specified.
Third, The combination of the hopper, A, chamber, B, pipe or tube, E, provided with faucets or plugs, the deflecting bund, C, and chute or trough, D, all arranged to operate substantially as and for the purpose settorth.

47,477.—India-rub Der rausaug Middletown, Ohio: I claim the cylindrical packing former, A, for preparing India rubber annular packings for scaling fruit cans, in the manner de-scribed and represented in the accompanying drawings. I also claim the pressure ring, x, or its equivalent, in combinetion with the flangeor base, a, applied and used in the manner and for the Purpose specified.

47,478.—Machine for Making Lanterns.—Wm. Westlake, Chicago, Ill.: I claim the former or device constructed substantially as describ upon which to make instein guardia.

-India-rubber Packing Former.-Wm. Webster,

47.477

47,479.— Train Way for Ferry Boats.— Norman Wheeler, Brooklyn. N. Y.: w.

Wheeler, Brooklyn. N. Y.: First, I claim in connection with the deck, A, and coaming, D, the dedector or switch bar G, so arranged and operated as to slide the rear wheels outward, and cause them to describe the larger curve, substantially in the manner and for the purpose herein set

curve, substantially in the manner and for the purpose nerven set forth. Second, I claim in connection with the alove the employment of the perforated or rouginened plates. F , of hard material, combined and arranged to operate in connection with the deflector, G, so as to afford a hold for the animals, and provide for the lateral move-ment or sliding of the wheels, substantially as and for the purposes herein described 47,480. —Tubular Condenser.—Norman W. Wheeler, Brooklyn, N. Y. I claim the improvement in condensers and analagous tubular constructions herein described—to wit, the employment of the soft packing, G, and driven annulus, E, the latter holding itself in place and supporting and guiding the tube, D, and compressing the pack-ing, G, substantially in the manner and with the effect herein set forth.

481.-Movable Berth.-Norman W. Wheeler, Brook

17,401.—Movable вегы.—.... lyn, N. Y.: First, I claim in the described combination with a vessel the em-ployment of the sockets, D D and E E, stanchuons, F and H, the two or more berths. C'C3, and the free supporting stanchions, I and K, arranged substantially as and for the purposes described. Second, I claim in connection with the above combination of hooks, links and stanchions, constructed and arranged to operate together substantially in the manner and forthe purposes described.

together substantial: y in the manner and forthe purposes described. 47,482.—Landing Platform for Steamboats and other Vessels.—Norman W. Wheeler, Brooklyn, N. Y.: First, I claim the construction and use of an adjustable bridge, B, permanently attached to a vessel, A, and arranged to allow of its being turned in board, and operated by the boisting means in both positions, substantially in the manner as herem set forth. Second, I claim in combination with an adjustable bridge the man-per and rolling hingres, G. P. B, arranged to operate in the man-ner and for the purposes substantially as herein set forth. Third, I claim the within descibed arrangement of the jib stay, H, continuations, h h, and rigid post, I, for the purpose herein set forth

forth 47,483.—Bottle Stopper.—E. R. Wilbur, New York City : 1 claim the bottle stopper above shown, constructed and applied substantially as described.

47,484.—Railway Chairs.—J. E. Williams, Xenia, Ohio : First, I claim supporting the joints of rails by means of a two part chair resting upon and bridging the space between two separate ties, with lips, b, extending the entire length, and fanges, c, e, x tending below and falling between the ties, the parts being clamped and held by the bolts, e, or their equivalents, substantially in the manner herein described. In combination with the foregoing, I claim the block of wood, for the purpose specified.

47,486.—Plow.—T. Winslow, Cleveland, Ohio: 1 claim the herein described constructor of plows, the distin-guisling feature being the relative position of the lower edge of the mold board to the land side substantially as herein set forth, thus forming in one implement a common and subsoil plow.

forming in one implement a common and subsoil plow.
47,487.—Biraiding Machine for covering Skirt and other Wires.—Oliver R. Burnham, (assignor to J. I. and J. O. West) New York City: First, I claim the uniting by a braided covering of the wires, held separately and apart until Lie point of braiding, and the bringing them together at the point, so as to braid them just before, or as they are brought together side by side or parallel, and then the twin-ing them edge to edge, during the continuous movement of the wires, so as to strain and tighten the braid upon the wires as de-scribed.

ing' them edge to edge, during the continuous intervention of the wires as described.
 second, I claim the construction and u.e of the guide and supporting picces, b b, with the apertares in the same. for the passage of the wires by which the wires are supported and directed to the point of braiding, without interfering with the motion of the bobbins or threads, in the manner and for the purposes described.
 Third. I claim the guide piece, e, constructed and operating in the manner and for the purposes described.
 Third. I claim the guide piece, e, constructed and operating in the manner and for the purposes described.
 Third. I claim the same time the continuous and unobstructed passage of the wires and the point of braiding, whether with or without the guide piece, f, combined proceeds and is completed.
 Fourth, I claim the application and use of the pressure and delivery rollers whether with or without the guide piece, f, combined operation of which the wires are time dege to edge by a grachal they are conducted away as completed.
 47.488.—Knitting Machine Needles.—Augustus C. Carey.

47,488.—Knitting Machine Needles.—Augustus C. Carey, Lynn, Mass., assignor to himself and Geo. S. Sulli-van, Boston, Mass.: Leukin the combination in a machine knitting needle of a latch

ran, DOSION, MASS.: I claim the combination in a machine knitting needle of a latch with an elongated flexible hook that extends upwards nearly paral-lel with the shank of the needle, and to such a distance or length as to reduce the angle that the latch makes with the shank, thus form-ing a narrow of slim needle that can be used forfine work, substan-tially as herein described.

(iii) y as herein described.
47,489.— Heating and Fuel Device.— Daniel C. Colby (assignor to himself, D. W. Rawson, J. Reddington and Thomas I. Harris), Claremont, N. H.: I claim the arrangment of the damper. H, the pipe, G, and the oriface, j on the upper end of the funnel, B, the ledamper, I, the pipe, F, and the oriface, k, on the other end substantially as described, and the combination of the funnel, B, thus provided, with the outer funnel, A, and the stove, C, one or both, as and tor the purposes set forth.

James, A, and the stove, C, one of out, as and for the purposes set forth. 47,490.—Cotton Press.—Geo. C. Davies, (assignor to Ohio Erolin Company.) Dayton, Ohio: I claim, First, The provision in a baling press of the screw, B, plarform, E, and baling trunk, H, in the described combination with the swinging platton, I, the whole being arranged and operat-ing substantially as setforth. second, I claim the suspended platten or abutment, I, articulated to the frame, by means of the links, K V, and pintles, L L, so as to be capable of being swung to one side for filling or charging the bal-ing trunk in the manner described.

47,491.—Game Boards.—James T. Edson, Stowe, Mass. assignor to himself and Geo. L. Crosby, Berlin,

Mass.: claim the combination of the groove, B, and the passage, b, lead therefrom, with the game board, A, and the receiver, c.

.-Valve Gear for Steam Engines.-Chapman E. age, (assignor to Columbia Drew,) Winona 47,492.

Gage, (assignor to Columbia Drew,) Winona, Minn.: I claum the sliding valve rods, 14 14, constituting supports and ruldes for the bar, 7, which imparts movement to the valve rods by coming in contact with the shoulders, 51 3. and thus effect the alter-nate opening and closing of the proper induction and exhaust parts. 47,493.—Lamp.—Alonzo Hicks, Factoryville, N. Y., assignor to himself and Leoniel Jacobs, New York City: I claim the combination of the diaphragm, d, deflectors, i P, guards, f, and wick tube, c, in the manner an. for the purposes specified. 47,493.—Composition for Preparing Ribbons for Hand

47,494.—Composition for Preparing Ribbons for Hand Stamps.—Horace Holt, (assignor to W. W. Se-combe.) New York City:
 I claim the within described composition applied to a ribbon, sub-stantially as and for the purpose set forth.

47,495.—Horse-shoes and Calks.—Charles H. Johnson (assignor to himself and Charles E. Woodman), Boston, Mass.: Iclaim as my invention the combination of the fastening flange,

a, and the nortise, b, with the corresponding socket, c, and tenon, d, of the calk, and with one or more bolts, a', or equivalents, extend-lug through the fiange and the calk, substantially as specified.

47,496.—Composition for Lining Oil Barrels.—Henry Loewenberg, New York City, assignor to himself and Emile Granier, Paris, France:
 I claim the use of a compound of the ingredients herein described, viz, of glue, acid and sirup, and mixed together substantially in the manner and about in the proportion set forth.

 wanner and about in the proportion set forth.
 47,497.—Process for Treating Auriferous Ores.—W. Adolf Ott (assignor to himself and Henry Jackson), Brooklyn, N. Y.:
 I claim the use, in treating auriferous ores, and particularly pyrites containing gold, of hypochlorous acid, substantially in the manner herein set forth. This invention consists in the employment or use of a mixture of

alarly from pyrites containing gold.]

neularly from pyrites containing gold.]
47,498.—Feed Bag.—Henry Pennie and Chnnock (assignors to themselves and Levi Bissell), New York City, and reassigned by L. Bissell to said Pennie and Chinnock:
We claim a feed bag, or portable crib, for a horse or other animal, so constructed that it may be at the same time suspended (rom the bead and attached no or near the ureast of the animal, and when so suspended and attached may have its bottom inclined downward toward or from the animal's mouth, by the downward and upward movements of his head, substantially as and for the purpose hercin described. 47.499.—Feed Water Heater.—Robert Poole (assigno)

41,499.—reed Water Heater.—Robert Poole (assign to himself and German H. Hunt), Baltimore, Md. I claim the manner in which I have arranged and combined tank, A, with regard to the inlet and cutlet water pipes conner with it, the scatterer, and the branch pipe leading 'rom the ordin exhaust or waste pipe to its intricritor for the purpose of heating water passing through said tank without interfering with the scape of the steam through said exhaust or waste pipe, subst tially as here in described.

tially as nerein described.
47,500.—Fastening for Harness.—Josiah Shepard, New Britain, Conn., assignor to himself and Richard Butler, New York City:
I claim a strap fastening for harnesses and for similar purposes, composed of two carved side pieces, a s. connected at their ends by cross pieces, b b", placed relatively with each other as shown, and the center cross piece, b', provided with a central piece, c, substantially as described.

47,501.—Floating Dock.—Edward Turner (assignor to Simon R. Golibart), Baltimore, Md.: I claim, First, So constructing a floating dock that a vessel may be raised bodily out of water and asspended between floats or pon-toons upon vertically adjustable frames or elevators substantially as

cribed. econd, The use of vertically adjustable frames, D D, in combina-to with pontoons, A A, and mcclanism applied to these latter, ch is adapted for adjusting the frames independently of each ind, The employment of guides, D'D, in conjunction with the rating frames, D D, and floats, A A, substantially as described.

47,502.—Horse-shoe.—Alexander Tyrrell (assignor to himself and Kimball Ferrin), Batavia, N. Y.: I claim a Lorse-shoe, constructed as described, with the recesses, a a, made at any point between the heel and toe, for the purposes specified. 47.502.

47,503.—Capsules for Preventing the Soiling of Fire-arms.—F. L. M. Dorvault, Paris, France: I claim the employment or use of solf-discharging capsules, sub-stantially as herein described, incomination with fire-arms, to pre-vent them from soiling, as set forth.

vent them from soling, as set forth. 47,504.—Medicated Candy.—Lazarus Morgenthau, Mann-hlem, Baden: First, I claim the combination of sugar with an extract from the young shoots of the pine tree, substantially in the manner and for the purpose hercen set torth. Second, I claim the compound formed of the s.veral specific in-gredients in the proportions herein set forth. 47,505. Mode of Disintegrating. Vecetable, Substances

gredients in the proportions herein set forth.
47,505.—Mode of Disintegrating Vegetable Substances for Paper Pulp.—Zephirin Gaspard, Alozandre Na-than Petrone Oriol, Amable Alfred Fredet and Pierre Amable Henri Matussierare, Paris, France:
We claim the within described process for disintegrating vegetable materials by the application of aqua regia, substantially in the man-ner herein set forth.

47,506.—Manufacture of Iron and Steel.—Geo. Parry, Ebro Vale Iron Works, Eng. Patented in England Nov. 18, 1861 :

I claim the process above described, whereby I am enabled to pro uce purified virought iron and hard or soft cast-steel in large masses n an economical manner.

### REISSUES.

1.940.

1,940.—Enema Syringe—Hamilton D. Lockwood, Charlestown, Mass., assignee of C. H. & H. E. Da-vidson. Patented March 31, 1857 : What is clamed as the invention of Charles H. and Herman E. David-on, is a syringe, having an elastic buib or chamber, fixible tubes, and a suitable valvular or arrangement, when organized so as to operate substantially as described.

David-on, is a syringe, having an elastic outo or cnamoer, nexuoue tubes, and a suitable valuular or arrangement, when organized so as to operate substantially as described. 1,941,—Folding Bed Bottom.—Frederick C. Payne, New York City. Patented March 29, 1864 : I claim, First, The connection of the two parts, A A', of the frame or box of a folding bed bottom or mattress on each side thereof, by means of a folding bed bottom or mattress on each side thereof, by the statistic of the two parts, A A', of the frame or box of a folding bed bottom or mattress on each side thereof, by the statistic of the statistic of the statistic of the statistic parts, A A', at two points, at such a distance apart as to make room for the studing between the said parts, when folded parallel with each other, substantially as hele in described. Second, The blocks, D b, in combination with the plates, d, and the recesses, i, in the connected ends of the two portions, A A', of the box or frame, substantially as and for the purpose specified. 1,942.—Hot Air Engine.—Stephen Wilcox, Jr., West-erly, R. I. Patented Nov. 20, 1860: I claim, First, In combination with an air engine in which the air and gases are heated by combustion within the cylinder or in a saud for the purposes herein described. Second, Gadual By supplying the combustible gas or vapor for a gas engine operaturg substantially as herein described, as it is con-sumed and in the proper quantity for each stroke by means of the pump, G, or its equivalent, for the purpose set forth. Third combining a quantity of cooler is with the products of combustion by the combined action of platon, b, and valve, M, or their equivalents, substantially as described, for the purpose of pro-serving a safe detree of heat within the cylinders as above set forth. Fourth. The supplemental valve, m, arranged and operating sub stantially as and ior the purpose herein specified. Fifth, the arrangement of the heated evaporator, N, and cooler reservoir, O, in combination with an engine operator, N, and

pump, G, substantially in the manner and for the purpose herein set forth. Sixth, Placing a piece of fire brick, L, or equivalent substance, in close projuinty to the burner, k, for the purpose above specified. Seventh, In an engine operated with the direct pressure of the products of combustion and having the working cylinder and the combustion chamber arranged upon a single portable base, x, I claim the arrangement of the furnace casing and the working cylinder der in the additional casing, S, common to both, with air or other non.conducting substance illing the intervening space, substantially as and for the purpose herein set forth. Eighth, I claim is such englines in combination with provisions for reducing the temperature of the products of combustion before their aumission to the cylinder as shown, the employment of the parts of the apparatus, all arranged substantially as and for the purpose herein set forth.



the SCIENTIFICAMERICAN, have act d as Solicitors and Attorneys for procuring "Letters Patent" for me incentions in the United States and in all foreign countries during d as Solicitors and Atto the past sconteen years. Statistics show that nearly ONE-THIRD of a the applications made for patents in the United States are solicited through this office ; while nearly THREE-FOURTHS of all the patents taken in foreign countries are procured through the same source. It is almost needless to add that, after source my wars' experience in pre paring specifications and drawings for the UnitedStatesPatent Office the proprietors of the SCIENTIFIC AMERICAN are perfectly con versant with the preparation of applications in the best manner, and the friday school of all business before the Patent Office ; but they take pleasure in presenting the annexed testimonials from the three last ex-Commissioners of Patents.

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the office, a marked degree of promptness, skill, and fidelity to the nterests of your employers. Yours very truly, CHAS. MASON. interests of your employers.

Judge Mason was succeeded by that eminent patriot and stateman, Hon. Joseph Holt, whose administration of the Patent Office was so distinguished that, upon the death of Goy. Brown, he was appeinted to the office of Postmaster-General of the United States S after ring upon his new duties, in March, 1859, he addressed to us wing very gratifying letter. ntering upo

collowing very gratifying letter. Mrsiss, Moya & Co.:-It affords me much pleasure to bear test now to the able and efficient manner in which you discharged your reacts as solicitors of Patents, while I had the honor of holding the sides of Commissioner. Your business was very large, and you sus laned (and I doubt not justly deserved) the reputation of energy, marked ability, and uncompromising fidelity in performing your pro-tessional engagements. Very respectfully, your obedient servant, J. HOLT,

J. HOLT. Hon. Wm. D. Bishop, late Member of Congress from Connecticut, succeeded Mr. Holt as Commissioner of Patents. Upon resigning the office he wrote to us as follows: MESSNS, MUNN & Co. - It gives me much pleasure to say that, dur-ing the time of my holding the office of Commissioner of Patents, a very large proportion of the business of inventors before the Patent Office was transacted through your agency: and that I have ever found you faithful and devoted to the interests of your clients, as well se eminently qualified to ucriorin the duties of Patent Attorneys with skill and accuracy. Very respectfully, your obelient servant, WM. D. BisHoP. dient servant, WM. D BISHOP.

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Persons having conceived an idea which they think maybe Datent able, are advised to make a sketch or model of their invention, and submit it to us, with a full description, for advice. The points of novelty are carefully examined, and a written reply, corresponding

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The Patent Laws, enacted by Congress on the 2d of Merch, 1861 are now in full to ce, and prove to be of great benefit to all parties who are concerned in new inventions.

The law abulishes discrimination in feesrequired of foreigners, ex-cepting natives of such countries as discriminate against citizens o f the United States-thus allowing Austrian, French, Belgian, English

Russian, Spanish and all other foreigners, except the Canadians, to enloy all the privileges of our patent system (except in cases of de-signs) on the above terms. Foreigners cannot secure their inventions by filing a caveat ; to citizens only is this privilege accorded.

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