THE NEW TEMPLE EMANUEL.

The above is the name of the new Jewish synagogue recently dedicated situated on Fifth avenue and Forty-third street, New York city. Few buildings ever erected in this country, have attracted more attention, or are more entitled to admiration than this edifice. As a specimen of Moorish architecture, slightly modified to adapt the structure to its destined use, it affords a good study to professional architects and to all lovers of art. It occupies a lot one hundred and four feet on Fifth avenue, and one hundred and eighty-four feet on Forty-third street. It consists of a nave thirty-four feet wide, one hundred and sixty feet long, and seventy-two feet high, with transepts of about ninety feet in length, attached to which are aisles about twenty feet wide, containing the galleries. In front, on either side of the nave, rise two towers detached above the aisle walls, but connected with the nave by two bridges on a line with its ceiling and with the choir gallery, as well as by open balconies running all around the front. These towers are to be about one hundred and seventy feet high, and are to terminate in stone cupolas, the surfaces of which are to be covered with relief ornaments. The building is built of sandstone, out of the New Jersey, Cleveland, and New Brunswick quarries—each of these being used and a ranged with reference to its color. The entire cost of the structure and ground will amount to nearly a million dollars. The architects elected by the building committee were Mr Leopold Eidlitz and Mr. Henry Feu erbach.

The *Evening Post* gives a graphic description of the new temple and designates it as a "poem in stone:"

"All admirers of fine architecture will first be impressed with the façade Its fine proportions. varied color, and rich ornamentation are elements of beauty worthy of close study. The openings of the nave—the five entrance doors, the rose window and the transverse gallery near the apex—together with those of the tower crowned with open octagonal domes, are so many distinct forms hapily grouped and tastefully treated The ornamentation throughout is honest, appropriate, and rich. Foliated capitals, delicately sculptured, and clustered columns attached to the doors and windows, fretted spandrils and light pinnacles, rising like minarets from the buttresses of nave and transepts, supply imaginative points of great value in the matter of expression. The bright cream-colored pinnacles relieving against a blue sky and on the brown rubble, sparkling like so many jewels in their setting, animate the entire front and forestall anything like monotony of outline. Various intaglio designs, consisting of intricate mazes of lines peculiar to the Moorish system of decoration, fascinate the eye and enliven surfaces that would otherwise appear sombre. This fine combination of ample forms and ornamental devices, each in appropriate relationship for use and beauty, secures to this building an elegant and majestic air, which more ostentatious structures of greater magnitude fail to convey. The secret of this effect does not lie in size or in richness of decoration, but in proportion, a quality of all others in architectural art the subtlest and most rarely encountered.

USE OF COLOR.

"Attractive as the exterior is, the interior far surpasses it. On entering the building we seem transported to another sphere. Here we enter on the realm of color; forms seem to have vanished or to resolve themselves into radiant splendor. Color as an architectural element appears to reign supreme; we have that which the Orientals, the acknowledged masters of this element of art, most delighted in. The problem they have solved through the skillful handling of ornament, and a consequent distribution of color, is the production of general effects not only pleasing in themselves, but also harmonizing with the constructive masses. The Jews in their Bible, and the Mohammedans in their Koran, prohibited from depicting animated forms, have been obliged to make the most of color on its own merits; color, consequently, is their principal decorative medium. Yellow or gold, blue, red, black, and white are their vehicles of art expression. All muddy compounds of hybrid tints, miscalled color in many modern pictures, are completely ignored. The only figures they employ are delicate arabasques. and patterns arranged in a capricious but still regular manner, and which, adapted to the eye in conformity with its sensuous aptitude challenge no criticism on the score of their non-resemblance to known natural objects. Gorgeous hues, therefore, in true complementary union, cover the spacious walls of this edifice; the eye wanders over them attentive to their innumerable harmonies as the ear listens to the infinite harmonies of musical sounds. Draped arches, festooned with divers tints, support blue panels decked with golden stars, while the stained glass windows, more like luminous interstices than anything else, pour in a flood of prismatic brilliancy to blend all together in soft and radiant light. The obscurities of the triforium, the sanctuary, the organ-loft, and other spaces, lend an air of mystery to the general tone, which is again enhanced by the dark reflections of the richly carved wood work. The general effect is one of subdued richness, an effect in harmony with a spirit of adoration, and with that instinct which leads man to exalt worship by art.

"The use of color in this building will attract all eyes to it, and make it a model for imitation far and wide. Mr. Eidlitz has used color elsewhere, and notably in St. George's Church, but nowhere on the same grand and effective scale as here Decorative motives generally consist of meaningless imitations of Renaissance ornaments, mouldings, panels and tracery bolstered up with artificial shadows, expressing no sentiment and symbolizing no truth. Color, as here employed, conforms to natural law, and is therefore a truth in itself. None of its combinations suggests the intellectual perversity associated with Renaissance symbols so conventionally applied to public and private edifices everywhere."

VENTILATION.

The *Journal of the Franklin Institute,* contains the first, or a part of the first of a second course of lectures on ventilation, delivered by Lewis W. Leeds, before the Franklin Institute during the winter of 1867-'68. There seems to be such an itching for scientific laurels at the present time, that the most common subjects, upon which all that is pertinent can be said plainly and briefly, are made the vehicles of professional display *ad nauseam.*

The subject of ventilation is an important one, and perhaps is not appreciated as it should be, or sufficiently provided for in either public or private edifices. Grant all that; but does it follow, that in order to cure the evil, long harangues upon the constitution of air, the physiology of respiration, the anatomy of the lungs, and the circulatory system, the diffusion of gases, and all the technical information in the remotest degree connected with the subject, should be aired in trying to convince people that unless they breath pure air their health will suffer? The first installment of these lectures treats of all the above-mentioned subjects, and more too. How much is to follow before the real gist of the subject shall be reached, we are unable to say. Perhaps a discussion of the respiratory apparatus of fishes and reptiles, with some accounts of toads which have been imbedded in rocks for nobody knows how many centuries, without breathing, and have emerged from their rocky prisons, "fresh as when in their pristine youth, etc," and hopped away without even thanking their deliverers. This might be made applicable to the subject of ventilation, as thus: The toad does not breath in the same way as man inhales the ambient air, consequently what is fun to them, would be death to you, my hearers Moreover, all the stories of living toads, imbedded in rocks and trees. are humbugs—except the trees were hollow and the rocks had holes in them—from which we conclude that man could not breath without air, or live without breathing. *Quod erat demonstrandum.*

How to get the pure air is the question; a purely mechanical one. Hot air rises—cold air falls. The impure gases do the same thing; therefore it is only necessary to provide for the escape of foul gases at the bottom of a room, provided it is heated with warm air, or at the top, if heated by radiation; the pure air being admitted in the latter case through openings protected so that strong currents shall not be formed, and the exchange of air being fully provided for by passing the vitiated gases through heated flues, or drawing them off by fans or other apparatus.

There is the whole thing in a nutshell and all the scientific discussion of things upon the earth or under the earth can't make it more so; so the SCIENTIFIC AMERICAN believes and we believe its practical readers will concur.

OFFICIAL REPORT OF PATENTS AND CLAIMS

Issued by the United States Patent Office,

FOR THE WEEK ENDING SEPTEMBER 15, 1868.

Reported Officially for the Scientific American.

PATENTS ARE GRANTED FOR SEVENTEEN YEARS, the following being a schedule of fees:—

On filing each caveat	$10
On filing each application for a Patent, except for a design	$15
On issuing each original Patent	$20
On appeal to Commissioner of Patents	$20
On application for Reissue	$30
On application for Extension of Patent	$50
On granting the Extension	$50
On filing a Disclaimer	$10
On filing application for Design (three and a half years)	$10
On filing application for Design (seven years)	$15
On filing application for Design (fourteen years)	$30

In addition to which there are some small revenue-stamp taxes. Residents of Canada and Nova Scotia pay $500 on application.

☞ *Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying size of model required, and much other information useful to Inventors, may be had gratis by addressing MUNN & CO., Publishers of the Scientific American, New York.*

82,058.—MORTISING CHISEL.—Otis Adams and James Hatch, San Francisco, Cal.

We claim making the lips beveled from the edge to the main part of the chisel, and with the ends beveled and inclined, as herein set forth.

82,059.—LAMP BURNER.—Thomas Adams, Hudson City, N. J., assignor to himself, J. L. Romer, and H. T. McCoun, Brooklyn, N. Y.

I claim, 1st, The flattened, cone shaped wick tube, A, provided with a triangular opening, f, for admission of air in front, as it were, of the single wick, to establish a current through the center of the flame, and constructed so that in the passage of the single flat wick through it in a straight line, or thereabouts, from below, said wick is made to assume an annular form at its exit from said tube, substantially as specified.

2d, The arrangement of the wick lifter or operating device, E, relatively to the straight or entering portion e, of the tube A, constructed as described, and for operation in connection with the latter to turn and convert the wick from a flat or straight into a round or annular form, essentially as herein set forth.

3d, The base portion of the burner, of globular or enlarged character, as described, and divided, as at h (forming a cap, D), between the collar screw of the lamp and draft opening or openings to the flame, as and for the purpose herein set forth.

82,060.—CULTIVATOR.—A. H Allison, Charlottesville, Ind.

I claim, 1st, The yoke, C, secured to the under side of the tongue, and provided with the adjusting blocks, g g, in combination with the beams, G G, uprights, f f, provided with adjusting holes, double tree, c, arms, c' c', and braces, connecting the ends of the yoke with the main frame, all constructed, arranged, and operated in the manner and for the purpose set forth.

2d, The beams, G G, hinged to the adjusting blocks, g g, and provided with the shanks, i i, and braces, h h, in combination with the bails, J J, and foot pieces, Z Z, all constructed, arranged, and operated as set forth.

82,061.—SCHOOL DESK.—Herbert L. Andrews, Chicago, Ill.

I claim, 1st, The standard, composed of two parts, A B, one provided with the projection, g, and axle, i, and the other with the flange, a, in combination with the arm, C, the standards being secured by the screws and nuts, all substantially as specified.

2d, The combination and arrangement of the recess, b, when filled with rubber, or other elastic material, standard, B, and projecting heel, h, of the arm C, substantially as and for the purposes specified.

82,062.—BLACKBOARD. Herbert L Andrews, Chicago Ill.

I claim the blackboard, A, when provided with the groove, e, arms, c, pins or hooks, c, and supporting, constructed, and operating substantially as specified.

82,063.—LEATHER STRETCHING MACHINE.—W. R. Andrews, and Robert Dingwell, Newark, N.J.

We claim, 1st, The movable beam, B, in combination with the cross slat, C, when constructed and operated substantially as and for the purpose set forth.

2d, Operating the movable beam, B, by means of the ratchet bars, E E, and screws, D D, when constructed and arranged as specified, and for the purpose set forth.

82,064.—STOCK PUMP.—W. T. Armstrong, Freeland, Ill.

I claim the box pump, E, constructed as described, in combination with the stationary pipe, F, rod, D, and the compound hinged platform, B C, all constructed and arranged to operate substantially as shown and described.

82,065.—MOLDING PIPE.—John Aston, Pittsburg, assignor to William Smith, Allegheny City, Pa.

I claim, 1st, The combined arrangement of the flask, G, and hinged door G*, substantially as described.

2d The pit, A, furnaces, B, with their flues, C, and outlets, C*, ramming up stools, D, stoppers, E, nozzle, F, and sliding thimble, F*, the bars, K, and slide plates, L, when combined and arranged substantially as herein described and for the purpose set forth.

3d, Drying pipe molds by means of passing currents of heated air or gases through them, without removing them from the pit in which the operations of molding and casting are carried on, substantially as described.

82,066.—JOURNAL BOX.—John E. Atwood, Mansfield, Conn., assignor to himself, A. Sprague, and W. Sprague, Providence, R. I.

I claim the annular rings or collars, B*, near each end of the journal, in combination with the caps or shields, D, and the chambers, C*, provided in the journal box, all arranged substantially as herein set forth, for the purpose specified.

82,067.—SHINGLE MACHINE.—J. E. Austin Oswego, N. Y.

I claim, 1st, The method of operating the tilting tables, F F, namely, the projecting arms, f, obliquely slotted slide bars, H h, the hooking connecting rods, I I, and crank wheels, J having adjustable wrists or crank pins, all arranged and operating as herein shown and described, and for the purpose set forth.

2d, In connection with the tables, F, the laterally adjustable plate and socket block, N ll M, and vertically adjustable fulcrum block, K L, constructed and operating as herein shown, and for the purpose described.

3d, The bolt cutters, C C, having a horizontal movement on frame, D, and provided with wedges, s s, for acting on inclined surfaces of said frame, D, in such manner that all sides of the bolt holders are lifted alike, in connection with tappet lever, R, and link, P, or other suitable device for obtaining the sliding movement of bolt holders on frame, D, as and for the purpose described.

82,068.—WAGON AXLE. C. D. Bachelder, Camden, Me.

I claim, 1st, The combination, with an axle provided with an oil recess, b, of the cap, g, arranged oil tight thereon, and provided with a slot for the wick, substantially as and for the purpose described.

2d, The recess, b, provided with the dividing rib, c, having a recess, d, for the wick, communicating with the recess, b, by the holes, e, substantially as and for the purpose set forth.

82,069.—WAGON JACK.—E. R Baldwin, Southfield, Mass.

I claim the combination, with the bracket, B, and stand, A, of the friction rollers a and b, when applied and arranged as and for the purpose set forth.

82,070.—KNOB LATCH.—T. C. Ball, Bellows Falls, Vt.

I claim the combination of the lock ring, h, slots, c, and projections, k k, with and between the plates, escutcheon, b, and its projections, e and e', and the ring, g, with its slot, i, all operating together as and for the purpose set forth.

82,071.—ENAMEL FOR WINDOW-SHADES Edward C. Bancroft, Henry M Bancroft, and Ed. H. Bancroft, Syracuse, N. Y.

We claim the employment of the within compound in the manufacture of cloth window shades, for the purpose described, substantially as set forth.

82,072.—ELASTIC DRAFT ATTACHMENT FOR SINGLE AND DOUBLE HARNESSES.—John Barron, Cincinnati, Ohio.

I claim the combination and arrangement of the India-rubber draft attachment, B, adjustable check strap, rods, or case, C, and coupling, G, substantially as and for the purpose herein specified.

82,073.—VISE.—Thomas L. Baylies and Edwin Crawley, Richmond, Ind.

We claim, 1st, The combination of the devices operating automatically, by which the action is changed from the adjusting to the compressing screw or screws, by a continuous turning of lever, a, in one direction, and the action of the screws is reversed by a continuous turning of said lever in the opposite direction, substantially as set forth.

2d, The combination of the pins, c and c', and slots, b and b', with the sleeve, G, and screws, F and E, substantially in the manner described and for the purpose set forth.

3d, The bowl, J, and trigger, H, in combination with the screw, E, adjusting screw, f, and sleeve, G, the latter being provided with a ratchet, as specified, and all operating substantially as described and for the purpose set forth,

82,074.—PLANE.—Valentin Bitsch, St. Louis, Mo.

I claim the combination of the bit, a, having its lower cutting edges to form a re-entering angle, with the open shank bit, a', having its lower cutting edges arranged with beveled corners, acting with the plane stock, A, to form blind slats, whose narrow edges are chamfered, substantially as set forth.

82,075.—FARM GATE.—Charles S. Bonney, Penn Yan, N. Y.

I claim the hinges, D E, when made and applied as specified, and used in combination with the gate, substantially as and for the purpose set forth.

82,076. REFRIGERATOR.—Wilson Bray, Stockton, N. J.

I claim the forming or producing of a current of air within the provision chamber of a refrigerator, by means of a rotary fan or other mechanical device, so arranged as to impel or force the air through an ice box or water vessel surrounded by a freezing mixture, and also through a vessel containing charcoal or other absorbent of moisture and noxious gases, substantially as shown and described.

82,077.—MACHINE FOR FORMING EAVES-TROUGHS.—John Brett, Memphis, Mich.

I claim the eaves trough former constructed as herein described, of the grooved bed plate, A, crimping clamp, F, hinged thereto, with its hinged continuation, H I, and slotted roller, D, all arranged and constructed as herein shown and described.

82,078.—SAW SHARPENING DEVICE.—P. M. Bristol, Ludington, Mich.

I claim the swaging apparatus consisting of shaft C, wheel, D, and rest, E, arranged and combined substantially as described.

82,079.—MANUFACTURE OF ARTIFICIAL FUEL.—George H. Bronson, New York city.

I claim the process of making artificial fuel in which pitch or other similar material is used to produce the agglomeration of the particles of the substance or substances which constitute the basis of the fuel, by first heating the coal or other substance, and, while it is heated, introducing among it the pitch or other similar material in a powdered state, substantially as herein described.

82,080.—APPARATUS FOR DOMESTIC MANUFACTURE OF GAS. John W. Brown, Wooster, Ohio.

I claim, 1st, The retort, D, in combination with a gas apparatus adapted to domestic use, and as described, constructed substantially as set forth.

2d, The arrangement whereby the apparatus is made self-regulating, by the pressure of the gas in the gas holder, substantially as shown and described.

3d, Using the surplus gas as fuel, either under the retort for generating gas, or for other purposes, by the automatic arrangement, substantially as described.

4th, In combination with a gas apparatus, the washer and tar receptacle, G, and purifier, K when the same are constructed and arranged substantially as described.

5th, The rake, I, in the retort, substantially as and for the purpose set forth.

82,081.—CHAIR SEAT.—E. L Buckingham, Jefferson, Wis.

I claim the strips, b, composing the chair bottom, secured in the rails, A, by being passed over and under said rails, the ends being inserted in oblique slots, a, and there retained by the strip, C, applied to the outer edge of the rails, A, all substantially as herein shown and described.

82,082.—CARRIAGE SPRING.—Azro Buzzell, West Fairlee, Vt.

I claim my improved arrangement of the three springs A B C, as described, without any connection extending from or about from the middle of one spring, B, to or about to that of the spring, C, the whole being as shown in the drawings.

82,083.—LUBRICATING MATERIAL.—Calvin Carpenter, Jr., Astoria, N. Y., assignor to H. H. Wolcott, New York city.

I claim a lubricating material prepared from crude petroleum, in the manner above set forth.

82,084.—ANGULAR SHAFT COUPLING.—John M. Case, Worthington, Ohio.

I claim, 1st, Forming the bars, upon which the segmental cogs, E, are cast solid, substantially as herein shown and described and for the purpose set forth.

2d, Forming grims or flanges upon the sides of the segmental cogs, E for the purpose of preventing their lateral movement, and relieving the side pressure upon the connecting bars, F, as herein shown and described.

82,085.—WRENCH. Luke Chapman, Collinsville, Conn.

I claim the combination with the jaw A, provided with the recess, B, and annular groove, C, of the nut, D, and the spring ring, E, substantially as and for the purpose set forth.

82,086.—CAR WHEEL AND FROG.—W. H. Childe, Gainesville, Ala.

I claim uniting railroads of different gages by means of a frog applied at the junction of two or more tracks, and constructed as described, and by railroad wheels constructed with two or more independent treads, the said frog and wheels being employed together, but one former also permitting wheels with a single tread to pass over it, all substantially as described.

82,087.—MEASURING FUNNEL.—Charles Chinnock, Brooklyn, N. Y.

I claim the arrangement within the funnel of the stem, B, carrying the valve, C, at its lower end, whereby the weight of the funnel closes the valve when the latter is suspended by the stem for filling, substantially as herein set forth.

82,088.—FEED BAG.—Charles Chinnock, Brooklyn, N. Y., assignor to J. Little Hyde, New York city.

I claim the combination of the endless cord, c, and pulleys or slides, b, with the feed bag, A, all arranged and operating essentially as set forth.

82,089.—CULTIVATOR.—Joseph H. Clifton, Newcastle, Pa.

I claim, 1st, The board, A, provided with the knives, a, etc., and teeth, b, as and for the purpose set forth.

2d, The board, A, in combination with the bar, c, and teeth, c', as and for the purpose set forth.

82,090.—SHUTTLE.—Nathan Clough, Lowell, Mass., and James Baldwin, Manchester, N. H.

We claim a shuttle having its tip-shank riveted to the wooden plug, and the plug secured in the shuttle, as herein described.

82,091.—BUCKLE.—James Cory, Wayne, Mich.

I claim the arrangement of the tongue, C, and cross bar, B, in connection with the bails, A, in such a manner that each tongue shall operate on its bail without any intermediate bar, substantially as and for the purposes set forth.

82,092.—SEED COVERER.—E. D. Cramer, Hackettstown, N.J.

I claim a pointed seed coverer consisting of a triangular frame, A B, and of the up-and-down adjustable plates, D D, all made and operating substantially as herein shown and described.

82,093.—FORGING APPARATUS.—David Davies, Crumlin, England.

I claim, 1st, The steam cylinder and piston, connected with the hammer arm, so as to operate the same, in combination with the horizontal cylinder, arranged so that it can be turned, and in which the steam cylinder is mounted, substantially as described, so that the direction of the blows, relatively to the face of the anvil, can be changed.

2d, The steam cylinder and piston, connected with the hammer arm, so as to operate the same, and mounted in the horizontal cylinder, arranged so that it can be turned, to change the direction of the blows, relatively to the face of the anvil, substantially as described, in combination with the hydraulic ram, for raising and lowering the same, to adapt it to articles of various thicknesses or bight, substantially as described.

3d, Connecting the horizontal cylinder with its base, so that it can be turned in a horizontal plane, in combination with the steam cylinder and piston connected with the hammer, substantially as and for the purpose described.

82,094.—MOLDING BELL.—W. H. Davis, Brooklyn, N. Y.

I claim, 1st, The arrangement on the outer casing, B, of a downwardly projecting lip or rim, b, corresponding in size and position to the upwardly projecting rim or lip, a, on the inner casing, A, substantially as and for the purpose described.

2d, The arrangement of a guide for the sweep, D or D', on the rim of each casing, in addition to the central guide pin, d, substantially as and for the purpose set forth.

3d, The arrangement of two bearing points on the guide, F, substantially as and for the purpose set forth.

4th, The additional guide, G, catching over a rim, k, on the casing, in combination with the guide, F, substantially as and for the purpose described.

5th, The shank of the jaw, E, fitting into a socket in the guide, F, and allowing said jaw to accommodate itself to the position of the sweep, substantially as described.

82,095.—VISE.—Fernando J. Dibble, Chicago, Ill.

I claim, 1st, The combination and arrangement of the jaws, E D, the standard, C, and socket, B, provided with a set screw or its equivalent, the whole operating in the manner and for the purposes set forth.

2d, The combination of the jaws, E D, slide, H, screw, F, standard. C, and socket, B, arranged and operating in the manner and for the purposes described.

82,096.—BORING AND MORTISING MACHINE.—J. Jacob Earley, Fairfield, Ohio.

I claim, 1st, The adjustable chisels, 1 I, springs, N, cams, O, and wheel, G, when arranged and operated, in combination with the auger, H, for the purpose specified.

2d, The circular stays, L, adjustable radial arms, M, for expanding and contracting the shanks of the chisels, in the manner set forth.

82,097.—SAFETY ATTACHMENT TO WATCH.—Julius Elson (assignor to Florentine A. Jones), Boston, Mass.

I claim, 1st, The spring, D, provided with a stud or projection, d, one or more, in combination with the perforated barrel, as and for the purpose specified.

2d, The spring, D, in combination with the main spring, for the purpose of equalizing the tension of the latter, as set forth.

3d, The stud or projection, d, in combination with the barrel or main spring, when used and operating substantially as and for the purposes set forth.

82,098.—CHIMNEY TOP.—Henry English, Wilmington, Del.

I claim the construction of chimney tops, with one or more apertures at the base and upper portion, constructed and arranged as hereinbefore described for the purpose set forth.

82,099.—CHAMBER COMMODE.—Enoch S. Farson, Philadelphia Pa. Antedated September 1, 1868.

I claim the spring catch bar, E, in combination with the cover, D, pot, C, and adjusting handle, F, the said spring catch bar and handle being constructed and arranged to operate together substantially as and for the purpose described.

82,100.—MACHINE FOR STUFFING HORSE COLLARS.—William Fauntleroy, New Harmony, Ind.

I claim, 1st, The combination of the collar board, B, pulley, E, collar, I, and mandrel, K, substantially as and for the purpose described.

2d, The combination with the same, of the belt, F, and treadle, G, substantially as and for the purpose described.

82,101.—BEEHIVE.—Orrin Field, Independence, Iowa.

I claim the combination with the central fixed comb frame, B, of the detachable hinged comb frames, C, all arranged substantially as herein shown and described, for the purpose specified.

82,102.—PAVEMENT.—Richard Foley (assignor to himself and Edwin Ferguson), New York city.

I claim the combination, in a pavement, of the foundation boxes, a, filled with concrete, with the surface blocks, b, and strips, c, being laid in alternation, substantially as and for the purpose described.

82,103.—DEVICE FOR PRESSING, PACKING, AND WEIGHING WOOL.—A. W. Fox, Columbiaville, Mich.

I claim the weighing device, consisting of the circular plate, i, rod, p, hinged bar, j, tube, m, spring, l, and lever, L, in combination with the hinged parts, B B C C, and fixed part, D, of the packer, as herein described, for the purpose specified.

82,104.—PERMUTATION LOCK.—Cicero R. C. French, Berkley, Mass.

I claim, 1st, The combination, with a series of tumblers and adjustable rings, of an indicating wheel, O, a click, P, and sliding plate, C, whereby the bolt being set at half lock, the required combination may be formed, by turning the tumblers alternately in opposite directions, substantially as set forth.

2d, The curved recesses in the bolt, B, in combination with the sliding plate, C, when operating as and for the purpose specified.

3d, The click or bolt, P, provided with the projection, i, in combination with the bolt, B, as set forth.

82,105.—LIQUID METER.—Charles A. Geissenhainer, and George W. Geissenhainer, Pittsburg, Pa.

We claim the arrangement, in the air tight glass chamber, A, constructed as herein described, of the straight bucket wheel, B, water chamber, C, pipes, D E, cog wheels, B, and indicating devices, g, all constructed as and for the purposes set forth.

82,106.—MANUFACTURE OF BEET SUGAR.—Theodore Gennert, New York city.

I claim, 1st, Treating beet sugar with cane sirup or cane molasses, substantially as and for the purpose described.

2d, Treating beet sugar with cane sirup or cane molasses, under the application of heat, substantially as and for the purpose set forth.

3d, Exposing the beet sugar to the action of water or steam, after the same has been treated with cane sirup and molasses, substantially as and for the purpose described.

82,107.—MILL PICK.—H. H. Gillett, Warsaw, Mo.

I claim a mill pick handle, constructed as described, and provided with glass, enabling the operator to see his work, as well as shielding him from any particles of rock flying about, as herein set forth.

82,108.—CUPBOARD CATCH.—P. D. F. Goewey, Albany, N. Y.

I claim the latch, composed of the plate, A, the locking tumbler, D, in combination with and operated by the doubly-moving knob, C, all constructed substantially as herein shown and described, and for the purposes specified.

82,109.—ROCK-DRILLING MACHINE.—Ernst W. Gram, Negaunee, Mich., assignor to himself, Peter Berg, and A. P. Swineford.

I claim the combination of the stationary frame, A B, oscillating frame, C, trunnions, D, shaft, E, pinions, F G H, shaft, 1, lifters, J, rod, K, wiper-lifter, L, spring, N, drill, O, cam, P, plate wheel, Q, spring R, and shoulder, S, all constructed and arranged substantially as herein described.

81,110.—LUBRICATING PULLEY.—James H. Gray, Boston, Mass. Antedated September 8, 1868.

I claim an oiling device for loose pulleys, when constructed, applied, and arranged to operate substantially as and for the purpose described.

82,111.—LIFTING JACK.—William Green, Holly, Mich. Antedated September 7, 1868.

I claim, 1st, The movable pedestal, B, when used in combination with a "lifting jack," the parts being constructed and arranged as and for the purpose specified.

2d, The arrangement of the springs, m m and j, with the lever, C, catch dogs, f f and h, the several parts being used as and for the purposes herein set forth.

82,112.—GATE.—William W. Green, Jr., Janesville, Wis.

I claim, 1st, The combination of the yoke, h k i, and guard, g, so as to allow the gate to be removed, when required, and yet prevent it from being removed by unruly animals, substantially as described.

2d, The combination of the elongated rail and cap, b a, bonnet, d, spur, e, yoke, h k i, wedge, n, and block, l', substantially as described.

82,113.—MACHINE FOR PLANING AND MOLDING.—J. P. Grosvenor, Lowell, Mass.

I claim, 1st, The combination of the swinging mandrel frame with the vertically-adjusted slide, E, and laterally adjustable slide, I, substantially as described for the purpose specified.

2d, The pattern, constructed as described, with a rebated outer edge, in combination with the perforated rigid or flexible rack, r, substantially as described for the purpose specified.

3d, The rigid or flexible rack, r, constructed as described, and adapted to be applied to a pattern to be used in cutting irregular forms, substantially as herein shown and described.

4th, The pattern, Q, provided with a rack, r, around its outer edge, to assist the process of feeding the wood to the cutter head.

5th, The feed wheel, R R', when constructed of the two parts, R R', so as to operate, in connection with a pattern having a rebated outer edge, in the manner described.

82,114.—CLOTHES PIN.—John Haigney and Frank M. Hedman, East Boston, Mass.

We claim the combination and arrangement of the brace, D, and the catch-spring, F, with the two levers, A B, connected together in manner and so as to operate substantially as described.

Also, the arrangement and combination of the auxiliary spring, E, with the brace, D, the catch spring, F, and the two levers, A B, arranged and combined substantially as explained.

82,115.—WINDOW SCREEN.—Frank Hatch, La Crosse, Wis.

I claim the combination of the two sections or frames, A B, with a spring, d, so arranged that the spring will operate to force said sections outward against the window casing, and retain the screen in any desired position, substantially as and for the purpose described.

82,116.—BRICK MACHINE.—Daniel Hess, Blandville, Ky.

I claim, 1st, The arrangement of a centrally-poised beam B with its weighted box, A, oscillated by the arms, J, and connecting rod, K, in combination with the plungers, P, substantially in the manner and for the purpose specified.

2d, In combination with my oscillating box, A B, the plungers, P, with their enlarged base, p p, and slots, 1 2 3 etc., when operated substantially in the manner set forth.

3d, The arrangement of the press bed, G, and table, E, in combination with the revolving mold tables, F, between them, together with the molds, f, for pressing bricks edgewise, when arranged substantially as set forth.

4th, The arrangement of the table, E, with its hopper openings, 3, in combination with the revolving mold beds, F, and molds, 1 2 3, arranged in the manner and for the purpose specified.

82,117.—COUPLING.—John Heuermann, Davenport, Iowa.

I claim, 1st, The arrangement and combination of such coupling as is shown in drawings, and described in the specifications.

2d, The construction of slots extending about two-thirds of the distance from bottom to top or outer end in coupling case, as shown on drawings.

3d, The construction of openings in double cross sockets, for oval bolts.

82,118.—SCREW-CUTTING DIE.—Arnold Hoermann, New York city. Antedated September 4, 1868.

I claim, 1st, A screw-cutting die, having a recessed surface, so as to present two or more cutting threads in full sectional relief, as described and shown.

2d, The die, C, having a recessed surface, so as to present two or more cutting threads in full sectional relief, combined with the slot, C', set in advance of the center of the die, all as set forth.

3d, The guide, M, in combination with a die having portions of one or more threads entirely removed from the entering face thereof, the several parts being constructed and arranged substantially as and for the purpose herein set forth.

82,119.—FLOOR COVERING.—Wm. Howell, J. C. Finn, and C. A. Duy, Philadelphia, Pa.

We claim a covering for floors, etc., consisting of layers of cloth, paper, and wood, combined as set forth.

82,120.—COMPOSITION FOR SIZING AND DRESSING WARPS.—Thomas Johnson, Tewksbury, assignor to himself and J. H. Hutchinson, Lawrence, Mass.

I claim the above described composition, as composed of the before-mentioned ingredients, combined by means of water and heat, in manner substantially as described.

82,121.—EXTRACTING TAN BARK.—T. W. Johnson, New York city.

I claim, 1st, The within described process of extracting tan bark by softening the bark in chips, passing it through rollers into the saturating tank, exposing it in said tank to the action of beaters, elevating and passing it through a series of leaches, where it is washed repeatedly until all the astringent properties contained therein are taken up by the wash, substantially as set forth.

2d, Passing a constantly fresh supply of crushed bark through the saturating tank, and exposing it therein to the action of beaters, substantially as and for the purpose described.

3d, Separating the disintegrated bark from the liquid absorbed by it while passing through the saturating tank, by the action of the perforated buckets on the elevator, and by that of the leach which receives the bark as the same is discharged from said elevator, the liquid absorbed by the disintegrated bark being drained off by the perforated elevator buckets, and by the perforated bottom of the receiving leach, and returned to the saturating tank, substantially as set forth.

82,122.—COMPOSITION FOR MAKING DESIGNS UPON FABRICS.—Mrs. R. L. Jones, Sacramento, Cal. Antedated May 6, 1868.

I claim the composition of rosin and soot, perfumed as above described, and for the purpose set forth.

82,123.—HEMP BRAKE.—John Kaye, Louisville, Ky.

I claim the combination of the cranks and beaters, when constructed and operating substantially in the manner and for the purpose herein described.

82,124.—DEVICE FOR BLOCKING CHAINS.—Peter Kendrick, Trenton, N. J.

I claim the box, A, provided with the movable partition, C, and screws, P, in combination with the strips, a a', at the ends of the bottom, a x, of the box, for supporting the long links, D, at the ends of the box, substantially as and for the purpose specified.

82,125.—INVALID REST.—T. S. Kennard, Exeter, N. H.

I claim the combination of the brace, A, which supports the back of the rest, B, at different angles, and secured by the thumb screw in the socket, C, and at the lower end by the hinge, D, with the card teeth, E E, on the under side of the rest, to prevent its sliding or slipping on the bed when in use, in the manner described.

82,126.—OSCILLATING STEAM ENGINE.—R. J. King, Lancaster, Pa.

I claim, 1st, The arrangement of the connecting rod, A, with its slot, C, and regulating devices, D E and F, with the rock shaft, G, and eccentric, S, as herein described.

2d, The arrangement of the eccentric, S, with reference to the parts, A C D and F, and the shaft, T, as herein set forth.

3d, The arrangement of the angular pipes, M and R, with the steam chest, N and the trunnions, P, as herein set forth.

82,127.—ADJUSTABLE CARRIAGE POLE.—M. A. Koon, Catskill, N. Y.

I claim, 1st, Making the extension, B, through which the arms, C C', of the swinging braces, D D, pass, separate from the pole itself, substantially as herein shown and described.

2d, The arms, C C, constructed as described, and attached directly in the pole extension by means of a horizontal aperture fitted through, and a screw, a, fitted into the same, as set forth.

3d, Making the contiguous surfaces of the arms, C C', rough or toothed, as set forth, and forming indentations, b b, or their equivalents, on the outer face of one of them, substantially as and for the purpose herein shown and described.

82,128.—LIFTING MACHINE.—A. Kriebel, Hereford, Pa.

I claim the combination of the slotted perforated post, A, two pins, B, lever, C, and chain, D, with each other, said parts being constructed, arranged, and operating substantially as herein shown and described, and for the purpose set forth.

82,129.—ANILINE DYE.—J. Lambert, Jr., (assignor to himself and Charles Rumpff,) New York city.

I claim, 1st, The new product or coloring material above described, called by me saffranine red.

2d, The process employed by me for producing the said coloring material, saffranine red, substantially as above described.

82,130.—PLOW AND CULTIVATOR.—John Lane, Chicago, Ill.

I claim the improvement herein described in the manufacture of plows and cultivators, that is to say, the making of them of metal plates, having a central layer of soft iron or steel, with exterior layers of cast steel, substantially as and for the purposes described.

82,131.—CENTERING DEVICE.—E. E. Lazell (assignor to himself, T. H. Peters, and F. Keyser), Philadelphia, Pa.

I claim the arrangement, with the concave conical milling head, D, of the centering pin, E, projecting through the head, D, in the manner and for the purpose herein specified.

82,132.—BAG-HOLDING DEVICE AND TRUCK.—J. S. Lehman, Mount Joy, Pa.

I claim the holder, C, constructed as described, and having a short angle, W, with beveled sides, so as to fit into dovetailed slots in the jaws, B, all arranged and operated substantially as specified and shown.

82,133.—OUT-HAUL FOR BOOMS.—George W. Leighton, and C. O. Cole, Portland, Me.

We claim the combination and arrangement of the rack, b, and vessel's boom, dog, B, ring, f, and loop, e, or their equivalents, as and for the purposes set forth.

82,134.—PLAYING CARDS.—John J. Levy, New York city.

I claim as new articles of manufacture, playing cards provided with bevel edges, substantially as herein shown and described, and for the purpose set forth.

82,135.—DEVICE FOR CONDUCTING GRAIN TO THRESHING MACHINE.—A. W. Lockhart, Sacramento, Cal.

I claim the employment or use of a plurality of endless aprons, H K K, connected with a frame, F, and an adjustable upright pole, A, all arranged in such a manner, that the aprons may be adjusted at different degrees of inclination in order to feed grain from stacks or wagons to threshing machines, and the pole rendered capable of always being adjusted in a vertical position, even when placed on uneven or inclined ground, substantially as and for the purposes herein set forth.

82,136.—CHIMNEY SCRAPER.—Shubael K. Luce (assignor to himself and Charles O. Luce), Marion, Mass.

I claim a scraper, composed of the bars, i i i I, with slots, i i i i, the bars, H H H H, with bolts, h h i h h h h, and the corner bolts, L L L L, connected by the expanding springs, J J J J J J, the collars, K K, on the shaft, F, the whole being constructed and operating in the manner and for the purpose herein described and set forth.

82,137.—COMBINED CORN PLANTER AND CULTIVATOR.—John S. Mason, Coal Run, Ohio.

I claim the plow beams, K K, attached to the frame, A, by joints, j, in connection with the standards, h, and covering plates, i x, crank shaft, L, to the cranks, k, of which the beams are connected by chains, and the lever, M, at one end of the shaft, L, substantially as and for the purpose specified.

82,138.—LIQUID METER.—Joshua Mason, Paterson, N. J.

I claim, 1st, The combination, with the measuring cylinder, A, and its reciprocating piston, B, of primary and secondary valves, K and P, when arranged for operation in relation to the measuring cylinder, substantially as shown and described.

2d, The primary and secondary valves, K and P, formed with disks or heads, j j' k k', and n n' r r', for operation within valve chambers, F F', in combination with ports and passages, f f', i i', inlet passages, g, branch, e, passage way, H, ports, s s', and passage, G, with its opening, d, essentially as specified.

3d, The arrangement of the ports or passages which control the ingress and egress of liquid through the secondary valve, and of the passages in connection therewith in such manner as that the flow of the liquid through the valve acts on the latter in the same direction as that to which it has been last shot, and so that said valve is kept shot or thrown in opposite or reverse positions by the pressure of the fluid on its opposite heads alternately, substantially as herein set forth.

4th, The primary valve, K, operated by the piston of the measuring cylinder, essentially as described, and having an open tubular stem in open communication with the latter, as and for the purpose specified.

82,139.—PRESS.—George Matthewman, Brooklyn, N. Y.

I claim operating the press through the instrumentality of two toggles arranged as represented, that is to say, the arm, I, operating the arm, F, through the link, H, presenting the several angular relations at the different periods, as specified, and the motion thus transmitted being conveyed to the press-rod, b, and its connections, through the medium of the arms, E, and links, D, forming a second toggle, all substantially as and for the purposes herein set forth.

82,140.—SULKY PLOW.—J. R. McConnell, Marengo, Iowa.

I claim, 1st, The construction and arrangement of the pivoted draft pole K, adjustable side bar, E, beam, A, and lever, L, as herein described for the purpose specified.

2d, The adjustable right angular bar, E, seed bar, I, adjustable bar, J, brace, G, and lever, L, in combination with the beam, A, pivoted draft pole, K, and plow, C, all arranged as described, for the purpose specified.

3d, The adjustable right angular bar, E, adapted to support the seat and bar, H I, the bar, J, brace, G, and pivoted draft pole, K, as herein described for the purpose specified.

82,141.—HARVESTER RAKE.—Leander J. McCormick, William R. Baker, and Lambert Erpelding (assignors to C. H. McCormick and Brother), Chicago, Ill.

We claim, 1st, The combination in a harvester, substantially as set forth, of a hinged finger beam, a narrow platform affixed to the finger beam, and a dropping platform hinged to the fixed one, with a series of steel-ribs, and a rake revolving over the platform on a horizontal shaft, and mounted on a support secured on the shoe.

2d, The combination, substantially as set forth, with the tripping cam, of the vibrating arm, U, and oscillating dog, for the purposes set forth.

82,142.—HAMES FASTENER.—Robert R. McDonald, Syracuse, N. Y.

I claim the frame, A, the teeth, B B, the catches, C C, the thumb-screw, D, the spring, E, and tongue, when the parts are constructed, combined, and used in the manner as set forth and described.

82,143.—TENONING MACHING.—William McKnight (assignor to himself, John H. Fulford, and Daniel W. McCurdy), Clearfield, Pa.

I claim the arrangement of the guide, C, rest plates, a, adjustable rest, b, and sliding rest, d, upon the bed, to operate in connection with a plane, as herein shown and described.

82,144.—TOBACCO DRESSING MACHINE.—Robert Meginnity and Joseph Dessenger, Detroit, Mich.

We claim, 1st, The loosening of the fibers of fine cut tobacco by a blast of air passing through the same.

2d, The oscillating cylinder, F, provided with the rock shaft, D, the inclined longitudinal screens, O, the perforated tweer plate, N, the openings S and P, the doors, Q, bumper springs, R, stirrup, T, and step, V, when arranged and operating in the manner described, and for the purposes set forth.

3d, The fan blower, B, driving shaft, D, pulley, C, crank, E, connecting rod, G, and rocker arm, H, the air-conducting pipe, J, oscillating tweer, K, trunnion, U, and blast pipes, M, when arranged and operating substantially as described, for the purpose specified.

4th, The combination and arrangement of the above-named parts with the frame, A, substantially as and for the purposes set forth.

82,145.—CARVING MACHINE.—George Merrill, Newburyport, Mass.

I claim, 1st, The combination, in a machine constructed substantially as described, of the laterally-swinging arms, D, and the vertically-sliding tool and guide holder, u, when said parts are arranged to operate substantially as and for the purpose set forth.

2d, The combination of the swinging frame and the sliding plate or frame, u, carrying the cutting tool and guide, arranged with sliding table, B, to operate in connection therewith, substantially as described.

3d, The combination of the adjustable frame, H, hinged bars, D, frame, T, having the pulley, I, mounted thereon, and the sliding plate or frame, u, when arranged to operate as set forth.

82,146.—STEAM GENERATOR.—T. H. Muller, New York city.

I claim, 1st, The construction of the diaphragms, G, extending in a longitudinal direction through the tubes, B, substantially as described.

2d, The construction of the flanges, b, at the ends of the diaphragms, G, substantially as set forth.

82,147.—CORSET.—William W. Netterfield, Rochester, N. Y.

I claim the arrangement of the stiffeners, h i k, springs, c c, diagonal shoulder braces, l l, straps, a a, back stiffeners, b b, hooks or buckles, m m, and side spring stiffeners, f f, all as herein described and for the purpose set forth.

82,148.—CORN HARVESTER.—Nelson Newman, Springfield, Ill.

I claim the yielding bars, H, applied to the machine as shown, or in an equivalent way, to operate in connection with the teeth or cutters, e, and fingers, c, substantially as and for the purpose set forth.

82,149.—ROTARY STEAM ENGINE.—Thomas A. Nizer, Hamilton, Ohio.

I claim, 1st, The arrangement of the cylinders, k k, piston, J J, steam pipes, L F, lever arrangement and cock, m, double abutments, E, and partition plate, h, with relation to each other and the inclined planes, C, as herein shown and described.

2d, The adjustable packing plate, a, adapted to conform to the curve, O, of the inclined planes, C, as herein shown and described.

82,150.—LAMP.—John E. Noyes, New Albany, Ind.

I claim, 1st, The lamp, B, provided with tube, C, hollow shaft, f, with opening, i, and screw regulator, g, substantially as and for the purposes set forth.

2d, The triangular, plate, formed into a wick tube, F, with the projecting edges of the wick, in the manner set forth, and used with the lamp, B, as constructed, as and for the purposes set forth.

82,151.—ILLUMINATING OIL.—John E. Noyes, New Albany, Ind.

I claim the within-described burning fluid, compounded and prepared substantially as set forth.

82,152.—HAY KNIFE.—James Offineer, Ashland, Ohio.

I claim the knives, A B C and D, attached to the iron strip, H, when arranged and combined as herein described, for the purpose set forth.

82,153.—SEED PLANTER.—R. F. Osgood, Rochester, N. Y.

I claim, 1st, So combining and arranging the feeding apparatus, consisting of hoppers, E, rollers, G, and drill teeth, H, with the shaft, I, that the lateral adjustment to change the width of the rows shall be effected by simply sliding in the straight continuous shaft, as herein set forth.

2d, Combining with the swinging gate, and with the seeding apparatus mounted thereon, the adjusting screws, k k, or equivalent, whereby the depth of cut of the drill teeth may be increased or lessened, as set forth.

3d, The combination of the gear bar, L, and the swinging gate, D, of the arm, q, so arranged that the gate is allowed a range of motion sufficient to adjust the depth of cut of the drill teeth, before the gear is raised to be disengaged, as herein set forth.

81,154.—PROCESS OF PREPARING SULPHATE OF BARYTES.—William M. Page and Emil B. Krausse, St. Louis, Mo.

We claim the process, substantially as described, for heating sulphate of baryta, and producing therefrom the refined product known to the trade as "sulphate of barytes."

82,155.—CORN PLANTER.—G. F. Partridge, Adrian, Mich.

I claim, 1st, The hopper, H, horizontal and perpendicular spout, I, slide, K, valve, L, lever, N, connecting rod, O, bell crank, P, arms, S, levers, T, all being operated by the projections, F', upon the sides of the wheel, D, when constructed and arranged substantially as herein set forth.

2d, The lever, W, rod, X, bars, Y, in connection with the bends, Z, pole, 3, hounds, 4, and rod, 5, when operating substantially as and for the purpose herein described.

3d, The combination and arrangement of the above named parts with wheels A and D, axle, B, frame, C, parallel bars, E, front bar, G, standard, 6, cultivator teeth, 7, scraper, 8, lugs, 9, when constructed, arranged, and operating substantially as and for the purposes herein specified.

82,156.—HARVESTER.—Everett G. Passmore, Jr., Philadelphia, Pa.

I claim, 1st, The combination, substantially as set forth, of the main frame, the driving wheel, the finger beam, arranged in the same vertical plane as the main axle, but on a lower level, the vertically-moving pivoted tongue, the adjusting crank, and the hand lever, J, whereby the guards may be tipped at the will of the operator.

2d, The combination, substantially as set forth, of the independently-hinged combined reel and rake arms, the double-tracked cam, and the vertically-adjustable guide arms, whereby the beaters are caused to descend into the standing grain in advance of the cutters, and to rise before reaching the cutters, as set forth.

3d, The combination, as set forth, of the rake arm, guide, and cam way, s, with the spring latch, u, which is lowered to lift the rake, and the latch, s2, which falls to guide it back to the track, whereby the gravel is always removed unless the rake is lifted by the latch.

4th, The combination, in a harvester, substantially as set forth, of a series of independently hinged rotating rake and reel arms with the double tracked cam-way and connecting guides, when so arranged that the rake descends upon the platform behind the cutters, to sweep off the gavel, while the beaters descend into the grain in advance of the cutters, and rise before reaching them, to lift fallen grain.

82,157.—PLOW.—Ezra Peck, Chicago, Ill.

I claim, 1st, A hollow sheet metal beam, when constructed with the flanges, E E, as set forth and for the purpose specified.

2d, Constructing a hollow plow beam by riveting or otherwise properly fastening together the two parts, A and K, or their equivalent, for the purpose specified.

3d, Constructing a hollow plow standard and beam, curved and bent in one continuous piece, directly from sheet metal, in the manner and for the purpose specified, as a new article of manufacture.

4th, The slotted concave support, in combination with the beam, A, and mold board, z, all arranged as set forth.

5th, Rounding or angling the inner bearing or face of the coulter standard, u, when used in connection with the clasp, J, in the manner and for the purpose specified.

6th, The beam, A, strip, K, flanges, E E, slotted support, o, and mold board, z, all constructed and arranged as set forth.

82,158.—SMOKE STACK.—Theodore P. Peck, Savannah, Ga.

I claim, 1st, The cone box, B, having perforated upper section, with bonneted outlets or port holes, c', substantially as herein described,

2d, The inverted truncated cone shaped sieve, F, arranged within the perforated upper section of the cone box, B, substantially as and for the purpose herein set forth.

3d, The combination of the cone box, B, and sieve, F, with each other and with the other parts of a smoke stack, substantially as herein specified.

82,159.—METALLIC SHUTTER.—Eliab Perkins, Fond du Lac, Wis.

I claim, 1st, A metal shutter, formed of two plates recessed and riveted together, in the manner substantially as described.

2d, A metallic shutter, constructed substantially as herein described, and provided with a water reservoir, substantially as set forth.

82,160.—FURNACE FOR MELTING STEEL, IRON, ETC.—Edward R. Playle, Great Bend, Pa.

I claim the furnace, A, when suspended on trunnions with power gear attached, for the purpose herein described.

82,161.—STOP-COCK.—Joshua Regester, Baltimore, Md.

I claim, 1st, The valve, F, constructed with a flange, 1, and embraced by an elastic packing, h, which is applied between the collar and cap of the stop-cock, substantially as described.

2d, A right-and left screw valve stem, D D', a valve, F, and the picking, h, combined and adapted to operate substantially as described.

82,162.—CORN-PLANTER.—James Selby, Peoria, Ill.

I claim, 1st, The combination, with the slide, C, of the roller, h, and arm or support, D when arranged to operate substantially as described

2d, The lever, L, having its lower end resting in a socket or rest connected to the seed slide, for the purpose of bolding the slide down while operating it, as set forth.

3d, The seed-tube, B, provided with the vertical partition, l, and horizontal partition, f, with the holes, o, therein, substantially as described.

4th, The valve-rod, b', with the valve, n, attached thereto, said rod, b', being located in the seed tube, B, and operated by the slide, C, substantially as shown and described.

82,163.—HOWEL AND CROZE.—Jacob B. Siefried, Pittsburg, Pa.

I claim, 1st, In the case of a howel, or of a howel and croze, the opposite working faces, a a', made substantially as described, and either with or without the flat face, a'', for the purpose set forth.

2d, A howeling bit, c, made with two or more curved edges, x x', to correspond to the shape of the working edges, a a', of a howel-case, substantially as above described.

3d, The construction of a combined howel and croze, the cutting bits of the croze being placed at or a little forward of the centre of the working face of the howel, and the howeling bit just back of the centre, substantially as and for the purposes set forth.

4th, The frame, f, as a box or case for the crozing chisels, hung in the combined tool by a ball-and-socket or hinge joint, or other equivalent device, and operated substantially as and for the purposes above set forth.

82,164.—APPARATUS FOR IMPREGNATING CANE JUICE AND OTHER LIQUIDS WITH SULPHUROUS-ACID GAS.—Evan Skelly, Plaquemine, La.

I claim, 1st, The register, K and valve J, in connection with the wheel, O, and pendent valve, L, all arranged as shown, or in an equivalent way, to admit of the supply of gas to the cane juice being automatically regulated by the quantity of juice passing through the juice trough, substantially as set forth.

2d, The wheel, O, in the juice trough, M, in combination with the pendent partition plates, N N, and recesses, e e, all arranged as shown, for the mixing of the gas with the cane juice, and the prevention of the escape of gas from the juice trough, substantially as shown and described.

3d, The wheel, F, provided with the draught nozzles, a, and submerged in the chamber, E, in combination with the pipes, B B' B'', and furnace A, all constructed and arranged as shown, for the purpose of drawing the gas from the chamber through the water in E, substantially as set forth.

82,165.—GANG PLOW.—Frederick P. Smith, Petaluma, Cal.

I claim, 1st, The arrangement of the devices and means herein recited for raising and lowering the frame and plo ws.

2d, The bars, with spaces on the end of the beam, and on the tongue, with the bolts and nuts for the adjustment of the land wheel axle, and the caster wheel's arm, as herein set forth.

82,166.—GANG PLOW.—F. P. Smith, Petaluma, Cal.

I claim the combination of the several means and devices herein set forth, for raising and lowering the plows.

82,167.—TWINE BOX.—H. Smith and J. Emery, Buffalo, N.Y.

We claim, 1st, The adjustable and removable knife, B, having a screw shank, C, and set screw, C', in combination with the twine box, A, substantially as described.

2d, The extended screw shank, C, and set screw, C', as a means of connecting and securing both the knife, B, and removable bottom, D, to the main body of the twine box, A, substantially as herein described.

82,168.—HAME.—Isaac B. Smith and Henry C. Burr, Springfield, Vt.

We claim, 1st, The combination of the post, A, double post, B, and blot, E, arranged and constructed substantially as and for the purpose described.

2d, In combination with the bolt, E, the washers, J and K, arranged upon it, substantially as set forth.

82,169.—COAL STOVE.—H. D. Snyder, Carbondale, Pa.

I claim a stove composed essentially of the wall. A, formed of the system of doors, as above described, the grate, D, supported as described, the cylinders, C and G, the upright shaft, I, the centering plate, i, and the radiating box, J, all the said parts being constructed and put together as described.

82,170.—GRAIN DRYER.—Henry Spendelow and Rob't Henenage, Buffalo, N. Y.

We claim, 1st, The arrangement, in combination with the closed chambers, of the disk plates, k, and raised flanges, h, in the manner and for the purpose herein set forth.

2d, The combination, with the arms, l l, of the spreaders, p p p, arranged as described, and operating in the manner and for the purpose specified.

3d, The arrangement, in combination with the drying floors, C, and arms, l l, of the series of slots, m m, receding in position, so as to leave a closed surface in the succeeding floor below each slot, as herein set forth.

82,171.—GUIDE FOR SCROLL SAW.—G. W. Staats, Newcastle, Pa.

I claim, 1st, The guide, A a, substantially as described, in combination with a scroll saw and a pattern, all as and for the purpose set forth.

2d, The auxiliary guide plates, h h', links, i i, and suitable accessory plates, k j k, and screws, l, for giving the proper curvature to the plates, h h', all substantially as shown and described, in combination with the guide plate, A' a', and a scroll saw, all as set forth.

82,172.—JOINING AND FITTING HOOF HOOKS.—F. Stanley, Austin, Texas.

I claim the fitting of the hoof-hook or cleaner into the back of the ordinary horse brush, and the mechanism above described, by which it is confined in its sheath or thrown out at pleasure, or any similar arrangement answering the same purpose.

82,173.—COOKING-STOVE VENVILATOR.—C. Stoddard and A. Stoddard, Naples, N. Y.

We claim the sleeve, a as arranged and combined with stovepipe, A, pipes, B and D, and metallic dish, C, substantially in the manner and for the purpose herein set forth.

82,174.—CHEESE PRESS.—J.D. Stratton and T. Wilson, Mackinaw, Ill., assignors to J. D. Stratton.

We claim a cheese press having attached thereto the cam, H, lever, H, rollers, E and G, and sliding beams, P, constructed and arranged substantially as specified.

82,175.—WASH BOARD.—H. B. Straut, Greenleaf, Minn.

I claim, in combination, the construction of the rubbing board, D, within frame, C, and the mode of attaching the same, thus constructed, to a common washing board, substantially as and for the purposes described.

82,176.—FIRE ESCAPE.—S. A. Swalm and C. C. Smitt, New York city.

We claim, 1st, A fire-escape ladder attached at the upper part of the window, inside the building, in combination with a box or receptacle for holding such ladder when folded, and a swinging bottom and latch, applied substantially as set forth, to cause the ladder to pass outside the building as it is unfolded for use, as specified.

2d, The tubular rungs for the ladder, formed with right-and-left-hand screws at their ends, in combination with the link, n, that connect with the ropes or chains, substantially as set forth.

82,177.—FRUIT GATHERER.—Geo. Tanner, Freetown, N. Y.

I claim, 1st, The combination of the rod, C, with its hook, E, and the rod, A, with its cross-head piece, to form an adjustable clamp for the uses and purposes set forth.

3d, In combination with the above, the saw, F, when arranged to operate as described.

82,178.—COTTON PRESS.—W. H. Tappey, W. C. Lumsden, and A. Steel, Petersburg, Va.

We claim the shaft, G, wheel, P, rack, B, wheel, H, pawls, e and d, double arms, Q, rod, k, lever, M, and roller, f, all arranged, constructed, and operated substantially as described, in combination with the follow block, C, and beam, A, of an upright press, as set forth.

82,179.—BIT STOCK.—J. W. Thompson and F. M. Thompson, Greenfield, Mass.

We claim a bit stock or tool holder, constructed and arranged so as to operate substantially as described.

82,180.—CULTIVATOR.—Thomas Thorley, Southfield, Mich.

I claim, 1st, The quadrant, I, provided with flanges, J, when attached, and operating substantially as and for the purposes herein described.

2d, The levers, K, the bolt and hand nut, L, and the plate, N, provided with the slot, N, when arranged and operating substantially as and for the purposes herein shown.

3d, The combination of the beam, A, the vertical standard, C, the teeth, D and H, the handles, E, and arms, F, the standards, G, the quadrant, I, the flanges, J, the levers, K, the bolt and hand nut, L, the slot, M, and plate, N, when constructed, arranged, and operating substantially as and for the purposes herein set forth, described, and shown.

82,181.—PAPER FASTENER.—William M. Tileston, N.Y. city.

I claim corrugating, fluting, or grooving the points and arms, for punching the holes as described.

82,182.—LUBRICATOR.—Richard H. Tradenick, Pittsburg, Pa.

I claim the oil cup, C, having the column, E, oil passage, G, ball, F, top, K, and set screw, L, when constructed and operating substantially as and for the purpose set forth.

82,183.—SEWING-MACHINE.—J. D. Vanduzer, Tyrone. N.Y.

I claim, 1st, The arrangement of the cam wheel, C, connection, D, lever, E, and pendulous frame, I, when constructed and operating substantially as and for the purpose set forth.

2d, The eccentric, D, bar, N, and pivoted lever, O, in combination, when constructed as described, and arranged to give motion to the cloth, substantially as herein set forth.

82,184.—CUT-OFF VALVE GEAR FOR STEAM ENGINE.—C. W. Walley, New Orleans, La., assignor to the New Orleans Pneumatic Propelling Company.

I claim, 1st, The arrangement of the toggle joints, D D' D'' D''', with reference to the induction and eduction valves, when those parts are constructed substantially as herein described.

2d, The arrangement of the toggle joints, D D' D'' D''', with the bars, E and E', substantially as herein described.

81,185.—POST HOLE BORER.—Jacob M. Walter, and Samuel Shank, Springfield, Ohio,

We claim, 1st, The arrangement, within the frame, G J K, hinged, at L, to the main frame, of the jointed shaft, f f, bearing the auger, the arm, q, and beveled gear wheel, K, adapted to turn with and move longitudinally on said shaft. pinion, l, on crank shaft, H, windlass, l, cords, p, ratchet wheel, n, pawl, o, and crank, M, all constructed and arranged to operate in the manner and for the purpose herein set forth and shown.

2d, The hollow blocks, C, fixed to frame, A, and adapted to receive the head, b, of axle, a, on which the wheel, B, is held by means of nut, d, as herein shown and described, for the purpose specified.

82,186.—RAIL FENCE.—Eli G. Warner, Union Township, O.

I claim the construction of a fence, with a triangular frame, A B C, in which the rails are laid obliquely, in the manner and for the purpose as above stated.

82,187.—KITCHEN IMPLEMENT.—Charles S. Westland, and John B. Allen, Providence, R. I.

We claim a kitchen implement, constructed substantially as described, and for he purpose set forth.

82,188.—SHOE LACING.—Margeannah White, Providence, R.I.

I claim the eye A, in connection with its fastening, B and C, when constructed and applied to a shoe, substantially as set forth and for the purpose specified.

82,189.—ATTACHMENT FOR PLOW.—Charles E. Wilson, Palmyra, Me.

I claim the spring, B, adjustable roller head, D, and roller, C, as an attachment for a plow, all constructed and operating substantially in the manner and for the purposes shown and described.

82,190.—VALVE GEAR FOR STEAM ENGINE.—Furman R. Wilson, Philadelphia, Pa.

I claim, 1st, The arrangement of the adjustable cams, C' C', composed as described, with reference to the screw thread, b, on the piston rod, I', and the key, e, and key slots, d, substantially as herein shown and described, and for the purpose set forth.

2d, The lever, O O O, with its two short arms, having the rollers, h and i, arranged with reference to the valve rods, M M, and cams, T and S, upon the piston rod, I, substantially as herein described, and for the purpose set forth.

3d, The cams, S and T, being both arranged on one piston rod, in combination with the lever, O O O, substantially as described, and for the purpose forth.

82,191.—CULTIVATOR.—J. A. Woodward, S. S. Woodward, and Thomas Mason, Sandwich, Ill.

We claim, 1st, The reversible axle joints, H H, pivoted to the frame, A B, and arranged to balance the same, substantially as set forth.

2d, The combination of the above-described axle joints, with the frame, A B, and folding seat, L, as and for the purpose herein described.

3d, The handles, D D, pivoted to the standards, E E, and made adjustable to or from each other by means of the slotted plates, F F, and set screws, I I, as described and shown.

82,192.—PERMUTATION LOCK.—Linus Yale, Jr., Shelburne Falls, Mass.

I claim, 1st, The method of adjusting the lock to and connecting it with the door by means of the steady pins and bearing screws, substantially as described, in combination with the fastening screws, or the equivalent fastening, as and for the purpose described.

2d, In combination with the lock bolt, two sets of rotating tumblers, and their appendages, each set operated by one spindle, which also acts upon the bolt and the racks connected with the fence of the tumblers, and capable of being thrown separately in and out of gear with the pinion on the lock bolt, substantially as and for the purpose specified.

3d, The rack, or its equivalent, to stop or liberate the lock bolt, when combined with the fence of the tumblers, by means of an interposed spring, or equivalent, substantially as and for the purpose specified.

4th, Combining the eccentric roller, which is acted upon by a wheel or equivalent on the spindle, with the fence of the tumblers by a vibrating lever, or equivalent therefor, having a spring or equivalent interposed between it and the fence, substantially as described, and for the purpose set forth.

5th, Balancing the tumblers, or, as the equivalent thereof, disconcerting the preponderating weight relatively to the slots for the fence, substantially as and for the purpose specified.

6th, A sliding and rotating spindle, which both shoots the bolt and revolves the tumblers, as described, and is provided with a cylindrical cavity, as specified, in combination with a stationary arbor of greater length than the space occupied by the pack of tumblers, and projecting into the cylindrical cavity of the spindle, the combination being substantially such as herein before set forth.

7th, Combining, with the case which contains the tumblers, and which is fitted to the tubular projection from the lock frame, so that it can be inserted therein and removed therefrom for the purpose of changing the combination, a spring bolt or latch controlled by a separating lock, substantially as and for the purposed escribed.

8th, Making the knob hollow and threaded on the inside to receive the threaded portion of the spindle to such an extent that it can be fitted to doors of various thicknesses, and then prevented from turning, the one on the other, by a feather key as described.

82,193.—APPARATUS FOR TOLLING GRAIN.—James Armstrong, Bucyrus, Ohio.

I claim the combination of the box, A, with partitions or chutes, e f g, the spout, k, and the gage, l, when constructed and arranged as and for the purpose herein set forth.

82,194.—PROCESS OF REFINING CAST IRON.—Haydn M. Baker, Harlem, N. Y.

I claim the use of solid and fusible insoluble silicates of soda, potash, and other bases, consisting of silicate of lime, magnesia, barytes, strontian, lead, and bismuth, or mixtures of same, for the purpose of removing silica, sulphur, carbon, and metalic oxides from iron at very elevated temperatures, in the manner herein described and for the purposes fully set forth.

82,195.—VAPOR CONDENSER FOR LARD-RENDERING KETTLES.—Wm. M. Bartram, Philadelphia, Pa.

I claim, 1st, The employment of the air tube g, through which air is forced by a bellows, or other equivalent means, into the cap, D, above the fire, in combination with the gooseneck, E, condensers, F and G, and pipe, S, leading into the chimney, whereby a part of the vapor is condensed, and the uncondensed vapor is carried up the chimney, substantially as set forth.

2d, The arrangement of the kettle, C, cap, D, air tube, g, condensers, F and G, pipes, f J N k, conduit pipe, m, discharge pipes, t t' L, and pipe, S, all constructed and operated in the manner and for the purpose set forth.

82,196.—LAMP.—John Bellerjeau, Philadelphia, Pa.

I claim pendent springs, B, terminating in hooks or rests, C, when attached to the lower side of an annular plate, F, having an annular hole, A, in its center, substantially as and for the purpose herein shown and described.

82,197.—WATCH.—P. R. Bennett, Jr., Urbana, Ohio.

I claim suspending the jewel or bush of a watch by means of lateral springs placed about the same, substantially in the manner and for the purpose herein set forth.

82,198.—STEAM GENERATOR.—Auguste L. Bezy and Isidore A. Desnoyers, Paris, France.

We claim, 1st, The arrangement of the inner and outer casings of a steam boiler eccentrically to each other, for the purpose set forth.

2d, A boiler the outer shell of which consists of two or more flanged sections, constructed and so secured together by screw bolts as to be detachable from each other, substantially as herein set forth, for the purpose described.

82,199.—RAILWAY SAFETY ATTACHMENT.—H. S. Blood, Jefferson, La.

I claim the combination of a railroad car with the fender wheels, A A, the shaft, I, and the frame, B, when these parts are constructed, arranged, and operate substantially as herein described, for the purpose set forth.

82,200.—FEATHER RENOVATOR.—Amos Bond (assignor to himself and A. D. Moore), Chicopee, Mass.

I claim, 1st, The combination of the revolving feather holder, A, dryer, C, steam chest, D, tubes, I, valve seat, E, two-way valve, F, valve seat, H, blow-off pipe, G, exhaust valve, G', reservoir, K, and pipe, J, substantially as and for the purpose described.

2d, The removable partition, P, applied to the revolving feather holder, A, to form compartments therein, substantially as described.

3d, The slotted or sawn caps, applied to the outer ends of the tubes, I, when the latter are applied to the steam chest, D, and dryer, C, substantially as and for the purpose set forth.

82,201.—SKATE.—Joseph Bourke, Curraghleagh, Ireland.

I claim the combination of the perforated plate, C, and hooked rod, D', with the movable sole plate, B, lips, b' b', and heel plates, E E2. all arranged to operate substantially as and for the purpose herein described.

82,202.—MANUFACTURE OF ARTIFICIAL STONE.—Wm. K. Boyle, Brookville, Md. Antedated Sept. 7, 1868.

I claim the herein described process of manufacturing artificial stone, by means of which the insoluble silicate of lime is formed, by the double decomposition of the silicate of potash and nitrate of lime, substantially as herein set forth and described.

And, as a secondary result, the utilization of the nitrate of potash, as a waste material, in the manufacture of artificial stone, as herein set forth and described.

82,203.—TOP PROP FOR CARRIAGES.—F. A. Bradley (assignor to himself, James G. English, and E. F. Mersick), New Haven, Conn.

I claim, 1st, In combination with a stud, A, of other than cylindrical form, the sleeve, F, formed with the flange, a, and the nut, G, arranged so as to bear against the said flange, substantially as herein set forth.

2d, In combination with the stud, A, formed upon the plate, B, the covering plate, D, with its neck or projection, E, when constructed and arranged so as to cover the plate, B, substantially in the manner herein set forth.

82,204.—PORTABLE PLATFORM SCALE.—H. K. Bugbee, Williamstown, N. J.

I claim, 1st, The levers, G and H, having their fulcra on plates, J, which rest upon adjustable standards, A and A', or directly upon the surface of the ground or floor, in combination with a graduated scale beam, and the within described appliances, or their equivalents, connected therewith, all substantially as and for the purpose set forth.

2d, In combination with the above, the bars, L, or platform, for the purpose specified.

3d, The frame, D, with its fixed and movable arms, h and h', for the purpose specified.

82,205.—HOG CHOLERA MEDICINE.—A. J. Carver and E. P. Horn, Greenhill, Tenn.

We claim the aforesaid medicinal compound for the cure and prevention of hog cholera.

82,206.—GLOBE VALVE.—Wm. Chesley, Cincinnati, Ohio.

I claim, 1st, The bolt, D, screwed into the disk, e, of the seat, B, and drawing said seat in the direction of the pressure of the valve, as and for the purpose specified.

2d, The valve, C, with groove, G, depressions, I I, and lining, L, of brass or any other suitable material, substantially as and for the purpose described.

82,207.—HAND RAKE.—Holley M. Clark, Brewer, Me.

I claim the shafts, A B, wheel, D, tie, C, cross beam, E, and arms, F F F F, in combination with the rotating rake, G d d d, all constructed and operating substantially in the manner and for the purposes shown and described.

82,208.—APPARATUS FOR BREWING MALT LIQUOR.—Paul Conday, Philadelphia, Pa., assignor to himself and Chas. F. Leisen.

I claim an apparatus, so constructed that the steam rising from the brewing boiler during the process of brewing may be used for the purpose of heating and preparing the wort for each succeeding brewing, as described.

82,209.—BUSK OR STAY FOR CORSET.—Thomas B. De Forest, Birmingham, Conn.

I claim a dress or corset busk, of paper or similar fibrous material, having inserted longitudinally therein a metallic spring, substantially as set forth, as a new article of manufacture.

82,210.—RAILROAD CAR HEATER.—W. B. Farwell, New York, assignor to himself and Chas. R. Abbott, Elmira, N. Y.

I claim, 1st, The universal joints, D D, and the pipes, B B and C, applied to the permanent or fixed pipes, A x, of the cars, for the purpose of forming a steam tight connection between the pipes of the cars, and admitting of a free vertical, lateral, and longitudinal play or movement of the latter, substantially as set forth.

2d, The placing of the coiled or sinuous portion of the steam pipes, A x, in inclined positions, with water receptacles, G, communicating with them at their connecting points, said receptacles being provided with valves or siphons, s o arranged as to admit of the discharge of the water of condensation at proper intervals, without permitting the escape of steam, substantially as set forth.

82,211.—CUTTER HEAD.—Samuel Fawcett, Rochester, N. Y.

I claim the rotary cutter head, having one or more wings for holding the knives, made adjustable longitudinally, constructed to operate substantially as described.

82,212.—LINIMENT.—Heinrich Fedder, Lancaster, N. Y.

I claim the liniment, made of the ingredients and in the manner substantially as described.

82,213.—DEVICE FOR MEASURING THE FEET OF HORSES.—H. B. Ferren, Batavia, N. Y.

I claim, 1st, In combination with a device, as above described, for taking an accurate measure of the form of a horse's hoof, the arrangement of the index headed screw, E, center screw, a, and point, e, in a straight line, so as to certainly adjust the measure to the center of the foot, as described.

2d, In combination with a device for measuring the hoof of a horse, the slides, G, constructed as described, the index headed bolt, E, and wheel, F arranged and operating as described.

82,214.—DEVICE FOR MEASURING THE FEET OF HORSES.—H. B. Ferren, Batavia, N. Y.

I claim, in combination with the slides, F F, the adjustable slide, C, and the adjustable heel slides, D D, as described, all secured to the one center screw B, as and for the purpose described.

82,215.—DEVICE FOR ATTACHING SHOES TO HORSES' FEET.—Horace B. Ferren, Batavia, N. Y.

I claim, 1st, In combination with a shoe provided with an upward projecting flange at the heel, as shown in the patent to Tyrrell, one or more spring bands, D, fastened by nuts, or their equivalents, to said flanges, substantially as set forth.

2d, The bars, C C, constructed as described, with a screw at the lower end to be inserted in a horse shoe, and a loop, or its equivalent, at the upper end, for the purpose of holding a band, so that the shoe may be attached to a horse's foot by the same, substantially as herein set forth.

82,216.—CHURN DASHER.—Elliot H. Funk, Newark, Ohio.

I claim the pivoted swinging wings, g g, in combination with the break boards, h h, and dash boards, d d, all arranged substantially in the manner and for the purpose set forth.

82,217.—APPARATUS FOR DETACHING HORSES FROM CARRIAGES.—George Gabriel (assignor to himself and Philip Wisenberger) Pittsburg, Pa.

I claim, 1st, The plate, C, having the lock, E, pin, h, and eyes, a a' a'', substantially as described.

2d, The combination of the plate, C, the bars, D and F, constructed and operating substantially as described.

82,218.—BED BOTTOM.—Geo. L. Gerard, New Haven, Conn.

I claim the arrangement of the plate or strip, d, and buttons, f and g, with the spring, C, and slats, A and B, the parts being made and used as and for the purpose specified.

82,219.—LAMP FEEDER.—T. B. Gibbons, Baltimore, Md.

I claim, 1st, The lamp feeder, D, when constructed with the tube, J, extending from the end of the nozzle around to the rear side of the body or the can near its top, and thence through the wall of the can into its interior, and operating substantially as described.

2d, The combination of the cock, N, having the orifice, o, with the nozzle, d3, having the two passages, n n', by which, at the same time that the liquid is delivered from the can, D, to the lamp, A, the gas in the latter is conveyed to the upper part of the can, without escaping around the nozzle, and in the manner described.

82,220.—BRAKE FOR YARN BEAM OF LOOMS.—Joseph John Harrison and Edward Harrison, Broughton, England.

I claim, 1st, The chains or bands, f, bearing on the ends of the warp roller, and secured to a bar, m, in combination with the within-described devices, or their equivalents, for adjusting the bar and securing it after adjustment, for the purpose specified.

2d, The combination of the above and the springs, l, connected to the bands or chains, f, for the purpose described.

82,221.—STEP LADDER JOINT.—Shubael E. Hewes, Albany, N. Y.

I claim the joint, composed of the foot, c c, the round, s, the button, B B and the matrix, a a, substantially in the manner and for the purpose above described.

82,222.—LOW WATER INDICATOR.—George M. Hopkins, Albion, N. Y.

I claim, 1st, The vessel, A, in combination with the pipes, B B and C C, and the swivel joints, D D and E F, operating in the manner substantially as shown and described.

2d, The stop cocks, I and O, having the spring catches, L L, in combination with the vessel, A, arranged to operate substantially as shown and described.

3d, The vessel, A, in combination with the whistle, P, and intermediate devices for giving alarm and regulating the supply of water, as above set forth.

82,223.—GANG PLOW.—Charles L. Horn, Jr, and Leonard Mancy, St. Morgan, Ill., assignors to Leonard Mancy.

I claim, 1st, The frame, A A1 A2, the wheels, B and B1, adjustable arm, b b1, post, B2 and braces, B3, when combined and arranged as herein shown and described.

2d, The plow beams, C, their posts, C1, and the frame beam, A2, when constructed substantially as herein shown and described, and for the purpose set forth.

3d, The beams, C, post, D, and seat, D', when constructed and arranged as herein shown and described.

4th, The arrangement of the beams, C, rod, E, and lever, E', in the manner and for the purpose herein described and set forth.

82,224.—DEVICE FOR FILLING MARSHES.—George Howell and William Smith, Philadelphia, Pa., assignors to George Howell.

We claim, 1st, The combination and arrangement of the case, B, constructed as described, with the scow, A, substantially in the manner hereinbefore described and for the purpose set forth.

2d, The combination of the perforated pipes, J, with the case, B, substantially as for the purpose above described.

82,225.—WATER WHEEL.—John Hoyt, Hughsonville, N. Y.

I claim an outward discharge water wheel, constructed as described, namely, having a top plate, B, inverted cone, F, buckets, d d, and rim, D, all constructed and arranged in relation to each other, substantially as herein described.

82,226.—RAILWAY SNOW PLOW.—Jenkins Jones, and T. G. Elswald, Providence, R. I.

We claim the arrangement of the frame, A, constructed as above described, with the apron, G, and the deflector, E, substantially as herein set forth.

82,227.—BELT FASTENING.—Timothy Kennedy, Mount Carmel, Conn.

I claim the springs, D D, provided with bosses, a a, and fitting transversely against the under side of the belts, in line with the perforated edges of the single top plate, A, the bosses, a a, being adapted to receive the ends of the screws passing through the top plate and belts, as herein described for the purpose specified.

82,228.—ILLUMINATING DAMPER.—John H. Keyser, New York city.

I claim, 1st, The door, A, constructed with openings, h, and mica holding ribs, g g', substantially as described.

2d, The mica holding plate, D, interposed between door, A, and plate, B, substantially as described.

3d, Providing an illuminated door or window for a stove with fixed mica lights d, and movable mica lights, d', substantially as described and shown.

82,229.—GATE.—John H. King, Smithfield, Ind.

I claim, 1st, The combination and arrangement of the pins, d1 d2, plates, d, sliding bolt, E, concealed spring, F, and weighted lever, G, when constructed and operating as described.

2d, The combination of pins, d1 d2, plates, d, sliding bolt, E, concealed spring, F, weighted lever, G, hinged prop, H, and catch, g, arranged and operating as described.

82,230.—BOTTLE STOPPER.—John Klee, Dayton, Ohio.

I claim the stopper or plug, B, made conical or tapering at both ends, and provided at one end with the rubber packing disk, A, arranged as described, and secured by a tack, F, all as and for the purpose herein set forth.

82,231.—ATTACHMENT FOR GAS BURNERS.—Julius Kopp, Hoboken, N. J.

I claim an adjustable cap, A, constructed of woven or perforated metals, with flanges, A'' A'' A'', substantially as and for the purpose set forth as an article of manufacture.

82,232.—FAUCET.—B. F. Kraft, Reading, Pa.

I claim the combination and arrangement of the induction passage, a, valve, b, spring, d, handle, D, three cornered piece, E, and eduction-passage, i, the whole being constructed and operated as set forth.

82,233.—WHIFFLE TREE SWIVEL.—M. F. Lanning, White House, N. J.

I claim the movable swivel, D, constructed as described, with one end longer than the other, and pivoted to the end of the iron, B, for the purpose of attaching trace to a whiffle tree, substantially as herein set forth.

82,234.—TREE BOX.—J. W. L. Letherbury, Sandoval, Ill.

I claim a tree wrapper constructed and operating substantially as described.

82,235.—CHURN.—Henry Leber, Bellfair Mills, Va.

I claim the herein described triangular form of paddles, arranged in alternate ranks, in opposite position, as relates to their angles upon the shaft, as herein shown and described.

82,236.—CARPET LINING.—Miles Mayall, Roxbury, Mass., assignor, by mesne assignment, to George W. Mayall. Antedated June 27th, 1868.

I claim, as an article of manufacture, an under lining for a carpet, constructed from an elatic fibrous material, placed between the surfaces, one of paper and the other of a thin, open-woven fabric, and having perforations through the whole, substantially as described.

82,237.—MACHINE FOR BENDING WOOD.—Josiah F. Melcher, Bloomington, Ill.

I claim the construction and arrangement of the cross beam, C, tables, F F' and frame, D D', substantially as shown and described.

82,238.—PROCESS OF DEBRANNING WHEAT.—John G. Moxey (assignor to himself, Henry C. Carey, and Abraham Hart), Philadelphia, Pa.

I claim the within described improved process of debranning wheat, that is to say, subjecting the grain, without the use of steam, and while in a dry state, to the action of the blades, in the manner described.

82,239.—DROP TUBE STEAM GENERATOR.—Joseph Nason, New York city, assignor to himself, Charles H. James, and Frank Milward, Cincinnati, Ohio.

I claim, 1st, The within described extension of the drop tube upward abov

the upper surface of the tube sheet A, and the provision for allowing a current of water to circulate through the side of such extension, and descend through an inclosed passage or tube, d, combined and arranged substantially as and for the purpose herein set forth

2d In combination with the above, making the extended top, D', in a separate piece from the main cheq tube, D, and adapted to serve relatively to the other parts, substantially in the manner and for the purpose herein specified.

82,240. SAW SHARPENING DEVICE.—A. M. Newman, Terre Haute, Ind.

I claim, 1st, The adjustable standards, B B, provided with heads, C C, and washers, e e, for the purpose of securing the files, and adapting the machine to different sized files, substantially as and for the purposes herein set forth.

2d, The combination of the slotted bar, A, standards, B B, handles, D D, rod d, guides, i i, constructed and operating substantially as and for the purposes herein set forth.

82,241.—FOUR-WHEEL PLOW.—Nelson B. Norton, Burlington, Wis

I claim, 1st, The arrangement of the lever, H, jaws, I, and metallic straps, K, with the plow beam, F, frame, C, post or standard, L, straps, M, and catch h, when constructed and used as and for the purpose set forth,

2d, The adjustable rod, g, in combination with the frame, C, and plow beam, F when arranged as and for the purpose specified.

82,242.—LIME KILN. W. C. Pettijohn, St. Louis, Mo.

I claim the arrangement of the kiln, A, having the chamber, A', grate, a, ash pit, B, side aperture, a', metallic dome, D, constructed in two parts, and having the smoke exit, o2, all combined substantially as herein set forth.

82,243.—MACHINE FOR FORMING BUTTONS.—S. G. Pitts (assignor to himself and W. L. Palmer), Leominster, Mass.

I claim the combination of, as well as the arrangement of, one or two sets of mandrels, A B, the toothed rack or carrier, L, and its supporting rail, K, and the clamp, M M, the whole being provided with mechanism for operating the rack, mandrels, and clamps, substantially as described.

82,244.—APPARATUS FOR CARBURETING AIR.—J. T. Plass and R. H. Plass, New York city.

We claim, 1st, The gate, E, in combination with the fluid trap, c2, constructed as described, for regulating the supply of hydrocarbon to the evaporating chamber, and returning the surplus to the reserve chamber, substantially as set forth.

2d The tubular stem of the hollow cone valve, G, for the insertion of shot or other suitable weights, for adjusting the pressure in the gasometer, substantially as set forth.

82,245.—BLIND HINGE.—R. B. Prindle Norwich, N. Y.

I claim a self locking blind hinge, formed by combining the pin, G, with its conical base, and a corresponding seat in the disk, F, with the shoulder, B, engaging the lever, D, in the manner and for the purpose substantially as herein shown and described.

82,246.—ANIMAL TRAP.—H. W. Prouty (assignor to himself and Howard Tilden), Boston, Mass.

I claim the arrangement of the arms, D D, spears, K K, bait rod, L, and bait cup C, in combination with the spring F, and catch, G, the whole being constructed and arranged upon a block or frame, substantially as described and for the purpose set forth.

82,247.—TABLE.—J. C. Putnam, Worcester, Mass.

I claim, 1st, The construction of the top, B, the pieces, C C, for supporting the top, in connection with the slide, R, substantially as set forth and described.

2d, The combination of the movable legs, leaves, drawer or drawers, and a fastening mechanism that holds both drawer and leaves, substantially as set forth and described.

82,248.—BRICK KILN.—S. D Rader, Williamsport, Pa.

I claim the arrangement of the kiln, A, and furnaces, C, and long side furnaces, B, composed of a series of small fireplaces, o o o, and provided with draft holes, I I, at the side and ends, all constructed substantially as and for the purposes herein set forth.

82,249.—GAS BURNING FURNACE FOR STEAM GENERATORS.—John T. Rich, Philadelphia, Pa. Antedated July 8, 1868.

I claim, 1st, So arranging a furnace that the coal shall be subjected to distillation before it enters the fire box, and at the same time so arranging the draft or blast that the gases thus evolved shall be thoroughly mingled with atmospheric air or air and steam within the furnace, but before entering the fire box or combustion chamber to be consumed, substantially as described.

2d, The chute, C, extending in the form of a tube into the fire chamber and serving as a retort, for the purpose of distilling the coal retained in the tube by means of the heat of the fire box, in combination with a draft pipe, F F', substantially as set forth.

3d, The steam blast, s, so arranged in relation to the tube or retort in which the coal is subjected to distillation, that the wet steam and atmospheric air shall be mingled with the gaseous products of the coal before entering the fire box, substantially as set forth.

4th, The arches or diaphragms, G, when constructed of a refractory substance, and extending entirely across the fire-box, and perforated with openings, K, substantially as and for the purpose set forth.

5th, Double perforated arches or diaphragms, G, in combination with intermediate openings, P, through the external walls

6th, The combination of the chute, C, extending into the fire-box, to act as a retort in the distillation of the coals and arches or diaphragms, G, so located within the fire-box as to reflect the heat upon such retort, substantially as set forth.

7th, The steam blower, constructed with concentric funnels, N, extending successively from the center, one beyond the other, and discharging the currents passing between them into a tubular extension, F', of the outer case, F, substantially as set forth.

82,250.—COMBINED CORN SHELLER AND APPLE GRINDER.—M. H Ripley and William N. Temple, Minneapolis, Minn.

We claim the combination of the tapering and concaved-toothed cylinder, B, guide, F, springs, G, gears, D E, and frame, A, with its spouts, I J, when the several parts are constructed and arranged in the manner specified.

82,251.—BIT STOCK.—Clemens B. Rose Sunderland, Mass.

I claim the handle, A, constructed of the two pieces applied to the stock, B, as described, and secured by the ferrules, C, all substantially as herein set forth.

82,252.—MACHINE FOR THREADING BOLTS.—J. Schuessler, and John Kennedy, La Fayette, Ind., assignor to John Schuessler.

We claim 1st, the arrangement, herein described of the hollow slotted mandrel, B, the grooved reciprocating head, E, and the cutters, C.

2d, The combination of the devices set forth in the foregoing clause, with the lever, F and graduated quadrant, M, substantially as set forth

81,253.—HARVESTER.—Thomson C. Sebring, Milford, Mich.

I claim, 1st, The employment in grass and grain harvesters, of a round cast-iron main frame, F, constructed substantially in the manner and for the purposes herein shown and described.

2d, In combination with the main frame F, the cover or cap, C, substantially as shown and described, for the purpose of entirely encasing the gearing of the machine, and protecting it from dust and dirt.

3d, In combination with the horizontal bevel wheel, W, the box or step, s, and adjusting screw, v.

4th, The annular pawl, p, provided with the inclined plane e, arranged and operating substantially in the manner and for the purposes herein shown and described.

5th, The arrangement of the spring, f, as shown, and operating in the manner and for the purposes described.

6th, The hand lever, Y, pivoted to the head H, of the cutter bar, and operating substantially in the manner and for the purposes herein shown and described.

7th, Pivoting the rear end, b", of the cutter bar head, H, in the shoe, S, with a spherical joint to permit any necessary vertical change in the elevation of the outer end of the cutter bar, and also of the front side, substantially in the manner and for the purposes herein shown and described.

8th, The adjustable gate, a", secured to the standard, J", of the shoe, S arranged to operate as herein described.

82,254.—COMPOSITION FOR STUFFING AND FILLING WOOD.—Jacob Sheller, Wilmington, Del.

I claim the combination of the within named ingredients, when mixed in the several quantities and proportions, as herein described and for the purpose set forth.

82,255.—FILTER.—Thomas Simmons, Brooklyn, N. Y.

I claim, 1st, The case, A, provided with a movable head, and each of its heads being provided with the pieces, D D, upon which screw threads are formed, so that the filter can be reversed and cleansed, substantially as set forth.

2d, The frame, C, as constructed and combined with the case, A, and pipes D D and G, when used with a force pump as and for the purpose set forth.

82,256.—COMBINED CLOTHES-HORSE, ETC.—Henry L. Stillson, Plattsburg, N. Y.

I claim 1st, The four armed rollers D D, constructed as described, with a series of holes through one of the arms, and provided with ratchet wheels, E, and journals, n n, which revolve between the side pieces, A A, substantially as and for the purposes herein set forth.

2d, The combination of the grooved supports, A A, with the top, B, and board, G, and rails, F, when they are adjustable, and all constructed as and for the purposes herein set forth.

82,257.—SAWING MACHINE.—Hiram Thompson (assignor to R. Hall & Co.), Worcester, Mass.

I claim, 1st, The combination and arrangement, with the saw-arbors, E E, or either, and the stationary disks K K, of the movable disks, F F, substantially as and for the purposes set forth.

2d, The arrangement of the binding pulley, U, in relation to the belt, N, pulley O, and saw arbors, E E, substantially as and for the purposes set forth.

82,258.—REVOLVING FIRE-ARM.—F. Alexander Thuer, East Hartford, assignor to Colt's Fire-arms Manufacturing Company, Hartford, Conn.

I claim, 1st, The laterally movable piece, g, containing the firing pin, i, in combination with the rotating-chambered breech and the hammer of a revolver, substantially as described, and for a safety device.

2d, A laterally movable plate, located between the hammer and cylinder of a revolver, and bearing the shell ejector, substantially as and for the purpose hereinbefore set forth.

3d, The combination of a movable piece, supporting both the firing-pin and an ejector, with the hammer of a revolver, and with a rotating breech, having chambers open at the rear, when arranged to permit the rear wall of the hammer to serve as a means of igniting the charges or of expelling the empty shells from the chambers, substantially as hereinbefore specified.

82,259.—CLOTHES WRINGER.—Josiah Webb, Spartansburg, Pa.

I claim constructing the rolls, B B, of the wooden cylinder, D, the coating of pitch and sand, m, and the spirally wound coil of rubber, o, arranged in the manner and for the purposes specified.

82,260.—MANUFACTURE OF ARTIFICIAL STONE.—Demetry Mindeleff, Washington, D. C.

I claim the herein described improvement in artificial stone.

82,261.—CIDER MILL.—Charles Wilson, Clinton, Pa. Antedated September 4 1868.

I claim the combination and arrangement of the endless roller belt, C, hopper, A, revolving bottom, D, and circular upright frame, G, when constructed, arranged, combined, and operated as herein described, and for the purposes set forth

82,262.—VAPOR BURNER.—Christoph Wintergerst, Mobile, Ala.

I claim the arrangement of the reservoir, A, curved tube, B, burner, C, screws, G e, ring, E, and plate, D, whereby a light is produced and so divided that a larger and brighter flame is formed, all as herein specified.

82,263.—STILL FOR TURPENTINE.—J. E. Winants, Brooklyn, N. Y., and John F. Griffin, New York city.

We claim, 1st, The process, substantially as described, of distilling the crude material and extracting the fumes at a low temperature, and carrying them off from the lower portion of the still, as and for the purposes set forth.

2d, The employment, in combination with the chamber or case of the still, of a steam heated rotating agitator cylinder, into and through which the crude material passes during the process of distillation, substantially as described.

3d, The employment, in combination with the melting chamber, of one or more heated barrel supporters, F, adapted to hold and melt out the contents of the barrels, substantially as hereinbefore described.

4th, The employment of steam tubes so perforated as to eject the live steam on to those surfaces which are required to radiate the greatest quantity of heat, substantially as herein set forth.

82,264.—WATER ELEVATOR.—C. P. Woodruff, Newbern, Tenn.

I claim, 1st, The cylinder, C, constructed with the central partition or wall, C', when employed in combination with the sliding shaft, F, and the tubular bearings, e e, substantially as described.

2d, The arrangement of the spring, s, tubular bearings, e e, shaft, F, clutch, m, partition, C', and cylinder, substantially as described and shown.

82,265. SAWING MACHINE.—Oscar E. Moore, Corunna, Mich., administrator of the estate of Samuel Yarion, deceased.

I claim the guides, b, affixed to or forming part of a wheel, R, or its equivalent, in combination with a saw shaft, P, operating substantially as described, for the purpose specified,

82,266.—CLOCK.—John B. Mayer, Niagara Falls, N. Y.

I claim, 1st, The arrangement of the wheel, A, pinion, E, escapement wheel, D, with the hour, minute, and second hands upon axis of said escapement wheel, substantially as herein described.

2d, In combination therewith, the ratchet wheels, k l, revolving tooth, l', pin, i, and wheel G, operating substantially as and for the purpose described.

82,267.—STRIKING MECHANISM FOR CLOCKS.—John B Mayer, Niagara Falls, assignor to himself and Tobias Witmer, Williamsville N.Y.

I claim, 1st, The spur wheel, D, in combination with the pins, v v v, and the pinion, F', the tumbler wheel, E, the spur wheel, F, the pinion and fly wheel, G, in combination with the hammer tails, o1 p1, in order to effect the striking of quarters and hours on separate bells, as set forth.

2d, The combination of locking plates, B and C, and locking wheel, A, for controlling the action of the hour and quarter hour hammers on two or more separate bells.

3d, The combination and arrangement of the sliding shafts, O and P, lever, q, hammer tails, o1 and p1, springs, o2 and p2, and pin wheel, D, for the purpose substantially as herein described.

4th, The lever, R, in combination with the locking plate, C, and sliding hammer shaft, P, for the purpose of shifting the said hammer shaft, and alternating the action of the hammers on the bells.

REISSUES.

79,298.—MANUFACTURING GLASSWARE WITH HANDLES.—Dated June 30, 1868; reissue 3,116.—J. S. Atterbury and T. B. Atterbury, Pittsburgh, Pa

We claim, 1st, Producing handles for glass lamps and other glassware by casting them in molds ready to be attached to such articles, substantially as described.

2d, The manner, substantially as described, of attaching glass handles to lamps or other articles of glass, in the process of blowing such articles in a mold, substantially as described.

3d, Guiding hot flexible glass, as it drops or descends from the "punty" or pipe of the operator, to the point of attachment on the bowl or other article, by means of a mold which shapes the handle.

4th, Dropping hot flexible glass into a mold for the purpose of forming a handle or handles for the bowl of a lamp or other vessel.

5th, A glass lamp or other article in glass having a molded or cast handle and a blown body, produced substantially as described.

51,991.—BREECH-LOADER.—Dated January 9, 1866; reissue, 3,117.—Berdan Fire-Arms Manufacturing Company, New York city, assignees of Hiram Berdan.

We claim, 1st, The employment, in a breech-loading fire-arm, of a device, so applied and operated as to press back the cartridge against the face of the breech preparatory to firing, substantially as and for the purpose herein described.

2d, So applying and operating the cartridge shell refractor of a breech-loading fire-arm, that it shall serve the purpose of pressing back the cartridge against the face of the breech preparatory to firing, substantially as herein specified.

3d, So arranging the detonating pin of a breech-loading fire-arm, that it shall strike the back of the head of the cartridge opposite to where it is supported by a movable device which serves the purpose of pressing back the cartridge against the breech, substantially as herein set forth.

4th, The elongation of the hole provided in the swinging breech, for the reception of the pin upon which it swings, whereby the breech has a direct support in the breech receiver at the time of firing, and yet is free to swing back loosely, to open the barrel for reloading, substantially as herein set forth.

5th, The relative position and arrangement to each other of the hammer, firing-pin, swinging breech, and line of bore, by which the line of bore is unobstructed and the loading facilitated when the hammer is at half cock, substantially as herein described.

6th, The combination, with one main spring, of two or more stirrups, one or more connecting the tumbler or hammer, and the other connecting a brace, for locking the breech when the hammer is down substantially as herein set forth.

7th, In combination with a swinging breech piece, the employment of a suitable projection on the lower or front side of the brace or tumbler, whereby the loading and full cock is prevented, substantially as and for the purpose herein specified.

8th, So constructing and applying a brace to a swinging breech, for breech loading fire-arms, that it swings on a tumbler shaft detached from the tumbler, but is attached to the main spring in such a way as to give a greater motion to the brace than is given to the tumbler.

9th, So combining a movable brace, which operates to lock the breech at the time of firing, a three-notched tumbler, and a swinging breech, in a breech loading fire-arm, that while the hammer is locked on the sere in the first or safety notch, the breech is locked in a closed condition by the said brace, substantially as herein set forth.

10th, The combination of the flanged breech receiver or lock frame, A, the pins upon which the hammer, breech, and sere work, and the cheek pieces of the stock, by which the pins are held in place, substantially as herein described and for the purpose herein set forth.

51,991.—BREECH-LOADER.—Dated Jan. 9, 1866; reissue 3,118.—Division B.—Berdan Fire-Arms Manufacturing Company, New York city, assignees of Hiram Berdan.

We claim the recess, a, provided in the hub or hinged portion of the breech piece, in such relation to the barrel or chamber as is herein described, for the purpose set forth.

78,932.—PRESERVING MEATS, FRUIT, ETC.—Dated June 16, 1868; reissue 3,119.—Wm. Davis, Samuel H. Davis, and David W. Davis, Detroit, Mich. assignees of Wm. Davis.

We claim, 1st, The construction of a car body, ship's hold, room box, or chest provided with compartments, A B C, ice receptacle, D, chimney, E, and hatches, G, when arranged and operating substantially as described for the purposes set forth.

2d, The goose neck trap, F, or equivalent, in combination with receptacle, D, and compartments, A B C, when arranged substantially as and for the purposes set forth.

3d, The receptacle, D, for the freezing mixture, so constructed and arranged as to be pendent from the inner upper wall of chamber, C, and allowing a free circulation under and beneath the receptacle and on all sides, substantially as described.

4th, The construction and relative arrangement of the ice receptacle, D, with the chamber, C, whereby the moisture in said chamber, C, is frozen to the wall of receptacle, D, substantially in the manner and by the means described.

62,683.—ALARM LOCK.—Dated March 5, 1867; reissue 3,120.—James S. Porter and Russel Porter, Waterford, N. Y.

We claim, 1st, The cam or stop, F, which, by being properly set, offers an obstruction to the turning of the key, substantially as described.

2, The pistol, C, hammer, G, latch, H, and trigger, L, when all arranged and combined within the interior of a lock casing, provided with a cover, O, and plug, F, substantially in the manner and for the purpose described

78,132.—PLANER CHUCK.—Dated May 19, 1868; reissue 3,121—Charles H. Riggs, Windsor Locks, Conn.

I claim, 1st, In combination with the movable jaw, B, and slotted chuck bed, D, the eccentric shaft, D, with eye bolts, E E, and nuts, G G, arranged towards the front of the jaw, the jaw being constructed with a back surface equally as high as the front, or surface next to the stock, substantially as herein shown, and for the purpose set forth.

2d, The device for fastening the chuck to the base plate, M, consisting of the plate, K, with annular groove, bed plate, L, angle irons, O, threaded pin, B; with nut, and groove, Q, in base plate, M, all constructed and arranged in the manner described.

3d, The arrangement of the round or dove-tailed nuts, R R, screws, J J, stationary jaw, C, and the movable jaw, B, substantially as shown and set forth.

79,865.—GRINDING PLATE FOR GRIST MILLS.—Dated July 14, 1868; reissue 3 12 .—Henry Shaw and Wm. D Leavitt New Orleans, La.

We claim the combination and arrangement of the cast iron grinding plate B, the unyielding non-conducting paper packing, C, and back plate, D, all constructed and secured together substantially in the manner and for the purpose herein described.

78,404.—RAILWAY RAIL AND SPLICE.—Dated May 26, 1868; reissue 3,123.—Zalmon B. Wakeman, Rockford, Ill.

I claim, 1st, The hollow shell rail, A, when the sides are curved in toward each other so as to receive and retain the block, B, as and for the purposes set forth.

2d, The combination of the hollow rails, A, with the connecting block, B, provided with a removable bar or key, b, substantially as herein set forth and shown.

46,771.—APPARATUS FOR CARBURETING AIR OR GASES.—Dated March 14, 1865; reissue 3,124.—John A. Bassett, Salem, Mass.

I claim, 1st, The general arrangement and construction of the apparatus consisting of the several parts shown and described.,

2d, The carburation of air or gases by the use of perforated plates or cylinders, with the fibrous material partially immersed in the hydrocarbon liquid, substantially in the manner as set forth and shown.

3d, The automatic regulation of the air to be admitted to the holder and carbureter, by means of a valve connected with and operated by the holder, through the lever and cord, or their equivalents, when used for this purpose, as shown and specified

4th, A carbureting device placed in the gas-holder tank, in the manner substantially as described.

5th, A carbureting device for enriching air or gases with the vapor of a volatile hydrocarbon, placed in a gas-holder tank, having a seal for the holder independent of the level of the hydrocarbon liquid.

6th, The combination of a device for carbureting air or gases, using capillary materials, with the method of carbureting by forcing the air or gases through the hydrocarbon.

7th, The automatic reservoir for replenishing the hydrocarbon liquid in the carbureting chamber, in combination with a gasometer, substantially as shown and described.

8th, The use of a mercury valve for controlling the admission of air to the carbureting chamber, as set forth and shown.

9th, Forcing air or gas through hydrocarbon liquid, or through capillary materials charged with such liquid, within a gas holder, so as to carburet or enrich the same, substantially as described.

10th, The combination of a gas holder, a vessel to contain hydrocarbon liquid within the gas holder, and an air or gas forcing apparatus, substantially as described

Inventions Patented in England by Americans.

[Compiled from the "Journal of the Commissioners of Patents."]

PROVISIONAL PROTECTION FOR SIX MONTHS.

2,493.—MANUFACTURE AND FASTENING OF PAPER BAGS.—Joseph Rapson, New Bedford, Mass. Aug 10. 1868.

2,494.—MACHINE FOR MAKING EYELETS.—James M. Osgood, Somerville, Mass Aug. 10, 1868.

2,497.—AUTOMATIC INDICATOR FOR STEAM BOILERS.—Edwin L. Bomeisler, Philadelphia, Pa. Aug. 10, 1868.

2,528.—PHOTOGRAPHIC FRAMES, AND MECHANISM FOR MAKING THE SAME.—Garret P. Bergen and Chas. T. Bainbridge, New York city. Aug. 12, 1868.

2,534.—BREECH-LOADING FIRE ARMS AND CARTRIDGES.—Isaac M. Milbank, Greenfield Hill Conn. Aug. 13, 1868

2,564.—FOG ALARM.—John R. Anderson, Brooklyn, N. Y. Aug. 17, 868.