Recent American Inventions.

The following inventions are among the most useful improvements lately patented:—

BRUSH.

This invention refers to an improvement in the construction of round, square or oval brushes, where the tuft of bristles is secured around the end of a stick or handle, the object of which improvement is to more firmly secure the bristles or brush part to the handle than hitherto, by the employment of a flanged cap which is screwed on the handle over the head of the brush and imbedded into the cemented bristles. This invention is patented by Daniel Fleming, of Brooklyn, N. Y.

CALENDAR CLOCK.

This invention consists in the arrangement of a compound dial, in combination with an ordinary clock, said compound dial being composed of an ordinary clock dial, provided with suitable apertures and surrounded by a circle having the figures, from 1 to 31, marked on it at regular intervals, and provided with two additional movable dials, one of which is marked with the names of the week days and the other with the names of the months, and each dial being made to rotate independent of the other around the common center of the common dial in such a manner that one hand attached to the central arbor of the clock movement indicates the days of the week and the date or the day of the month, and that, at the end of each month, the required change can easily be effected by shifting said hand and also the dials in order to bring the name of the next succeeding month, and the name of the proper day of the week, before the respective apertures in the face of the clock. The credit of this contrivance is due to G. Maranville, Hampton Corners, N. Y.

STEAM BOILER.

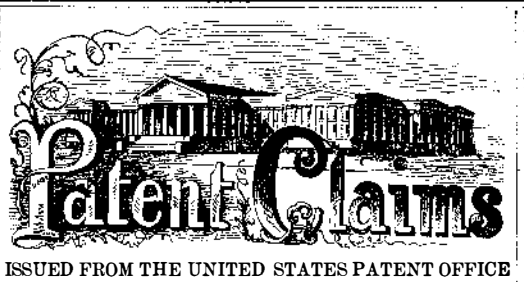
This invention consists in a detachable fire box, constructed and applied in combination with the body of the boiler, in a manner to obtain a portable boiler which may be made of large capacity, is easily set, is little liable to get out of repair and is a very effective steam operator. John Porter, of Jefferson, Texas, is the patentee of this invention.

DRAWER.

This invention relates to an improvement in drawers for the use of grocers and other merchants whose stock is weighty and kept in quite large receptacles. The object of the invention is to supersede the ordinary bins and barrels by obtaining the capacity of the latter with a greater ease of adjustment than the ordinary drawer, and the enabling of the invention to be placed one over the other in rows, so as to economize in space. The invention consists in having the drawer placed on a crosspiece, in such a way that it may be tilted thereon, and its contents rendered accessible, instead of being drawn out bodily as hitherto. This device was patented by S. B. Schultz of Princeton, Ill.

IMPROVEMENT IN JOINTS OF TELEGRAPH CABLES.

Much difficulty has been hitherto experienced in making perfectly insulated joints in the gutta-percha insulated telegraph wires or cables employed as submerged conductors at the crossings of rivers and other waters. The method generally adopted of making the joints has been to strip off the gutta-percha covering from the terminal portions of the conducting wire or wires, taper off the said covering for some distance from the stripped portions, and after twisting the uncovered portions of the wire or wires together, to cover the connection thus formed with gutta-percha, by warming a lump of the latter sufficiently to make it plastic and adhesive, and working it round the connection with the hand. By that method, however, it is difficult to make the gutta-percha covering free from crevices, and, in many cases, when the insulation of the joint appears perfect, it will prove not to be so a short time after it has been submerged. This invention consists in enveloping the connection formed as above described, with a wrapper of sheet gutta-percha or india-rubber, or of cloth coated with either of those substances, having one or both surfaces covered with a cement composed of said substances reduced to a plastic state with naphtha or other solvent, such wrapper being applied by rolling it around the connection. The patentee of this invention is J. N. Power, of New York City.



ISSUED FROM THE UNITED STATES PATENT OFFICE

FOR THE WEEK ENDING MARCH 5, 1861.

Reported Officially for the Scientific American.

*** Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 4, 1861, 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.

580.—Clark Alvord, of Westford, Wis., for an Improvement in Binding Attachment to Harvesters:

I claim, first, The reciprocating gavel carrier, A, constructed and operating as described for the purposes set forth.

Second, I claim the combined pressers, D and E, constructed and operating as described and for the purposes set forth.

Third, I claim the combination of the reciprocating gavel carrier, A, with the pressing apparatus, D and E, at both ends of the machine or at but one end, as set forth,

581.—Wm. W. Austin and F. Creasy, of Carrollton, Mo., for an Improvement in Hemp Breaks:

We claim the above-mentioned arrangement of the swords or splitters, h h, and breaking slats, g g, upon the cylinder, G, for the purposes shown and described.

[This invention has for its object the preparing of hemp or flax without rotting, and to separate the liquous matter from the fibers in a more rapid and better manner than can be done with breaking machines now in use. It consists in so arranging on a rotary cylinder a suitable number of swords or knives and breaking slats that half their length will be brought to act upon the stalks alternately, thus equalizing to a greater degree the movement of the cylinder, and consequently lessening the power required to drive the machine than if the slats and swords run continuously from end to end of the cylinder.]

582.—Wm. R. Axe, of Beloit, Wis., for an Improved Mop-holder:

I claim, first, Confining the cloth on a needle bar, c, formed on one of the jaws, a, in combination with an interlocking jaw, b, the whole constructed and operating substantially as described.

Second, I claim adjusting and securing the jaws, a and b, in their proper relative positions with each other and the handle by means of a single screw, B, in combination with the concave recesses, 1 and 2, and correspondingly convex shanks, the whole constructed and operating as described.

583.—Benjamin Best, of Dayton, Ohio, for a Composition to Prevent the Premature Decay of Trees, Wires, &c.:

I claim the compound mixture of the above materials and its application and use to and for trees, vines and other growing vegetation.

584.—Cyrus Chambers, Jr., of Philadelphia, Pa., for an Improvement in Machines for Folding, Pasting and Cutting Paper:

I claim, first, The combination of the arms, L and M and N, lever, O, pawl, P, arm, Q, and treadle, R, or equivalent mechanism, for the purpose of arresting the motion of the paster wheel to prevent its coming in contact with the paper when this is not properly placed on the machine, as described.

Second, So connecting the paster wheel with the first folding knife that both can be simultaneously arrested by the same mechanism, substantially as specified.

Third, Trimming off the heads or edges of pamphlets or signatures during the process of folding, substantially as set forth.

Fourth, So regulating the position of the cutters by means of the stop that both may be simultaneously adjusted to sheets of different sizes, as specified.

Fifth, Adjusting the end of the folding blade to correspond with the position of the stop and cutters, as and for the purpose described.

Sixth, Combining in one machine the mechanism for pasting, folding and trimming off the heads or edges of pamphlets or signatures, substantially as specified.

Seventh, The combination in a folding blade of a serrated and curved or angular concave edge for the purpose of preventing the sheet from slipping on the knife, and also to introduce the edges of the paper between the rollers slightly in advance of the middle as described.

585.—Samuel Clark, of New York City, for an Improvement in Tuning Pins for Musical Instruments:

I claim a tuning pin for stringed instruments, when the same is constructed in the manner substantially as described.

586.—B. Coe and M. Geon, of Dalton, Ohio, for an Improvement in Vessels for Evaporating Saccharine Juices:

We claim the evaporator in combination with the protectors to the furnace, as shown in Fig. 3, the shaft, B, the pinions, b b, the segments, c c, the sliding loops, E E, the ratchet wheel, A, lock, d, and the pivot, D, as shown in Fig. 1, as described and for the purpose set forth.

587.—E. Davis and Alonzo Palmer, of Hudson, Mich., for an Improvement in Grain Separators:

We claim the employment, in connection with the shoe, of the connecting rod, a, the spring, d, the rod, e, attached eccentrically to the fan shaft pulley, G, the bar, F, and the rod, i, when arranged as shown, by means of which a lateral and longitudinal, and at the same time a partially circular motion is communicated to said shoe, substantially as set forth.

Second, The arrangement of the sliding section, H, of the fan case with the trap door, I, spring, m, and strap, n, for the purpose of directing and regulating the draft at the head of the shoe, substantially as set forth.

588.—W. E. Doubleday and S. H. Lyon, of Brooklyn, N. Y., for an Improved Die for Pressing Hats:

We claim the crown die, b, fitted to be raised or lowered in the brim die, a, for the purposes and as set forth.

And in combination with the adjustable crown die, b, we claim the adjustable tip die, f, in the die, e, for the purposes and as specified.

589.—Daniel Fleming, of Brooklyn, N. Y., for an Improved Brush:

I claim the screw cap, D, or its equivalent, combined with a brush, essentially as and for the purposes described.

590.—G. W. T. Grant, of Winona county, Minn., for an Improvement in Picket Fences:

I claim the construction of a picket fence with only one rail to the panel, having the rails supported on the shouldered pickets, and being placed at a sufficient angle with each other consecutively, to give the necessary strength to the fence to resist lateral pressure, the pickets fitting loosely in the holes of the rails and the lower ends of the pickets sunk sunk sufficiently into the earth to prevent them from being moved laterally out of place, all in the manner and for the purpose set forth and described.

591.—John Griffin, of Louisville, Ky., for an Improved Mode of Regulating the Speed of Vehicles Moved by Mechanical Power:

I claim the arrangement of the two connecting rods, K M, attached respectively to the cranks, L N, of the axles, D, and shafts, O, the latter, when in use, being connected to the axles by the gearing, g h Q, substantially as and for the purpose set forth.

592.—John Griffin, of Louisville, Ky., for an Improvement in Cotton Pickers:

I claim The arrangement of the tubes, A D, cylinder, E, and valves, c F, substantially as and for the purposes set forth.

593.—D. D. Hardy and J. J. Morris, of Cincinnati, Ohio, for an Improvement in Rotary Pumps:

We claim the employment of the rotary pistons, B B', formed of two semi-cylinders of different diameters, in combination with the two central inner tongues or projections, D D', of the case, A, substantially as shown and described.

[This invention consists in the employment of two rotary pistons each formed of two semi-cylinders of different diameters, in combination with two central inner tongues or projections within the shell or case; the whole being constructed and operated in such a way as to overcome the difficulties attending the operation of rotary pumps, both as regards durability and the amount of work performed in a given time, as well as the power required to operate them.]

594.—John Hastings and L. P. Gautier, of San Francisco, Cal., for an Improvement in the Process of Treating Gold and Silver Ores:

We claim the manner of extracting gold and silver from their ores by the use, in the manner set forth, of chloride of copper, whether prepared in the manner described or by any other means.

595.—G. E. Hayes, of Buffalo, N. Y., for an Improved Apparatus for Vulcanizing Caoutchouc:

I claim, first, So constructing and using a vulcanizing vessel with a flattened bottom as that the plaster mold, containing the rubber compound, shall lie in contact with the inside of the lower part of the vessel, so that the heat from the lamp, or other heating body, shall be applied directly to that part of the vessel upon which the mold lies, for the purposes and substantially as set forth.

Second, I claim a mercury chamber formed in the upper section, the same being constructed and arranged with the thermometer substantially as set forth.

Third, I claim the opening, c, in combination with the bottom, A, band, D, and cover, E, substantially as described.

596.—J. S. Hooton, of New Carlisle, Ind., for an Improved Condenser and Water Heater for Steam Engines:

I claim the arrangement of the induction and eduction pipes, A and B, the induction and eduction pipes, I and O, the waste water pipe, S, and the alternating opposite plates or shelves, x x, with each other and with the vertical box or tube of the apparatus, when the said plates or shelves are placed at such distances from each other that the water can be made to fall in succession from one shelf to another in broadly expanded and thin sheets, and, whilst thus falling, be acted upon by the ascending steam within the apparatus, in the manner set forth.

597.—J. W. Howlett, of Greensboro', N. C., for an Improvement in Sewing Machines:

I claim, first, Producing the necessary tension of the upper needle thread, N', by passing it between two glass plates, M' M', held in dovetail slots at the end of a bent spring, J, when this spring is combined with an adjustable clamp screw, L', substantially as and for the purposes set forth.

Second, Making the tension plates of glass, substantially as and for the purposes set forth.

Third, The arrangement of a rod, W, with a tapering face, U V, and spiral spring, Y, in combination with a vertical and horizontal reciprocating needle, substantially as and for the purposes set forth.

[This invention consists, first, in an improved construction of clamp for maintaining the requisite tension of the upper needle thread, and, second, in an ingenious and effective device to insure the correct looping action of the lower needle.]

598.—Josiah Howell, of Sacramento, Cal., for an Improvement in Hemming Guides:

I claim the division of the tube in three parts, a d and b c, of which the two lower parts, a and d, are connected together by a bar, F, passing over the plate, D, of which the upper portion, b c, forms part, the whole arranged and applied substantially as set forth.

[This invention relates to hemmers of the tubular kind. It consists in a certain construction of the tube of the hemmer in three pieces, whereby the hemmer is made adjustable so as to turn hems of various widths, in a very simple manner and without the complication of parts found in adjustable hemmers of other construction.]

599.—R. M. Hughes, of Pleasant Grove, Pa., for an Improvement in Railroad Car Couplings:

I claim a car coupling consisting of a link and pin combined in one piece and pivoted or swung near the middle, one end serving as a link and the other as a catch, so constructed and arranged as to be self-coupling and detachable by means of a lever or other equivalent device, substantially as described.

600.—J. L. Hyde, of New York City, for an Improvement in Sewing Machines:

I claim the combination of a foot plate with the shank of the presser foot, by means of a foot frame open at one side so as to permit the introduction of the foot plate edgewise therein, substantially as described.

601.—George Ives, of Detroit, Mich., for an Improved Wood Saw Horse:

I claim the application to saw horses of a pedal with hook and spring attached, for the purposes mentioned, namely, the better means of making firm and holding secure in its place any stick of wood or other articles to be sawn, using for such purpose any style of hook and means of turning the same, or any kind of spring that will produce, by the aid of the pedal or otherwise, the intended effect.

602.—Josiah James, of Ogdensburgh, N. Y., for an Improvement in Mechanical Movements:

I claim as my invention the joint walking beam as shown in Fig. 1, consisting of the jaws or upper and lower portions of joint, as shown in A A' and A'', the end of the lever or other portions of the joints, as shown in B B' and B'', together with the pin, C.

I claim as my invention the joint placed at the point where the walking beam is poised, to give a compound or rotary motion to the end of the walking beam, inserted in the fly or balance wheel, E.

603.—Mathaus Kæfer, of Factoryville, N. Y., for an Improvement in Transmitting Motion:

I claim the arrangement of the shaft, A, guide rods, E E, and fly wheel, B, with the arms, F F, and rockshaft, b, in the manner and for the purpose shown and described.

[This invention consists in arranging the fly wheel shaft of a steam engine or other device in the ends of two arms or pendents, which swing on a rockshaft in such a manner that the same, with its appendages, oscillates in an arc described around the center of said rockshaft, and that all the friction created by the oscillating or reciprocating motion of the fly wheel and its shaft are thrown on the journals of the rockshaft.]

604.—Jacob Kleiber, of Memphis, Tenn., for an Improvement in Swimming Propellers:

I claim the arrangement and combination of the hollow shank, D, with its flanged part, H, the rod, E, and spiral spring, f, when used in connection with arms, K, rods, l, and a waterproof covering, A—the whole being made and operated in the manner and for the purpose set forth.

605.—W. A. Lightall, of New York City, for an Improved Method of Supplying Water to Steam Vessels, for the Purpose of Condensing Steam or Cooling Water:

I claim the arrangement of the hoods, D D', constructed as shown, in their relation to the condenser or cooler, C, and the vessel, A, as described and for the purpose set forth.

606.—R. Little, of Middle Branch, Ohio, for an Improved Device to Prevent Hogs from Rooting:

I claim, as an improved article of manufacture, a device for preventing hogs from rooting, formed from a single piece of wire, in the manner described and as fully shown in Fig. 1 of the accompanying drawings.

607.—G. B. Mallette, of Millport, N. Y., for an Improvement in Portable Field Fences:

I claim the stakes, C C, armed with the splice pieces, c c, when pivoted to their supporting stretcher bar, B, and provided with the notches, i i, in their inner edges or sides, in combination with the sections, A A substantially as and for the purpose specified.

608.—Galusha Maranville, of Hampton Corners, N. Y., for an Improvement in Calendar Clocks:

I claim the combination of the independently adjustable dials, B C, face plate, A, and hand, D, the latter being actuated by clock movement, and the whole arranged and adapted to operate in connection in manner substantially as and for the purposes shown and described.

609.—T. J. Mayall, of Roxbury, Mass., for an Improvement in Brushes:

I claim my new mode of securing bristles or other materials used in brushes, by fixing them in a setting or stock of india-rubber or gutta-percha, substantially in the manner described, so that the said bristles shall be firmly held in their places and clasped by virtue of the elastic force of the india-rubber or gutta-percha, and their setting protected against the action of water or other agents to which they might be exposed in the use of the brush.

610.—T. J. Mayall, of Roxbury, Mass., for an Improvement in Waterproof Hose:

I claim forming a hose or tubing in two flat pieces or sides of cloth or woven fabric, coated with rubber or gutta-percha, in one or more layers or thicknesses, and united at their edges by sewing, riveting, or otherwise, substantially as set forth.

611.—F. J. Miller, of Buford, Ga., for an Improvement in Machinery for Making Rope:

I claim the combination of the folding platform, A, and sliding frame, C', with its wheels, I I', with the stationary frame, C, with its wheels, H G G G, and grooved self-adjusting regulator, D, arranged for operation as and for the purposes set forth.

612.—E. J. y Patrullo, of Merida, Yucatan, Mexico, for an Improvement in Machines for Dressing the Leaves of the Agave Plant:

I claim the described arrangement of alternate comb-edged and smooth-edged beaters, B B', on the circumference of a rotary drum, A, in combination with feed rollers, D D', and with an adjustable hinged apron, F, constructed and operating in the manner and for the purpose set forth.

[This invention consists of a series of alternate comb-edged and smooth-edged beaters arranged on a rotary drum, in combination with suitable feed rollers and with an adjustable hinged apron, which keeps the ends of the leaves to the beaters.]

613.—Francis Peabody, of Salem, Mass., for an Improvement in Looms:

I claim, in combination with the reed and race beam of a loom, a series of projections extending from the reed and over the race beam, in such a manner as not only to operate while the shuttle is being driven longitudinally across the race beam in maintaining the said shuttle in its proper path relatively to the race beam or the reed, or both, but to allow the warps to extend and work between the said projections, substantially as specified.

I also claim the improved arrangement of each spring stopper of the race beam, relatively to the upper surface of the said race beam, viz., in manner and so as to press the shuttle down upon the said surface, substantially as described.

I also claim my improved mode of constructing the shuttle, viz., with its mouth inclined relatively to the base, and provided with the retaining lip, or its equivalent, arranged at its upper edge, substantially as and for the purpose specified.

614.—J. M. Perkins, of Cleveland, Ohio, for an Improvement in Water Elevators:

I claim the buckets, E E, attached to the windlass, B, as shown, and provided with the recesses, d, in connection with the spout, F, provided with the curved rods or hooks, G, arranged in such relation with the buckets to operate as and for the purpose set forth.

[This invention has for its object the drawing of water for domestic purposes by a very simple arrangement of means, which may be operated with the greatest facility, be cheaply constructed and applied, and not liable to get out of repair or become inoperative by use. The invention consists in the use of two buckets, connected by ropes or chains, to a windlass in such a way that one bucket will rise as the other falls, and using in connection with the buckets thus arranged, a spout or discharge trough provided with curved rods, to serve as stops, and placed in such relation with the buckets as to tilt the same as they reach their culminating point, and discharge their contents into the discharge spout.]

615.—Charles Perley, of New York City, for an Improved Ship's Capstan:

I claim the capstan or other barrel for ropes or chains, provided with the circular recesses, 1 and 3, receiving the nests of balls, 2 and 4, in the manner and for the purposes specified.

616.—John Porter, of Jefferson, Texas, for an Improved Steam Boiler:

I claim the detachable fire box, constructed of the form and applied, in combination with the body of the boiler, substantially as described.

617.—Charles Potter, Jr., of Westerly, R. I., for an Improvement in Printing Presses:

I claim the combination of the oscillating platen and bed, connected and operated as described, when the former is provided with a pin and the latter with a corresponding socket, operating together substantially in the manner shown, for the purpose of securing an accurate register and preventing slur, as described.

618.—J. N. Power, of New York City, for an Improved Method of Jointing Telegraph Connectors:

claim, in joining telegraph cables, the use of a sheet gutta-percha wrapper covered with india-rubber cement, in the manner and for the purpose shown and described.

619.—S. S. Putnam, of Dorchester, Mass., for an Improved Curtain Fixture:

I claim a curtain fixture consisting of the bracket, b, with its slot, f, and roll, C, the journal, i, of which, by rolling along on the bottom edge of the slot, carries the roll or its spool into contact with a stationary stop, substantially as set forth.

620.—D. F. Randall, of Hartford, Conn., for an Improvement in Tatting Frames:

I claim, as a new article of manufacture, the tatting frame described.

621.—C. B. Richards, of Brooklyn, N. Y., for an Improvement in Sewing Machines:

I claim the employment of a rocking shuttle-driving lever, operated by a crank and slide, or their equivalents, in the manner set forth, in combination with a pin, or its equivalent, attached to said slide, and driving the needle arm substantially in the manner described.

622.—F. B. Richards, of Boston, Mass., for an Improvement in Enema Syringes:

I claim my new and improved bulb and tube connection as made in two separate tubular parts, b c, and respectively inserted in or applied to the elastic bulb and the tube or connection of the valve chambers, and so as to operate therewith or connect the bulb and valve chambers, substantially in the manner and for the purpose as described.

623.—J. R. Robinson, of Boston, Mass., for an Improvement in Steam Boiler Furnaces:

I claim the gas-mixing chamber, B, constructed in rear of the bridge, C, with a covering arch, F, and openings, d d, in the said arch, substantially as specified.

And, in combination with the chamber, B, constructed as described, I claim the trunk, e, elevated above the said arch for the reception of the lighter gases, substantially as specified.

624.—I. M. Rose, of New York City, for an Improvement in Sewing Machines:

I claim, first, A needle with a globular head, b, wheel, c, and hooks, d, constructed and arranged as described, and for the purpose stated.

Second, The clamp, f, with the sheet of rubber contained therein when used for the purpose of giving rotation to the wheel, c, for the purpose set forth.

Third, The arm, i, in combination with the needle, a, and wheel, c, when used in the manner and for the purpose specified.

Fourth, The wheel, c, with its hooks, d, in combination with the spring holder, e, and head, b, for the purposes shown.

Fifth, The spring holder, e, with the head, b, and groove, g, when used and combined for the purpose of holding the needle in place, and at the same time, permitting the thread to pass over the head, b, and between it and the spring clamp, e, in the manner and for the purpose shown.

625.—J. H. Scott, of Millport, N. Y., for an Improved Steam Valve:

I claim the construction of the valve with the chamber, y, ports, o o, exhaust chamber, E, and stem, R, as set forth, in combination with the case, c c, feed pipe, F, tubes or pipes, a a and x, lever, r, set screws, s s, and strap, B, the whole constructed and arranged substantially as and for the purposes described.

626.—John Seitz, Sr., of Bloom, Ohio, for an Improvement in Presses:

I claim the combination, with the two loaded adjustable levers, 1 1, of the perforated disks, 2 2, upon the same axis of motion as the levers, the said disks and levers being so combined and attached as to render the levers capable of adjustment, as described, and the disks and levers being upon the same axis of motion as the pinions which drive the follower, as described.

627.—Peter Shearer, of Reading, Pa., for an Improved Apparatus for Generating Power:

I claim, first, The combination of the cylinder, E, piston, 31, piston, S, and the heater or heaters, substantially as described, the parts being so constructed and arranged, with refereuce to each other, as to accomplish the result stated.

Second, The combination of the air chamber, D, with the heater, B, or other suitable device for heating fluid used, for the purpose of maintaining proper and elastic pressure upon the fluid, as set forth, the heater and air chamber being connected as stated, or in any other appropriate manner.

Third, The combination of the auxiliary clyinder, I, and piston, 30, with the cylinder, E, and piston, 31, for the purpose of facilitating the process of starting the machine, said pistons being connected to each other, and the cylinder, I, being provided with valves and other appendages, substantially as described, and accomplishing the purpose stated.

Fourth, The combination of the thermometric regulator, y, or its equivalent, with dampers, r and q, arranged in connection with the smoke stack or chimney and the flues, substantially as described, for the purpose stated.

628.—Hermann Shlarbaum, of New York City, for an Improvement in Water Gages for Steam Boilers:

I claim connecting the glass tube thereof with the metallic parts, by means of india-rubber sleeves or muffles, substantially in the manner as set forth.

629.—S. B. Shultz, of Princeton, Ill., for an Improved Shop Bin or Substitute for Drawers:

I claim arranging or placing a drawer, B, within its case or box, A on a cross bar, C, or its equivalent, to admit of the opening and closing of the drawer by the tilting of the same, substantially as set forth.

630.—E. G. Stevens, of Biddeford, Maine, for an Improvement in Enema Syringes:

I claim the valvular mechanism described, for reversing the currents, consisting of the valve seat case, with its openings, S S', the conical valve seat with its valves, o v, as shown in Figs. 1 and 2, the screw, p, neck, r, when used in combination with the pipe, B C, and bulb, D, or their equivalent, substantially in the manner set forth and specified.

631.—U. T. Stuart and C. E. Stewart, of Fayette county, Tenn., for an Improvement in Straw Cutters:

We claim the arrangement of the plunger, I, rope, H, lever, G, and spring, F, when used in connection with the cutters, A A, and plates, C and D D, as and for the purpose substantially as set forth.

632.—C. E. Toop, of New York City, for an Improved Washing Machine:

I claim, first, The combination of the corrugated bed, 1, and corrugated washboard, 3, arranged as described, with the gearing for giving motion to said bed, the whole being so arranged and combined as to violently agitate the clothes at the same time that they are gradually turned over, so as to bring a different portion of the mass successively in contact with the washboard and bed.

Second, The combination, with the above-mentioned devices, of the two rails or side pieces, 2 2, corrugated as described and represented, for the purpose specified.

633.—G. R. Walker, of Washington, D. C., for an Improvement in Corn Huskers:

I claim, 1st, The employment of a grinding wheel to remove the nuts of the husks in contradistinction to a wheel armed with cutters, said wheel also serving as a guard for the ears of corn, substantially as described.

Second, I claim the combination of the grinding wheel, B, cogged wheel, A, and springs, C, or their equivalent, substantially as described.

Third, I claim the combination of the endless apron, L, wheels, A and B, endless aprons, D and O, springs, C, and hinged apron, J, the whole being constructed and operated in the manner and for the purpose set forth.

634.—N. D. Wetmore, of Cleveland, Ohio, for an Improvement in the Mode of Preserving Butter:

I claim the mode of preserving butter by compressing it in vessels, and then hermetically sealing the joints at C and H, and then encasing the whole with gypsum when in a plastic state, all in the manner and for the purposes described.

635.—D. A. Woodward, of Baltimore, Md., for an Improvement in the Mode of Operating the Reflector of a Solar Camera:

I claim, first, The arrangement and combinatton of the pivotal axes of the mirror with the lever, G, and connecting rod, H, for elevating or depressing the mirror, substantially as specified.

Secondly, I claim combining with the revolving collar, B, the adjustable rail, I, and its traverse, e, substantially as and for the purposes set forth.

636.—A. R. Wyeth, of West Middletown, Pa., for an Improvement in Tanning:

I claim the described process for tanning hides or skins, consisting in first soaking them in a warm solution of potash and salsoda, then, after rinsing, working and sweating, subjecting them to the vapor of spent damp tan bark, damp horse dung and rotten wood; then soak them in a tanning liquor composed of bark solution sumach divi divi and alum, which liquor is afterward strengthened with japonica, glauber salts and common salts, all in the manner and in the proportions set forth and described for the purpose specified.

[This invention consists in exposing the hides or skins to the consecutive action of certain liquors or vapors combined with a series of manipulations, whereby the tanning process is greatly facilitated and a good and tough leather produced in a much shorter time than by the ordinary tanning process.]

637.—T. C. Zulich, of Schuylkill Haven, Pa., for an Improvement in Potato-diggers:

I claim combining with an inclined cylindrical screen, D, as described, the spiral or screw conveyer, K, substantially as and for the purposes described.

[This invention consists in combining, with a suitable shovel plow adapted to the digging of potatoes and other roots, a rotating cylindrical sieve, so arranged with relation to said plow that the earth mixed with potatoes loosened by the plow will be deposited in the front end of this cylinder, and as this cylinder is rotated the earth will be separated from the potatoes and the potatoes discharged at the rear end of the cylinder. It also consists in arranging said rotating cylindrical sieve in a position inclining from the rear to the front end of the machine, and in employing, in combination with this cylinder as a means for conveying the potatoes backward, a spiral propeller of a suitable construction.]

638.—J. E. Earle, of Brooklyn, N. Y., assignor to himself and Samuel Hathaway, of New York City, for an Improvement in Sewing Machines:

I claim the combination of the needle arm, a, pulley clutch, F, levers, G H and K, and trip, I, constructed, arranged and operating substantially as set forth, to disconnect the power on the loosening of the thread.

639.—T. G. Harold, of Brooklyn, N. Y., assignor to himself and G. L. Kelty, of New York City, for an Improved Curtain Fixture:

I claim a lever, e, fitted upon a pin and guided by the spool on the curtain roller, in such a manner that the lever is always kept in its correct position for stopping the curtain regardless of the position of the spool relatively to the bracket.

And I claim arresting the movement of the spool and curtain by a blocking piece, pall or stop passing in between and acting against the sides of the spool.

640.—L. W. Lathrop and L. B. Justice, of Philadelphia, Pa., assignors to L. W. Lathrop aforesaid, for an Improvement in Sewing Machines:

We claim, first, Passing a loop of needle thread over a stationary spool case containing an ordinary spool by means of a continuously revolving hooked ring adapted to receive the said spool case, when the latter, as well as the ring and its hook, are so constructed that the loop, in passing over the case, shall be free from contact with the edge of the case as well as with the inside edge of the ring, as set forth, for the purpose specified.

Second, We claim the reciprocating hook, arranged and operating as set forth, so as to control the loop of needle thread after it has passed over the spool, and prevent it from being twisted, knotted or otherwise disarranged as it is being drawn into the fabric.

641.—Clark Marsh (assignor to the Wheeler & Wilson Manufacturing Company), of Bridgeport, Conn., for an Improvement in Hemming Guides for Sewing Machines:

I claim A hemmer foot plate, constructed substantially as described, and capable of being secured to and detached from the shank of the presser-foot of a sewing machine, substantially as described.

642.—John Moulson, of Philadelphia, Pa., assignor to A. B. Elliott, of Troy, N. Y., for an Improvement in Sewing Machines:

I claim a transparent presser-foot for a sewing machine, which is a combination of a transparent foot plate with a shank by means of a frame that holds the foot-plate and connects it with the shank, substantially as described.

I also claim the combination of a presser-foot frame with a transparent perforated foot-plate of convex form, substantially as and for the purpose described.

643.—Orson Parkhurst (assignor to H. D. Fuller and R. Safely), of Cohoes, N. Y., for an Improvement in Knitting Machines:

I claim the combination of the vibrating lever, E, with the lever, C, its adjusting weight, W, and point, g, operating to and with each other in manner and form as described, so as to disengage the operating power through ring, R, upon the droppping of a stitch or loading of the needles, or any false operation of the machinery by which the integrity of the fabric knit is affected, substantially as the same is set forth and described in the specification.

644.—G. E. Vanderburgh (assignor to the Liquid Quartz Company), of New York City, for an Improvement in Silicated Soaps:

I claim the use of a liquid silicate in the production of an improved quality of soap; but this I only claim when the liquid silicate thus employed contains, by weight, a larger proportion of silex than it does of the alkaline base of the same.

645.—Turner Williams (assignor to himself and David Heaton, 2d), of Providence, R. I., for an Improvement in Converting Reciprocating into Rotary Motion. Ante-dated Sept. 5, 1860:

I claim the peculiar friction pawls, e and s, constructed in the manner substantially as described, for the purpose specified.

I also claim the combination of the said friction pawls or their equivalent with the surfaces, g g, of the driving wheel, arranged and operating substantially as described, for the purpose set forth.

646.—Carlos Garcia, of New Orleans, La., Administrator of the Estate of Felix Garcia (deceased), late of same place, for an Improvement in Decalcifying Liquids. Patented in Belgium Oct. 22, 1855:

I claim the within-described method of treating saccharine and other liquids, first with an excess of lime, and afterwards with soap, substantially in the manner and for the purpose set forth.

[This invention consists in treating saccharine or other liquids first with an excess of lime and afterwards with some saponificable substance, so that by the action of the lime the impurities contained in the liquid are separated from the same, and by the subsequent action of the saponificable substance the lime, together with the impurities are reduced to such a state that they can easily be separated from the liquid, leaving the latter in all its purity.]

647.—H. D. Deming and P. G. Walker, of Delmar, Pa. assignors to P. G. Walker and Wesley Pitts, of Charleston, Pa., for an Improvement in Animal Traps:

I claim the construction and arrangement of the above-described trap, the same being provided with the index, T, and trip, H, and having sheet metal side wall, rotary partitions, and coiled springs, all combined and operating together substantially as set forth, for the purposes described.

RE-ISSUES.

43.—Ira Kinman, of Freeport, Ill., for an Improvement in Measuring Faucets. Patented May 3, 1859:

I claim the construction of the faucet with the rotating slide, F, and an eccentric barrel, C, operating substantially as shown and described, in combination with the described device to register accurately and automatically the number of rotations of the slide, and to arrest it when the desired quantity of fluid is discharged, as set forth.

I also claim the employment of an endless screw, in combination with the rotary slide, F, and eccentric chamber, E, arranged and operating in the manner and for the purposes substantially as set forth.

[This invention, as re-issued, covers the use of an endless screw arranged within the tube of a faucet, for facilitating the flow of thick, viscous liquids through the faucet, whether the screw be combined with the measuring chamber, as before, or not.]

44.—Frederick Nishwitz, of Brooklyn, N. Y., for an Improvement in Harvesters. Patented Feb. 16, 1858:

I claim the arrangement of an adjustable lever directly connected with the the tongue or pole, for elevating the cutting apparatus, and to hold it at any desired hight, as and for the purpose set forth.

Second, I claim said lever, in combination with the pole, chain or cord, the frame or finger bar, said pole being attached at its rear end near the center of the machine, as and for the purpose set forth.

Third, I claim, in combination with the said lever and pole, the pawl and treadle operating jointly in the manner and for the purpose specified.

Fourth, I also claim the combination of the lever, pawl and treadle with the adjustable stop, K, substantially as described, for the purposes specified.

EXTENSIONS.

Eunice B. Hussey, Administratrix of Obed Hussey (deceased), late of Baltimore, Md., for an Improvement in Reaping Machines. Patent dated August 7, 1847. Re-issue 449, dated April 14, 1857:

I claim as my invention the combination of a vibrating scolloped cutter, the indentations of whose edge act as a series of moving shear blades, with slotted guard fingers, the sides of which act as a corresponding series of fixed shear blades; the parts of such fingers forming the slot being connected at the front ends only, leaving the rear of the slot open and free for the escape of material that would otherwise clog the cutter, substantially as described.

Eunice B. Hussey, Administratrix of Obed Hussey (deceased), late of Baltimore, Md., for an Improvement in Reaping Machines. Patent dated August 7, 1847. Re-issue 451, dated April 14, 1857:

I claim, as my invention, the combination of a slot formed between the long and short parts of the guard finger, with an opening in the rear of the short part, substantially as described.

Eunice B. Hussey, Administratrix of Obed Hussey (deceased), late of Baltimore, Md., for an Improvement in Reaping Machines. Patent dated August 7, 1847. Re-issue 742, dated June 21, 1859:

I claim, as my invention, the combination of the side and cross bearings of the guards, with flush edges at or near the forks of the blades substantially as described.

Eunice B. Hussey, Administratrix of Obed Hussey (deceased), late of Baltimore, Md., for an Improvement in Reaping Machines. Patent dated August 7, 1847. Reissue 917, dated February 28, 1860:

I claim the combination of the finger beam (without a platform), the short, open slot fingers having small projections below the cutter—the scolloped cutter—and the guides for the cutter; these parts being constructed and combined substantially as described; the cutter vibrating in a straight line, each scollop having an edge sliding in close proximity to an angular corner of the finger, and forming therewith a nipping angle, substantially as described.

Henry Jenkins, of Brooklyn, N. Y., formerly of Pottsville, Pa., for an Improvement in Machinery for Weaving Wire Grating. Patented March 6, 1847:

I claim manufacturing screens or other articles from metallic wires or bars that are bent or crinkled at the point of intersection previously to being laid or woven up, whereby I am enabled to form meshes of any desired size or shape by such intersecting bars or wires, so that they shall be rigid and durable, as set forth, and this I claim irrespective of the mechanism for bending or crinkling said wires, or interweaving them to form the requisite meshes.

DESIGNS.

23.—N. S. Vedder, of Troy, N. Y., for a Design for a Cook Stoves.

24.—N. S. Vedder and E. Ripley (assignors to N. S. Vedder), of Troy, N. Y., for a Design for a Stove.

Notes and Queries

F. C., of Mass.—You state that, in order to increase the speed of your cider mill, you reduced the size of the small pulley one-half, but now find that it takes double the power to drive it, and you wish to know the reason why and how to make the pulleys so as to remedy the evil. Of course, since you have doubled the speed of your mill, the power required to drive it must be proportional, because you have twice the amount of work to do.

L. R., of N. Y.—There is no other mode of blueing articles of iron and steel known to us than by submitting them, when polished, to heat on an iron plate on the top of a furnace. They will pass through various shades of color, according to the temperature to which they are raised; whenever they attain to the blue shade, take them off and cool instantly. They must be exposed freely to the air while being heated, or you will fail to obtain the desired color.

A. J. W., of Mass.—To your question, "What is the best bait for foxes?" we are not able to reply positively. We know that the body of a rabbit or of a pullet is sometimes used. We should suppose that tying a live chicken to a low roost, and setting two or three traps just out of its reach, would be an excellent plan. Wolves are caught at the West by setting a trap in the ashes where a pile of wood has been burned, and then scattering pieces of meat about among the ashes.

R. R. H., of N. Y.—The bronze medals which we have examined are not coated with an artificial bronze varnish. By boiling tarnished bronze medals for a few seconds in dilute sulphuric acid, then washing them well in hot water, they will become bright; they should then be dried, and if you desire to prevent them from oxydizing, give them a thin coat of white varnish.

A. M. B., of N. Y.—A wagon will run easier when its wheels are placed on small iron axles than if placed on large wooden ones. The cheapest and easiest way to extinguish fire in a brick kiln is to shut it up as tight as possible. A little steam allowed to flow through the flues will tend to extinguish the fire, but will injure the quality of the brick.

J. B. J., of C. E.—Articles of iron are now case-hardened with a composition of powdered prussiate of potash and flour or meal in equal parts, made into a paste with water, and applied first to the surface of the article, then allowed to dry. The article is now raised to a low red heat in a clear fire, and then plunged into cold water. The prussiate of potash is the main agent; the flour is simply a vehicle for its application.

H. E. T., of Wis.—Your suggestion to give the hole through Hewett's projectile a spiral twist is a very natural one, but we believe that all attempts to rotate missiles by the resistance of the air must be failures. The rotation must be given before the shot leaves the gun, and then it will continue without any further assistance to the end of its flight.

J. H., of N. Y.—The Buhr-stone, of which millstones are made, is a natural deposit of cellular quartz, formerly supposed to be found in considerable quantity only in the mineral basin of Paris and the adjoining districts. The best quarry is at La Ferté-sous-Jouarre. The stones are quarried and broken into rectangular blocks, called "panes," which are made up into millstones and bound together with iron hoops. About eight years ago we received some excellent samples of buhr-stone from a quarry just opened in Georgia, which was said to be of inexhaustible extent. We know of no way to wash bolting cloths to prevent the ravages of insects.

T. L. B., of Ind.—In the Wesson rifle, which has never been surpassed for length of range and accuracy of firing, the ball, or rather cone, is swedged through a false muzzle which is removed before the gun is discharged. This swedging alters the shape of the missile, causing it to fill the grooves of the rifle, and preventing all windage. But we have never heard any advantage claimed for merely compressing the lead.

G. S., of Ill.—An overshot wheel 8 feet in diameter, with 225 lbs. of water on the loaded side, running 6 revolutions per minute, would discharge 1,350 lbs. per minute. This, falling 8 feet, would be equal to 10,000 lbs. falling 1 foot; and, as a horse-power is measured by 33,000 lbs. falling 1 foot per minute, your stream is just about one-third of one horse-power. An allowance of 40 per cent for friction, leakage, inertia of the water, &c., leaves about one-fifth of a horse-power for all that you could possibly utilize.

J. S., of Ohio.—An electric engine can be made to work on your principle.

J. P., of Cal.—Your ingenious lightning rod insulator is received. We shall not have it engraved.

R. N., of Ga.—All the fire companies in this city are under the command of the Chief Engineer and his Assistants, whose orders are supreme at fires. The first man at the engine house is entitled to hold the pipe at a fire; this is the custom, but fire companies can make such rules as they please about their minor duties. A complete revolution is going on in all our cities, in substituting steam for hand engines; and with this change a new system of firemen's tactics is also being introduced. Frame buildings are never blown up with powder to stop the ravages of a fire; they are usually torn down with hooks and levers. Excepting upon one occasion, we never saw a brick building blown up to arrest a fire.

C. H., of N. Y.—Several plans have been suggested for causing projectiles from cannon to rotate by the resistance of the air against wings on the outside, and among them a screw on the point of the projectile. It seems to us that Mr. Stetson's objection to these is perfectly sound; the rotary motion must be given to the missile before it leaves the gun. It seems to us, also, that there is a great deal of force in Mr. Stetson's remark, that the rifling of cannon has altogether too short a twist. If the velocity of the bolt is 1,600 feet per second, and it turns round once in 100 feet, it will rotate at the rate of 960 revolutions per minute; and this, we should suppose, would be sufficient. The larger the bolt, the smaller the number of revolutions necessary per minute.

E. F. F., of Mass.—In the nature of things, any substance that will prevent your blacking from drying will prevent it from taking a polish. You must keep it tightly covered.

C. A. S., of Ill.—The best varnish for covering magnets is made with gum shellac dissolved in alcohol. The best for covering iron implements is copal, made with linseed oil. Smee's "Electro-metallurgy," published by J. Wiley, Walker-street, this city, may perhaps answer your purpose. If you make your steel magnets about 8 inches long, 3 wide and about ¼ of an inch in thickness, we believe they will answer for an experimental electro-magnetic machine for producing the electric light.

H. B. N., of N. Y.—All the galvanized iron which we have examined does not seem to withstand the action of salt water or a saline atmosphere but for a short period. Alcohol may be manufactured from corn cobs, but the quantity obtained is small in proportion to their bulk. The quantity of alcohol obtained from corn and malt is exactly in proportion to the sugar contained in them. To obtain alcohol from corn cobs, they must be mashed and fermented exactly like the corn that is used in distillation.

E. B. C., of Ohio.—Nitric, sulphuric and hydrochloric acids will dissolve the solid substances in the human system; but they will effect the dissolution of the system itself at the same time.

J. B. Z., of N. Y.—We have had enough of "hair snakes," unless some one can give us their natural history from careful observation.

B. W. K., of Wis.—The principle of the gyrascope has been repeatedly explained. All the motions result from inertia, or rather from a combination of inertia and gravitation. You will find the general principle very clearly presented on page 193, Vol. III. (new series), of the SCIENTIFIC AMERICAN.

B. F. H., of Mo.—If you want a capitalist to take hold of your steam plow with you, apply to the hardest and sharpest money-maker in your neighborhood. If there is any real virtue in it, that is the sort of man to carry it through; and if there is none, the sooner you abandon it the better.

Money Received

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, March 9, 1861:—

P. M., of Mich., $25; W. A. L., of N. Y., $25; J. C., of N. Y., $50; E. T. H., of L. I., $30; J. H. Van R., of N. Y., $15; T. C., of Cal., $35; F. W., of Mass., $10; H. C. S., of Ohio, $35; F. B., of N. Y., $25; L. P., of Conn., $25; E. J. y P., of Mexico, $40; J. L., of Mass., $25; J. O. F., of Mass., $30; C. L., of Cal., $40; W. F. B., of Ill., $30; L. S., of N. Y., $250; J. A. R., of Pa., $30; E. M., of N. Y., $50; V. C., of Va., $$15; J. F. S., of Va., $25; A. & E., of Texas, $30; G. H. C., of N. Y., $15; J. V., of Mich., $30; A. T., of N. Y., $25; J. A. De B., of N. Y., $25; J. S. S., of N. Y., $25; M. H., of N. Y., $25; J. S. S., of N. Y., $25; J. A. C., of Ohio, $25; J. R., of Conn., $28; W. W. H., of N Y., $15; C. & D., of N. J., $20; J. P. S., of N. Y., $30; L. & W., of N. Y., $25; H. W. M., of Ill., $25; J. B. S., of Conn., $25; H. McD., of Pa., $30; I. W., of Maine, $40; L. C., of N. J., $30; C. K. H., of Cal., $25; J. G. D., of Mich., $30; V. D., of Va., $30; P. P., of N. Y., $43; G. S. C., of Ill., $25; J. C., of Canada, $30; J. S. G., of Maine, $30; N. R. M., of N. Y., $30; W. W., of Pa., $55; B. & D., of N. J., $15; L. & W., of N. Y., $475; C. H. A., of Conn., $15; E. T. S., of Ohio, $23; G. G., of N. Y., $25; W. J. P., of N. Y., $25; C. F., of Mich., $25; A. H. B., of N. Y., $25; H. C. A., of Ill., $25; E. T., of N. Y., $55; C. T P., of N. Y., $40; I. V. B., of N. J., $30; J. R. M., of Texas, $35; W. K., of N. Y., $40; G. & C. B., of Conn., $30; E. F. F., of Tenn., $43; C. T. B., of Mass., $25; A. S., of N. Y., $30; W. H., Jr., of Mass., $35; C. C. H., of N. Y., $30; S. M. D., of Mass., $25; J. M. C., of Mass., $20; J. H., of Ohio, $25; J. McC. & Bros., of N. Y., $25; C. H., of N. H., $30; W. & L., of N. Y., $15; H. T. C., of Conn., $15; L. & P., of Pa., $20; R. McC., of N. Y., $15; J. P., Jr., of N. H., $15; C. T. C., of N. Y., $10; E. R. W., of Maine, $25; J. & R., of N. Y., $25; J. L., of N. J., $28.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending March 9, 1861:—

[The patents on these cases, when issued, will be granted for seventeen years under the new Patent Law.]

J. R., of Conn.; J. T., of N. Y.; G. G., of N. Y.; J. & R., of N. Y.; H. B. & J., of Iowa; J. O. W., of N. Y; J. R. R., of Mass. (2 cases); J. S. S., of N. Y.; A. M., of Maine; J. McC. & Bros., of N. Y.; C. F. C., of N. Y.; E. J. y P., of Mexico; L. & W., of N. Y.; E. T., of N. Y.; S. M. D., of Mass.; J. H., of Ohio; J. A. De B., of N. Y.; H. W. M., of Ill.; J. L., of N. J.; A. S., of N. Y.; J. B. S., of Conn.; W. J. P., of N. Y.; F. W. T., of Mass.; L. P., of Conn.; G. S. C., of Ill.; E. R. W., of Maine; W. K., of N. Y.; E. T. S., of Ohio; C. T. P., of N. Y.; J. J. H., of Ky.; L. L. K., of Mass.; L. S., of Vt.; C. T. B., of Mass.; J. L., of Mass.; S. H. & H., of Mass.; F. B., of N. Y.; G. S. C., of Ill.; C. H. A., of Conn.; P. P., of N. Y.; J. V., of Mich.; G. F. J. C., of N. J.; E. T. H., of L. I.

New Books and Periodicals Received.

THE PRACTICAL DRAUGHTMAN'S BOOK OF INDUSTRIAL DESIGN: Forming a Complete Course of Mechanical, Engineering and Architectural Drawing, Founded Upon the "Nouveau Cours Raisonné de Dessin Industriel" of M. M. Armengaud, aîné, Armengaud, jeune, and Amoroux, Civil Engineers, Paris, Containing Additional Plates and Examples of the Most Useful and Generally Employed Mechanism of the Day; by William Johnson, Asso. Inst. C. E., Editor of "Practical Mechanics' Journal." Second edition, with the French Measures carefully converted into English. Boston: C. B. Russell, No. 12 Tremont-street.

In a previous edition of this standard work, the French measures were preserved, causing some inconvenience, but in the present publication they have all been converted into English, and the work may now be considered perfect. It has been adopted in Yale and other colleges, as the best guide for instruction in mechanical drawing.

THE ATLANTIC MONTHLY: published by Ticknor & Fields, Boston, Mass.

The March number contains the last chapter but one of "The Professor's Story." The secret is whispered, and the end can be seen.

Important Hints to Our Readers.

BACK NUMBERS AND VOLUMES OF THE SCIENTIFIC AMERICAN.—Volumes I., II. and III. (bound or unbound) may be had at this office and from all periodical dealers. Price, bound, $1.50 per volume by mail, $2—which includes postage. Price in sheets, $1. Every mechanic, inventor or artisan in the United States should have a complete set of this publication for reference. Subscribers should not fail to preserve their numbers for binding.

PATENT CLAIMS.—Persons desiring the claim of any invention which has been patented within thirty years, can obtain a copy by addressing a note to this office, stating the name of the patentee and date of patent, when known, and inclosing $1 as fee for copying. We can also furnish a sketch of any patented machine issued since 1853, to accompany the claim, on receipt of $2. Address MUNN & CO., Patent Solicitors, No. 37 Park Row, New York.

BINDING.—We are prepared to bind volumes, in handsome covers, with illuminated sides, and to furnish covers for other binders. Price for binding, 50 cents. Price for covers, by mail, 50 cents; by express or delivered at the office, 40 cents.

CHANGE IN THE PATENT LAWS.

NEW ARRANGEMENTS—PATENTS GRANTED FOR SEVENTEEN YEARS.

The new Patent Laws, recently enacted by Congress, are now in full force, and promise to be of great benefit to all parties who are concerned in new inventions.

The duration of patents granted under the new act is prolonged to SEVENTEEN years, and the government fee required on filing an application for a patent is reduced from $30 down to $15. Other changes in the fees are also made as follows:—

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 Re-issue	$30
On application for Extension of Patent	$50
On granting the Extension	$50
On filing 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

The law abolishes discrimination in fees required of foreigners, except in reference to such countries as discriminate against citizens of the United States—thus allowing English, French, Belgian, Austrian, Russian, Spanish, and all other foreigners except the Canadians, to enjoy all the privileges of our patent system (except in cases of designs) on the above terms.

During the last sixteen years, the business of procuring Patents for new inventions in the United States and all foreign countries has been conducted by Messrs. MUNN & CO., in connection with the publication of the SCIENTIFIC AMERICAN; and as an evidence of the confidence reposed in our Agency by the Inventors throughout the country, we would state that we have acted as agents for more than FIFTEEN THOUSAND Inventors! In fact, the publishers of this paper have become identified with the whole brotherhood of Inventors and Patentees, at home and abroad. Thousands of Inventors for whom we have taken out Patents have addressed to us most flattering testimonials for the services we have rendered them, and the wealth which has inured to, the Inventors whose Patents were secured through this Office, and afterward illustrated in the SCIENTIFIC AMERICAN, would amount to many millions of dollars! We would state that we never had a more efficient corps of Draughtsmen and Specification Writers than are employed at present in our extensive Offices, and we are prepared to attend to Patent business of all kinds, in the quickest time, and on the most liberal terms.

The Examination of Inventions.

Persons having conceived an idea which they think may be patentable, are advised to make a sketch or model of their invention, and submit it to us, with a full description, for advice. The points of novelty are carefully examined, and a reply written corresponding with the facts, free of charge. Address MUNN & CO., No. 37 Park-row, New York.

Preliminary Examinations at the Patent Office.

The advice we render gratuitously upon examining an invention does not extend to a search at the Patent Office, to see if a like invention has been presented there, but is an opinion based upon what knowledge we may acquire of a similar invention from the records in our Home Office. But for a fee of $5, accompanied with a model or drawing and description, we have a special search made at the United States Patent Office, and a report setting forth the prospects of obtaining a Patent, &c., made up and mailed to the Inventor, with a pamphlet, giving instructions for further proceedings. These preliminary examinations are made through our Branch Office, corner of F and Seventh-streets, Washington, by experienced and competent persons. Over 1,500 of these examinations were made last year through this Office, and as a measure of prudence and economy, we usually advise Inventors to have a preliminary examination made. Address MUNN & CO., No. 37 Park-row, New York.