

## RECENT AMERICAN INVENTIONS.

**Harvesters.**—This invention, patented by G. W. Richardson, of Evansville, Indiana, relates to an improvement in the construction of the frame of the harvester, whereby the finger bar and sickle may be readily adjusted to any desired height, and the finger bar at the same time be well braced and supported, so as to be perfectly capable to withstand all strain to which it may be subjected. It also relates to an improved arrangement of the sickle driving mechanism, whereby the same is brought in quite close proximity to the driving wheel, and much side draft prevented, and a longer pitman than usual allowed to be used in order to facilitate the operation of the sickle.

**Gas Carbureter and Regulator.**—This apparatus, patented by J. A. Bassett, of Salem, Mass., consists of a vessel containing a series of annular passages, arranged concentrically one within another, around an upright axis, and communicating with each other on opposite sides alternately, and a second vessel, filled with a porous material, arranged above the first-named vessel, and communicating therewith by means of an interposed valve attached to the same stem, with an inverted cup-shaped float, arranged in the lower vessel, and with a valve at the mouth of the inlet, by which the gas enters the latter vessel from the main. Both of the vessels contain naphtha or other hydro-carbon liquid, and the lower vessel serves partly to effect the naphthalizing process, but mainly as a cooler, to cool the gas before its advent to the upper vessel, in which the naphthalizing is mainly performed and completed. The regulation of the flow of gas is effected by the inverted cup and the valve at the inlet, and the valve interposed between the two vessels serves by nearly shutting off the gas when the liquid in the lower vessel gets very low, to give notice that the said vessel requires replenishing.

**Improvement in Projectiles.**—This invention, patented by Charles W. Small, of Bangor, Maine, consists in furnishing an elongated projectile with a packing formed of a number of strips of wrought-iron, copper or other tough but flexible metal or material, partly imbedded in the metal of which the projectile is composed, and lapping each other on the outside of the projectile, in such manner as to form around the rear thereof, a tube, which is divided into sections, and capable of being expanded against the bore of the gun, by means of the pressure of the gases of the gunpowder against its interior, and so made to prevent windage, and, in the case of rifled guns, made to fit the rifle grooves, and obtain for the projectile a rotary motion, which is preserved in a great degree during the flight of the projectile by the further expansion of the sections of the tube after the discharge from the gun has taken place, and the consequent pressure of the spirally-formed edges of the said sections against the atmosphere.

**Calendar Clock.**—This invention relates to the construction of the wheel generally known as the day-of-the-month wheel, carrying the index which denotes the day of the month upon the dial or calendar. This wheel has been variously constructed, and had various devices attached to it to provide for its making  $\frac{1}{31}$ ,  $\frac{2}{31}$ ,  $\frac{3}{31}$ , or  $\frac{4}{31}$  of a revolution at the expiration of every month, according as the month has thirty-one, thirty, twenty-nine or twenty-eight days, but its construction and attachments have been generally either complicated or liable to get out of order. The invention consists in the construction of the wheel with three of its thirty-one teeth progressively shorter than the remaining twenty-eight, that by the use of a properly-operated click to move the wheel and a properly-controlled detent to stop it, one, two, three or four teeth, as may be required, may be caused to pass the detent at the expiration of the month, and so permit the movement of the day-of-the-month index from the position which indicates the number 31, 30, 29 or 28 of the last day of one month to the position which indicates the number 1. Patented by Eugene M. Mix and James E. Mix, of Ithaca, New York.

**Hub-Turning and Mortising Machine.**—The object of this invention is to obtain a machine by which hubs may be turned, and then mortised to receive their spokes, the turning and mortising being performed at one operation. The invention consists in combining with an ordinary turning lathe, a slide rest provided with a cutter, and also with a mortising tool, the

parts being so arranged that the cutter may, by a simple manipulation, be first made to act against the work, and turn the hub in proper form, and the mortising tool then made to act and mortise the hub. Patented by Edwin M. Scott, of Auburn, New York.



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\*. Pamphlets giving full particulars of the mode of applying for patents, under the new law which went into force March 2, 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.

34,555.—J. S. Atterbury, J. Reddick and T. B. Atterbury, of Pittsburgh, Pa., for Improvement in Molds for Glassware :

We claim, first, The means and manner, substantially as described, of pressing articles of glassware in bas relief.

Second, The means and manner of uniting the bas-relief glass work to the outer surface of blown glassware, substantially as described.

34,556.—B. H. Bafol, of Philadelphia, Pa., for Improvement in Steam Boilers :

I claim the furnace, B, diving flue, H, one or more horizontal flues, J, and the return flue, M, with its vertical tubes, the whole being arranged within the casing, A, as and for the purpose set forth.

34,557.—J. A. Bassett, of Salem, Mass., for Improved Apparatus for Carbureting Gas :

I claim, first, The combination, substantially as described, of a vessel, A, in which the gas passes, over the surface of the hydrocarbon liquid, to be partly carbureted and cooled by the evaporation of the liquid, and a vessel, B, containing a porous substance, and saturated with such liquid, through which the gas subsequently passes, as set forth.

Second, The gas-regulating valve, j, and float, k, combined with a gas-naphthalizing and carbureting apparatus, substantially as specified, in which the rods, l, crank shaft, F, lever, G, and rack plate, E, all arranged and mounted, as shown, to operate as and for the purpose set forth.

[This invention relates to an improved horse rake, of that class in which wire teeth are employed. It consists in the peculiar arrangement of the rake head, its connection with springs and an adjusting lever, whereby the manipulation of the rake is rendered extremely simple, and the device placed under the complete control of the operator.]

34,559.—J. M. Blake, of Madison, Wis., for Improvement in Horse Powers :

I claim, first, The endless apron, A, when constructed substantially as described, with supports, f, and connecting blocks, a.

Second, The arrangement of the large friction rollers, B, drum, C, and end roller, D, in combination with the endless apron, A, substantially as and for the purposes specified.

34,560.—Joseph Bondy, of New York City, for Improvement in Knapsacks :

I claim the straps, D, extending from and connecting the rear upper edge of the knapsack to the shoulder straps or strap, C, which are fixed to the front side of the knapsack, substantially as and for the purpose specified.

34,561.—W. H. Brown, of Worcester, Mass., for Improvement in Breech-Loading Firearms :

I claim, first, The peculiar method of moving the barrel in both directions, and holding it against the breech, J, by means of the locking bar, D, in combination with the parts, E, F and G.

Second, The combination and relative arrangement of the inclined or wedge-shaped adjustable packing piece, o, with the stock and front-beveled end of the locking bar, D, substantially as and for the purpose set forth.

Third, The combination and arrangement of the adjusting piece, E, with the adjusting screws, e and r, for adjusting the pressure of the barrel against the breech, substantially as set forth.

Fourth, The combination and peculiar arrangement of the connecting piece, F, with the locking bar, D, and the lever, G, as described, whereby it is allowed a longitudinal motion to facilitate the passage of the joint, c, past the plane of the axes, n and a, during the operation of locking and unlocking the barrel.

Fifth, The combination with the stationary breech, J, and the recessed rear end of the barrel, B, of the projecting hooks, m m m, constructed and arranged to operate as described, whereby the cartridge case can be placed in position by a simple downward movement of the hand, and there retained in a central position as respects the bore of the barrel, until after the charge has been fired and the barrel unlocked, for the purposes set forth.

34,562.—R. S. Chapin, of New York City, for Improvement in Lamps :

I claim in combination with the wick tube, constructed as aforesaid, the deflecting cap, e, applied in the manner and for the purposes specified.

34,563.—W. Z. W. Chapman, of New York City, for Improvement in Fastenings for Cartridge Boxes :

I claim the clasp, f, formed substantially as specified, and applied to the lower part of the flap of a cartridge or cap box, and connecting to the bottom of said cartridge or cap box, in the manner set forth, so as to form a fastening that can be worked by the fingers in the act of opening or closing said box, as described and shown.

34,564.—C. W. Clewley, of Providence, R. I., for Improvement in Watch and Locket Cases :

I claim a rim for lockets and similar metallic cases, formed of sheet metal, in such manner that the face of the field piece within the case and the exterior surface of the rim are both formed from the same side or surface of the original sheet metal, and that the field piece and rim are of one piece of metal.

34,565.—F. H. Cuyppers, of Newark, N. J., for Improvement in Hinges and Hooks :

I claim, first, The combination of the wedges, B, casing, C, and tongues, E, constructed and operating as set forth.

Second, The combination of the projecting flange, F, with a hinge, having tongues expanded or deflected by wedges, as explained.

[By means of this invention hinges may be attached to wood, stone, iron or other material, without the aid of screws or any of the customary modes of fastening, and are more securely held than by the means in common use.]

34,566.—W. H. Doane, of Chicago, Ill., for Improvement in Machines for Cutting Veneers :

I claim the combination of the cast-iron concave and curved-grooved

ribs, with the brass faces or other equivalent metal, arranged and connected in the manner and for the purpose specified.

34,567.—G. A. Dabney, of San José, Cal., for Improvement in Apparatus for Operating Churns :

I claim the arrangement of the vibrating frame, J, arm, m, and connecting rod, n, in combination with the cord, f, dasher, l, j, tub, F, and swinging frame, E, as constructed and operating in the manner and for the purpose shown and described.

34,568.—Alexander Douglas, of English Neighborhood, N. J., and S. S. Sherwood, of Acquackanonck, N. J., for Improvement in Ladies' Skirts :

We claim, first, The combination, in the manner described, of the hoops, 1, 1, tapes, 2, 2, and braids, 3, 3.

Second, The combination with the waistband, 8, and with each other of the metal plate or strap, 6, and the eyelets, 7, substantially as set forth.

Third, The construction of the slides for expanding the skirt, with continuous bars upon the outer side of the hoop, or side furthest from the sliding portion, and with pointed teeth upon the inner side instead of continuous bars, in the manner and for the purpose described, the pointed teeth alternating with the bars, as shown.

Fourth, The combination with the upper continuous hoop of the stay, 4, and eyelet, 5, substantially as described.

34,569.—Daniel Fitzgerald, of New York City, for Improvement in Tents :

I claim, first, Constructing a tent in the calèche form, so that it may fold compactly together, vertically in a flat form, and be readily erected, substantially as described.

Second, The use of the flanged collars to hold the radial braces, constructed substantially as described.

34,570.—F. B. Franklin, of Appleton, Wis., for Improved Spring Bed Bottoms :

I claim the combination of the coils, F F, loops, G G', rods, H H', and eyes, E, all constructed, arranged and connected in the manner shown and explained, so as to constitute a continuous elastic web.

[The object of this invention is a bed bottom, formed of a series of wire coils and loops, and its superiority consists in so constructing and connecting the coils that they shall form a continuous web of greater elasticity than spring bed bottoms in common use.]

34,571.—W. O. Grover, of Boston, Mass., for Improvement in Sewing-Machine Needles :

I claim an eye pointed needle, having an interrupted groove on one side and a continuous groove on the other, substantially such as is described.

34,572.—O. B. Hatfield, of New York City, for Improved Elevator :

I claim the construction of an elevator or dumb waiter, supported wholly upon one side, ascending and descending in a vertical course, substantially in the manner described.

34,573.—W. G. Hermance, of Albany, N. Y., for Improvement in Straw Cutters :

I claim the combination of the bell crank lever, G, link, E, knife, F, and standards or arms, C, D, cast or secured to the mouthpiece, B, substantially as and for the purposes set forth.

34,574.—G. B. Hicks, of Cleveland, Ohio, for Improvement in Telegraph Apparatus :

I claim, first, The employment of an adjustable magnet, m' m', as and for the purpose set forth.

Second, I claim the double armature lever, M, with the attached armatures, a2 a3, arranged and operating as specified.

Third, I claim the arrangement of the local battery, number 1, in combination with the helix, m' m', the conducting wires, w' w', and the points, o and e, arranged and operating as and for the purpose described.

Fourth, I claim the employment of two points, one on each end of the sounder armature lever, L, by means of which circuit through two magnets on opposite sides of the same armature, may be closed or broken simultaneously; and thus the armature lever held still for the purpose described.

Fifth, I claim the combination of the adjustable local magnet, m' m', with the receiving and recording instruments, when arranged and operated as and for the purposes specified.

34,575.—J. P. Hillard, of Fall River, Mass., for Improved High and Low Water Detector for Steam Boilers :

I claim the combination of the valve, B', with two ports and detector, A', with one port, and adjusting arm, J', attached to B', and float, F', constructed and arranged to operate, so that when the water falls to a certain line in the boiler the float, F', resting on the water will open the valve and allow the steam to escape through port, D', to give alarm, and when the water rises to a certain line in the boiler, the float, F', will rise and open the valve, and allow the water to escape through port, C', and give alarm, substantially as and for the purposes set forth and described.

34,576.—W. H. Holbrooke, of New York City, for Improved Silicated Soap :

I claim the combining of a soluble alkaline silicate with rice flour, or an analogous flour by the process before described, or its equivalent, to be used as an ingredient in soap making.

34,577.—Samuel Jarden, of Baltimore, Md., for Improved Odorizer of Kerosene Oil :

I claim the manner of odorizing kerosene oil, as stated, or by combination with said essential oils in greater or less proportions, if the said manner of odorizing be substantially the same.

34,578.—W. H. Kelly, of Onondaga County, N. Y., for Improvement in Cultivators :

I claim the combination of the central beam, made as described, with the shares, 6, and shanks, a, when constructed and operating as set forth, and attached to the beam by means of clasps and bolts, as shown by Figs. 7, 7.

34,579.—Benedikt King, of Providence, R. I., for Improvement in Cartridges Adapted to Breech-Loading Firearms :

I claim the use and employment of a cartridge having its base formed substantially as described, in combination with the groove, V, and plate, J, when said plate forms a part or one side of the groove or hole, V, being constructed and operating substantially as set forth.

34,580.—Lewis Kirk, of Reading, Pa., for Improvement in Brick Machines :

I claim, first, The formation of solid building brick by compressing the clay in and forcing it out of forming tubes and by subsequently trimming the ends by the means and substantially in the manner as described.

Second, Gradually condensing the particles of clay and expelling the air therefrom by compressing the clay in a separate chamber previous to its being forced in and through the forming tube by the means substantially as described and for the purposes set forth.

Third, In combination with the mechanism described for compressing the clay by forcing it in and through a forming tube, I claim a mechanism constructed, arranged and operating substantially as set forth for dividing the compacted mass of clay into bricks of suitable length and for simultaneously trimming both ends.

Fourth, In a brick machine constructed to operate as described by forcing the compressed clay in and through a forming tube, I claim the mechanism for regulating at will the supply of clay into the compression chamber, substantially in the manner and for the purpose set forth.

Fifth, The mode described of dividing transversely the mass of clay compacted into shape by the employment, in combination with the revolving trimming knives, or their equivalents, of a fixed and movable platen and tray, constructed to operate as set forth, so as firmly to hold the mass of clay to constitute a brick, around its longer sides while it is being cut at its ends.

Sixth, The construction of the hopper with curved grate bars at the bottom thereof when said bars are provided with projecting teeth shaped and combined with revolving triturating blades, as described, the whole arranged substantially in the manner to operate as set forth.

34,581.—A. S. Lyman, of New York City, for Improved Process of Separating the Fibers of Wood and other Substances for the Manufacture of Paper Pulp :

I claim, first, Effecting the separation of the fibers of wood, hemp, flax, or other vegetable matters by subjecting them, in a close vessel or vessels, to the combined simultaneous action of a whipping, beating, rubbing, grinding or picking apparatus, and of water at a high temperature and pressure.

Second, The washing out of the gummy and coloring matters or other soluble parts from the fibers by changing the water while the substances are being subjected to the combined or simultaneous action specified.

[Foreign patents have been taken out for this invention, and we shall soon publish an illustrated description of it.]

**34,582.**—P. W. Mackenzie, of Jersey City, N. J., assignor to Addison Smith, of New York City, for Improved Gas Compensator :

I claim the use of the compensating plates, A A, the connecting and adjusting rods, g and j, in combination with the valve, s, and circular valve seat, d, d, or its equivalent, with long narrow ports, s, s, the whole substantially as set forth.

**34,583.**—B. F. McAlhatten, of New York City, for Improved Bed for Ships and Hospitals :

I claim the construction of a bed with both the end pieces and the bottom pieces forming the bottom laths, made of air-tight chambers, the whole being arranged and combined in the manner and for the purpose substantially as described and specified.

**34,584.**—J. H. Mears, of Oshkosh, Wis., for Improvement in Rakers for Harvesters :

I claim guide, X, constructed and operating as set forth, and arranged relatively with guide, N, standard, Z, bevel wheel, S, and double rake, P, as and for the purposes set forth.

[This invention consists in the employment or use of a rake attached to an endless belt or chain, and used in connection with a guide ; the above parts being placed in such relation with the grain platform and all arranged in such a manner that the rake will, as the endless belt or chain is moved, traverse or sweep across the platform and take the cut grain therefrom and return back to its original working point in an elevated state, so as not to interfere during its return movement with the falling of the cut grain on the platform, nor with the bars of the reel which throw the cut grain thereon.]

**34,585.**—A. D. Milne, of Tiverton, R. I., for Improvement in Tobacco Pipes :

I claim, first, Providing the stem of a tobacco pipe with a removable metallic condenser substantially as and for the purpose set forth.

Second, Providing the bowl with a removable lining, constructed as described, in combination with the removable partition, substantially as and for the purpose set forth.

Third, Providing the stem with a valve which may be opened and closed at pleasure, as set forth.

**34,586.**—John Mittlehaus, of Berlin, Prussia, for Improvement in Setting Artificial Teeth :

I claim the construction of button-set teeth by combining the following elements:—First, a tooth plate, a, in proportion to length and breadth that more or less places perforated by oval openings ; second, an edge or rim, b, surrounding all openings of the tooth plate on the side facing the pituitary membrane ; third, a cover, c, a little larger than the said edge, soldered to the tooth plate at the side turned to the mouth hole, so as to leave a space between the tooth plate and the cover, substantially as shown and described.

**34,587.**—Robert Morrison, of Newcastle-upon-Tyne, England, for Improvement in Apparatus for Forging and Crushing Iron. Patented in England August 6, 1853 :

I claim, first, The system or mode of constructing such apparatus with the piston, piston rod, or hammer bar and guides in one solid mass.

Second, A hammer bar for steam hammers, constructed substantially as described and arranged in relation to other parts of the apparatus, so as to dispense with the use of guides below the cylinder.

**34,588.**—B. W. Nichols, of Fair Haven, Conn., for Coupling for Octaves, &c., in Melodeons :

I claim a melodeon valve made with its rear portion so extended and beveled that it may be opened by pressing the rear end toward the reed board, as readily and effectually as by pressing the front end toward the reed board, when it is made and fitted for the purpose of coupling octaves, substantially as described.

Second, I claim the use of the shaft cam, C, when it is made to serve the double purpose of bringing the diagonal levers into position, and also forming a complete fulcrum on which the whole series of diagonal levers may be vibrated, when made, located and used substantially as described.

Third, I claim the use of a series of single diagonal levers, c, in combination with valves, d, fitted to be worked at both ends, for the purpose of coupling octave, when the whole is constructed, arranged and fitted to produce the result, substantially as described.

Fourth, I claim the use of the series of single diagonal levers, c, in combination with the shaft cam, C, when constructed, arranged and operated substantially as described.

**34,589.**—L. C. Palmer, of East Winsted, Conn., for Improvement in Furnaces for Heating Scythes, &c. :

I claim the arrangement of the recess, G, and ledge, g, with the fire box, B, flue, D, and openings, i, as and for the purpose shown and described.

[The object of this invention is to obtain a furnace by which the metal bars or stock used in the construction of scythes may be heated more economically than hitherto.]

**34,590.**—J. L. Plimpton, of New York City, for Improvement in Fastenings for Skates :

I claim, first, The combination of the connecting link, D, and sole plate, A, with an adjustable or permanent stop, substantially as described.

Second, The connecting link, D, lever and catch, or equivalent device, in combination with the stop, E, and sole plate, A, when combined and arranged to operate substantially as described.

[An engraving of this invention was published in our last number.]

**34,591.**—H. J. M. Puistienne, of Paris, France, for Improved Mode of Treating Copper Ores :

I claim the mode set forth of treating copper ores ; and particularly the application of sulphur, chloride of calcium or chloride of lime, or other chlorides, for the purposes of the present invention, and wish to be understood that the proportions of the chemical agents mentioned may be varied according to the nature of the copper ores to be operated upon.

**34,592.**—G. W. Putnam, of Smithfield, N. Y., for Improved Device for Purifying Butter :

I claim having the vessel, A, provided with butter escape openings, g, in combination with the adjustable perforated slides, h, substantially as shown and described for the purpose set forth.

[This invention consists in separating buttermilk, brine and other liquids or semi-liquids, from butter by subjecting the same to a requisite pressure within a suitable vessel or chamber provided with ejection passages, whereby the particles of butter are made to adhere together, and the foreign fluid substances strained out or separated therefrom.]

**34,593.**—T. C. Richards, of Milwaukee, Wis., for Improvement in Curtain Fixtures :

I claim as a new article of manufacture, a curtain fixture or pressure roller, constructed as and for the purpose set forth.

[This invention relates to an attachment which is designed to be applied to the ordinary curtain or shade fixtures now in common use, and is intended to obviate the slipping of the cord on the pulley which is attached to the upper roller.]

**34,594.**—E. P. Russell, of Manlius, N. Y., for Improvement in Harvesters :

I claim the combination of the tapering or conical rollers, a, with the bevel outward on the flange, c, operating as described and for the purposes set forth.

**34,595.**—E. M. Scott, of Auburn, N. Y., for Improvement in Machines for Turning and Mortising Hubs :

I claim the pivoted bar, I, provided with the parallel guides, f, f, and sliding heads, J, N, the heads being provided one with the cutter, M, and the other with the chisel, O, and guides, J, and the head, J, operated by a screw, K, and connected with the head, N, by a bar, T, when required ; all being arranged and combined with a turning lathe, to operate as and for the purpose set forth.

**34,596.**—C. W. Small, of Bangor, Maine, Improvement in Projectiles for Rifled Ordnance :

I claim furnishing a projectile with a packing formed of strips, a b b, of flexible metal partly imbedded in the metal of which the projectile is formed, and partly lapping each other on the exterior of the projectile, in such a manner as to form an expanding tube, substantially as and for the purpose specified.

**34,597.**—C. L. Spencer, of Providence, R. I., for Improvement in Mode of Converting Motion :

I claim the use of the spring, I, or its equivalent, in combination with the curved connecting rods, G G, for the purpose of enabling the operating pawls to be so adjusted as to obtain an effect upon the shaft equal to the action of the crank, while the danger of hanging upon the dead point is prevented, substantially as described.

**34,598.**—L. L. Stearns (assignor to himself and L. M. Meigs), of Jersey Shore, Pa., for Improved Washing Machine :

I claim the construction of the adjusting lever, C, in connection with the main lever, B, and in combination with the spring, D, substantially as and for the purpose specified.

**34,599.**—Collins and Munroe Stevens, of Boston, Mass., for Improvement in Clocks :

We claim the tooth or detent, M, turning about a center-pivot or support, as described, in connection with the lever, m m, substantially as and for the purposes set forth.

We also claim the method of relifting and relocking the lever, m m, and the tooth or detent, M, by the cam, n, substantially as described.

We claim the combination of the wheel h, the wheel, c, and the shaft, i, as described for the purpose of rewinding the spring at the escape wheel, substantially as described.

We further claim the socket, v, protruding through the plate, B', in the manner described, in combination with the arm, w, the pin, y, and the spring, x, substantially as described, for the purpose of setting the time part of the clock.

**34,600.**—W. W. St. John, of Pleasant Mount, Mo., for Improvement in Current Water Wheels :

I claim fitting the pairs of buckets, g h and i k, when arranged at right angles upon the adjustable block or hub, f, in the manner specified, so that said buckets, by the adjustment of the block, can be so placed as to return above the surface of the water, while the buckets act as immersed as much as possible, as set forth.

**34,601.**—J. F. Tapley, of Springfield, Mass., for Improvement in Printing and Cutting Paper :

I claim the combination of the cutter or die, B, with the block, C, and springs, D D, or their mechanical equivalents, when constructed and operated substantially in the manner and for the purpose fully set forth.

**34,602.**—Elmer Townsend, of Boston, Mass., for Improvement in Canister or Case Shot for Ordnance :

I claim the arrangement and combination of the wings, h, with the head, H, the case, A, and the charge of balls, thereof, the whole being to operate together, substantially as and for the purpose or purposes as specified.

I also claim the combination and arrangement of the part, C, with the shell case, A, the sabot, D, and the packing, d.

I also claim the combination and arrangement of the cap, G, and one or more lateral orifices, f, with the fuse tube and a chamber, n, formed in the rear end of the sabot, as specified.

I also claim the combination of one or more flanges, k k, or the equivalent thereof, with the loading chamber and the winged head applied thereto.

I also claim the construction of the cap, l, and the wings, h, viz., in two separate parts, substantially in manner and so as to be combined together, as described.

**34,603.**—G. O. Townsend, of Boston, Mass., for Improvement in Tents :

I claim, first, Erecting or erecting the tent and graduating the tension of the canvas, A, thereof, by means of a sliding frame, D, placed on the pole, B, and operated by means of the screw, C, on the pole, and the ring or band, E, and pin, d, or their equivalents, as set forth.

Second, The combination of the toggles, and attached cords, p q, with the flaps, l, in the manner shown and described.

[The object of this invention is to facilitate the raising and lowering of the tent, as well as to afford a ready means for regulating the tension of the canvas, and thereby compensate for the damp and dry state of the atmosphere, and admit of the canvas being kept properly strained or stretched at all times, avoiding the loosening and sagging of the same in dry weather, and also avoiding the undue tension occasioned by the absorption of moisture in wet weather, which, in tents of ordinary construction, is frequently so great as to either rupture the canvas or draw the tent pins out of the earth. An illustration of this invention will appear in our next number.]

**34,604.**—J. B. Van Deusen, of New York City, for Improved Car Coupling :

I claim the shackle, D, provided with the spiral flanches, a a, in combination with the drawheads, A A, having spiral openings, C C, arranged relatively with the flanches, a a, of the drawheads, to operate as and for the purpose set forth.

I further claim, in connection with the shackle and drawheads, A A, the back-plate, b, attached to the frames, B, and provided with the recesses or notches, c, for the purpose of holding or sustaining the shackle, as set forth.

[This invention consists in having a shackle provided with spiral flanches at its ends, and using, in connection therewith, drawheads having spiral or screw-shaped openings to receive the spiral flanches of the shackle.]

**34,605.**—George Westinghouse, of Schenectady, N. Y., for Improvement in Grain and Seed Winnowers :

I claim the arrangement together of the swinging shoe, H, when operating, as specified, fan, C, and adjustable box, N, as shown and described for the purpose set forth.

[This invention consists in giving the shoe of the machine an oblique vibratory motion at an angle of about 45°, so that the straws of the grain will not catch into the meshes of the screen, and pass through it, a contingency which occurs in the horizontally vibrating screens of the ordinary fanning or winnowing machines. The invention also consists in a novel way of attaching the tailscreen to the shoe, whereby said screen may be inclined at a greater or less angle, to regulate the discharge from its end as desired.]

**34,606.**—C. Whipple, of Providence, R. I., and R. J. Stafford, of Smithfield, R. I., for Improvement in Machines for Combing Cotton :

We claim, first, For mode of operation, substantially as specified, by means of which a tuft of cotton, or other fibrous material, after it has been detached from the main body of the stock, is transferred to successive holding jaws, and subjected to the operation of being combed alternately on each side and both ends, as set forth.

Second, We claim the combination of a pair of vibrating feed rollers, C, with a series of jaws, B B, having an intermittent rotary motion, substantially as described, for the purpose of separating the stock to be combed into tufts.

Third, We claim giving to each series of jaws an intermittent rotary motion, substantially as described for the purposes specified.

Fourth, We claim a doffer cylinder, H, in combination with the cylinder No. 3, so arranged as to receive the several tufts after they have been combed in successive overlapping layers, preparatory to being formed into a continuous sliver.

**34,607.**—G. M. Zell, of Waynesville, Ohio, for Improvement in Water Elevators :

I claim the combination of the wheel or pulley, E, spout, J, and bucket, H, provided with the valve, L, and lever, N, when arranged for joint operation, substantially as and for the purpose set forth.

[This invention relates to a new and improved water elevator of that class in which a valvular bucket is elevated by means of a chain passing over a pulley. The invention consists in a novel way of adjusting the filled bucket when elevated, and operating its valve, whereby the whole or any portion of the contents of the bucket may be discharged into the trough by simply operating the crank of the pulley shaft.]

**34,608.**—Theodore Atteneder (assignor to himself and R. H. Gratz), of Philadelphia, Pa., for Improvement in Telescopes for Measuring Distances :

I claim the use in telescopes, spyglasses, &c., of a plain glass disk situated in the focus of the eye lens, a scale being marked on the disk and that scale so graduated as to enable the observer to ascertain the distance of an object of given dimensions.

**34,609.**—Jehu Brainerd (assignor to Brainerd & Burrige), of Cleveland, Ohio, for Improvement in Tanning :

I claim the use of the salix grisea for the purpose of tanning, when prepared as set forth.

**34,610.**—J. R. Gill, W. E. Palmer and W. W. Webb, of Alton, Ill., for Improved Clothes Wringer :

We claim the bars, A A, provided with the jaws, B B, in combination with the jaws, M M, sockets, G G, roller bearings, D H, springs, K K, and nuts, L, fitted on the bars, A A, and all arranged for joint operation, substantially as and for the purpose set forth.

[This invention relates to an improved clothes-wringing device of that class in which pressure rollers are employed, and which are attached to the wash tub or box by means of a clamp. The object of the invention is to obtain a simple and efficient clothes wringer of the kind specified by applying or securing the device to the wash tub or box by the same means employed for graduating the pressure of the rollers.]

**34,611.**—W. L. Gregory (assignor to himself and Gardner Landon, Jr.), of Amsterdam, N. Y., for Improvement in Skates :

I claim the combination of the screws, B' B', with the runner knees, caps, D D, nuts, C C, and stock, A, in the manner shown and described.

[The object of this invention is to economize in the construction of skates. The invention relates to the means employed for securing the runner to the stock—the most expensive part of an ordinary skate—and consists in attaching wood screws to the top of the knees of the runner, and using, in connection with the screws aforesaid, nuts and sockets, all arranged to effect the desired end.]

**34,612.**—O. J. Hall (assignor to himself and Franklin Decker), of Pittsford, N. Y., for Improvement in Railroad Chairs :

I claim clamping the two halves, C and C', of the chair together by means of a single flat tapering key, k, as specified, when the said halves, C and C', are matched together by a tongue and groove running horizontally across the base of the rail, as shown and described, and are provided with stops, S.

**34,613.**—E. M. and J. E. Mix (assignors to W. T. Huntington and Harvey Platts), of Ithaca, N. Y., for Improvement in Calendar Clocks :

We claim the day-of-the-month wheel, F, having three of its thirty-one teeth progressively shorter than the remaining twenty-eight, and applied to operate substantially as specified.

**34,614.**—G. W. Richardson (assignor to himself and G. M. Weed), of Grayville, Ill., for Improvement in Harvesters :

I claim the finger-bar, D, segment, B, and plate, E, formed of one piece of metal or of detached pieces connected together and fitted on the axle, a, of the driving wheel, A, when said parts are combined or arranged in relation with the draft-pole, C, fitted on the axle, a, and used in connection with the pin, l, or its equivalent as and for the purpose set forth.

**34,615.**—Alexander Shannon (assignor to himself, T. W. Weathered and E. B. Cherevoy), of New York City, for Improvement in Cartridges for Firearms :

I claim the perforated diaphragm or diaphragms, c, d, producing a sectional charge as and for the purpose specified.

**34,616.**—F. W. Smith (assignor to S. S. White), of Philadelphia, Pa., for Improvement in Manufacture of Dentists' Pins :

I claim the construction of the dies, d e, and their arrangement relatively to the cutters, c f, and the punch, b, substantially as specified.

[The principal object of this invention is to provide for the manufacture of pins with a head at each end suitable for artificial teeth manufactured according to the mode for which Letters Patent of the United States have been granted to S. S. White, that is to say, with heads at the outer ends of the pins, and it consists in a novel construction of dies for the manufacture of such two-headed pins.]

**34,617.**—J. A. Welsh (assignor to himself and R. McC. Davidson), of Xenia, Ohio, for Improved Cylinder for Grain Scouring and Thrashing Machines :

I claim a cylinder, A, for grain thrashing or scouring machine, provided with trilateral-shaped teeth, and having its outer side cast with a chill, B, as and for the purpose set forth.

[This invention consists in casting the cylinder with a chill at its outer side, whereby a cylinder is obtained which will be kept in constant working order by use ; the wear of the soft portion of the cylinder causing the hard outer edges to be kept sharp or prominent.]

**34,618.**—N. B. White (assignor to himself and W. B. Rhoads), of South Dedham, Mass., for Improved Clothes Wringer :

I claim, first, Operating the rolls, C and D, by gears, one of which is moved vertically by the shaft of the roll, which rises and falls, substantially in the manner specified.

Second, I claim the frame, F, or its substantial equivalent, through which the power of the spring, e, is brought to bear on the roll, which rises and falls, for the purpose set forth.

**34,619.**—J. P. Comly, of Dayton, Ohio, for Improvement in Treating Flax and Hemp to make them resemble Cotton :

I claim cutting flax or hemp straw before it is broken, so as to separate the seed ends from the residue of the stock, and divide the fiber into equal or nearly equal lengths suitable for spinning by ordinary cotton spinning machinery, as and for the purpose specified.

## RE-ISSUES.

**1,284.**—T. B. Bleeker (assignor to New York Wire Railing Company), of New York City, for Improvement in Folding Bedsteads. Patented April 17, 1847. Re-issued July 24, 1860, and Extended :

I claim, first, The folding frame hinged in the center and setting within the corner posts, when such frame is connected directly to the posts themselves by journals or bolts on which the parts turn in folding or unfolding, as set forth.

Second, The hooked-shaped ends to the side rails of the frame hinged in the center-taking bolts or journals attached to the posts and forming hinges for the same, or for allowing said frame to be disconnected from the posts, as specified.

Third, In a bedstead wherein a frame is employed that is hinged to fold as set forth, and hinged at its ends directly to the posts, the use of a fastening or brace that retains the hinged frame and posts in their proper relative position, as set forth.

Fourth, In a bedstead where the head and foot guards are constructed substantially as specified, and the bottom is made of a frame hinged to fold in the center as set forth, locating the journal or bolt, b, on the post, so that the bedstead, when folded, will stand upright, as specified.

**1,285.**—S. H. Miller, of Hanoverton, Ohio, for Improvement in Governors for Steam Engines. Patented Sept. 11, 1860 :

I claim the employment, in combination with the described system and arrangement of sliding sieve, B, arms, E E', balls, F F', and links, D D', of a spring or springs, applied to operate substantially as and for the purpose specified.

[The object of this invention is to construct a governor for stationary portable or marine engines or other motors, the operation of which will not be materially affected by placing its axis in a horizontal or any inclined position, or by the motion of a vessel at sea on board of which

it may be applied; and it consists in a certain system and arrangement of a sliding sleeve, arms, links and balls, in combination with a spring or springs, for producing centrepetal force, whereby the desired result is obtained.]

DESIGNS.

1,548.—Henry Hebbard, of New York City, Design for Spoon or Fork Handles.

EXTENSIONS.

5,459.—Robert Hillson, of Albany, N. Y., for Improvement in Hot-Air Furnaces. Patented Feb. 29, 1845 :

I claim, first, The invention of a grate with a hemispherical or conical projection or boss rising upward in the center thereof; the part of the grate outside of said boss being flat, as an improvement upon former grates, which are either flat or hemispherical or hemicylindrical both the flat part and the projecting part of my grate being grated.

Second, I claim the use of the circular rim which rests upon a circular opening in the bed plate and moves circularly thereon, and upon which the grate hangs by pivots resting on sockets in the rim, as above described, as an improvement upon the former made by which the grate rested by its sockets immediately on the bed plate.

Third, I claim the manner described of dumping the grate by means of the cross bars and handles and the ways or projections for the cross bars to move upon, the grate being suspended in the manner set forth.

Fourth, I claim the separate air chamber marked A, Fig. 1, constructed against the side of the lower cylinder which may be extended to the top of the upper cylinder, for the purpose of heating an adjoining room, as described.

Fifth, I claim the connecting of the part of the furnace below the fire, by means of a conical air pipe and pipe with the room to be heated, so as to draw from that room solely the air for the support of the fire, for the purpose of creating a draft into that room of the hot air from the furnace, as described.

Sixth, I do not claim the cylindrical box or drum, called the hot-air circular, and represented in Fig. 5, nor do I claim the smoke circular represented in Fig. 6, but I claim the combination of this smoke circular with this cylindrical box or drum, in the manner and for the purposes described.

PATENTS FOR SEVENTEEN YEARS.



The new Patent Laws enacted by Congress on the 2d of March, 1861, are now in full force, and prove 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, excepting 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 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. More than 5,000 such examinations have been made through this office during the past three years. Address MUNN & CO., No. 37 Park-row, N. Y.

How to Make an Application for a Patent.

Every applicant for a Patent must furnish a model of his invention. If susceptible of one; or if the invention is a chemical production, he must furnish samples of the ingredients of which his composition consists, for the Patent Office. These should be securely packed, the

inventor's name marked on them, and sent, with the government fees by express. The express charge should be prepaid. Small models from a distance can often be sent cheaper by mail. The safest way to remit money is by draft on New York, payable to the order of Munn & Co. Persons who live in remote parts of the country can usually purchase drafts from their merchants on their New York correspondents; but, if not convenient to do so, there is but little risk in sending bank bills by mail, having the letter registered by the postmaster. Address MUNN & Co. No. 37 Park-row, New York.

Caveats.

Persons desiring to file a Caveat can have the papers prepared in the shortest time by sending a sketch and description of the invention. The government fee for a Caveat, under the new law, is \$10. A pamphlet of advice regarding applications for Patents and Caveats, in English and German, furnished gratis on application by mail. Address MUNN & CO., No. 37 Park-row, New York.

Foreign Patents.

We are very extensively engaged in the preparation and securing of Patents in the various European countries. For the transaction of this business, we have offices at Nos. 66 Chancery-lane, London; 29 Boulevard St. Martin, Paris; and 26 Rue des Eperonniers, Brussels. We think we can safely say that THREE-FOURTHS of all the European Patents secured to American citizens are procured through our Agency.

Inventors will do well to bear in mind that the English law does not limit the issue of Patents to Inventors. Any one can take out a Patent here.

Circulars of information concerning the proper course to be pursued in obtaining Patents in foreign countries through our Agency, the requirements of different Patent Offices, &c., may be had gratis upon application at our principal office, No. 37 Park-row, New York, or either of our Branch Offices.

Rejected Applications.

We are prepared to undertake the investigation and prosecution of rejected cases, on reasonable terms. The close proximity of our Washington Agency to the Patent Office affords us rare opportunities for the examination and comparison of references, models, drawings, documents, &c. Our success in the prosecution of rejected cases has been very great. The principal portion of our charge is generally left dependent upon the final result.

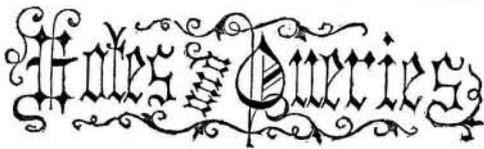
All persons having rejected cases which they desire to have prosecuted are invited to correspond with us on the subject, giving a brief history of the case, inclosing the official letters, &c.

Assignments of Patents.

The assignment of Patents, and agreements between Patentees and manufacturers, carefully prepared and placed upon the records at the Patent Office. Address MUNN & CO., at the Scientific American Patent Agency, No. 37 Park-row, New York.

It would require many columns to detail all the ways in which the Inventor or Patentee may be served at our offices. We cordially invite all who have anything to do with Patent property or inventions to call at our extensive offices, No. 37 Park-row, New York, where any questions regarding the rights of Patentees, will be cheerfully answered.

Communications and remittances by mail, and models by express (prepaid), should be addressed to MUNN & CO., No. 37 Park-row, New York.



C. H. J., of Ohio.—If there was a hole directly through the diameter of the earth and a ball were dropped into it at the surface, were it not for the resistance of the air the ball would pass through to the surface on the other side, and then return; continuing to oscillate forever. But in consequence of the resistance of the air, the oscillations would gradually diminish in extent, and the ball would finally rest at the center.

J. B., of Mich.—We are not aware that Mr. Chadwick's pamphlet on education has been published in this country; but D. Appleton & Co., or any of our leading booksellers, would import a copy for you. We believe that a republication of it in the U. S. would prove profitable.

S. B. B., of Pa.—After your patent has expired you can prosecute all parties who had previously used it.

E. E. S., of Mich.—The idea of casting types into words is not new. Small words have been cast in this manner but printers do not like them for some reason.

T. H. K., of N. Y.—We are not acquainted with the method employed by Prof. Percy for uniting phosphorus with copper and making an alloy.

D. B. W., of N. Y.—There is no good work published so far as we know on graining, varnishing, polishing and painting in general. We have not heard of the Cosmopolitan Art Association, for a long period.

W. D., of Iowa.—The target you send us is a very excellent one indeed and shows that you have some sharpshooters still left in your place. We will hang it up in our office for the curious to look at, but shall omit its publication.

J. H. B., of C. W.—The brass coloring which you have observed on the head of Sheffield axes, &c., is produced with lacquer, which is simply lac varnish colored with turmeric.

J. R. T., of Cuba.—There have been various constructions of apparatus for raising water by the direct pressure of steam, and we do not discover any patentable novelty in that described in your letter, which can doubtless be made to repeat the process as you suggest. We think it possible that the cut-off could be operated by a float. Practice shows all such apparatus to be very inferior to pumps owing to its liability to get out of order.

P. S., of Pa.—We have no positive knowledge of the composition of the fulminates used in the Prussian needle cartridges but suppose it is nearly the same as is used for percussion caps with perhaps a little more chlorate of potash. The composition for caps is fulminating mercury 3 parts; chlorate of potash 5 parts; sulphur 1 part; and powdered glass 1 part.

S. P. B., of Mich.—All soaps are "chemical soaps."

The particular article to which you refer for cleansing greasy waste contains an excess of alkali. It is made by adding to dissolved hard soap, or common soft soap, caustic alkali made by dissolving soda in water, and adding thereto an equal weight of slacked lime, then stirring the two together, allowing the lime to settle and afterward pouring the clear liquor among the soap. One pound of soda is sufficient for two gallons of soap. Such soaps have been called "labor saving." They answer very well for greasy waste and coarse cotton articles, but should not be used for fine linen goods because the strong alkali tends to render them yellow in appearance.

F. & R., of Conn.—Water will flow from an opening in the side of a flume with the same velocity that a body would have at the level of the opening falling from the level of the surface. This velocity is equal to the square root of the product of the height multiplied by 64.33, and for one foot is equal to 8.02 feet per second. The area of your opening 24 inches long by 2 1/2 inches wide, is 60 square inches, but under this low head through so large an opening, only about 1/3 of the theoretical quantity of the water would issue, owing to the contraction of the vein, 40 square inches is 0.28 square feet, which multiplied by 802 gives 224 cubic feet per second, or 135 cubic feet per minute. A cubic foot of water weighs 62 1/2 lbs. so that you have 8,432 lbs. per minute, which falling 7 feet gives 59,024 foot-pounds per minute, and this divided by 33,000 lbs.—one-horse power—shows the power of your water 1.788 horse-power. A pretty good over-shot wheel will yield about 60 per cent of the power of the water, making 1.07, or just about one-horse power. These data will enable any one having a knowledge of the simple rules of arithmetic to make the other calculations that you require. The reduction from the theoretical flow varies with the size and altitude of the openings, and all these elements must be known in order to make an accurate calculation. In order to obtain the same quantity of water under a one-foot head as you obtain under a 9-foot head through a gate of 200 square inches, the gate opening will have to be ten times as large or 2,000 square inches.

G. R. C., of Mich.—The best mortar for laying fire brick in a furnace, is fire-clay reduced to a proper consistency with water. The clay used for making porcelain also answers very well.

R. A., of Pa.—So far as our observation has extended, we have not noticed any loss of the power of steam when conveyed from the boiler to the cylinder by a crooked pipe. We have not, however, made such observations on a steam pipe as long "as 200 feet." We think you will find some reduction of the pressure of steam after being conveyed such a distance, if the pipe has several elbows on it. This will show a loss of power.

SPECIAL NOTICE—FOREIGN PATENT.—The population of Great Britain, is 30,000,000; of France, 35,000,000; Belgium, 5,000,000; Austria, 40,000,000; Prussia, 20,000,000; and Russia, 60,000,000. Patents may be secured by American citizens in all of these countries. Now is the time, while business is dull at home, to take advantage of these immense foreign fields. Mechanical improvements of all kinds are always in demand in Europe. There will never be a better time than the present to take patents abroad. We have reliable business connections with the principal capitals of Europe. Nearly all of the patents secured in foreign countries by Americans are obtained through our agency. Address Munn & Co., 37 Park row, New York. Circulars about foreign patents furnished free.

Money Received

At the Scientific American Office on account of Patent Office business, during one week preceding Wednesday, March 12, 1862:—

- A McG., of N. Y., \$35; J. D. C., of Conn., \$20; J. S., of N. Y., \$45; R. G., of N. Y., \$20; C. C. C., of Iowa, \$25; J. A. L., of N. Y., \$25; C. and F., of Iowa, \$25; S. S. T., of Cal., \$62; J. Z., of Ill., \$25; T and D., of Nevada Ter., \$30; L. F. L., of Ill., \$25; W. S., of N. J., \$10; H. and M., of N. Y., \$10; A. L. W., of Mass., \$115; J. G., of R. I., \$10; W. H. C., of N. Y., \$25; C. C., of Ill., \$25; E. Y., of N. Y., \$25; S. A. B., of Conn., \$45; W. E. B., of R. I., \$25; A. C. McQ., of Ill., \$15; W. H. P., of N. Y., \$25; J. O. F., of N. Y., \$25; M. La P. and V., of N. Y., \$25; O. R. B., of N. Y., \$20; E. G., of Mass., \$45; E. C. H., of N. Y., \$15; G. H., of N. Y., \$25; J. P., of N. Y., \$60; H. T. P., of Conn., \$35; C. and A., of Conn., \$15; A. B., of Conn., \$40; A. C., of N. Y., \$25; T. Y. and others, of Pa., \$10; E. B., of Cal., \$15; S. S., of Mass., \$15; E. F. B., of Conn., \$25; S. H., of Ind., \$25; A. B., of N. Y., \$15; R. T. H., of Mass., \$25; O. N., of N. Y., \$15; L. H., of Ill., \$25; P. L. K., of Ill., \$20; A. J., of Iowa, \$15; W. B. W., of Mass., \$15; G. H., of N. Y., \$25; H. S., of N. Y., \$25; J. M., of N. Y., \$25; C. E. B., of Conn., \$20; W. H. R., of N. Y., \$55; C. H. P., of N. Y., \$15; C. F. B., of Conn., \$10; J. B., of N. Y., \$25; A. N. P., of Ill., \$10; W. B. B., of Ill., \$25; J. B. R., of N. Y., \$275; J. P. A., of Ill., \$15; G. T., of Mass., \$15; A. and F., of Me., \$28; A. G. B., of Conn., \$30; F. G., of Mich., \$15; J. W. K., of Mich., \$25; E. C. F., of Mass., \$28; H. T. P., of Conn., \$100; G. N. C., of Conn., \$25; G. A. L., of N. Y., \$280; J. R. A., of Pa., \$40; A. A. D., of N. J., \$15; C. H. B., of Mass., \$15; W. B., of L. I., \$10; C. S., of N. Y., \$25; J. S. T., of N. Y., \$10.

Specifications and drawings and models belonging to parties with the following initials have been forwarded to the Patent Office from March 5 to Wednesday, March 12, 1862:—

- W. H. R., of N. Y.; G. H., of N. Y.; C. and F., of Iowa; J. B., of N. Y.; H. S., of N. Y.; A. C., of N. Y.; J. H. T., of Switzerland; E. F. B., of N. Y.; A. B., of Conn.; L. H., of Ill.; J. G. Sr., of R. I.; R. T. H., of Mass.; J. M., of N. Y.; E. H., of D. R. W. of Wis.; C. S., of N. Y.; H. T. P., of Conn.; C. C. C., of Iowa; L. F. L., of Ill.; A. N. P., of Ill.; M. La P. and V., of N. Y.; C. H. B., of Mass.; C. C., of Ill.; R. G., of N. Y.; J. W. K., of Mich.; E. F. B., of Conn.; W. H. P., of N. Y.; W. B. B., of Ill.; J. A. L., of N. Y.; J. O. F., of N. Y.; J. Z., of Ill.; J. S. T., of N. Y.; A. and F., of Me.; G. N. C., of Conn.; W. E. B., of R. I.; S. H., of Ind.; C. F., of Wis.

RATES OF ADVERTISING.

Twenty-five Cents per line for each and every insertion, payable in advance. To enable all to understand how to compute the amount they must send in when they wish advertisements inserted, we will explain that ten words average one line. Engravings will not be admitted into our advertising columns; and, as heretofore, the publishers reserve to themselves the right to reject any advertisement they may deem objectionable.