

RECENT AMERICAN PATENT.

Pianoforte.—This invention consists in the employment of straight bridges throughout the whole scale of a pianoforte, whereby, besides allowing much more freedom of vibration to the board, the strings are enabled to be so arranged in overstrung tiers or sections through the middle of the board, and a more perfect scale as to the proportionate length of strings, and a progressively-increasing distance between the notes on the bridges toward the bass, are obtained. The latter result is of great importance, for as the strings of the lower notes require longer vibrations so they require greater distance or space of bridge uninterfered with by other notes. Another improvement consists in electrically isolating the case, sound-board and all that produces and adds to the tone of the instrument, from the iron frame or plate or mere sustaining portion, whereby the electricity that is generated or attracted by vibration in the strings, and which the inventor considers to be the source of sound, is all forced into and prevented from escaping in any way but through the sound-board. Another feature consists in making the case of the grand pianoforte narrower across the middle than at the rear end, and wider than usual at the rear end, the object being to make the case (which is a mere shell of wood and with a bottom sound-board) of a form approximating to that of the violin or guitar, which is the form best adapted for sound, and to obtain a greater width of sound-board in the lower or bass part of the instrument where greater vibration is necessary. A further improvement consists in providing an opening at the left-hand front corner of the sound-board of a grand pianoforte for the purpose of giving a better opportunity for the sound to come out from the instrument when a bottom sound-board is used. Spencer B. Driggs, of New York city, is the inventor of this improvement.



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- 41,968.—Construction of Explosive Shells.—Wm. B. Aitken, Philadelphia, Pa. Ante-dated March 4, 1864 : I claim the mode of forming the cores of bomb shells, or other missiles, out of the pieces, a, shaped and arranged relatively to each other, and the outer case, E, substantially as described, the said pieces being held together in the manner specified or by equivalent means.
- 41,969.—Attachment of Buttons, &c.—Nathan Ames, Saugus Center, Mass. : I claim as a new attachment of buttons, hooks and eyes and other analogous objects, the shank or shanks, d, prong or prongs, e, and shoulder or shoulders, c, substantially as and for the purpose described.
- 41,970.—Salinometer Case.—Edward H. Ashcroft, Lynn, Mass. : I claim the arrangement of the spray chamber, C, within the measuring cistern, A, substantially as described. And with the said arrangement of the spray chamber, C, within the measuring cistern, A, I claim the arrangement of the jet tube, F, of the spray chamber, viz : so as to discharge toward the bottom of the spray chamber, substantially in manner as described. I also claim my improved arrangement of the spray chamber, C, the measuring cistern, A, the stand pipe, G, the auxiliary conduit, d, and the valve, g, and its stem, h, the whole being substantially as hereinbefore described.
- 41,971.—Door Spring.—Willard Badger, Jr., North Chelsea, Mass. Ante-dated March 15, 1864 : I claim, first, The vibrating spring-arm, E, arranged inside of the jamb and casing, and connected with the corner of the door by means of a metallic strip, G, or its equivalent, substantially as set forth, and for the purpose described. Second, The lever, I, in combination with the spring-strip, G, and vibrating arm, E, arranged and operating substantially as described.
- 41,972.—Lamp.—Marshall Burnett, South Boston, Mass. : I claim the connection, C, combined with the reservoir and burner, and made substantially as and for the purpose described.
- 41,973.—Broom.—Samuel Carpenter, Cedar Rapids, Iowa : I claim the combination of the handle, c, the braces, a a, and b b, the clasps, e and f, the screwbolts and nuts, g g g, and the wisps, i, in the manner and for the purpose set forth.
- 41,974.—Apparatus for making Extracts.—Wm. Class & Ernest Rubenon, Cincinnati, Ohio : We claim the arrangement of the pump, valves, and filtering

- medium, herein described and represented, between the inlet and exit passages, I, D, for the purpose of making coffee, tea, or other extracts, or for the purpose of filtering any liquid, as herein represented and set forth.
- 41,975.—Vapor Stove.—H. W. Dopp, Buffalo, N. Y. : I claim a heating tube, L, and conducting pipe, K, in combination with perforated distributing plate, A, for the purposes set forth.
- 41,976.—Match Box.—George Dowler, Birmingham, England. Patented in England Jan. 7, 1863 : I claim the match box made with or having applied to it, the striker case or plate, x, provided with the opening, w, the same being as and for the purpose as hereinbefore more fully set forth.
- 41,977.—Pianoforte.—Spencer B. Driggs, New York City : I claim, first, The employment throughout the scale of a pianoforte of a system of straight bridges of different heights, whereby the strings are brought in overstrung tiers or sections over or as near as possible to the middle portion of the sound-board, substantially as herein described and other results hereinabove mentioned are obtained. Second, Electrically isolating the case, the sound-board, and all that is instrumental in producing or developing the sound from the iron frame or mere sustaining portion of the pianoforte, substantially as and for the purpose herein specified. Third, Construing the case of the grand pianoforte of violin form, that is to say with both sides curved and with the rear portion wider than the middle portion, substantially as and for the purpose herein described. Fourth, In combination with a bottom sound-board, C, in a grand pianoforte, I claim the opening, f, g, at the front left hand corner of the sound-board, B, substantially as and for the purpose herein specified.
- 41,978.—Soluble Silicate.—Samuel P. Duffield, Detroit, Mich. : I claim the above described silicate of potassa, as a new article of manufacture, the same being made directly from ashes and sand, substantially as described.
- 41,979.—Manufacture of Common Salt.—Samuel P. Duffield, Detroit, Mich. : I claim the above-described common salt or chloride of sodium, as a new article of manufacture, the same being made from salines containing the chlorides of calcium or magnesium, or both said salines being purified by the use of a silicate of potash or of soda, substantially as set forth.
- 41,980.—Manufacture and purifying of Common Salt.—Samuel P. Duffield, Detroit, Mich. : I claim the use of soluble alkaline silicates for the purpose of purifying brines or salines, or common salt itself, by the precipitation of the chlorides of calcium or of magnesium or both, substantially in the manner and for the purposes set forth.
- 41,981.—Gas Burner.—Whitman S. Dyer, Portland, Maine : I claim the gas burner constructed and operating in the manner described and represented as an improved new article of manufacture.
- 41,982.—Manufacture of Paper Pulp from Straw, &c.—A. K. Eaton, New York City : I claim, first, Preparing paper pulp from straw or other substances by subjecting it to a grinding process commencing with the early stages of the treatment with hot alkalies, and continuing the grinding in connection with the alkaline treatment, in the manner and for the purpose herein described. Second, I claim purifying the alkali held in solution in the refuse liquor by passing it through a filter constructed substantially as above described, sufficiently to enable me to use it again, and completely replacing it when necessary by making it into combustible cakes, as set forth.
- 41,983.—Plane-stock.—George Franklin Evans, Norway, Maine : I claim as my invention or improvement in the plane made with the spring face plate, the construction of the connecting rods, F F, and stock receiving the ends of the stock curved, substantially in manner and so as to operate together as specified.
- 41,984.—Breech-loading Ordnance.—George H. Ferris, Utica, N. Y. Ante-dated March 9, 1864 : I claim, first, Closing and opening the chamber of a gun from the rear, by means of a screw-actuated and screw-encircled recoil-seat, or breech-piece, E, when said recoil-seat or breech-piece is received into a screw perforation in the breech of the gun and combined exteriorly with a supporting nut, D, or its equivalent, substantially in the manner and for the purpose herein set forth. Second, When the chamber of a gun is rearwardly opened and closed by means of a screw-actuated recoil seat, E, I also claim combining a tubular shaped expandible double-ended, V, constructed as described with the inner face of said recoil seat, substantially in the manner and for the purpose herein set forth. Third, When the chamber of a gun is closed and opened by a screw-encircled recoil-seat, or breech-piece, E, I also claim forming a longitudinal groove or slot, in the lower portion of the screw-cut portion of the opening to said chamber, to serve as a receptacle for the dirt that may accumulate in the screw-threads of the same, substantially in the manner herein set forth.
- 41,985.—Sealing Fruit Cans, &c.—Henry S. Fisher, Newburgh, Pa. : I claim the use of india-rubber or gutta-percha gaskets coated on both sides with a substance with a composition, such as specified, in combination with a preserve can or jar and cap, e, and retaining device, f, substantially as described.
- 41,986.—Wash-stand.—Zebina E. Fobes, Troy, N. Y. : I claim a portable wash-stand having a basin, B, and provided with a tubular shaped expandible double-ended, V, constructed as described waste-water tanks, and with cocks for controlling the supply and escape of the water, substantially as described.
- 41,987.—Corset Skirt-supporter.—Lavinia H. Foy, Worcester, Mass. : I claim, first, The mode of fastening the front by means of hooks, b, and eyelets, whereby the article can be either laced or hooked, substantially as set forth. Second, I also claim making the bosom adjustable by means of the hooks and eyelets, substantially as set forth. Third, I also claim in combination with the supporting rim, F, of a skirt-supporter, the hoop, E, shielded at its ends by metal caps, g, substantially as set forth. Fourth, I also claim in combination with the supporting rim of a corset skirt-supporter of a hoop with its ends protected and covered by shields, additional to the case, for the purposes set forth.
- 41,988.—Nib for Scythe-snaths.—Pinckney Frost, Springfield, Vt. : I claim the nut fastening, g g', constructed and applied to the nib, B, substantially as and for the purposes herein described.
- 41,989.—Furnace for smelting Ores.—Eliza Jane Hall, San Francisco, Cal. : I claim, first, The combination of parts herein described for the reduction and saving of ores, viz :— 1st, The arrangement for a powerful draught. 2d, The peculiar egg-shaped form of the furnace. 3d, The gradually contracting flue going out from the back of the furnace. 4th, The peculiar construction of the condensing apparatus. 5th, The boiler on top of the furnace for economy of fuel. 6th, Introduction of steam above and near the bottom of the fire, for oxidation. 7th, Small fire-box in the boiler. 8th, Fan-blower or other power to supply the draught. 9th, Simple and cheap flues named. 10th, Charcoal for fuel. 11th, The peculiar construction of the bottom of the furnace herein described. Second, I claim the condenser with the sieve at its top through which a continuous shower of cold water is kept pouring for the purpose of condensing and precipitating the volatile portions of the metals escaping with the draught, arranged and operating substantially as set forth. Third, I claim the flue, s, within the condenser, and surmounted with the conical cap, to secure the condensation and precipitation of the volatile portions of the metals escaping with the draught.
- 41,990.—Horse Rake.—O. J. Hardgrove, Massillon, Ohio : I claim the combination with a vibrating rake, of a vibrating lever, C, constructed with a locking shoulder, s, pivoted arm, i, and vibrating arm, h, operating substantially as and for the purposes described.
- 41,991.—Mode of cancelling Revenue and other Stamps.—Emanuel Harmon, Washington, D. C. : I claim the method of cancelling revenue stamps, in combination with engraving thereon of the initials of the months of the year,

- and of figures or dots representing the days or a series of days of months, substantially as above described.
- 41,992.—Dove-tailing Machine.—S. E. Hartwell, New Albany, Ind. : I claim, first, The arrangement of the gang of conical dove-tailing bits, C K K' k', rotating on axes at right angles to the plane of motion of the bed, E, substantially as and for the purposes explained. Second, The combination of the adjustable dovetailing bits, C K K' k' k' bed, E, e, sliding in a plane at right angles to the axes of the said bits, the clamps, H and I, and gage, G, the whole being arranged and operating substantially as set forth. Third, I claim the dovetailing cutter, C K K' k', operated as represented in the foregoing specification.
- 41,993.—Chimney-flue.—Charles T. Harvey, Chicago, Ill. : I claim the combination and use of two or more longitudinal compartments surrounding (except as before stated) the smoke flue or chimney, when they are divided into distinct air flues and have independent currents of air passing through them for heating and ventilating purposes and as a protection against fire, substantially as shown. I also claim the branch connection, T T, by which heat can be conveyed to or air drawn from the center or other part of a room or rooms, into air flues from the upright air flue in combination with the chimney described in the preceding clause of my claim, substantially as shown.
- 41,994.—Cleaner for Lamp Chimneys.—Ezra S. Hazeltine, Warren, Pa. : I claim the use of an elastic pad for the cleaning of lamp chimneys, or other glass tubes with curved or irregularly curved inner surfaces.
- 41,995.—Screw Wrench.—Henry Wheaton Hewet, New York City. Ante-dated Jan. 25, 1864 : I claim the extending tube upon which the adjusting male screw is cut, so as to form a part of the handle, with its spindle bearings or their equivalents, thereby rendering the shank-pindle quite inflexible, and allowing a coarse and powerful adjustment of the movable jaw, substantially as herein described.
- 41,996.—Invalid Bedstead.—John R. Hill, Goshen, Ohio : I claim, first, Suspending the bottom of an invalid cradle by a frame, capable of elevation or depression at either or both ends, by windlasses, H I, or their equivalents, substantially as and for the purposes set forth. Second, In the described combination with the suspended frame, D, of an invalid cradle, I claim the provision of standards, B, and clamps, C, for attachment to a common bedstead, as set forth. Third, The arrangement of the parts, L O P N Q, for sustaining and laterally stretching the bottom, R, of an invalid cradle.
- 41,997.—Plow.—Wm. Hinds, Little Falls, N. Y. : I claim, first, A plow mold-board when constructed in accordance with the following conditions, viz : all lines on the face of the mold-board which are parallel to a surface upon which the plow rests when in its proper position for operation, to be straight, all said lines to intersect two circular arches described upon vertical planes, transverse to an axis from which said arches are generated, said axis to be parallel to the before-mentioned horizontal surface. The radius of that arc which is nearest the rear end of the mold-board to be about double the radius of that arc which is nearest the front end of the mold-board. The distance between the vertical transverse planes upon which said arches are described to be about equal to the radius of the smaller arc. Second, In combination with a plow mold-board constructed as described in the preceding claim, a rim or flange, m, for the purpose of rendering the rear edge of the mold-board more durable. Third, In combination with a plow mold-board constructed as claimed above, a sward cutter, V, attached to the plow-share, and secured to the standard by a removable bolt. Fourth, In combination with a plow mold-board a cross bar constructed with feet as shown at Fig. 6, for the purpose of more rigidly attaching the rear end of the beam to the rear end of the mold-board. Fifth, In combination with a plow mold-board a land-side arm, N, constructed in a trough like form and fitted to the land-side with a dovetailed joint, for the purpose of attaining greater security and facility of attachment.
- 41,998.—Wringing Machine.—G. R. Huntley, Taunton, Mass. : I claim the stands, N, with legs, L and M, lever, E, rollers, R, R, friction wheel, G, box, B, rod, A, flange, K, and spring, C, arranged in the manner described for the purpose set forth.
- 41,999.—Apparatus for preventing the Loss of Sugar during Evaporation.—Gustavus A. Jasper, Charlestown, Mass. : I claim the combination of the vessel, D, its float, F, and pipe, E, with the vacuum pan, A, its conduit, C, and the condenser, B, the whole being arranged substantially in manner and so as to operate as and for the purpose hereinbefore specified.
- 42,000.—Breech-loading Fire-arm.—Benjamin F. Joslyn, Stonington, Conn. Ante-dated March 11, 1864 : I claim the sliding rod, H, arranged in respect to the metallic cartridge and operated by the movable breech of a breech-loading fire-arm, substantially as and for the purpose herein set forth.
- 42,001.—Washing Fluid.—Sylvester Kent, Providence, R. I. : I claim, as a new article of manufacture, with the within written name and title, substantially the within-described combination of potash, sal ammoniac, and salts of tartar, in solution, as and for the purpose specified.
- 42,002.—Cooking Range.—William M. Kepler, Cincinnati, Ohio : I claim the arrangement of the hot air chambers, G G, at the sides of the fire box, and connecting them with the oven, B, B, by pipes that first pass out of the stove, and then return back into the oven, so as to heat said ovens, and offer facilities for connecting with the hot air chambers or passages, and for the purposes specified.
- 42,003.—Apparatus for shearing Metals.—Isaac Lamplugh, Springfield, Ill. : I claim, first, A tool-holding machine consisting of a bed, B, curved standards, C, lever, D, and longitudinal braces, F, F, in combination with the diagonal shears, e, e', all arranged and operating substantially as described. Second, A machine for shearing metal, &c, constructed and operating substantially as described.
- 42,004.—Apparatus for shearing, punching, and bending Metals.—Isaac Lamplugh, Springfield, Ill. : I claim, first, The single plate machine, composed of the perpendicular standards, A A', longitudinal brace, B, stationary jaw, C, and the movable jaw, D, with its guides, d, d, all combined, constructed, and arranged, substantially as and for the purposes described. Second, The application of the punching, shearing, or bending tools to single plate jaws, C, D, in combination with the guides, d, d, substantially as set forth.
- 42,005.—Machine for rolling Knife-blades.—William P. Lathrop, Winchester, Conn. : I claim the combination of mechanism for making knife-blades economically, expeditiously, and in a way not now in use, as herein described, or by any other mode substantially the same.
- 42,006.—Treating and preparing Navassa Guano.—Gustav Adolph Liebig, Baltimore, Md. : I claim, first, The separating process herein indicated, for cleansing and purifying navassa guano. Second, The separate articles herein described as articles of manufacture, made, or commerce, derivable from navassa guano, in the manner indicated or by other analogous means.
- 42,007.—Petroleum Stove.—Charles B. Loveless, Syracuse, N. Y. : I claim, first, The use, in vapor stoves, of a valve-seat and valve made of steel, in the pipes through which the supply of the fluid takes place, in commerce, derivable from the supplying and vaporizing pipes, substantially as above described. Second, The return pipe, h, and vapor pipe, b, constructed, arranged, and operating substantially as set forth, in combination with the return, N. Third, The additional vapor pipe, R, and burner, O, in combination with the protected vapor-pipe, h, for the purposes set forth. Fourth, The deflector-plate, B, constructed and operating substantially as described, for the purpose of forming the hot-air chamber, I, and of forming the escape chamber, 2, as specified. Fifth, The hot-air chamber, I, around the cylinder, B', constructed substantially as set forth.