

shaft, provided with a device to lock either of them to said shaft when desired, as described, so as to save three-fourths of the time heretofore required to retract the press, and the time and labor of reversing the horse twice for each bale pressed.

**RAILROAD CAR WHEELS**—Michael Phelan, of Bridge-water, Pa. : I claim the curved projections on the disk of four reversed sines, forming arms, in combination with braces and a series of arches, so arranged on the disk or front plate of four reversed sines, so as to give a uniform spring to all parts of the casting in cooling, relieving the wheel from all contingent strain, and giving the greatest possible strength for the weight of iron used, and for the application of said curved projections and combination of arches and braces, without a front plate in casting car wheels, as described.

**CORN PLANTERS**—Bradley L. Prime, of Hamilton, Ohio : I claim the yielding partitions, c, of the hopper, constructed, arranged and operating as and for the purpose set forth, in combination with the secondary projections, n n', of the cam, E, the whole operating as described.

**CORN HARVESTERS**—John H. Ribbe, of Somerset, Ohio : I claim the combination of the bed, f, and arms, K, with the movable carriage, C, or its equivalent, so as to receive the cut product and deposit the same, as described.

I also claim the re-entrant reel, in combination with the receiving apparatus, as described.

**MACHINES FOR MAKING BROOMS**—Spencer Rowe, of Baltimore, Md. : I claim the employment of the double pawl operating on the ratchet wheels, c c, and hollow shaft, B, the rock shaft, D, and rods f, all arranged as described, when in combination with the ends, E, and friction spools, G, and bobbin, F, for the purpose of manufacturing corn brooms in a superior manner.

**RIDING SADDLES**—Joseph Rudisill, of Natchez, Miss. : I do not claim a spring seat saddle, broadly.

Neither do I claim having the foundation of the cantel lined with the tree, and rendered capable of yielding by a rubber spring, in the patent of Seth Ward, 1857.

Neither do I claim, broadly, a spring arranged at the head of the tree for assisting in rendering the seat elastic.

But I claim the peculiar arrangement of a series of light flat springs, a a, in a circular line around the upper side of the cantel foundation, E, of the tree, A A, for use in combination with the coiled spring, G, as peculiarly arranged under the head, C, of the tree, said springs being actuated simultaneously by means of the seat, E, and webbing or foundation, D, as and for the purposes set forth.

[This invention is designed to render horseback riding more comfortable and pleasant. It provides a seat which yields to the descent of the weight of the rider upon it, and then instantly assumes its original form as soon as the weight rebounds, or rises off of it, ready for a second descent of the weight upon it, as in pacing and trotting.]

**SEED PLANTERS**—John Robinson, of Elk, of Sharps-town, Md. : I claim, first, regulating the quantity of earth deposited over and adjacent to the seed, by means of adjustable stops, d, when used in connection with the curved arms, G, lifting arms, E, and adjustable strap, K, in connection with the adjustable cover, k, the whole constructed and operating as and for the purpose set forth.

Second, The combined arrangement of the vibrating box, I, lifting arm, F, adjustable strap, k, and adjustable stop, d, the whole operating as and for the purpose set forth.

**WORKBOXES**—Charles C. Schmitt, of New York City : I do not claim separately or apart from the general construction of the box or escrtoire, any of the parts described.

But I claim a workbox and escrtoire constructed as described, viz. the hinged or folding front side, n, provided with the flap, p, the recesses in the top to receive the writing and sewing implements, the secret drawers, z z and a concealed by the sliding plate or bottom, t, the whole being arranged or disposed as shown and described, for the purpose of forming a combined work-box and escrtoire.

[For a description of this refer to page 107.]

**SPREADING LIME AND OTHER FERTILIZERS**—Pierpont Seymour, of East Bloomfield, N. Y. : I do not claim the use of the levers, rods, or eccentric or zig-zag wheels whereby I communicate motion from the carriage wheel to the distributing works, as such devices are well known, and in use for various purposes.

But I claim the combination and arrangement of a series of vibratory plates or distributors, d, attached to and working upon the face of an inclined plane or distributing surface, C, by means of the rod, F, or any equivalent connection that will give the required motion to one end of said plates, while another portion is stationary upon the board or plane, in the manner and for the purposes described.

**MACHINE BANDING**—Charles Lensmann, of Brooklyn, N. Y. : I do not claim the web or the composition separately; neither do I claim broadly saturating webs, woven from fibrous materials with the composition above described.

But I do claim as a new manufacture the machine banding, substantially as before described.

**RAILROAD CAR WHEELS**—A. B. Latta, of Cincinnati, O. : I claim the wheel constructed, as represented, in its parts, for the purpose of producing a tension stress on the dished wrought iron plates, B B, for binding the rims together, by drawing the plates, B B, apart in the center, and holding them by the ring, G, as represented, and substantially for purposes specified.

**KNITTING MACHINES**—S. D. Fairbanks, (assignor to himself and C. H. Adams), of Cohoes, N. Y. : I do not claim a latch regulator, with a point to pass under the latches after they are closed, such as is described and represented in the patent granted to Jonas B. and Her-rick Aiken, May 22, 1855; neither do I claim a yarn carrier, in combination with a latch regulator, as described in said patent.

But what I do claim is a latch interceptor, consisting of a bar or arm, arranged in such a position over the needles as to intercept the latches after they are opened or thrown back by the stitches of the fabric knit, and hold them open until the yarn is supplied to form new stitches, and then allow them to be closed again, substantially as described.

I also claim, in combination with the above described interceptor, the yarn carrier, f, for the purpose of delivering the yarn, substantially as set forth in the specification.

**MACHINES FOR SHAVING CLOTH**—M. D. Whipple, of Charlestown, Mass., assignor to A. B. Ely, of Boston, Mass. : I claim removing the rest, E, away from beneath the sheaving knives, and holding the cloth against the ledger blade by tension, in the manner and for the purpose substantially as set forth.

**PAINT VEHICLE**—Isaac Gattman, (assignor to himself and Jacob and D. E. Breinig), of Philadelphia, Pa. : I do not claim exclusively the use of watery solutions for mixing paints.

But I claim the employment of the alkaline salts of the fatty acids, oleate, margarate, stearate of potash, soda, and like substances in combination with rosin and oil, as a thinner for paints instead of oil, substantially in the manner set forth and for the purpose specified.

**GRAIN AND GRASS HARVESTERS**—Wm. H. Seymour (assignor to himself and D. S. Morgan), of Brockport, N. Y. : Patent dated Dec. 14, 1852—Ante-dated Oct. 25, 1852 : I claim the combination of the platform and driving gear, the space between the platform and driving gear for the discharge of gavel, the draught pole and the stand or rest on the platform for the forker, when the same are arranged substantially as described.

**GRAIN AND GRASS HARVESTERS**—Wm. H. Seymour (assignor to himself and D. S. Morgan), of Brockport, N. Y. : Patent dated Dec. 14, 1852—Ante-dated Oct. 25, 1852 : I claim the combination with the stand or rest, W, upon the rear side of the platform, for the person who rakes off the grain, and with the platform of a strong rail, r, firmly secured to the outer side of the main frame, and extending thence along the rear side of the platform to support it and the stand for the forker, substantially as set forth.

**GRAIN AND GRASS HARVESTERS**—Wm. H. Seymour (assignor to himself and D. S. Morgan), of Brockport, N. Y. : Patent dated Dec. 14, 1852—Ante-dated Oct. 25, 1852 : I claim the method described of protecting the gearing from being injured by the working and twisting of the main frame by mounting the said gearing in an auxiliary metallic frame, constructed and firmly attached to the main frame, as described.

**COOKING STOVE**—Elias Young (assignor to Chamberlain & Co.), of Cincinnati, O.

**DESIGN.**

**Descriptive Index to Chemical Patents.**

An Index to the chemical patents issued by the United States Patent Office during the year 1852. Prepared for the SCIENTIFIC AMERICAN by Dr. D. Breed, solicitor of patents, Washington, D. C. Continued from the SCIENTIFIC AMERICAN of November 21, 1857.

**Archil**—Prepared by treating lichen *roccelus* with volatile alkali, urine and lime water, in certain proportions: Leon Garosson, June 15, 1852.

**Acid**—Sulphuric; concentrating of, in leaden vessels to 66° Baume, at a temperature below the boiling point: Carl Hinrichs, September 7.

**Baryta and Strontia**—Production of sulphur and sulphuric acid from sulphuretted hydrogen evolved in process of manufacturing carbonates: Charles Lennig, March 16.

**Beer**—Concentrated material for; gum, starch, sugar, &c., from evaporated infusion of grain: Franz G. Rietsch, February 3.

**Beer**—Use of corn boiled to a jelly, into which malt or rye is then mashed: Frederick Seits, January 20.

**Butter**—Preserved by use of iodide of potash: Louis De Corn, August 3.

**Cement**—Hydrate of lime and pulverized resin mixed with cold water: B. S. Welsh, May 18.

**Enamel**—For brick and iron; mixture of glass, lime, (hydrate or sulphate,) salt, oxyd of iron and water: Dunn and Howes, September 7.

**Gutta Percha**—Heating to 285° to 430° Fah., then vulcanizing by a hyposulphite alone, or with metallic sulphurets, whiting or magnesia: John Rider, June 1.

**Gas**—Refrigerated by air. Apparatus: Robert Foulis, October 12.

**Gas**—Feeding into heated retort, charged with bituminous coal, either oil, coal tar, resin, asphaltum, or other bituminous or carbonaceous matter, in a fluid state, separately or mixed: Henry W. Adams, August 10.

**Gas**—Use of mixture of wood and fat for generating: Danre, Nichols and Lopez, December 8. France, September 27, 1851.

**India Rubber**—Juice or milk of tree treated with common salt, to preserve: F. Bronner, September 7.

**Iron and Steel**—Use of calcined borax and carbonate of ammonia in welding; certain proportions: Boyd C. Leavitt, July 27.

**Ivory**—Placed at certain angle to bleach in sunlight: Ulysses Pratt, January 6. Ante-dated July 6, 1851.

**Oil**—Obtaining paraffine and paraffine oil from bituminous coal: James Young, March 23. England, October 7, 1850.

**Oil**—Mixture of camphene, benzole, carbonate of potash and glycerine with whale oil: William H. Mason, May 25.

**Paints**—Treatment of magnesian minerals with mineral acids, for preparing pigments: Heman S. Lucas, November 23.

**Paint**—Watery solution of sulphate mixed with oil paints: Washington F. Davis, August 17.

**Powder**—For blasting; chlorate of potash and prussiate of potash: Edward Callow, February 17. England, August 6, 1850.

**Soap**—Use of ammonia (or carbonate ammonia) with kaolin, or other aluminous earth; composition of: William McCord, July 27.

**Soda**—Chromate; from ore heated with salt, chloride of potash, or hydrate of lime; jet of steam to expel iron as sesque-chloride; then treat with muriatic acid: John Swindells, December 21. England, November 14, 1850.

**Soda**—Carbonate; sulphate, heated with carbonaceous materials, and treated with water, carbonic acid, evaporation, &c.: Henry Pemberton, October 19.

**Sugar**—Use of aluminate of lime with phosphate of alumina, or of lime and phosphoric acid, for clarifying: Oxland and Oxland, July 6. England, May 15, 1851.

**Zinc**—Metallic; impalpable powder prepared by cooling agency of steam: Henry W. Adams, July 28.

**To Avoid Sneezing.**

**Messrs. Editors:** You will agree with me that it is not a superstitious notion that sneezing may be an indication of having caught a cold. The wise take it as a premonition to avoid encroaching upon a constitution at present sound; they shut every door, close every window, and even stop every crack through which the air may ooze. Sneezing is the effect of a convulsion of the diaphragm, or muscle separating the chest from the abdomen. The sudden check of the uniform condition of the respirating apparatus brings on sneezing. Therefore, by stopping or changing the cause, the effect is prevented. The air which is inhaled when a fit of sneezing is coming on, if suddenly breathed out, will effectually arrest the sneeze. There are times when sneezing is out of place among persons of good breeding—times when it ought not to break deep silence, as at prayers. J. H. H.

**The Purple of Cassius.**

This is a color generally used in the glazing of earthenware, glass, porcelain, and enamels. It is one of the most ancient as well as the most beautiful of colors and has rather a scarlet tinge. Chemically it is composed of oxyds of tin, oxyd of gold, and water; and according to slight variations in the amount of either metal various shades of color can be obtained. Various methods have been proposed for its preparation, the best process for obtaining it in a pure state being to take 310 grains of fine gold dissolved in 1550 grains of aqua regia, consisting of one part of commercial nitric, and four parts of commercial hydrochloric acid; the solution is evaporated to dryness in a water bath, the residue dissolved in water, filtered and diluted with 20 or 30 ounces of water and placed in contact with granulated tin, the purple precipitate being the desired compound. When freshly precipitated it dissolves in ammonia, but by exposure to the light the solution gradually decomposes, becoming gradually blue and then colorless, but when fused with a glaze on porcelain it is a most durable color. The richness of its tints is evidently due to the presence of the gold, which, causing it to be very expensive, has often been endeavored to be replaced by another metal; and often in experimenting, much richer hues have been observed during certain stages in the oxydation of copper, these however are only evanescent, the color quickly changing to the dead black of cupreous oxyd. We believe that some French chemists are now engaged in searching after a good scarlet or purple for porcelain, from copper, and we hope that they may be successful, as it will greatly aid the progress of the art of decorating the works of the potter's wheel.

**Bole Armenia.**

This is an earthy mineral found in nearly every part of the world, and has the affix of Armenia, because first brought from that

country. It is very friable and varies in color from yellow and brown to red and black, and has a greasy feel. When placed in water it readily absorbs it and, emitting bubbles of air, falls to pieces. Formerly it was much used as a medicine but it has now fallen into disrepute, because the only tonic that there could be in it is due to the presence of oxyd of iron, which is now administered in its pure state. It is also used in Germany as a pigment, and also as a tooth powder.

**Speed Indicator and Governor.**

J. M. Benckert, of Philadelphia, has patented a machine for the above purposes. It consists in having a series of arms pivoted to a revolving plate, with weights at their outer ends, and their inner ends being connected with gearing. The arms are connected to a gearing cam, which is rotated reciprocally, as the arms, by centrifugal force and springs, are made to recede or approach each other; the cam, as it thus rotates, giving the proper motion to an index, to designate the speed of the machine to which it is attached, and also actuating the throttle valve of a steam engine, or the gate of a water-wheel.

**Fire Kindling Composition.**

By taking regulated proportions of kauri gum, rosin and alcohol, and allowing them to remain open to the ordinary atmosphere temperature, or to a gentle heat, the gum and rosin will be dissolved and amalgamated. Then add wood or sawdust in such quantity that it will stir up into a sufficiently consistent mass to be molded into cakes, and when dry it will form a very good fire-kindling material. It is the invention of Elizabeth Bellinger, of Mohawk, N. Y., and was patented to her this week.

**Steel Plow.**

By this invention the mold-board and lay always retain their form while on the frame or foundation; and in case the lay becomes sprung while being sharpened, it will be caused to take its original shape when applied to the frame or foundation. Thus all inconvenience from the lay and mold-board in steel plows being sprung and banging in the soil, is avoided. A perfectly smooth and regular steel surface is presented to the soil. This plow is well adapted for western lands. It is the invention of John Lane, of Lockport, Ill.

**Bail for Millstones.**

Joseph M. Glover, of Skegg's Creek, Ky., has patented an improvement in the above, which consists in having a box placed at the bow or bend of the bail, and a block secured in it; the block resting on the point of the spindle, and rendered capable of being adjusted by means of set screws, so that the stone may be balanced with great facility; also, when the hole in the block becomes worn, the block may be readily removed and a new one fixed in its place.

**Rock Drill.**

An improvement in the method of mounting drills so that they may readily be adjusted to the direction that it is desired the hole may be bored in the rock, has been patented by Joseph E. Nesen, of New York. There is also an arrangement contrived for gripping the drill, at the proper time, and again loosening it, so that it may strike the rock with some amount of force.

**Printing Press.**

This invention is an improvement on hand presses, and is designed to facilitate the operation of printing by hand, so that the work may be performed in a much more expeditious manner than at present, and equally as perfect, with much less labor. It is patented by J. Henry, of Vevay, Indiana.

**Workbox and Escrtoire.**

Charles C. Schmitt, of New York, has patented a most ingenious workbox for containing articles of value, such as jewelry, &c., The secret drawers are most cleverly arranged, and the whole is a unique and beautiful piece of workmanship.