

black. Here is a new field for the enterprise of our manufacturing artists.

In a communication to the Edinburgh Philosophical Magazine, Mr. H. C. Sorby states that he has made several experiments with water in capillary tubes to determine when it boils, and at what temperature it freezes. It can be raised to about 212° without boiling, and lowered below 32° (the freezing point) without freezing. In tubes of one two-hundredths of an inch, he lowered its temperature to 5° without freezing, when not in contact with ice. It thus appears that by the water adhering to the sides of the tube, it is prevented from becoming solid at a temperature much below that at which it freezes when in a large body.

Mr. Thomas Spencer, the discoverer of the electrotype, has lately made another important discovery. He has ascertained that the magnetic oxyd of iron which abounds in rocky strata, sands, &c., destroys all discoloring and polluting organic solutions in water. Even sewerage water can be thus almost instantaneously purified. Moreover, Mr. Spencer has discovered that the apparently mechanical process of filtration is itself magnetical, and it being known that all substances are constitutionally more or less subject to magnetical influences, all extraneous matter suspended in water may be rapidly separated in filtration either by magnetic oxyd or black sand of iron.

Mr. Bailly, the president of the London Astronomical Society has been for six years weighing the world in different ways, and is now sure that he has obtained its specific gravity so nearly accurate that his figures cannot err more than 0.0058. The total weight of the world in gross tons is 6,062,165,592,211,410,488,889, according to his scales.

Considerable has been published in several of our papers relating to the English river ferry-boats, at Liverpool and other places. They have no upper cabins nor spacious saloons like the ferry-boats in this city. Much better boats should be used at Liverpool, but they could not have such an amount of upper works as those on our rivers. The awful storms which visit the British coast, with the tremendous roll of the Atlantic rushing up the rivers so near to the sea, would not permit ferry-boats like ours to be run. It is now proposed to construct a huge iron tunnel under the Mersey at Liverpool. The idea is taken from the several illustrations of tunnels which have appeared in former volumes of the SCIENTIFIC AMERICAN, and which had been proposed for communication between New York and Brooklyn under the East river.

English rails are in better demand than they were a few weeks since. The Welsh are selling at £6 per tun for cash, and Staffordshire at £7. Scotch pig iron has fallen a little, the cash price in Glasgow being £2 12s. Banca tin is selling at £139 per tun; Straits, at £136. Copper is in good demand. Spelter has improved, the price being £21.

The New York and Philadelphia Steamship Company have purchased the iron screw steamers Edinburgh and Glasgow. Their price was £52,500, about half their original cost. Although they have changed proprietors, they will continue to sail regularly between Greenock and New York.

New York Markets.

CANDLES.—Sperm, city, 3c. a 40c. per lb.; sperm, patent, 50c.; wax, paraffine, 50c.; adamantine, city, 18c. a 21c.; stearic, 27 a 28c. COALS.—Anthracite, \$4.50; Liverpool orrel, \$10; cannel, \$12. COPPER.—Refined ingots, 2 1/2c. a 23c. per lb.; sheathing, 25c.; Taunton yellow metal, 20c. CORDAGE.—Manilla, American made, 8 1/2c. per lb.; Rope, Russia hemp, 12c. COTTON.—Ordinary, 8 1/2c. a 8 3/4c.; good ordinary, 9 1/2c. a 10c.; middling, 11 1/2c. a 11 3/4c.; good middling, 11 3/4c. a 12 1/2c.; middling fair, 12 1/2c. a 13 1/4c. DOMESTIC GOODS.—Shirtings, bleached, 26 a 32 inch per yard, 6c. a 8c.; shirtings, brown, 30 inch per yard, c. a 7 1/2c.; shirtings, bleached, 33 a 34 inch per yard, 7 a 8 1/2c.; sheetings, brown, 36 a 37 inch per yard 5 1/2 a 8 1/2c.; sheetings bleached, 36 inch per yard, 7 1/2 a 15c.; calicoes, 6c. a 11c.; drillings, bleached, 30 inch per yard 2 1/2 a 10c.; cloths, all wool, \$1.50 a \$3.50; cloths, cotton warp, 85c. a \$1.37; cassimeres, 85c. a \$1.37 1/2; satinetes, 30c. a 60c.; flannels, 15c. a 30c.; Canton flannels, brown, 8 1/2c. a 13c. FLOUR.—State, superfine brands, \$4.00 a \$4.95; Ohio common brands, \$3.05 a \$5.20; Ohio, fancy brands, \$5.30 a \$5.40; Michigan, Indiana, Wisconsin, &c., \$5.25 a \$5.35; Genesee, extra brands, \$5.00 a \$7.50; Missouri, \$5.10 a \$7.50; Canada, \$5.15 a \$3.20 Richmond City, \$5.50 a \$7.25; Baltimore (Howard-street), \$5.50 a \$6.25; rye flour, fine, \$3.63 a \$3.90; corn meal, \$4.05 a \$4.10. HEMP.—American, dressed, \$149 a \$150; dressed, from \$160 a \$300. Jute, \$57 a \$90. Italian, \$275. Russian clean, \$190 per tun. Manilla, 6 1/2c. per lb. INDIA-RUBBER.—Para, fine, 70c. per lb.; East India, 50c. a 52c. INDIGO.—Bengal, \$1 a \$1.55 per lb.; Madras, 75c. a 95c.; Manilla,

60c. a \$1.15; Guatemala, \$1 a \$1.25. IRON.—Pig, Scotch, pertun, \$23.50 a \$24; Bar, Swedes, ordinary sizes, \$87 \$90; Bar, English, common, \$42.50 a \$43; Sheet, Russia, 1st quality, per lb., 1 1/2c. a 1 1/4c.; Sheet, English, single, double and treble, 3 1/2c. a 3 3/4c.; Anthracite pig, \$24 per tun. IVORY.—Per lb., \$1.25 a \$1.80. LATHS.—Eastern, per M., \$2.10 a \$2.15. LEAD.—Galena, \$5.80 per 100 lbs.; German and English refined, \$5.65; bar, sheet and pipe, 5 1/2c. a 6c. per lb. LEATHER.—Oak slaughter, light, 31c. a 32c. per lb.; Oak, medium, 31c. a 33c.; Oak, heavy, 30c. a 31c.; Oak, Ohio 29c. a 30c.; Hemlock, heavy, California, 20 1/2c. a 21 1/2c.; Hemlock, buff, 15c. a 18c.; Cordovan, 50c. a 60c.; Morocco, per dozen, \$18 to \$20; Patent enamelled, 16c. a 17c. per foot, light Sheep, morocco finish, \$7.50 a \$8.50 per dozen; Calf-skins, oak, 57c. a 60c.; Hemlock, 56c. a 60c.; Belt-ing, oak, 32c. a 34c.; Hemlock, 28c. a 31c. LIMB.—Rockland, 80c. per bbl. LUMBER.—Timber, white pine, per M feet, \$17.50; yellow pine, \$35 a \$36; oak, \$18 a \$28; eastern pine and spruce, \$13 a \$15 White Pine, clear, \$35 a \$40; White Pine, select, \$25 a \$30; White Pine, box, \$14 a \$18; White Pine, flooring, 1 1/2 inch dressed, tongued and grooved, \$24.50 a \$25; Yellow Pine, flooring, 1 1/2 inch, dressed, tongued and grooved, \$29 a \$32; White Pine, Albany boards, dressed, tongued and grooved, \$30 a \$31; Black Walnut, good, \$45; Black Walnut, 2d quality, \$30; Cherry, good, \$45; White Wood, chair plank, \$45; White Wood, 1 inch, \$23 a \$25; Spruce Flooring, 1 1/2 inch, dressed, tongued and grooved, each, 22c. a 24c.; Spruce Boards, 1 1/2 inch, Hemlock Boards, 1 1/2 c. a 14c.; Hemlock wall strips, 10c. a 11c.; Shingles, cedar, per M, \$23 a \$35; Shingles,ypress, \$12 a \$25; Staves, VV. O. pipe, light, \$55 a \$58; Staves, white oak, pipe, heavy, \$75 a \$80; Staves, white oak, pipe, culls, \$30 a \$35; Staves, do. lhd., heavy, \$70; Staves, do. bbl. light, \$30 a \$35; Staves, do. bbl. culls, \$20; Mahogany—Duty, 8 per cent. ad. val.—St. Domingo, fine crotches, per foot, 35c. a 45c.; St. Domingo, ordinary do., 20c. a 25c.; Honduras, fine, 12 1/2c. a 15c.; Mexican, 13c. a 15c. NAILS.—Cut at 3 1/2c. a 3 3/4c. per lb. American clinch sell in lots, as wanted, at 5c. a 5 1/2c.; wrought foreign, 3 1/2c. a 3 3/4c.; American horse-shoe, 14 1/2c. OILS.—Limeed, city made, 56c. per gallon; limeed, English, 56c.; whale, bleached winter, 59c. a 60c.; whale, bleached Fall, 58c.; sperm, crude, \$1.35; sperm, unbleached winter, \$1.45; coal oil, \$1; lard oil, No. 1 winter, 90c. a 95c.; refined rosin, 30c. a 40c.; camphine 46c. a 47c.; fluid, 53c. a 55c. PAINTS.—Litharge, American, 7c. per lb.; lead, red, American, 7c.; lead, white, American, pure, in oil, 8c.; lead, white, American, pure, dry, 7 1/2c.; zinc, white, American, dry, No. 1, 5c.; zinc, white, French, dry, 7 1/2c.; zinc, white, French, in oil, 9 1/2c.; ochre, ground in oil, 4c. a 6c.; Spanish brown, ground in oil, 4c.; Paris white, American, 75c. a 90c. per 100 lbs.; vermilion, Chinese, \$1.13 1/2 a \$1.22; Venetian red, N. C., \$1.75 a \$2.31 1/2 per cwt.; chalk, cash, \$4.75 per tun. PLASTER-OF-PARIS.—Blue Nova Scotia, \$2.75 a \$2.87 1/2 per tun; white Nova Scotia, \$3; calcined, \$1.20 per bbl. RUBBER.—Common, \$1.50; per 310 lbs.; strained, No. 2, &c., \$1.60 a \$2; No. 1, per 280 lbs. \$2.25 a \$3.50; white, \$3.75 a \$4.50; pale, \$4.50 a \$6. SPELTER plates, 5c. a 5 1/2c. per lb. STEEL.—English cast, 14c. a 16c. per lb.; German, 7c. a 10c.; American spring, 5c. a 5 1/2c.; American blister, 4 1/2c. a 5 1/2c. TALLOW.—American prime, 11c. per lb. TIN.—Banca, 32c.; Straits, 30 1/2c.; plates, \$7.25 a \$9.25 per box. TURPENTINE.—Crude, \$3.50, per 280 lbs.; spirits, turpentine, 46c. per gallon. WOOL.—American, Saxony fleece, 50c. a 55c. per lb.; American full bleed merino, 46c. a 48c.; extra, pulled, 45c. a 50c.; superfine, pulled, 37c. a 41c.; California, fine, unwashed, 24c. a 32c.; California, common, unwashed, 10c. a 12c.; Mexican, unwashed, 11c. a 14c. ZINC.—Sheets, 7 1/2c. a 7 3/4c. per lb. The foregoing rates indicate the state of the New York markets up to November 24th.

There has been very little change in the prices since last week, thus showing a fair and steady business.

The reports from the western cities regarding the sales of grain represent great uniformity in the prices and sales. The receipts in this city have been very heavy, and the stock is rapidly augmenting.

The foreign trade of this port for the last week, compared with that of the corresponding season last year, may be epitomized thus:—

Table with 2 columns: Imports, week ending Nov. 10, 1859; Exports, week ending Nov. 10, 1859. Values in dollars and cents.

Foreign goods are in moderate request, except for the newest and most desirable patterns. Silks continue to be largely placed at auction, and prices almost invariably run low. Robes, with two or three flounces, meet with moderate sale, and are retailed at exceedingly low rates. Other goods are quiet, and slow of sale, both at public and private sale. The salesrooms are crowded with accumulated goods.

A steady fair demand prevails for most descriptions of dry goods of domestic manufacture, and prices have undergone but little change. The manufacturers are generally engaged on fabrics for the spring trade, which promises to be large. The inquiry for export is good, and the sales present a larger aggregate than was generally looked for among the trade. Notwithstanding the present month was generally expected to be very dull, the aggregate transactions have been to a fair extent, and prices have been sustained.



ISSUED FROM THE UNITED STATES PATENT OFFICE FOR THE WEEK ENDING NOVEMBER 22, 1859.

[Reported Officially for the SCIENTIFIC AMERICAN.]

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26,150.—Charles J. Addy, of Roxbury, Mass., for an Improved Clock Escapement: I claim the independent gear pallet, f, pivoted to a fixed bearing in combination with a recoil pallet swinging with the pendulum, in the manner substantially as set forth.

26,151.—Moses Allan, of Utica, N. Y., for an Improvement in Metal-planing Machines: I claim, first, The construction of the apparatus F E g, shown in Fig. 2, and its adaptation to the use of the ordinary planing-machine, and its combination therewith and for the purposes described. Second, The combination of the bearing-stands, H I, and the disk, M, with the carriage of the machine, connected and arranged substantially as described, and for the purposes described; the whole being constructed, combined and operating substantially in the manner set forth.

26,152.—E. G. Allen, of Boston, Mass., for a Combination Steam Gage: I claim the combination and arrangement of the several instruments requisite to enable the engineer to regulate the proper working of steam machinery, substantially as set forth; the said instruments being inserted in one case, and having the hands or other indicators upon one face or dial plate, in the manner and for the purposes specified.

26,153.—Samuel Barber, of South Brunswick, N. J., for an Improved Washing-machine: I claim the combination with the lever, N, for operating the frame, D, of a curved extension guide, R, for adjusting the frame in the manner set forth; and— Second, The arrangement, with the above, of the serrated arc, J, on top of the dash-board, G, for adjusting the inclination of said board, for the purposes and in the manner specified.

[This invention is an improvement in the adjustment of a washing-machine for adapting it to the various articles to be washed, by adjusting the dash-board to or from the surface of the box, at the same time giving, by a peculiar adjustment of a swinging frame, a greater or less sweep to the dash-board. The invention consists, first, in the employment of a segmental extension guide-piece attached to the frame of the dash-board, and operated by a friction roller attached to a hand lever, so that the motion of the frame can be regulated, and the pivot of the lever placed to its least possible working distance from the fulcrum; and it also consists in regulating the dash-board by means of a segmental rack extending from the top and in rear of the dash-board, and a pin passing down through a cross-tie of the swinging frame into the teeth of said rack.]

26,154.—Eli Bartholomew, of Cleveland, Ohio, for an Improvement in Beehives: I claim the arrangement of the outer casing, A, and the inner casing, B, in relation to each other, and the ventilating openings, H, in cover, G, which cover is furnished with a top, K, and boxes, L, L, in the manner and for the purposes specified.

26,155.—Jered Beach, of Freeport, Pa., for an Improved Saw-set: I claim the arrangement of the guide, c, with slot, g, levers, f and m, connecting-link, o, set screws, l 2 3 4 and 5, when used in connection with the gage, a, graduating rest-plate, d, regulating screw, e, anvil, i and set, j; the whole being arranged and constructed substantially as described for the purpose set forth.

26,156.—D. Berry, of Huntington, Ind., for an Improvement in Automatic Canal Bridges: I claim the bridge, I, arranged to work on inclined ways, F E, and connected by a chain and wheel, M N, or their equivalents, to a shaft, O, which is connected, by gearing, to segments, Q, in line with the bridge and the boat, so that the former can be actuated by the movement of the latter, substantially as described.

[The object of this invention is to obtain a bridge for canals that may be opened by a boat as it passes along, and closed by its own gravity after the boat has passed. The device is perfectly automatic in its operation throughout, allowing low bridges to be used in cases where high piers and bridges are now required in order to allow the boats to pass underneath them.]

26,157.—Milton B. Bishop, of Whitingham, Vt., for an Improvement in Washing-machines: I claim the means of operating the two wash-boards, viz. the arrangement and application of the two sets of levers or brakes, F E, together and with respect to the wash-boards, B C, disposed one over the other and in the tub, as described.

I also claim, in combination with the upper wash-board, B, and its brake, H, the rocker shaft, K, the slide-bar, L, and the springs, M M; the same being for the purpose or objects specified, meaning, also, to claim the combination of the said rocker shaft, the slide and springs.

26,158.—Wendlin Bleser, of New York City, for Composition Cement or Mortar: I claim the mortar described, made and employed substantially as set forth.

26,156.—Joseph W. Bradley, of New York City, for an Improvement in Ladies' Bustles: I claim a bustle consisting of a waist-band, composed in parts of strips, a, of metal or other elastic material, and a spiral spring, A, tapered from the middle towards each end, applied to and combined with such waist-band substantially as described.

[This invention consists in the combination of a waist-band, and a spiral spring tapered from the middle towards each end.]

26,160.—Lockwood B. Brooks, of New York City, for an Improvement in Steam Valves: I claim rendering the two parts, B and C, of the balanced puppet valve, adjustable, relatively to each other, by connecting the stem, B, to the sleeve, C, by the yoke, D, or its equivalent, arranged and operated substantially in the manner and for the purposes set forth,

26,161.—George Caward and David C. Caward, of Prattsburgh, N. Y., for an Improvement in Road-scrappers:

We claim the reversible revolving and adjustable blade, B, with the adjusting-boxes, C, when made and operated as and for the purpose specified.

Also, the circular arms, D, with the wheels, E, when made and used as specified and for the purpose set forth.

26,162.—A. J. Chapman, of Bayou Goula, La., for an Improvement in Bagasse Furnaces:

I claim, first, The employment of the central air heating-chamber, n, having discharge passages, n<sup>2</sup>, leading into the furnace in its sides, and a central descending flue, l, in combination with a double-walled furnace, F, having an air-heating chamber, f, between its walls, and discharge passages, z, through its inner wall, leading into the fire-chamber, substantially as and for the purposes set forth.

Second, The combination of the partitioned and valved air-heating chamber, f v X, between the walls of the furnace, with the upper and lower hot-air passages, a b, and mixing-chamber, c, substantially as and for the purposes set forth.

Third, The combination of the auxiliary valved-flue, Y r, leading directly to the chimney, with the valve, d, boiler-flue, B' r, and the furnace, F, substantially as and for the purposes set forth.

Fourth, The combination of the valve, O, in the hopper, with the cylinder feeder, S, carrier-drum, h, cam, V, and lever, O, substantially as and for the purposes set forth.

26,163.—Matthias P. Coon, of Brooklyn, N. Y., for an Improvement in Apparatus for Generating Illuminating Gas:

I claim, first, The particular form and manner of constructing and combining a gas-generating retort, consisting of a fusion-chamber and barrel, as represented in Fig. 1, A, Nos. 1 and 3, as combined for the purpose specified.

Second, I also claim the diaphragm, J, in combination with the chamber, F and D, and diaphragm, N, as represented in Fig. 4, in the manner and for the purpose specified.

Third, I also claim the chamber, H (Fig. 7), constructed as and in combination with the other apparatus specified.

Fourth, I also claim the chamber, K (Fig. 9), as attached to the cover, M, in connection with the escape-pipe, L, with a stop-cock, or its equivalent, attached in the manner and for the purpose specified.

Fifth, I also claim, in combination with the apparatus specified, the projecting ridge on facing-rim or flange, O, and the corresponding groove, P, in the door, N; and I also claim, in combination, the yoke or bar, R, and crank screw, S, as combined; and also the hook-hinges, X (all of which are represented by Fig. 10), as set forth and specified.

26,164.—Benjamin P. Crundall, of New York City, for an Improvement in Children's Sleds:

I claim connecting the head and neck, A, of the horse to the bottom or in front thereof of a child's sled, having spring or other runners, in such a manner that the pole may be secured under the bottom, B, of the sled, substantially as shown in the drawings at Fig. 1, and for the purpose set forth.

26,165.—Edward Crane, of Dorchester, Mass., for an Improvement in Locomotive Engines:

I claim the combination, in a locomotive, of a boiler and engine, with a water tank, coal box, blower and baggage department, on one long truck frame suspended underneath the axles of the wheels, arranged substantially as described.

26,166.—Edward Crane, of Dorchester, Mass., for an Improvement in Railroad Cars:

I claim the use of a single long truck for the support of a railroad car, when the frame of said truck is constructed and suspended substantially as described.

I also claim the use of cylindrical bars of iron, passing under the frame of the truck, and nearly in contact with the rails, for the purpose of keeping the truck frame from striking the rails or ground in case the cars leave the track.

26,167.—D. M. Cummings, of Enfield, N. H., for an Improvement in Harrow Teeth:

I claim, first, Constructing the tooth, A, of a harrow with prongs, B, sharp-pointed shields, C, substantially as and for the purpose specified.

Second, In combination with the above, the wedge-shaped plate, D, substantially in the manner and for the purpose described.

[Each tooth is furnished with three prongs, and attached to each of these prongs is a sharp-pointed shield, which serve to gage the depth to which the teeth cut. The teeth are adjusted to a greater or smaller inclination, according to the soil in which they have to work, by means of wedge-shaped plates that are placed between the teeth and the frame.]

26,168.—John Davis and Ebenezer Davis, of Matildaville, Pa., for an Improvement in Launching Flat Boats:

We claim the combination of the hinged projection beams, C, with the shoulders, a, pull-eyes, p, and ropes, d, substantially as and for the purpose set forth, when used in connection with the permanent staging, S.

26,169.—Harrison Doty, of Cardington, Ohio, for an Apparatus for Supplying Sawdust to Furnaces:

I claim the employment of the latch, D, when the same is constructed and arranged to operate substantially as in the manner and for the purpose set forth.

I also claim the arrangement of the hinged bottom, B, provided with the adjustable weight, d, with the latch, D, provided with adjustable weight, a, and with stationary box, A, for the purpose set forth.

26,170.—Charles Douglas, of Hebron, Conn., for an Improvement in Wagon Jacks:

I claim, first, The combination and arrangement of the lever, E, pawl, F, ratchet plate, D, rod, C, and stock, A, substantially as described for the purpose set forth.

Second, The pawl, F, when used for the double purpose of a pawl on the ratchet plate, D, and a fulcrum for the lever, E, as and for the purpose described.

26,171.—C. H. Durkee, of Hartford, Wis., for an Improvement in Grain-binders:

I claim, first, The combination of the traveling segment, D, jointed arm, G, its rod, G', connecting-rod, I, and rack, H, operated by pinion, J, rack, J', when the same are arranged and operate as set forth.

Second, I claim the swinging rack, K, in combination with the traveling segment, D, for receiving and holding the pinion, J, while the end of the arm, G, is being passed through the loop, in the manner set forth.

Third, I claim the loop-holder, c, trip block, d, and block, e, arranged and operating substantially as and for the purposes set forth.

26,172.—Asahel K. Eaton, of New York City, for an Improvement in Vulcanizing Rubber Compounds:

I claim the use of a metallic bath, substantially as described, for the purposes of vulcanization.

26,173.—Gustavus G. Elias, of Lancaster, Pa., for an Improved Cabbage-cutting Machine:

I claim the specific arrangement and combination of the sliding box, C, with its rollers, P, fast spring, N, and retaining-plates, I, the double-coned spiral spring, K, with its square bottom, L, and armed top, H, the counter-cutting-knives, 1, 2, and central division, 3, on the table, A, provided with legs; the wheel, E, crank or connecting-rod, F, when these several parts are made substantially as and for the purpose specified.

26,174.—E. A. Elliott, of Port Gibson, Miss., for an Improvement in Cotton Presses:

I claim, first, The employment of the hinged forms, B, forming part of the box, A, in combination with the follower, R, said forms being so arranged as to receive the cotton and to act as guides for the follower, substantially as described.

Second, I claim the employment of the weighted-follower, R, in connection with the spring bolts, g, or their equivalent, whereby the loose cotton is instantly, at the proper time, brought down and held in the proper space, to be acted upon by the followers, F, substantially as described.

Third, I claim the arrangement of the doors, S S and T, with reference to the box, A, and the position of the bale therein, when fully compressed, by means of which I am enabled to apply and secure the covering without sewing, substantially as described.

Fourth, I claim the arrangement of the rod, M, and stop, N N', with reference to nut, H, and its movement, whereby the clutch, L, is not only disconnected from the pulleys, J and K, at the proper times, but also prevented from connecting by accident or otherwise, as described.

26,175.—George August Engelhard, of New York City, and Rudolph Franz Heinrich Havenmann, of New Brunswick, N. J., for an Improvement in Compositions of Caoutchouc and Allied Gums:

We claim the described product, obtained by the action of chlorine on gums, such as india-rubber or gutta-percha, whether in solution or in substance, in either of the modes pointed out, or in any other that is substantially the same and which will produce a like effect.

26,176.—A. J. Emlaw, of Grand Haven, Mich., and Elliott Richmond, of Kelloggsville, Mich., for an Improvement in Saw-mills:

We claim, first, The arrangement of the friction wheel, M, and pulleys, I J, in connection with the shafting, E H K, for the purpose of giving the feed and gigning back movement to the carriage, M', as set forth.

Second, The arrangement of the adjustable bars, O, on the carriage, M, screw rods, P, and adjustable wheels, Q, on shaft, R, whereby the bars, O, may be adjusted nearer to or further from each other to suit the length of the stuff to be sawed.

[The subject of this invention relates to certain improvements in that class of sawing-machines in which circular saws are used, and consists in the peculiar manner of hanging the saw arbor, whereby the same may be readily adjusted as circumstances may require. It also consists in a peculiar reversing gear for gigning back the carriage and an improved arrangement of detail block, whereby the latter may be readily adjusted on the carriage to suit the length of the stuff to be sawed.]

26,177.—Dennis C. Gately, of Newtown, Conn., for an Improvement in Rubber Bolting:

I claim, as a new article of manufacture, machine bolting or banding, manufactured with surfaces of india-rubber or gutta-percha, and having surfaces which are as nearly as is practically possible perfectly smooth, as described.

26,178.—Dennis C. Gately, of Newtown, Conn., for an Improvement in Making Rubber Bolting:

I claim the method described for manufacturing machine bolts or bands of india-rubber or gutta-percha, by rolling them in thin sheets of flexible metal and then heating them, substantially in the manner and for the purposes described.

26,179.—Oliver C. Green, of Dublin, Ind., for an Improvement in Harrows:

I claim the described arrangement of the harrow teeth, a, beams, b, wheels, c, arms, d, lever, e, rods, g, and rack, h, the whole being constructed and operating together in the manner and for the purposes set forth.

26,180.—John Griffin, of Louisville, Ky., for an Improvement in Cotton-harvesters:

I claim the employment or use of annular chambers, B, communicating with the cups, D, of the suction tube or tubes, A C, by means of perforations, b, and communicating with a steam or air chamber by means of flexible tubes, G, substantially as and for the purposes set forth.

[This invention relates to an improvement on a machine for picking or harvesting cotton by steam, for which Letters Patent were granted to the same inventor, bearing date March 8, 1859. The object of the present invention is to economize in the application of the power used or extended in the operation of the machine. This is effected by a novel arrangement, whereby an auxiliary or helping force or power is obtained for detaching the cotton from the bolls.]

26,181.—P. Griswold and H. H. Seeley, of Hudson, Mich., for an Improvement in Grain Separators:

We claim the combination with the screen, D, of the rocking bar, L, and vibrating bar, E, as shown and described, for the purpose set forth.

[This invention consists in giving the lowermost screen in the shoe of the separator a compound movement, and using in connection therewith a supplemental screen having a vertical movement only, whereby the separator, by a very simple mechanism, is rendered very efficient.]

26,182.—John P. Hale, of Kanawha, Va., for an Improvement in Evaporating Vessels:

I claim the superheating of the steam or vapor arising from the evaporation of the brine, substantially as and for the purpose shown and described.

26,183.—A. J. Hall and Russell Patten, of Morristown, Vt., for an Improvement in Carriage Tops:

We claim the construction of bows for folding carriage tops with joints, substantially as and for the purposes set forth.

26,184.—Louis Harper, of Riceville, N. J., for an Improvement in Fertilizers:

I claim, first, The preparation of the peat or muck or lignite, and their mixture with sulphate of lime, soda, potash and magnesia, when required to form the bases of the preparation intended for composition of the fertilizer.

Second, The addition of phosphate and bi-phosphate of lime to the above basis, and the impregnation of the above mixture with ammonia, in the manner described, so as to be converted into simple and double salts, as above stated.

Third, The combination of peat or muck or lignite, prepared as described, with green sand marl.

26,185.—Lewis G. Hoffmann, of Waterford, N. Y., for an Improved Door-fastening:

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

26,186.—Julius Hornig, of Newark, N. J., for an Improved Cut-off Arrangement for Steam Boilers:

I claim the employment for opening and controlling the closing of the cut-off-valve, of a revolving and swinging cam, C, applied in combination with and operated by a revolving wrist plate, D, or its equivalent, and a grooved disk, E, substantially as described.

[This invention consists in the employment for opening and controlling the closing of the cut-off-valve, of a cam, constructed, applied and operating in a peculiar and very simple manner, where the cutting-off of the steam variably under the control of a governor, or at any given point in the stroke of the piston under the control of suitable means of adjustment, is effected.]

26,187.—Joshua L. Husband, of Philadelphia, Pa., for an Improved Propelling Wheel:

I claim the combination of the guides, E and F, the arms, A and A', the connecting rods, D and D', the double cranks, L and M, and the sectional paddles, H, operating together, in the manner and so as to produce the effects described.

26,188.—R. W. Huston, of Calais, Maine, for an Improvement in Coal Hods:

I claim the arrangement of the bucket, C, with the external casing, A, when the bucket is provided with a rim or flange, c, around its top, and with a pin on its bottom, upon which it revolves, and when the external casing is provided with a top which fits snugly around the bucket and over the rim or flange with a channel, D, and with a door to said channel, the whole being used substantially as and for the purpose specified.

26,189.—George E. Inman, of Buffalo, N. Y., for an Improved Ditching-machine:

I claim, first, The cutter, M, arranged and operating substantially as set forth.

Second, I claim the arrangement of the adjustable roller, L, under the elevated part of the share, C, substantially as set forth.

Third, I claim the arrangement of the castor-wheel, I, plow, G, cutter, M, adjustable roller, L, and plowshare, c', and side pieces, D, relatively to each other, substantially as described.

Fourth, I claim the arrangement of the two driving-wheels, B B, on the same shaft, when placed so near together as to track within the ditch cut by the horizontal share, c, substantially as described.

26,190.—Luther Johnson, of Grand Ledge, Mich., for an Improvement in Rotary Steam-engines:

I claim, first, The employment, in combination with a sliding abutment fitted to the outer stationary cylinder, of an inner revolving cylinder, having a concentric groove or channel closed permanently in one place by a piston extending all across it, substantially as described.

Second, Operating the abutments, E E', and the cut-off valves, G G', by means of the same cam, F F', through the agency of rollers, g h g' h', or their equivalents, applied to the abutments, and yokes, k k', rods, l l', and levers, m m', and arms, n n, applied to the cut-off valve; the whole arranged and operating substantially as described.

Third, The two sliding reversing valves, applied in combination with the two sets of steam-pipes in relation to the abutments, and operated simultaneously by a single lever, substantially as described.

[This invention consists mainly in a novel system of cams and connections for operating the sliding abutments and the cut-off valves of a rotary steam-engine, and in a novel arrangement of reversing valves for changing the direction of the engine.]

26,191.—H. P. Judson, of Bethlehem, Conn., for an Improvement in Ox Yokes:

I claim the arrangement of the peculiar rotary spring disk, D, curved rods, F G', and horizontally moving locking bolts, B B', as and for the purpose shown and described.

[This invention consists in arranging two bolts, each having beveled ends, upon a plate which is secured over the bow hole in the yoke beam, so that each bolt will be acted upon by suitable springs and connecting-rods, inclosed under the plate above mentioned in such manner that they will approach and recede from each simultaneously. It also consists, in conjunction with the before-mentioned bolts, in tapering the end of the bow to a point, so that, by pressing this point between the ends of the bolts, they will open and allow the bow to be inserted in its place, and when thus inserted, they will simultaneously close and lock the bow securely to the beam. The operation of unlocking is simply to turn a small pin on top of the beam, when they will both instantly open and permit the bow to be removed.]

26,192.—Cheney Kilburn, of Burlington, Vt., for an Improved Lathe Attachment:

I claim the rotating reciprocating knife, D, in combination with the carriage, B, provided with the gouging tool, F, and V-shaped cutter, G, pattern, L, recess, H, and support L', when arranged and operated as set forth and for the purpose specified.

26,193.—Elisha C. Leonard, of New Bedford, Mass., for an Improvement in the Manufacture of Paraffine Candles:

I claim my improvement or improved process of treating paraffine in the manufacture of candles therefrom, whereby I am enabled to dispense with a refrigerating air bath cooled by artificial means, my improvement or invention consisting in the employment, in manner described, of the atmospheric temperature and the refrigerating water bath after the first cooling of the candle in the water bath.

26,194.—Edward J. Mallett, of New York City, for an Improvement in Railroad Car Axles:

I claim the combination and arrangement of the parts as represented for the purpose of forming an axle on which the wheels shall have an independent motion, the whole constructed substantially as described for the purpose set forth.

26,195.—Charles E. Mann, of Troy, N. Y., for an Improvement in Traction Locomotives Carrying their own Railway:

I claim so applying the endless chains, A, as to make them not only the track for the supporting wheels, B, of the locomotive to run on, but also the means by which the engine propels the locomotive along the ground, substantially as described.

26,196.—James J. Mapes, of Newark, N. J., for an Improvement in Fertilizers:

I claim the production of a fertilizer by combining guano and sulphate of ammonia, or its equivalent with burnt bones, or their equivalents, when the said bones, or equivalent, have been treated by sulphuric acid, as specified; the whole being prepared substantially in the manner and for the purpose set forth.

26,197.—Thos. J. Mayall, of Roxbury, Mass., for an Improvement in Scythe-rifles:

I claim, as a new article of manufacture, a rifle for sharpening scythes, &c., formed of india-rubber or gutta-percha, with which emery, sand, or other suitable gritty substances, are incorporated, substantially as set forth.

29,198.—Wm. Morrison, of Carlisle, Pa., for an Improvement in Harvesters:

I claim providing the rear end of the finger with the open slot, d, whereby I am enabled to readily remove the stationary cutters and fingers, and to replace them without detaching the bolts or nuts which secure the fingers to the finger-bar, in the manner and for the purpose specified.

26,199.—Martin Nixon, of Philadelphia, Pa., for an Improvement in Boilers for Treating Paper Stock:

I claim the close spherical tier or boiler, A, journaled on hollow trunnions, B, and provided with a perforated floor, F G, steam-pipes, D and E, and elevating and distributing pipes, I and J; the whole being constructed and arranged and operating substantially in the manner set forth, to boil paper stock under a heavy pressure, by the combined action of an upward current of steam and a downward current of hot alkaline solution, and admitting of the ready inversion of the said boiler for the discharge of its contents when cooled.

26,200.—John K. O'Neil, of Kingston, N. Y., for an Improvement in Vapor Lamps:

I claim the arrangement of the auxiliary burner, G, in connection with the gas generating chamber, E, in such a manner that a cessation of its action on said chamber may at any time be effected without extinguishing its light by the separation of said burner from its

influence on said chamber, as described, and for the purpose specified.

I also claim the spiral revolving shade in combination with the auxiliary burner, as described, and for the purpose set forth.

I also claim the construction and arrangement of the burner, G, and graduating tube, g, in combination as described and for the purpose specified.

26,201.—Wm. Pearson, of Windsor Locks, Conn., for an Improvement in Sewing-machines:

I claim the combination of the vibrating looper, the cam flange which operates it, and the vibrating bar, J, carrying the friction rollers, j, the parts being constructed, combined and arranged substantially as and for the purposes set forth.

26,202.—J. B. Falser and G. Howland, of Fort Edward, N. Y., for an Improvement in the Manufacture of Paper Pulp:

We claim the boiling of the straw or other stock for about four hours, under a pressure of from 110 lbs. to 130 lbs., in a solution of caustic alkali, of a strength indicating from 34° to 32° Beaume, substantially in the manner and for the purpose set forth.

26,203.—Wm. Phelps and W. H. Hanford, of Sycamore, Ill., for an Improvement in Horse-power Machines:

We claim the combination and arrangement of the wheels and rollers, C C C and D D D, on truck, B, and wheel, H, and friction rollers, I I I and J J J, on track, H, and friction rollers, R R R, on rotary track, O, with rotary drive wheel, N, and friction rollers, U, constructed and operated substantially as described.

26,204.—Francis B. Richardson, of Boston, Mass., for an Improvement in Elastic Enema Syringes:

I claim the improvement in india-rubber syringes, as an article of manufacture, which consists in combining the india-rubber or gutta-percha, or other waterproof bag, with the suction end of the syringe, in the manner substantially as described.

26,205.—T. J. W. Robertson, of New York City, for an Improvement in Sewing-machines:

I claim, first, The employment, in combination with the needle of a sewing-machine, of a plate, K, constructed and operated substantially as shown and described, for the purpose of laying and holding braid, gimp, or other material, upon the surface of the fabric, as set forth.

Second, The arrangement of the guides, e e e, to extend past the center and on each side of the needle-hole, as and for the purpose set forth.

Third, The employment, in combination with a braid-holder, M, of the adjustable slide, N, for the purpose of flattening and opening the braid and preventing its kinking, as shown and described.

26,206.—John A. Seaman, of St. Louis, Mo., for an Improved Machine for Chamfering and Crozing Kegs or Casks:

I claim the rotating arms, a, provided with the adjustable jaws, b, the adjustable rotating ring, G, fitted to the annular plate, D, by the screws and guides, E F, the plate, D, being provided with the tool-holding levers, I J, attached to the guide-shafts, C, and supported by the springs, E, and the shafts, G, connected to a treadle frame, H, the whole being combined and arranged to operate substantially as and for the purpose set forth.

[The object of this invention is to obtain a machine whereby kegs may be hoveled and crozed, and formed complete ready to receive the heads, the work being performed very expeditiously in a perfect manner, and with but the aid of a single attendant or operator.]

26,207.—Lemuel W. Serrell, of Brooklyn, N. Y., for an Improvement in Guides for Sewing-machines:

I claim, first, A spring tucker, B, acting to fold the edge of the hem against the plate of the hemmer, when combined with the adjusting screw, S, or its equivalent, whereby the pressure of the tucker on the goods and the opening or mouth left for their passage are regulated, as set forth.

Second, I claim the horn, S, in combination with the tongue, e, for the purpose and as specified.

Third, I claim the arrangement of the hem-spreader stock, h, and guide, d, for the purposes and as specified.

Fourth, I claim attaching the guide or hemmer to the sewing-machine by a cylindrical pin or hinge to permit the said guide or hemmer to be turned up or inverted, so that the edge of the cloth, at the beginning of the hem, can be properly entered and folded while in this position, as set forth.

26,208.—Daniel Spencer, of Courtlandt, N. Y., for an Improvement in Grain Separators:

I claim the combination with a grain separator between the fan shaft and the separating screens of a shaft, H, and a series of sliding wheels, I, substantially as shown for the purpose set forth.

[The object of this invention is to obtain a simple and efficient means for regulating the speed of the shake movement of the separators, so that the vibrations of the same may be quicker or slower as may be required, without changing the speed of the fan. In order to separate grain from foreign substances by means of screens, the shake motion of the latter should be according to the state or condition of the grain. If very dirty, and mixed grain is to be cleaned and separated, the screens should have a quick movement in order to work effectually. And if the grain be but little mixed and tolerably free from dirt, a slow movement would be required, as a quick movement in the latter case would cause a portion of impurities and foreign substances to pass through the screen with the grain.]

26,209.—John F. Stark, of Greensburgh, N. Y., for an Improved Composition for Protecting and Ornamenting the Surface of Wood:

I claim the employment of a compound composed of sulphur and alcohol, or sulphur and the alcoholic varnish described, in the proportions and manner shown and described for the purpose set forth.

[This invention consists in the use of sulphur in a crystalline state, in combination with alcoholic varnish, for the purposes of covering surfaces of wood, or other material, to protect or give an ornamental appearance thereto.]

26,210.—James Stratton, of Brooklyn, N. Y., for an Improved Apparatus for Regulating the Pressure of Water in Pipes:

I claim the employment or use of the air-chamber, E, diaphragm, D, or its equivalent, with valve, C, attached to the pipe, B, containing valve, C, and communicating with the air-chamber by pipe, F, provided with the cocks, H I, and the pipe, G, communicating with the pipe, F and B; the above parts being arranged in relation with each other and the supply pipe, A, to operate as and for the purpose set forth.

26,211.—L. Taylor, of Jordan, Wis., for an Improvement in Apparatus for Elevating Water from Wells, &c.:

I claim, first, The employment or use of the springs, D, arranged in connection with traveling jacks, G I, and receivers, B B, to operate as and for the purpose set forth.

Second, The means, substantially as shown, of connecting the bucket, I, to the carriage, J, to wit, the lever, x, on the carriage, provided with the loop, w, and the bail, v, of the bucket, with its pulley, v, in connection with the pulleys, e', on the carriage and the taper rod, g, and catch, h', in the well-house, L, whereby the bucket is drawn up the wire or way and dropped and raised from the well.

[This invention relates to certain improvements in that class of water-elevating devices in which the buckets or pails are connected

to carriages that run on inclined wires or ways from the well or spring to the house. The object of the invention is to facilitate the application of the device or its adaptation in all cases where it may be applied, and at the same time facilitate the operation of the bucket both as regards its travel over the inclined wire or way its filling and emptying, also the proper manipulation of the same to ensure the durability of the device.]

26,212.—Saml. Thomas and John Thomas, of Cattsauqua, Pa., for an Improvement in Air-heating Pipes for Blast Purposes:

We claim supporting both of the legs of the arched pipes, G, upon one bottom tube, constructed substantially as described, so that injury to said pipes, by the displacement of the bottom tubes will be prevented; and so that each bottom tube, with its connected arched pipes, may be removed and replaced, without disturbing any of the remaining arched pipes, or bottom tubes, all as set forth.

26,213.—Thos. Tripp, of Buffalo, N. Y., for an Improved Propeller Wheel:

I claim a propeller wheel, having blades formed in respect to their main propelling surfaces, and also in respect to their outward arcs, substantially as described.

26,214.—David Walling, of Garrettsville, N. Y., for an Improved Washing-machine:

I claim the combination of weighted arms, D D, jointed connecting-rod, H, angular lever, G, rod, a, vibrating dash-board, I C, and dash-board, M, when the same are all arranged and to operate as set forth.

[This invention consists in a peculiar arrangement of levers and weighted arms with a vibrating dash-board, and a fixed vibrating dasher, so that the operation of cleaning the clothes is effected with a very little manual labor, so little that a child may operate the machine with perfect ease.]

26,215.—M. D. Wells, of Morgantown, Va., for an Improved Washing-machine:

I claim the reciprocating plunger, operated as described, in combination with the rack-pieces, D, moved by the plunger, in its backward motion, and springs, d d, throwing said rack in place, the whole operated as specified.

26,216.—J. Whiteside and H. F. Crabill, of Fuller's Corners, Ind., for an Improvement in Cultivators:

We claim, first, The arrangement and combination of the hinged, curved shovel beams, A A, cross-bar, D, and gaging wheel, F, substantially as and for the purpose set forth.

Second, The curved draught-beam, B, arranged as described, in combination with the cross-bar, D, handles, G, and rod, h, substantially in the manner and for the purpose specified.

[This cultivator is arranged with two curved shovel-beams which can be used with their concave sides facing each other, and also reversed bringing their concave sides towards each other, whereby it adapts itself to a great variety of work. The width of the shovel-beams is determined by means of a cross-bar, which carries a gaging wheel to govern the depth of the shovels cut. The draught-beam is so arranged that the clevis can be attached to one end or to the other, according to the position of the shovel-beams, and a rod connecting the two ends of the draught-beam forms the guides for the handles whenever the position of the shovel-beams is changed.]

26,217.—R. G. Wilkins, of Burns, N. Y., for an Improved Washing-machine:

I claim, first, The combination of an upper rotary rubber, with revolving slats, with two or more lower rotating rubbers with revolving slats, arranged substantially as described for the purpose set forth.

Second, I claim arranging the undulating surface of the slats in the upper rubber, so the projections come opposite to each other throughout, when the same is combined with a lower rotating rubber in which the projections of one slat are arranged opposite the depressions in the adjacent slats, and also when the slats of the upper rubber are arranged in relation to the slats of the lower rubber, as described, for the purpose set forth.

26,218.—John Williams, of Ashfield, Mass., for an Improved Washing-machine:

I claim the combination of straight fluted rollers, placed in the box of the machine in the form seen in the model, and two arms connected by a handle at one end, and attached by the other to the extremities of the frame which holds the four rollers.

26,219.—E. A. Willis, of Cold Spring, N. Y., for an Improvement in Floating Batteries:

I claim the combination of the central upright shaft, so applied that it may serve to anchor the battery, and that the battery may revolve around it, and a system of propellers by which the battery may be either caused to revolve around the said central shaft while at anchor, or propelled from place to place, when the said central shaft is elevated, substantially as described.

26,220.—T. W. Wilson and Lewis Raymond, of New York City, for an Improved Disengaging Hook for Liberating Ships' Boats:

We claim the combination of a detachable hook, consisting of an open eye and pin combined with each other, substantially as set forth with a pulley block for lowering a boat.

We also claim the combination of a detachable hook with the davit, or object from which a boat is lowered by means of a lanyard, that is independent of the lowering tackle, in such manner that the combination as a whole operates to free the boat from the tackle by the taunting of the lanyard.

26,221.—Michael Werk, of Cincinnati, Ohio, for an Improvement in Lining Tanks for Fatty Acids:

I claim the lining of the tank or metal vessel used with wood and cement, in the manner set forth.

26,222.—C. M. Wilkins, of Madison, Ohio., for an Improved Cheese Vat:

I claim the rearrangement of the valves, N and O, within the water chamber and vat, substantially as described.

26,223.—Sylvester P. Wheeler, of Bridgeport, Conn. (assignor to Moses H. Wheeler & Co., of same place), for an Improvement in Manufacture of Nitrate of Silver Crayons:

I claim the manufacturing or forming of sticks or pieces of nitrate of silver or lunar caustic, with one or more wires or ribbon of metal running through the same, to which the nitrate of silver or lunar caustic adheres and still holds to the wire, wires or ribbon, when used or otherwise, when broken.

26,224.—Harry Abbott, of North Huron, Ind. (assignor to himself and Emerson Abbot, of same place), for an Improvement in Centrifugal Water-wheels:

I claim the combination, with a centrifugal water-wheel, A, of a valve, E, located and arranged within said wheel so as to turn with it, and, at the same time, be adjustable while the wheel is in motion, by means of the bail, c, concentric rod, H, and adjusting-lever, I, substantially as set forth.

26,225.—J. A. Althouse, of Philipstown, Ill. (assignor to himself and F. W. Lechtenberger, of New Harmony, Ind.), for an Improvement in Machines for Raking and Loading Hay:

I claim the combination of the stationary rake, C, revolving rake, I, and vibrating rake, K, placed on a mounted frame, and arranged for joint operation substantially as and for the purpose set forth.

[This invention consists in the employment or use of stationary,

revolving and vibrating rakes, mounted on wheels and arranged for joint operation, whereby hay or grain may be loaded on a wagon or cart with far greater facility than by the usual exclusively manual process.]

26,226.—Gillett Bunting, of Liberty, Ind. (assignor to himself and W. M. Jarrell, of same place), for an Improved Churn-dasher:

I claim producing the vibratory movement in the cylindrical churn-dasher, by means of the combination of said arms with the crank portion of the driving-wheel and intermediate connecting rod, when these are used in connection with the current-breaker, K, as set forth.

26,227.—James T. Coxell, of Brooklyn, N. Y. (assignor to himself and Edward Jones, of same place) for an Improved Mangle:

I claim, first, The arrangement of the rollers, A B B, above the table, so that the fabric will be folded by the machine, substantially as shown and described.

Second, The combination with the weighted levers, L, of the lifting ropes, F, or their equivalents, so that the downward pressure of the roller, A, may be released, and the roller lifted at the will of the operator to allow such portions of the linen that have buttons or other elevations to pass through the machine uninjured, all as shown and described.

26,228.—H. E. Fickett and John W. Summers, of Glens Falls, N. Y. (assignors to H. E. Fickett, aforesaid), for an Improved Bed Bottom:

We claim the arrangement of the slats, B B B, with the spiral springs, C C C, wires, D D, central supports, E E E, and cross-brace, F, arranged and operated in the manner described and for the purpose specified.

26,229.—Horatio P. Gatchell, of Ravenna, Ohio (assignor to E. J. Bates, of Bedford, Ohio), for an Improvement in Coffee Pots:

I claim the forming of the walls of the cups, B C and F, with male and female screws, as described, in combination with the perforated bottoms, E and E', for the purpose of compressing the ground coffee and extracting the strength of the drug by displacement, in the manner specified.

26,230.—Wm. Darker, (assignor to himself and J. B. Thompson) of Philadelphia, Pa., for an Improved Mode of Applying Steam as a Motor to City Railroad Cars:

I claim, first, Placing a steam-engine and steam generator on the top of a city railroad car, when the engine, by suitable driving-mechanism, is connected with the wheels of the car, to propel the same.

Second, Connecting the governor, N, with a throttle valve and brake arranged substantially as shown to operate as set forth.

Third, The particular arrangement of the brake, formed of the strip, Z, on wheel, K, and actuated by the movement of the yoke, Y, on its bent ends, e e, connected with the hand lever rod, V, substantially as shown, so as to allow of the adjustment of the throttle valve by hand independently of the automatic connection.

Fourth, The arrangement of the bar, A', cam, N, lever, B', and rod, H, connected with the bar, A', by the arm, G, whereby the brake is operated automatically, as set forth.

[The object of this invention is to apply steam as a motor directly to city railroad cars, in such a manner that the necessary machinery employed will not be cumbersome, and entirely out of the passengers' way, and at the same time so arranged and adapted to the car as to preclude the possibility of the engineer or attendant running the car beyond a proper speed, and also insuring a perfect control of the speed of the car in descending grades. The invention will be understood by the above claims.]

26,231.—Augustus J. Goffe and Demus Goffe, of Cohoes, N. Y., (assignors to Downs & Company, of Seneca Falls, N. Y.) for an Improvement in Knitting-machines:

We claim the rotary burr-presser, M, having inclined planes, a, between the teeth, in combination with the sliding needles arranged and operating substantially in the manner and for the purpose shown and described.

We also claim varying the eccentricity of the groove, f, by means of the movable pulley, g, spring, k, adjusting-screw, h, and friction-pulley, l, substantially in the manner and for the purposes herein described.

26,232.—Liveras Hull, of Charlestown, Mass., (assignor to himself and A. Wheeler, of Boston, Mass.,) for an Improved Method of making Copal Varnish:

I claim my new manufacture of varnish, as composed of gum copal, camphene and alcohol, united in the proportions in a cool state, in a closed or air-tight vessel, substantially as specified.

26,233.—Henry W. Joslin, of Trenton, N. J., and A. K. Eaton, of New York City, (assignors to the Joslin India-rubber Company of New York) for an Improvement in the Treatment of India-rubber:

We claim the treatment of the argillaceous red shale of New Jersey or other similar geological localities, in combination with sulphur and caoutchouc, a, substantially in the manner and for the purpose described for the manufacture of india-rubber.

26,234.—James S. McCurdy, of Brooklyn, N. Y., (assignor to J. H. Myers, of New York City) for an Improvement in Sewing-machines:

I claim the vibrating lever, g, carrying the shuttle-driver, h, and provided with the spring, k, to keep the shuttle-driver to the raceway, the whole constructed and operating as and for the purposes specified.

26,235.—Henry M. Scott, (assignor to himself and Samuel Adlam) of Portland, Maine, for an Improved Bed-bottom Spring:

I claim the employment of spring hooks, A, and clamps, D, substantially as described, for the purpose of attaching strips of webbing to the frame of a bedstead.

[By means of this spring the employment of webbing for bed bottoms is rendered practicable. The ends of the webbing are securely held over their entire width, and the slack can be taken in without much trouble.]

26,236.—Parmenas P. Parkhurst, of Princeton, Mass., for an Improved Ore Separator:

I claim the washing-box or chamber, a, constructed with the pipe, h, entering near the bottom, to cause a whirl and circulation, as specified, and with the gate or overflow, c, for the purposes and as described and shown, and in combination with such washing-box, a, I claim the receptacle or box, e, and chamber, f, to receive the metallic particles when the gate, d, is raised, as set forth.

26,237.—John Thomas, (assignor to himself and John M. Lord) of Indianapolis, Ind., for an Improvement in Billing Railroad Bars for Re-rolling:

I claim the tie No. 7, or its equivalent, when used for interlocking T-rail or other old iron, and forming the pile of six rails, shown in Fig. 1, when constructed and arranged as and for the purposes set forth.



26,238.—E. T. Weeks, (assignor to S. H. Babcock) of Franconia, N. H., for an Improved Shoe-pegging Machine:

I claim the feeding-device formed of bar, L, to which the jaws are connected, operated by the screw, K, ratchet, S, and pawl, T, lever, U, and pitman, V, substantially as and for the purpose set forth.

I also claim, in connection with the riving or splitting knife, the gear, I, arranged as and for the purpose specified.

I further claim the elastic or yielding bar, Q, when attached to the arbor, M, provided with cam, d, and used in connection with the segment rack, P, curved bars, N O. and jaws, k l, for the purpose set forth.

RE-ISSUES.

Berresford Maria King, of New York City, Executrix of Valentine Hall, deceased, late of said New York City, for an Improvement in Apparatus for Cooling Liquids. Patented Sept. 20, 1859:

I claim, first, The employment or use of one or more receivers, A B, with or without the pump, E, placed on a tank, F, containing ice water or water at a low temperature, and connected together and to the liquid supply pipe, substantially as and for the purpose set forth.

Second, The employment or use of one or more receivers, A B, placed within a tank, F, and connected with the barrel or cask, H, by means of a siphon, I, and with a pump, E, within or at the outside of the tank, for the purposes set forth.

Third, The combining of a pump, E, with one or more receiver, A B, connected together and made to communicate with each other by siphons, CD, when said parts are submerged within a tank, F, and made to communicate with the barrel or cask, H, by means of a siphon, I, extending over the top of the tank, substantially as and for the purpose set forth.

[This invention consists in placing one or more receivers, with or without a pump, within a tank supplied with ice water, or water at a low temperature, and connecting together said receiver or receivers and the pump, if one be used, by means of a siphon or siphons which are placed in communication with the supply pipe, whereby liquids can be drawn in a cool state direct from the supply pipe, and the refrigerating device readily cleaned when necessary, all the parts being rendered very accessible. See engraving in No. 18, present volume.]

Joseph W. Fawkes, of Christiana, Pa., for an Improvement in Machines for Plowing. Patented Jan. 26, 1858:

I claim, first, The employment, in combination with the locomotive, of a bilge-shaped driving-wheel, substantially as set forth.

Second, I do not claim broadly the invention of movable spurs; but I claim the combination of the sliding spurs, k k, with the bilge-shaped driving-wheel, E, as shown and described.

Third, The arrangement of the adjustable frame, plows, sage-wheel, driving-wheel, engine, boiler, and guiding-wheels, as shown and described.

Septimus Norris, of Philadelphia, Pa., for an Improvement in Running Gear of Locomotive Engines. Patented Sept. 26, 1854. Re-issued March 2, 1858:

I claim the combination of a free vibrating-truck, with six or more driving-wheels, when the front pair of drivers is placed in advance of the center of gravity of the entire engine, substantially as and for the purposes set forth.

William Oldham, of Buffalo, N. Y., for an Improvement in Steam-boilers. Patented June 7, 1859:

I claim, first, The central water space, F, in the combustion-chamber, F, arranged in relation to the annular water space, F', and to the tubes, D, or their respective equivalents, substantially as set forth.

Second, Placing the annular sheet, G, and horizontal plate, I, (which with the jacket form the smoke-pipe, M), outside of the water space to allow the sediment to be conveniently removed from the water space, in communication with the described arrangement of the return tubes, D, substantially as set forth.

DESIGNS.

Elemir J. Ney, of Lowell, Mass., (assignor to the Lowell Manufacturing Company) for a Design for Carpet Patterns. (2 cases.)

ADDITIONAL IMPROVEMENT.

Benjamin F. Wells, of Georgetown, D. C., for an Improvement in Naval Architecture. Patented Oct. 18, 1859:

I claim making the lines of every section of a vessel from the keel to the water line arcs of circles, when said arcs have separate and independent centers determined substantially in the manner described.

EXTENSIONS.

Christian V. Queen, of Peckskill, N. Y., for an Improvement in Forges. Patented Nov. 18, 1845:

I claim the combination of the curved sliding shutters for enclosing the space over the fire, and the device for admitting a draught of air to keep up the combustion during the intervals in which the bellows are not employed, the same being effected for the purpose and substantially in the manner described.

Joseph E. Anderson, of Boston, Mass., for an Improvement in Planing-machines. Patented Nov. 21, 1845:

I claim the manner shown of forming, arranging and combining with the revolving cutter-wheel, the revolving platform and the endless aprons between which the board to be planed is to be passed, by means of which arrangement and combination it is firmly held along the whole length of such apron and carried regularly forward without deviation.

George Faber, of Canton, Ohio, for an Improved Magnetic Water Gage for Boilers. Patented Nov. 26, 1845:

I claim the method herein described, or any other substantially the same, of indicating the rise and fall of water in a steam-boiler or generator by means of an indicator outside thereof actuated by a magnet connected with a float or any other body within the boiler that rises and falls with the water and connected with the magnet, substantially as described.

NOTE.—The above list of patents contains THIRTY-ONE which were prosecuted through the Scientific American Patent Agency. Although not so many as we frequently obtain, some weeks, we consider it a very good week's business from one agency.

Literary Notices.

EDINBURGH REVIEW. Published by Leonard Scott & Co., this city.

The present number of this, the oldest of the British reviews, contains ten able essays, each worthy of the days when Jeffrey was its editor. The first is a review of A. Bains' new work on "Psychology," and the last one is on the "Secret Organization of Trades" in England. It is stated in this article that a strike of workmen was once concocted to defeat the election of Sir Joseph Paxton to the British Parliament; and that it was got up by a political cabal, who bribed the ringleaders among the workmen.

THE ATLANTIC MONTHLY. Ticknor & Fields, publishers, Boston.

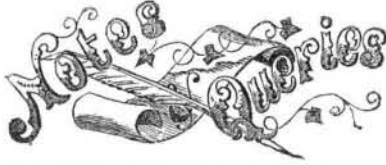
The December number has the concluding chapters of "The Minister's Wooing" and "The Professor at the Breakfast Table." The new publishers affirm, in italics, that "The Atlantic" has never been, and will never be, a sectional journal.

THE MATHEMATICAL MONTHLY J. D. Runkle, A. M., A. A. S., editor; Ivison & Phinney, this city, publishers.

This is a magazine of some 40 pages, printed on excellent paper, in beautiful style, and devoted wholly to the discussion of mathematical problems. We suspect its circulation is hardly equal to that of the "New York Ledger."

NEW YORK COACHMAKERS' MAGAZINE. Published by E. M. Stratton, this city.

This very interesting magazine has reached the seventh number of the second volume, and doubtless is appreciated by the very large class of mechanics and manufacturers to whose interests it is devoted.



E. M. R., of Va.—According to your recollection, if Robert Stephenson had not magnanimously declined the usual allowance made to vessels of the size of his yacht "Wave," he would have beat the "America" in the famous race. We remember reading, in an English publication devoted to such matters, a very good-natured and very graphic account of the race. The writer said that, as his party rode along in the edge of the evening through the immense crowds who were wending their way homeward, they had constant occasion to reply to the hail, "Is the 'America' ahead?" "Yes." "What is next?" "Nothing."

R. M., of Pendleton.—We do not remember to have received any specimen of copper from you. You had better send another to E. N. Kent, No. 30 Wall-street, this city, for analysis.

P. C., of Pa.—You are required by law, on presenting an application for a patent, to define, and, at the same time, clearly and honestly explain, your invention. If you have failed to do this, you have no right to complain of the Commissioner of Patents for refusing to grant you a patent. Inventors sometimes think they can get a patent without explaining their secret. This is absurd, as the law could give no protection to an inventor unless he fully explains his invention, and then only after being satisfied that it is new and entitled to a patent.

H. W. W., of Ky.—It is generally acknowledged that pure sperm is the best oil for lubricating machinery. Although higher in price than other oils, it is not considered more expensive, because it affords such good results, and is the most durable. This opinion we have derived from several machinists, who have tried various kinds of oils. A cheaper oil, equally as good, is desirable, because a vast annual expenditure on railroads and in factories is incurred for this lubricator. Common whale oil can be much improved for lubricating purposes, by boiling it with soda for half an hour. About one ounce of soda only is used to the gallon; and when boiled, it is allowed to settle until a sediment falls to the bottom. The clear is then run off, and used for the machinery.

C. O. R., of N. J.—We decide not to publish the article you send us, upon the cut-off and throttle-valve, taken from a daily paper. We will state, however, that the objection urged by the writer to the operation of the cut-off by the governor is absurd; for the same objection would apply to all high-pressure reciprocating engines, whether governed by the cut-off or not; or even if they worked under the full head of steam throughout the stroke. The cut-off has nothing to do with such an effect as he described.

N. P. M., of Ohio.—It is a law in mechanical work that action and re-action are equal. The ball would not fall with greater force than that required to make it ascend.

J. C., of Mass.—You complain that we did not answer your letter in regard to the probability of your being able to find a market here for your patent clocks. If you will stop and reflect a moment, you will see that such a question does not belong to us to investigate and answer. Simply because you are one of our subscribers does not "entitle" you to our time in looking up information about the state of the clock market. Our paper is supposed to be worth the subscription price, else you would not take it. Our rule is to show courtesy to all our readers alike; but we do not recognize the principle that a subscriber, because he is a subscriber, has a right to demand our time in a business matter without compensation. We carefully answer all inquiries put to us by our readers, when we can do so without a great sacrifice of time; and we have their repeated assurances that they get from us, freely, information they could not obtain elsewhere for money.

S. B., of N. J.—If, as you state, thunder or electric clouds are always minus, and the earth plus, then no discharges to the earth can take place. In other words, were your views correct, no house, tree, man or beast would ever be lightning-struck.

I. A. S., of Pa.—You appreciate the advantages of having the extremity or point of the lightning-rod made of a good conductor; hence, you are right in condemning the use of German-silver points. A silver point is better than one of platina, because it has nearly thrice the conducting capacity. Platina, however, is so difficult to fuse, and a silver point is so liable to be melted by a heavy discharge of the fluid, that the platina, on this account, some may prefer it.

W. M., of Ky.—H. Bailliere, No. 440 Broadway, this city, is the agent for Muspratt's chemistry.

B. & O., of N. Y.—H. B. M. Birkenbine, Chief Engineer of the Philadelphia Water-works, has charge of the very interesting experiments in relation to the power of the various turbine wheels. By writing to him, you can ascertain whether you are too late to have your wheel tested.

J. M., of Mich.—On examination, we find that our statement in regard to the first locomotive used in this country was correct. It was, in 1831, on the Mohawk and Hudson Railroad,

S. E. R., of Pa.—Your question is, Will water passing on to an overshot wheel, through an opening one foot in height, do more work when the supply in the forebay is 8 feet high than when it is but one foot high, the supply being constant in both cases? We answer, it will depend entirely on the direction in which the water strikes the wheel; if it strikes it so that the momentum will be expended in turning the wheel, it will generally be the case, then the wheel will run faster when the water is high in the forebay.

J. C., of Mount Pleasant.—Attempts have been made to drive machinery with gunpowder, and if they had been successful the light engine to fly with would have been produced. Two difficulties were encountered—the force was too sudden, and the smoke fouled the machinery. We do not think your plan practicable.

W. A. M., of Mass.—We know of no substance more certain to explode, on being struck, than fulminating mercury, with which percussion caps are charged. Atmospheric air, on being suddenly compressed, will yield sufficient heat to kindle phosphorus.

D. M. C., of N. Y.—There are two causes of the prolonged sound of thunder. One is that the lightning generally moves in a direction somewhat towards or from the spectator, and the sound produced nearest him reaches him sooner than that produced at greater distances. Another reason, assigned by Professor Pearce, is the varying densities in the different strata of air and cloud through which the sound passes. Your questions in astronomy are of the most elementary character, and could be answered only at considerable length. We must refer you to some work on astronomy. Professor Olmstead's will be suitable for you.

E. M. R., of Va.—Singular nouns ending in s (single) form the possessive by taking an apostrophe and s. There are good authorities for omitting the second s, but we notice that most of the good writers in this country and England now adopt the rule which we have given. Morgan James, of Utica, and Daniel Fish, of No. 66 Fulton-street, this city, are ranked among the best rifle makers in the State of New York. "The American Rifle," by Chapman, is said to be a good work. The October number of the "Atlantic Monthly" has a good article on the rifle. You will find an illustration of the lime stove invented by W. W. Albro, of Binghamton, N. Y., on page 281, Vol. XI, of the SCIENTIFIC AMERICAN.

J. R. A., of Conn.—THE SCIENTIFIC AMERICAN is the only work, published in this city, that contains a list of all the patents granted since 1847.

H. R., of Mass.—We are aware that you are a joint patentee with Mr. Leonard, in the method of manufacturing paraffine candles, for which the patent was issued on the 8th of February last, but Mr. Leonard is the inventor; hence we gave him credit, and no other person has the right to claim any glory for the improvement.

S. S., of N. J.—You can make a beautiful, quick-drying varnish for paper or linen, as follows—Take gum sandarach, 8 oz.; Canadian balsam, 4 oz.; and dissolve them in a quart of alcohol. Varnish made with gum resins and turpentine do not dry so fast as those made with alcohol, but they are not so liable to crack.

H. W. C., of N. Y.—A very small amount of sulphate of iron should be used in making black ink with logwood; an ounce is sufficient for a gallon.

C. T. M., of S. C.—You can put up a line of telegraph in any part of California and use a visual signaling telegraph like that employed in England; but if you use an electro-magnet to make records or produce signals of any kind, it would be considered an infringement of the Morse patent.

S. H., of Del.—Two sets of blocks and falls rove four-fold and set up on angle frames are sufficient to elevate a steeple-frame of 7,000 pounds weight. You must be careful in securing the frames so as to have them sufficiently strong, to prevent their breaking when raising the steeple.

J. K., of Del.—Resin gas possesses double the illuminating power of coal-gas, but we cannot tell you the relative value of the gas made from saw-dust, to which you refer.

H. J. G., of N. Y.—Solar oil is simply a market name for a certain quality of coal-oil.

Money Received

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, Nov. 26, 1859:—

A. D. H., of Mich., \$25; J. S., of R. I., \$25; D. S. H., of R. I., \$30; J. C., of N. Y., \$55; E. C., of N. Y., \$30; J. J. A., of N. C., \$25; G. A. W., of N. Y., \$30; J. C. W., of N. Y., \$25; N. A. P., of Tenn., \$30; J. Q., of N. Y., \$30; M. & B., of R. I., \$25; R. M. C., of Mich., \$30; J. H., of Ill., \$40; E. L., of N. Y., \$30; D. De F., of Mass., \$30; B. & C., of N. Y., \$30; W. S. M., of Pa., \$30; S. & R., of N. Y., \$35; I. S., of N. Y., \$30; I. M. L., of R. I., \$30; P. T., of N. J., \$30; E. M. & J. E. M., of N. Y., \$35; E. P. M., of Mass., \$30; L. B. D., of Wis., \$25; J. S., of Ohio, \$30; W. A. G., of N. Y., \$30; H. A. M., of N. Y., \$10; J. T. R., of Pa., \$30; A. R. W., of Pa., \$30; M. P. W., of R. I., \$30; V. M. B., of Pa., \$30; L. B. D., of Wis., \$50; G. K., of N. Y., \$10; L. S. C., of N. Y., \$10; M. K., of N. Y., \$30; J. E. E., of Cal., \$10; M. & H., of Mass., \$25; R. W. H., of Ga., \$35; F. O., of N. Y., \$25; N. A., of Conn., \$55; D. N., of Ill., \$25; I. P. L., of N. Y., \$10; R. N. T., of Conn., \$30; L. F., of N. Y., \$30; S. B., of N. J., \$30; B. S. C., of N. Y., \$30; G. H. S., of Mass., \$30; E. P., of Pa., \$30; W. D., of Ill., \$10; M. C., of Mass., \$55; J. F. H., of N. Y., \$25; W. B. C., of L. I., \$57; J. P. G., of N. Y., \$55; H. B. J., of N. J., \$25; C. H. D., of Miss., \$55; W. T., of N. Y., \$30; J. D. B., of Vt., \$30; B. D. & F., of Pa., \$30; O. M. P., of Ill., \$25; G. B. L., of N. Y., \$30; T. H. B., of N. Y., \$25.

Specifications, drawings and models belonging to parties with the following initials have been forwarded to the Patent Office during the week ending Saturday, Nov. 26, 1859:—

F. M. & J. E. M., of N. Y.; W. A. S., of N. Y.; J. J. A., of N. C.; J. F. H., of N. Y.; I. H., of N. Y.; L. S. C., of N. Y. (two cases); M. K., of N. Y.; W. S. M., of Pa. (two cases); T. H. W. & Bros., of Ga.; K. & R., of Texas; D. D. F. D., of Mass.; J. S., of Conn.; E. L., of N. Y. (two cases); B. & C., of N. Y.; J. P. G., of N. Y.; H. B. J., of N. J.; W. C., of Iowa; M. & H., of Mass.; A. D. H., of Mich.; G. K., of N. Y.; J. C. W., of Ill.; J. D., of N. Y.; W. B. C., of L. I.; S. & R., of N. Y.; M. P., of Ill.; T. H. B., of N. Y.; A. R. W., of Pa.; D. N., of N. Y.