

WEEKLY SUMMARY OF INVENTIONS

The following inventions are among the most useful improvements patented this week. For the claims to these inventions the reader is referred to the official list on another page:—

BOILERS & C.

Actual experiments with boilers having riveted joints of the usual kind, that is to say with the marginal portions of the plates which contain the rivet-holes, of the same thickness as the rest of the plates, prove that if the strength of the plates is assumed to be 100, the strength of the joints, if secured by a single row of rivets, is about 56, and if secured by a double row, about 70. Now as the strength of a boiler is to be measured by the strength of its weakest part, it is evident that a boiler with such joints, can only bear with safety 56-100, or 70-100 of the pressure it could bear if the joints were of the full strength of the plates, and hence that a large proportion of the metal now used in boilers is useless, and that the same strength might be obtained with plates of very much less thickness, if the riveted portions could be made as strong as every other portion. By the use of so much thinner plates a great saving in the cost of all boilers would be effected, but this advantage is of trifling importance compared with that which would result to steam navigation from the immense saving in the weight of iron. The latter advantage would be very great in ocean navigation, as it would enable more coal or freight to be carried, but would be still greater in the navigation of shallow rivers where boats of the lightest draft are required. The saving of weight will also be of great importance to railroads on account of the saving in wear and tear of the track, and in fact it will have more or less importance in all boilers of locomotive or portable character, as the boilers of steam fire engines, steam plows, and portable steam-engines; and in iron ships, gasometers, and other structures or apparatus formed of iron plates united by riveting, the advantages of thus reducing the thickness of the plates will be almost or quite as great as in steam-boilers. James Buchanan Henry, of this city, has patented an invention the object of which is to make the joints of boilers and other structures or apparatus composed of metal plates united by riveting, as strong as the rest of the plates, and to this end his invention consists in making the marginal portions of the plates which are to form the laps of the joints and receive the rivets of a sufficiently greater thickness than the rest of the plates, to compensate for the weakening effect of the rivet holes.

ELEVATING VESSELS.

This invention has for its object the remedying of the difficulties attending navigation in shoal water over sand bars without the employment of excavators, or what are denominated "camels," which are sometimes used to carry boats over the bars, or for elevating sunken vessels docks, &c., the operation of which are well understood. It consists in furnishing vessels of any description with a strong metallic vessel of a suitable capacity, which will serve to contain condensed air, the air to be forced into this vessel by suitable air pumps operated by the engines or by manual power, before the vessel starts on her voyage or any time during the voyage, so that the condensed air will be ready for use at the appropriate time, with this vessel is connected a strong pipe or receiver, and to this receiver are attached, at the required intervals along its line, branch pipes, of any flexible material found best adapted to this purpose; these communicate with suitable bags, or buoys, and with these bags are connected cords or chains which are attached to the side of the vessel and arranged in such a way that the buoys can be thrown over the stem and stern and be brought under and near the keel while in an uninflated state, and while in this situation can be inflated simultaneously so that the vessel may be elevated horizontally and thus decrease the draft sufficiently to permit it to float over the bar, or whatever may be the obstacle in its course, in perfect safety. This improvement was designed by T. Cato McKeen, of Nashville, Tenn.

OSCILLATING ENGINE.

This invention relates to that class of oscillating engines to and from which the induction and eduction of steam is effected through ports in a side pipe. In this class of engines there is always a greater or less tendency of the steam acting between the side pipe and the receiving face of the cylinder, to force apart the valve

faces, and this tendency increases or diminishes in force with the variation of pressure in the boiler and with the more sudden variations produced in the side pipe by the action of the governor, so that such variations in the pressure have heretofore rendered it difficult to accommodate or adjust the means used to resist the effects of such pressure, and hence when the pressure has been very high, the valve faces have been forced apart and permitted a leakage of steam, and when the pressure has been low, there has been too much friction between the said faces, causing a serious loss of power and an undue degree of wear of the said faces. The first part of the invention is designed to overcome this difficulty, and to this end it consists in a certain mode of producing on the end of the trunnion on the opposite side of the cylinder to the side pipe, a pressure varying in proportion to the pressure on the receiving face of the cylinders. Another difficulty to be encountered in this class of oscillating engines results from the unequal expansion and contraction of those parts of the working face of the side pipe, through and in contiguity to which the induced or live steam passes, and those parts through and in contiguity with which the cooler exhaust steam passes; and the second part of the invention consists in providing for a constant supply of live steam from the induction chamber of the side pipe, to a cavity formed within that part of the face of the said pipe which is contiguous to the eduction chamber, or within the walls of the eduction chamber, for the purpose of producing (as nearly as is practicable) a uniform temperature, and consequently a uniform expansion and contraction of the metal in all parts of the face of the side pipe. The inventor of this device is William S. Mackintosh, of Pittsburgh, Pa.

OSCILLATING ENGINE.

This invention relates to that class of oscillating engines to and from which the induction and eduction of steam is effected by means of a side pipe, and its object is to counteract the tendency of the steam acting between the side pipe and the side of the cylinder on which the steam is received to force apart the valve faces and permit an escape of steam. It consists in so applying a piston or its equivalent in relation to the trunnion on the opposite side of the cylinder to that on which the steam is received and so conveying steam to act upon the said piston or equivalent that it may be thereby forced directly towards the end of the said trunnion, and through interposed bearings of proper character may be made to press against the said trunnion to hold the valve face of the cylinder against the corresponding face of the side pipe. The credit of this contrivance is due to William S. Mackintosh and James Hemphill, of Pittsburgh, Pa.

PRINTING PRESS.

The object of this invention is to apply to an ordinary hand printing press, such as is generally termed a job printing press, an automatic inking device so arranged that the form may be properly inked by simply moving the frisket and forcing down the platen, the usual manipulation of the old hand press. The invention also has for its object the proper supporting of the platen to preserve its horizontality whatever may be the relative position of the form or type with it, and also a more ready adjustment than usual of the blank sheets to the frisket. This device has been patented to Oliver E. Weston, of Roxbury, Mass.

MACHINE FOR PRINTING ADDRESSES ON NEWSPAPERS.

The object of this invention is to obtain a device that may be attached to a printing press of any of the known kinds, and operate conjointly with it in such a way, that the addresses may be printed on the margin of the sheets simultaneously with the printing of the newspaper on the body or central parts of the sheets; thereby dispensing with the labor of putting the addresses on each paper after it is printed. J. A. Campbell, of Georgetown, C. W., is the inventor.

POWER LOOM.

This invention consists in certain improved means of governing the operation of the let-off mechanism and the consequent delivery of the yarn from the beam, by the tension that is produced on the cloth by the take-up, whereby a more uniform tension of the cloth and warp is preserved, and all the advantages known to weavers to result from a uniform tension are obtained. This improvement was designed by William H. Gray, of Dover, N. H.

FOREIGN NEWS AND MARKETS.

A submarine cable of 120 miles in length has been laid through the Bass' Straits between Australia and Tasmania; thus affording good evidence of South Sea enterprise.

Steam power is coming into very extensive use on farms in England. Engines amounting to 10,000-horse power were made and sold last year. For certain kinds of work, when they can be employed on large farms, the cost for steam work is about three-fifths that of horses.

Since 1851 Messrs. Burgess & Key have sold 1,900 of McCormick's reapers, of which 771 were made last year; and at present they have four times the number of orders on hand which they had in Jan. 1859. Messrs. Crosskill have sold 500 of Bell's reapers and 800 of Hussey's; Messrs. Dray have also sold 800 of Hussey's, and Messrs. Garnett have sold 600 of Hussey's and 250 of Wood's. Altogether, according to a paper recently read on the subject before the Society of Arts in London, by T. C. Morton, there were 4,000 reapers employed in England last harvest, and probably their will be twice the number used the next. Nearly all of these machines are American inventions; and among them, Hussey's seems to be the favorite on account of its simplicity. The labor of 40,000 laboring men was saved by these machines last year, and thus a great gain was effected by the farmers, while, at the same time, there was plenty of work for able farm operatives, and no reduction of wages.

On the North London Railroad several car wheels have been fitted with an elastic strip under each tire, and it has been found that much less wear and tear has been experienced. This is following in the track of some of our American car wheel builders, who set the tyres upon a continuous surface of wooden blocks. Such wheels are used on the Boston and Providence Railroad.

On most of the English railroads no means of communication have yet been furnished between the passengers and engineers, as on our American railroads, by the simple means of a rope running over the top of the cars. Mr. Mechi has written a letter to the London Times on this subject, and suggests that an act of Parliament be made to compel railroads to furnish such means of safety.

Railroad iron is in good demand. The Welsh rails bring £5 12s. 6d. per ton, cash. The Staffordshire rails bring £7. Staffordshire bars are selling at £7 10s., double sheet iron, £10 10s.; single, £9. The best hoop is £8 10s.; round rods, £7 10s. Spelter, per ton, £22. Copper, £112, in tile. English refined tin, £142. Scotch pig iron is in steady demand, and a large business done at the rate of £2 18s. per ton. The British metal market is indeed active, and good prices ruling.

There has been a great increase of orders for brass wire at Birmingham.

NEW YORK MARKETS.

CANDLES.—Sperm, city, 38c. a 40c. per lb.; sperm, patent, 60c.; wax, paraffine, 50c.; adamantine, city, 18c. a 21c.; stearic, 27 a 28c.

COAL.—Anthracite, \$4.50 a \$5; Liverpool orrel, per chaldron, \$11; cannel, \$11.50.

COPPER.—Refined ingots, 23½c. a 24c. per lb.; sheathing, 25c.; yellow metal, 30c.

CORDAGE.—Manilla, American made, 8½c. per lb.; Rope, Russia hemp, 12c.

COTTON.—Ordinary, 8½c. a 9c.; good ordinary, 9½c. a 10c.; middling, 11½c. a 11¾c.; good middling, 11¾c. a 12¾c.; middling fair, 11¾c. a 13c.

DOMESTIC GOODS.—Shirts, brown, 20-inch, per yard, 6c. a 7½c.; shirts, bleached, 36 a 32-inch, per yard, 6c. a 8c.; shirts, bleached, 30 a 34-inch, per yard, 7c. a 8½c.; sheetings, brown, 36 a 37-inch, per yard, 5½c. a 6½c.; sheetings, bleached, 36-inch, per yard, 7½c. a 15c.; calicoes, 6c. a 11c.; drillings, bleached, 36-inch, per yard, 8½c. a 10c.; cloths, all wool, \$1.50 a \$2.50; cloths, cotton warp, 85c. a \$1.57; cassimeres, 80c. a \$1.37½; satinettes, 30c. a 60c.; flannels, 15c. a 35c.; Canton flannels, brown, 8½c. a 13c.

DREWOODS.—Barwood, per ton, \$18 a \$20; Camwood, \$150; Fustic, Cuba, \$35 a \$26; Fustic, Tampico, \$22; Fustic, Savanilla, \$19 a \$20; Fustic, Maracaibo, \$18.50 a \$19; Logwood, Laguana, \$22 a 23; Logwood, Tabasco, \$21; Logwood, Sta. Domingo, \$13 a \$13.50; Logwood, Honduras, \$16 a \$17; Logwood, Jamaica, \$12.50 a \$12; Lima wood, \$95 a \$75; Sapan wood, \$17.

FLOUR.—State, superfine brands, \$1.15 a \$1.25; Ohio, common brands, \$1.25 a \$1.50; Ohio, good and choice extra brands, \$1.50 a \$1.75; Michigan, Indiana, Wisconsin, &c., \$1.50 a \$1.55; Genesee, extra brands, \$1.75 a \$1.75; Missouri, \$1.40 a \$1.50; Canada, \$1.65 a \$1.60; Virginia, \$1.25 a \$1.25; Rye flour, fine, \$1.75 a \$1.90; corn meal, \$1.30 a \$1.40.

HEMP.—American undressed, \$120 a \$150; dressed, from \$160 a \$200. Jute, \$95 a \$97. Italian, \$275. Russian clean, \$190 a \$200 per ton. Manilla, 6½c. per lb. Sisal, 5½c.

INDIA-RUBBER.—Para, fine, 55c. per lb.; East India, 47½c. Indigo.—Bengal, \$1 a \$1.55 per lb.; Madras, 70c. a 95c.; Manilla 60c. a \$1.15; Guatemala, \$1 a \$1.25.

IRON.—Pig, Scotch, pertun, \$34 a \$35; Bar, Swedes, ordinary sizes, \$35 \$36; Bar, English, common, \$42.50 a \$43; Refined, \$52 a \$54; Sheet, Russia, 1st quality, per lb, 11 1/2c a 11 3/4c; Sheet, English, single, double and treble, 3 3/4c a 3 7/8c; Anthracite pig, \$33 per tun.

IVORY.—Per lb, \$1.25 a \$1.30. LATHS.—Eastern, per M., \$2. LKAD.—Galena, \$5.20 per 100 lbs.; German and English refined, \$5.65 a \$5.70; bar, sheet and pipe, 5 1/2c a 6c per lb.

LEATHER.—Oak slaughter, light, 29c a 31c per lb.; Oak, medium, 30c a 32c.; Oak, heavy, 28c a 31c.; Oak, Ohio 29c a 30c.; Hemlock, heavy, California, 19c a 20c.; Hemlock, buff, 15c a 18c.; Cordovan, 50c a 60c.; Morocco, per dozen, \$18 a \$20.; Patent enameled, 16c a 17c per foot, light Sheep, morocco finish, \$7.50 a \$8.50 per dozen; Calfskins, oak, 55c a 60c per lb.; Hemlock, 56c a 60c.; Bolting, oak, 32c a 34c.; Hemlock, 28c a 31c.

LIAM.—Rockland, 75c per bbl.

LUMBER.—Timber, white pine, per M feet, \$17.75; yellow pine, \$35 a \$36; oak, \$18 a \$20; eastern pine and spruce, \$14 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, \$23 a \$24; White Pine, Albany boards, dressed, tongued and grooved, \$20 a \$21; Black Walnut, good, \$45; Black Walnut, 2d quality, \$30; Cherry, good, \$45; White Wood, chair plank, \$42; White Wood, 1 inch, \$23 a \$25; Spruce flooring, 1 1/2 inch, dressed, tongued and grooved, each, 22c a 24c; Spruce Boards, 1 1/2c a 17c.; Hemlock Boards, 12 1/2c a 14c.; Hemlock wall stripe, 10c a 11c.; Shingles, cedar, per M \$28 a \$35; Shingles, cypress, \$12 a \$25; Staves, W. O. pipe, light, \$5 a \$6; Staves, white oak, pipe, heavy, \$75 a \$80; Staves, white oak, pipe, culls, \$30 a \$35; Staves, do. hhd., heavy, \$70; Staves, do. bbl. light, \$30 a \$35; Staves, do. bbl. culls, \$20; Mahogany.—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, 3 3/4c a 3 1/2c per lb.; American clinch, 5c a 5 1/2c; American horse-shoe, 14 1/2c

OILS.—Olive, Marcellis, baskets and boxes, \$3.35 a \$3.50; Olive, in casks, per gallon, \$1.12 a \$1.25; Palm, per pound, 9c a 9 1/2c; Linseed, city made, 57c a 58c per gallon; linseed, English, 57c a 58c; whale, fair to prime, 45c a 52c.; whale, bleached 50c a 60c.; sperm, crude, \$1.40 a \$1.45; sperm, unbleached winter, \$1.47; lard oil, No. 1, winter, 92 1/2c a 97 1/2c; red oil, city distilled, 60c.; Wadsworth's refined rosin, 30c a 40c.; Wadsworth's boiled oil for painting, 35c a 40c.; Wadsworth's tanner's improved and extra, 30c a 40c.; camphene, 41c a 46c.; fluid, 50c a 53c.

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, 7c a 9c per 100 lbs.; vermilion, Chinese, \$1.12 1/2 a \$1.22; Venetian red, N. C., \$1.75 a \$2.25 per cwt.; chalk, \$4 per tun.

PLASTER-OF-PARIS.—Blue Nova Scotia, \$3.75 per tun; white, \$3.50; calcined, \$1.20 per bbl.

RESIN.—Turpentine, soft, N. C., per 280 lbs., \$3.43 1/2 a \$3.50; Wilmington, 6c., \$3.43 1/2 a \$3.50; common, per 310 lbs., \$1.62 1/2 a \$1.65; strained and No. 2, \$1.62 1/2 a \$1.90; No. 1, per 280 lbs. \$2 a \$2.75; white, \$3 a \$4; pale, \$4.50 a \$5.50.

SOAP.—Brown, per pound, 6c a 8c.; Castile, 8 1/2c a 9c.; Olive, 7c a 7 1/2c.

SPELTZ plates, 5 1/2c a 5 1/4c 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 1/4c.

SULFAC.—Sicily, \$70 a \$80 per tun.

TALLOW.—American prime, 10 1/2c a 10 3/4c per lb.

TEX.—Banca, 32c.; Straits, 30c.; plates, \$650 a \$9.37 1/2, per box. WOOL.—American, Saxony fleece, per lb, 55c a 60c.; American full blood merino, 48c a 52c.; extra, pulled, 45c a 50c.; superfine, pulled, 39c a 42c.; California, fine, unwashed, 24c a 32c.; California, common, unwashed, 10c a 18c.; Mexican, unwashed, 11c a 14c.

ZINC.—Sheets, 7c a 7 1/2c per lb.

The foregoing rates indicate the state of the New York markets up to January 18th.

Trade is becoming more lively, and there seems to be a general expectation of "good times coming" in the course of a few weeks.

There have been large arrivals of hides during the past week; but the prices for them are still maintained, and tanners seem to be cautious in purchasing for fear there may be a decline shortly. It is rather remarkable to note how distant countries are laid under contribution to supply us with hides and skins for making leather. Last week 112 bales of cow and 100 of goat hides arrived here from Calcutta, and 90 bales of goat from London, in Africa. There is a large stock of manufactured boots and shoes on hand, and business in this department is more dull than usual at this season of the year.

With reference to the liability of insurance companies in the case of the Pemberton Mill disaster, a Boston paper says:—"If the law of this State does not conflict with the New York code on the same subject, it is apparent that the corporation can recover but a very small sum. During the great Hague-street fire in New York, a building fell from the explosion of a steam boiler, and the ruins took fire. The Hartford Insurance Company had a policy on the machinery, and a suit was brought to recover the damages done to the machinery by fire after the building had fallen. The court decided that the contract terminated the moment the building fell. The case was appealed, and the Court of Appeals sustained the decision."



ISSUED FROM THE UNITED STATES PATENT OFFICE FOR THE WEEK ENDING JANUARY 17, 1860.

[Reported Officially for the SCIENTIFIC AMERICAN.]

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26,823.—Leonard Anderson, of Painesville, Ohio, for an Improved Method of Hanging Reciprocating Saws: I claim the combination of the saw, B, with the short arm, J, of the pitman, H, pin, R, and slotted arc, F, when the upper end of the saw moves in a right line, substantially as described, so that the saw will be carried backward, during its upward stroke, but will descend on a vertical line, all as set forth.

[The nature of this invention consists in pivoting the upper end of the saw to a vertical sliding block, and the lower end to the short arm of a pitman-rod, which has its fulcrum in a block sliding in a circular groove, so that the saw in its movement will have an alternate reciprocating and at the same time a vibrating motion, and be thrown back during its upward stroke, in order that the kerf may clear itself of sawdust.]

26,824.—A. C. Babcock, of New Haven, Conn., for an Improved Curtain Fixture: I claim the combination of the long india-rubber spring, C, with the curtain roller, B, and its appendages, when the whole is constructed, arranged, and made to operate, substantially as described and set forth.

26,825.—Albert Baker, of Appleton, Wis., for an Improved Life-preserving Raft: I claim the combination of extension beams, C, C, with central beam, A, ferrules, D, D, racks, b, b, pinions, a, for operating each pair simultaneously, arranged in the manner and for the purposes set forth, the whole being buoyed up out of the water by suitable bags, F, as described.

[This invention is a raft made in such a way that it can be readily taken to pieces, and folded up in a very compact and portable shape, or put together in a few minutes. When put together it will occupy a large superficial area, and have great floating capacity, not easily upset and will serve a useful purpose at sea or for pleasure purposes.]

26,826.—V. M. Baker, of Elkland, Pa., for an Improved Water Wheel: I claim the combination of the two series of buckets, C, D, and scroll, E, constructed and arranged substantially as and for the purpose set forth.

[This invention relates to an improvement in that class of water wheels in which a scroll is employed, the wheel being encompassed by the same. The invention consists in a peculiar form and arrangement of the buckets, whereby several advantages are obtained over all scroll saws, to wit, a more uniform motion, and a better combined action of the direct and re-acting force or power of the water.]

26,827.—Jesse Battey, of Honeoye Falls, N. Y., for a Machine for Directing Newspapers, &c. Ante-dated July 17, 1859:

I claim, first, The arrangement of type on slats connected together so that they may be moved successively through a machine, in the manner and for the purposes described and set forth, or any equivalent involving substantially the same principles. Second, The combination and arrangement of lever, X, X, click, a, and ratchet wheel, b, with cog wheels, R, R, for the purpose of moving slats, A, A, in the manner and for the purpose specified, or any arrangement accomplishing substantially the same thing. Third, The arrangement and combination of spring, j, pulley, c, h, and belt, f, for the purpose of taking up slats, A, A, or drum, F, as specified, or its equivalent. Fourth, The adjusting springs, d, d, for the purpose specified. Fifth, I do not claim the pin, O, or lip, l, separately; but I claim their combination and arrangement in the manner and for the purpose specified. Sixth, Moving apron, Z, by means of cleat, 5, and click, 4, in the manner and for the purpose specified or any arrangement substantially the same. Seventh, Drawing or moving newspapers, or other similar documents into a machine, by finger bars, I, I, and spurs, 6, in the manner specified, or any arrangement accomplishing substantially the same thing. Eighth, The arrangement and combination of arm, J, pin, 9, click, K, and bars, L and M, in the manner and for the purpose specified, or any arrangement substantially the same. Ninth, The arrangement and combination of lever, T, clicks, x, and ratchet wheel, U, pinions on shaft, 1, cog wheels, z, drums, p, belts, N, cleats, q, &c., for the purpose of elevating boxes, r, r, in the manner and for the purpose described and set forth or any arrangement accomplishing substantially the same thing. Tenth, I claim the method described of securing type in type-boxes, by means of screw, 12, and wedge block, 13, as shown in Fig. 4.

26,828.—Smith Beers, of Naugatuck, Conn., for an Improvement in Machines for Pulling and Cutting Cotton Stalks: I claim the construction, arrangement and operation of the pulling wheels, E, E, whether provided with inter-machine spokes, g, g, for cutting and crushing as well as pulling, or simply arranged for pulling and either with or without the auxiliary cutting and cleaning knives, substantially in the manner and for the purposes specified. I also claim the rathering wheels or rollers, G, G, constructed and operating as described, in combination with the pulling wheels, E, E.

26,829.—August Bickel, of Philadelphia, Pa., for an Improvement in Crutches: I claim, first, The springs, c, c, and elastic strap, f, in combination with the top-piece, a, the same being constructed, arranged and combined together, substantially in the manner and for the purpose set forth and described. Second, I also claim the application of the spiral spring, b, to the lower end of the staff, in combination with the tube, b', and stem, c, as and for the purposes set forth and described.

26,830.—C. F. Brown, of Bridgeport, Conn., for an Improvement in Spring Rollers for Window Shades: I claim the combination of the frame, B, in which the roller revolves with the two springs, E, E, substantially as described.

26,831.—J. A. Campbell, of Georgetown, C. W., for an Apparatus for Printing Addresses on Newspapers: I claim printing addresses on the margin of newspapers simulta-

neously with the printing of the newspapers, by means of cells or boxes, i, containing the addresses set up in type and conveyed to the form, or to the bed thereof, by means of an endless apron having an automatic intermittent movement, and this I claim independently of any particular form or kind of printing-press, or means employed for operating the endless apron.

26,832.—Joseph Carlin, of Cumminsville, Ohio, for an Improved Horse-shoe: I claim the arrangement of the projections, D, cavities, E, dovetail, b, c, F, and wedge-keys, G, constructed and combined substantially in the manner and for the purpose set forth.

26,833.—V. M. Chaffee, of Xenia, Ill., for an Improvement in Plows: I claim, first, The double-flanged reversible cutter landside, in combination with the peculiar-shaped stand, D, and bolts, O, O, and Q, substantially as set forth. Second, I also claim the arrangement of the turning plate, E, in combination with the double flanged reversible cutter landside and bolts, O, O and Q, or their equivalents.

26,834.—V. M. Chaffee, of Xenia, Ill., for a Printing-press: I claim, first, The adjustable card-box, R, constructed and arranged substantially as described. Second, The slide, T, in combination with the catcher feed-plate, U, constructed and operated substantially as and for the purpose specified. Third, The grooved wheel, G, in combination with the bolt, d, and pitman, J, all constructed and operating substantially as described. Fourth, The sliding frame, F, constructed as described, and working in a line parallel to the main shaft. Fifth, The mechanism d, c, a, b, or its equivalent, for the purpose of imparting to the inking rollers a double longitudinal friction against each other. Sixth, The combination of the ratchet wheel, H', shaft, J', arm, L', and graduated plate, K', in the manner and for the purpose specified. Seventh, I claim communicating power to a printing press by means of a combination of a cam and sliding-frame, when the main shaft to which the cam is attached is in a line parallel to the line of motion of the sliding-frame, substantially as described.

26,835.—Sylvanus S. Clark, of Manchester, N. H., for an Improvement in Hay and Straw-cutters: I claim the combination and arrangement of the crossed and connecting rods, D, E, the brake, L, and the sectoral levers, F, G, applied to the supporting frame and the shear cutters or mechanism, substantially the same. I also claim arrangement of the sectoral arms, brake and connecting bars above the knives, C, C', and the mouth of the hopper, as represented.

26,836.—George A. Cox, of Brooklyn, N. Y., for an Improvement in Formers for Bonnet Fronts: I claim the use or employment of the former, A, in combination with the frame composed of the parts, D, E and F, when arranged and operated in the manner described and for the purpose specified.

26,837.—Benjamin F. Craig, of Washington, D. C., for an Improvement in Hot-air Engines: I claim the introduction into the cylinder of a hot-air engine, of two separate bodies or currents of gaseous matter, one of which is much cooler than the other, and the hotter of which is controlled and limited by the action of the cooler and by the form and arrangement of the piston and cylinder to such an extent as that it does not come into contact with those working parts which its heat would injure, substantially as described.

26,838.—Pearson Crosby, of New York City, for an Improvement in Filing Saws: I claim the bar, A, with the slide, B', transverse plate or file-holder, C, provided with the file, D, and the set screws, E, E, or their equivalents, to form a new and useful implement for the purpose set forth.

[This invention consists in the employment or use of a bar provided with an adjustable slide, a stationary clamp or holder in which the file is secured, and adjusting or gage screws; the parts being so arranged that the sides of the teeth of the saw may be filed so as to form a "set" of equal width throughout the whole length of the saw, and also to render the cutting action of the saw far more efficient than hitherto.]

26,839.—Valorus Drew, of New York City, for an Improved Shade Fixture: I claim, first, The two cords, C, E, connected by the ring, D, and arranged as shown, to wit, the cord, C, passing around the roller, B, and the cord, E, provided with the eye, F, and attached to the jamb of the window casing, substantially as and for the purpose set forth. Second, The sliding journal, f, fitted in the roller, B, provided with the slot, c, so arranged relatively with the journal, f, as to admit of the adjustment of the same for the purpose specified. Third, Attaching the shade, G, to the roller, B, by means of the headed elastic rod, j, fitted in the hem of the shade and secured into the groove or recess, g', of the roller by means of the staples, h, in connection with the tape, H, provided with the knot, k, as described.

[This invention consists in a novel way of arranging the cord by which the shade roller is turned, whereby the cords may be kept at a proper degree of tension in order to insure the rotation of the roller, and also readily slackened to facilitate the removal, when required, of the roller from the window casing. The invention also consists in a novel way of securing the roller in the window casing, whereby all metallic fixtures, except the journals, are dispensed with, and the roller readily adjusted in and detached from the casing. The invention further consists in a novel way of attaching the shade to the roller, whereby the former is not only firmly secured to the latter, but also rendered capable of being detached, with facility, for the purpose of being washed when required.]

26,840.—Eugene Duchamp, of St. Martinsville, La., for an Improvement in Scaffolding: I claim the arrangement and combination with the cross-ties, F, and poles, A, of the adjustable brackets, B, and straps, C, substantially as and for the purposes shown and described. [This invention is an improvement in hanging and supporting scaffolds for builders, painters, carpenters, plasterers, and other work in which ladders cannot be practically employed; so that the scaffold will be held or secured in a perfectly steady position near the building which is to be repaired, and at the same time so that the foot boards can be readily adjusted to any height required, without using either ropes or nails for retaining the parts together.]

26,841.—Josiah P. Fitch, of New York City, for an Improved Churn: I claim, first, The curved guard F, arranged on the dasher shaft, and moving with the same, in combination with the peculiar shaped dasher and churn tub, in the manner and for the purposes described. Second, The hand rest, E, when made adjustable, in combination with the guard, l, churn tub, A, and dasher, B, in the manner described.

26,842.—Wm. Franklin, of New Haven, Conn., for an Improvement in Pantalons: I claim the combination of upright elastic ribs with the legs of the pantalons, by means of a lining or its equivalent, by which the ribs are secured in place, in contra-distinction to attaching them directly