

has come. Everywhere now we bring Monday, and in twenty-four hours by the chronometer after starting, we are in New York again, and find the merchants taking down their shutters, and the Monday newspapers telling us what has happened during our absence.

THE RIGHT TO FREE HIGHWAYS.

Why is it that in all the bills and bids we hear of for the construction of railroads or bridges in, above or under our streets and rivers, and among all the proposals or demands of compensation to the public for these lucrative public grants, the one thing we never hear of is that excessive profits shall be applied to the cheapening of fares for the million? Why is it that projectors propose to pay license fees into the public treasury, or to divide their profits with the school fund—interests already provided for and sure to be sustained—but shrink from the business-like and beneficent plan of reducing their fares and enlarging their traffic progressively, to any extent which will still yield lucrative returns.

Time is more than money: it is life: and rapid and cheap locomotion is life and money in a double sense, to the industrious and especially the industrious poor. They cannot always afford to pay twenty cents an hour for life; but it might and ought to be afforded them, though the medium of cheap and rapid locomotion, at five or ten cents an hour, with the blessings of pure air and moderate rents beside. The legislature which will provide for a system of rapid conveyance to and from and throughout this city and its suburbs, with a steady compulsory reduction of fares as fast and as far as consistent with a liberal but not inordinate profit and with due regard to safety and comfort, will do an amount of good and earn a grateful remembrance not often open to any body of men in the course of a century. Such a system, we believe, would speedily reduce all city fares to three cents, and all fares from the city to the remoter suburbs to six cents; while the improvements in economy of propulsion yet before us in the future may ultimately make one cent each a profitable fare for the daily moving millions of the city that is to be.

There can be no doubt that, on sound principles of political economy and philosophy, all private property in public highways ought eventually to be extinguished, and the use of them for public or private traffic thrown open on equal terms to all, taxed only with an equitable proportion of the cost of maintenance, in the same manner as common roads. The proper aim of a public work is not profit for a few, nor even wealth and honor to the whole, but to economize the time, strength and means of every individual: for of the gains of individuals all public wealth consists. In the infancy of our country, the resources of all its individuals were organized or incorporated in some sort for making the roads, bridges and other public works esteemed indispensable, and these became at once common property and free to all. A continuance of the same principle of action would have made the railroads, canals, bridges and colleges as free as the common roads and the common schools. In an ideal republic of good men, devoted to public rather than private good, this would be possible and incalculably profitable. But in a republic of men as they are, selfish, and only forced into union of interests and resources by extreme necessity, nearly all progress in public works and institutions is necessarily left dependent on selfishness, and in order to have better roads, bridges, etc., it is necessary to allow certain individuals enormous profit and wealth as an inducement to build them. Nevertheless an eventual return to the primitive ideal of free common wealth in all that is in its nature common to all, should be persistently kept in view. There is a proper and a practicable limit to all these public grants, which will be strictly insisted on by every legislator who is at all qualified by sense and honesty for his trust. The profit of the road company is to be regarded only as a means to the true end, public accommodation and economy, and is to be used only so far as necessary to attain that end; not carried so far as to interfere with it.

The present tendency toward a reabsorption of railroad, telegraph and bridge property by the public and for public benefit, through the agency of Government, is a hint which may yet become an assertion of the principle embodied in the limitations of every charter, that all such grants are but temporary concessions, for the ultimate benefit of the commonwealth, and that when they have served their purpose and repaid their beneficiaries, they must return as public property. We are not prepared to say that the resumption of these grants by Government, especially with its present corrupt and wasteful character, would be an improvement. Nor does it matter what any one may say about it; for these practical issues will work themselves out in their own time and way, little affected by theory and advice. There is one direction, however, in which we think we can discern a practical drift in the nature of things; and it is illustrated in the peculiar principle of the proposal on foot for a railroad from the Missouri river to Texas, to be open to all parties for their own care and locomotives, by payment of tolls, in the same manner as canals usually are. There are reasons enough why railroads should eventually go the way that most turnpikes have already gone, becoming first toll roads, and eventually, in a distant future of greater common knowledge and wealth, free public roads. Monopolies are at best necessary evils, and that temporarily, and their manifest destiny in every case is to go down before the paramount rights and interests of the whole, sooner or later, after they have served their temporary purpose.

In regard to the internal highways of a metropolis like this, we may assert as an axiom that there is no mere reason

for making the rails, tunnels and bridges private property than for providing the pavements, sidewalks, street crossings, lamps, sewers, Croton water, public parks, etc. etc., on the same principle. The evils of the private property system as applied to this class of public works (to which may be added the gas service) are such as the community literally groan under, without a hope of remedy. On the other hand, the beneficent success of the system of public works under which the Croton Aqueduct and Central Park were constructed, is a standing refutation of all arguments against the extension of such a system to the construction of a complete and satisfactory network of free public ways beneath or above our present crowded thoroughfares and rivers, and the equitable resumption of the much-abused privileges of all our city railroad and ferry companies. We invoke the attention of the legislature to some statesman-like and far-reaching measure of democratic progress; for which the people can afford to wait a little in preference to riveting tighter the bonds of the present undemocratic monopoly system for the sake of temporary convenience.



ISSUED FROM THE U. S. PATENT OFFICE

FOR THE WEEK ENDING FEB. 12, 1867.

Reported Officially for the Scientific American.

PATENTS ARE GRANTED FOR SEVENTEEN YEARS, the following being a schedule of fees:—

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On granting the Extension.....	\$50
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Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying size of model required, and much other information useful to inventors, may be had gratis by addressing MUNN & Co., Publishers of the SCIENTIFIC AMERICAN, New York.

61,914.—ARM FOR CAR SEATS.—Albert L. Babcock, New Haven, Conn.

I claim the seat-arm herein described as an improved article of manufacture.

61,915.—DEVICE FOR OILING SPINDLES, TOP ROLLS, ETC., OF SPINNING AND OTHER MACHINERY.—Samuel H. Barber, East Greenwich, R. I.

I claim the combination of the tubes, constructed and operating substantially as described, with the various machines used for manufacturing cotton, wool, and other material, for the purpose and substantially as herein set forth.

61,916.—STEAM ENGINE.—John S. Barden, Providence, R. I.

I claim the improved steam engine, constructed not only with the two connected heads, C, D, to its piston, and with the exhaust passage, d, extending from the steam chest, laterally, into the space between the said two heads and out the side of the cylinder, but as provided with the lever, G, to extend between the two heads and into the slide valve, H, such lever being for operating with such slide valve, in manner substantially as explained.

I also claim the combination of the mouth piece, L, with the force pump and steam engine, arranged and so as to operate substantially as specified.

61,917.—MODE OF TREATING SACCHARINE MATTERS.—Edward Beanes, London, England.

I claim subjecting saccharine matters to the action of ozone, substantially as and for the purpose described.

61,918.—APPARATUS FOR CARBURETING GAS.—W. W. Bierce, Cleveland, Ohio.

First, I claim the float, D, perforated tin, F, and covering, F', as arranged, in combination with the sleeve, G, tube, B, and slot, C, for the purpose and in the manner substantially as described.

Second, The shield, K, pipe, B, and sleeve, G, in combination with the case, A, for the purpose and in the manner as herein set forth.

61,919.—BLOWER.—George W. Bigelow, New Haven, Conn.

I claim the combination of the revolving valve, E, with the vibrating piston, D, substantially as and for the purpose herein set forth.

61,920.—DIE FOR FORMING SPIKE HEADS.—Reuel Blackwood, Philadelphia, Pa.

I claim a die consisting of the parts, A and B-D-B, constructed substantially as described, and operated by any suitable machinery, substantially as and for the purpose set forth and described.

61,921.—CAP FOR PRESERVING JARS.—Joseph Borden, Bridgeport, N. J., assignor to F. & J. Bodine, Philadelphia, Pa.

I claim a cap consisting of a disk, B, and arms, b, the whole being constructed and adapted for attachment to a jar, substantially as described.

61,922.—COAL STOVE.—Albert Brown, Troy, N. Y.

I claim, in combination with a fire-box and combustion chamber of stoves, a fuel magazine or reservoir, A, as provided with lateral vents or apertures, a, a, substantially in the manner as herein described and for the purpose set forth.

61,923.—SASH-SPRING HOLDER.—Reuben F. Brown, Lewisburg, Pa.

I claim a new article of manufacture, the arrangement and combination of the casing, A, its solid base, H, and notches, a, a', latch, B, spring, D, covering plate, C, all constructed and operating in the manner and for the purpose specified.

61,924.—CLOTHES-LINE REEL AND HOUSE.—M. H. Card and A. Sallee, Fulton, Ill.

We claim, in a clothes-line reel, the combination and arrangement of the flange drum, G, the spring, C, house, J, and stop, L, all operating as and for the purpose specified.

61,925.—CHURN.—William L. Card, Gardiner, Ill.

I claim, the combination of the revolving churn and stationary washers, the hollow shaft, a, and removable spindles, F, arranged and operating substantially as and for the purposes specified.

61,926.—SCREW GAGE.—J. S. Copeland, Bridgeport, Conn.

I claim a screw gage constructed substantially as described.

61,927.—HYMN AND TUNE BOOK.—Ebenezer Curtice, Yonkers, N. Y.

I claim, First, In singing books having their leaves cut, as herein described, the use of whole leaves, intervening the cut leaves, for the purpose mentioned herein.

Second, The application of a holder, in the manner and for the purpose herein specified.

61,928.—CARPET STRETCHER.—George O. Dunlap, Chicopee, Mass.

I claim, First, The spring, D, arranged upon the plate, A, in combination with the projections, b, b', substantially as herein shown.

Second, The claws, E, E', in combination with the carpet stretcher, substantially as shown.

61,929.—WRENCH.—Timothy Earle, Valley Falls, Smithfield, R. I.

I claim the invention in wrenches, described, consisting of a movable jaw, C, provided with a serrated or equivalent, roughened surface, a, a', in combination with a spring clamp, F, or its equivalent, substantially as set forth.

61,930.—MACHINERY FOR DRYING PAPER IN PAPER-MAKING MACHINE.—Oliver Ellsworth (assignor to himself and Richard Smith), Boston, Mass.

I claim graduating the supply of steam to the cylinders which dry the

paper by the expansion and contraction or tension of the paper made and dried.

Also, in combination with the drying cylinders, the movable roller over which the paper passes, and the link and lever which connect it to the valve in the steam pipe which supplies the drying cylinders.

I claim making the link which connects the movable roller with the regulating valve detachable and connecting it to a roller held in place by the paper, by the mechanism described, or its equivalent, so that when the paper breaks and releases the roller, the connecting mechanism will detach the link so that it will cease to operate the valve in the steam pipe.

I also claim making the link, X, X', adjustable in its length, by means of a slot and slide and screw, or other equivalent device.

61,931.—PREPARING SOLUBLE SILICA, AND IN APPLYING THE SAME TO USEFUL PURPOSES.—Anthony L. Fleury, Philadelphia, Pa. Antedated Dec. 28, 1866.

I claim the process, herein described, for preparing hydrated silica.

I also claim, as a new manufacture, hydrated silica, prepared substantially as described and set forth.

I further claim the improvement, herein described, in the manufacture of artificial stone, marble, paints, cements, and the like, substantially as described.

61,932.—STRAW CUTTER.—Warren Gale, Chicopee Falls, Mass.

First, I claim the pressure cylinder, A, constructed substantially as described, and geared to the cutting cylinder, B, in such a manner that the edge of the knife or knives shall, at the point of contact with the pressure cylinder, move at equal speed therewith, when the said pressure cylinder is constructed of disks of wood, rawhide, leather, or other similar material, not including metals of any kind, and is of full cylindrical form, substantially as set forth in the drawings.

Second, In combination with the above claim, sliding box, A, screws, E, E', spring, D, operating as described and for the purposes set forth.

61,933.—STRAW CUTTER.—W. Gale, Chicopee Falls, Mass. Antedated Aug. 12, 1866.

First, I claim the pressure cylinder, B, constructed as described, and having its entire periphery covered with a surface of soft metal, in combination with a knife-cylinder, provided with oblique or spiral knives, when the said cylinders are constructed and operated so that the edge of a knife, at the point of contact with the soft metal, shall move at the same speed as the pressure cylinder, substantially as and for the purposes specified.

Second, The sliding boxes, C, springs, S, and screws, E, in combination with the devices claimed in the first claim.

Third, The spiral knives, K, when secured in spiral grooves, h, in the cylinder, B, when the said cylinder is geared to the pressure cylinder, B, all constructed and arranged substantially as above described.

61,934.—MACHINE FOR STRAIGHTENING THE WEFT OR FIGURES OF TEXTILE FABRICS.—James Greenwood, Clinton, Mass.

I claim the machine, substantially as and for the purposes described, that is, as composed not only of a straightening roller, made expandable and contractible, as set forth, but of rollers, or their equivalents, for presenting the cloth to the action of such roller and moving such cloth with respect to it, substantially as explained.

I also claim the combination of the combination of a lever, or its equivalent, with the straightening roller, supported as described, and a combined with rollers, or their equivalents, for presenting a piece of cloth to the action of such roller, in the manner and for the purpose as set forth.

61,935.—BELT CLASP.—Philander Harlow, Hudson, Mass., assignor to himself and Asa F. Hall.

I claim the belt fastening, composed of the two plates, A and C, constructed and operating together in the manner and for the purpose substantially as described.

61,936.—EDIBLE PREPARATION FROM INDIAN CORN.—J. W. Haskins, Charlestown, Mass.

I claim the improved edible composition, as made of maize and gum acacia, or the same and one or more sweetening or flavoring matters or substances, substantially as set forth.

61,937.—STEERING APPARATUS.—Horatio F. Hicks, Grand View, Ind. Antedated Jan. 28, 1867.

First, I claim the arrangement of the pistons, S, S', rods, L, index, M, and pointer, d, substantially as and for the purpose specified.

Second, The arrangement of the levers, H, H', with levers, a, a', and rods, K, by means of which the boat may be steered from forward or aft, substantially as set forth.

61,938.—MACHINE GEARING.—Alonzo Hitchcock, New York City. Antedated Jan. 30, 1867.

I claim distributing the power around the shaft to be driven so that the tendency to displace the shaft on one side is counteracted by that on the other by the means and in the manner substantially as described.

61,939.—HARNES CLAMP.—Thomas B. Hodge, Francistown, N. H., assignor to himself and D. McCaine, Groton, Mass.

I claim the above described arrangement and combination of the clamp, D, the looped straps, C, C', the bed piece, A, the rod, E, and the ratchet, F, and catch, H.

Also, the combination therewith of one or more of the auxiliary bed pieces, I, made substantially as described.

61,940.—SORGHUM STRIPPER.—A. D. Huff and L. D. Huff, Clinton, Iowa.

We claim the knife, C, provided with two cutting edges, d, e, the first for topping with an endwise thrust, and the other for cutting when drawn back, when combined with the forked guides, b, b', of the stock, A, and a solid curved stripper, F, arranged and operating substantially in the manner and for the purposes described.

61,941.—ANIMAL TRAP.—Henry Lee, Oberlin, Ohio.

I claim the fall, F, armed with teeth or points, F', standard, G, and yoke, H, in combination with the post, I, baited lever, D, and staple, I, as and for the purpose set forth.

61,942.—FENCE.—J. C. Leonard, Union City, Mich.

I claim the combination of inclined stakes or pickets with a horizontal supporting wire or rod when said stakes are slotted or kerfed to receive the wire, are prevented from spreading apart at their base, all substantially as herein described and illustrated.

61,943.—CULTIVATOR.—Ivory Lord and Sewall Woodman, Saco, Me.

First, We claim the shank, s, as shown in all the figures of the drawings, elongated, and perforated as described, and the brace, b, connected therewith.

Second, The attachment of the teeth by the rods or arms at a distance from the wood, as shown in Figs. 1 and 4, and secured in place by nuts and keys, as described.

Third, The mode of widening or narrowing the machine by sliding the teeth on the arms, r, r', h, in Fig. 4, and the combination of all, forming the cultivator as represented and described.

61,944.—HARVESTER.—James S. Marsh, Lewisburgh, Pa.

I claim casting the platform, C, in one piece with a tool box on its upper surface to give the required strength to this platform, and with recesses in its outer corner for gears, c, c', substantially as described and shown in Fig. 2 of the drawings.

Second, The double-hinged joint platform supported upon inner and outer castor wheels, H, H', in combination with the adjustable transverse bar, D', and drag bar, E, substantially in the manner and for the purpose described.

Third, In combination with the hinged platform, castor wheels, H, H', suspending devices, D' and E, I claim the lever, F', and link, a', substantially as and for the purposes described.

Fourth, The combination of the lever, F', with the hinged cutting apparatus and draft frame, transverse bar, D', link, d', drag bar, E, and transverse, M', all arranged and operated substantially in the manner and for the purpose described.

Fifth, The combination and arrangement of the forward adjusting device, F, with the rear adjusting device, F', each having a separate axis whereby the ordinary adjustment is retained and the adjustment of the pitch of the points of the guard fingers to suit the condition of the grass to be cut, substantially as described.

61,945.—COOKING STOVE.—James Marshall, New Orleans, La.

I claim the combination of the columns, b, and ledges, a, with the oven, A, hollow grate bars, the oven, B, a, d openings, C, when covered by a cast cross bar, D, when these several parts are constructed and relatively arranged with respect to each other, as described for the purpose set forth.

61,946.—APPARATUS FOR EXTRACTING PARAFFINE, ETC., FROM OIL.—J. B. Meriam, Cleveland, Ohio.

First, I claim the stanchions, G, pulleys, N and O, as arranged in combination with the frames, A, and pan, B, for the purpose and in the manner as set forth.

Second, The cross head, D, friction rollers, c', in combination with the stanchions, G, as arranged and operated by the link, K, and levers, L, for the purpose in the manner specified.

Third, The cylinder, P, as constructed with ribs or corrugations, b, on the inner surface, as and for the purpose specified.

Fourth, The follower, E, with the dependent arms, C, in combination with the cylinder, P, for the purpose and in the manner as substantially as described.

Fifth, The arrangements of the cases, S, bucket, U, pipe, T, in combination with the tank, Q, provided with the perforated bottom, K, as and for the purpose set forth.

Sixth, The cases, S, buckets, V, in combination with the tank, Q, and freezing mixture, for the purpose and in the manner as described.

61,947.—CASTER FRAME.—Frederick J. Miller, Brooklyn, N. Y.

First, I claim the caster frame whose base is provided with receptacles or compartments for salt, sugar, etc., when constructed in the manner described and shown.

Second, I claim the combination of the base, a, and the spring or holder, f, when applied to a caster frame, in substantially the manner described and shown.

61,948.—DUMPING WAGON.—George N. Munger, New Orleans, La.

I claim the frame work, D and E, which supports the body, the one part being fixed to the body and the other to the forward axle, and the two parts hinged together and combined with a device for securing the two axles in

their proper relative positions, the whole constructed and arranged so as to operate substantially in the manner and for the purpose specified.

61,949.—HARDENING IRON.—Harvalin Paddock, St. Johnsbury, Vt.

I claim the within-described process of hardening iron with the employment of carbonate of iron and carbon in a finely-divided state, applied in the manner substantially as herein set forth.

61,950.—COMBINATION OF STAMP HOLDER AND INKSTAND.—Philander Perry, Charlestown, Mass., and Joshua Brooks, Newton, Mass.

First, We claim the stamp holder, O, having openings in the cover with chambers containing each a plunger, o, and c, used with or without springs, substantially as and for the purpose described.

Second, We claim, in combination with a stamp holder, the well, G, G, with a rotating cylinder, H, thereon, constructed substantially as and used for the purpose described.

Third, We claim the combination of the mullage pot, I, and the sand box, L, with one inkstand, substantially as described.

Fourth, We claim the grooved steps, C, C, for holding pens and pencils in combination with an inkstand, constructed and used substantially as described.

Fifth, We claim the corrugated wiper, substantially as described.

Sixth, We claim the two standards, Q, with the ears, R and c, fitted to receive a calender, when used in combination with an inkstand and constructed substantially as described.

Seventh, We claim the combination of the stamp holder, finger wiper, mullage pot, sand box, pen rack, and calender stand, with an inkstand, all constructed substantially as shown and used as described.

61,951.—HOLDBACK IRON FOR CARRIAGE TRILLS.—Russell B. Prindle, Norwich, N. Y.

I claim the holdback iron or stop, A, substantially as and for the purpose set forth.

61,952.—HARVESTER.—Amos Rank (assignor to the Aetna Manufacturing Company), Salem, Ohio.

First, I claim securing the flange beam rigidly to a rocking shoe, J, which is sustained at its front end by means of a transverse brace, H, which has a hinged connection with the draft frame and is coupled to the drag bar or brace G, by means of devices, I and J, or their equivalents, and at its rear end to an angular projection, G', of a longitudinal brace, G, all constructed and operating substantially as described.

Second, I claim in combination with a shoe hinged as at H, the two braces, G and H, coupled together by means of devices, I, J, or their equivalents, which will admit of the rising and falling of the front end of the shoe, J, substantially as described.

Third, The construction of the drag bar, G, with the projection, G', on its rear end and projection, G', on its front end, and the bar being wrought metal and in one piece, substantially as and for the purpose described.

Fourth, The combination with the two-wheeled draft frame and the gearing thereof, of the compound brace, G, G', H, coupled together by the loose connection, I, J, and the double-hinged shoe, J, substantially as and for the purpose described.

Fifth, The arrangement of the transverse brace, H, angular drag bar or brace, G, G', coupled loosely together and a depressed hanger of a two-wheeled draft frame, said wheels being independent drivers, all substantially as and for the purpose described.

61,953.—HARVESTER.—Amos Rank (assignor to the Aetna Manufacturing Company), Salem, Ohio.

I claim providing for keeping the sickle and pitman rod of a combined reaper and mower in a straight line vertically by means of a gage collar, h, applied to the swivel pin, a, substantially as described.

61,954.—MINCING KNIFE.—Helen M. Remington, Springfield, Mass.

I claim the sectional stems or shanks, h, with the knives, c, in combination with the cylindrical clamp or ring, a, and the socket, g, substantially as herein described and for the purpose set forth.

61,955.—MACHINE FOR GRINDING SAWS.—John Richards, Columbus, Ohio.

First, I claim the arrangement substantially as herein described, whereby saw blades are supported and up to the position desired, adjusted at different angles with respect to the face of the carriage, D, and bevelled on both sides, all substantially as set forth.

Second, The combination of the two screws, a, d, with the sliding carriage, D, of a saw-bevelling machine, substantially in the manner described.

Third, The combination of the shouldered holder, K, hinged adjustable support, G, and curved gage, g, substantially in the manner and for the purpose described.

Fourth, The hard metal-shouldered holder, when constructed to operate as described.

61,956.—COOKING STOVE.—J. J. Savage, Troy, N. Y.

First, I claim the location of the fuel door way or feed mouth, B below and forward of the combustion chamber, C, of stove furnaces and in such immediate position to the fire-box, A, as to operate in manner substantially as herein described for the purposes set forth.

Second, When operated in combination with and through said located fuel door way, B, in manner as and for the purpose described, I claim the lever feeder, constructed substantially as set forth.

Third, In combination with the front plate, D, of stove furnaces, I claim the arrangement of a fire or guard plate, E, in position above the fuel door way, B, of the fire box, and about opposite the combustion chamber, C, substantially in manner and for the purpose set forth.

Fourth, In combination with the fuel door way, B, when located substantially as described, of the front plate, D, of stove furnaces, I claim the arrangement of an inclined or slanting position such as to overhang the fire box and combustion chamber of the furnace, substantially in the manner and for purpose as herein set forth.

61,957.—CHEMICAL COMPOSITION FOR BLASTING ROCKS.—Charles Seidel, New York City.

I claim the above-described composition of matter, substantially as and for the purposes described and set forth.

61,958.—PAVEMENT.—William H. Shurtteff, Providence, R. I.

First, I claim a paving block composed of wood and iron or other suitable metal combined and applied to each other, substantially as shown and set forth.

Second, The combination with a wooden block of suitable form of a skeleton or open-work metal cap or frame applied to the said block in such manner that the fibers of the wood shall be compressed between the sides of, and forced up into the openings in the top of the said cap or frame, substantially as shown and described.

Third, The skeleton or open-work metal cap for paving block herein described the same consisting of a frame of iron or other like material, the sides of which are extended and bent at the ends forming the top of the frame, the said bars being wedged shaped or tapering toward their lower ends, and arranged so as to form a grating or lattice work, substantially as and for the purposes shown and set forth.

61,959.—CHEESE VAT.—Alanson Slaughter, Middletown, N. Y.

I claim the arrangement and combination of the hot water trough, A, with its recess, C, the steam and drip pipes, D, E, the corrugated disc inator, F, and milk vat, G, with or without the agitator, K, substantially as and for the purpose herein specified.

61,960.—PORTABLE PISTOL GALLERY.—Fisher A. Spofford and Matthew G. Raffington, Columbus, Ohio.

First, We claim a miniature portable pistol gallery, constructed substantially as shown and described.

Second, The ends and barrel, Figs. 3 and 8, arranged and operating in the manner and for the purposes herein described.

61,961.—RAILROAD-TIME INDICATOR.—R. C. Taylor, Brockport, N. Y.

First, I claim the employment of a series of adjustable cams, C, C, with a graduated cam wheel, B, and an escapement lever, D, or equivalent, operating substantially as described and for the purpose set forth.

Second, Making the wheel, B, in two parts, c, d, when combined with the cams, in the manner and for the purpose specified.

61,962.—METALLIC CARRIAGE WHEELS.—Adam P. Ware, Camden county, N. J. Antedated Jan. 28, 1867.

I claim constructing a wheel for carriages, substantially as described, when the felloes, B, are made of malleable iron, and constructed and fitted together with the plates, h nuts, a, and spokes, C, in the manner described.

61,963.—EXCAVATOR AND POTATO DIGGER.—Benjamin O. Warren, Elkhart, Ind.

First, I claim the central carrier, C, as arranged relatively to the inclined plane of the shovel, B, in combination with the larger carrier, C, substantially in the manner and for the purpose as herein set forth.

Second, The longitudinal frame, B, arranged in combination with the beams, A, axles, a, and carrier, C, substantially in the manner and for the purpose as herein set forth.

Third, The guide lever, G, in combination with the frame, B, and shovel, b, substantially in the manner and for the purpose as herein set forth.

Fourth, I claim the application or adaptation, in the manner herebefore described, of pipes or tubes in furnaces or fire places, in immediate juxtaposition with ovens or other cooking apparatus or heating chambers, which pipes or tubes admit heated air into the oven or other chamber to be heated.

61,965.—PEAT MACHINE.—Darius Wellington (assignor to Cornelius Wellington), Boston, Mass.

I claim the combination of the cylinder, a, and its reducing and pressing mechanism, the mold cell, c, and pl, l, and the follower, l, when the whole are constructed and arranged to operate together, substantially as shown and described.

I also claim so combining the driving shaft, n, by which the follower is directly operated, and the mill shaft, e, that the pressure upon the peat may be increased or diminished relatively to each reciprocation of the follower, substantially as set forth.

I also forming the bed of the mold cell of the stone, as and for the purpose set forth.

I also combining with the cylinder, b, the cutting edge, u, operating as set forth.

61,966.—FIRE BRICK.—Samuel K. Wellman, Nashua, N. Y.

I claim the composition of fire clay and quartz, or fire clay and plumbago or black lead, about in the proportions specified, for the manufacture of fire-brick crucibles and other vessels or articles which are to be subjected to an intense heat.

61,967.—RAILROAD SWITCH.—George Westingham, Jr., Schenectady, N. Y.

First, I claim a portable railroad switch having double branch tracks, D, D, which converge as shown, and are intersected by grooves, H, H, substantially as set forth.

Second, I also claim the double grooved frog, C, having branch track, D, in combination with the switch bar, E, substantially as set forth.

Third, I also claim the retention of the rest, F, of the branch tracks, D, backward, so as to form a bearing surface for the switch bar behind its joint, substantially as shown.

Fourth, I also claim the combination of the double grooves, the right and left branch tracks, and the track, I, at the forward end of the frog, C, substantially as shown.

61,968.—MANUFACTURE OF PAPER BOXES.—Seth Wheeler and Edgar Jerome, Albany, N. Y.

First, We claim, in the manufacture of hollow paper articles directly from paper pulp by mechanical pressure, means substantially as described, whereby the water is allowed to escape freely, and form is given to the pulp at one operation as set forth.

Second, We claim the combination of vertical and horizontal followers in a machine adapted for making paper boxes and other hollow articles from pulp, substantially as and for the purpose described.

Third, We claim the combination of a perforated die and a follower or followers in a machine adapted for making paper boxes from pulp, substantially as described.

Fourth, In a machine adapted for making paper boxes and other hollow articles, we claim the use of a light, rigid frame upon or within which the article of pulp is formed, said frame being removable from the die, substantially as and for the purpose set forth.

61,969.—MANUFACTURE OF BOXES FROM PAPER PULP.—Seth Wheeler and Edgar Jerome, Albany, N. Y.

First, We claim a new article of manufacture, to wit, the paper box with its body and the rim of its top pressed into form directly from paper pulp, and the rim pieces of the body and top cemented in place, substantially as described.

Second, A box top, as a new article of manufacture, made as described.

Third, The body and bottom of a box, as a new article of manufacture, made as described.

61,970.—HORSE SHOE NAILS.—Albert S. Wilkinson, Pawtucket, R. I.

I claim the horse shoe nail, B, C, for securing nails to the feet of animals having hoofs, B, passing quite through the shoe or through the lower plate of a double shoe, substantially in the manner and for the purpose set forth.

61,971.—HORSE SHOE.—Albert S. Wilkinson, Pawtucket, R. I.

First, I claim the placing of a toe clip, B, on one side of the toe of the shoe, so as to be mainly opposite one of the heels of the shoe, when the said opposite heel clip are used to secure the shoe to the foot, while one heel of the foot is free for lateral expansion, substantially in the manner and for the purpose set forth.

Second, I claim a clamping band, K, K', running from one heel of the shoe over in front of the hoof, and fastening to the toe of the shoe opposite to the starting point at the heel, in combination with the heel rest, j, substantially in the manner and for the purpose set forth.

Third, I claim the ratchet-headed clamping screw, h, l, in combination with the catch or detent, m, Fig. 2, substantially in the manner and for the purpose set forth.

Fourth, I further claim the combination of the heel clip, b', band, K, and the bar clip, j, arranged substantially as herein represented; to firmly clamp one side of the heel of the hoof.

61,972.—HORSE SHOE.—Albert S. Wilkinson, Pawtucket, R. I.

I claim a continuous clip, B, B', b', g, j, in combination with the bar, A, elevated at the toe, B', and heel, b, and having the arms, g, j, extending upward and taking hold of the heel of the foot, the heel clips being fastened by the button fastening, h, l, substantially in the manner and for the purpose set forth.

61,973.—HORSE SHOE.—Albert S. Wilkinson, Pawtucket, R. I.

First, I claim a rubber sole, B, extending over the whole sole of the foot, in combination with a stiffening metallic shoe, a, substantially in the manner and for the purpose set forth.

Second, And, in combination with the above, I claim the metallic shield, k, substantially in the manner and for the purpose set forth.

Third, I claim the extension, b, in combination with the flap, R, substantially in the manner and for the purpose set forth.

61,974.—HORSE SHOE.—Albert S. Wilkinson, Pawtucket, R. I.

I claim a round-bottom shoe, A, Figs. 1 and 2, armed and protected at the heel and toe with steel plates, e, e, e, substantially in the manner and for the purpose set forth.

61,975.—HORSE SHOE.—Albert S. Wilkinson, Pawtucket, R. I.

I claim a calk formed by parts, d, f, placed alternately on the outer and inner edge of the bar, A, substantially as shown and described.

61,976.—MOLDING SASH WEIGHTS.—Samuel Williamson, Cincinnati, Ohio.

First, I claim the iron cut off or stop, D, when applied and used in casting weights.

Second, The application and use of the horn-shaped conical iron chill or sand cores, E, E', in casting weights.

Third, The application and use of the stops, D, D, and the cores or sand, E, E', whether used separately or in combination in casting weights, substantially as set forth and described.

61,977.—DIES FOR MAKING KNOBS.—Joseph Wise (assignor to Thomas Kennedy), Branford, Conn.

First, I claim the combination and arrangement of the socket, C, and spindle, D, provided respectively with projections, a, and a', and arranged to operate substantially in the manner described.

Second, In combination with the above, I claim the arrangement of the spindle, I, as and for the purpose specified.

61,978.—MANUFACTURE OF VINEGAR.—Harry P. Witbeck, Rochester, N. Y. Antedated August 12, 1866.

I claim the process of producing a liquid for vinegar or acetic acid from the produce of the mixture of grains, as herein described, by passing the same through a filter, for the purpose of purification, substantially as herein specified.

I also claim the rapid process of acclimating the liquid by subjecting it to a charge of pure oxygen, as herein described.

61,979.—BUCKLE.—Henry S. Woodruff, Jamesville, Wis.

First, I claim the application to the cross bar, b, and on the outer surface of a buckle of a fixed right tongue, g, when arranged and used substantially as and for the purpose set forth.

Second, The combination and arrangement of the cross bar, b, and tongue, g, with the cross bar, a, and tongue, r, substantially as and for the purpose set forth.

61,984.—CEMENT FOR WALKS, FLOWS, PAVEMENTS, ETC.—J. S. Baldwin, Elmira, N. Y., W. H. Jones, Rochester, N. Y., and E. N. Gibbs, Elmira, N. Y.

We claim a cement formed by the combination of coal tar, coal pitch, sand, coke or coal ashes, furace cinders or iron scale and rosendale cement, substantially in the proportions herein specified.

61,985.—MODE OF TREATING PEAT.—Hosca Ball, New York City.

The vertical conductor, B, and horizontal conductor, A, arranged at right angles to each other with corresponding screws, B, E, independent of each other and operating substantially as and for the purpose specified.

61,986.—MUSQUITO BAR FOR WINDOWS, ETC.—V. Barker, Otisfield, Mass.

First, I claim the corners for a frame made from sheet metal as herein shown and described and for the purposes set forth.

Second, I also claim the bars, C, provided with grooves in which is fitted a tongue in combination with the socket corners, substantially for the purposes herein shown and described.

61,987.—HYDRAULIC PUNCHING MACHINE.—J. B. Barnes, Fort Wayne, Ind.

I claim an improved hydraulic punch formed by the combination of the large hollow screw, B, the small interior screw, C, and the plunger, G, with each other and with the yoke, A, substantially as herein shown and described.

61,988.—GAGES FOR SAW MILLS.—Jacob Behel and John Nelson, Rockford, Ill.

First, I claim the adjusting of angle, C, to any desired angle by means of two rotatory motions, one around an axis in itself, and the other around an axis in B, or its equivalent.

Second, In combination with the fence, B, of a saw gage, we claim the block, E, slide, F, and set screw, J, when said slide is grooved to fit the inclined faces of the graduated way bar, L, and the latter is set into and is flush with the face of the saw table, the said parts being constructed and arranged substantially in the manner and for the purposes set forth.

61,989.—HOOKS AND EYES.—Andrew Bennett (assignor to himself and Joseph Oechler), Brooklyn, N. Y.

I claim an improved article of manufacture, a hook, A, provided with side springs, a, a, substantially as and for the purpose herein shown and described.

61,990.—HORSE SHOE.—Thomas B. Bishop, Baltimore, Md.

I claim, First, The combination of the artificial calk, b, and flange, a, formed above the base of said calk, when the calk bears upon the ground and the flange is adapted for being applied between the hoof of the horse, and the shoe, substantially in the manner and for the purpose described.

Second, The combination of air passages, c, with the elastic sole or frog substantially as and for the purpose described.

Third, Setting or grooving the bottom surface of the frog, b, substantially as and for the purpose described.

Fourth, The combined cushion and elastic frog or calk, constructed as described the same being a new article of manufacture.

61,991.—MUCILAGINOUS COMPOUND.—Victor G. Bloede, Brooklyn, N. Y.

I claim the gum produced by treating starch with a compound of nitric and hydrochloric acids mixed together, substantially as and for the purpose described.

Second, The within described process of producing gum from starch by treating the same with nitric acid in about the proportion herein set forth and drying it on metal sheets of a heat of about 300° Fah. as specified.

Third, The combination of oil of almonds with an aqueous solution of gum prepared by treating starch with acids, substantially as and for the purpose set forth.

61,992.—MODE OF TREATING INDIA RUBBER.—Stephen Bourne, Headstone Drive, Harrow, England, assignor to himself and Theodore Bourne, New York City.

I claim deodorizing india-rubber or any compound of which it forms a part by means of charcoal, substantially as described.

61,993.—METAL BUNG.—William Boynton, Auburn, N. Y.

I claim, First, The screw, c, in combination with disk, B, the nut, d, and washer, e, the whole constructed and operating as and for the purpose herein set forth.

Second, The case, A, constructed in the manner and for the purpose substantially as herein described.

Third, A combination of a case, A, and disk, B, both constructed and operating substantially as herein set forth.

61,994.—PANEL FOR LAMP SHADES.—George M. Breuker (assignor to Breuker and Kessler), Philadelphia, Pa.

I claim the manufacture of panels for lamp shades by applying to the varnished surface of a sheet of mica or sheet of paper or other material on which two or more layers of oil color have been deposited as herein specified.

61,995.—SOAP.—John Brucker, Chicago, Ill.

I claim the soap consisting of the above enumerated ingredients and prepared substantially in the manner herein described and specified.

61,996.—PRINTING PRESS.—William Bullock, Philadelphia Pa.

I claim the endless belts carrying the rollers in combination with the vibrating frame for throwing down the sheet and asserting its motion substantially as described.

61,997.—ALLOY FOR MOLD BOARDS AND OTHER PARTS OF PLOWS.—Oscar F. Burton, Jersey City, N. J.

I claim the manufacture of the mold boards, shares and other parts of plows and cultivators wrought in an alloy composed of copper, tin and zinc with or without antimony and lead or either substantially as specified.

61,998.—SKATES.—Charles Bushman, West Chester, Pa.

I claim the curls, c, formed out of the same piece as the runner and arranged with regard to the heel and toe plate, and the runner as herein arranged and represented.

I also claim a raised circular socket, m, on the heel plate of the skate, and furnished with an elliptical shaped hole, n, in its top so that a screw head slightly filed away on its opposite sides and set in the heel of a boot or shoe, may enter and turn in said socket to form a fastening between the heel of the boot or shoe and the skate as herein described and represented.

61,999.—DIRT RECEPTACLE.—Chesmon Butterfield, West Waterville, Me.

I claim a dirt or dust receptacle having its cover or top, D, and bottom plate, F, connected together through rods, G and J, and swinging lever or beam, H, so as to operate substantially in the manner and for the purpose described.

62,000.—TRUSS.—Ephraim Capen, Batavia, Ill.

First, I claim the combination and arrangement of the shaft, c, provided with an inclined stationary shoulder, B, the nut, D, and the collar, C, and its pad arm operating substantially as described for the purpose of adjusting and securing the requisite pressure, as herein set forth and specified.

Second, I claim constructing the pad arm in two parts, E, F, pivoted together as described for the purpose of affording a lateral adjustment to the part, as herein set forth.

I claim forming a boss, g, upon the arm, F, whereunto the pad is attached substantially as and for the purposes specified and shown.

62,001.—BUTTON FASTENING.—George J. Capewell, West Cheshire, Conn.

First, I claim a button provided with the cone, f, either as shown in fig. 1, or fig. v, of the drawings, substantially as and for the purpose specified.

62,006.—APPARATUS FOR DISTRIBUTING LIQUID MANURE.—J. Warren Clark, Iowa City, Iowa.
I claim the combination of a box wagon for containing water and earth, forming a puddle computed with a plow for cutting a trench connected with a mixer of the compound within the wagon box, and a hose or its equivalent for conducting it into the trench behind the plow, for the purpose of setting young trees or plants in rows, constructed and arranged substantially as herein described.

62,007.—BOILER FURNACE.—Thomas H. Clark, Indianapolis, Ind.
I claim the combination of a boiler furnace, when one or more boilers are arranged in the same longitudinal plane of the flues, E, made concentric in the transverse section with the bottom of the boilers, and which extend beneath the boilers in the direction of their length, and are separated from each other by ridges, S, with the transverse channels, L, and air channels, F and H, and the continuation of the partition between the boilers over the chambers, C, leaving a space under the boilers substantially and for the purposes as herein shown and described.

62,008.—SLEEVE BUTTON AND STUD.—Barnes Clayton, Philadelphia, Pa. Antedated Feb. 2, 1867.
I claim in combination with the shank and head of a shirt bosom stud, or sleeve button, a self-adjusting fastening, consisting of the hollow cylinder, 1, slide or bolt, 2, and spiral spring, 4, the same being constructed, arranged, and combined, and operating together, as and for the purpose described.

62,009.—LIFTING JACK.—Charles T. Close, Brooklyn, N. Y.
I claim a wagon jack, composed of the legs, A and B, and a lever, when combined together, as and for the purpose described.

62,010.—NURSING COUCH.—James H. Cogshall, Lexington, Mich.
I claim the nursing couch, consisting of the support, A, screw, B, set screw, E, semi-circular arms, D, table, C, and straps, F, when constructed and arranged as herein set forth.

62,011.—LETTER ENVELOPE.—C. Conkling, Ashland, Ohio.
First, I claim the belt, D, and loops, B, C, in combination with the envelope, substantially as described.
Second, The duplicate back, F, and loops, E, and envelope, substantially as and for the purpose set forth.
Third, The duplicate back, F, in combination with the envelope, as and for the purpose set forth.
Fourth, The self-sealing belt, D, in combination with the envelope, as and for the purpose set forth.

62,012.—CLAW BAR FOR RAIL.—Maxwell Cornelius, Cheviot, Ohio.
First, I claim the hinged double headed claw bar, A B B' D, and E E', constructed and adapted to operate as set forth.
Second, In combination with the above, I claim the single clawed auxiliary head, F, adapted to be hinged to the bar proper, and to operate in the manner set forth.
Third, The claws proper, B B', E E', adapted for ready removal and replacement, as set forth.

62,013.—LUBRICATOR.—Julien L. Courcier, Paris, France.
I claim the tube, e, in combination with the closed reservoir, a, and tube, b, substantially as herein set forth for the purpose specified.

62,014.—DEVICE FOR FORMING HORSE COLLARS.—Isaac T. Crum, Chicago, Ill.
I claim the combination of the form, A, with the flanges, D, and standard, C, substantially as set forth.

62,015.—SOLE CUTTING MACHINE.—Timothy A. Curtis, Brookfield, Mass.
First, I claim supporting the knife holder, B, on an internal support in connection with the solid bearings of the holder, on a frame, at x x, when the knife is swung half round between each cut by means of the levers, rack, and catch ring, or their equivalents, substantially as set forth.
Second, I claim raising the block and table in connection with the swinging knife, in the manner and for the purposes substantially as above described.

62,016.—TOE CALK FOR HORSE SHOES.—George Custer (assignor to himself and Charles Toll), Monroe, Mich.
I claim a toe calk provided with a recess, and a projection upon its inner and upper surface, all as set forth, and substantially as described.

62,017.—BOOT HEEL.—George W. Davis, Milford Center, Ohio.
I claim a cast metallic heel, constructed as described, in combination with the devices for uniting the same to boots and shoes, as herein set forth.

62,018.—MACHINE FOR PRESSING HATS.—Joseph De La Mar (assignor to himself and Abraham Emanuel), Brooklyn, N. Y.
First, I claim the combination of steam cylinder, d, d, piston, b, and steam ring, c, for the purpose of affording heated surfaces to press against.
Second, The application of hydraulic pressure into an expansible indiarubber hat, over which the hat to be pressed is placed.

62,019.—RAZOR STRAP.—Friedrich Eichner, Chicago, Ill.
I claim the use of the four substances herein enumerated, in three different proportions herein set forth, for the purpose of making three different kinds of razor straps, in the manner substantially as herein described and specified, for concave razors as the barbers use.

62,020.—SAW.—James E. Emerson, Trenton, N. J.
I claim the method of securing teeth inserted in or attached to a saw plate, by forming the dovetail of one or more rivets, permanently secured either in the saw plate or the tooth, in the manner substantially as shown and described.

62,021.—ICE PITCHER.—George A. Eno, Philadelphia, Pa.
I claim the inner casing of an ice pitcher, or water cooler, constructed at the over end as described, for the purpose specified.

62,022.—TUBULAR GRATE.—B. Garvin and R. J. Pettibone, Oshkosk, Wis.
We claim the combination of the tubes, A, with the caps, B, when constructed and applied substantially as and for the purpose set forth.

62,023.—SCISSORS SHARPENER.—A. W. Gifford (assignor to himself and Henry D. Ward), Worcester, Mass.
I claim the serrated or bar, B, with the sides, D, C, provided with the spring, F, substantially as described, for the purpose specified.

62,024.—VAPORIZING AND BURNING GASOLINE FOR HEATING AND ILLUMINATING.—Henry Gilbert, Philadelphia, Pa.
First, I claim the screw stop, with or without valve at the bottom, intended to fill the reservoir or vessel with the combustible fluid from below.
Second, The stop cock, or its equivalent in the burner, serving to regulate the exit of gasoline vapors, and consequently the size of the flame.
Third, The filling of the lamp or burner, or both, with sawdust, charcoal powdered or otherwise, bone dust, cotton, flax, hemp, wool, rattan, jute, or other similar porous substance.
Fourth, The modification of said lamp, by omitting the metallic burner entirely, and burning it by means of a wick, covered or not covered by a cap of wire gauze, only burning without any wick by means of the metallic burner.
Fifth, The use of a bundle of fine metallic wire in the openings and stop cocks of cans, bottles, tanks, barrels, or other reservoirs, for fluid combustible substance, giving a better ingress and egress to the liquid material, than is the case with wire gauze, and acting as an improved safety arrangement in preventing any flame to communicate to the interior, and cause explosion.

62,025.—EVAPORATOR.—H. C. Gilbert, Cambridge, Vt.
I claim the combination of the shaft, D, cog wheels, G, racks, H, and sliding frame, I, with each other, and with the top, A, of the furnace, A, when said parts are constructed and arranged substantially as herein described, and for the purpose set forth.

62,026.—WASHING MACHINE.—J. S. Gochmayer, Goshen, Ind.
I claim the yielding bed formed of a series of radiating conical rollers in combination with the rubber, F, composed of a series of conical radiating rollers, and made in two parts, which are hinged together by a rod, e, passing through the vertical shaft, D, substantially as and for the purposes described.

62,027.—STAIR ROD.—W. B. Gould, New York City.
I claim the combination of a stair rod, A, and socket or hollow tips, B, when they are constructed or arranged together so as to hold the rod, at either one or both of its ends, with an elastic or yielding pressure, substantially as and for the purpose described.

62,028.—CAR COUPLING.—Ransom W. Green, Bradford, Pa. Antedated Feb. 10, 1867.
I claim the arrangement of the hinged draw head, B, the link, I, the shouldered pin, E, D, guide frame, C, and the shouldered spring arm, H, G, operating substantially as described.

62,029.—CARPET BEATER AND CLEANER.—W. H. Hankinson, New York City.
First, I claim the two pairs of feeding rollers, B and C, and the cylindrical brush, F, made self-adjusting as described and arranged in relation with each other, and with the supporting cords, E, and flexible beaters, a*, substantially as herein set forth, for the purpose specified.
Second, The stiff brushes, c, arranged upon a rotating frame in combination with the feeding rollers, B, C, and cylindrical brushes, F, substantially as herein set forth for the purpose specified.

62,030.—HORSE POWER.—Theophilus Harrison (assignor to himself and William C. Buchanan), Belleville, Ill.
I claim the arrangement of the pinion, D, and the pinion, D', shaft, F, and pinion, H, diagonally with the pinion, H', and the shaft, E, in combination with the main wheel, A, constructed in the manner and for the purpose specified.
I also claim the elliptical or oval pin or axle, B, of the master wheel, A, in connection with the two pinions, D, D', and separate shaft, E, F, substantially as and for the purpose set forth.

62,031.—HEATING STOVE.—Thomas Henney, Dubuque, Iowa.
First, I claim the combination of the branch pipe, I, inlet pipe, H, pipes, G, G', chimney, J, central fire cylinder, A, hollow base, B, cap section C, and

the pipes, D, D', all arranged and operating substantially as and for the purpose described.
Second, The combination of pipes, H, I, with the pipes, G' and D', applied to a stove composed of sections, A, B, C, and pillars or pipes, substantially as described.
Third, Providing for securing the several movable sections of the stove together by means of rods, nuts and flanges applied to the air pipes, G, substantially as described.
Fourth, I claim the arrangement of the air pipe, G', opening at the top and bottom of the stove, and passing through the exit pipe, D', and damper, E, substantially as described.

62,032.—PRINTING PRESS.—John Henry, Jersey City, N. J.
First, I claim the arrangement in combination with the reciprocating distributing table, C, of disc distributors, D, D', for action in concert with distributing rollers, substantially as specified.
Second, The combination with the distributing rollers, table, C, and disc, D, D', of separate fountains, E, F, essentially as and for the purpose or purposes herein set forth.

62,033.—BURGLAR AND FIRE ALARM.—Josiah Holmes and Charles W. Nickerson, Pittsburg, Pa.
First, We claim the plate lever, n, with the slot, s, in combination with the catch rod, m, and scap, p, h, which are arranged and operated in connection with the alarm, substantially as and for the purposes herein described.
Second, The guard rods, v, v', with their ends, v', the spiral springs, r, r', and the lever, n, combined, arranged, and operating substantially as and for the purposes set forth.

62,034.—HORSE RAKE.—Edgar Huson, Ithaca, N. Y.
First, I claim the spring B, anterior to the rake head for the purpose of relieving the labor of operating the rake and also for the purpose of a quick upward motion of the teeth, so that the hay or other article raked shall not be bound by the forward motion of the horse, between the teeth, and the strippers or cleaners of the rake.
Second, I claim the combination of the spring B, rod E, and head lever F, as described.
Third, I claim the rake head O, P, teeth I, and staples J, all constructed and arranged substantially as and for the purposes set forth.

62,035.—HARVESTER RAKE.—Robert V. Jones and Henry Fessler (assignors to themselves and James Short), Canton, Ohio.
We claim, First, The circular metallic case A, provided with the wheels I, M, G, and F, springs, m, l, and r, in combination with the pins 1 and 2, treadle, and o, rack bar K, and wheel P, all arranged and used substantially as herein specified.
Second, The quadrilateral shaped platform D, with its slotted shield, hinged as described, and the rake bar P, (connected to a stud at the geometrical centre of the platform) rake shaft, y, tumbler u, and lugs j and j', for carrying the grain to the rear of the machine, the whole being constructed, arranged and operating as specified.
Third, The circular metallic case, constructed as described with rack bar R, and wheel P, in combination with the platform and rake, the whole being constructed and operating in the manner herein specified.

62,036.—DOOR LOCK.—Francis Just, Buffalo, N. Y.
First, I claim in combination with the tamblers B, B, and a key bit, the bolt A, when operated as herein described for the purpose of locking the door.
Second, I claim the catches, F, F, in combination with the key bit, for the purpose specified.

62,037.—MANUFACTURE OF HATS.—Henry Kellogg, New Haven, Conn.
I claim a hat formed and constructed by combining animal fibre with vegetable pulped fibre, substantially as herein set forth and described.

62,038.—WATER CRANES FOR SUPPORTING LOCOMOTIVES.—Lewis Y. Ketcham, Port Jervis, N. Y.
I claim, First, The water shaft, c, within the pedestal a, constructed, arranged and operated substantially as described.
Second, The arrangement of means or devices for operating the water valve and the outlet valve, as herein shown and described.

62,039.—OILER.—John Kipp and William Allmendinger, Melrose, N. Y.
We claim, First, An oiler consisting of a reservoir C, and air pipe B, a discharging pipe E, with a removable nozzle F, all constructed and operating substantially as herein described for the purpose of oiling below the level of the operator.
Second, In combination with the elements recited in the foregoing claim, an elastic bulb, operating substantially as and for the purpose as herein described.
Third, In combination with the elements recited, in both of the foregoing claims a suitable device for opening and closing the air hole in the air pipe B, substantially as and for the purpose herein described.
Fourth, The curved removable nozzle E, and the adjustable discharging pipe in combination with the other parts of an oiler, all being constructed substantially as herein shown and described.

62,040.—COTTON BALE TIE.—J. Knight (assignor to T. C. Coleman), Louisville, Ky.
I claim forming a bale tie loop A, with turned edges, a, a, and one diagonal and one square end, arranged and applied for securing the ends of a hoop in the manner herein described.

62,041.—RAILWAY SWITCH.—Ezra B. Lake, Bridgeport, N. J.
First, I claim the rails A, and A', of the main track and the rails B, and B', of the turnout and switch rails C, and C', in combination with the operating lever, J, and the rods, G, H, and I, and their equivalents, for communicating motion from the said operating lever to the switch rails.
Second, The operating levers G, H, and I, and their connections in combination with the switch rails.
Third, The combination of the above mentioned operating levers with the movable bars x, situated beneath the cars.
Fourth, The combination of the slotted bar D, eccentric P, its arm t, and rods l, and n.

62,042.—FISH HOOK.—Benjamin Lee, Jr., Williamsburgh, N. Y., assignor to himself and Alfred Woodham, New York City.
I claim a spring B, or its equivalent in combination with a fish hook, substantially as and for the purpose described.

62,043.—BEEHIVES.—C. P. Lloyd, Portsmouth, Ohio.
I claim the combination of the boxes C, with sides as described and opening at the top, and the attached frames D, constructed and operating substantially as and for the purpose specified.

62,044.—BRONZING MACHINE.—John Knox Lowe, Cleveland, Ohio.
First, I claim the fur or otherwise lined case described, constructed and operating substantially as and for the purposes set forth.
Second, Wiping cylinder D, and cloth E, in combination for the purposes of operating in a bronzing machine substantially as described.
Third, The combination of the fur roller with the lined box, its cylinder the wiping cylinder and its cloth constructed and operating together, substantially as and for the purposes explained.
Fourth, Feed tapes G, G, or their equivalents, in combination with tapes F, F, to receive, carry and deliver the sheet substantially as described.

62,045.—MUD BOAT.—Almon D. Monley, Washington, Mich.
First, I claim the combination of one or more mud vats C, with two boats or buoys A, placed parallel with each other and connected with timbers B, substantially as herein described and for the purpose set forth.
Second, The combination of the sectional drop battons c' c', and the lever catch E, with the mud vats C, when the said drop battons are constructed and arranged substantially as herein described and for the purpose set forth.

62,046.—CHURN.—Geo. W. Manson (assignor to Nicholas W. Manson), Buxton, Mass.
I claim as a means of imparting motion to two dashers in a churn, the arrangement of the geared wheel B, geared wheel D, crank shaft, E, connecting rod, h, and working beam, F, swinging on the support, G, the working beam, F, being so connected with the two dashers that it can be separated from the dashers when the cover of the churn is to be removed in the manner and for the purposes set forth.

62,047.—CAR SEAT FOR RAILWAY CARS.—Frank Martin, Aurora, Ind.
First, I claim in combination with a revolving seat, E, F, F', and hinged back, G, the flexible straps, H, H', and retaining hooks, I, I', or their mechanical equivalents.
Second, In combination with the frame, A, B, and revolving seat, E, F, F', I claim the hooked bar, K, K', and lugs, L, L', employed to secure the seat against rotation, substantially as described.

62,048.—MACHINE FOR SHARPENING CALKS OF HORSESHOES.—J. B. McClanathan, Horicon, Wis.
I claim the frame, A, having the burr, D, mounted therein, in combination with the rigid pivoted plate, C, and set screw, F, arranged as described.
Second, Providing the upper front face of the plate, C, with the corrugations to act as rests or supports for the point of the calk as described.

62,049.—TENT BEDSTEAD.—A. D. McCoy, New Orleans, La.
I claim the bedstead, A, having adjustable head rest, B, operated by the frame C, supporting the upright B, with connecting stretcher rods, c, d, bearing the inclined rod d', which intersect and form catches, l, on which rests the beam, g, constructed and operating as described for the purpose specified.

62,050.—SEWING MACHINE.—James S. McCurdy, New York City.
First, I claim the hoop, F, constructed with an opening a, a point, b, on one side of the said opening, and a hook, e, on its inner circumference, and driven by a tongue or projection, a, on the rotating mandrel of the sewing machine, all substantially as herein specified.
Second, In combination with a rotating hoop constructed and operating substantially as hereinbefore specified, a bobbin so held within but out of contact with the said hoop to be confined in the direction of its axis but to be capable of free rotation, substantially as herein specified.
Third, The holding device by which the bobbin is held within and in proper relation to, but out of contact with the rotating hoop consisting of the rings, k, and l, one of which has an offset, k, for the partial support of the bobbin, and the other, l, substantially as specified.
Fourth, The arrangement of the adjustable feed cam, P, stop collar, R, spring, t, and nut, T, the whole applied to the rotating mandrel, C, or its equivalent, substantially as herein set forth.

62,051.—BEEHIVE.—Charles McGrew, Bloomington, Ill.
I claim the bottom, c, above the openings, b' leaving the space, d, in combination with the case, A, having water trough, C, on its sides which with the front space below the alighting board is painted white, for the purpose described, and operating in the manner as and for the purpose specified.

62,052.—SAUSAGE STUFFER.—Purches Miles (assignor to Theodore Mace), New York City.
I claim the follower, a, and axle, c, in combination with the vertical hopper, a, having a curved bottom, and the nozzle, f, introduced through the vertical side, a', as specified.
I also claim forming the hopper, a, with the curved bottom and sides cast in one piece, to receive the follower, a, d, axle, c, and front a', as and for the purposes specified.

62,053.—FIRE PLACE.—Warren P. Miller, San Francisco, Cal.
First, I claim a lining or partition, g, made of a suitable reflecting metal and located within an air heating chamber behind the fireplace or chamber and separating the latter from the dead air chamber, substantially as and for the purpose specified.
Second, In combination with the partition, g, I claim the air-heating chamber, c, c, and dead air or non-conducting chamber, d, all constructed and arranged in the manner and for the purpose specified.

62,054.—DEVICE FOR LUBRICATING THE AXLE OF VEHICLES.—Jacob F. Morris (assignor to himself and Calvin Lockwood), Lansingburgh, N. Y.
I claim the combination of the oil cup or reservoir, F, one or more furnished with short tubes, G, and J, strainer, H, sponge, I, and cap, K, or equivalent, with the hub, B, and axle box, E, of the wheel, substantially as herein shown and described for the purpose set forth.

62,055.—PROCESS OF PREPARING INDIA-RUBBER.—William Mullee, Franklin, Pa.
First, I claim the above described process or method of treating or preparing india-rubber for use or manufacture.
Second, I claim as a new article of manufacture the substance produced by subjecting india-rubber either pure or when mixed with other substances, to the process herein described.
Third, I claim the racks, R, or their equivalent for holding the sheets of rubber while in the bath, as set forth.
Fourth, The combination of the feed roller, B, and the roller, C, armed with teeth for removing the crystals from the sheets as described.
Fifth, The hollow drum, E, and roller, D, when combined and used for the purpose set forth.
Sixth, The bath with the fireplace, A, and the heat fire or passage, a, arranged as herein shown and described.

62,056.—MACHINE FOR DRESSING STONE.—William M. Murray, Tiffin, Ohio.
First, I claim supporting the adjustable frame, A, which carries the vibrating pick and the mechanism for operating it, upon a bed frame, A', and adjustable frame, B, in such manner that frame, A, can be adjusted substantially as described.
Second, The combination of the adjusting screw, a, hook, A4, stay, a' and perforated cross bar, A3, with the bed frame, A', substantially in the manner described.
Third, The construction of the device, m, m', for the purpose and in the manner substantially as described.
Fourth, Pivoting the pick arm, E, to a vertically adjustable block, d2, substantially as and for the purpose described.
Fifth, The means substantially as described for adjusting the fulcrum block, d3, for raising and depressing the rear end of the hammer arm.
Sixth, The application of the shaft of the wheel, G, to a vibrating frame, H substantially as described.
Seventh, The combination of vibrating frame, H, pinion wheel, h, and spur wheel, and, arranged and operating substantially as described.
Eighth, Supporting shaft, c, carrying the parts described, at one end by frame, A, and at the other end of a lever, C, substantially as and for the purposes described.

62,057.—ATTACHING BITS TO BRACES.—John H. Nellis, Richmondville, N. Y.
I claim a bit having a groove with the spring, C, constructed as described and operating in the manner substantially as specified.

62,058.—CONSTRUCTION OF PAPIER MACHE MATRICES FOR STEREOTYPE PLATES.—William Nelson, Boston, Mass.
I claim a papier mache matrix for casting stereotype plates, composed of flour paste, paris white and plumbago, and molded in the manner substantially as herein set forth.

62,059.—BUCKLE.—Hermann Neumann, New York City.
I claim the combination of the tongue, B, free at one or both ends with side bars, F, of the buckle frame, the whole constructed and operating substantially as described.

62,060.—CULTIVATOR.—W. J. Ozer, Williamsport, Ind.
I claim an improved iron cultivator frame formed by the combination of the bar, A, C, and F, with each other, when said bars are constructed and arranged substantially as herein shown and described.

62,061.—DOOR AND GATE LATCH.—J. A. Park, Lansing, Mich.
I claim the arrangement of the plate, A, with the latch, C, and shaft with weight, D, with or without the spring when constructed in the manner substantially as herein set forth.

62,062.—PIPE TONGS AND CUTTER.—John Peace, Camden, N. J.
I claim a pair of pipe tongs having an adjustable screw, E, socket, D, with a series of gripping edges at each end, substantially as and for the purpose described.

62,063.—MACHINE FOR BENDING SKELP.—John Peace, Camden, N. J.
I claim the horizontal slide rest, A, or its equivalent, the adjustable bracket, C, the anti-lever, E, the adjustable stop, D, and the dies, F, F', all constructed and arranged as described, and for the purposes herein described.

62,064.—COURRIER'S "SLICKER."—Daniel Peters and John W. Pauly, Keokuk, Iowa.
First, We claim forming the handle, A, in two parts, a', a2, substantially as herein described and for the purpose set forth.
Second, Forming the blade, B, with a slot, b4, substantially as herein described and for the purpose set forth.
Third, The combination of the half round friction wires, b' and b2, and the metallic lined grooves, a3 and a4, with the blade, B, and handle, A, substantially as described and for the purpose set forth.
Fourth, The combination of the friction and strengthening bolt, C, with the slotted blade, B, and with the handle, A, substantially as described and for the purpose set forth.

62,065.—OIL CAN.—Abraham H. Phillippi, Reading, Pa.
I claim the box, L, flat spring, X, rod, R, arm, A, and rod, U, when the whole are arranged as and for the purpose set forth and described.

62,066.—GRAIN DRILL.—Hiram Pulse, St. Paul, Ind.
First, I claim the provision in a grain drill of the separator, I, between the place of supply and delivery, substantially as and for the purpose set forth.
Second, The arrangement of notched rod, W, bell crank, X, draft rod, Y, and slotted clevis, Z, or their mechanical equivalents for the optional regulation of the side draft by a person at the rear of the machine, substantially as set forth.

62,067.—CORN PLANTER.—John M. Reeds, Milford Township, Mo.
I claim the steel spring, marked, A, on the drawing and roller and double gear, also above described in combination with the hand corn planter as specified.

62,068.—AXLE BOX FOR VEHICLES.—John Reilly, Racine, Wis., assignor to himself and Thomas Falvey.
I claim casting the box around the rings, as and for the purpose described.
I also claim the arrangement, as described, of the rings within boxes, so that the box shall overlap the rings, to prevent the displacement of the rings from end thrust of the axle, as described.
I also claim the combination, substantially as described, with an axle box of hollow longitudinal ribs, which serve both to fasten the box in the hub, and to convey oil to the axle, whether said ribs or chambers be cast with the box, or made separately of cast or wrought metal, and afterwards attached to the box.
I also claim the arrangement of the oil reservoirs, the axle and the lining rings, as and for the purpose set forth.

62,069.—COTTON-BALE TIE.—J. Reinecker, New Orleans, La., assignor to Gustavus Ricker, Covington, Ky.
I claim the plate, B, provided with the semicircular opening, a, and the opening, c, with inclined sides, d, presenting two sharp edges or angles to the strap, substantially as described for the purpose specified.

62,070.—PROCESS OF MANUFACTURING ALCOHOLIC SPIRITS.—John W. Richardson (assignor to himself, Daniel L. Davis, and Jeremiah Kimbrough), Ogden, Ohio.
I claim the process of manufacturing alcohol from the juice or skimming of sorgho or other (so called) northern cane, substantially as described.

62,071.—GAGE FOR CIRCULAR SAWING MACHINES.—John D. Riley, Cincinnati, Ohio. Antedated Feb. 2, 1867.
First, I claim the beveling fence, B, hinged to the arms, A, A, and adjustable to cut a bevel at any desired angle, substantially in the manner and for the purpose set forth.
Second, In combination with the above, I claim the guide bar, G, and piece, H, having curved slots, set screws, I, I, and hinged arms, S, F, connected with the cross bar, E, substantially in the manner and for the purpose set forth.
Third, I claim the hinged beveling fence, B, provided at its back edge with the hinged slotted cross bar, C, in combination with the hinged uprights, D, D, to adjust said fence to any desired angle, substantially in the manner and for the purpose set forth.

62,072.—SMITH'S FORGE.—William H. Risher, Austin, Texas.
First, I claim the construction of the twer with a central chamber, k, into which the waste, clinders, and other matters collect, said chamber having a passage between its upper end and the fire bed of the twer, so that the air

of the bellows or blast nozzle shall circulate in a chamber outside of the chamber, k, and pass up to the grate through the space which is between the fire bed plate and the upper edge of the chamber, k, all substantially as and for the purpose set forth.

Second, The construction of the twee, substantially in the manner and for the purpose described.

62,073.—BELT LAP CUTTER.—Charles E. Robinson, Concord, N. H.

I claim attaching the knife to a grooved sliding block, E, working in grooves in the top leaf or upper part, B, of the machine, and provided with a handle, G, substantially in the manner and for the purpose herein shown and described.

Second, The combination of a rubber or other elastic seat with the lower leaf, C, part, A, of the machine, substantially as herein shown and described.

Third, Hinging the lower and upper parts or leaves, A and B, to each other at one end, substantially as herein shown and described.

62,074.—ENAMEL FOR COVERING HOOP-SKIRT SPRINGS.—W. S. Ryterson, Philadelphia, Pa.

I claim enameling the covering of hoops or springs of a hoop skirt or of so many of them as may be necessary, with a composition prepared of the ingredients, and in the manner and proportions herein described, and set forth.

62,075.—ICE PLANER OR CUTTER.—James Serrill, Philadelphia, Pa.

I claim an ice cutter or planer, consisting of the adjustable cutting knife, A, supporting block, B, guides, C, C, incorrodible surface plates, D, D, and the tunnel or spout, E, arranged and combined together as described, as an improved article of manufacture, for the purpose specified.

62,076.—HORSE SHOE.—George Sewell, Poughkeepsie, N. Y.

First, I claim the construction of a horse shoe with a supplementary detachable portion, B, substantially as herein set forth for the purpose specified.

Second, The attachment of the supplementary portion, B, to the part, A, of the shoe, by means of the tapering dovetail joints, g, tapering dovetail socket, c, spurs, and keys, l, arranged in relation with each other substantially as herein set forth.

62,077.—BREECH-LOADING FIRE-ARM.—Christian Sharps, Philadelphia, Pa.

First, I claim the combination of the hooked projection, w, or its equivalent, or the lever, D, with the lip, y, or its equivalent, on the sliding breech, for the purpose specified.

Second, The spring, h, arranged to slide in the frame, B, and having a notched projection, j, in combination with the levers, D, and its arm, F, the whole being arranged substantially as described, so that the cartridge may be extracted either by the manipulation of the lever, D, or sliding rod, H.

Third, The combination of the spring plate, G, on the lever, D, the notch, e, on the arm, F, and portion, h, of the frame, by which the said spring plate is released from the notch on moving forward the said lever, D.

62,078.—WINDOW FASTENER.—J. D. Simmons, Quincy, Ill.

I claim the eccentric lever, B, provided with the notch, X, and the lug or wing, Z, for the purpose of stopping the spring and preventing strain upon the same, in combination with the plate, A, formed as described, and the spring, D, provided with bar, b, the whole arranged and used as and for the purpose specified.

62,079.—WHEAT DRILL.—Jacob Slauder (assignor to himself and Levi C. Smith), Osborn, Ohio.

I claim the shaft, d, with the worms or screws, e, over the openings, i, in the bottom of the hopper, C, in combination with the gear wheels, b, c, and one of the driving wheels, E, constructed, arranged, and operating substantially as and for the purposes herein described.

62,080.—SEEDING MACHINE.—F. F. Smith and A. Thurston, Four Corners, Ohio.

We claim, First, So combining the lever, E, with the seeding stocks, G, and clutches, e, f, that the movements of the said levers will elevate the seeding stocks simultaneously with the operation of the clutches to stop the motion of the seed-dropping mechanism, substantially as herein set forth.

Second, The retention of the plate, c, in its place, with reference to the cylinder, d, and hopper, by means of the groove, e, and removable upper part, a, of the aforesaid hopper, substantially as herein set forth and for the purpose specified.

62,081.—SHAFT COUPLING.—Henry K. Smith (assignor to himself and Charles Osgood), Norwich, Conn.

I claim the shaft coupling herein described, the same consisting of the sleeve, C, having beveled or inclined ways or grooves, D, pieces or blocks, E, and screw bolts, H, when combined and arranged together, substantially as and for the purpose specified.

62,082.—SINK.—Sidney Smith, Greenfield, Ohio.

I claim, First, The arrangement, in a metallic kitchen sink, of a grating, C, substantially as described and for the purpose set forth.

Second, The arrangement of the kitchen sink of the movable baskets, substantially in the manner described.

62,083.—STEAM GAGE.—William Stamp, Susquehanna Depot, Pa.

First, I claim a concave flat-bottomed or saucer-shaped steel plate diaphragm fitted in a steam gage, and constructed substantially as herein described.

Second, I claim also the eccentric adjusting pin, i, or its equivalent, in combination with the piston lever, h, and the segment, d, constructed and operated substantially as herein described.

62,084.—WASH BOILER.—M. W. Staples, Catskill, N. Y.

I claim the chambers, B and C, the perforated partition, E, and the circulation tubes, F, with apertures, G, arranged substantially as shown and described, in combination with a boiler for the purposes herein set forth.

62,085.—BASKET MACHINE.—Geo. Storer, New Britain, Conn.

I claim, First, The gudgeon, c, extending from the stock, m, and turning upon the pin, i, in combination with the mold block, d, as specified, so that said gudgeon, c, will be sustained by its stock in a horizontal or vertical position, for the purposes set forth.

Second, I claim the mold block fitted so as to be revolved in combination with the clamping cap, c, and movable center, f, substantially as and for the purposes specified.

62,086.—MACHINERY FOR MAKING OVAL PICTURE FRAMES.—John E. Sweet (assignor to John S. Bon and E. R. Sanford), Syracuse, N. Y.

I claim, First, The combination and arrangement of the shafts, C, D, E, and their pinions, with their cranks and its boxes, substantially as described and for the purposes set forth.

Second, The eccentric sleeve, S, for varying the throw of the crank, substantially as described.

Third, The combination of the scraper, R, arm, O, upright, L, with or without the pedal, P, as described and for the purposes set forth.

62,087.—PICKER CUSHION FOR LOOMS.—Wm. J. Thorn (assignor to himself and F. A. Betts), Westbrook, Me.

I claim a tanned leather picker cushion for weaving looms manufactured and prepared in the manner herein set forth.

62,088.—SMUT MACHINE.—Wm. E. Tickler, Ezra T. Marshall and Daniel M. Marshall, Pierceton, Ind.

We claim, First, The smut machine consisting of the cylinder, B, hollow shaft, C, brushes, E, shaft, D, cones, d, standards, e, riddle, G, fan, T, and pipe, P, operating substantially as described, for the purpose specified.

Second, The spreading device consisting of the pivoted valve, n, elastic fingers, o, arranged in the spout, m, substantially as and for the purpose specified.

62,089.—BRICK BURNER.—Wm. H. Towers, Boston, Mass.

I claim the revolution of unburned bricks within a circular turret or kiln in such a manner that during the first part of a revolution they shall dry and become gradually heated, then be thoroughly baked during their passage over a furnace, and then gradually cool until, at the completion of the revolution, they shall be delivered perfectly burned and serviceable bricks, using for the purpose the apparatus hereinbefore described, or any other substantially the same and which will produce the desired effect.

62,090.—MACHINE FOR PULLING FLAX.—Samuel W. Tyler (assignor to Thos. M. Cleeman, George P. Prescott, Wm. Deyermant, E. H. Jones and Henry Holmes), Troy, N. Y.

First, I claim for pulling flax and such other crops as require such similar harvesting, the use of a series of two or more belts or bands, made flexible so as to ply around pulleys or cylinders and properly arranged to work in conjunction by pairs, so as to eradicate or pull the crop from the earth, and this I claim irrespectively of any pulling or eradicating movement that may be given to the belts, or of any particular form or kind of material employed in the construction of the same, substantially as set forth.

Second, I claim constructing the belts with irregular or corrugated surfaces upon their outer or grasping sides, for the purposes set forth, and substantially as described.

Third, I claim constructing pulleys with webbing or other comparatively non-elastic foundation cushioned with india-rubber or other soft material, substantially as described.

Fourth, I claim arranging the belts upon the machine in the position of an inclined plane, so that the same will travel upward and backward at the same time, for the purposes set forth and substantially as described.

Fifth, I claim so imparting motion to the pulleys that each section of each pair thereof shall move in a direction around its axis or axes opposite to that of its fellow, so that the conjunctive sides of the two shall move together in one direction, in combination with impinging elastic surfaces, substantially as described.

Sixth, I claim so arranging the belts as to leave an open space between their grasping sides at the point X, substantially as set forth and described.

Thirteenth, I claim an automatic raking or delivering device when arranged in a manner to support the crop in an upright position while it is being conveyed along from the pulleys or rollers to the point at which it is delivered from the rack, substantially as described.

Fourteenth, I claim in combination with the pulleys a vibrating separator for separating the swath from the standing portion of the crop, substantially as described.

Fifteenth, I claim the separating swords or blades, X, for the purposes set forth and substantially as described.

Sixteenth, I claim so attaching the pullers to the machine, in connection with springs, as to secure to them an automatic or self-adjusting pressure upon the crop, substantially as described.

Seventeenth, I claim the adjustability of the tongue, E, in combination with the traveling elastic pulleys, substantially as described.

Eighteenth, I claim so constructing and attaching the deflecting guards, N, as to allow the crop to approach the pulley at a point upon the opposite side of the line of their axes, for the purposes set forth and substantially as described.

62,091.—NUTRITIVE MEDICINE.—Samuel C. Upham, Philadelphia, Pa.

I claim a nutritive medicine composed of the within-described ingredients, prepared in the manner and in the proportions substantially as set forth.

62,092.—LUBRICATING OIL.—P. H. Vander Weyde, Philadelphia, Pa.

I claim the manufacture of illuminating or burning oil and a superior lubricating oil from common petroleum, combining the filtering, evaporating at a low temperature, and thickening processes above described.

62,093.—PREVENTING INCrustation IN STEAM BOILERS.—P. H. Vander Weyde, Philadelphia, Pa.

I claim the attachment with in the upper part of the steam room of a boiler of a number of short rods resembling small inverted straight or curved lighting rods, or their equivalents, intended to carry the positive electricity of the steam to the bottom of the boiler where it is discharged into water repels the electro positive deposits preventing them from settling and thus protects the boiler from incrustation.

62,094.—MAKING AND USING NITROUS OXIDE GAS.—P. H. Vander Weyde, Philadelphia, Pa. Antedated Jan. 30, 1867.

I claim, First, The new economical method of making nitrous oxide gas, as above described.

Second, The apparatus for compressing and liquefying it, as above described.

Third, The use of the liquefied gas after its re-expansion as an anæsthetic for surgical operations (and anti-spasmodic) in cases of typhoid fever, cholera, and other medical operations.

Fourth, Its use as a substitute for oxygen for the Drummond or Calcium light, or hydro-oxygen blow pipe for magic lanterns, light houses, melting of platinum, &c.

Fifth, Its use as a bleaching, oxydizing, deodorizing, and disinfecting agent.

Sixth, The use of the liquefied gas as a store of motive power, for driving railroad cars and other contrivances.

62,095.—GAS GENERATOR.—P. H. Vander Weyde, Philadelphia, Pa. Antedated Jan. 30, 1867.

I claim, First, A gas generator when the action is entirely separated from the substance which the gas evolved brought in contact only in proportion to the pressure and quantity required and adapted to the instantaneous generation without the application of heat of the following gases: hydrogen, oxygen, carbonic acid, hydro-sulphuric acid, sulphide of ammonia, nitric and nitrous oxide, and hypo-nitric acid.

Second, The long-necked bell jar, A, connected and expanded below as described above preventing the absorption of the gas by the liquid.

62,096.—TUBULAR STILL FOR CONTINUOUS DISTILLATION.—P. H. Vander Weyde, Philadelphia, Pa. Antedated Jan. 30, 1867.

I claim, First, A still consisting of a series of tubes situated in the flue, through which tubes the liquid to be distilled is uninterruptedly passed in a small stream and in its downward course submitted to a continually increased heat.

Second, I claim a number of vapor tubes attached at different heights to this tubular still giving exit to vapors of different density and volatility, each tube condensing its own vapor separately in a common worm tubular condenser, or any other kind, and thus producing liquids of different density by one single uninterrupted operation; also preventing fusiil and other oils from contaminating any other part of the apparatus or of its products with their vapors.

Third, The manner of connecting the tubes by means of traps for the separation of the different vapors, and by screw caps giving access to their interior for cleaning, repair, or other purposes.

62,097.—MANUFACTURE OF WHITE LEAD.—P. H. Vander Weyde, Philadelphia, Pa. Antedated Jan. 30, 1867.

I claim, First, To effect with the same apparatus and one single operation the separation of the products of the distillation of wood, chiefly of the acetic acid and the immediate transformation of the remaining charcoal into carbonic acid and the use of those two products to the manufacturing of white lead, in the manner described.

Second, The spiral inverted gutter, h, intended either to secure a more perfect absorption of the carbonic acid or any other gas by the liquid or to charge air or gas more perfectly with the vapor of the liquid through which it passes.

Third, The treatment of the precipitate with a hot alkaline solution of quicklime, or its equivalent, and the washing out of the filters with lime water.

62,098.—ELEVATOR.—R. M. Van Sicker, New York City.

I claim, First, A portable elevator consisting of a car or truck mounted on two sets of wheels, substantially as described with tracks or guide posts mounted thereon and a carriage or platform supported by and moving in connection with said posts, substantially as herein shown and described.

Second, I claim having the tracks or guide posts made adjustable, substantially as and for the purpose herein shown and described.

62,099.—SODA-WATER STAND.—A. Van Winkle, Newark, N. J.

I claim, First, The arrangement of two or more tiers of sirup cans one above the other in a soda-water stand, substantially as and for the purpose described.

Second, Making the cans of the upper tier narrower than those of the next succeeding one below, substantially as and for the purpose set forth.

62,100.—COOKING STOVE.—George W. Walker, Boston, Mass.

I claim the arrangement of the flue, i, with respect to the oven and the main flue, substantially as described.

62,101.—BREWERS' MASH TUN.—James Walker, Cincinnati, Ohio.

First, I claim the provision in a mash tun of the radiating inlets to the drain pipe or pipes, substantially as and for the purposes set forth.

Second, The elevated drain pipe proper within the mash tun, substantially as set forth.

62,102.—LATCH FOR GATES.—W. T. Wells, Decatur, Ill.

I claim the combination with a latch of a slotted plate, or its equivalent, when the two are so constructed and arranged together as to operate substantially in the manner described and for the purpose specified.

62,103.—Suspended.—

62,104.—ELASTIC MARKING ROLLER.—L. B. Witherell, Galesburg, Ill.

I claim the supplementary ball and handle, G, h, in combination with the ball and handle, D, E, of an elastic printing cylinder, substantially as and for the purpose specified.

62,105.—MAKING HAMMERS.—J. Yerkes, Fox Chase, Pa.

I claim constructing claw hammers of cast iron, in the manner described.

62,106.—COVERING HARNESS TRIMMINGS WITH VULCANIZED RUBBER.—Andrew Albright, Dryden, N. Y.

I claim providing metallic trimmings for carriages and harnesses with a coating of vulcanized caoutchouc or hard rubber, substantially as and for the purpose herein set forth.

RE-ISSUES.

2,474.—SHEARS.—Barnard, Son & Co., Waterbury, Conn., assignor to Wm. B. Barnard. Patented Dec. 27, 1864. Reissued March 27, 1866.

We claim uniting the blades and handles of shears, lamp trimmers and similar instruments by means of one or more rivets homogeneous with the handles, in combination with a rebate or recess of any suitable form, made in the end of the handle to receive the inner end or tang of the blade when the shoulder or inner edge of the recess does not project above the face of said tang after it has been properly secured therein, all substantially in the manner and for the purpose herein set forth.

2,475.—POCKET BOOK.—J. Frederick Dubber, Brooklyn, N. Y. Patented Jan. 10, 1865.

I claim a pocket book or other similar article provided with one or more strips, d, of steel or other elastic material, in the edge or edges of its closing flap, e, substantially as and for the purpose described.

2,476.—HEATING STOVE.—Samuel B. Sexton, Baltimore, Md. Patented April 19, 1859. Reissued Dec. 3, 1861. Again reissued Feb. 6, 1864. Again reissued Sept. 27, 1864.

First, I claim a stove for warming or heating purposes constructed with a fuel magazine supported free from the grate, and a combustion chamber having a grated fire and air supply bed of a greater diameter than the fuel magazine, so arranged and constructed that the fuel can spread out laterally and form a conical pile and burn in thin layers out to the wall of the stove, so that the inflammable gases may burn in a free space as they are evolved from the combustion surface of the incandescent conical pile of coals and so that air shall be supplied in a direct manner through the grate into said free space, substantially as and for the purposes described.

Second, In combination with the subject matter of the first claim, constructing the combustion chamber, A, with projecting window frames or door frames, substantially as and for the purposes described.

Third, A stove for warming or heating purposes embracing the features of the construction mentioned in my first claim and the additional feature of the

gas or products of combustion, circulating apartment above and around the upper portion of the magazine, substantially as and for the purposes described.

Fourth, A stove for warming and heating purposes wherein the spreading of the coals in a lateral direction from the lower end of their magazine is wholly unobstructed all around and out to the wall of the stove, A, and at the same time the combustion chamber proper is formed by the outer wall of the stove, and the products of combustion circulate underneath and around the magazine, in combination with illuminating door or windows in the said outer wall, said windows or doors being located above the grate and above the upper margin of the lining of the wall, substantially as and for the purposes described.

Fifth, The combination of a fuel supply magazine, H, which has its lower end free from the grate fire bed, G, and an unobstructed space below it where the fuel may spread out laterally and burn in a conical pile and in thin layers to the outer wall of the stove, with a stove, A, which has illumination doors or windows in its wall above the lining, all in such manner that the fire can be kindled through the apertures which are covered by the doors or windows, substantially as set forth.

Sixth, The combination of the unobstructed free space, F, out to the wall of the stove above the lining, the illumination windows or doors in wall, A, and gas circulating space, P, around the circumference of the magazine, substantially as described.

Seventh, In a coal supply magazine stove, I claim the extended grated surface of the fire bed outside of reservoir or magazine, in combination with the free space around the magazine of a base burning stove, substantially as described.

Eighth, Increasing the combustion and the consequent heating effect of the coal and also insuring a more brilliant illumination of the wall of the stove, by constructing, arranging and combining the combustion chamber proper, the magazine and the grate fire bed, all substantially in the manner herein specified.

2,477.—PEN AND PENCIL CASE.—Wm. S. Hicks, New York City. Patented Sept. 12, 1865.

First, I claim the case, A, consisting of a simple tube, provided with the cap, c, and short inner tube, e, arranged as set forth.

Second, The combination of a simple tube, I claim the reversible handle, substantially as set forth.

2,478.—BOAT DETACHING TACKLE.—Thomas Huntington, New Rochelle, N. Y. Patented June 5, 1866.

First, I claim the employment or use of a single shaft, C, arranged with hooks, B, in the manner shown, or in an equivalent way so that by the turning of said shaft the hooks, B, may be simultaneously liberated to detach the boat from the davits.

Second, The hooks, B, suspended or fitted in the plates, A, in combination with the arms, e, attached to the shaft, c, all being applied to the boat and arranged to operate substantially in the manner as and for the purpose set forth.

2,479.—CUPOLA FURNACE.—John and Thomas Insull, New Haven, Conn. Patented May 8, 1866.

First, We claim the annular air chamber, C, in combination with one or more blast pipes, D, E, and with the furnace, A, constructed and operating substantially as and for the purpose described.

Second, The partition, b, in combination with the annular air chamber, C, blast pipes, D, E, and furnace, A, constructed and operating substantially as and for the purpose set forth.

Third, Making the tweers oblong instead of round, as usual, for the purpose described.

Fourth, Two or more rows of tweers placed in a zigzag position, substantially as and for the purpose set forth.

Fifth, The aperture, a, in the outer wall of the air chambers, C, in combination with the tweers, a, constructed and operating substantially as and for the purpose described.

2,480.—MANY-BARRELED FIRE-ARMS.—Christian Sharps, Philadelphia, Pa. Patented Jan. 25, 1859. Division A. Reissued June 18, 1861.

I claim the combination of a discharge with the hammer and the devices herein described, or the equivalents to the same, for changing the position of the discharger on the movement of the hammer.

2,481.—BREECH-LOADING FIRE-ARMS.—Christian Sharps, Philadelphia, Pa. Patented Jan. 25, 1859. Division B. Reissued June 18, 1861.

First, I claim the lever, M, with its projection, V, and the rod, N, in combination with the barrel and its stock, when the whole is arranged as set forth, when the lever, M, is so formed as to serve the purpose of a trigger guard.

Second, Causing the spent cartridges to be withdrawn from the barrel during the movement out of the same by means of a clip or clips applied and operating substantially as set forth.

2,482.—EAR, CHEEK, AND CHIN MUFFS.—Wm P. Ware, Cincinnati, Ohio. Patented July 6, 1858.

First, I claim a muff or pocket for the ear, formed so as to surround the base of the ear and extend of a size and shape to contain the ear and protect the same from cold, substantially as set forth.

Second, I claim a cheek and chin muff suspended from the ears, substantially as specified, instead of being fastened around the neck or over the head.

Third, I claim muffs or pockets formed to set over the ears and held in place by a connection passing down under the chin, substantially as shown.

2,483.—HARVESTER.—Robert T. Campbell, Washington, D. C., assignee of Thos. J. Stealey. Patented Dec. 15, 1857. Reissued Nov. 6, 1866.

First, I claim combining with a hinged platform which is free to conform to the undulations of the ground independently of the motions of the draught frame, or of the axle of the transporting wheels, a toothed rake which will deliver the cut grain upon the ground in gavels, and a reel or gathering device, which will press the standing grain toward the cutters, said rake and reel or gatherer being wholly supported upon said platform, substantially as described.

Second, Combining with a hinged platform a toothed rake and a reel or gatherer, which are wholly supported upon and move in harmony with said platform, an adjustable hinge connection which will allow of the vertical adjustment of the cutting apparatus to adapt the machine to different heights of cut required, substantially as described.

Third, Sustaining a toothed rake and a reel or gatherer wholly upon a platform which is supported at its inner end by a vertically adjustable joint, and at its outer end by a wheel or its equivalent, substantially as described.

Fourth, Suspending the rear inner end of a hinged platform which has a toothed rake mounted wholly upon it, in such manner that this part of the platform can be adjusted vertically without changing the position of the forward adjustable hinge connection, substantially as described.

Fifth, The combination of a hinged finger beam, a platform and an auxiliary adjustable suspending and sustaining jointed or flexible connection, in such manner that the finger beam and platform are suspended at their inner ends and are so supported upon a wheel or its equivalent at their outer ends as to conform at their outer ends to the undulations of the ground, independently of the motion of the main frame or of the axles of the supporting wheels, substantially as described.

Sixth, In combination with a vertically adjustable hinge joint and hinged finger beam and cutter bar, and with the crank, a, for communicating motion to the cutters, an universal joint, m, to connect the pitman, l, with the cutter bar, substantially as described. I claim the adjustable blocks, i and j, for tightening the joint around the crank wrist, substantially as set forth.

Seventh, The combination of crank shaft, Q, with adjustable bearings, a, a, the pitman, Q, and the oscillating rake, S, substantially as described.

Eighth, Hanging the reel to the rake frame or platform and adjusting said reel to different heights by means of braces, w, w, or their equivalents, substantially as described.

DESIGNS

2,572.—ORNAMENT FOR HATS AND DRESSES.—Mary A. Lawrence, New York City.

2,573.—TOBACCO PIPE.—Louis Saarback, Philadelphia, Pa.

2,574.—Cook's Stove.—Garretson Smith and Henry Brown (assignor to Leibrandt & McDowell), Philadelphia, Pa.

2,575.—FOUR OILCLOTH.—Hugh Christie, Morrisania, N. Y.

2,576.—EDGES OF BOOKS.—John H. Crowell, Providence, R. I.

2,577, 2,578.—PRINTERS' TYPE.—Julius Herriet (assignor to David Wolf Bruce), New York City. Two Patents.

2,579, 2,580, 2,581.—FLOOR OILCLOTH.—Charles T. Meyer, Bergen, N. J., assignor to Edward C. Sampson, New York City. Three Patents.

2,582.—COFFEE STRAINER.—Anthony Shafer and Alexander Barckley, Philadelphia, Pa.

EXTENSION NOTICES.

William H. Johnson, of Springfield, Mass., having petitioned for the extension of a patent granted to him the 7th day of March, 1854, and patented in England the 21st day of April 1853, for an improvement in sewing machines, for seven years from the expiration of said patent, which takes place on the 21st day of April, 1867, it is ordered that the said petition be heard at the Patent Office on Monday the 15th day of April next.

Lauren Ward, administrator of the estate of Richard Ward, deceased, of Naugatuck, Conn., having petitioned for the extension of a patent granted to the said Lauren Ward as said administrator on the 28th day of June, 1853, for an improvement in machines for turning irregular forms, for seven years from the expiration of said patent, which takes place on the 25th day of June, 1867 it is ordered that the said petition be heard at the Patent Office on Monday the 10th day of June next.