

produced a great increase in the breadth of land sown,—in some regions nearly double—and Providence has smiled upon the buried seed and the tender blade. The deep snows of the winter have protected the wheat, and from every section comes the report that it is growing magnificently and promises a glorious yield, far surpassing in the aggregate any crop ever before raised in this country. The Puritans of New England, taught by hunger to feel their dependence on the God of nature, used to fast and pray one day in every spring, for a blessing on their hard fields, and their descendants keep up at least the form in the New England states to this day. Our crops have yet to run the gauntlet of many foes, and may the Providence whose bounty we have seen so marvellously enlarged in modern years, still regard mercifully the wants of our teiling millions, and "God save the wheat!"

The report of the Agricultural Department for April says: "Never has there been so general an expression of encouragement in view of the fine condition of winter wheat since the establishment of the present system for the collection of crop statistics. In more than nine tenths of the returns received, the condition of the crop is reported favorable and promising. From the South the returns are as cheering as from the West. The report states, however, that the loss of cattle from starvation and exposure the past winter has been extraordinary. Beef is not likely to be any cheaper.

GLEANINGS FROM THE POLYTECHNIC ASSOCIATION.

Dr. Feuchtwanger showed a specimen of tellurium, an exceedingly rare substance commonly classed among the metals but which has much analogy in its properties to sulphur and selenium. The French call this substance one of the metalloids. In its native state the ore is found combined with iron, gold, or silver. Its color is silvery white and brilliant, and in appearance it closely resembles antimony. It is found in the Altai mountains and in Transylvania. The specimen shown was found in a gold mine of California.

Mr. Fisher exhibited drawings for a steam-plowing machine or more properly a pulverizer. The machine resembles a locomotive with a short boiler, and mounted on wide tired wheels. The power is applied to drive a drum having circular saws thereon set three inches apart. By suitable gearing the engine advances slowly while the drums rotate with great rapidity, pulverizing the soil to the proper depth. The subject of steam plowing being thus introduced, its importance was acknowledged by all, but an animated discussion sprung up respecting the relative advantages of employing traction engines working the plows directly, or stationary engines working the plows by means of chains, as is the common custom in England. Both methods had their advocates who warmly argued their respective merits. It was claimed on one side that the traction engine beats down the field in front of the spaders which it afterward is made to plow up, as the wheels must be made wide enough to prevent the machine from sinking into the ground.

Mr. Parmelee read a paper on gypsum, describing its nature, and referring more especially to its use as a fertilizer. Its value in this respect he asserted was owing to its absorptive power in taking in ammonia from the atmosphere and storing it up to be disseminated by the rains through the fields.

President Tillman gave the club the results of some experiments he had witnessed at the works of the lead encased block tin pipe company, showing that this pipe possessed the same strength as that of lead pipe of twice its weight. He also referred to the dangerous effects from using water drawn through common lead pipe, and advocated the passage of a law which would prevent its employment in this capacity. He was followed by several members speaking on the same subject, describing minutely the action of the poison and its different effects. Some persons are more susceptible to its injurious consequences than others, as is well known to be the case in regard to painter's colic and kindred complaints.

Mr. Walling repeated the beautiful experiment lately performed by Prof. Thompson of Edinburgh before the Royal Society of Scotland, and described in the article on "wirbel bewegung" on page 212, current volume. These air vortexes are very frequently produced in nature and are made visible when smoke or steam is mixed with the whirling air. They may be seen when cannon are fired, particularly if the muzzle is "slushed" with grease, also as issuing from the smoke stack of a locomotive just starting: human smokers constitute perhaps the largest number of experimenters in this line. Mr. Walling remarked that the molecular theory based upon this phenomenon by Prof. Thompson, was an indication of the tendency of scientific opinion towards some such purely dynamical theory as had been previously proposed by himself.

Tin Lined Pipe for Water.

On Thursday the 23d of May an exhibition of the method of the new manufacture of lead pipe lined with block tin was given at the manufactory of the inventors and manufacturers, foot of west 27th street, New York. The visitors invited had an opportunity to witness the processes from the first casting of the core of tin to the production of the pipe in its finished state, and the sentiment was general that it was a complete success. We have no time nor space in this issue to describe the processes, nor to state the facts established by the experiments. In our next we shall endeavor to show the immense advantages of this over the ordinary water pipe.

The hardware manufactory of Sargent & Co., New Haven, Conn., gives employment, at its full capacity, to 800 hands, and turns out 4,000 different articles of hardware to the amount of \$4,000,000 to \$7,000,000 per year.



ISSUED FROM THE U. S. PATENT OFFICE FOR THE WEEK ENDING MAY 21, 1867. Reported Officially for the Scientific American

Table with 2 columns: Description of patent services and corresponding fees. Includes items like 'On filing each caveat', 'On filing each application for a Patent', etc.

Patents are granted for seventeen years, the following being a schedule of fees: 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.

64,826.—DEVICE FOR HOLDING CIGARS.—Charles Appel, Hoken, N. J. I claim, as an improved article of manufacture, a cigar holder consisting of a combination of the shells, A B, with the cutter, C, the latter either being attached to one of the shells or being part of the same, all made and operating substantially as and for the purpose herein shown and described.

64,827.—LIME KILN.—George Atkins, Sharon, Pa. I claim the arrangement of the lime kiln formed of the chambers, A B D, and heated by furnaces, C C, at different levels inside the kiln, operating substantially as and for the purpose herein described.

64,828.—HAY PRESS.—George H. Aylworth, Brighton, Ill. I claim a hay press, consisting of the box, A, and the sliding partition, K, operated by means of the screws, C B, the whole constructed and arranged as herein shown and described.

64,829.—CARRIAGE-WINDOW FRAMES.—Francis Baker, New York City. I claim a carriage-window frame swiveled or pivoted to uprights, F, arranged to move in and through the carriage body, and bent springs, K or L, hooks or catches, N, and studs, I, substantially as and for the purpose described.

64,830.—SEWING MACHINE.—Robert Barclay, Buffalo, N. Y. I claim, First, The sliding rod, G, situated between the needle slide and tension device, T, in combination with the needle operating shaft, E, and cam, R, the whole arranged and operating as and for the purpose specified. Second, The combination and arrangement of the adjustable pivoted dog, M, slide, O, and lever, G, in combination with the presser foot, D, constructed and operating substantially as and for the purpose set forth.

64,831.—LIQUID FOR CARBURETING GASES.—John A. Bassett, Salem, Mass. I claim the hydrocarbon liquid for carburating gases, produced by the combination and process described substantially in the foregoing specification.

64,832.—PEAT MACHINE.—Alfred Bridges, Newton, Mass. I claim the arrangement of the sleeve, C, passing over stock, D, in the rate for the purpose described herein. Second, The adjusting plunger, E, by means of projection, A, and spring, C, or its equivalent, as above specified.

64,833.—RAILWAY SWITCH.—James S. Brothers, Duncannon, Pa. I claim the construction of the chair, K, with the adjustable frog, G, when arranged, combined, and operated as herein described and for the purpose set forth.

64,834.—QUARTZ MILL.—Samuel C. Bruce, New York City. I claim the revolving wheels, C and D, with velocities varying in some regular ratio, so that wheel, D, shall always revolve faster than, and in the same direction as, wheel, C, and for the purpose described. Second, The arrangement of wheels, C and D, revolving in the same direction, in combination with the communicating cases, A and B, and so constructing said cases and arranging them with reference to said wheels and their shafts that the external air can enter at aperture, E, only in the periphery of the case, A, substantially as and for the purpose described.

64,835.—SAW SET.—Benjamin N. Butcher, Philadelphia, Pa. I claim the combination of the blade, A, with beveled edges of different angles of inclination, and the reversible and adjustable pieces, E and E', set screws, F and G, and sets, C D, substantially as and for the purpose set forth.

64,836.—CANE AND SORGHUM STRIPPER.—James A. Campbell, Stow, Ohio. I claim, First, The rollers, G H, arranged substantially as shown and described, in connection with the stationary cutter or stripper, L, and the yielding or pressure cutter or stripper, M, having the lever, N, and spring, O, applied to it, substantially as and for the purpose set forth. Second, The rotary topping cutter, Q, attached to wheel, R, in connection with the concave plate, S, all arranged to operate in connection with the stripping device, substantially as shown and described.

64,837.—PORTABLE SEAT FOR DRIVERS UPON CARS.—James F. Campbell and Cornelius Finney, Williamsburg, N. Y. We claim the upright or stag, B, with hook at one end, and provided with a rod, E, having seat, G, and strap, H, substantially as and for the purpose described.

64,838.—BOTTLE STOPPER.—Horace S. Carley, Cambridgeport, Mass. I claim the slide, F, carrying stopper, in combination with the swiveled lock, E, and flues, K, for the purpose of preventing the cold air from chilling the ends of the flues proper, substantially as and for the purpose set forth.

64,839.—WHEEL PLOW.—Elisha A. Chace, Rosemond, Ill. I claim a wheel plow, having the stationary frame, A, pivoted frame, F F', F', F', beam, D, and elevators, G G' G', arranged to operate substantially as and for the purpose described.

64,840.—CLOTH-GUIDE FOR SEWING MACHINES.—George F. Clemens, Springfield, Mass. I claim, First, A cloth guide for sewing machines the employment with a cloth gage of a rigid guide plate, adapted to bear upon the cloth in front of the sewing needle, and extend across the line of seam being sewed, and having elastic and adjustable pressure given to it, in such a manner as that it shall press more upon the cloth outside the seam than inside thereof, and thereby guide the cloth towards the gage face. Second, The elastic plate, B, either with or without the rigid guide plate, A, combined with the pressure plate, C, screw, F, and gage, C, substantially as described and for the purposes set forth. Third, The rigid guide plate, H, combined with the elastic plate, I, screws, J, J', right plate, K, and gage, L, all with or without the link, N, substantially as described and for the purposes set forth.

64,841.—DEODORIZER FOR PRIVY SEATS.—Neil Clifford and A. N. Bell, Brooklyn, N. Y. We claim the combination with the seat of a privy, water closet, or other similar place of whatever name called, of a receptacle or vessel for the reception and holding of any suitable deodorizer or disinfectant, whether in the form of a liquid or powder, when such vessel or receptacle is so constructed and connected with the seat, that by the depression or upward movement of the seat, or both, the said disinfectant or deodorizer will be discharged into the vault of the privy, etc., substantially as and for the purpose described.

64,842.—LOCOMOTIVE ENGINE.—Joseph M. Coale, Baltimore, Md. I claim, in combination with locomotives and other similar boilers, the additional sheet, A, and flues, K, for the purpose of preventing the cold air from chilling the ends of the flues proper, substantially as and for the purpose set forth.

64,843.—RAILROAD RAIL FASTENING.—John Cochran, Wall Township, N. J. Antedated May 13, 1867. I claim the combination of a screw, bit of wood, screw spike, with a cleat that has a bearing upon the top and at the edge of the rail flange, and also upon the cross tie, and so constructed or formed that it can be removed from the flange of the rail upon slackening up the screw bolt or wood screw spike by which it is secured to the cross tie, substantially as herein described.

64,844.—STEAM GENERATOR.—S. M. Colburn (assignor to himself and Sylvester Colburn), Ansonia, Conn. I claim the plate, B, constructed and arranged within the boiler, so as to form a chamber, C, communicating with the boiler by means of openings or perforations, A, substantially as and for the purpose set forth.

64,845.—MANUFACTURE OF GAS.—Joseph H. Connelly, Wheeling, West Va. First, I claim the use of lime obtained from burnt limestone or oyster shells, dampened or slaked with water, salt, or saltpeter solution, introduced into the retort as described, in the proportion mentioned, for the purpose of whitening and desulphurizing the gas, as set forth. Second, The use of lime prepared as stated, in combination with coal and residuum oils, introduced as described for the purpose specified.

64,846.—MEANS FOR STEERING VESSELS.—Robert Creuzbauer, New York City. First, I claim, in combination with a steering screw, or its equivalent, arranged within a pipe or water way extending transversely through the hull of a vessel, a means which will enable the pilot to give a right or left motion to said screw or to stop or start it at pleasure, without stopping or reversing the motion of the driving power, substantially as described. Second, The combination of a steering screw or its equivalent, arranged within a water way extending transversely across the hull of a vessel, with a means which will enable the pilot from the pilot house to stop, start, or reverse the motion of an engine, which is used for rotating said screw, substantially as described.

64,847.—KEEPER FOR DOOR LOCKS.—George W. DaCunha, of New York city. I claim an improved catch or nosing for door locks formed with a flange, dt, to project along or be led into the jamb, and with a flange, d2, to project along the casing, said flanges being cast solid, and with forming an integral part of the side catch, substantially as herein shown and described, and for the purpose set forth.

64,848.—HAY LOADERS.—Leopold De Lacey, Springfield, Ill. First, I claim the revolving platform and raking device, D, composed of the frame, A, fitted in the main frame, A, and provided with the bars, E, having teeth, F, attached, all arranged substantially as and for the purpose specified. Second, The raking and pitching fork, S, attached to a carriage, P, operated by an endless chain, Q, and arranged with ways or guides, J, J, on a suitable frame or support, substantially as and for the purpose set forth. Third, The swinging or pendant frame, T, in combination with the lever, I, bar, M, and clutch pulley, G, arranged to operate in connection with the revolving platform and raking device substantially as and for the purpose specified.

64,849.—PLANING MACHINES.—William H. Doane, Gerritt V. Orton, and William E. Loudon, of Cincinnati, Ohio, assignor to J. A. Fay & Co. First, We claim the combination of the adjustable break irons, K' K', with the cutters, K K, and the removable collars, H H, all constructed and arranged in the manner and for the purpose described. Second, The application of the shield, G, to a post, M, which is allowed to revolve around the cutter head substantially as described. Third, Sustaining the safety shield, G, upon the table top, A, by means which will admit of said shield being moved around the axis of the cutter head, and also adjusted vertically substantially as described.

64,850.—WHEEL VEHICLES.—James W. Drew, Stockbridge, Mich., assignor to J. N. Townson and James W. Drew, Antedated May 16, 1867. I claim the crooked sway bar, H, and the cross bars, I and J, in combination with the axle, C C, and the axle guides, G G, the whole constructed and operating in the manner and for the purpose herein described.

64,851.—COCKS.—Charles M. Alburger, (assignor to George R. Kirk), Philadelphia, Pa. I claim the follower, A, having its metallic packing, E, and elastic packing, e, and elastic packing, e', in combination with the spring, D, flange, G, thumb, F, packing, E, and spigot, C, substantially as described for the purpose specified.

64,852.—CONVERTING RECTILINEAR INTO ROTARY MOTION.—James A. Ehle, Green Bush, Wisconsin. First, I claim converting rectilinear motion into rotary motion by the use of polygons, substantially as described. Second, The balanced lever, B, the connecting rods, C C, the carriages, D, and the guides, E, substantially as described and for the purposes herein set forth. Third, The pins, f, forming hooks upon the triangles, E, and the bars, b, in combination substantially as shown and described. Fourth, The cam wheel, L, in combination with the triangle, E, and the gear wheels, H and K, substantially as herein shown and described.

64,853.—PORTABLE ROOFING BOILER AND FURNACE.—Perry Fenlason, Cincinnati, Ohio. I claim the boiler, B, in combination with the spring dray, A, or its equivalent, constructed substantially as above described and for the purpose set forth.

64,854.—ATTACHMENT TO STOVES FOR GENERATING GAS.—B. L. Fetherolf, (assignor to himself and J. N. Hea desty), Tamaqua, Penn. I claim the hollow metallic block, A, fitted within the fire chamber of stove so as to constitute both a gas generator and a lining or fire back, substantially as described.

64,855.—PUTTING UP OILS IN CASKS, &c.—P. G. Finn, Erie, Penn. I claim the barreling and hermetically sealing of coal oil in a heated and expanded state, substantially as and for the purpose set forth.

64,856.—EDIBLE COMPOSITION.—Daniel Fobes, (assignor to Fobes, Hayward, & Co.), Boston, Mass. I claim the edible composition as made of the materials in the manner and for the purpose substantially as described.

64,857.—EXTENSION TABLE.—George F. Folsom, (assignor to himself and Charles F. Pease), Roxbury, Mass. I claim the combination as well as the arrangement of an auxiliary leaf, E, and mechanism (viz. its rods, K, elevators, H, and their counter cams, or the equivalents thereof) for operating it as described with two leg frames, and their main leaves, D D, one of such leg frames being constructed with a space or recess arranged below the main leaf, and for the reception of the auxiliary leaf when the table is closed as described. I also claim the combination as well as the arrangement of two auxiliary leaves, E E, and mechanism for operating them as described, with the three frames, A B C, and their main leaves, D D, arranged together as specified.

64,858.—MECHANICAL MOVEMENT.—William Galladay, Sheboygan Falls, Wis. I claim the combination of the arms, C D, and pawls, E F, with the ratchet wheel, A, as and for the purpose set forth. Connecting the arms, C and D, at their inner ends, so as to be operated by one connecting rod, substantially as shown and described.

64,859.—GIG MILLS.—Ernst Gessner, Aue, Saxony. First, I claim the construction and arrangement of the revolving disks, D, in the adjustable frame, C, substantially as described for the purpose specified. Second, The arms, G G', with toothed segments, in combination with the rollers, N, and disks, D, constructed and operating substantially as and for the purpose set forth.

64,860.—GATES.—Robert D. Green, Columbia, Mo. I claim the solid bed-sill or track laid in the ground, and detached from the gate post, and on which the gate rests, plain on upper surface with groove or rail as denoted by letters, H, also pin fastener top of posts, as shown by letter, G; also the track cleaners, marked, D D, fastened together under part of bottom rail of the gate in front of each wheel, and designed as the gate moves, to remove from track all obstructions to the wheels, C C; also gate posts, E E, used to prevent the gate from running off the track when open. I also claim in combination with the posts of the main gate, represented by letters, H D C C E E, letters patent for extended top and bottom rails or sills, to be used at pleasure in forming a gap, moving the gate forward on the wheels, C C, so that the gate will admit the passage of small stock, and at the same time exclude large stock.

64,861.—MANURE DRAG.—Christian H. and Joseph H. Harnly, Pennsylvania Township, Pa. We claim the arrangement of the fork drag, A A' A'', with its spring and lever, F E, clump rod, D, and armed fork head, C B, runners, G, all combined and operating substantially in the manner specified. In combination with the fork drag, figure, 1, and its rig, O, and hook, K;

we also claim the rake-drag, figure 2, when used in connection with said fork drag in the manner and for the purpose set forth.

64,862.—METHOD OF PROPELLING CARS, ETC.—Charles T. Harvey, Tarrytown, N. Y.

I claim, First, the combination of the sliding pulley, Q, with the series of teeth on the axle, by which the said pulley is made fast to the axle, and with the springs, I, P, of the guide rod, D, for the purpose of stopping the motion of a car, substantially as shown.

Second, I also claim the combination of the parts, a and b, composing both a fast and loose pulley, with the springs, I, P, and the axle, A, for the purpose of starting the car substantially as shown.

Third, I also claim the use in cars or other objects which are moved by propelling cables of clutches or arms whose faces that receive the impulse of such cables are plain, substantially as shown.

Fourth, I also claim so arranging the guide rod, D, and cable clutch or arm, C, that they are compelled to rotate together while the latter is allowed to have a longitudinal movement on the former substantially as set forth.

Fifth, I also claim the combination of anti-friction rollers, z, with the cable clutch or arm, C, to obviate or prevent friction during the movements of said clutch, substantially as set forth.

Sixth, I also claim the supplementary springs, P, for strengthening and aiding the main spring, I, and so arranging and connecting them between the sides of spring, I, and the frame of the car that they are not displaced or injured by any vertical motions of the car body, substantially as set forth.

Seventh, I also claim the application to a car of bent arms, X, to hold the car down, or prevent it from being displaced from the track, substantially as shown.

Eighth, I also claim the combination of the pendulous roller, q, with the drum, p, and the pulley, l, substantially as described.

Ninth, I also claim the combination of the bar, M, and cam, o, with the lever, j, that operates the cable clutch or arm, C, substantially as described.

64,863.—HORSE HAY FORKS.—H. H. Hatheway, Clockville, N. Y.

I claim, First, the manner of securing the tines, C, to the handle by combining with each other the caps, b and b', bolts and nuts, a, a', ring, c, and handle, A, substantially as shown and operating in the manner described.

Second, The adjustable bail, D, in combination with the rings, d, keys, q2, and brace, E, substantially as and for the purpose herein shown and described.

64,864.—BEEHIVE.—B. S. and E. H. Havland, Fort Dodge, Iowa.

We claim the arrangement in the bee box of the perforated partitions, b, and adjustable partitions, D, whereby the communication between the several compartments, C, may be opened or closed, substantially as described for the purpose specified.

64,865.—ATTACHING THILLS TO VEHICLES.—Thompson Hersee, Jr., Buffalo, N. Y.

I claim a thill coupling composed of a clip, A, so constructed as to have a chamber in its part to receive a piece of india-rubber or other elastic substance, C, and also to receive the cross head, e, of the thill iron, D, the front plate, c, of the chamber being notched or forked at its upper end and the top plate, a, of the clip over the chamber having an aperture made in it to allow the cross head of the thill iron to pass into the chamber with a projection, f, to serve as a guard to prevent the casual rising of the cross head, e, substantially as shown and described.

64,866.—CARRIAGE SPRING.—B. T. Henry, New Haven, Conn.

I claim an elliptic spring having one or more ribs, d, formed upon its surface, substantially as and for the purpose set forth.

64,867.—FASTENING FOR SHIRT COLLARS.—Frederick, Hess, Baltimore, Md.

I claim the fastener composed of a plate with an eye on each side of it, one for holding an elastic loop to fasten the collar to the shirt, the other to hold a ring to secure the fastening to the collar as described.

64,868.—CULTIVATOR.—Jacob Hollinger, Millersburg, Ohio.

I claim the curved beam, A, as arranged in combination with the adjustable standards, B, and braces, E, H, for the purpose and in the manner, substantially as set forth.

64,869.—ANIMAL TRAP.—J. W. Hollingsworth, Salem, Ind.

First, I claim the shaft, E, bearing the spring, G, eccentric, D, and double crank, H, to which are connected the rods, I, pivoted to wings, J, in combination with the rocking plate, L, supporting the pivoted levers, M, provided with stops, n3, constructed and operating in the manner and for the purpose specified.

Second, The stops, m3, in combination with the levers, M, pivoted to the rocking plate, L, arranged relatively with the shouldered eccentric, D, operating substantially as described for the purpose specified.

Third, The rod, P, provided at one end with a catch fitting into notch in the end of the rod, Q, connected at the other end by rod, O, to lift gate, G, operated by the shouldered eccentric, D, and arranged relatively with the working parts of the trap herein described, substantially as and for the purpose specified.

64,870.—HOOP SKIRT.—William E. Houston (assignor to himself George W. Hubbell and J. R. Lattin), Birmingham, Conn.

First, I claim securing the hoops to the tape by a clasp or other device inclosing the tape upon the hoop without extending through the tape, substantially as herein set forth.

Second, The combination of the cord band or other material inserted in or attached to the tape with the hoops when the hoops are attached thereto, substantially as specified.

64,871.—CLASP FOR HOOP SKIRTS.—William E. Houston (assignor to himself George W. Hubbell and John R. Lattin), Birmingham, Conn.

I claim securing the two ends of hoops by a clasp corrugated thereon diagonally and at reverse angles upon opposite sides, substantially as described.

64,872.—TAPE OF HOOP SKIRTS.—William E. Houston (assignor to himself George W. Hubbell and John R. Lattin), Birmingham, Conn.

I claim a tape formed with a longitudinal pocket, C, combined with transverse pockets, B, substantially in manner herein set forth as an improved article of manufacture.

64,873.—TAPE OF HOOP SKIRTS.—William E. Houston (assignor to himself George W. Hubbell and John R. Lattin), Birmingham, Conn.

I claim the tape formed with the thread spaces, C, in combination with the pockets, B, substantially as and for the purpose specified as an improved article of manufacture.

64,874.—METHOD OF MAKING BALANCE WHEELS FOR WATCHES, ETC.—Edward Howard, Boston, Mass.

I claim the process or mode of making a series of balance wheel disks or buttons by the use of the crucible the brass tube and the steel rod, substantially as herein described and for the purpose specified.

64,875.—SUGAR CANE STRIPPER.—S. Terry Hudson, Success, N. Y.

I claim, First, The double pairs of springs, B, C, having lap jaws, c, c', for opening by each other, and also varying the spaces, C, and combination with the swivel guard plate, a, attached to the spring, D, and the stand, A, all arranged and operating substantially as and for the purpose herein described.

Second, The shifting spring, E, in combination with the springs, B, C, arranged and operating as and for the purpose herein set forth.

Third, The movable stand, A, provided with the point, h, or its equivalent and the head, F, in combination with the spud, a, arranged as and for the purpose herein specified.

64,876.—WASHING MACHINE.—George R. Hughes, Centralia, Mo.

I claim the cylinder or drum, E, the bent lever, C, the lever, J, the ratchet and pawl, C', or for tightening the cord on the cylinder or drum, F, the shaft, E, the cords, H and K, and the disk, D, constructed, arranged and operating substantially as described in combination with the frame A.

64,877.—SEED PLANTER.—D. H. Hull, Plantsville, Ct.

I claim, First, The device for operating the slides, j, j', of a seed planter consisting of the lugs, m, on the slides, connecting rods, Q, crank shaft, C, pinion, h, and internal gear on driving wheel, F, all combined with each other and made and operating substantially as herein shown and described.

Second, The device for raising and lowering the hinged frame, H, which consists of the chains, K, passing over the pulley, c, on the stationary arm, N, shaft, L, and ratchet wheel and pawl, h, i, all made and operating substantially as herein shown and described.

Third, The frame, H, when it is provided with the seeding boxes and when it is hinged to the main axle, A, substantially in the manner and for the purpose herein shown and described.

64,878.—CULTIVATOR.—James M. Hume (assignor to himself and C. F. Hoyt), Colchester, Ill.

I claim the adjustable beams, B, arranged in combination with the frame, A, levers, K, links, L, bar, C, and single tree, M, as and for the purpose, substantially as described.

64,879.—ENVELOPE.—Ralph S. Jennings (assignor to himself and N. G. Kellogg), New York City.

I claim, First, In constructing flat envelopes cutting and folding the same to form corner wings, E, E, at the ends thereof in combination with the eyelet seals, e, e, substantially in the manner and for the purpose herein described.

Second, Fastening corner flaps, C, of an envelope with each other by metal spars, d, d, or their equivalents as and for the purpose herein specified.

64,880.—PERMUTATION LOCK.—A. W. Johnson and George Thompson, New York City.

We claim the adjustable tubes, O, of unequal length fitting over each other their outer ends provided with teeth, e, which fit into corresponding teeth in the flange, d, of the graduated adjustable rings, Q, fitting one within the other, the said tubes provided upon their inner ends with notched disks, M, the notches in the outer ring being beveled upon one side, when all are constructed, and arranged as described and operating from the yoked shaped bolt, B, provided with the spring pawl, W, substantially as described for the purpose specified.

64,881.—MOTIVE POWER.—W. B. Jones, Franklin, Ky.

I claim the combination of the inclined wheel or frame, A, cylinder, C, and

lever shaft, E, when arranged together so as to operate together, substantially in the manner and for the purpose described.

64,882.—PRUNING SHEARS.—Peter Keck, Zanesville, Ohio.

First, I claim the mode of attachment of the blades of a pair of shears composed of three levers, substantially as shown and described.

Second, The combination of a convex edged cutting blade with the mode of attachment of the blades of a pair of shears, composed of three levers, substantially as shown and described.

64,883.—HORSE SHOE MACHINE.—John W. Kingsbury, New Bedford, Mass.

First, I claim the slotted arm, E, in combination with the sliding frame, F, and die, G, whereby the movement of said die is initiated substantially as herein shown and described.

Second, The adjustable rollers, H, having upper and lower plates of different diameters and thicknesses in combination with the slotted plates, G, all as herein shown and described.

Third, The combination of the adjustable block, M, or its equivalent with the reciprocating die, G, for the purpose of flattening the toe of the shoe, substantially as set forth.

Fourth, The combination of the reciprocating die, G, adjustable rollers, H, clamping jaws, I, for the purpose of forming horse shoes, all made and operating as herein shown and described.

Fifth, The adjustable block, M, or its equivalent in combination with the reciprocating die, G, and clamping jaws, I, for the purpose of flattening the toe of the shoe, all as set forth.

Sixth, The device for operating the jaws, I, consisting of the cam, o, on shaft, C, rod, n, block, L, rollers, m, plates, l, and springs, q, q, all made and operating substantially as set forth.

64,884.—HEATING STOVE.—A. Lee, St. Paul, Minn.

I claim the deflector, E, and the vertical cylinder, D, in combination with the air cylinders, B and C, as and for the purposes specified.

64,885.—HOG HOLDER.—W. and C. Leffingwell, Clarksburg, Ohio.

We claim, First, The device for holding hogs for the purposes of wiring, ringing, or snouting, or for slaughtering or otherwise operating upon them, adjustable to the size of the hog, in manner and by the appliances, substantially as described.

Second, The hinged side, D', when combined with the hinged roofing, E, E', or their respective equivalents, substantially as described.

Third, The inclined slat, H, or its equivalent, when combined with a box or trough, having its front opening contracted by the slats, G, G', or by an equivalent construction, substantially as described.

Fourth, The slat, H, or its equivalent, when combined with a box or trough having its front opening contracted by the slats, G, G', or by an equivalent construction, substantially as described.

64,886.—DEVICE FOR ELEVATING ICE.—Henry Little, Middletown, N. Y.

I claim the rotary screw elevator, in combination with the bearing, arranged to operate in the manner substantially as and for the purpose set forth.

64,887.—MODE OF DESULPHURIZING IRON ORE.—John Little, Newburgh, N. Y.

First, I claim the mode of desulphurizing iron ore by heating it in a furnace to red-hot temperature and throwing it then in cold water, substantially as set forth.

Second, The combination of processes for desulphurizing iron ore and preparing it for direct use in cupolas by heating, cooling in cold water, crushing between rollers, washing and mixing with fluxes for the reduction, to clean iron.

Third, The furnace, A, in combination with the movable plates, S1 S2, and the hoisting gears, M1 M2, for moving these plates with the ore, substantially as set forth and as shown in the drawing.

64,888.—HARVESTER RAKE.—John M. Long, Hamilton, Ohio.

First, I claim the rake head, I, attached to a shaft, H, on a disk, G, having an inclined axis, and arranged with a spring, J, to operate in the manner substantially as and for the purpose specified.

Second, The sleeve, F, placed loosely on the shaft, C, in connection with the clutch, L, when said parts are used in connection with the rake and beaters, in the manner substantially as and for the purpose set forth.

64,889.—Cancelled.

64,890.—CAR COUPLING.—W. H. Mayo, Hillsburgh, Nova Scotia.

I claim the draw hook, B, connected by a pin, a, to one draw-head, A, in combination with the box, D, attached to the other draw-head, C, and provided at its front part with an inclined bottom, c, the bent plate, E, lever, F, connected with plate, c, and with an arm, l, by a rod, k, and the spring, g, all arranged to operate substantially in the manner and for the purpose herein set forth.

64,891.—CAN OPENER.—T. A. McFarland, Meadville, Pa.

I claim, as a new article of manufacture, the can opener consisting of the handle, A, and cutters, C, constructed, arranged, and operating as described, for the purpose of cutting out a disk or plug at a single blow, as set forth.

64,892.—SOLAR CHRONOMETER.—Lloyd Miffin, Germantown, Pa.

I claim a gnomon so formed as to throw the shadow backward when the sun is fast, and forward when it is slow, to an extent equal in each case, to its variation from mean or clock time, so that the shadow of the gnomon will always cross the time scale at a point indicating the mean time, substantially as described.

I also claim correcting the variation from mean or clock time by the use of the sun's motion in his declination, north and south.

64,893.—GRINDSTONE.—Warren P. Miller, New York City.

First, I claim the mode of securing the blocks, B, to the disk, A, by means of the flange, a, and keys, C, all made and operating substantially as herein shown and described.

Second, The grooves, d, d', when arranged in the grinding surface, substantially in the manner and for the purpose herein shown and described.

Third, Constructing grindstones by combining the shaft, D, and the disk, A, with the stones, B, keys, C, all made and operating substantially as and for the purpose herein shown and described.

64,894.—DOOR INDICATOR.—Francis E. Mills, San Francisco, Cal.

First, I claim the reversible box, b, provided with the lettered cover, c, having the hole, h, and the revolving disk, P, said box containing a series of letters or blank disks, S, S, adapted to be placed in the sink, t, in the reverse end of said box, substantially as described for the purpose specified.

Second, The reversible box, b, in combination with the door glass plate, A, having circular opening, B, and semicircular opening, D, substantially as described for the purpose specified.

64,895.—STEAM GENERATOR.—Thomas and Thomas H. Mitchell, Albany, N. Y.

We claim the generator mounted so as to rotate on a horizontal or nearly horizontal axis, and within a furnace, substantially as described, in combination with the pipe or pipes for supplying and jetting the water, substantially as and for the purpose set forth.

We also claim the combination of the generator rotating within the furnace, the steam pipe and steam chest, and the pipe for supplying and jetting the water within the generator, substantially as and for the purpose set forth.

We also claim the combination of the generator rotating within the furnace, the pipe for supplying and jetting the water, the steam pipe and steam chest, and the blow-off pipe, substantially as and for the purpose set forth.

We also claim the steam pipe attached to and rotating with the generator, and provided with apertures, when combined with the steam chest and stuffing box, so that while rotating, it will discharge the steam into the stationary chest, substantially as and for the purpose set forth.

64,896.—BOLT AND RIVET MACHINE.—John Morgan, Jr., Wheeling, W. Va.

First, I claim the construction and arrangement of the solid die, x', follower, U, header, N, and cams, D E F and I, upon the shaft, B, substantially as herein shown and described for the purpose specified.

Second, The carrier, W, knife, 10, and shield, 16, combined, arranged, and operating in the manner and for the purpose specified.

Third, The solid die, x', forming the under side of the head of the rivet conave, as herein set forth for the purpose specified.

64,897.—BOX FOR BLUEING AND OTHER POWDERS.—George A. Moss, New York City.

I claim a box for powders, of the class specified, constructed of wood and provided with a cover of foil, or its equivalent, substantially as shown and described.

64,898.—CAR COUPLING.—John H. J. O'Neill, New Haven, Conn.

First, I claim the combination of the hook, F, the pawl, I, and lever, N, when constructed and arranged so as to operate substantially in the manner herein set forth.

Second, The head, C, constructed so as to be depressed, independent of the case, B, substantially as set forth.

Third, The arrangement of the lugs, f, or in combination with the frame, E, operating so as to relieve the spring, substantially as herein set forth.

64,899.—PORTABLE BLACKING CASE.—Abraham W. Overbough, New York City. Antedated May 16, 1867.

First, I claim the arrangement and combination of blacking and polishing utensils, in the manner described, so that the case, when unfolded, forms a stand or bench.

Second, I also claim the feet, combined with the devices, in the manner so as to form an even surface when closed.

64,900.—KNITTING MACHINE.—Arthur Paget, Loughborough, Great Britain.

I claim, First, The method of and arrangement for retaining each sinker in position by a spring which also assists the action of the sinker when sinking the thread.

Second, The combination of the bars, C3 D, and the sinkers, C, when the whole is constructed and operate in connection with each other as set forth.

Third, The arrangement for drawing across the incline or other equivalent, first in one direction and then in the other, by a double grooved pulley revolving with the main shaft, and by cords or chains and weights or catch blocks, so arranged as to draw across once during a part of each revolution.

Fourth, The method of suspending the action of the drawing across motion by the employment of an incline or cam piece, so arranged that when required it can be made to lift a hinged incline piece, or other mechanical equivalent, and thus prevent the catch block entering the notch in the draw-

ing across pulley, b, by which the said catch block would otherwise be carried round.

Fifth, The method of producing a selvedge in any part of the width of the fabric by the employment of an incline or other mechanical equivalent attached to and operating with the incline for actuating the sinkers or their equivalents, by which first mentioned incline the thread layer or thread layers is or are made to descend and pass between the needles at the end of each course.

Sixth, The plates, E', of steel or other hard metal, in combination with the bar, E, as described.

Seventh, The method of alternately knitting web and narrowing or widening the same, or making changes in the knitting by moving endwise in the direction of their axes the set of cams or levers employed in knitting the web, and another set or sets of cams or levers employed in effecting the narrowing, widening, or changes in the knitting.

Eighth, The method of producing, by a self-acting motion, in which cams, inclines, or levers can be used, the before-mentioned endwise movements of the cams or levers, which said self-acting motion can be (without arresting the revolution of the cams) brought into operation by hand, or by tappets, or holes in an endless chain, belt, drum, or pulley.

Ninth, Each of the foregoing methods or arrangements in combination with any or all of the other methods or arrangements.

64,901.—BEDSTEAD.—Isaac Pedrick, Bridgeton, N. J.

First, I claim the frame, E F G H K, and hooks, l, or their equivalent, in combination with each other and with the posts, B, substantially in the manner herein shown and described and for the purpose set forth.

Second, The post sockets, C, in combination with the posts, D, rails, A and B, and frame, E F G H K, substantially as herein shown and described and for the purpose set forth.

Third, The connecting slats, L, upon or connecting them with a cord or tape, M, substantially in the manner herein shown and described and for the purpose set forth.

64,902.—CARD HOLDER.—Henry H. Pember, New York City.

I claim the cardholder consisting of rectangular piece of metal, B, having a flange, a, along the edges of the two ends and its lower side, D, the upper side left open and provided near its center with the catch, E, and perforated ear pieces, F F, when all are constructed of one piece of metal, as herein set forth.

64,903.—MACHINE FOR SWAGING HORSESHOE BLANKS.—Chas. H. Perkins and Richard W. Comstock, Providence, R. I.

We claim the combination of the vibrating swaging bar, C, operating as described, with the stationary bar, A, for swaging the heels of horseshoe blanks, substantially as described.

64,904.—BOLT HOLDER.—Bacchus Perry and Aaron Cornish, Lee, N. Y.

We claim the bolt holder constructed and operating substantially in the manner and for the purpose herein described.

64,905.—CULLENDER BOILER.—Benj. F. Porter, Manchester, N. H.

First, I claim the perforated boiler, A, with double L-shaped slots, a, resting wires, b, and movable bottom constructed as described, and operating in the manner as and for the purpose specified.

I also claim the perforated boiler, A, in combination with a cylindrical boiler of any kind, when constructed and used substantially as described for the purposes specified.

64,906.—GANG PLOW.—L. O. Rockwood, Ottawa, Ill.

I claim the adjustable extension joint, fig. 4, constructed substantially as and for the purpose described in the foregoing specification.

64,907.—TRUNK.—Columbus A. Rose, Columbus, Ga.

I claim a trunk provided with a triangular hinged portion, B, and internal doors or lids, E, capable of being employed as shelves, substantially as described.

64,908.—SKATE FASTENING.—Duane A. Ross, New York City.

First, I claim the combination of the screw rods, a, b, with the sole and heel clamps and with the thumb nuts, e, k, for the purpose of fastening or detaching the skate to or from the boot or shoe, substantially as described.

Second, I also claim increasing the screw rods, nuts, and curved arms substantially as herein described, to prevent them from injury by snow, ice, water or other causes, substantially as described.

Third, I also claim hinging the clamp plates, n, to the clamp arms, d, for the purpose of adapting the clamping surface to the varied shapes or tapers of the heels of boots or shoes, substantially as described.

64,909.—COTTON AND HAY PRESS.—J. G. Roux, Raymond, Miss.

I claim the independent screws, B, having the same pitch but reverse motion, having pinions, E, on their inner ends, operated by the same pinion, D, operating in combination with the nuts, G, and braces, F, substantially as described for the purpose specified.

64,910.—HANGING AND LOCKING SASH.—Charles A. Schaefer (assignor to himself, Fritz Frillman, Wm. Wolf and John Schachtschober), Chicago, Ill.

I claim the half-round locking stud, I, in combination with arack, J, and pinion, F, to lock a window sash at any desired point, substantially as set forth.

64,911.—SASH SUPPORTER.—Charles A. Schaefer (assignor to himself, Fritz Frillman, Wm. Wolf and John Schachtschober), Chicago, Ill.

I claim the combination of the screw cylinder, A, shank, C, spring, I, and fork, e, with the roller, d, substantially as and for the purpose set forth.

64,912.—SEED SOWER.—Elijah U. Scoville, Manlius, N. J.

First, I claim having two or more hoppers, E, within one seed box, D, substantially as and for the purpose herein shown and described.

Second, The grooved roller, F, when arranged below the hoppers and when provided with adjustable slides, e, e, by which the amount of the seed discharged is regulated, substantially as set forth.

Third, The revolving spreader, G, when provided with perforated wing, 11, substantially as and for the purpose herein shown and described.

Fourth, The perforated wings, 11, when arranged in zig-zag lines upon a revolving shaft, G, substantially as and for the purpose herein shown and described.

Fifth, The hoppers, E, when arranged in a seed box, D, which is supported by braces, b, in combination with the spring, c, and screw, a, and roller, F, substantially as herein shown and described.

Sixth, The grooved roller, F, in combination with the rubber scrapers, h, which are secured in that side of the hoppers, E, towards which the seed is carried by the roller, as set forth.

Seventh, The zig-zag perforated revolving spreaders, in combination with the grooved roller, F, and hoppers, E, all made and operating substantially as herein shown and described.

64,913.—TIP-CART BODY FASTENING.—John E. Seavey, Kennebunkport, Me., assignor to himself and S. E. Bryant.

I claim the cart body fastener made substantially in the manner and for the purpose and to operate as specified, it being composed of the weighted arm, A, the eccentric, b, the yoke, B, and the bearing, C, formed and arranged as explained.

64,914.—PLOW POINT.—David J. Selden, Mount Vernon, Ohio.

I claim the wrought-iron tenon cast in the cast-iron share with shoulders on each of the four sides of the tenon, the point with the mortise to fit

Second, The arrangement of the draft pole, F, pivoted to the plow beams, B, B, and compressed and elevated by the screw, a, substantially as and for the purpose set forth.

64,924.—GATE.—Jacob Vail (assignor to himself and John H. Linderman), Beloit, Wis.
 First, I claim the arrangement of the cords, H and I, and pulleys, J, L, O, P, with each other and with the gate, B, for the purpose of opening and closing said gate, substantially as herein shown and described.
 Second, Making one of the horizontal boards or bars of the gate act as a sliding latch, substantially as herein shown and described and for the purpose set forth.
 Third, The combination of the coiled spring, E, or its equivalent, with the sliding bar, b, substantially as herein shown and described.
 Fourth, The combination of the pivoted lever, T, with the gate, B, sliding bar, b, and operating cords, H and I, substantially as herein shown and described and for the purpose set forth.

64,925.—ATTACHING BURNERS TO LAMPS.—H. Weston, Town-
 anda, Pa.
 I claim providing the interior of the collar, C, with a screw and having the exterior of the projection, B, covered with a packing, a, of leather or any suitable cement or composition, with set screws, c, passing through the collar, substantially as and for the purpose set forth.

64,926.—PLANTER AND MANURE DISTRIBUTOR.—Benjamin F. Whitner, Madison, Pa.
 I claim the combination of the furrow opener, g, the furrow wheel, A, and the seed receptacle, B, substantially in the manner and for the respective purposes herein set forth.
 I also claim the grooved planting cylinder, C, when it is combined with a jointed and a recessed ring, i, and when the said cylinder works in combination with the furrow opener, g, the furrow wheel, A, and the covering drag, h, substantially in the manner herein set forth.

64,927.—SHOVEL PLOW.—Albert Wilcox, Maquoketa, Iowa.
 I claim the attachment of the third shovel, A, by means of the curved supporting bar, B, to the beam, C, of the main plow, also the manner of equalizing the draft of said plow by making the left-hand standard of the main plow more curved and the shovel on the same side larger, in the manner and for the purpose above set forth.

64,928.—EGG BEATER.—Marvin T. Williams, Milwaukee, Wis.
 I claim, propeller blade, M, beating arms, L, shaft, I, pinion, F, cover, H and cog wheel, D, arranged and combined substantially as and for the purpose described.

64,929.—STEAM GENERATOR.—Joseph Woodruff, Rahway, N. J.
 First, I claim the connection of two boilers by means of the pipes, DD, substantially as described.
 Second, I also claim extending the tubes, D, D, a nozzle into the boiler and bending or deflecting the same, for the purposes substantially as set forth and described.

64,930.—CAR SPRING.—Henry A. Alden, Matteawan, N. Y.
 I claim, in a spring composed of one or more pairs of concavo-convex or conical and radially corrugated plates as described interposing between the plates of each pair a disk of vulcanized rubber, or other elastic body of suitable dimensions, substantially in the manner and for the purposes set forth.

64,931.—BRACE FOR BITS.—Charles H. Amidon, Greenfield, Mass.
 I claim the combination of the clamping stirrup, B, and shoulder, G, in the shank of a bit brace, for the purpose set forth.

64,932.—CLOTHES WRINGER.—Charles H. Amidon, Greenfield, Mass., assignor to the Bailey Washing and Wringing Machine Company, Woonsocket, R. I.
 First, I claim the cog wheels, D, E, F, connected together at their axes by the straps or links, G, so as to form a flexible train of gearing between and in combination with the rollers, BB, of a clothes wringing machine, substantially as and for the purpose set forth.
 Second, The levers, H, H, arranged substantially as set forth to be in opposition to a resisting force exerted by a spring or springs, or their equivalent.

64,933.—COFFER DAM AND BOAT.—William H. Applegate, Le Claire, Iowa.
 First, I claim the construction and arrangement of a floating coffer dam and boat combined having the water-tight compartments and provided with the series of frames arranged to support the planking, substantially as herein shown and described.
 Second, In combination with a combined coffer dam and boat constructed as described, I claim the shafts, A and F, and the carrier or endless belt, D, for removing material, G, which is to be deposited, substantially as set forth.
 Third, I claim the construction and arrangement of the boat with an opening at its rear end, substantially as described.

64,934.—SEPARATING ZINC FROM GOLD AND SILVER.—Edward Balbach, Jr., Newark, N. J.
 I claim a movable black-lead retort formed with a neck and introduced within a furnace, substantially as set forth, for receiving alloy, silver, lead, and zinc alloys and distilling off the zinc, the remaining alloy being poured out by inclining the retort, as set forth.

64,935.—MACHINE FOR WIRING BLIND SLATS.—Peter Barry, Newark, N. J.
 I claim, First, The independent cut-off, F, arranged to operate upon the staples by coming between them from above, substantially as described.
 Second, I also claim the independent cut-off in combination with the guides, e, e, which guide its free end to the guide strip, B, substantially as shown.
 Third, I also claim the combination of the elbow lever, S, the slot, F, the pawl, L, and the adjusting shoe, M, substantially as shown.
 Fourth, I also claim in combination with the feeding pawl, L, the adjusting shoe, M, and the feeding bar or rack, substantially as shown.
 Fifth, I also claim the application of a spring plate, R, to the feeding mouth or space below the plunger, when arranged and combined with a rigid or unyielding guide strip, B, substantially as set forth.

64,936.—ATTACHING CARRIAGE THILLS.—A. R. Bartram, Redding, Conn.
 I claim, First, The adjustable coupling, A, in combination with the cross bar, C, substantially as set forth.
 Second, The tang, B, of the coupling, A, provided with a groove, as set forth, in combination with the socketed cross bar, C, and the set screw, E.

64,937.—LIFTING JACK.—J. H. Bean, Marietta, Ohio.
 I claim the lever, E, and serrate bars, C, C, both the latter working in the vertical passages, BB, for greater security, in combination with the levers, F, F, and detents, G, G, and springs, b, b, the detents pivoted to the levers and operating at right angles to the said bars, substantially as described.

64,938.—LATHE.—William B. Bement, Philadelphia, Pa.
 I claim, First, The combination of the spindle, C, its two overhanging ends, driving wheel or pulley, F, and bearings, B, B, the whole being arranged substantially as set forth for the purpose herein set forth.
 Second, The combination of the said spindle and its two overhanging ends with the bearings, B, B, carrying two slide rests when the said spindle can be adjusted from and towards and in a direction at right angles to the said bearings.
 Third, The said spindle, C, its adjustable bearings, B, B, and its cog wheel, F, in combination with the adjustable arms, I, I, and the gearing herein described, or its equivalent.
 Fourth, The combination of the two slide rests, the two screw shafts, m and m', for operating the said rests, the driving pinion, n, and the two clutches, p and p'.

64,939.—LIFE PRESERVER.—John M. Billhofer, Irvington, N. Y.
 I claim the double cone-shaped frame, A, provided with the bag, B, and jaws, C, substantially as and for the purpose shown and described.

64,940.—OSCILLATING ENGINE.—William E. Bird, New York City.
 I claim the combination in steam or other oscillating engines, with the trunion of the engine cylinder of a reciprocating slide valve working against a fixed or stationary seat and operating to control the ports or passages of the engine, substantially as described.

64,941.—COMBINED BACK SIGHT AND CARTRIDGE RETRACTER FOR FIRE-ARMS.—G. W. Bowlby, Pontiac, Mich.
 I claim the sight, F, constructed and used in combination with the barrel, A, for the purpose of forming a sight and retractor at the same time, substantially as specified.

64,942.—CARRIAGE TRIMMING.—Charles Bried, Newark, N. J.
 I claim rubber or gutta-percha tubes, sleeves, or rings or compounds of gum elastics when made and used in the forms and for the purposes herein above designated.

64,943.—HEATING STOVE.—Albert Brown, Troy, N. Y.
 I claim, in connection with the combustion chamber of base burning stoves, the arrangement of a fuel reservoir or supply chamber, C, directly under an oven, B, substantially in manner as herein described and for the purpose set forth.

64,944.—WARP EYES OF WIRE HEDDLES FOR LOOM HARNESS.—Darius C. Brown, Lowell, Mass.
 I claim my improved headle eye made substantially as described, that is, of wires or parts of a wire twisted together and subsequently spread laterally at the angle or angles of junction, in manner substantially as set forth so as to tighten the twist at either or both ends of the eye, as and for the purpose as hereinbefore explained.

64,945.—GATE.—John A. Burchard, Beloit, Wis.
 I claim an improved farm and carriage gate when constructed and operated substantially as set forth and for the purpose specified, in combination with the vault, O, O, weight, C, lever, D, pulleys, E, E, tracks, Q, Q, cords, e, f, latch, b, pulleys, H, H, posts, A, A, G, G, and plunger, F.

64,946.—LIFTING JACK.—Charles Butterworth, Miamisburg, Ohio, assignor to himself and Jacob Kercher.
 I claim the combination and arrangement of the uprights, A and B, the lever, E, with its fulcrum roller, n, and the supporting pieces, F, constructed substantially as described and for the purpose specified.

64,947.—APPARATUS FOR ACCUMULATING AND RECLAIMING HEAT.—Thos. J. Chubb, Brooklyn, N. Y.
 I claim, First, The employment in a chamber or chambers of a series of tubes arranged in such manner that the exterior surfaces of said tubes are exposed to or are in communication with the waste heat passages in the chamber in which said tubes are arranged and the space or passages between the tubes in said chamber are in communication with the chamber of combustion, and also to and with the passages leading to the chimney and the interior of said tubes or passages there-through, are in communication with a separate chamber or passage leading from the gas generating furnace to and through the interior of the said tubes to the chamber of combustion, when the foregoing is combined with substantially a similar chamber, series of tubes, spaces, passages, and communications, the interior of such latter series of tubes being in communication with the passage leading from the open air to and through the interior of said tubes to the chamber of combustion, substantially as described.
 Second, The combination in or with a gas generating furnace of a chamber or chambers containing a series of tubes in which the waste heat produced by the combustion of gas and air heated in these passages as separate currents to the place of combustion in a direct or continuous manner by open air surface action or passage of the heat through the material of which said tubes are composed, substantially as described.
 Third, The employment of a series of tubes so arranged that they may be heated by the products of combustion produced by the mingling together of heated air and gas when said air and gas have been heated by heat constantly applied to the material of which the said tubes are composed, substantially as described.
 Fourth, The employment of a chamber or chambers containing a series of tubes so arranged as to present an extensive caloric absorbing surface and conducting heat through the material of which said tubes are composed and communicating it to and heating a current or currents of air and gas or gases passing on or over the opposite side of the said tubes.
 Fifth, Constructing chambers with a series of tubes for the entrance of continuous currents of air and gases for supporting combustion in a separate chamber, which currents are heated by waste heat or the products of combustion of such heated currents passing in opposite directions or nearly opposite directions and on opposite sides of said tubes and through the material of which they are composed, for the purposes specified.
 Sixth, Making provision for heating air and reheating gas in their passage to a chamber of combustion by the heated products resulting from combustion in said chamber when said gas, air, and heated products flow through their respective passages without requiring reversal, substantially as specified.

64,948.—COMBINED GRAIN THRASHER AND CLEANER.—Adrian Cornell, Newtown, Pa.
 I claim, First, The combination substantially as described of the thrashing cylinder, the double vibrating shaker, the fan, and the shaking shoe, when arranged for joint operation as set forth.
 Second, The detachable shoe frame, E, constructed and arranged as described.
 Third, The combination of the shaker, the shaking hopper and the riddle, arranged for joint operation as described.
 Fourth, The combination of the driving shaft and pulleys with the cylinder shaft and pulleys on the fan shaft, arranged and operating as described, for the purpose of adapting the machine to use with either an undershot or overshot horse-power without crossing the belts.

64,949.—LIFTING JACK.—Charles Crow, Onarog, Ill.
 First, I claim the arrangement and combination of the movable steps, I, racks, D, and guides, B, C, when constructed to operate substantially as and for the purpose set forth.
 Second, The combination of the roller, H, rope, E, pulley, J, inner guides, C, and drum, v, when arranged substantially as and for the purpose described.

64,950.—CHURN AND PUMP POWER.—Francis Danzenbaker, Bridgeton, N. J.
 I claim the perpendicular, B and E, and their attachments, lug, C, shaft, D, and arms, G and F, when arranged to operate both a churn and pump, either separately or combined, substantially as set forth.

64,951.—MACHINE FOR APPLYING ANIMAL POWER.—Jonathan Dearborn, Seabrook, N. H.
 I claim the combination and arrangement of the inclined shaft, A, the wheel, C, the gear, E, and the plate, A, the wheel, C, the gear, E, the fender, D, and the platform, G.
 I also claim the combination of the beveled gears, H, I, the shaft, K, the shaft, A, the wheel, C, the gear, E, and the platform, G, the whole being arranged so as to operate as specified.

64,952.—HOOPS FOR SKIRTS.—L. De Forest, Birmingham, Ct.
 I claim protecting the hoops of hoop skirts by a succession of metallic clasps or spangles, in the manner and for the purpose substantially as herein set forth.

64,953.—SAW.—Charles Disston, Philadelphia, Pa.
 I claim an elastic detachable forked key, C, constructed and adapted to the retention of a detachable saw tooth, substantially as specified.

64,954.—PROCESS OF TREATING STEEL BLADES, ETC.—Henry Disston, Philadelphia, Pa.
 I claim the within described mode or process of treating blades or other thin pieces of steel, that is to say: straightening and compensating them by impact or pressure immediately after they have been reduced to the desired temper, and while they are still hot, as described.

64,955.—CARRIAGE WHEEL HUBS.—L. Dorman, Worcester, Mass.
 First, I claim the combination of the grooved wooden part, A, with the metal shell, B, substantially as and for the purposes set forth.
 Second, The combination of the grooved wooden center or core, A, and the spokes, E, with the slotted or metal shell part, B, substantially as and for the purpose set forth.

64,956.—AUTOMATIC LUBRICATOR.—Isadore Dreyfus, New York City.
 I claim an automatic lubricator, constructed to be applied as described provided with a loose rod or dasher, set in motion by the journal for conducting the lubricating material thereto, substantially as specified.

64,957.—SASH PULLEY.—Simon Drum, Allegheny City, Pa.
 I claim a shell for a sash pulley, said shell being made in halves and without a face piece, and arranged that the openings for the screws are divided by the line of separation between the halves of said shell, whereby one half of each opening for the screws are cast in the end of each half of the shell, the whole being constructed, arranged, and operating substantially as herein described and for the purpose set forth.

64,958.—SUPPORT OR BEARING FOR FRICTION ROLLERS.—Stephen W. Eaton, Farrington, Me.
 I claim the box, A, constructed substantially as specified, viz: with the elongated recesses or notches, a, a, to receive the journals of the roller, B, and so made as to enable the roller to rest on the base plate, c, of the box, and roll thereon a short distance in either direction from the middle of the plate, as described.

64,959.—WOODEN PAVEMENT.—Henry Fayette, Port Chester, N. Y.
 First, I claim the sections of pavement composed of a number of wooden blocks bolted together longitudinally and transversely, substantially as described.
 Second, In sections of pavement composed of wooden blocks, bolted together as described, I claim making the blocks in the outer tier of each section longer than the central blocks, as and for the purpose described.

64,960.—WOODEN PAVEMENT.—Henry Fayette, Port Chester, N. Y.
 I claim locking together sections of wooden pavement by means of tongues and grooves so arranged that each section will be supported by every adjoining section, substantially as described.
 Second, I also claim sections of pavement, composed of wooden blocks bolted together as described, and provided with tongues and grooves so arranged that when laid down in a pavement each section will be locked with all the adjoining sections by means of said tongues and grooves, substantially as described.

64,961.—DEVICE FOR LUBRICATING WHEELS, ETC.—John C. Fish, Barnstable, Mass.
 I claim a lubricating apparatus constructed of a reservoir, in which is located the tube, c, provided with openings as described, and with a perforated movable tube, l, operating substantially as described.

64,962.—MARINE FURNITURE.—Josiah Foster, Sandwich, Mass.
 I claim a construction of movable furniture for vessels such that by means of packed joints, arranged and operating as set forth, it can be transformed into boats, substantially as described.

64,963.—MACHINERY FOR MAKING NAILS.—Thaddeus Fowler, Seymour, Conn., assignor to the Fowler Nail Company, New Haven, Conn.
 First, I claim moving the rod of blanks forward and adjusting successively each blank to its proper position before the dies bite upon it, by means of the lateral flanges, o, s, arranged and operating in the manner herein described.
 Second, I claim combining with devices for feeding the nail blanks, the two pairs of cutters, h and m, and l and n, arranged substantially as described.
 Third, I claim the combination of the cutters, h and m, l and n, with the rollers, and e, formed with cam-shaped surfaces, i, and flanges, o and s, as and for the purposes specified.

64,964.—MACHINE FOR MAKING HORSE-SHOE NAILS.—Thaddeus Fowler, Seymour, Conn., assignor to the Fowler Nail Company, New Haven, Conn.
 First, I claim the jaws, n, n, fitted and actuated substantially as specified, to straighten the nail by pressure on its edges, as set forth.
 Second, I claim the die, p, in combination with the carrier plate, h, for acting upon the side of the nails as brought around successively, as specified.
 Third, I claim the cutter, q, in combination with the carrier plate, h, for clipping off the nail points as successively presented by said carrier plate, h, as set forth.
 Fourth, I claim the spring friction plate, t, in combination with the carrier plate, h, and a file for removing the side of the point, substantially as specified.

64,965.—LAMP BURNER.—John A. Frey, New York City.
 I claim the combination of the air chambers, f and g, with the aspirinlets, d, d, and perforated diaphragm, c, arranged and operating as and for the purpose set forth.

64,966.—MACHINE FOR SIZING AND FELTING HATS.—E. R. Gardiner, Brooklyn, N. Y.
 I claim the combination with the inclined endless belt or apron, C, of the inclined adjustable or self-adjusting partly submerged bed, F, and box or bath, A, substantially as and for the purpose or purposes herein set forth.

64,967.—GANG PLOW.—T. Elzear Gardiner, Bryantown, Md.
 I claim a gang plow, constructed and operating in the manner substantially as shown and described.

64,968.—GUIDE FOR SEWING MACHINES.—George D. Garvie, Hartford, Conn.
 I claim the adjustable gage, B, in combination with the spring arm, a, both being constructed and arranged as described.

64,969.—ATMOSPHERIC CHURN DASHER.—J. C. Gaston, Cincinnati, Ohio.
 I claim the tubular handle, A, provided with the perforation, b, near the upper end, a, in combination with the dash board, c, having the annular cavity, c, in its lower face, all constructed and operating substantially as herein described and for the purpose set forth.

64,970.—BRIDLE REIN.—A. E. Graham, Richland, Ind. Antedated November 21, 1866.
 I claim the continuous reins, A, A, passing through pulleys on the end of the bit, and also through pulleys each side of the gag rein, and around the terret or check hook, being tacked together (as seen at x), or prevented by a support from sliding through said check hook, substantially as described and for the purposes herein specified.

64,971.—CHURN.—Adelbert W. Gray, Bennington, Ohio.
 I claim the special arrangement of the break, C, in combination with the beater, H, when operated conjointly, in the manner and for the purpose set forth, by means of the band, I, pulley, K, and wheel, J.

64,972.—RECIPROCATING ENGINE.—William D. Grimshaw, Newark, N. J.
 I claim the combination, with a reciprocating piston, of a cushioning attachment, operating as a sliding or movable plug to the port or ports of the cylinder, substantially as specified.

64,973.—BED BOTTOM.—C. H. Hall, Binghamton, N. Y.
 I claim the arrangement of a series of springs, C, each having three or more coils, which are placed on pins, D, and on the end of the slats, B, substantially in the manner and for the purpose shown and described.

64,974.—PLOW.—H. G. and E. L. Hall, Putnam, Ohio.
 I claim, First, The detachable side plate, B, of the plow point, A, substantially as and for the purpose specified.
 Second, The cutting point, C, composed of a wrought-iron shank, c, and a cast or chilled-iron cap, c', substantially as and for the purpose specified.
 Third, The method above described of attaching the side plate, B, to the plow joint, A, by means of shoulder pins, b' b', projecting from the side plate, B, into slots in the body of the plow point, where the shoulders of the pins rest on ledges or keys in the walls of the slots, substantially as and for the purpose specified.
 Fourth, The method of attaching the shank, c, to the plow point, A, above described.
 Fifth, The independent cutter or coultter, H, substantially as and for the purpose described.
 Sixth, The construction of the cutting point, C, and the groove or bed, a, as above described, so that the cutting point may be self-sharpening, substantially as and for the purpose specified.

64,975.—DOOR LOCK.—W. J. and J. W. Harris, Newport, N. Y.
 I claim, First, In combination with the key for arranging the tumblers, the elastic or slide for moving the lock bolt, substantially as described.
 Second, In combination with the slide, the stops against which it impinges or brings up at the exact point in which the locked or unlocked positions for the admission and withdrawal of the key, substantially as described.

64,976.—WINDOW-SASH WEIGHT.—H. A. Harvey, New York City.
 I claim the new article of manufacture herein described, namely, a sash weight, composed of a metallic case filled with iron ore and cement, manufactured as herein set forth.

64,977.—TURBINE WATER WHEEL.—Birdsill Holly, Lockport, N. Y.
 I claim sustaining turbines and other wheels by means of a water chamber, H, and disk, F, resting directly upon the sides thereof, both surrounding the step and shaft of the wheel when supplied with water from the flume, and proportioned to the height thereof, substantially as set forth.
 I also claim, in combination with said device, the supply pipe, I, arranged for receiving the water from the outlet of the stop gate, J, substantially in the manner and for the purpose set forth.

64,978.—DEVICE FOR PERFORATING CIGARS.—J. Houghton, New York City, and G. Wingfield, Brooklyn, N. Y.
 I claim, First, The combination of the needles, a, head, A, casing, B, spiral spring, b, ring, c, and piece, C, substantially as and for the purpose set forth.
 Second, The combination with the head, A, and needles, a, a, with the casing, B, substantially as and for the purposes set forth.
 Third, The combination with the head, A, and needles, a, a, of the conical piece, C, having a trumpet-shaped or conical opening in it, substantially as and for the purpose specified.
 Fourth, The combination with one or more needles, a, a, head, A, and casing, B, of the spiral spring, b, substantially as and for the purpose set forth.

64,979.—BROOM HEAD.—William G. Hughes, Hebrew Ind. Antedated May 8, 1867.
 I claim, First, The combination of the wire braces, I and J, with the parts, A and B, and with the brush of the broom, substantially as described and for the purpose set forth.
 Second, The combination of the spring or bracing wires, M and N, with the wire braces, I and J, and the brush, P, substantially as described and for the purposes set forth.

64,980.—TOBACCO CUTTING MACHINE.—W. W. Huse, Brooklyn, N. Y.
 I claim arranging or hanging the circular cutter eccentrically upon its shaft, so that only a portion of its cutting edge is at one operation brought into action on the tobacco or other material to be cut, and when desired, can be shifted on its shaft to bring another portion of its cutting edge to act on the substance to be cut, as described.
 I also claim making the cutter for a short distance from its periphery or cutting edge, inclining outward from its plane of motion as herein described in combination with the method of hanging the cutter eccentrically and so that it can be shifted on its shaft as described.
 And I also claim in combination with the eccentric cutter, the employment of a sharpener and wiper, arranged substantially in the manner and for the purposes set forth.

64,981.—SEEDING CULTIVATOR.—Henry Hutchison, Three Rivers, Mich.
 First, I claim the reversible cross shaped marker, O, constructed, arranged and operating as described.
 Second, The reversible rhomboidal spades, E, constructed, arranged and operating as described.
 Third, The reversible winged covering plows, U, constructed, arranged and operating as described.
 Fourth, Adjusting and holding the shafts upon the legs or shovel stocks by means of the hinged clamps and set screws, constructed and arranged as described.
 Fifth, The combination of the hinged slotted legs with the pivoted drag bars having hooks on their rear ends to pass through the slots and be held by wooden pins behind the legs when constructed, arranged and described.
 Sixth, The combination of the marker and front plow with the shifting bar, P, shifting lever, P', and drivers seat, when arranged for joint operation as set forth.
 Seventh, The combination of the legs with their supporting beams by means of the laterally adjustable sockets, forks, lugs, and set screws, constructed, arranged and operating as described.
 Eighth, The combination substantially in the manner described of the front and rear plows mounted on opposite ends of levers pivoted to rock transversely to the axle to relieve the strain on the plows caused by inequalities in the surface of the ground.
 Ninth, The combination of a series of front and rear plows with longitudinally sliding levers fulcrumed on transverse levers so connected at their inner ends that the levers can simultaneously be raised or lowered by the driver or be held in any position desired.
 Tenth, The combination of the covering plows attached to the beam suspended from the rear end of the rocking levers with the lateral vibratable front plows suspended from the front end of the rocking levers.
 Eleventh, The combination of the lifting levers, shifting bar, V, and detent, v, when arranged in relation to the drivers seat, substantially in the manner described.
 Twelfth, The arrangement of the adjustable drivers seat, arched bar and adjustable back brace as described.
 Thirteenth, The arrangement of the hoppers, E' and F, as and for the purpose described.
 Fourteenth, The combination with the feeding hopper, E', of the reciprocating teeth, m, and rubbers, m', for the purpose of separating the seed.
 Fifteenth, The combination with the lower hopper of the reciprocating toothed feeding slides.
 Sixteenth, The vertically reciprocating gates, J, arranged and operating as described.
 Seventeenth, The combination substantially in the manner described of a hopper, a horizontally reciprocating toothed slide and a vertically reciprocating gate.
 Eighteenth, The combination of the hopper the reciprocating slides, the feed spout and the marker, for the purposes set forth.

64,982.—STATIONARY WASH BASIN.—Alfred Ivers, New York City.
 I claim the pendant flange, d, and slot, e, in combination with the dam, i, and pipe, g, substantially as and for the purposes specified.

64,983.—SHEEP RACK.—Heber G. Ives, Dunham, Conn.
 First, I claim pivoting the hay rack of a sheep feeding device so that by adjusting or turning the same, the trough beneath may be exposed to facilitate feeding, substantially as described.
 Second, I claim the combination with the racks, C, C, of two troughs, F, F, having their contiguous inclined sides joined together at top at an angle for the purpose of distributing the grain or roots, substantially as set forth.

64,984.—HARVESTER.—Luman H. and George J. Jones, Bar-
 ington, N. Y.
 I claim the arrangement of the several parts, B C D E G J K L and M when made and applied as and for the purposes herein specified.

64,985.—HARVESTER PITMAN.—Jacob L. Kintner, Harrison county, N. Y.

I claim the grooved adjustable journal boxes, B B, frame, A, and packing, E F, combined and arranged with the cutter bar, D, pitman, E, and wrist pin, C, in the manner and for the purposes herein specified.

74,986.—ORGAN.—George B. Kirkham, New York City.

First, I claim the connections, a, a, their nuts, screws, and blocks, d, e, together with their pin screws, and little ball supports, c.

Second, I claim the lips, f, and their guides, g, g.

Third, I claim the spring catch, h, and its attachments, i, j, k, l, m, n, and o, including the arrangement, p, and q.

Fourth, I claim the bar, b, and its supports, b', b' as shown and set forth.

Fifth, I claim the combination, s, r, t, u, v, as described and represented.

Sixth, I claim the peculiar hinge joint made by the sticks, T, Y, and Z, with little pins passing through the sticks.

64,987.—GATE.—Albertus Larrowe, Cohocton, N. Y.

I claim the combination and arrangement of the gate, as herein described, with the post, C, having the rabbits, e, e, and roller, g, and post, B, with slot and catch, t, in the manner and for the purposes set forth.

64,988.—WINDOW-SASH ELEVATOR.—John Le Ferre, Charlestown, Mass.

I claim the hinged plate, C, with its projections, a, eyes, c, d, and screw, D, in combination with the block, G, provided with its screw thread, f, and carrying the pulley, e, substantially as and for the purpose set forth.

64,989.—TIME GLOBE.—L. Paul Juvet, Glenn's Falls, N. Y.

First, I claim the axle of the globe, A, when constructed of the two sections, F and F', the former serving as an axis for the hollow arbors, o and p, carrying the hour and minute hands, d and b, and the latter serving as a winding arbor, constructed, arranged, and operating in the manner substantially as shown and described, and for the purpose set forth.

Second, The combination of the dial, D, globe, A, and the chronometer movement within the same, arranged, constructed, and operating in the manner substantially as shown and described and for the purpose set forth.

64,990.—MODE OF AGEING ALCOHOLIC LIQUORS.—Joseph Lloyd Martin, Baltimore, Md.

I claim, First, The process herein described for changing, altering, and modifying whiskey, brandy, gin, or other alcoholic liquors, so as to give them the character and quality of similar liquors as usually acquired by long keeping.

Second, The combined action of heat, electricity, and attrition, so as to modify and change alcoholic liquors, substantially herein described.

Third, The combination of an electric battery, pump, and tanks, or their equivalents, so as to treat alcoholic spirits, substantially as herein described.

64,991.—SHEEP SHEARS.—Ebenezer Mathers, Elderville, Pa.

First, I claim a pair of sheep shears, with reversible blades for cutting or clipping whether each blade or set of blades be made in one piece or in two or more pieces, substantially in the manner and for the purposes above set forth.

Second, The mode of attaching the handles, a, a', of a pair of sheep shears by a spiral or coiled spring, b, so as to admit of their easy operation, such spring possessing sufficient rigidity to cause the return stroke of the blades, substantially as and for the purposes herein set forth.

Third, Securing a more or less intimate contact between the opposite blades or sets of blades of a pair of sheep shears, by a set screw passing through a slot in one of the blades or the plate to which such blade is attached, and screwing into the other, substantially as and for the purposes above described.

64,992.—INSTRUMENT FOR PREVENTING INCRUSTATION OF STEAM BOILERS.—David Matthew, Prairie du Chien, Wis.

I claim the employment within the boiler or cage or case, containing metallic scrap, substantially as described.

64,993.—HEATING APPARATUS.—T. A. McFarland, Meadville, Pa.

First, I claim the combination substantially in the manner described, of the fire chamber, the water chamber, and the steam chamber, with the casing or body of the stove, for the purpose set forth.

Second, Connecting the water and steam chambers by the steam and waste water pipes, arranged as described, for the purposes set forth.

Third, The valve, F, arranged to operate as a safety valve for the boiler, and as a return valve for the condensed waste steam, as described.

64,994.—BRICK.—Samuel McLaughlin, Philadelphia, Pa.

I claim bricks having ribs and grooves arranged substantially as and for the purpose herein set forth.

64,995.—MANUFACTURE OF PACKING FOR STUFFING BOXES FOR STEAM ENGINES, PUMPS, ETC.—Wm. Hartley Miller, Philadelphia, Pa.

I claim the combination of these materials in a packing for engines, pumps, etc., in the manner shown and described.

64,996.—POTATO DIGGER.—Adam Minnis, Canton, Township, Mich.

First, I claim the whole combination of the machine, for the use and purposes named.

Second, I claim as new the shears, A A, etc. five or more, in shape and manner of adjustment.

Third, I claim as new the flexible knives, E E, etc., in the manner of their adjustment.

64,997.—HAWSE PIPE.—Parker Moody, Gloucester, Mass.

I claim the arrangement and combination of the auxiliary concave roller, D, and its chamber, b, with the hawse pipe, A, its oblique mouth piece, E, and the concave friction roller, C, arranged in such mouth piece, substantially as shown and described.

I also claim the combination and arrangement of the dovetailed plates, d, d, and recesses, e, e, with the hawse pipe and its auxiliary roller, D, and roller chamber, b, as described.

I also claim the construction of the roller chambers with discharging passages f, g, h, having therefrom and communicating as described.

64,998.—COMBINED PRESS FOR CHEESE AND FOR OTHER PURPOSES.—Christian Musselman, Somerset, Pa.

I claim the arrangement of the lever, d, winch, f, platform, a, and rings and cylinders, i, k, m, o, in the manner and for the purposes set forth, the whole forming a press adapted to domestic uses.

64,999.—BREECH-LOADING FIRE-ARM.—Joseph and George Henry Needham (assignors to James G. Gray), (London, Eng.

We claim the arrangement of the breech piece, i, with its component parts, constructed and operating substantially in the manner described.

65,000.—MACHINE FOR MAKING TYPE MOLDS.—Mortimer Nelson, New York City.

First, I claim a wheel receiving a radial groove movable types in combination with a lever and with projections on said wheel, substantially as set forth, whereby the lever, that moves the type is also made to accurately adjust the wheel and hold it while the type is being impressed, as set forth.

Second, I claim a vertical wheel carrying movable types placed radially and constructed substantially in the manner specified.

Third, I claim the barrel, C, in combination with the type wheel, A, and keys, F, substantially as and for the purposes set forth.

Fourth, I claim the feed wheel, Z, rack, A, beds, S, and S, constructed and operated substantially as and for the purposes set forth.

Fifth, I claim the spacing block, E, and its actuating mechanism, applied substantially in the manner and for the purposes set forth.

Sixth, I claim the lever, W, in combination with the spacing block, E, S, and feeding mechanism, substantially as specified.

Seventh, I claim a contractile band to draw the type back to place in the type wheel, as set forth.

65,001.—SHINGLE MACHINE.—Elijah R. Osgood, Columbus, Ohio.

First, I claim the manner shown and described of constructing the movable dogs of two parts, e, e', jointed together and held so by a plate, substantially as described.

65,004.—HOG FEEDER.—I. S. Pope, Napoleon, Ohio.

First, I claim the wheel, G, as arranged in combination with the box, A, and trough, B, as and for the purpose described.

Second, I claim the rollers, K, as arranged and operated by the lever, L, in combination with the reservoir, I, and trough, for the purpose and in the manner as set forth.

65,005.—VAPOR BURNER.—Alonzo W. Porter and J. Hamilton Brown (assignors to Alonzo W. Porter and James S. Gray), New York City.

First, We claim mounting the heater cap and conductors on a plug having a ground edge fitting into a corresponding ground surface on the top of the retort, substantially in the manner described for the purpose of readily separating the heater cap from the retort to cleanse the latter.

Second, The combination substantially in the manner described of a locking yoke embracing the retort with a detachable plug supporting the conductors, for the purpose set forth.

Third, The combination of the retort, the central pipe, and the valve stem with the sleeve screw and yoke, for the purpose specified.

Fourth, A yoke which embraces the retort and serves both to lock the parts together and as an additional heat conductor.

65,006.—MACHINE FOR CUTTING TOBACCO.—E. L. Pratt, Boston, Mass.

I claim the swinging carrier, the center, and the gage plate, when arranged to operate together substantially as shown and described.

65,007.—FURNITURE FOR VESSELS.—Samuel F. Pratt, Roxbury, Mass.

I claim the combination of the seat and water-tight tank, when constructed and arranged to operate substantially as and for the purpose specified.

Also in combination with the foregoing of one or more water-tight compartments, as and for the purpose specified.

65,008.—LOCOMOTIVE ENGINE.—Lucier Raichaert, Paris, France, assignor to Richard and Henry L. Norris, Philadelphia, Pa.

First, I claim a locomotive engine having a main driving shaft with a crank formed in the same turning in fixed bearings secured to the frame and situated between two truck axles each of which has a cranked axle coupled to the said main driving shaft, all substantially as and for the purpose herein set forth.

Second, The combination of the said main driving shaft, E, the cranked axles of the trucks, and coupling bar, J, the several shafts and their cranks being arranged substantially as described.

Third, The bars, F, and F', constructed and adapted to the main driving shaft and cranked axles of the trucks, substantially as and for the purpose herein set forth.

65,009.—AUTOMATIC WATER LEADERS.—Henry Reuch, Quincy, Ill.

I claim the spring, N, in combination with the valve, I, spring case, P, discharge pipe, J, and weight linked to the valve, all arranged substantially as described.

65,010.—LAMP HEATERS FOR VEHICLES.—Edwin H. Reynolds, Rising Sun, Md.

First, I claim a casing, B, having a perforated top, a, side openings, b, partition, G, in combination with a detached lamp, the whole being constructed and applied to the bottom, A, of a vehicle, substantially as and for the purpose described.

Second, The combination of the above-mentioned casing, B, with a glass lamp chamber.

Third, The shields, n, n, arranged beneath the tubular projections, d, d, substantially as and for the purpose specified.

65,011.—VAPOR BURNER.—H. M. Richmond, Buffalo, N. Y.

First, I claim the combination of the transparent cone or deflector, A, with the inner cone, B, of a gas generating burner.

Second, In combination therewith I claim the flange, F, with the grooves, H and G, or the equivalent thereof, as and for the purposes described.

65,012.—TRACTION ENGINE.—John B. Root, New York City.

I claim the combination of variable or adjustable eccentrics or cranks on a rotating shaft driven by the engine, with reciprocating friction blocks or devices acting upon the wheels connected with the driving shaft of a locomotive or traction engine, substantially as specified.

65,013.—ROTARY VALVE.—John B. Root, New York City.

I claim the combination with a valve the face of which moves in the arc of a circle or arcs of circles, of a driving pin, G, projecting radially from the valve operating rock shaft and made cylindrical at its junction with the valve and loosely fitting or entering into the valve, substantially as and for the purpose or purposes herein set forth.

65,014.—CHURN.—W. W. Sanborn, Lyons City, Iowa.

I claim the perforated beater, H, the air tube, K, and the grooved bottom, J, when constructed, arranged, and operating substantially as and for the purposes above set forth.

65,015.—SASH SUPPORT.—John N. Sawtell, Chicopee, Mass.

I claim a sash supporter the combination of the wedge, C, lever, E, and guide box, A, the whole constructed and operating substantially as described.

65,016.—VENTED FACETS.—Henry Schild and Jacob Schild, New York City.

We claim the valve, f, at the inner ends of the channels, j, k, in combination with the blocks, d, d, and also with a perforated lug, D, constructed and operating substantially as and for the purpose described.

65,017.—ATTACHING CARRIAGE THILLS.—Gottlieb Schreyer, Columbus, Ohio.

First, I claim the construction, upon a clip strap, B, of a perforated lug, D, with a conical enlargement, b, b, on its sides, adapted for receiving the slotted thilliron, E, and a bolt, G, substantially as described.

Second, The construction of the clip strap, B, with lips, c, c, for holding rubber blocks, d, d, and also with a perforated lug, D, having conical enlargements upon it, substantially as described and for the purpose set forth.

Third, The combination of the slotted thill iron, E, conical lug, D, and a tapering bolt, G, substantially as described.

65,018.—STEAM-GENERATOR GAGE COCK.—Thomas Shaw, Philadelphia, Pa.

I claim the construction and arrangement of the gage valve and whistle whereby to control the pressure, and to indicate the sound produced by steam and water commingled, or water unmingled with steam, substantially as set forth.

65,019.—INSULATING SUBMARINE CABLES.—George B. Simpson, Washington, D. C.

I claim the combination of gutta percha and metallic wire in such form as to increase a wire or wires, or other conductors of electricity, within the non-conducting substance gutta percha, making a submarine telegraph cable at once flexible and resistant, which may be suspended on poles in the air, submerged in water, or buried in the earth to any extent, for atmospheric and submarine telegraph communication, and for other electric, galvanic, and magnetic uses, as hereinbefore described.

65,020.—BEEHIVE.—Nathan Simpson, Pomeroy, Ohio.

I claim applying and arranging around the entrance to the beehive needles or other sharp pointed pieces of metal substantially as set forth, and for the purposes stated in the foregoing specification.

65,021.—SLEIGH BRAKE.—Henry Sipe, Sipesville, Pa.

I claim the rock shaft, b, and arms or elbow levers, c, c, in combination with the brake bars, d, d, and pole or tongue, a, arranged and operated substantially as described.

65,022.—TOY.—George W. Sizer, Brooklyn, N. Y.

I claim the combination of one or more whistles with the toy known as the buzz, substantially as herein set forth.

65,023.—PADDLE WHEEL.—E. Spencer, Ottawa, Canada West.

I claim the pivoted buckets, I, provided with the cams, b and h, and arranged to operate in connection with the stationary ring, B, having the notches, n, and projections, c, formed thereon, substantially as shown and described.

65,024.—CONCRETE BRICK MACHINE.—James Stewart, and David Windsor, Sandwich, Ill.

First, We claim the combination and arrangement of the molds, B B, plungers, C, C, following bar, E, arms, H H, I I connecting arms, L L, and shaft, N, substantially as and for the purposes specified.

Second, We claim in combination with the above, the arms, F F, and lever, G, arranged as and for the purposes described.

65,025.—FENCE.—Jonathan Thomas, Mount Union, Ohio.

First, I claim the combination of the horizontal wires, C, C, with strips, B, B, looped around them substantially as shown and described.

Second, I claim the posts, A, constructed of bar iron in U form with the flange at bottom to adapt them to be bolted to a base, substantially as described.

65,029.—BRUSH.—A. M. White, New York City.

I claim the enlarged chambers, a', of the holes, a, in combination with the staple-like wires, b, substantially as and for the purpose specified.

65,030.—HARVESTER RAKE.—William N. Whiteley, Jr., Springfield, Ohio.

First, I claim driving the rake and reel directly by means of a worm screw on the cutters crank shaft, and a worm gear on one end of the reel shaft, substantially as shown and described.

Second, The quadrant-shaped dropping platform, P, hinged to the finger bar, substantially as and for the purpose set forth.

Third, The combination of the quadrant-shaped platform, P, with the rake, G, arranged to operate in conjunction with said platform, substantially as described.

Fourth, The combination of the rake, G, the cam, F, and quadrant-shaped dropping platform, P, so arranged that the dropping of the platform is dependent upon the movement of the rake, substantially as described.

Fifth, In combination with the dropping platform, P, and rake, G, the stop, O, substantially as and for the purpose set forth.

Sixth, The combination of the clutch lever, L, and the stop lever, M, substantially as and for the purpose set forth.

Seventh, The combination of the cam, F, lever, S, and dropping platform, P, substantially as and for the purpose set forth.

65,031.—HORSE HAY FORK.—Michael Winsler, Wm. Campbell, and Lyman Hardman, Tuscarawas County, Ohio.

We claim the fork, A and B, when constructed and operated in such a manner that the point of the outside tine of each fork will come in contact with the point of the inside tine of the other fork, substantially as and for the purpose herein set forth.

65,032.—MANUFACTURE OF BROWN METALLIC PAINT.—Peter Winter, Horicon, Wis.

I claim the brown metallic paint, manufactured from the substance popularly known as dead or shot iron ore, consisting mainly of peroxide of iron and manganese, when treated substantially as herein shown and described.

65,033.—VALVE FOR STOVE-PIPE DAMPER.—Gaius B. Wiseman, Sycamore, Ill.

First, I claim a folding damper valve, composed of the leaves, B C D, operated by a sliding stem, A, the whole constructed substantially as set forth and described.

Second, The folding and revolving damper valve, constructed and operated substantially as set forth and described.

65,034.—WATCH.—Charles V. Woerd, Waltham, Mass.

I claim, in combination with the wheels, c, and means for rotating the same, the lever, b, provided with the wheel, d, when arranged to operate substantially as described.

Also, in combination with the lever, b, and wheel, d, a spring catch, latch pin, and stops, substantially as and for the purpose described.

65,035.—MACHINE FOR MAKING EYELETS.—Solomon W. Young (assignor to himself, J. W. Hoard, and R. A. Denison), Providence, R. I.

I claim the combination as well as the arrangement of the feeding mechanism, the dies, l, l, the punches, m, n, and mechanism for operating such punches substantially as described.

I also claim the die plate as made with the guide groove, i, and the gage cavity, k, arranged with the dies, l, l, substantially as described.

65,036.—MACHINE FOR MAKING EYELET STOCKS.—Solomon W. Young (assignor to himself, J. W. Hoard, and R. A. Denison), Providence, R. I.

First, I claim the die plate as constructed with the groove or channel, b, and the depressions, e, e, as and for the purposes set forth.

Second, I also claim the combination of the retainer, H, with the die and the punch, or the same and the guide channel, such retainer to operate with the punch, substantially as specified.

Third, I also claim feeding apparatus made substantially as described.

Fourth, I also claim the combination as well as the arrangement of such feeding apparatus, or its equivalent, with the punch and die and the retainer, as specified.

Fifth, I also claim the combination of the feeding apparatus, the punch and die, the retainer and the guide channel, to operate as specified.

Sixth, I also claim the combination as well as the arrangement of either or both the guide staples, with the die plate, the punch, and the feeding mechanism, as explained.

Seventh, I also claim the combination of the roller, f, the guide channel, the retainer, the punch, and die, one or more staples, and the feeding mechanism.

RE-ISSUES.

2,616.—MACHINE FOR GUMMING AND PRINTING ENVELOPES.—

Henry C. Berlin and George H. Jones, New York City, assignors of Thomas V. Waymouth. Patented June 12, 1866. Reissued Sept. 25, 1866.

First, I claim the construction and operation of the hinged table B, substantially as and for the purpose set forth.

Second, The operation of the movable separator G, or its equivalent in combination with the gummer D, substantially as and for the purposes set forth.

Third, The combination of the gummer D, and reciprocating carrier F, or its equivalent and the endless apron H, or its equivalent, arranged and operated substantially as and for the purposes set forth.

Fourth, Imparting an intermittent motion by suitable mechanism to the endless apron H, or its equivalent, when combined with a reciprocating carrier F, and gummer D, for the purpose set forth.

Fifth, The operation of the rollers K', and finger I', separately or together in combination with the endless apron H, and carrier F, substantially as and for the purposes set forth.

Sixth, Gumming these flap of an envelope or similar blank by a gummer, which performs the double office of gumming the blank and raising or holding it stationary in combination with any suitable mechanism to receive the blanks, one after another after they have been gummed and carry any such blanks so gummed in such a manner that the gummed portions will be prevented from lying upon or overlapping each other, while drying, for the purpose set forth.

2,617.—PHOTOGRAPHIC ALBUM.—William W. Harding, Philadelphia, Pa., assignee by mesne assignments of Richard Van Velthoven and Joseph H. Hazzard. Patented Oct. 17, 1865.

I claim the binding of the sheets or cards of albums together by means of strips of leather or m uslin, or their equivalent pasted or secured to the edges of contiguous or alternate sheets successively through the book.

2,618.—COOKING APPARATUS AND REFRIGERATOR.—Ignaz Newburg, New York City, assignee of Joseph and Ignaz Newburg. Patented Nov. 6, 1866.

I claim the non-conducting packing or material, composed of pasteboard boxes fitted one within another, substantially as herein set forth for the purpose specified.

Second, The double casing a, b, and non-conducting material c, having an annular gutter m, openings l, opening g, and pan f, and furnished with the non-conducting cover A, in combination with the central vessel B, the whole constructed and arranged substantially as herein set forth for the purpose specified.

2,619.—PAPER CUTTING MACHINE.—William Smith, South Windham, Conn., Executor of the estate of Enos P. Beckwith, deceased.—Patented Dec. 19, 1865.

First, I claim the employment in a paper cutting machine of a combination of two elements, to wit, a feed mechanism impelled by a motion intermittent which starts and stops the feed gradually, and a frictional connection, which allows a returning motion of the impelling mechanism, while the feed is at rest, and takes hold of and releases the feed at any point, without the least motion due to ratchets, and the like toothed connections; all substantially as and for the purpose herein specified.

Second, The combination in a paper cutting machine, of a revolving knife, with a gradually starting intermittent feed mechanism, substantially as and for the purpose herein set forth.

Third, The within described arrangement of the revolving knife b, crank B, link D, connecting means E, and intermittent feeding drum G, substantially as and for the purpose specified.

Fourth, In combination with mechanism, substantially as herein described for feeding forward and arresting the motion of the paper, I claim adjusting the length of the sheets by changing the position of the link D, or its equivalent, substantially as and for the purpose herein set forth.

Fifth, The endless piece G, arranged relatively to the knives a, and b, to the gradually stopping and starting mechanism, G, H, or its equivalent in a paper cutting machine, substantially as and for the purpose herein specified.

Sixth, The spring K, arranged as specified relatively to the intermittent feeding mechanism E, F, G, and their connections, in a paper cutting machine.

Seventh, Taking hold of the feed roller so as to prevent its revolving backward when the forward motion is arrested in combination with the feed, having an alternated reversed motion, and gradually starting and stopping, as herein specified.

Eighth, The within described construction and arrangement of the brake M, so as to aid in arresting the forward motion at the proper time as well as to prevent the backward motion.

Ninth, The within described arrangement of the spring J, brake M, wheel G, and the connected parts of an intermittent feed in a paper cutting machine, substantially as specified.

Tenth, The catch or dog N, with a releasing device therefor in combination with the brake M, spring J, and suitable means for depressing the same, and the intermittent feeding drums G, H, or their equivalents, in a paper cutting machine as specified.

Eleventh, The actuating cam B, and surface N, brake M, and wheel G, of an intermittent feed in a paper cutting machine, substantially as specified.

2,620.—HARVESTER RAKE.—Robert Bryson, Schenectady, N. Y. Patented April 8, 1862.

First, I claim the combination of the vertical shaft E, angular guide bar I, rake head J, slotted arm F, connecting rod H, vibrating lever G, and crank B, substantially in the manner and for the purpose described.

Second, The combination of the many-sided block K, rake head J, spring L, inclined legs N, loaded lever hook Q, and loaded tripping hook levers, O, O, the whole being constructed to operate substantially as described.

Third, In combination with a platform hinged to a draft frame having two supporting and driving wheels, I claim a circularly sweeping rake arm or handle, which moves in a plane parallel to the plane of the hinged platform, on a pivot which is on said platform; and which also receives an intermittent

oscillating motion about its own axis; when the support of such rake arm is located at or near the rear end of the platform which is attached directly to the finger beam, substantially as and for the purpose described.

Fourth, I claim a hinged platform with a vibrating rake mounted upon it, said rake moving in the plane of the top of the platform while sweeping off the grain and then oscillating on its own axis so as to move back above the grain which is to be swept off by its return forward stroke, substantially as herein described.

Fifth, A rake arm which sweeps in the path of a part of a horizontal circle, oscillates in the path of a vertical circle, all without changing its attitude at any point, such rake arm being mounted on a platform which is hinged to the finger beam, and which is directly behind the cutting apparatus, substantially as described.

Sixth, A hinged platform with the elevated extension D, adapted for sustaining a rake which delivers the cut grain in gabels upon the ground in rear of the draft frame, substantially as described.

Seventh, A hinged platform with a rake arm J, which is provided with a raking device, said raking device moving with the rake arm in its passage over the platform, and acting to hold the teeth of the rake arm in a position for raking, and also in a position for passing unobstructedly over the grain upon the hinged platform, substantially as described.

Eighth, A rake which has both a circular vibrating movement and an intermittent oscillating movement, all without changing the plane of the rake arm mounted on a platform which is hinged to a two wheeled draft frame, substantially as described.

Ninth, A rake which has both a circular vibrating movement and an intermittent oscillating movement about its own axis all without changing the plane of the rake arm; such rake being mounted on a hinged platform and driven by a crank and pitman, from the inner side of a draft frame which has two separate and independent driving and supporting wheels, substantially as described.

2,621.—MANUFACTURE OF BLACK LEAD CRUCIBLES.—George Nimmo, Jersey City, N. J. Patented May 31, 1864.

I claim the manufacture of crucibles from a composition of which calcined plumbago or old pots ground, forms a part, substantially as set forth.

DESIGNS.

- 2,655.—DESIGN FOR A COOK'S STOVE.—John Abendroth, New York City.
- 2,656.—DESIGN FOR A CARRIAGE LAMP.—Marcus DeVoursney, Newark, N. J.
- 2,657.—DESIGN FOR A SHAFT FRAME.—Adolph H. Rau, Philadelphia, Pa.
- 2,658.—DESIGN FOR A PIANO STOOL.—Henry M. Ritter, (assignor to M. Greenwood & Co.) Cincinnati, Ohio.

EXTENSIONS.

ORNAMENTING BOTTLES.—L. Q. C. Wishart, Philadelphia, Pa. Design. Letters Patent No. 1,161. Dated Oct. 25, 1859.

I claim the ornamental design, described and represented in the drawing for Pine Tree tar cordial bottles.

SUPPORTING THE TOPPING-LIFT AND PEAK HALYARD BLOCK OF SAIL VESSELS.—William and Stephen G. Coleman, Providence, R. I. Letters Patent No. 9,619. Dated Oct. 25, 1859.

We claim the supporting the topping-lift by means of a crane, of such form, and construction, that when the topping-lift hoist, when the sail is hoisted, it shall not pull or chafe against the peak halyard block.

We also claim the so arranging and constructing such crane that it may also support the peak halyard block, substantially as specified.

MACHINE FOR PEGGING BOOTS AND SHOES.—J. J. Greenough, New York City. Reissued No. 269, dated July 4, 1854. Again reissued No. 698, dated April 26, 1859. Letters patent No. 10,427. Dated Jan. 17, 1854.

I claim driving the pegs into boots and shoes automatically, by means of a peg driver operated up and down by a positive mechanical movement whether impelled by a cam, eccentric, or crank, or other equivalent, substantially as and for the purposes specified.

MACHINE FOR PEGGING BOOTS AND SHOES.—J. J. Greenough, New York City. Reissued No. 269, dated July 4, 1854. Again reissued No. 699, (Div. 2.) dated April 26, 1859. Letters patent No. 10,427. Dated Jan. 17, 1854.

I claim the moving the sole of the shoe along by means of the awl that forms the hole in which the peg is inserted, in combination with the peg driver, whether the peg driven be or be not employed, to perform the additional function of presenting the peg, whereby each hole made by the awl is brought in succession in line for inserting the peg before the awl is withdrawn, as set forth.

MACHINE FOR PEGGING BOOTS AND SHOES.—J. J. Greenough, New York City. Reissued No. 269, dated July 4, 1854. Again reissued No. 700, (No. 3) dated April 26, 1859. Letters patent No. 10,427. Dated Jan. 17, 1854.

I claim cutting off shoepegs from a strip of peg wood, or other material, by means of a lateral side cut, that will cut straight across substantially as and for the purposes set forth when combined with suitable ways in which the strip slides, and machinery for driving the pegs as specified.

I also claim enclosing the peg by the cutter until it is driven as specified, by making the cutter, when in position, a part of the guiding tube substantially as set forth.

I also claim the combination of the endless feed with a cutter for severing the pegs in a shoe pegging machine, as above specified.

MACHINE FOR PEGGING BOOTS AND SHOES.—J. J. Greenough, New York City. Reissued No. 269, dated July 4, 1854. Again reissued No. 701, (No. 4) dated April 26, 1859. Letters patent No. 10,427. Dated Jan. 17, 1854.

I claim connecting the last with a horizontal slide or plate capable of presenting the shoe or boot, substantially as described, so that the shoe or boot attached thereto, may be turned and moved in any direction, in a horizontal or inclined course, in combination with a mechanism, substantially as described, which tends constantly to force it upward against a rest or guide, but which will permit it to yield downward as described; but this combination I claim only when combined with the pegging mechanism above described, or any equivalent thereof.

I also claim an automatic means of moving and guiding the last to present it to the pegging apparatus, in the required line of pegging the guide groove and guide, and plunger and curved rack, substantially as described in combination with the mechanism above described or the equivalent thereof which permits the last to be moved in any desired direction as set forth.

MACHINE FOR PEGGING BOOTS AND SHOES.—J. J. Greenough, New York City. Reissued No. 269, dated July 4, 1854.

Again reissued No. 702 (No. 5) dated April 26, 1859. Letters patent No. 10,427. Dated Jan. 17, 1854.

I claim the combination of the universal movement carriage, and lateral awl movement for properly presenting the shoe to receive the pegs in succession, as herein specified.

I also claim the combination of the mechanism for the cutting and feeding of the pegs, as herein described, or any equivalent thereof, with the automatic peg driver, as described.

I also claim the combination of the following elements, or their mechanical equivalents, namely, the peg-former, the peg-feeder, the peg-driver and the mechanism for moving the shoe, herein described, thus constituting an automatic machine for pegging shoes, as set forth.

MACHINE FOR PEGGING BOOTS AND SHOES.—J. J. Greenough, New York City. Reissued No. 269, dated July 4, 1854.

Again reissued No. 703 (No. 6) dated April 26, 1859. Letters patent No. 10,427. Dated Jan. 17, 1854.

I claim the pegging of boots and shoes with nails or pegs drawn wire substance, the guides for the wire, and the mechanism for driving the wire, said nippers cutting off the peg after it is driven, substantially as specified.

WEAVING CORDED FABRICS.—William Smith, New York City.—Letters patent No. 9,653. Dated April 5, 1853.

I claim the process of forming a fabric by the combination of stationary and movable warps with the two weft threads, passed simultaneously through the two sheds, formed above and below said stationary warps. The weft threads being held in place on the surface of the stationary warps by the movable warps.

SEWING MACHINE.—William Wickersham, Boston, Mass.—Letters patent No. 9,679. Dated April 19, 1853.

I claim the combination of a single needle and two thread guides (carrying separate threads) so operated that during one passage of the needle, through and out of the cloth, or other material to be sewed, one of the said guides, shall lay its thread in the hook of the needle, while during the next passage of the needle through and out of the cloth, the other guide shall lay its thread in the hook of the needle, each guide acting alternately, all substantially as herein before specified, the improvement of making one of the said guides, viz: the guide I, with the long slot, for receiving the thread in its passage to and through the other guide as specified.

I also claim the above described peculiar mode of sewing cloth, or other fabric, viz: by combining two threads with the fabric by drawing them through from the same side of the cloth and through each other's loops, interlocking them in plegna stitches so that the threads alternately bind each other substantially as specified.

The improved arrangement of applying the closing slide of the hooked needle, to the same side as the barb or hook, so that it may slide in a groove in the needle or carrier parallel to the motion of the needle, in the manner and for the purpose as specified.

BALANCING SLIDE VALVES OF STEAM ENGINES.—Robert Waddell, Liverpool, Eng.—Patented in England, April 27, 1853. Letters patent No. 10,999. Dated June 6, 1854.

First, I claim the equilibrium table with its levers or their equivalents applied to and acting in combination with the valve substantially as herein described.

Second, I claim the packing pieces extending from the back of the valve chest, abutting against the back of the valve in combination with the small passages leading to the ports, substantially in the manner herein described.

Third, I claim combining the equilibrium table or its equivalent with the packing and small passages by the joint action of which a slide valve is perfectly and entirely balanced.

SEWING MACHINE.—William H. Johnson, Springfield, Mass.—Reissued No. 355, Feb. 26, 1856. Letters patent No. 10,597. Dated March 7, 1854.

First, I claim the making of a seam with a single thread, by the combination of a single needle, forked hook, and expanding lever, operating substantially in the manner and for the purpose herein specified.

Second, The forming or making of a seam from a single thread by the running of a loop of the thread through the material to be sewn, the running of a second loop through the material and putting the first loop through the second, the running of a third loop through the material and through the first-named loop, the carrying of a fourth loop through the material and putting the third loop through it, and so on, putting the first loop through the second and around the third, the second loop through the fourth and around the fifth, and so on, forming the belaying double loop stitch herein described, in the manner set forth.

Third, The feeding of the material to be sewn by means of a vibrating piercing instrument, whether said instrument be the needle itself or an independent instrument in the immediate vicinity thereof, substantially as herein described.

PROCESS FOR PREPARING GOLD.—Alfred J. Watts, Brooklyn, N. Y. Letters Patent No. 9,691. Dated April 26, 1853.

I claim the within-described process of preparing or crystallizing gold for the purpose of filling teeth, substantially as herein set forth and described.

KNITTING MACHINE.—John Mee, Lowell, Mass., assignor to John Mee and John Rourke, Lowell, Mass., and G. Mackenon, Portsmouth, N. H. Letters Patent No. 9,718. Dated May 10, 1853.

I claim two sets of thread guides in combination with two sets of needles (or their equivalents) and machinery for casting the loops, the whole being made to operate together substantially as herein before specified.

I also claim two sets of thread guides in combination with two sets of needles and machinery for casting the loops, all substantially as described, and operating together to produce a ribbed knit fabric, such as I have explained.

I also claim the improvement of causing the two sets of needles to work or move up and down independently of each other or in other words so that one set may move downward or be moved out of the way of the thread guides to be brought into operation on the other set, such improvement enabling me to bring or arrange the two sets of needles close together and thus make closer work than can be produced when the two sets of needles are made to move in one direction (either up or down) at the same time.

WARP KNIT FABRIC.—Jno. of Mee, Lowell Mass., assignor to Jno. Mee and Jno. Rourke, Lowell, Mass., and G. Mackenon, Portsmouth, N. H. Letters Patent No. 9,719. Dated May 10, 1853.

I claim the above described new or improved manufacture of warp skirt ribbed fabric, the same being made by means of two sets of hooks or two sets of warps or warp yarns laid and looped together, and upon the said hooks or needles, substantially in the manner specified, and whether to exhibit ribs to equal or unequal widths on opposite sides of the fabric as explained.

MACHINE FOR SHRINKING HAT BODIES.—Jas. S. Taylor, Danbury, Conn. Letters Patent No. 9,700. Dated May 3, 1853.

I claim the process of shrinking or sizing the hat bodies by passing them longitudinally into and through a chamber formed by placing several cylinders

or rollers having concave or other denomination of surfaces in such a proximity as to form the said chamber as herein before substantially set forth.

MACHINE FOR POINTING AND THREADING SCREW BLANKS.—Thomas J. Sloan, New York City. Letters Patent No. 9,688. Dated April 26, 1853.

I claim combining in an organized machine, a cutter and its appendages operated substantially as specified for forming the point on screw blanks, as specified, with the chaser or cutter which cuts the threads over the shank and pointed part thereof down to the point substantially as specified.

Inventions Patented in England by Americans.

(Condensed from the "Journal of the Commissioners of Patents.")

PROVISIONAL PROTECTION FOR SIX MONTHS.

1,051.—MACHINE FOR CUTTING SCALE-BOARD, AND FOR THE MANUFACTURE OF THE SAME INTO AN IMPROVED FABRIC FOR STRUCTURES GENERALLY.—John K. Mayo, New York City. April 3, 1867.

1,053.—APPARATUS FOR REGULATING AND TRANSMITTING ELECTRIC CURRENTS, ESPECIALLY DESIGNED FOR USE IN CONNECTION WITH TELEGRAPHIC INSTRUMENTS FOR LONG SUBMARINE LINES.—George Little, New York City. April 3, 1867.

952.—PROCESS FOR MANUFACTURING ICE.—Thaddeus S. C. Lowe, New York City. March 30, 1867.

1,000.—ARTIFICIAL STONE FOR GRINDING, WETTING, OR POLISHING PURPOSES, AND A PROCESS FOR PRODUCING THE SAME.—Geo. K. Van Derburgh, New York City. April 3, 1867.

1,028.—STEAM GENERATOR. Mitchell Safety Steam Generator Company, Albany, N. Y. April 3, 1867.

1,044.—MODE OF EMBALMING.—Geo. W. Scollay, St. Louis, Mo., April 6, 1867.

1,068.—MACHINERY FOR PICKING AND GINNING COTTON.—Enoch Osgood, Boston, Mass. April 10, 1867.

1,078.—BRICK MACHINE.—Richard A. Douglas, Chicago, Ill. April 11, 1867.

1,069.—BREACH-LOADING FIRE-ARMS.—Henry H. Wolcott, Yonkers, N. Y. April 10, 1867.

1,077.—MODE OF AND APPARATUS FOR MULTIPLYING POWER, ESPECIALLY APPLICABLE TO HOISTING OR LIFTING MACHINERY.—Henry J. Griswold, Boston, Mass. April 11, 1867.

864.—MACHINERY FOR CUTTING CHANNELS IN STONE, ETC.—George J. Wardwell, Rutland, Vt. March 25, 1867.

866.—BREACH-LOADING FIRE-ARMS AND CARTRIDGES.—Loughlin Conroy and Irlstram D. Vanderveer, New York City. March 25, 1867.

871.—STEAM AND VACUUM GAGE.—Emmett Quinn, Washington, D. C. March 26, 1867.

876.—SCREWS.—Valentine Fogarty, Boston, Mass. March 26, 1867.

882.—VALVE GEAR OF STEAM ENGINES.—William Wright, New York City March 26, 1867.

883.—LOOMS.—Erastus B. Bigelow, Boston, Mass. March 26, 1867.

894.—MACHINE FOR PAINTING METALLIC SURFACES, ETC.—Henry Fassmann, New Orleans, La. March 27, 1867.

EXTENSION NOTICES.

Charles Watt, of Putney, England, and Hugh Burgess, of Royer's Ford, Pa., having petitioned for the extension of a patent granted to them the 18th day of July, 1854, and antedated the 19th day of August, 1853, reissued the 5th day of October, 1853, and again reissued in two divisions the 7th day of April, 1865, for an improvement in process of treating wood and other vegetable substances in the manufacture of paper pulp, for seven years from the expiration of said patent, which takes place on the 19th day of August, 1867, it is ordered that the said petition be heard at the Patent Office on Monday, the 5th day of August next.

Henry Ritchie, of Newark, N. J., having petitioned for the extension of a patent granted to him the 23d day of August, 1853, for an improvement in padlocks, for seven years from the expiration of said patent, which takes place on the 23d day of August, 1867, it is ordered that the said petition be heard at the Patent Office on Monday, the 5th day of August next.

Arshal H. McKinley, of Higginsport, Ohio, having petitioned for the extension of a patent granted to him the 16th day of August, 1853, for an improvement in socket for auger handles and braces for seven years from the expiration of said patent, which takes place on the 16th day of August, 1867, it is ordered that the said petition be heard at the Patent Office on Monday, the 25th day of July next.

NEW PUBLICATIONS.

THE ART OF PERFUMERY. By G. W. Septimus Piesse. Philadelphia: Lindsay & Blakiston.

This book gives the methods of obtaining the odors of plants, and instructions for the manufacture of perfumes, cosmetics, etc., upon which subjects it is quite full and apparently complete. It is illustrated with numerous engravings and is neatly published.

THE ART OF MANUFACTURING SOAP AND CANDLES, Embracing Hard, Soft, and Toilet Soaps, the Modes of Detecting Frauds, etc., etc. By Adolph Ott. Philadelphia: Lindsay & Blakiston.

This is likely to be a manual for the perfumer and fancy soap manufacturer as it gives full accounts of the different processes for making their products.

MAP OF GILPIN COUNTY, Embracing the Central Gold Region of Colorado.

This map was drawn from surveys made last summer by Messrs. Chas. W. Morse and Geo. H. Hill, of Central City, Colorado. It is drawn on a scale of 1,500 feet to the inch and shows the mountains, gulches, cañons, stream roads, and quartz mills, giving the names of the companies to whom they belong; it also gives many of the most prominent lodes. The labor and expense of making accurate surveys in this rough region is great, and three months were devoted to its accomplishment. Only 200 copies have been published, mainly for subscribers. The map must be of advantage to capitalists who have invested in mines in this region, and also to miners either there or contemplating locating in that region. The price of this map is \$25 per copy, to be obtained of Gaylord Watson, No. 16 Beekman street, N. Y., and Rufus Blanchard, Chicago, Ill.

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