TASTE AND SMELL UTILIZED.

The two senses of tasting and smelling are usually considered mainly as servants, capable of contributing to our luxurious pleasures, rather than as aids to business success; yet some departments of business could hardly be conducted without their employment. The sale and purchase of liquors and wines are consummated almost entirely by the help of taste and smell. Although the strength may be judged by the size and appearance of bubbles formed when shaken, by the sinking or floating of olive oil in them, and their appearance when turned, yet the expert judges more readily and correctly of their strength, as well as purity, flavor, etc., by tasting and smelling. In the great wine marts of Europe the business of wine taster is a distinct profession. Tobacco and hops are judged by the purchaser fully as much by smell as by sight and touch; and it is wonderful what expertness is attained by professional judges by the cultivation of this sense; their judgment being practically infallible.

But the testing of tea exhibits, in a more marked manner, the use of taste and smell in mercantile transactions. In every wholesale tea house will be found a row of tea cups with a little furnace or lamp for heating water. There is no sugar or milk. In the side of every chest of tea, ranged in tiers along the walls, is a small hole stopped by a cork. The taster draws the cork, takes a few grains of tea in his hand, smells it, then puts it in a cup, pours a little hot water on it, tastes, and his judgment is formed, the character of the tea is fixed. Frequently the smelling is sufficient, and it is remarkable how absolutely and decidedly the professional taster declares the character of the article he has tasted. Not less remarkable is the fact that there is seldom any marked disagreement between the estimates made by different individuals. The profession of tea taster in our large cities is frequently quite lucrative. Merchants purchase largely, relying implicitly on the representations of the expert; and it is seldom their confidence is misplaced, whatever "tricks of the trade" there may be attempted to deceive the taster.

The gift, if so it may be called, of being a successful tea taster, is not general, although it might be supposed that experience would be all that is necessary to insure perfection, or at least an approximation to it. The profession is severely taxing to the nervous system, affecting the subject similarly to alcohol or tobacco when used to excess.

Submarine Perambulation.

The *Nouvelliste* of Marseilles gives a very minute account of the system employed there for working under water. Fulton, it informs us, was the first to solve the problem of a submarine vessel, which he built of copper for purposes of naval warfare, but was obliged to give up the plan because of the difficulty of supplying the men with air, especially when they were to operate at a distance from the apparatus; and, moreover, his method of propulsion was defective, consisting of jointed oars that could not afford a greater speed than 400 yard per hour. At present many ways have been devised for removing those obstacles. The air is supplied by a mechanical and chemical process combined. Before the vessel is let down a provision of compressed air is secured by means of pumps, and distributed among the various compartments; it is calculated to balance the pressure of the column of water she is to encounter at the depth required. The immersion of the submarine boat is obtained by increasing her specific weight through the introduction of water into its reservoirs; the immersion is effected by the expulsion of this water, which latter therefore acts as a moveable ballast. The boat's center of gravity is so arranged as to make her touch the bottom with her base flat, and almost without a shock. When the ground has not been explored before, the vessel is kept in suspension until, by a skillful manœuvre, a proper place is found for her. By ingenious contrivances an exact equilibrium is obtained between the compressed air and the column of water, and the trap doors communicating with the bed of the sea are then opened. The men, standing with their feet on the latter, but having their heads still in the chamber containing their supply of air carry the boat to the spot they want to explore; but if they find it necessary to leave the craft, each puts on his scapbander, or water tight helmet, provided with a hose, through which he receives air from the vessel, and which is screwed to one of the reservoirs of compressed air, and can thus work at a tolerable distance from the boat.

Editorial Summary.

A SPLENDID BEQUEST.—It is understood in private circles, that Henry Keep, Esq., of this city, whose name is very prominent in the railroad interests, has purchased the block of ground on the Fifth avenue, opposite the Roman Catholic Orphan Asylum, consisting of twelve city lots, whereon he proposes to erect, at his own expense, and for the benefit of the city, an elegant art gallery. The price paid for the ground is $260,000, and it is understood that Mr. Keep will expend nearly a million of dollars upon the building. Mr. Keep began life a poor boy, and as a reward for his energy and integrity he has amassed a large fortune, and now proposes to spend some portion of it for the good of the people. The particulars of this noble bequest have not yet been made public.

THE atmosphere in the tunnels of the Metropolitan Railway in London is reported to be absolutely poisonous, and without any sufficient cause, as their proper ventilation is perfectly practicable. Several deaths are reported as having occurred in these neglected passages, and the compulsory purchase of the road by the Government is loudly demanded by some of the English journals.

SMOKY CHIMNEYS.—A correspondent of the *Builder* submits a simple and cheap remedy for smoky flues, which is stated to be successful in eight out of ten bad chimneys. The principle upon which it depends is sound, and its use would obviate, in many instances, the employment of the unsightly chimney-tops which so often mar the architectural effect of otherwise fine buildings, without answering the desired end. He says: "I find from experience that, by the use of fine wire gauze of from thirty-six to forty wires to the inch, as a screen, blower, or guard, judiciously applied to register stones, ranges, or stove doors, little if any smoke will come into the room. The atmospheric pressure prevents the smoke entering the room through the gauze, and if applied immediately to the front of the fire more smoke will be consumed than by any other means. In that case the wire should be kept two inches from immediate contact with the hot fire."

HOW NOT TO STRAIGHTEN CURLY HAIR.—Two different applications for patents were lately made for compounds, claimed to take the natural curl out of the hair of negroes and make it straight. In one of the compounds, the chief ingredient was extract of Iceland moss, and in the other nitric acid $N O_5$. It was proved by actual experiment, to the satisfaction of the examiner that neither of these compounds would accomplish the result, and the claims were refused. Evidently the applicants only wanted patents as a recommendation to induce as many colored people as possible to try a bottle of the worthless stuff. Indeed, if every colored woman in the United States would only spend fifty cents to buy the remedy, being persuaded to do so by the recommendation of a United States patent, the patentees would make a nice little fortune. The result of these applications shows the value of a preliminary investigation into the merits of alleged new discoveries.

THE enterprising city of Chicago is to have a grand park, to be located on the Riverside Farm, about seven miles out of the city, and known as the Gage property—owned by D. A. Gage, of the Sherman House, embracing about eleven hundred acres, and to be connected to the city by a broad boulevard. The park is to be laid out in winding avenues for drives, and the grounds will be offered by the proprietors as sites for the erection of suburban residences. This strikes us as a very sensible project, and the natural advantages of Chicago will place the proposed park within easy access of those who seek for rural beauty and homestead enjoyment.

WOODEN PARASOLS.—The wooden parasols which were introduced extensively in the French capital and will likely find patrons in other fashionable centers, may thus be described: They are painted to represent peacocks' feathers, each feather being a separate rib, like those of a fan. By ingenious mechanism they can be fastened into the form of a parasol, and can also be folded up into as small a compass as a fan, which purpose they answer admirably. They also can be turned into a variety of things, and have joints by which they shade the wearer on any side where the sun is too powerful.

THE Abyssinian King—Theodore—wished his captains to attack the British by night, but preferring to meet death by daylight they declined the proposition. Had they accepted, it is doubtful whether they would not have been put to rout without a single shot, by the magnesium light Sir Robert Napier carried with him on the expedition. Had they stood their ground in face of the blaze of light thrown directly in their faces from a distance of 600 yards, the English shielded by the night could have picked them off at their leisure.

THE first Northwestern Woolen Exposition and Convention of Wool Growers and Manufacturers at Chicago, opened August 4th. It promises to be interesting. Mr. W. G. Coulter, in his speech during the second day's proceedings, stated that the superior facilities possessed by Western woolen manufacturers were nearly 25 per cent. in their favor over those possessed by the New England States. Fifteen hundred different lots of goods are on view, and many distinguished agriculturalists, wool growers, and manufacturers are present.

A CORRESPONDENT from Franklin, N.Y., sent, some days ago, a communication in regard to some reports heard by many individuals in that locality. By some mischance the communication was mislaid. The explosions occurred at a time when the sky was cloudless, and we learn from a second communication that they have been ascribed to the falling of a meteor. The reports were so loud in some cases as to severely jar houses and cause dishes to rattle, etc.

THE *Revue Populaire*, of Paris, gives an account of some very curious experiments made by Dr. Claude Bernard. If oxygenized blood be injected into the arteries of the neck immediately after decapitation, warmth and sensibility return, the eye gets animated and displays such perception that an object shaken before it will cause winking of the eyelids and movements of eyeballs as though to avoid injury.

THE dwellings found at the bottom of the fresh water lochs in Scotland continue to be discovered in various parts of the country and are attracting great attention, as throwing light upon the habits and history of the Celtic race which for many centuries inhabited that country. The first one was brought to light by the draining of a loch on the property of the late Mr. F. D. P. Asley, in Arisaig.

RUSSIA will soon have the Black Sea and the Baltic in direct railway connection. This was a long contemplated project, and will not only develop her commerce but enormously increase her defensive power.

WE are in receipt of several communications requesting information in regard to the spectroscope and spectral analysis. A full description of the instrument and its use, with engravings is to be found upon pages 17 and 18, Vol. XV. of the SCIENTIFIC AMERICAN.

THE Commissioner of Patents has extended the patent of M. A. C. Mellier, of Paris, for making straw paper. It is a chemical process for reducing straw and other vegetable matter to pulp by the application of a solution of hydrate of soda, also in the employment of hypochlorites in the process of bleaching. It is said to be a valuable invention.

MONEY PACKAGES.—Persons who send money to this office by Express, should always enclose a letter in the envelope along with the money. We frequently receive packages without the accompanying letter and are sometimes bothered to know who sent it. A letter would save time and trouble.

ANOTHER victim to science has fallen on African soil. Le Saint, the geographer, who had left France about nineteen months ago, has died at Abu Khaka. Malte-Brun has received letters from Alexandria which leave no doubt as to the young traveler's fate.

CYRUS W. FIELD telegraphed from London, August 3d, that the Atlantic cable of 1866 ceased to work about thirty-five minutes past twelve o'clock on that day. The damage is at the Newfoundland side, according to the tests, and is supposed to have been caused by an iceberg.

A PETITION signed by four hundred ladies has been presented to the Russian Minister of Public Instruction, praying that the Professors at the University might give special lectures for ladies, so as to satisfy their legitimate desire for higher instruction.

A SPINNING wheel made in the year 1768, and in good preservation, was recently sold in Lancaster, Pa., for ten cents, we should think that a poor compliment to the old family friend.

OFFICIAL REPORT OF PATENTS AND CLAIMS

Issued by the United States Patent Office,

FOR THE WEEK ENDING AUGUST 5, 1868.

Reported Officially for the Scientific American.

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

On filing each Caveat	$10
On filing each application for a Patent, except for a design	$15
On issuing each original Patent	$20
On appeal to Commissioner of Patents	$20
On application for Reissue	$30
On application for Extension of Patent	$50
On granting the Extension	$50
On filing a Disclaimer	$10
On filing application for Design (three and a half years)	$10
On filing application for Design (seven years)	$15
On filing application for Design (fourteen years)	$30

In addition to which there are some small revenue-stamp taxes. Residents of Canada and Nova Scotia pay $500 on application.

☞ *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.*

80,529.—YARN-BEAM FOR LOOM.—Benjamin A. Bailey (assignor to himself and William H. Kilvert), Lewiston, Me.

I claim, 1st, The serrated keys and key-seats, for holding the head in position, substantially as set forth.

2d, A yarn beam, having main heads, made movable and adjustable, in combination with serrated key seats and adjustable keys, substantially as described.

80,530.—ELEVATED RAILWAY.—Eli M. Barnum, N. Y. city.

I claim, 1st, The construction and arrangement of the supporting columns of three plates, two outside corrugated plates joined upon a third central plate, arranged substantially as described.

2d, The construction and arrangement of the base block of the columns, substantially in the manner described with a nearing in the top and bottom thereof, the bottom bearing being fitted with keys, by which the column can be adjusted to a vertical position after the base or foundation block has been set, and without disturbing the same, the upper bearing acting as a fulcrum, by which the keys in the bottom bearing bring the tops of the columns to their proper position, in the manner substantially as described.

3d, In combination with the top of the columns, a separate cross-head, T, constructed, applied, and secured, substantially as described.

4th, Combining, between the wooden cross-tie, Q, and the iron cross-head, T, when constructed, the latter with a V-shaped top, and the former with a V-shaped bottom, the india-rubber bearing pieces, i i, inserted in the recesses cut in bottom of the cross-tie, so as to shed the water, and avoid the accumulation of ice and dirt around the rubber.

5th, The method and arrangement of securing the cross-tie and rail chair to the cross-head, substantially as described.

6th, Combining with the columns and rails of an elevated railway, a pipe or tube, for the purpose of supporting, sustaining, and bracing the same, substantially as described.

7th, In combination with the supporting columns, the adjustable brackets, u, figs. 6 and 6, for supporting the awning-rods t t, and by which they can be moved up or down, or attached to the inside or outside of the columns, substantially as described.

8th, In combination with an elevated railway, and as part of the system herein described, the construction and arrangement of the described signals to govern the movements of the cars, substantially as described.

80,531.—MACHINE FOR CUTTING RAGS.—Allan T. Bennett, and William O. Anderson, Cincinnati Ohio.

We claim the combination of the gang of hooked knives, C C1 C2 C3, arranged spirally along the shaft, so as to reach the material to be acted upon in rapid and regular succession, the notched bench, D, and yielding feed-wheels, E E1 E2 E3, all constructed as described, the knives working intermediately between the feed wheels and projections of bench, D, for the purpose set forth.

80,532.—COAL-STOVE.—David B. Cox, Troy, N. Y.

I claim the annular horizontally-circulating flue, b, around the base of the fire-pot, and separated from the chamber above by a perforated partition, g, substantially as and for the purpose herein specified.

80,533.—GOVERNOR FOR STEAM-ENGINE.—Christopher G. Cross Chicago, Ill.

I claim the arrangement of the lever or crank, T, beam, P, and pumps, N, with the cylinder, D, regulating stop, x y, shaft, E, rod, H, and case, A B, substantially as and for the purposes specified.

80,534.—LET-OFF FOR LOOM.—George Draper, Hopedale, Mass.

I claim the combination of the connection rod, l', or the mechanical equivalent thereof, with the lay, B, and the mechanism applied to the whip-roller, D, and the yarn beam, C, such mechanism consisting of the friction-strap, f, its wheel, g, and spring, d, and the operative lever and train of gears, as explained.

80,535.—APPARATUS FOR SWAGING THE SWIVEL-EYES OF WATCH-CHAINS.—Virgil Draper (assignor to Edmund J. Richards), North Attleboro Mass.

I claim the combination of the grooved supporter, A, the carrier B, the bed-die, D, the swaging die plate, E, and the punch, F, such being constructed for use in manner and for the purpose substantially as described.

80,536.—AUTOMATIC BOILER FEEDER.—Samuel Driver (assignor to Robert H. Driver), Philadelphia, Pa.

I claim the combination and arrangement of the chambers, B and B', and valves, G and G', provided with pinions, F1 and F2, and operated by means of the wheel, F, on the driving-shaft, D, substantially in the manner above described.

80,537.—CUPOLA FURNACE.—John H. Eddy, Taunton, Mass.

1 claim, 1st, The air-chamber, I, when used in connection with cupola furnaces, as above described, and.

2d, The introduction of the blast into cupola furnaces, at the center thereof, whether the same is accomplished in the precise method herein described or by any other means substantially the same.

80,538.—WEATHER STRIP.—Thomas S. Fellows, Walnut Lake, Minn.

I claim a weather-strip, composed of the plates, C D, when the former is provided with a lip, c', and the latter with an acute-angular groove or recess, d', and the same are so combined and arranged that they are operated by the natural elasticity of the metal, substantially as described and for the purpose specified.

80,539.—REVERSIBLE LATCH.—Charles R. Fisher, Chelsea, Mass.

I claim, 1st, The slider or saddle, F, with the reversible bolt, C, and its spring, e, when combined and arranged as described, and so as to operate together as set forth.

2d, The combination of the carriage, D, the tumbler, E', and the retractile spring, E, with the saddle, F, the reversible bolt, C, and its spring, e, the whole being arranged and applied to the case, A, in manner as described, and so as to operate together as set forth.

80,540.—WASHING AND WRINGING-MACHINE.—George P. Fuller, Philadelphia, Pa.

I claim, 1st, The guiding-rings, D D, in combination with the heads, E E, and pressing-bars, C, substantially as described.

2d, The combination of the slides, d, with the pressing bars, C, and guiding-rings, D, substantially as described, and for the purpose specified.

2d, The combination of the slides, d, with the pressing-bars, C, and guiding-rings, D, substantially as described, and for the purpose specified.

3d, A revolving drum, which has around its periphery a series of squeezing bars, supported by springs, and having metallic slides on their ends, which are caused to vibrate in radial grooves in metallic rings, that are confined to the insides of the drum heads, when the several parts are constructed and arranged in relation to each other substantially as described, and the drum is combined and arranged with a series of squeezing rollers, substantially in the manner and for the purpose set forth.

4th, The combination of the segmental strips, k, with the dovetail grooves or recesses, l, and rollers, G, substantially as and for the purpose specified.

5th, The combination of the wringing apparatus, consisting of the squeezing roller, I I, carrying roller, 12, and endless apron, J, and chains, K, with the washing-machine, substantially in the manner described.

6th, The combination and arrangement of the shifter, consisting of the clutch wheel, O, lever, P, and horizontal rod, Q, with the driving-shaft, F, and wheel, L, substantially as and for the purpose set forth,

80,541.—MACHINE FOR THRESHING AND CLEANING GRAIN.—Henry Gill, Mansfield, Ohio.

I claim, 1st, the picker roll, C, in combination with the parts, a and b, when constructed and arranged to operate substantially as and for the purpose set forth.

2d, The beater or shaker arms, F, in combination with the roller, D, provided with the cams or tappets, e, for more thoroughly shaking up the straw and separating the grain therefrom, substantially as described.

3d, The straw-carrier, consisting of the belts, E, provided with spikes or teeth, and the notched bars, R, when arranged to operate substantially as shown and described.

4th, The adjustable tail-piece, G, in combination with the belts, E, substantially as described.

5th, The shoe, I, when located in a threshing machine, and pivoted at its front end, in front of the axle of the threshing cylinder, substantially as set forth.

6th, Providing the shoe, I, with the adjustable slide, h, for regulating the delivery of the grain and chaff to the blast in a thin and even sheet, as set forth.

7th, The combination of the float p, and the registers, V, when applied to a fan, and arranged to operate substantially as described.

8th, Operating the screw, n, by means of the springs, a', and the arms, f, and cams, n, when arranged as set forth.

9th, The combination of the shoe, I, inclined chute or grain board, H, and operating cams, n, when arranged for joint operation, substantially as described.

80,542.—CHEMICAL FIRE-ENGINE.—Edwin Gordon, Boston, Mass.

I claim, 1st, The combination in a chemical fire-engine, of chamber, A, rod, D, supplied with rings or conical shaped disks, g, or other equivalent measuring or graduating device, suction pump, C, compartment, B, sieve, F, pipe, a, and compartment, e, operating together substantially as and for the purposes explained.

2d, The combination, in a chemical fire-engine, of chamber, A, rod, D, supplied with rings, conical disks, or other measuring or graduating device, suction pump, C, compartment, B, and sieve, F, operating together substantially as above described, and for the purposes above set forth.

3d, The combination, in a chemical fire-engine, of the upper part of the chamber, A, or any equivalent, for holding chemical substances for generating carbonic acid gas, with the pump-rod, D, supplied with rings or disks, or any equivalent measuring or graduating device, and the suction pump, C, or any equivalent, for supplying a graduated quantity of pure water, operating together substantially as above described, and for the purposes therein stated.

4th, The rod of a force pump, or other expelling pump of a chemical fire-engine so constructed that it shall extend above the piston chamber of said pump, and have upon it a succession of rings or conical disks or other equivalent measuring or graduating-device, for carrying down from a chamber above, through which the rod travels, a definite and regular quantity of some chemical substance or substances, for generating or assisting in generating carbonic acid gas, substantially in the manner above specified.

5th, A suction pump so arranged that it shall furnish a regular measured supply of pure water proportionate to the amount of chemical substances used and varying with the speed with which the engine is worked, for the purpose of dissolving and mixing with the chemical substances used for generating carbonic acid gas in a chemical fire engine, substantially in the manner and for the purpose specified above.

80,543.—STEAM-GENERATOR.—Joseph Harrison, Jr., Philadelphia, Pa.

I claim, 1st, Compensating units, e, combined substantially in the manner and for the purpose described, with a steam boiler constructed in accordance with that described in the patent granted to me, October 4, 1859.

2d, The combination of plain cast or wrought iron pipes with the cast-iron units, in the manner and for the purpose specified.

80,544.—COMPOSITION FOR PREVENTING INCRUSTATION IN STEAM BOILERS.—William Hewitt, Pimlico, England.

I claim the use of tannic acid, in combination with nauseous animal matter, in a solid form, for the purpose of preventing incrustation in steam boilers,

80,545.—TASSEL-FASTENING.—S. B. Hill (assignor to himself, Levi B. Taylor, and Charles B. Lang), Chicopee, Mass. Antedated July 18, 1868.

I claim connecting the bobbin, b, and cord, c, by means of the spring, a, substantially as described, and for the purpose specified.

80,546.—HANGERS FOR SHAFTING.—George W. Hubbard, and Scott A. Smith, Philadelphia, Pa.

I claim, 1st, The cored spaces, b', in combination with the enlarged opening, B, in a ball-and-socket hanger, when made for the purpose specified.

2d, The combination of the oil-reservoir, c'', in the lower adjusting screw, a' with the opening, o, and the channel, d', in a ball-and socket hanger, all constructed substantially as described, and for the purposes specified.

80,547.—RAILROAD GATE.—T. Romeyn Huntington, and William W. Huntington, Minneapolis, Minn.

We claim, 1st, The revolving lever, A, having, from end to end, a shoulder or groove, partly spiral and partly rectilinear, and so constructed that, when fastened upon the track alongside the rail, such shoulder or groove will receive the flange of the wheel, causing the lever to revolve, all substantially in the manner described.

2d, The combination of the rod and crank, I G, with the revolving lever, A, by means of short arm, J, so constructed and arranged that the train, passing over A, shall communicate a lifting force to rod, L, all substantially as described.

80,548.—TRUNK-CASTER FRAME.—George B. Jenkinson, Newark, N. J.

I claim, as a new article of manufacture, the within-described trunk-caster frame, formed with clamps, c c, braces, b b, and having the roller placed in the angle of the frame, for the purpose set forth.

80,549.—BOOT PROTECTOR.—J. U. Johnson, Springfield, Mass. Antedated July 24, 1868.

I claim, as an article of manufacture, the boot protector, constructed and arranged as described.

80,550.—STEAM HAMMER.—David Joy, Middlesboro, Great Britain, assignor to Gustav Brinkman, assignor to J. Vaughan Merrick, W. H. Merrick, and John E. Cope.

I claim the employment of the piston or hammer bar of a steam hammer or hammers, driven by elastic fluid, as the valve for the hammer, the ports being formed in the piston, hammer-bar, or cylinder, or among them conjointly substantially as set forth.

80,551.—WHIFFLE TREE.—J. W. Kelley, Cleveland, Ohio.

I claim the dove-tailed groove plate, C, in combination with the dove-tailed ribbed plate, F, in the manner as and for the purpose set forth.

80,552.—APPARATUS FOR WELDING TOGETHER THE LAY AND LAND SIDE OF A PLOW.—John Lane, Chicago, Ill.

I claim an improved implement for facilitating the welding together the lay and the land side of a plow, namely, a vise, the jaws of which are so shaped as to fit the curved surface of the lay and the under edge and inner side of the land side, substantially as shown and described.

80,553.—KNIFE RING.—Charles B. Long, and William A. N. Long, Worcester, Mass.

We claim the combination of the peculiar-shaped knife or cutter, b, with the slotted neck, a, cap, B, and part, C, of the ring, substantially as and for the purposes set forth.

80,554.—FRUIT JAR.—J. B. Lyon, East Cleveland, Ohio.

I claim the screw tube, G, provided with notches, a, as arranged, in combination with the valve seat, D, valve, E, elastic band, H, and cover, B, for the purpose substantially as set forth.

80,555.—BOOT AND SHOE AND CLOG FOR THE FEET.—George W. Martin, Boston, Mass.

I claim, 1st, Uniting the two parts, A and B, of a boot or shoe heel by means of tongue and groove, h and g, when provided with self-adjusting retaining springs, c c, either with or without the spring, d, for the purposes specified.

2d, The tongue and groove, h and g, when formed with the receding sides, i i, and swelled sides, j j, when constructed and attached, as described, either with or without the projection, k, and openings, p p, as and for the purposes set forth.

3d, The elastic adjustable pieces, m and n, in use either upon heel or sole of boot or shoe, as specified and set forth.

4th, The tongue, h, and groove, g, in application to the heel of a boot or shoe, substantially in the manner illustrated, and for the purposes described and set forth.

80,556.—CULTIVATOR.—Robert McCorkell, Philadelphia, Pa. Antedated July 15, 1868.

I claim, 1st, The lever, H, rack, L, and connecting rod, N, in combination with the plates, E, for the purpose set forth.

2d, The lever, c, in combination with the drag bars, C, standard, n, and rubber spring, r.

3d, The mode of attaching and securing the head, b, of the drag bar, C, for the purpose of adjusting the angle of the plows.

4th, The mode of attaching and securing the standard, z, to the bar, y, as and for the purpose set forth.

80,557.—SPEAKING TRUMPET.—F. J. Miller, Brooklyn, N. Y.

I claim as a new article of manufacture, a pocket trumpet, made in substantially the manner described and shown, and for the purposes set forth.

80,558.—HEMMER FOR SEWING MACHINE.—John Morrison, Birmingham, England.

I claim, 1st, the hem folder, a, in combination with the graduated jointed arm, b, and horizontally-swinging base plate, c, substantially as and for the purposes herein shown and set forth.

2d, The combination, with the graduated arm, b, and base plate, c, of the spring slide, f f2 f3, constructed and used substantially as herein shown and described.

3d, The combination, with the hem-folder, a, graduated jointed arm, b, and base plate, c, of the spring plate, h h2 h3, jointed to the arm, b, at h4, substantially as and for the purposes set forth.

80,559.—OIL FOR WOOL.—William H. Moss, New Richmond, Ohio.

I claim the preparation of a compound oil, composed of the ingredients and in the proportions, and made in the way and manner, substantially as set forth above, for application to the use and manufacture of all kinds of woollen goods, and the greasing, carding, cleansing, and spinning of all kinds of wool.

80,560.—EXPANDING MANDREL.—Augustus F. Nagle, Providence, R. I.

I claim an expanding mandrel, as herein described, consisting of the slotted shell, B, having spring jaws, B B, and tapering arbor, A, all constructed, arranged, and operating in the manner set forth.

80,561.—BIRD CAGE.—Charles L. Osborn, New York city. Antedated July 20, 1868.

I claim, 1st, The combination, in a cage, of the sills, posts, plates, girts, cross ties, etc., constructed as described, with the glass sides, substantially as herein specified.

2d, The test or sleeping compartment, J, constructed below the surface of the floor of the cage, substantially as described, when used for the purpose set forth.

80,562.—SPRING-SEAT FOR WAGONS.—Henry H. Palmer, Rockford, Ill.

I claim a seat, A, bottom, B, braces, C, and straps, E, in combination with the spring, D, when arranged to operate substantially in the manner herein described.

80,563.—BUTTON.—Frederic J. Peabody, Medford, Mass.

I claim a stud or bottom, having its back or inner plate, B, divided on one side into two portions, b c, which are bent or curved around in opposite directions, so as to overlap each other, substantially in the manner and for the purpose set forth.

80,564.—MACHINE FOR POLISHING WOODEN HANDLES.—E. Quinlan, Sheboygan Falls, Wis.

I claim a hollow mandrel, A, with the burnishers, D D, attached thereto, substantially as and for the purpose set forth.

80,565.—ATTACHING HANDLES TO TOOLS.—George Raymond, Fitchburg, Mass., assignor to himself and Samuel E. Crocker.

I claim the combination, with the handle, its ferrule, and the tang or shank of the tool, of a tapering tubular key, passing through both the ferrule and handle, and encircling and grasping the end of the said shank or tang, under the arrangement and for operation as herein shown and set forth.

80,566.—WATER WHEEL.—Isaac S. Roland, Reading, Pa.

I claim the movable and self-relieving chute chamber, f j k l, located within the series of water wheel buckets, c c, and operating therewith, substantially as herein set forth.

Also, the arrangement of the movable chute chamber, f j k l, and its annular supporter, g, with the disk and buckets of the water wheel, substantially as herein set forth.

Also, the combination of the tubular gate, h, with said movable chute chamber, arranged and operating substantially as herein set forth.

80,567.—MOLD FOR CASTING LETTERS, ETC.—George F. Sack, New York city.

I claim a mold for casting letters and ornaments, which will retain an accurate impression of the most delicate lineaments of the pattern, made of a sepia or cuttle fish bone, in the manner substantially as herein described, and for the purpose mentioned.

80,568.—GAS-BURNER ATTACHMENT.—John Scholl, Soho, assignor to Samuel S. Bateson, Mayfair, England.

I claim, 1st, The combination with a platinum or other equivalent gas light improver or perfecter, of a guard or protector, for the purpose herein before set forth.

2d, The peculiar modes of combining a gas light improver or perfecter with a guard or protector, whereby the former is maintained, through the agency of the latter, in its proper adjusted position, substantially as herein before described, and illustrated by the drawings.

80,569.—HOISTING APPARATUS.—Elijah U. Scoville and Washington L. Scoville, Manlius, N. Y.

We claim, 1st, The circular discharging-wedge, J, and roller, I, for operating the discharge of the transit pulley, A B, substantially as shown and described.

2d, The circular catch, k', and latch, M n, in connection with the transit-pulley A B, constructed and operating substantially as herein shown and described.

3d, The combination of retaining projections, e, with discharging levers, E, and hooked cheeks, a a'', of transit pulley, A, as herein shown and described.

80,570.—LIGHTING UP PICTURE GALLERIES.—Edgar M. Smith, New York city.

I claim a lighter, so constructed with dimmed plate glass underneath the burners, as that all that portion of a room or gallery above the line of vision shall be in bright light, and all that portion below the ordinary line of vision be in dim or obscured light, substantially as and for the purpose set forth.

Also, in combination with the dimmed plate glass, the bent rods and knobs, or their equivalents, for changing the light of the bright light, and the dimmed light in the room or gallery, substantially as and for the purpose described.

80,571.—MACHINE FOR GRINDING THE CUTTERS OF MOWING MACHINES.—Benjamin B. Snow and Theo. J. Dickerson, Auburn, N. Y.

We claim, 1st, The sliding rest, C, moving in a slot in the frame, for the purpose of holding the knife clamp, substantially as described.

2d, The rod, D, moving longitudinally in the rest, C, for the purpose of successively bringing the sections of the reaper knife to the stone.

3d, The combination of the clamp, E, and rod, D, with the rest, C, frame, A, and fixed stone, B, all arranged and operating substantially as described.

80,572.—HAND-SPINNING MACHINE.—W. H. Stevenson, Athens, Mo.

I claim, 1st, The rod, e, stud, m, levers, r v v' and t t', jaws, h h', step, s, and plate, w, of a spinning machine, all constructed, arranged, and operating in relation to one another and the other parts of the machine, substantially as and for the purpose specified.

2d, The rod, e, stud, m, lever, r, and its arm, 4, levers, n and q, with its connections, ratchets, 1 2 of a spinning machine, all constructed, arranged, and operating relatively to themselves and the other parts of the machine, as and for the purpose specified.

3d, The combination of the parts above mentioned with the frame, A, carriage, B, drum, C, belt, D, and roller, f, of a spinning machine, as and for the purpose specified.

80,573.—WATER BOSHES FOR PUDDLING FURNACE.—Joseph Stokes and John Brough, Trenton, N. J.

We claim making the boshes hollow, and the hollow to extend under the bottom for the passage of a current of water, substantially as and for the purpose set forth.

80,574.—GRATE BAR.—O. H. Taylor, Brooklyn, N. Y.

1 claim, 1st, The grate bar, A, provided with serrations or indentions upon the upper slope of said bar, as herein shown and described, and for the purposes set forth.

2d, The key, D, in combination with the slots, F F, for the purpose of locking the bars, substantially as shown and described.

3d, The combination of the open truss work with the bar, A, provided with serrations, and interlocked by an independent key, when constructed as shown and described, and for the purpose set forth.

80,575.—FRICTION NIPPER.—D. Thomas, Hingham, Mass.

I claim, in friction-nipper feeds, the employment of a shoe in connection with the notched lever, cheeks and flanged ring, so as to operate substantially as described.

80,576.—TEA-KETTLE, COFFEE-POT, ETC.—W. Wagstaff, Millbury, Ohio.

I claim the transverse arrangement of the pipes, C, in the chamber, B, and in combination with the tea kettle or coffee-pot, A, in the manner as and for the purpose set forth.

80,577.—LAMP-WICK TRIMMER.—Daniel Warner, Boston, Mass., assignor to himself, James T. Bowman, Richard C. Dougherty, and Daniel J. Hinkins.

I claim the clamping age, as constructed of the flat tube slitted at its opposite edges, as set forth.

Also, the combination and arrangement of either or both the flanges, c c, with the flat tube slitted at its opposite edges as specified, the whole being for the purpose or purposes as explained.

80,578.—HOP DRIER.—W. F. Waterhouse Weyauwega, Wis.

1 claim, 1st, A furnace, with hopper-shaped interior, in combination with movable roof, D, substantially as described.

2d, The roof, D, hung by hinges at the eaves, so as to perform the threefold purpose of roof, for protection against the weather, as shown in Fig. 1, reflectors, to reflect artificial and solar heat, and to cover the kiln, to retain the heat when the hops are off, substantially as described.

80,579.—ROCK DRILLING MACHINE.—William Weiler, Washington, N. J.

1 claim, 1st, The driving shaft, D, carrying at the opposite ends wheels F and F', and arranged on the frame of the machine, substantially as and for the purpose described.

2d, The yoke, G, secured to the top of the frame of the machine, for the purpose specified.

80,580.—APPLE PARER.—C. Albert Wiggin, North Sandwich, N. H.

I claim, 1st, The turn table, B, cogged as described, and furnished with projection, b, in combination with pinion, F, constructed and arranged to operate substantially as set forth.

2d, Shaft, b1, spring, D, pinion, F, table, B, shank, g, knife, G, springs, g1 and g2, fork, j, shaft, j', pinions, j h and h', gear wheel, L, and shaft, f, all combined and arranged substantially as and for the purpose set forth.

80,581.—SCAFFOLDING.—Marvin T. Williams, Milwaukee, Wis., assignor to himself and John Lund.

I claim the two short ladders, A, pivoted to the bars, C, having the spring catches, D, arranged to engage in the recesses in the ends of bar, A, all constructed and arranged for use substantially as herein shown and described.

80,582.—ADJUSTABLE BARREL HEAD.—Andrew C. Yawger, Newark, N. J.

I claim the pieces, A and B, when used in connection with piece, C, of a barrel head, and held in place by means of piece, F, and screw, G, all constructed and operating substantially as set forth.

80,583.—SCREW DRIVER.—Isaac Allard (assignor to himself and Frank A. Howard), Belfast, Me.

I claim, 1st, The tube, A, the spiral shank, B, and the spring, C, when the same are constructed, arranged, and operated substantially as and for the purpose shown and described.

2d, The spring-catch, F, in combination with the spiral shank, B, and tube A, as herein described for the purpose specified.

80,584.—CAR COUPLING.—William S. Anderson, Shelbyville, Tenn.

I claim the combination of the lever, C, bolt bearer, D, bolt, E, and link, F, in connection with the buffer, A, and coupling frame, B, secured to the car by the bolt, H, all constructed and arranged as described, and for the purpose specified.

80,585.—SEED PLANTER.—Moses Atwood, New Sharon, Iowa.

I claim, 1st, The attaching of the seed-distributing apparatus to a frame, G, placed on the frame, A, of the machine, and attached thereto by hinges, and arranged in connection with a windlass, in the manner substantially as shown, to admit of the furrow and covering shares being raised when necessary, as set forth.

2d, Operating the seed distributing plates, q q, through the media of the treadle shaft, R, and bent levers, S S, arranged substantially as set forth.

3d, The adjustable bar, K, arranged as shown in connection with the bars N N, on which the seed boxes, M M, are secured for the purpose specified.

4th, The combination of the frame, G, with the frame, A, provided with truck wheels, when said frames are used in connection with a seed-dropping mechanism, as set forth.

80,586.—MACHINE FOR REMOVING WIRE TEETH FROM CARDS.—John A. Baham, Robert C. Wilson, and Samuel French, Auburn, N. Y.

We claim, 1st, The toothed drums, B' and C', the card-guide upon the bar, U, and the adjustable plate, x, provided with the guides, y y, combined and arranged substantially as and for the purpose set forth.

2d, The toothed wheel, T', when used in combination with the drums, B', and C', as and for the purpose set forth.

3d, The knives, E', and wheel, T', in combination with the drums, P M and Q, constructed and operating as and for the purpose set forth.

80,587.—BEE-HIVE.—Zebiah W. Bassett, Fulton, N. Y., administratrix of the estate of N. P. Basset, deceased.

I claim, 1st, The securing of the combs, G, in the box, C, by means of the screws, q, and spurs, r, substantially as shown and described.

2d, The exit passage, m, in connection with the entrance passages, h i, and chamber, j, all arranged substantially as and for the purpose specified.

80,588.—STOCKING DARNER.—Simeon R. Bolton, Prescott, Wis.

I claim a stocking tree, consisting of detachable heads and shaft, the heads being of different sizes, and the shaft provided with a cavity for use as a needle case, all arranged substantially as herein described.

80,589.—DENTISTS' AND BARBERS' CHAIR.—Alonzo T. Boon, and James B. Finchure Galesburg, Ill.

We claim, 1st, The combination and arrangement of the head-rest, F, crank, G, with a grooved cam, b, and rubber, c, affixed therein, and plate, H, with the back of the chair substantially in the manner and for the purpose as herein shown and described.

2d, The combination and arrangement of the support, A, rod, B, spiral spring, C, helical screw, D, and rack, E, with the seat of the chair, substantially as in the manner and for the purpose as herein shown and described.

80,590.—LAMP.—S. C. Brockington, Groton, Conn.

I claim 1st the self acting valve attachment to lamp reservoirs, consisting of the valve, c, attached to a float, E, and made and operating substantially as herein shown and described.

2d, The device set forth in the foregoing clause, in combination with the perforated guard, F, arranged as shown.

3d, The combination of the lamp reservoir, C, with the guard, F, float, E, and valve, c, and with the pipe, B, stop-cock, C, and tank, A, all make and operating substantially as herein shown and described.

80,591.—WEATHER STRIP.—Albert C. Brown, Chicago, Ill.

I claim the combination of the molding, a b, with the stop, C, provided with a groove, c, arranged substantially as and for the purposes specified.

80,592.—STEAM TRAP.—Robert Brown, Norwich, Conn.

I claim the arrangement of the steam exhaust chest, A, the perforated partitions, F G, the disk valves, H I, and their common stem, J, with relation to each other and the cylinder, as herein shown and described.

80,593.—COTTON SEED CLEANER.—Thomas W. Brown, Cudworth, Barnsley, England.

I claim, 1st, Removing the fiber from the hull of cotton seed by successively heating and cooling the same, by means substantially such as herein shown and described, and for the purpose set forth.

2d, The combination with the heater, B, of the feeding rollers, E F, hopper D, and spout, G, substantially as and for the purpose herein shown and described.

3d, The combination, with the heater, B, of the agitating pan, L, substantially as and for the purpose described.

80,594.—SKEIN-SETTER FOR AXLE.—John Burt, Sturgis, Mich.

I claim, 1st, The employment of the slide, h, in crank, D, for adjusting the arm, substantially as and for the purpose specified.

2d, The wave, g g, when hinged or pivoted at both ends, substantially as set forth, for the purpose of accommodating them to the set of the arm.

3d, Providing the crank, D, with a rocking box, a, and attaching screw shaft, b, thereto, substantially as described.

4th, Finally, wheel B, constructed substantially as set forth, in combination with hinged or pivoted ways, g g, screw shaft, b, knife block, E, divided nut, e, and crank, D, for the purpose described.

80,595.—PRUNING-SHEARS.—Daniel Campbell, Elizabeth, N. J. assignor to Henry Seymour and Robert H. Seymour, New York city.

I claim the holder, K, in combination with the movable blade, D, and fixed blade, B, of a pair of pruning shears, when said holder is applied or arranged so as to be operated automatically from the movable blade, D, substantially as and for the purpose set forth.

Also, operating the movable jaw, D, through the medium of the cross arm, I, attached to the shaft, H, which is provided with the crank, G, to which the spring, J, and rod, F, are attached, all arranged substantially as shown and described.

80,596.—CLAMPING KNIVES OR CUTTERS OF MOWING MACHINES WHILE BEING GROUND.—Henry J. Case (assignor to Henry Richardson), Auburn, N. Y.

I claim in combination with the clamping and holding bar, A, the series of clamping hooks, actuated through a common lever for fastening and releasing the reaper bar or sickle, substantially in the manner and for the purpose described.

80,597.—MEDICAL COMPOUND FOR TREATING HOG CHOLERA.—N. H. Cass, Henryville, Ind.

I claim the compound composed of the above mentioned ingredients, in about the proportions named, substantially as and for the purposes described.

80,598.—HARVESTER CUTTER.—G. W. Chapman, Jr. (assignor to himself and W. A. Plantz) Iowa Falls, Iowa.

I claim the sickle-bar, constructed as described, consisting of the upper bar, b', provided with the inclined slots, s, for the passage of the screws, h, the lower bar, b, having a groove for the reception of the ribs, c, of the teeth, a, said bars being adjusted to clamp the teeth by means of the screw, e, in their upset ends, as herein described for the purpose specified.

80,599.—BURGLAR-ALARM LOCK.—Nash Chock, Chapel Hill, N. C. Antedated July 30, 1868

I claim, 1st, The lever, Fx, connected with the bar, i, as shown in combination with the sliding bar, F, at the outer side of the lock, and attached to the shutter or door, and arranged so as to operate an alarm, substantially as shown and described.

2d, The lever, G, pivoted to the bar, F, in connection with the spring, k, toothed wheel, H, cord, J, and weight, K, or an equivalent, arm, m, on the drum of the shaft, I, shaft, M, with arm, L', and bell hammer, N, attached, spring, O, and bell, P, all arranged and combined to operate in connection with the lock substantially as set forth.

80,600.—POST DRIVER.—Alvin B. Clark, Richmond, Ind.

I claim, 1st, The device, constructed substantially as described, and arranged upon a wagon in such a manner as to throw the weight of the vehicle upon the post, as and for the purpose set forth.

2d, The combination of lever clamps, B B, center beam or lever, C, screw, D, with its lever, J, hoisting screw, G, with its base, F, and lever, H, and ocket-plate, I, all operating substantially as described, and for the purpose set forth.

80,601.—SWITCH.—James T. Clark, and John B. Besler, Galesburg, Ill.

We claim the combination of the two short, G G', and two long, H H', pointed movable rails with two stationary rails, I2 E', forming a treble safety switch, the whole arranged and operating substantially as and in the manner herein described and specified.

80,602.—ELEVATOR BUCKET.—O. W. Clark, Appleton, Wis.

I claim the elevator bucket, constructed in the form herein shown and described, as and for the purpose set forth.

80,603.—RACK FOR FEEDING SHEEP.—J. C. Colflesh, Delaware, Ohio.

I claim the tapering rack, C, supported on the frame, A, by means of its shaft, B, and provided with a hinged lid, E, pawl, c, and ratchet, c', and operated by the crank, D, so that it can be revolved to prevent the sheep from feeding, to allow its being filled with provender, and prevent the ingress of rain or snow, as herein set forth.

80,604.—RICE CULTIVATOR.—George W. Cooper, Ogeechee, Ga. Antedated July 30, 1868

I claim, 1st, The cutter, D, of a rice cultivator, when arranged as described with upturned cutting sides, a a, substantially as set forth.

2d, The curved cutters, E E, when arranged on the sides of the cultivator, so as to cut close to the plants, without injuring the same, as set forth.

3d, The revolving toothed breakers, H H, when arranged with beveled edges, and when made and operating substantially as herein shown and described.

4th, The revolving breakers, H H, when made as set forth, in combination with the washer, b, and cleaners, I I, all made and operating substantially as herein shown and described.

5th, Making arms, F, in which the axle, G, of the breakers has its bearings, adjustable on the beam, A, so that thereby the height of the breakers can be adjusted as set forth.

6th, A rice cultivator, consisting of the beam or frame, A, with the cutters D E E, and breakers, H H, all made and operating substantially as herein shown and described.

80,605.—BUCKLE.—L. D. Cowles, Romeo, Mich.
I claim the lugs, C C, on the sides of the frame, B, in combination with the frame, A, having inclined edges, whereby the end bars of the two frames are made to hold the strap, substantially as and for the purposes herein set orth.

80,606.—APPARATUS FOR DISINTEGRATING GRAVEL CONTAINING GOLD, ETC.—L. B. Cox, San Francisco, Cal.
I claim, 1st. The slotted bottom or floor, d, of the tub, D, when constructed in several independently removable pieces, for the purpose specified.
2d, The combination of the tub, D, slotted floor, d, rake, F, shaft, G, and receiving vessel, B, when the several parts are constructed to operate substantially as and for the purpose set forth.

80,607.—CORE BAR.—Richard T. Crane, Chicago, Ill.
I claim the combination of the bars, A, and cross bar, B, when constructed substantially as and for the purposes specified,

80,608.—LOOM.—George Compton, Worcester, Mass.
I claim, in combination with the hooked jacks, the angular lifter and depresser bars or levers, the inclination of which is effected by means substantially as set forth.
Also, in combination with lifter and depresser bars, the inclination of which is effected as and by means substantially as set forth, the even bars or levers, connected to the lifter and depresser bars, by the slide rods, and the links, s, substantially as described.
Also, the rocker wheel or segment, l, for imparting movement to the litter and depresser bars or levers, substantially as shown and described.

80,609.—FENCE.—Henry J. Culp, Goshen, Ind.
I claim the panels, A, hung upon the pin, a, in combination with the crossed stakes, D D, whereby the lateral movement of said panels is prevented, as herein shown and described,

80,610.—FEATHER RENOVATOR.—W. F. Daugherty (assignor to himself and Hiram Elliott), Wellington, Ohio.
I claim the faucets, E, in combination with the pipes, b, and side pipes, D D', for the purpose specified.

80,611.—POTATO DIGGER.—James P. Davison, Rome, N. Y.
I claim, 1st, The combination of the share or point, N, apron, O, vibrating shaker, S S', and clearing fingers, V V', arranged and operating substantially as and for the purpose set forth.
2d, The endless apron O, consisting of the belt, o, transverse bars, o1 o2 o3, and links, o4, employed and operating substantially as and for the purpose specified.
3d, The lips or flanges, a, in combination with the cross-bars, C C'G, beam, D, and braces, L, substantially as described.

80,612.—COUNTING REGISTER.—Jacob S. Detrick (assignor to himself and William R. Eckert), San Francisco, Cal.
I claim the combination of the lever, G, or its equivalent, with the detachable spindle, J, and the wheels, E I, when the parts are constructed and arranged so as to operate together, substantially in the manner and for the purpose indicated,

80,613.—BROOM.—Robert F. Dobson, Goderich, Canada.
I clain, 1st, The turning ring, a, affixed to the rolling barrel, D, by means of the braces, B, substantially as herein shown and described, for the purpose set forth.
2d, As a new article of manufacture, a broom in which the corn is applied and secured as herein shown and described.

80,614.—HARVESTER PITMAN.—Oliver P. Drury, Niles, Mich.
I clain the described construction of the coupling, consisting of the recessed jaw, C, formed upon the bar, A, the recessed jaw, B, provided with the extension, J, adapted to be moved between the guides, a a, by means of the screw bolt, E, extending through the jaw, C, all operating as described, the proximate recesses in the jaws, B C, receiving the ball, G, upon the shank of the pitman, D, as herein set forth and shown.

80,615.—SPARK ARRESTER.—Daniel Eberhart, New Pittsburg, Ohio.
I claim the within described spark arrester when constructed and operating substantially as and for the purposes herein set forth.

80,616.—CHURN.—D. A. Fiske, Delavan, Wis.
I claim, 1st, The paddles or floats, G, and shafts, F, constructed and arranged substantially as herein shown and described, in combination with each other and with the dasher frame, E, as and for the purposes herein set forth.
2d, The sliding bar, M, in combination with the dasher handle, D, cover, I, side boards, L, and cleats, J, substantially as herein shown and described, and for the purposes set forth.
3d, Forming the chamber, K, by inserting the ends of the side boards, L, in grooves formed in the inner sides of the cleats, J, substantially as herein shown and described, and for the purpose set forth.

80,617.—DOUBLE ACTION PUMP.—P. Foley, Nineveh, N. Y.
I claim the arrangement of the lever, M, with relation to the cylinders, A B, chamber, I, valve, d, and valves, b b, whereby, as the piston, C, descends, the valve, d, is opened, by means of the lever, M, to discharge the water from the chamber, 1, into the cylinder, A, the valves, b b, being operated to discharge the water from the cylinders, A R, into the chamber, D, by the alternate strokes of the pistons, C D, as herein described, for the purpose specified.

80,618.—CHIMNEY COWL.—William C. Frailey, Ironton, assignor t himself and D. T. Woodrow, Cincinnati, Ohio.
I claim the combination of the flanged base, B b, slides, c c', cap, d, lugs, e f, and connecting bolts, h, all constructed and employed substantially as and for the purposes set forth.

80,619.—OTTOMAN AND HASSOCK FILLER.—Elnathan G. Gaylard, New York city.
I claim the vertical moveable tube, C, ring, B in combination with the molding bottom, D, all arranged and acting conjointly as herein shown, and for the purpose set forth.

80,620.—WATER AND DAMP PROOF PAPER FOR COVERING WALLS.—Carolina Goessling, Jersey City, N. J.
I claim as an article of manufacture, paper, prepared substantially as described, and for the purposes herein set forth.

80,621.—BLACKING BRUSH SCRAPER.—John Goodenough, Jerseyville, Ill.
I claim the scraper, B, provided with the hook, x5, straight and curving edges, x x1 x3, and attached at right angles to the rod, B, as shown, the latter being bent at b b1 b2, and fastened to handle of brush A, as shown and described, ther od and scraper being so operated in connection with the handle, that when needed for use the former is turned forward and firmly held by the notch, c, and when not needed may be turned backward and held by the hook, x5, catching in the socket in the handle, as herein fully set forth.

80,622.—SCREW DRIVER.—Winfield S. Goss, Baltimore, Md.
I claim the screw driver handle, composed of the parts, C C' C", provided with holes, r r, the bolt, D, spring, s, and lock bolt, n, the whole being constructed to operate substantially as described.

80,623.—GLASS FURNACE.—Niles Granger, Saratoga, N. Y.
I claim the pot, B, formed of the parts, C and D, connected by the passageway, E, and operating substantially as and for the purposes described.

80,624.—CHURN AND BUTTER WORKER.—Samuel L. Hall, West Salem, Wis.
I claim, 1st, The metal churn, E, with the exterior vessel, P, both attached to the frame, A, provided with the locking device, o, all constructed and arranged to operate substantially as herein described, and for the purpose set forth.
2d, In combination with the bevel wheel, J, and winch, L, the dasher, G with the curved beaters, p, and grooved pin, h, bevel pinion, I, and brake, H, all constructed and arranged to operate substantially as herein described and for the purpose set forth.

80,625.—LET-OFF MECHANISM FOR LOOMS.—Wm. Hall (assignor to himself and J. W. Pitt), North Adams, Mass.
I claim the pivoted bearing, c, with the bar, e, attached, in combination with belt, B, pulley, g, on shaft, A, and spring, i, all consstructed and arranged substantially as and for the purpose set forth.

80,626.—THILL COUPLING.—I. C. Hart, Galesburg, Ill.
I claim the plate, H, and hook, L, constructed and arranged as described, and combined with the axle, A, clip, P, and tongue or thills, J, substantially as described and for the purpose set forth.

80,627.—MACHINE FOR BENDING WOOD.—Levi Heywood, Gardner, Mass.
I claim, 1st, Commencing to bend the wood from each end toward its center, instead of comencing to bend it from the center toward the ends, or from one end toward its other end, substantially as and for the purpose described.
2d, The formers, B B, with the geared tables, c c, working in the rack, D, and guided by the slots, a a, in combination with a suitable chain, H, substantially as and for the purpose described.

80,628.—DOUBLE VOLUTE SPRING.—Joseph Hobart, Boston, Mass.
I claim, 1st, A double volute spring composed of a single bar of metal, and made by bending said bar at the middle, doubling it upon itself, and coiling the same around a mandrel, or otherwise, substantially as described.
2d, In making double volute springs, in the manner set forth in the foregoing clause, so bending the limbs that the edges thereof shall describe lines of unequal curvature, but so that the curvature, commencing at or near the point of junction of said limbs, shall increase from thence outward toward the extremities thereof, substantially as described.
3d, In making a double volute spring, in the manner set forth in the first clause, bringing the two free ends near together, leaving an opening between the limbs which narrows toward the ends, substantially as described.

80,629.—MACHINE FOR SEPARATING AND CONCENTRATING Sulphurets.—Andrew Hunter, San Francisco, Cal. Antedated July 23, 1868.
I claim, 1st, The formation of the trough or table, B, with or without metallic lining, and alternately inclining and level, as shown by lines, a b d, substantially as described and for the uses and purposes as set forth.
2d, The combination, with the table or trough, B, and its adjustable hangers, of the cam shaft and spring, X, under the arrangement described, whereby both the oscillatory motion and percussion of the said table are effected, for the purpose of separating the sulphurets and metals from the lighter particles, as set forth.
3d, The eccentric strap, Z, in combination with the trough, B, and cam, or equivalent means, for imparting an oscillatory movement to said trough, substantially as and for the purposes set forth.
4th, The combination, with the table, B, and mechanism for imparting to the same an oscillatory movement, of the rocking trough, E, arranged for operation substantially as and for the purposes set forth.
5th, The combination, with the oscillatory table or trough, B, of the rotary scraper, W, made of india-rubber, or other suitable material, substantially as set forth for the purposes specified.
6th, The combination, with the table or trough, B, of the inclined screen, T, and mechanism for imparting to the same a vibratory motion, under the arrangement and for operation as herein set forth.
7th, The combination, with the oscillating trough and hanger, by which the rear end of the trough is held, of the wheels or rollers, R, for supporting the front end of said trough, substantially as herein shown and described.
8th, The combination of the table or trough, E, with eccentric troughs, E and G, hangers, D D, spring, X, wheels or rollers, R, scraper, W, and sieve, T substantially as described, and for the uses and purposes as hereinbefore set forth.

80,630.—ROTARY STEAM ENGINE.—N. Jackson and A. W. Jackson, Napoleon, Ohio.
We claim, 1st, The curbed spring, a, in combination with the L-shaped metal pieces, b b, arranged in the valves, F F, substantially as herein set forth.

80,631.—ARTESIAN PUMP.—L. Jennings, Brooklyn, N. Y. Antedated July 23, 1868.
I claim, 1st, The within-described construction and arrangement of the packing, D d' E, the same being composed of the soft and water-retaining cup-leather, E, and the hard and expansible exterior, D, the latter being in the form of a ring or hollow cylinder, open on one side, with one or more offsets, d', at the joint, all these several parts being constructed and arranged relatively to each other and to the box, B, and barrel, A, substantially as and for the purpose herein set forth.
2d, The partial spiral or incline, B5, and corresponding ratchet ring, G1 G2, arranged as represented, the ring, G1 G2, being allowed to traverse axially within the yoke or inclosing ring, A3 and to lock itself in new relations thereon, as the bucket B, descends, substantially as and for the purpose herein set forth.

80,632.—HEAD BLOCK FOR SAW MILL.—Nelson Johnson, Jasper, N. Y.
I claim, 1st, The eccentric longitudinal rests, L L', either or both, when constructed with a flat fall, l, and dogs, l', and operating substantially as described for the durpose specified.
2d, The vertical slots, 16, when employed in combination with the upper longitudinal rest, L, for the purpose of rendering said rest adjustable to suit different sizes and taper of logs, substantially as described.
3d, The combination of the levers, 3, ratchet rack, 4, link, 2, and vertically sliding dog, 1, with the standard, 5, substantially as and for the purpose specified.

80,633.—STEAM GENERATOR.—J. Kelshaw, La Fayette, Ind.
I claim a zigzag or undulating flue, formed by the alternately projecting water chambers, C C, substantially as herein described.

80,634.—MACHINE FOR GRINDING AND POLISHING SCHOOL SLATES.—Wm Kester, Cherryville, Pa.
I claim, 1st, The track, b b', when composed of the double inclines, t t', and used in connection with the cars, G G, and grinding stones, D D, in the manner and for the purpose specified.
2d, The combination of the movable bed, H, springs, s s, and body of the car, G, substantially as and for the purpose specified.

80,635.—WATER WHEEL.—T. J. Kindleberger, Eaton, Ohio.
I claim, 1st, The water wheel consisting of the plate, A, and rims, B and C, with the two tiers of buckets, E and F, all constructed and arranged substantially as herein described.
2d, The rim, C, and buckets, F, when constructed and combined as set forth.
3d, The combination of the pinion, I, segmental rack, H, rod, P, and collar, G, when arranged in connection with the case and vertical gates of a water wheel, as bercin shown and described.

80,636.—COOKING STOVE.—W. F. Kistler, Chicago, Ill., assignor to himself and G. W. Gillette.
I claim a stove, so constructed that the heat and smoke may pass through a chamber, space, or flue in the doors of the oven, substantially as and for the purpose specified.

80,637.—INDICATOR LOCK.—Thomas Lalor, Toronto, Canada, assignor to John Dewe, George Harding, and Bartholomew Lalor.
I claim, 1st, The cylinder, a, arranged in the lock in such a manner that it will cause the motion of the indicator, whenever the key is operated, to open the lock, as set forth.
2d, The slide bolt, d, by which the cylinder, a, is moved, as described.
3d, So constructing the tumblers or a lock that they will lock the cylinder, a, substantially in the manner herein shown and described.
4th, The guard, p', attached to the slide bolt, d, for the purpose of protecting the bolts, n, to prevent the lock from being picked, as set forth.
5th, The application of indicator wheels, f g h, or their equivalents, to a lock, the same being moved or set, whenever they key is turned in the lock, substantially as and for the purpose herein shown and described.
6th, The combination of the indicator wheels within the locking pin, i, which can be protected by a seal, as set forth.

80,638.—WATER WHEEL.—J. Y. Lanfair, Queensbury, N. Y.
I claim the wheel, A, constructed or cast with buckets, J, having two parts b b', arranged as shown, in combination with the curved throats, H H, all arranged substantially as and for the purpose specified.

80,639.—HINGE.—Elijah Lindsley, Neenah, Wis.
I claim the bent pivot, b, in combination with shoulder, a, and plates, d d, the whole forming a right-and-left hand, substantially as herein shown and described.

80,640.—MODE OF WATER-PROOFING PAPER, CLOTH, ETC.—R. O. Lowrey, Salem, N. Y.
I claim, 1st, The process of making paper, cloth, and all similar fabrics, as well as leather, comparatively water proof, as herein described.
2d, The products resulting from the application of my process to pulp, paper, cloth, and similar fabrics, as well as leather, as herein described.

80,741.—ARTIFICIAL GUM FOR COATING AND WATER PROOFING.—R. O. Lowrey, Salem, N. Y.
I claim, 1st, The composition, made by mixing a solution of salt and alum with a solution of soap, as herein described, for the purpose of producing an artificial gum.
2d, The composition, made by mixing my artificial gum with oils, resins, grease, gum, wax, fibrous materials, or their equivalents, substantially as herein described and for the purpose set forth.

80,642.—MANUFACTURE OF ILLUMINATING GAS.—W. L. Lowrey, Saratoga Springs, N. Y.
I claim, 1st, The process of distilling illuminating gas from coal tar, hydrocarbon oils, resins, wax, and the residuum of petroleum, substantially as herein described.
2d, The use of the hydrate of lime, within the chamber or retort, in the manufacture of illuminating gas in the ordinary way or by my process, substantially as herein described.

80,643.—ROTARY CULTIVATOR.—George F. Lynch, Milwaukee, Wis.
I claim, 1st, The shape of the tooth and the manner of finding the curve of the same, to suit any sized head or cylinder, as herein recited.
2d, Having the heads loose on the axle, to prevent clogging or choking, as herein described, in combination with the attaching the heads to the truck by straps, so as to permit each head or cylinder to act and move over obstructions independently.

80,644.—VALVE ARRANGEMENT.—Philander Macy, Rochester, N. Y.
I claim, 1st, The construction of the valve, K, with opening, d, bars, f f, lugs, h h, offsets, k k, and projection, r, as herein set forth.
2d, The combination of the rod, M, provided with the turning hook, s, and collar, t, and the lever, L, and spring, n, with the valve, K, and its projection r, operating substantially in the manner and for the purposes specified.

80,645.—STOVE GRATE.—A. J. Magoon, Providence, R. I.
I claim the combination and arrangement of the revolving grates, C C, horizontal shaft, B, lugs, e e, tubular shafts, a a, and beveled pinions, b b, all operating as described, whereby the grates are revolved separately and dumped simultaneously, as set forth and shown.

80,646.—MANUFACTURING AND PURIFYING SPIRITS.—P. Martin, Forest Grove, Oregon. Antedated April 4, 1868.
I claim, 1st, The manufacture of alcohol and other spirits, in the manner substantially as herein described.
2d, The use of saline matter for manufacturing and purifying spirits in combination with my said process, substantially as described.

80,647.—DEVICE FOR FEEDING SAWDUST, ETC., TO FURNACES.—J. A. McClelland, Vernon, Ind.
I claim, 1st, The application of a suction and blast fan to planing, circular saw, sand belt, or other wood-working machinery, when arranged in the manner shown, or in an equivalent way, to draw the shavings or sawdust from the machine and feed them to a furnace or discharge them from the building or shop, substantially as set forth.
2d, The arrangement of the two fans, D D', spouts, G K L F, and the valves J I, to operate substantially as and for the purpose specified.
3d, The air-escape pipe, H, in combination with the spouts, G K L F, and valves, J I, all arranged for joint operation, substantially as and for the purpose set forth.

80,648.—MOLDING MACHINE.—Charles H. Mellor, Philadelphia, Pa.
I claim the combination of the vertical cutter-bearing mandrel, N, having glands for controlling the belt with the table, D, made adjustable vertically by wedges placed on a frame, C, connected by hand wheel, F, and screw, I, all constructed and operated substantially as described.

80,649.—GAGE.—B. F. Merrill, West Lebanon, N. H.
I claim an adjustable measure for key holes consisting of the strips, B C, adapted to be forced apart by the action of springs, and clamped in the desired position by means of set screws or nuts, substantially as herein shown and described.

80,650.—CURTAIN FIXTURE.—Lucius E. Michell, Cincinnati, Ohio.
I claim the combination, substantially as described, of the perforated plate B b, pivoted spring catch, C D, stud, d, and pulley, E, for the purpose specified.

80,651.—WASH BOILER.—C. E. Miller, Indianapolis, Ind.
I claim the arrangement of cover, D, having perforated rim, d', and unperforated top, d, oblique and perforated diaphragm, E, pipe, G, and nozzles, g g', substantially as set forth.

80,652.—CLAY MILL.—Levi Moore, Baraboo, Wis.
I claim the disk, L, with its projections, in combination with the grinding plates, a and N, the floor, D, having chutes and opening, O, the horizontal grinding plates, G P, having wedge-shaped projections, the shaft, I, floor, H, and doors, Q Q, all substantially as and for the purpose shown and described.

80,653.—TUCK CREASER FOR SEWING MACHINE.—A. Morehonse and A. R. Heath, Danbury, Conn.
We claim, 1st, The bent arm, C, attached to the presser piston, A, when constructed with the slot, D, needle hole, B, spring guide, J, and guide swell O, substantially as and for the purpose set forth.
2d, The combination of the slotted arm, C, constructed as described, with the adjustable bar, N, and spring presser, F, as set forth.
3d, The combination of the presser piston, A, slotted arm, C, spring guide, J, guide, O, and spring presser, F, with the adjustable guide, H, or marker, I, arranged to operate substantially as described.

80,654.—LOG SLED.—C. W. Mosher, East Leon, N. Y.
I claim a log sled having the roller, f, chain, d, swinging frame, B, and its accessory roller, e, chain, a', and any log hooks, d, all substantially as shown and described and for the purpose set.

80,655.—COMPOSITION FOR DESTROYING INSECTS IN WHEAT. Joseph Newcomer, Baltimore, Md.
I claim the compound of the salt brine and copperas in the proportion, and the mode of treating the wheat, as hereinbefore fully described.

80,656.—FOLDING CHAIR.—J. Nicolai, Boston, Mass.
I claim a folding chair, having its seat, C, and legs, A A, connected by the bar, D, rings, e e, and guide rods, d d, all arranged substantially in the manner as and for the purpose set forth.
Also, the legs or steps, f f, attached to the seat, C, in combination with the bar, D, rings, e e, and guide rods, d d, for the purpose specified.

80,657.—PORTABLE FENCE.—J. W. Norman, Eugene, Ind.
I claim the combination of the pickets, A' A', the rings or collars, m m, the posts, B B, having the sockets, s s, the rods, r r, and the links l l, substantially as described.

80,658.—CHURN.—Josiah Oothoudt (assignor to himself and H. C. Jerauld), Minneapolis, Minn.
I claim the tub, C, dasher, B, sleeve or casing, c, hollow shaft, E, wheel, F, shaft, D, and gear, e e, when all are combined and arranged substantially as and for the purpose specified.

80,659.—SMOKE STACK.—W. H. Parker, Memphis, Tenn.
I claim the combination of three sections, E F and G, with the levers, A A A, with the latches, C C, the springs, D D, the racks, B B, the three or more springs, I I, the fulcrum, g, constructed and operated substantially as herein set forth.

80,660.—COMPOUND FOR DESTROYING INSECTS IN PLANTS.—W. A. Phillips, Perry Center, N. Y.
I claim the composition prepared of the ingredients and in the proportions and manner, substantially as herein described and set forth.

80,661.—FENCE.—S. B. Pierce, Homer, N. Y. Antedated July 29, 1868.
I claim the combination of the fence panels, B B, clasp, C, as constructed and posts, A, forming a portable fence, as set forth.

80,662.—CARRIAGE-CURTAIN FASTENER.—H. E. Pond, Franklin, Mass.
I claim the improved device, before described, for fastening the curtains of wheeled vehicles, consisting of the two perforated plates, a and b, riveted to opposite sides of the curtain, as represented, and with the outer one provided with the locking bolt for locking it to the stud, d, the whole being in manner and to operate as before described.

80,663.—DEVICE FOR SHEERING BOOMS.—L. W. Pond (assignor to himself and Eau Claire Lumber Co.), Eau Claire, Wis.
I claim the combination of the rudders, B, with the boom, A, whether said boom be made in one or more parts or pieces, substantially as herein shown and described and for the purpose set forth.

80,664.—SWIFT OR REEL.—E. N. Porter and P. P. Roberts, Morrisville, Vt.
We claim the arrangement of the spiral spring, a pin, E, perforated arms, F F, with the block, C, hook, D, and standard, A, substantially as and for the purposes herein set forth.

80,665.—BUNDLING MACHINE.—Edward J. Reddy, Bayville, N. Y.
I claim the handle, C, having the movable hand piece, c1, and stop, 2, the toothed segment, H, shaft, B, and segments, F, constructed to operate the flexible bands, E, as herein described for the purpose specified.

80,666.—GRAIN SEPARATOR.—O. N. Ritch, Geneva, Ill., assignor to himself and W. H. Howell.
I claim, 1st, The combination of the disk, H, and perforated plate, I, with adjacent faces inclined downwards, substantially in the manner and for the purpose set forth.
2d, In combination with said disk, H, and plate, I, the arrangement of a receiver, J, substantially as specified and shown.
3d, The combination of the disk, H, perforated plate, I, receiver, J, and chutes, K L, arranged to operate substantially in the manner described.
4th, The rim, M, provided with openings or notches, m, when arranged with respect to the passages, n, in the manner specified.

80,667.—LEAD PIPE CONNECTION.—W. D. Richardson, Springfield, Ill.
I claim the improved pipe joint herein described, the lead, E, being compressed within the flaring lip, D, by compressing the lengths of pipe forcibly together, and a space, C', being left around the extreme end of the male part, to allow the parts to be set at a slight angle without difficulty, all substantially as and for the purposes herein set forth.

80,668.—BEDSTEAD.—L. W. Roath, Lexington, Ohio.
I claim the cross rail, K, loops, d, as arranged in combination with the cord F, and sections, H G, substantially as and for the purpose set forth.

80,669.—DUMPING CART AND WAGON.—W. W. Rogers, Hampden Corner, Me.
I claim, 1st, The combination of the spring bolts, G, cords or chains, H, and pullers, I with the hinged tail board, E, stakes, J, and body, D, of the cart or wagon, substantially as herein shown and described, and for the purpose set forth.
2d, The combination of the brace rods, K, and cross bar, L, with the stakes, J, and shafts, C, substantially as herein shown and described, and for the purpose set forth.

80,670.—CARRIAGE TOP.—J. F. Sargent, North Turnbridge, Vt.
I claim the pivoted interior rod, D, in combination with the double-jointed tubular shaft, C, slotted near its center, sliding ferrule, I, grooved and notched ring flange, H, disk, E, braces, G, and curved radial ribs, F, all constructed and operating as described, for the purpose specified.

80,671.—GRAIN-DRILL SHOE.—Peter Schmitt, and Peter Jacob Schmitt, Waterloo, Ill.
We claim, 1st, The shoe, A, when provided with a slotted ing, a, and combined with the rod, B, and links, C, as herein described and shown.
2d, The rod, B, when provided with adjusting holes, b2, and coupled with links, C, by means of the joint pin, b, and the wooden pin, b4.
3d, The arrangement of the curved slot, a', pin, e', and links, C, substantially in the manner herein shown and described.

80,672.—SASH AND WINDOW FRAME.—Johann Schnell, New York city.
I claim, 1st, The hinged frame, B, in which the sashes, C D, slide up and down, as specified.
2d, The arrangement of the window sashes, C D, in a frame, B, which is hinged to the casing, A, all constructed to operate substantially as herein shown and described, for the purpose specified.
3d, The bars or plates, G, when removably secured to the sashes, and held by means of the catch, i g, all constructed and arranged to operate in the manner and for the purpose substantially as herein set forth and shown.

80,673.—DEVICE FOR SOLDERING TIN CANS.—William Serviss, Sidney, Ohio.
I claim the tubular holder, A, when provided with the slots, C, screws, D, and nuts, D', arranged and operating substantially as and for the purpose described.

80,674.—YOKE.—F. M. Shields (assignor to himself and John W. Sanders), Macon, Miss.
I claim, 1st, The combination, with a halter, of the yoke herein described, consisting of the strip, C, and hooks, D and E, substantially as and for the purpose described.
2d, The improved animal yoke, herein described, composed of the strip, C, hooks, D and E, substantially as and for the purpose described.

80,675.—MEAT CUTTER.—David Slaughter, West Hempfield Township, Pa.
I claim the arrangement of the circular knives, N, and weighted sliding car and box, Q, with its slotted arms, I I', in combination with a revolving block, L, and crank and screw shaft, D S, substantially in the manner and for the purpose specified.

80,676.—FASTENING FOR BRACELET.—George H. Soule, Jersey City, N. J.
I claim the clasp or fastener, A, as shown and described,

80,677.—BALANCE SLIDE VALVE.—John D. Stewart, La Porte, Ind.
I claim, in combination with the slide valve, B, valve-chest, G, and cover, G1, and steam chamber, F, the packing plates, H, to the back of which steam is admitted from the steam chamber, substantially as and for the purpose set forth.

80,678.—SPOKE TENON.—Geo. W. Stouffer, Lewistown, Pa.
I claim the provision in a spoke tenon of the grooves or concavities, b b2 b3, employed and operating as described, for the purposes specified.

80,679.—FILE CUTTING MACHINE.—Sedgwick A. Sutton, Dixon, Ill., assignor to himself, W. Uhl, and Lysander Flagg.
I claim, 1st, The combination and arrangement of the pivoted guide plate, B, slides, C and E, and the convex pressure roller, F, substantially as and for the purpose specified.
2d, The loaded lever, I, arranged or applied substantially as shown, with the standard, J, and oblong slot, h, in combination with the slides, C E, and convex pressure roller, F, substantially as and for the purpose set forth.
3d, The clamp, K, composed of the jaws, j j', lever, M, provided with the pins, n o, and the catch, L, applied to the clamp, and all arranged to operate in the manner substantially as and for the purpose specified.

80,680.—CORN AND POTATO COVERER.—James Swart, Hoffman's Ferry, N. Y.
I claim, 1st, The covering shares, G G', constructed as represented and described, and provided with the adjustments, g g* a and g1 g1* g2, substantially as and for the purpose set forth.
2d, The combined arrangement of the adjustable lead wheel, E, shares or scrapers, G G', and spring rollers, H H, all substantially as described, for the purpose specified.
3d, The springs, J J', in combination with the frames, A I, and rollers, H H', arranged and operating substantially as and for the purpose described.
4th, The combination of the handles, C, main frame, A, hinged frame, I rollers, H, and wheel, E, all arranged to operate substantially as herein set forth.

80,681.—HAY AND COTTON PRESS.—Benj. F. Taft, Groton Junction, assignor to himself and Daniel Needham, Groton, Mass.
I claim the within described portable pressing apparatus, consisting of the mounted wagon body, A S C D, windlasses, E and R, with their connecting gear, ropes, or chains, d d d d, etc., pulleys, c c c c h and i, follower, S, and cam, a, all constructed and arranged together substantially as herein shown and described.

80,682.—HORSE COLLAR.—Spencer P. Taylor, Oxford, Ohio.
I claim a horse collar divided by a partition, e, into compartments for the reception of different materials, substantially as described.

80,683.—LABEL HOLDER.—G. S. True, Leavenworth, Kansas.
I claim the carp holder consisting of the parts, D E, the former being hinged to the latter, which is adapted to be so attached to the trunk as to form a magazine, C, substantially as herein shown and described.

80,684.—WAGON BRAKE.—W. H. Tucker, Sunman, Ind.
I claim the blocks, E, rods, F and P, straps, K and N, sheave, O, rods, L M, spring, H, and lever, J, all constructed and arranged substantially as and for the purpose set forth.

80,685.—CHURN DASHER.—T. W. Tyler, Corry, Pa.
I claim the knife wheels F E G, constructed and operating substantially as

hereinshown and described, in combination with the long tenon, D, of the dasher handle, C, as and for the purpose set forth.

80,686.—COMBINED PLOW AND PLANTER.—Isaac H. Walker, Newton, Ill.

I claim, 1st, The mold boards, C C, projecting rearwardly and inwardly from the front mold boards, B B, at the same or a greater depth, substantially in the manner and for the purpose specified.

2d, The combined arrangement of the seed box, D D' d, dropping slide, G, crank lever, F, and treadle, E, all constructed and employed substantially as and for the purpose described.

3d, The harrow, J, constructed as described, and employed in combination with the plows, B C, and planter, D I, in the manner and for the purpose specified.

4th, The combined arrangement of the plows, B C, planter D I, harrow, J, and roller, L, all constructed and operating substantially as and for the purpose described.

5th, The hollow colter or drill, I, in combination with the mold boards, C C, and planter, D, as and for the purpose set forth.

80,687.—TIRE COOLER.—John Wampach, Shakopee, Minn.

I claim the combination of the connecting rods, E, lever, D, conuecting rod, G, and lever, F, with each other, with the box, B, beams, C, and frame, A, arranged substantially as herein shown and described and for the purpose set forth.

80,688.—CAR COUPLING.—James White, Harrison, Ohio.

I claim, 1st, The pin, C inclosed within the tight cylinder, B F, and operated by a spring, E, substantially as and for the purposes described.

2d, In combination with the above, the lugs or projections, J K, telescopic hollow stem, J L, and spring, M, all constructed, arranged and employed as and for the purposes specified.

80,689.—GRATE FOR STOVES, RANGES, AND HEATERS.—Richard Whiting and Albert Hamilton, New York city. Antedated July 29, 1868.

We claim an "adjustable grate," so constructed that the size of the fire space may be readily increased or diminished, by raising or lowering one section of the grate perpendicularly, or by inclining the other section or sections thereof to any required angle, by means of a cam, lever, or other device, using either movement separately, or both combined in one stove, range, furnace, or heater.

80,690.—THILL COUPLING.—Hironimus Will, Columbus City, Iowa.

I claim a shaft coupling having pieces, A and B, clutch, D, and spring, E, constructed, combined, arranged, and operating substantially as specified.

80,691.—WEATHER BOARD GAGE AND REST.—Isaac Williams, Westfield, Ind.

I claim the combination of the hollow shouldered part, A, having the parts a a2, the graduated adjustable stem, B, and the sliding wedge, D, all constructed, arranged, and operating as herein described, for the purpose specified.

80,692.—GAGE FOR WEATHER BOARDING.—Isaac Williams, Westfield, Ind.

I claim the bars, A, provided each at its outer end with an adjustable pivoted blade, B, and socketed at their inner ends for the reception of the sliding connection, D, which is adapted to be clamped in the desired position, said bars, A, being provided with flanges, a, all constructed, arranged and operating substantially as and for the purpose herein set forth and shown.

80,693.—TANNING.—W. Windoes, Fond du Lac, Wis.

I claim, 1st, The employment of a sugar and bran dump, in combination with the usual tanning process, all substantially as and for the purpose set forth.

2d, The alum and saltpeter tanning liquor, in combination with the preceding process, or other equivalent processes, all substantially as set forth.

80,694.—HARVESTER.—C. W. Witt and B. F. Witt, Indianapolis, Ind., assignors to B. F. Witt.

We claim, 1st, The tipping rake, when constructed and arranged receive the grain as it is cut, and deliver it to the binder, substantially as described.

2d, The box, A, with the seat or binding table, d, in combination with the tipping rake, substantially as described.

3d, The combination of the reciprocating bar, m, and plate, L, having the grooved rollers, o, arranged thereon to form the supports of the bar, m, all substantially as set forth.

80,695.—CAR BRAKE AND STARTER.—John S. Wood, Lansing, Mich.

I claim, 1st, The combination of the cylinder, B, wheel, D, and clutches, E and F, and flanges, G, when constructed and arranged substantially as described.

2d, The combination of the levers, H, flanges, and clutches, E and F, when so arranged that as the flanges are disengaged from the arm, the clutch on the same side will be engaged with the teeth on the hub, substantially as set forth.

3d, The combination of the cylinder, B, and wheel, D, with the flanges, G, when respectively so constructed that a projection from the flanges may be made to engage the arms, B2 or D', and prevent the revolution of the wheel or cylinder, substantially as and for the purpose set forth.

80,696.—EXCAVATOR.—Charles F. Woodruff, Newbern, Tenn.

I claim, 1st, In a revolving scraper or excavator, the combination of the swinging plates, F F, and the rounds, d d2, or their equivalents, substantially as and for the purposes specified.

2d, The combination of the lever, M, having the handle, m, and the hook, n, with the pawl, p, ratchet, w, and body, B, when the parts are constructed to operate substantially in the manner and for the purpose specified.

80,697.—SLEEVE OF KNITTED GARMENTS.—Wm. H. Abel, Greenville, R. I. Antedated July 27, 1868.

I claim, 1st, Making the short sleeves of under shirts, vests, and similar garments, of tapes or strips which have selvage edges, and in which the courses of stitches or loops run in the same direction as in the body of the garment, for the purpose and substantially as described.

2d, Forming the gusset of such sleeves in the manner and for the purpose substantially as described.

80,698.—STEAM ENGINE SLIDE VALVE.—L. H. Allen and John B. Wilford, Tamaqua, Pa.

We claim the arrangement of the bars, m m, with the exhaust openings, L L and passages, i i, whereby to complete the stroke of the valve, C, so as to make the maximum opening of the ports, substantially as set forth.

80,699.—BUTTON.—Henry Ansley, Washington, D. C.

I claim a button or stud constructed with the parts, A B C and C', arranged in relation to one another substantially as described.

80,700.—LOW WATER DETECTOR FOR BOILERS.—John Ashcroft, New York city.

I claim, 1st, The construction, arrangement, and combination of the low water detector tube, B, and fusible plug, D, with the steam alarm tube, F, weighted valve, H, and steam whistle, I, substantially as herein shown and described.

2d, The steam connection pipe, N, and valve, O, in combination with the fusible plug, D, and steam whistle, I, substantially as herein shown, described and set forth.

80,701.—APPARATUS FOR EXTINGUISHING FIRES.—James F. Babcock, Boston, Mass.

I claim a liquid ejecting apparatus having a main water or liquid chamber or reservoir, a, and a gas generating tube, d, this tube having provision at its upper part for holding the gas generating composition to be burned, and the tube and main chamber being constructed and arranged substantially as described.

80,702.—CENTRIFUGAL MACHINE FOR FILTERING, DRAINING, AND DRYING.—Robert J. Barry, Philadelphia, Pa.

I claim, 1st, A forked bar, E, having a yielding bearing, and arranged adjacent to and bearing with its forked end against the suspended shaft of a centrifugal drying machine, substantially as and for the purpose described.

2d, The said bar secured in a frame hinged to the outer casing or other permanent part of the machine, for the purpose set forth.

80,703.—CAR SEAT.—Samuel G. Blackman, Waterbury, Conn.

I claim a reversible or adjustable seat, constructed in the manner described, that is to say, the two parts which form the back and seat, according to the position in which the seat is adjusted, are pivoted upon a common center, so that both are turned to reverse the seat, substantially in the manner herein set forth.

80,704.—UNION VALVE COUPLING.—Sanford O. Blanding, Smithfield, R. I.

I claim a combined coupling and check valve, constructed and arranged substantially as described, for the purpose specified.

80,705.—LAMP.—Henry H. Boucher, Doylestown, Pa.

I claim, 1st, The combination with a lamp and a separate oil reservoir communicating therewith, of the tubular level regulator, E, two way cock, G, and tube, F, arranged and operating substantially as described.

2d, The tube, F, in combination with an oil reservoir and an escape cock, substantially as described.

80,706.—STOVE LEG.—George W. Burling, Trenton, N. Y.

I claim the circular slot, A, when combined with the grooved recess, a a, and the dovetailed lip, C, or their equivalents, substantially as and for the purpose described.

80,707.—GLOVE.—Remus D. Burr, Kingsborough, N. Y.

I claim, 1st, Cutting the front of the hand, thumb, and all the fingers, joined in one and the same piece of material, substantially as shown and described.

2d, In combination with the iron, cut in one piece, as above claimed, cutting the whole or three sides of the fore finger, also joined in said piece, substantially as described.

3d, Cutting the back of the hand and thumb, and the back and sides of the middle and little fingers, all joined in one and the same piece of stuff, substantially as described.

4th, Cutting the back of the hand with the back and sides of the middle and little fingers, all in one piece, as shown and described.

5th, In combination with the back of the hand and the middle and little fingers, cut as above claimed, the back and sides of the ring finger, cut in one piece and sewed to the back, substantially as described.

6th, In combination with the elements of the first claim, cutting the back of the thumb separate from the back of the hand, and joining it thereto by a seam.

7th, In combination with the elements of the third and fourth claims, cutting the front of the thumb separate from the front of the hand, and joining it thereto by a seam.

8th, In combination with the front of a mitten, cut as claimed in the first claim, cutting the back of a mitten with the back of the thumb in one piece, substantially as described.

80,708.—WATER CLOSET.—Wm. S. Carr, New York city.

I claim, 1st, A water closet hopper or container, having the inward flange, e, at the upper end, in combination with the pan, d, the parts being formed substantially as specified, so that the pan can be introduced or withdrawn through the opening in said flange, e, and the pan, when in place, shall set up against the under side of said flange, as set forth.

2d, The divided axis, k m, formed as shown, in combination with the pan, d, and socket, o, as and for the purposes set forth.

3d, The slotted adjustable link, u, in combination with the lever, r, and pull, w v, as and for the purposes set forth.

80,709.—NON-CONDUCTOR OF HEAT.—James Chalmers (assignor to James Chalmers, Jr.), London, England.

I claim the mixtures, in the proportions above described, of glutinous and siliceous clay, as the basis of a non-conducting compound, the calcination or half charring of saw dust, in the manner proposed, so as to preserve its fibrous nature and non-conducting qualities, and the use of wood and other pulp or fiber, and hoofs, prepared as above, for holding and consolidating the non-conductor compound, and for adding to its non-conducting qualities.

80,710.—FASTENING FOR BUTTONS.—Geo. D. Clark (assignor to himself and Clark and Cowles), Plainville, Conn.

I claim the herein described button fastener as an article of manufacture, consisting of the plate, A, with the slot, a, and one or more projections, d, substantially as set forth.

80,711.—CHANGABLE STENCIL PLATE.—James J. De Barry, Brooklyn, N. Y.

I claim the within described slots, C D E F, arranged relatively to the opening, a, and the strips, B, the whole being adapted to form an adjustable stencil plate, possessing the advantages and characteristics herein set forth.

80,712.—BASE BURNING STOVE.—T. Parsons Dickerman, New Haven, Conn.

I claim in combination with the reservoir or cylinder, B, of a base burning stove, the slide or cut-off, D, arranged and applied substantially in the manner herein set forth.

80,713.—HOMINY AND PEARLING MILL.—Edwin A. Duer (assignor to Geo. W. Patterson), Decatur, Ill.

I claim the combination and arrangement of the cylinder, B, having recess, D, diaphragm, I, passage, K, and slotted sliding gate, M, rotary shaft, C, provided with beaters, a, rotary screen, Q, fan blower, N, deflector, O, chutes H h P, hopper, E, vibrating shoe, F, and conveyor on shaft, C, all substantially as herein shown and described, for the purposes specified.

80,714.—WATER METER.—A. B. Edmands, Melrose, Mass.

I claim a water meter or motor made with valve blades or flaps, hinged to and swinging against and from an axial drum, such blades being rotated by pressure of the water entering the meter case through the eduction pipe, and each valve blade being thrown out from the drum as its outer edge passes the abutment or wall, substantially as set forth.

80,715.—PLOW.—John Fisher, Middletown, Pa.

I claim the adjustable wing, C, when used in combination with a subsoil plow, B, and constructed and arranged as and for the purpose herein fully set forth.

80,716.—BEEHIVE.—Samuel P. Forgy. Allensville, Ky.

I claim the application to the box or frame, of the self-adjusting transparent light on pivots, which will, at a given or proper time, allow the bee both ingress and egress, as herein described, using for that purpose any transparent substance which will produce the intended effect.

80,717.—HAND LOOM.—Wm. S. Freeman, West Union, Ohio.

I claim, 1st, The defying shaft, M, pawl, P, ratchet wheel, Q, shaft, R with tappets, S, and treadles, C, all constructed, arranged and operating substantially as described, for the purpose set forth.

2d, In combination with the elements of claim first, the picker staff, U u, and strap, V.

70,718.—MEDICINE.—Emil Frese, San Francisco, Cal.

I claim the above described composition for cathartic tea, made of the ingredients enumerated, mixed and compounded in about the proportions specified.

80,719.—VENTILATOR.—John F. Frye, Lowell, Mass.

I claim the combination of a metallic chimney with an adjoining heat conducting tube or box, in which the air is heated by the chimney, and conveyed to rooms above the level of the fire, said tube or box being controlled by valves at both ends, so that it may be used as a ventilator in the warm season.

80,720.—COMPOUND FOR EXTINGUISHING FIRES.—Edward A. Galbraith, Boston, Mass.

I claim, 1st, A solution of salt cake of commerce in water for extinguishing fires.

2d, A solution of chloride of magnesium and silicate of soda, in combination with salt cake of commerce, or its equivalent, for use in extinguishing fires, substantially as set forth.

3d, A solution of any soluble silicate, Epsom salts, and bicarbonate of soda, in combination with salt cake or sal-nixon, or their equivalents, for the purpose set forth.

4th, A solution of chloride of calcium, and soluble silicate, any bicarbonate of soda, in combination with salt cake of commerce, or its equivalent, for use in extinguishing fires.

80,721.—TUCK FOLDER FOR SEWING MACHINES.—Charles H. Gardner, Rochester, N. Y.

I claim, 1st, The piece, B, constructed as described, and consisting of the parts, L u H, spring, a, with open eyelet, e, all constructed as and for the purposes set forth.

2d, In combination with the above, the part, A, consisting of the raised block, c, and adjustable plate, H', all constructed as described, and operating together for the purpose set forth.

80,722.—VISE.—O. H. Gardner, Fulton, N. Y.

I claim, 1st, The combination of the spring, J, with the ball, H, formed upon the lower end of the shank, g', and with the cylindrical slide bar, I, substantially as herein shown and described, and for the purpose set forth.

2d, The combination of the sliding dog, O, with the shank, g', of the front jaw, G, and with the outer end of the cylindrical sliding bar, I, substantially as herein shown and described, and for the purpose set forth.

3d, The combination of the spring catch, P, with the shank, g', and with the sliding dog, O, substantially as herein shown and described, and for the purpose set forth.

4th, The described construction of the flanged plate, D, and the recessed and slotted plate, E, the former being attached to the shank of the jaw, B, by a screw, in order to be removable, as herein shown and described.

80,723.—EXTENSION WARDROBE FRAME.—Elias Gill, New York city.

I claim, 1st, An extension skeleton frame, for portable wardrobes, constructed and operating substantially as described, so that it can be longitudinally and laterally extended and contracted and folded together, as set forth.

2d, The posts, A A, B B, when connected and combined with the grooved bars, C C, and with the extension bars, D D, E E, and with the jointed levers H H, or their respective equivalents, all made and operating substantially as herein shown and described, for the purpose specified.

80,724.—MACHINERY FOR PICKING AND SEPARATING COTTON WASTE.—Darius Goff, Pawtucket, R. I.

I claim, 1st, A cylinder, B, armed with claw hooked teeth, L, so constructed that when set their points shall travel foremost as the cylinder revolves, substantially in a line concentric with the surface of the cylinder, in combination with the feed roller, G, or other suitable feeding mechanism, as described.

2d, The combination of the cylinder, B, as described, with a casing or jacket, m, constructed with a suitable opening, H, and a door for closing the same, substantially as and for the purpose specified.

3d, The combination of the cylinder, B, as described, with the feed roller, G, and retaining bar, R, or other suitable mechanism for delivering and retaining hold of the material, substantially as described, while it is subjected to the action of the cylinder, as specified.

80,725.—MACHINE FOR CUTTING AND FOLDING SHEET METAL.—A. G. Gray (assignor to himself and James T. Magee), St. John, New Brunswick.

I claim, 1st, The rectilinear reciprocating cutter head, E, and knife, B, as arranged with an independent pressure bar, F, of the cross section shown, and a rectilinear reciprocating and rocking lower knife and folder, substantially as described.

2d, The connecting rod, i, having its opening about shaft, M, elongated vertically, as arranged with trunion blocks, h, coupling screw, n, lifting and depression pins, m and o, and cams, p and q, substantially as and for the purpose described.

3d, The pressure bar, F, having notched standards, f, as arranged with cutter head, E, spring, g, and cams, e, as and for the purpose described.

4th, The arrangement of the pressure bar, F, as described, in combination with the rectilinear reciprocating and rocking folder, N, carrying knife, C, substantially as described.

80,726.—MACHINE FOR MAKING WHEELS.—Harrison Haag, Bernville, assignor to himself and George W. Yager, Reading, Pa.

I claim, 1st, A disk, J, adjustable, as described, on a standard, I, and carrying a tool, k, to which a longitudinally and a rotary motion may be imparted for the purpose set forth.

2d, The cross head, G, with its arm, v v, and screw rods, H and z, sliding on the vertical standards, F F', so that when in an elevated position it will serve to retain a hub, and when depressed will hold a felloe, all as and for the purpose specified.

80,727.—WASH BOILER.—Alex. W. Hall, New York city.

I claim the combination of the circulating chamber, C, attached to the shell, B, with the boiler, A, provided with apertures communicating with each, all constructed and arranged substantially as described.

80,728.—FIRE PROOF SAFE.—J. L. Hall, Cincinnati, Ohio.

I claim, 1st, Arranging a series of jars or other anti-corrosive vessels, C, containing water, or other suitable liquid, when the same are embedded in concrete, hydraulic or other cement, between the inner and outer casings, B and A, respectively, of fire proof safes, substantially as and for the purpose specified.

2d, The combination, in the construction of safes, of the case, A, bars, a, and the angle irons, L, when arranged as described.

3d, The perforated lining, B, to permit the escape of the steam to the interior of the safe, substantially as and for the purpose set forth.

80,729.—CLOTHES DRYER.—George H. Hammond, Davenport, N. Y.

I claim a clothes rack, having folding radial arms, b, ropes, f, and jointed braces, d e, in combination with two hubs fixed rigidly on a central staff, A, all substantially as shown and described, and for the purpose set forth.

80,730.—CAR COUPLING.—C. R. Hardy, Lexington, Ind.

I claim the slotted coupling bar, A, pivoted block, B spring, C, and mortised spring bars, D, with each other and with the draft bars of the cars, substantially as herein shown and described, and for the purpose set forth.

80,731.—FIREPLACE.—D. Hattan, Zanesville, Ohio.

I claim, in combination with a fireplace back, providing with a sliding plate C, one or more air tubes, E, arranged in and through the back, beneath the plate, substantially as set forth.

89,732.—PATTERN FOR TRIMMING HAT BRIMS.—C. M. Hawes, New York city.

I claim the revolving plate, C, with upright springs or elastic bars, F, attached, provided with pins, a, at their upper ends to fit in holes in the pattern, G, all arranged substantially in the manner as and for the purpose set forth.

80,733.—MACHINE FOR BLOCKING AND STRETCHING HATS.—George H. Hawkins, New York city.

I claim the combination of a block or former, to form the crown and body from the inside, and a rim or former, to form the brim from the upper side, with a base rim, to aid in holding the material while it is being molded or formed, substantially as described.

80,734.—BELT PUNCH.—Eben Hester, Suffield, Conn.

I claim a belt tool, constructed substantially as and for the purposes described.

80,735.—CAR COUPLING.—Omer Hewes, Kankakee, Ill.

I claim the lever jaws, E, pivoted in the angle between the bumper head, B, and the side bars, C, and attached at their inner ends to the slotted springs, F, in combination with the cam, G, whereby the coupling pin, D, is released from the lever jaws by the action of the cam upon the springs, as herein shown and described.

80,736.—SUPPORT FOR CAR SEAT BACK.—George Higginson, Newark, N. J.

I claim, 1st, The elastic bearings, consisting of the spring, E, and sliding blocks, C C, for car and other seat backs, made and operating substantially as herein shown and described.

2d, The blocks, C C, when combined with the springs, E, and cases, D, and when having pins, c, that fit into the slotted or grooved cases, substantially as herein shown and described.

80,737.—METHOD OF SEPARATING FIBRES FROM MULBERRY TREES.—Wilhelm Holdman, New York city.

I claim the method herein described of producing silk from mulberry trees.

80,738.—VALVE FOR STEAM ENGINE.—Wm. D. Hooker, San Francisco, Cal.

I claim, 1st, The recesses, o o', in the piston, b, arranged with reference to the ports, h h', substantially as herein set forth and shown.

2d, The arrangement, with relation to the cylinder, a, valve chamber, c, and the additional puppet valve chamber of the vales, d d', with its recesses u u', supply port, f, ports, g g', h h', i i', e e', vents, q q', exhaust ports, j j', ports, s s', and puppet valves, r r', substantially as herein described and shown.

80,739.—AMALGAMATOR.—Alfred Horn, Silver City, Nevada.

I claim, 1st, In combination with the annular chambers, B and B', the connecting groove or grooves D D, substantially as and for the purpose specified.

2d, The incline projection or scrapers, F F, cast at the end of the shoe, conforming to the natural wear of the shoes and dies without adjustment, substantially as described.

3d, Attaching the wings, G G, by the beveled slots, H H, and lugs, H' H', substantially as described.

80,740.—APPARATUS FOR DISTILLING SPIRITS.—Clark S. Hutchinson, Burlington, N. J.

I claim, 1st, The flat upright condenser, O, having arranged within it the shelves, d1 d2, overlapping each other, and shaped as described, with outlets for the escape of spirits of different grades, substantially as shown and described.

2d, The pools, d', either inside or outside of the condenser, C, in combination with the outlet pipes, g g', arranged and operating substantially as described.

3d, The doubler, M, constructed as described, between the still and the condenser, having the two pipes, m1 m2, intermediate valve, p, and inlet pipe R, and operating substantially as shown and described.

4th, The arrangement and combination of the condenser with its shelves d1 d2, the pool, n, with its exit pipes, g g', and doubler, M, connected and operating in conjunction, as described.

80,741.—PASSENGER REGISTER.—Thomas Jacobs (assignor to himself, James E. Kennedy, and John H. Kenneoy), Philadelphia, Pa.

I claim, 1st, The combination of the check lever, W, with the gate, C, arranged and operating substantially as described.

2d, The combination and arrangement of the ratchet, U, and spring pawl, V, with the rod, D, and gate, C, substantially in the manner described and for the purpose specified.

80,742.—SCREW.—P. N. Jacobus, Flat Brookville, N. J.

I claim the screw, A, having its head provided with the triangular notches b, extending entirely through the same, longitudinally of the screw, and adapted to receive the jaws of the screw driver in such a manner that said jaws shall complete the beveled circumference of the head, as herein described, for the purpose specified.

80,743.—BEDSTEAD FASTENER.—John Janeway, Indianapolis, Ind.

I claim the plate, B, consisting of the curved and beveled edges, A, and secured by the wedge, K, fastening the same in the post, when made, constructed, and operated substantially as set forth.

80,744.—SOCKET FOR TOOL HANDLE.—William H. Johnson, Philadelphia, Pa.

I claim a cast screw socket, B, for tool handles, when the screw threads, a, have open spaces, b, between them, formed by means of a sand or composition core, H, substantially as and for the purposes herein set forth.

80,745.—TERRET.—William H. H. Jones and Edward S. Harris, Morrison, Ill.

We claim a terret, in which the spring, D, acts upon the hinged section, C and the latter and the section, B, are fitted into one another at the ends, said parts constructed and arranged in relation to one another, substantially as described.

80,746.—HAND CORN PLANTER.—John F. Kinglesmith, Harden county, Ky.

I claim a rocking cylinder, F, and seed receptacles, S, therein, placed in the bottom of the hopper, E, over a delivery tube in a divided shaft, A A', when combined by means of a crank, G, and pivoted connecting link, with a slotted guide plate, B, secured in the lower section, A, of said shaft, A A', the whole being constructed, arranged, and made to operate substantially in the manner and for the purpose herein set forth.

80,747.—APPARATUS FOR CONCENTRATING ORES AND MINERALS.—S. R. Krom, New York city.

I claim, 1st, An ore bed, composed of tubes or hollow bars, constructed and arranged to admit of the passages within and through or out of them of a current or currents of air or water, in such a manner as that said air or water, in escaping therefrom, will meet in the center cross the ore passages or openings in the bed, substantially as specified.

2d, An ore bed made up of tubes of a reticulated character, having an air an air or water inlet or opening at their end or ends, and made either with without bottoms, d, essentially as and for the purpose or purposes herein set forth.

80,748.—ICE PITCHER.—Thomas Leach, Taunton, Mass., assignor to Reed and Barton.

I claim, 1st, The combination of a detachable and removable glass, earthenware, or chinaware lining, or interior pitcher with the metallic pitcher, A, and a ring, plate, or other equivalent device for holding the pitcher and lining together, and yet permitting the lining to be removed when necessary.

2d, The ring, G, having the rim or flange, g, when used in connection with the walls, A, and the lining, F, in the manner and for the purpose set forth.

3d, The combination of the ring, G, filter, H, and valve, J, forming a neat attachable and removable apparatus for ice pitchers, substantially as set forth.

4th, The combination of the apparatus above referred to with the walls, A and the screw rod, r, substantially as described.

80,749.—WRITING AND DRAWING DESK.—William W. Levering, New York city.

I claim, 1st, The described arrangement of the slate, G, in the part, F, the sliding frame and removable ground glass plate, J, in the hinged portion, D, of the desk, the blackboard, L, on the back of the upper desk, and the drawer, E, having the partition, c, and stop or stops, d, all constructed to operate in the manner and for the purposes substantially as herein set forth and shown.

2d, The within described combination of writing desk, blackboard, drawing slate, and writing slate, as set forth.

80,750.—CURTAIN FIXTURE.—D. E. Long, Pawtucket, R. I.

I claim the plates, C C, with the spurs, a, attached, in combination with the spring, D, all constructed, arranged, and applied in the manner substantially as and for the purpose set forth.

80,751.—STOVE OVEN.—M. W. Long, Bangor, Me.

I claim, 1st, The grate, f, when constructed and operated substantially in the manner specified.

2d, In combination with the grate, f, the disk, a, fitted to revolve in the manner and for the purpose substantially as shown and described.

3d, The device for raising the grate, consisting of pins, k, upon the underside of the grate, and the inclines, i, in the disk, whereby the grate is raised or lowered at will, by revolving it relatively to the disk, substantially as and for the purposes specified.

80,752.—HANGER FOR SHAFTING.—J. W. Loraine, Philadelphia, Pa.

I claim, 1st, The combination, with a hanger, of a plummet, B, and projection, m, the latter being arranged in respect to the center of the bearing and the point of suspension of the plummet, as set forth for the purpose specified.

2d, The within described hanger, composed of the permanent portion, A, with its plummet, B, and projection, m, and the adjustable portion, D, carrying the bearings, E and E', the whole being combined and arranged substantially as and for the purpose described.

3d, The cap, F, arranged to confine the bearing E and E', secured in front to the portion, D, of the hanger by a bolt or screw, and fitting at the rear in a recess in the said portion, D, substantially as and for the purpose herein set forth.

80,753.—FOOT MUFF.—William Marot Marshall, Philadelphia, Pa., assignor to himself and Joseph B. Alexander, Washington, D. C.

I claim, as an article of manufacture, a foot muff, as and for the purposes and in the manner as herein described.

80,754.—GILDING AND SILVERING MICA AND GLASS.—William Marot Marshall, Philadelphia, Pa., assignor to himself and Joseph B. Alexander, Washington, D. C.

I claim the method of gilding and silvering mica and glass, in the manner and for the purposes substantially as described and set forth.

80,755.—THIMBLE.—James E. McBeth, New Orleans, La.

I claim a thimble, whose body is provided with a series of openings, at the lower end of which is a circuinferential projecting rim, a, and whose lower part, A, is suitably indented, all as herein shown and described.

80,756.—TOOL FOR MENDING BELTS.—George W. Miller, West Meriden, Conn.

I claim, 1st, The bolt, m, with spring, t, in combination with the punch, e, and awl, d, of a belt-mending implement, or the blades of pocket cutlery, when constructed and operating substantially as herein described, and for the purposes specified.

2d, The punch, e, blade, c, and awl, d, or any two of them, when secured in one handle for pocket use, substantially as herein described and for the purposes specified.

3d, A belt punch, having the sharp edge, f, and cutting point, f', at one end, and the shoulder and heel, o, at the other end, and secured in a handle by means of a pivot, i, substantially as herein described and set forth.

80,757.—HAME FASTENER.—J. D. Miller, Enon, Ohio.

I claim 1st, The lever, D, constructed with the shoulder, F, and a recess behind it, in which to receive the ring, B, when in working position, substantially as described.

2d, The hook, D, with the point returned within the fold of the hook, as described, in combination with a link, proportioned so that while naked, it may be passed over the point of the hook, but not where the strap, C, is present, substantially as set forth.

3d, The lever, D, and crooked link, E, constructed so as to operate in the manner and for the purpose described.

80,758.—ROLLER WAGON SKEIN.—John W. Morrett and Hiram Watts, Shepherdstown, Pa.

We claim the rectangular bar, a, embedded in the axle, h, and curving at, x, in an arc along the axle tree, g, and fastened thereto by the screw, f, the rollers d and e resting their axles in the ends of the trapezodial blocks, b and c, which slide and are adjusted in the trapezodial gutter in the skein, all constructed and operating in the manner and for the purpose herein set forth.

80,759.—SHAFT COUPLING FOR WAGON.—Ichabod H. Mulford, Orange, N. J.

I claim, 1st, The arrangement and combination of the set screw, E, passing through the clip, a, and axle bed, B, with the rubber carrying plate, e, substantially as shown and described.

2d. The rubber supporting plate, e, or its equivalent, in combination with the hook shaped jaws, A, when so applied as to be capable of removal or detachment of the thill or whiffle tree without detachment of screw or nuts, substantially as set forth.

3d, A thill or whiffle tree coupling, so constructed that by the operation of a set screw alone, on an intermediate block, the thills may be secured to the axle or detached therefrom, substantially as shown and described.

80,760.—QUILTING FRAME.—S. H. Nesbit, (assignor to himself and James Nesbit), Monmouth, Ill.

I claim the rollers, E F H, pulleys, z, and cord, U, and pawl, n, in combination with the frame A D G I, constructed and arranged as described, and for the purpose set forth.

80,761.—MACHINE FOR GRINDING CUTTERS OF MOWING MACHINES.—S. W. Palmer and J. F. Palmer, (assignors to E. G. Storke, S. U. Palmer and Clara M. Palmer), Auburn, N. Y.

We claim, 1st, The combination, with the grinding wheel, and the conical adjustable bearings in which it is hung, of the beveled gearing and crank for driving said wheel, under the arrangement and for the operation as set forth.

2d, The construction of the water trough, stuffing box and frame or bearings, in which the grinding mechanism is supported, in one piece, substantially as herein and for the purposes set forth.

3d, The combination, with frame of the machine, of the adjustable rod and treadle, for holding and steadying the same while in use, as herein shown and specified.

4th. The adjustable swivel clamp, for holding the machine in position without the use of legs or other like supports, constructed and operating substantially as herein described.

5th. The cutter bar, supporting table, O P, when constructed and hinged to frame of the machine, in the manner described, so that it may be adjusted both laterally and towards and away from the grinding wheel, as and for the purposes set forth.

6th, In combination with the parts claimed in the preceding clause, the pivored slotted bar, having its swinging end hung in a segmental slot formed in said table, and the cutter clamp, with or without the cutter bar clamp, S, the said parts being arranged and operated substantially as shown and described.

7th. The employment in connection with the mechanism herein described or its equivalent, for holding and adjusting the position of reaper sections and like articles to be ground, of a grinding wheel, the surface or rim of which has a double bevel cl form, so that both edges of the section may be ground without materially changing the position of the cutter bar, as herein shown and set forth.

8th, The combination, with the arms, n1, their central supporting pin, the hollow post or socket for receiving said pin, and the adjusting screw for holding the same, of the knife or cutter bar clamp, its supporting plate, and the horizontal rod upon which the same are mounted and slide, the said rod being provided with a radical arm, curved rod and spring, as described, and the whole being arranged to operate in connection with the grinding wheel, as and for the purposes set forth.

80,762.—MODE OF DRESSING MILLSTONES.—Jesse Pannabecker, Eagle Mills, Durlach, Pa.

I claim the millstone dress, with the furrows, a, the land sides or rubbing surfaces, b, having deep holes or cells formed therein, in the manner and for the purpose substantially as described.

80,763.—MACHINE FOR SEPARATING ORES AND OTHER MATERIALS.—Stephen T. Pearce, New York city.

I claim, 1st, A mechanism arranged to separate the particles of pulverized ore or other granular substance, by impelling it, by the jointaction of gravity and centrifugal force, over a metallic or other polished surface, which will modify, by the frictional contact with the same, the direction imparted to the particles of such substance, substantially as and for the purpose set forth.

2d, The combination with the rotating cone, A, of the receptacle, D, divided into compartments, substantially as and for the purpose described.

80,764.—MACHINE FOR SEPARATING ORES AND OTHER GRANULAR SUBSTANCES.—Stephen T. Pearce, New York city.

I claim, 1st, The employment of means for impelling ores and other granular substances by centrifugal force, in combination with graduated receptacles for separating them, either in the atmosphere or in vacuo, substantially as and for the purpose described.

2d, The combination of the adjustable tube, A, provided with the laternal tube, E, or their equivalent, with the receptacles, F, substantially as and for the purpose described.

80,765.—HARNESS ROUND KNIFE.—J. H. Quackenbush, (assignor to himself and J. H. Riley, Springfield, Mass.

I claim the blade, A, having the curved slot, e, therein and hung in the slot, i, of the socket, b, by means of the pivot, c, and secured in position in said slot, i, by means of the screw, c, passing through, or partially through the socket, b, and through the curved slot, e, the whole forming a harness knife, and constructed and operating substantially as herein described and for the purposes specified.

80,766.—REFRIGERATING CHAMBER.—Joseph H. Racey, Jr., New York city.

I claim, 1st, The pocket, H, constructed of a series of flutes or corrugations, connected in a tight manner at their upper ends with the chamber, E, and at their lower ends with the trough, I, said trough being provided with a waste pipe, J, and vent pipe, K, so arranged that the water from the melting ice shall accumulate in the trough, and prevent the circulation of air through the refrigerant contained in said pockets, substantially as set forth.

2d, The combination of the vent pipe, K, with the inverting cone vent, a, arranged and operating essentially as shown and described.

80,767.—SOFA AND BED.—John B. Reith, New York city.

I claim the sections, C and D, in combination with section, B, and frame, A, substantially as herein shown and described, and for the purposes set forth.

80,768.—WAGON JACK.—Samuel Rice, Westford, Vt.

I claim the cast iron racks, D D, constructed substantially as described, and inserted in and held by the posts, B B, as set forth.

80,769.—SERIAL CRANK.—Charles F. Ritchell, Chicago, Ill.

I claim, 1st. The combination of a series of obtuse angled or inclined cranks, A A, constructed and arranged as described, and operating simultaneously, for the purpose of of performing boring, drilling, or some other useful mechanical operation, substantially as herein set forth and specified.

2d, In combination with the above the stationary plate, C, and the movable plate, D, frames or fixtures, to retain in position and to operate cranks, A A, substantially as and in the manner herein described and specified.

80,770.—LATHE DOG.—J. W. Russell, Springfield, Mass.

I claim the combination of the screw bolt, h, having the annular groove, o, thereon, the threaded clamp, d, the bolt, w shank, a, and the arm, b, all constructed, arranged, and operating substantially as herein described, and for the purposes specified.

80,771.—LITHOGRAPHIC PRINTING PRESS.—Amaziah G. Shackford, Malden, Mass.

I claim, 1st, The arrangement and combination of the thimble or counterbearing, U, and arm, 3, with the cog wheels, J L, and racks, H M and S, substantially as and for the purpose described.

2d, The swinging tooth, 4, pin, 7, spring, 6, cog wheels, Q, flange wheels, R, shaft, P, lever, 31, shaft, 32, crank, 38, arranged and operating in combination with the cams, e' d', substantially as and for the purpose described.

3d, The truncated flange wheels, RR, in combination with the carriage, N, substantially as and for the purpose described.

4th, Operating the tympan and nippers from the shaft, P, by means of cam, 18, and rod, U, and gears, W X Y Z, substantially as described.

5th, The endless cloth, X", combined and arranged with water trough, r, and damping roll, z, and the squeezing rolls, w w", substantially in the manner and for the purpose described.

80,772.—HORSE RAKE.—T. H. Shreeves, Greenbush, Ill.

I claim, 1st, The pawl, X, in combination with the device, d e F G H and S, substantially as described, and for the purpose set forth.

2d, The hooks, v v, substantially as described, and in combination with the main frame, as set forth.

80,773.—WELL BORING APPARATUS.—W. Skiff, Camanche, Iowa.

I claim, 1st, The arrangement of the drums, m and b, with the arms, B B, points, L L, and inclines, y y, for purposes forth.

2d, The arrangement of the augur with the adjustable lips, N N, with shaft, R, all constructed as set forth.

3d, The combination and arrangement of the drill, y, rope, x, lever, w, lever, f, and inclines on drum, b, for the purpose herein described.

80,774.—MACHINE FOR MAKING HARNESS FOR LOOM.—Joseph Sladdin, (assignor to himself and John Lord), Lawrence, Mass.

I claim, 1st, The combination, with the twister, d, of the means, substantially as described, for operating the same, as and for the purpose specified.

2d, The combination of the spoon "hookers," g g, with the nooker fingers, c c, and the needles, i i, substantially as and for the purpose described.

3d, The combination of the lapper cylinders, having guide eves, as described, with the spoon shaped hook, g g, and needles, i i, substantially as and for the purpose described

4th, The combination with the needle guide and support, j j, of the presser wheels, 15j5, when arranged and operating as and for the purpose specified

5th, The combination, with the devices for forming the loops, substantially as described, of the devices for knitting the heddles on to the rig bands, substantially as and for the purpose described.

6th, The combination, with the knitting devices herein described, of the lifting guide bars, k k, as and for the purpose described.

80,775.—CONVEYING LIVE FISH.—Anton Julius Smidth, Copenhagan, Denmark.

I claim pumping or otherwise forcing and mixing air with sea water, contained in tanks, in which salt water fish are placed, for the purpose of keeping such fish alive, substantially as above described.

80,776.—STOP BOXES FOR COCKS OR VALVES OF WATER AND GAS PIPES.—James Smith, St. Louis, Mo.

I claim, 1st, An extensible stop box, constructed of the two parts, A and B, and so arranged as to permit adjustment by means of screw treads or rings, substantially as herein described.

2d, In combination with the above, the caps, a, and C, when constructed and applied as and for the purpose described.

80,777.—PULLEY.—James P. Smith (assignor to himself and Francis W. Glenn), Oshawa, Canada.

I claim, 1st, A metal pulley, provided with grooves or recesses in its periphery, for the purpose set forth.

2d, A grooved or recessed metal pulley, in combination with the strips or pieces, b, and the facing, C, substantially as described.

80,778.—HORSE SHOE.—Lemuel A. Smith Pekin, Ill.

I claim the braces, E E, constructed and regulated as described, for the purpose of moving the clips, D D, in or out, as may be desired, substantially as herein set forth.

80,779.—TANNING.—Simon Snyder, Cincinnati, Ohio.

I claim the method of tanning substantially as hereinbefore described.

80,780.—PEN AND PENCIL CASE.—L. F. Standish, Springfield, Mass.

I claim the combination of the slotted handle, A, with the slide, B, having the knife blade, H, at one end, and a pen or other convenient tool at the other and operated by the pin, D, working in the slot, E, substantially as shown.

80,781.—TATTING SHUTTLE.—Ira H. Stockwell and Lizzie C. Goodwin, Worcester, Mass.

We claim, as a new article of manufacture, a tatting shuttle, having one of the ends of one of its sides sharpened to or provided with a, point, substantially as and for the purpose specified.

80,782.—STAND FOR MUSKETO NETS.—Albert Strasser and B. M. Lewy, Montgomery, Ala.

We claim, 1st, the stand, A, provided with the slide, C, braces, K, link, E, and extension, F, constructed and arranged as and for the purpose described,

2d, The combination with the same of the skeleton frame, I, or other equivalent means for supporting a musketo net, substantially as and for the purpose described.

80,783.—FLY FRAME FLIER.—James S. Streeter, Providence, R. I., assignor to himself and City Machine Company.

I claim constructing fly frame fliers of malleable or annealed cast iron, with one or both legs cast with a groove upon a core or its equivalent, and with an ear, the flanges of said legs and the ear being rolled down, to form the groved tube, a, as herein shown and described.

80,784.—WASHING AND WRINGING MACHINE.—Robert K. Tomlinson, Brownsburg, Pa.

I claim, 1st, Imparting an alternate reciprocating motion to a series of upper and lower rollers A A', by means of the cams, D, and a rotary motion to each roller by the double series of cords, i, when the cords of the upper series are driven from the upper wringer roll and the cords of the lower series from the lower wringer roll, as herein described, for the purpose specified.

2d, The cam wheels, D D, in combination with the rubbing surfaces, A A, by which the reciprocal motion to these surfaces is imparted.

3d. The combination of the upper and lower series of rollers, A A', cams, D, levers, P, bar, R, double series of cords, i, and wringing rolls, J, arranged and operating as described, for the purpose specified.

80,785.—UMBRELLA.—William F. Turner, Philladelphia, Pa.

I claim, 1st, The notches in the permanetly attached thimble, D, or the ferrule end of the cane, wherein to hook or attach the ends of the ribs, as herein described and represented.

2d, The notched runner, figs. 5 and 11, provided with the spring, L, having a detaining pin, the slide, M, and the encircling ring, O, and adapted to occupy the detachable bead of the walking stick, as herein described and represented

80,786.—LOOM FOR WEAVING FRINGE.—Louis D. Valetton, Philadelphia, Pa., assignor to Hensel, Reichert, Wolff & Co.

I claim, 1st, The slotted shuttle, G, constructed with a hook, g', and applied to operate in the manner and for the purpose specified.

2d, The twisting hook, H, having an intermittent rotary and vertical and horizontal motions, and arranged to operate in conjunction with the shuttle, G, substantially as and for the purpose set forth.

3d, The spools, N, and N1, attached to the bar, N2, having a vertical movement within the frame, and being connected with the lever, N7, through the medium of the rods, n n2, and levers, N3, and N4, all as herein described and for the purpose set forth.

4th, The pin, 18, applied and operating substantially as and for the purpose forth.

80,787.—COCK FOR RACKING OFF BEER.—Friederich Wagner, Danville, Pa.

I claim, for the purpose specified, the arrangement in a T-shaped tube of a cock, B, in the main part of the tube, so constructed as to be capable of shutting off the whole flow, and a deflecting cock, C, at the junction of the cross tube with the main tube, so constructed that by turning it at different angles the fluid coming from the main tube can be deflected totally or partially into either arm of the cross tube without the possibility of arresting in any degree the flow of the liquid through the main tube, the several parts of the apparatus being constructed and operating in the manner herein set forth.

80,788.—ADJUSTABLE OX-YOKE.—Sylvester G. Walker, Croydon, N.H., assignor to himself, William C. Allen, and Abijah Powers.

I claim, 1st, The method of hanging the neck pieces, B B', to the beam, A, by means of the bolts a a" a", the guide blocks, D D', the slots' M M', and the cap pieces, C C', as above described.

2d, The advantage ring, E, in combination with the levers, G G', constructed and operating as above described.

3d, The method of making the neck pieces, B B', stationary at any given points, equidistant or not equidistant from the centre block, F, within the limits of the reciprocating motions of the said neck pieces, by removing the blocks, K K', from the slots, M M' and screwing down tightly the cap pieces, C C', upon the beam, A, as above described.

80,789.—SEWING MACHINE.—D. Weaver, Guilderland, N. Y.

I claim, the spring, f, and fappet arm, g, in combination with the latch, e, and hook needle, n, substantially as and for the purpose set forth.

2d, The stop, h, in combination with the spring, f, latch, e, and hook needle, n, which is secured in a bar attached to the wrist pin, a, substantially as and for the purpose described.

3d, The spring, q, and bracket, m, sliding on the shank of the fork feeder, and compressing the spring as the needle rises, in combination with said fork feeder and needle, constructed and operating substantially as and for the purpose set forth.

4th, The slide, u, and hinged bracket, I, in combination with the needle bar, G, feed fork, k, and lever, K, or its equivalent, substantially as and for the purpose described.

80,790.—STRAINER.—William Westlake, Chicago, Ill.

I claim the removable strainer, A, when constructed and attached substantially as specified.

80,791.—RIVET.—Elonzo S. Wheeler, Westport, Conn.

I claim a rivet consisting of a tube, A, with its head, B, formed or attached thereon, substantially as described, with its corresponding head, C, constructed so as to be attached thereto, as herein set forth, as a new article of manufacture.

80,792.—NUT-SQUARING CHUCK.—Henry F. Wheeler, Boston, Mass

I claim a chuck, for the purpose described, as made with the screw-threaded end, c, provided with a movable shoulder, d, arranged to operate substantially as set forth.

80,793.—CURTAIN FIXTURE.—William H. Woods, Philadelphia, Pa.

I claim the combination and arrangement of barrel, B, with coiled spring, S, plate D, and shaft, T, for the purpose herein set forth.

80,794.—MOP AND CLOTHES WRINGER.—Elijah Youngs, Tuscarora, N. Y.

I claim, 1st, The ear, B, provided with the slot, E, curved as described and for the purpose set forth.

2d, The combination of the ears, B B, provided with slot, F F, curved as described, with the rollers, C C', and the lever, E, substantially as and for the purpose set forth.

3d, The socket plate, G, provided with a cam button, B, or its equivalent, in combination with the ear, B, substantially as and for the purpose set forth.

80,795.—AGRICULTURAL MACHINE.—Henry Cowing, New Orleans, La.

I claim, 1st, The application and combination of the double-block system of equalizing draft, as above set forth.

2d, The application and combination of the single-block system, in combination with the double-block system.

3d, The quadruple whiffletree.

4th, The application and combination of the cross bar, H2, with the tongue, for the purposes specified.

5th, The slotted slide bar, O, for the whiffletree so slide upon, as set forth.

6th, The joint in the tongue, as and for the purposes set forth.

7th, The rotary grooved cylinder, as and for the purposes specified.

8th, The adjustable thumb screw, l, in combination with a side valve for regulating the quantity of grain grown.

9th, The application of a steering apparatus to agricultural machines, composed of the wheels, I, cross bar, K, sheaves, i i', standards, I', rope or chain, J, stirrups, j j, cross bar, l, and the levers, L and L'.

10th, The standards, f', and the adjustable cross beam, K.

11th, The standards, D1 D2, of the canopy, the cross bars provided with screws d d, for the purposes set forth.

12th, The curved standards, e3, and box straps, e4, for the purposes specified.

13th, The semi-circular rack lever, E, and handle and stop lever spring, f, for the purposes herein set forth.

14th, The tripping lever, p, and cord or chain, p', for the purpose herein set forth.

15th, The application of horse or other power that may be employed to draw the machine, for raising the plows and instrument out of and from the ground, as set forth.

16th, The application and combination of a scraper and presser to a gang of plows, for the purposes herein set forth.

17th, The cross bars, A3 A4, for the purpose herein specified.

18th, The construction of an axle, so that the wheels can be moved further apart or nearer together to suit the widths of rows, as above specified.

19th, In combination with a gang of plows, the digging wheel, K.

20th, The digging wheel, in combination with the arrangement for raising and lowering it, as set forth.

21st, The three-toothed harrow, G, or its equivalent, as and for the purpose set forth.

22d, Making the shares and coulter in one piece, as and for the purposes above specified.

23d, The application and combination of a canopy to a gang of plows or harvesting machines, for the purposes above specified.

24th, The manner of making canopies with an expansive cord, as and for the purpose above specified.

25th, The tube on which the main wheels revolve, for the purposes herein specified.

26th, The curved plow standards and the springs, for the purpose above specified.

27th, The construction of a plow, so that in raking a root or stone, it will be thrown out and forced immediately back, as above specified.

28th, The nest of cups in the cylinder for the purpose herein set forth.

29th, The combination, as seen in Figs. 1 and 2, for the purpose of planting or sowing, as above specified.

30th, The application and combination of the cross bar, H', with the tongue H, Fig. 3, for the purposes herein set forth.

31st, The combination, as seen in Figs. 4 and 5, and the particular shape of the third plow with the incline for raising up the soil before turning over, as above set forth.

32d, The mole plow, in combination with the beams, seen in Fig. 15, wheel, raising apparatus, quadruple trees and their arrangement, for the purposes herein specified.

33d, The opening of the mold at different depths, and taking off the front molds and using their standards only, and using them all at once or separately, as above set forth.

34th, The application and combination, as seen in Fig. 8, with its modifications, for the purposes herein set forth.

35th, The application and combination, as seen in Figs. 10 and 11, of the gangs of plows, and the tines in the center, or before and behind the plows, as above set forth.

36th, The stubble lowerer, Q, and the arrangement herein set forth, for opening a deep furrow and turning the stubble into it, and the arrangement and combination of the plows, as seen in Fig. 12, or their equivalent, as set forth.

37th, The arrangement and combination, as seen in Fig. 13, for covering the caves as set forth

38th, The single hinged arm, for the purpose herein set forth.

39th, The arrangement for ditching, as set forth, and under draining by the mold plow, as set forth.

REISSUES.

75,035.—FRUIT GATHERER.—Dated March 3, 1868; reissue 3,060.—Virgil H. Lyon, Plainfield, Ind.

I claim, 1st, The head, A A', furnished with the fingers, C and B, when formed, constructed, and arranged substantially as herein shown and described.

2d, The head, A A', in combination with the sack or hose, S, substantially as herein specified.

3d. The sectional handle, D, constructed as described, in combination with the head, A A', substantially as and for the purpose set forth.

58,363.—CARD RACK.—Dated October 2, 1866; reissue 3,061. James Adair, Pittsburg, Pa.

I claim, 1st, A wire spring, of spiral or other continuous curve, when so made as to be fastened by hooks, eyes, or other similar device, either with or without an intermediate bed plate, to a desk, table, pedestal, or other like object, for use as a spring rack, substantially as hereinbefore set forth.

2d, A bed piece so made with raised sides and ends, as that a spring of continuous curve placed in the space enclosed therein, and properly fastened, shall be secured against both lateral and undue longitudinal motion, substantially as and for the purposes hereinbefore set forth.

3d, Fastening a spring or springs of continuous curve to a bed piece by a fastening rod passing longitudinally through or along the spring or springs, and properly secured at each end, substantially as and for the purposes hereinbefore set forth,

4th, A spiral or other continuously curved spring or springs, a, in combination with a metallic bed piece, A, by which to fasten the spring to a table or pedestal or other like object substantially in the manner hereinbefore expressed.

24,179.—HOSE COUPLING.—Dated May 24, 1859; reissue 3,032. —Amos Broadnax, Montclair, N. J., and Rollin B. Gray, Brooklyn, N. Y., assignees, by mesne assignments, of N. N. McLeod, St. Louis, Mo.

We claim joining the end or ends of a pipe or tube by means of a tubular coupling, one end or each end thereof made conical or beveled, and having a tubular screw nut and thread, said connection being susceptible of receiving or having cast upon it a branch or branches, without interfering with the construction of the joint or joints, all substantially as shown and described.

24,451.—METALLIC EARS FOR ATTACHING HANDLES TO PAILS AND LIKE VESSELS.—Dated June 21, 1859; reissue 3,063.—Thomas Evans, Newark, N.J.

I claim, 1st, Metallic ears, for attaching the handles to pails and other vessels, formed with concentric annular corrugations surrounding the bail orifice, substantially as and for the purposes set forth.

2d, So arranging the hooked ends of the bail as to give them an additional bearing against one or more of said corrugations, substantially as set forth.

3d, The drip-opening or passage, formed by the downward continuation of the outer corrugations, for draining the interior cavity, as shown and described.

4th, A bail ear, formed with the portion surrounding the eye, raised to receive the hooked end of the bail, when the marginal portion or portions thereof are formed on the plane of the part to which they are to be attached, substantially as set forth.

28,033.—BELT-FASTENING.—Dated April 24, 1860; reissue 3,064.—John Ashton Greene, and Henry A. Tweed, New York city, assignees, by mesne assignments, of G. W. Blake.

We claim, 1st, the employment, in connection with belts or bands, of a series of links or looped shanks, constructed to receive, at either end, a rod or locking bar, substantially as herein described.

2d, The manufacture of belt studs, constructed with eyes or loops, so that a series of them may be locked or fastened at either end by a single rod or cross bar, substantially as described.

3d, The combination of double-eyed shanks, with corresponding locking-bars, substantially as and for the purpose herein set forth.

4th, The method herein described, of fastening belts by means of two metallic bars united together by shanks passing through the ends of the belt or band to be united, substantially as set forth.

31,859.—BELT FASTENING.—Dated March 26, 1861; reissue, 3,065.—John Ashton Greene and Henry A. Tweed, New York city, assignees, by mesne assignments, of G. W. Blake.

We claim, 1st, As an article of manufacture, double-headed studs, shaped substantially as described, with a view to the uses herein set forth.

2d, The method of fastening or uniting the ends of belts by a series of double headed studs, substantially as herein shown and set forth.

3d, The use, in combination with the ends of belts or bands, of double headed studs, substantially as and for the purpose herein described.

70,151.—PRINTERS' GALLEY.—Dated December 4, 1868; reissue 3,066.—R. Hoe & Co. (assignees of Alexander T. De Puy), New York city.

We claim the combination, with the wooden frame of a printers' galley, of a metallic lining, secured thereto by means of a groove or grooves, substantially as and for the purpose specified.

67,196.—CHECK BRACE FOR CARRIAGE.—Dated April 28, 1862; reissue 3,067.—Isaac D. Johnson, M. D., Kennett Square, Pa.

I claim, 1st, The brackets, F F', located upon the perch, substantially as and for the purpose described.

2d, The brackets, H H', secured to the elliptic springs, C C', substantially as and for the purpose described.

3d, The combination of the brackets, F F', and the brackets, H H', with the connecting plate springs, G G', when arranged and operating substantially as and for the purpose described.

4th, The combination of the brackets, F, on the perch, the brackets, H H, on the springs, the plate springs, G, and the elliptic springs, whereby the torsion of the springs and the undue oscillation of the body are prevented.

5th, The combination, with the body of the vehicle, of the shackle, e, the spring, C, the brackets, F H, and the plate spring, G, whereby the spring is braced from the center, substantially as described.

6th, The combination, with the body of the vehicle, of the shackles springs brackets, and connecting plate springs, substantially as and for the purpose set forth.

37,867.—LAMP.—Dated March 10, 1863; reissue, 3,068.—Carl A. Kleeman, Erfurt, Prussia.

I claim, 1st, An argand burner and chimney holder, in combination with the cone, q, provided with openings, 4, to admit air to pass in between the cone and the glass chimney, substantially as set forth.

2d, The cone, q, provided with air openings, 4, in combination with the cylinder, p, and arms, 5, for connecting the said cone to the argand burner, substantially as set forth.

3d, The cup, 3, in combination with the cylinder, p, and wick tube, o, as and for the purposes set forth.

27,319.—MACHINE FOR BENDING SHEET METAL.—Dated February 28, 1860; reissue 3,069.—Orson W. Stow, Plantsville, Conn.

I claim, 1st, Making the folding bar, commonly used in such machines, in two parts, f and i, one part, i, being adjustable in respect to the folding plate e, by means of set screws, n, or other equivalent means, so far as to form a close or open lock, for joining two pieces of metal plate, or closing around a wire, substantially in the manner as described.

2d, Arranging the griping jaw, s, with the folding bar, f and i, in such a manner that on motion being given to the folding bar, f, on its axis, g, the griping jaw, s, is made to close on the folding plate, e, and at the same time carry along with it the folding bar, i, into such a position as will bring its axis, g, of motion nearly in to a line with the edge of the folding plate, e, thereby placing the folding plate, f and i, in position to be turned over to the folding plate, e, necessarily, and simultaneously with the motion of the folding bar, f and i, on its axis, g, substantially in the manner as described.

3d, The bed plate proper, a a', to which is secured the folding plate, c, in combination with the hinged frame, b, having journal boxes, d, and griping jaws, s, the folding bar, f and i, having journals, g, and cams, o, arranged and operating together, substantially in the manner as and for the purpose described.

4th, In a machine which uses but one folding bar, as described the combination of the folding plate with the folding bar, when so constructed and operating together that the distance between their adjacent edges can be increased or diminished at pleasure, for the purpose of forming both open and close locks or bends in sheet metal.

26,329.—BOOT AND SHOE TIP.—Dated November 29, 1859; reissue 1,339, dated September 2, 1862; reissue 3,070.—The American Shoe Tip Company, Conn., assignees, by mesne assignments, of Newman Silverthorn.

I claim a formed tip, substantially as described, as an article of manufacture.

19,321.—PLOW.—Dated February 9, 1858; improvement added August 2, 1859; reissue 3,071.—George Watt, Richmond, Va.

I claim, 1st, The combination, in a plow, of a land side, having an inward inclination from its base toward the mold board, and a neck breast, or standard, having a diverse or outward inclination, substantially as set forth.

2d, Constructing mold board and land side of cylindrical surfaces, intersecting along the cutting edge of the plow, in combination with the curved standard, S, the whole being constructed substantially as and for the purposes hereinbefore set forth.

3d, The combination of the eccentric roller, r, beam, B, notches, i, and cuff f, substantially as set forth.

DESIGNS.

3,143.—CARPET PATTERN.—James Allinson, Philadelphia, Pa.

3,144 to 3,147.—CARPET PATTERN.—Benj. Crabtree, Jr., Philadelphia, Pa.

3,148 and 3,149.—KNIFE OR FORK HANDLE.—Jos. Hill, Newark, N. J.

3,150.—SCARF RING.—Ralph S. Jennings, New York city.

3,151.—BUST OF FREDERICK DOUGLAS.—Dayton Morgan, Chillicothe, Ohio.

3,152.—GOBLET.—J. S. Palmer, Portland, Me.

3,153.—COOK'S STOVE.—Jacob Steffe, Philadelphia, assignor to Francis Buckwalter & Co., Royer's Ford, Pa.