THE METAL NICKEL---ITS USE IN COINAGE.

The people of this country have become somewhat familiarized with the name of the metal known as nickel from its employment in the composition of our lower class of coins. Indeed, our "lame duck" cents—so called from the abortive effigy of a flying eagle, resembling a duck flying—are denominated "nickels" from the known fact that nickel forms an important part of their composition. While the intention of the government in the coining of gold and silver is to give value for value received, and thus keep the intrinsic value of the coins as a bar against the use or export of the precious metals, except as coin, those coins composed of pure copper or copper with alloys were never intended to represent, by their weight and composition merely, the value of the metals employed. Such was, however, nearly the case years ago, when a copper cent was about one sixteenth or one twentieth the weight of a pound of copper when that metal was worth from 25 to 30 cents per pound; but our pure copper two cent pieces, less than one half the weight of an old fashioned cent, bear now no proper relation to the market value of copper.

Still, the object has been to keep our lower valued coins somewhere near the market price of the metals of which they are composed, and at the same time to prevent them from becoming inconveniently large; so nickel was introduced as a composition of our cents in order to reduce their size while preserving their value.

Nickle is a brilliant, ductile, and malleable metal discovered by Cronstedt in 1751. It is found associated with cobalt and with iron in the ore, and is a common constituent of meteoric iron. The usual sources of supply are the arseniurets of nickle in cobalt and in what the Germans *Kupfernickel* or copper-nickel, containing 56 per cent of arsenic and 44 per cent of nickel. Nickel is found in Saxony, Thuringia, Hesse, Styria, Dauphiné, and in Sweden. In this country its ores are found at Chatham, Conn., and in Lancaster, Pa., or rather about fourteen miles from the latter place; from which most of that used in the government mints is obtained.

Our nickel cents contain 88 parts copper and 12 nickel. It has been used for coinage also in Bavaria. It is valuable as an ingredient of the alloy known as German silver, the best of which is made of nickel, 3 parts; zinc, 3½; copper, 8. The Chinese *tutenag* also contains nickel, although often regarded as zinc. The *pakfong* of the East Indies is also a composition of which nickel forms a part. Nickel is more fusible than iron, and like iron is rendered still more so by combination with carbon. It is magnetic at ordinary temperatures. Owing to its freedom from oxidation in ordinary atmospheric temperatures it has been used for the needles of compasses. It appears to have some marked points of resemblance to iron.

POISONOUS CHARACTER OF SO-CALLED "CALIFORNIA ROSEWOOD."

We are aware that some trees in a state of growth are poisonous, but entertained the belief that when cut down and seasoned no injury could arise from their use; but our faith is now shaken by the assurance of one of our subscribers that he has frequently had his hands and face poisoned when turning the so-called "California rosewood."

This wood is of a more brilliant red than Brazilian rosewood, and very handsomely grained with dark lines; its texture is however, closer than rosewood, and it resembles in that respect, as well as in its agreeable odor when worked, the red cedar.

We wish some botanical reader of the SCIENTIFIC AMERICAN in California would investigate the subject and give us the result. Occasionally parcels of this wood arrive by sailing vessels from San Francisco at this port and are purchased by the dealers in fancy woods. A beautiful specimen of this wood is on our table, and from the end of it a piece was cut and turned by our informant to make an ear ring. This piece did not weigh an ounce, but the dust from it while it was being turned settled on the back of both hands and on the wrists of the turner. Not having used this kind of wood for some months he had forgotten to take the precaution of wearing a leather glove. The day was warm and perspiration extended over the hands, allowing the dust to lodge on them.

The effect was similar to nettle rash; the back of the hands and wrists became like those of a child with scarlatina, and the itching so intense that it kept him awake almost all of the night. This effect had invariably attended the turning of the wood when no precaution had been taken to guard the hands. Some one of our chemical friends might like to analyse the specimen on our table and give the benefit of his skill to our readers.

TRANSPLANTING TREES---THE BEST TIME AND WAY.

For most trees, especially fruit trees, no time is more propitious for transplanting than the autumn. If the leaves are green they may be either growing, or not yet in process of decay; the difference between these two stages must be determined by experience and a knowledge of the nature of the tree. The state of the soil and weather is a much more important matter than the condition of the trees. The time should not be chosen in the tempests of the late autumn nor the rains of the late summer. In the one case the newly transplanted trees may be strained, the roots loosened from the soil, and so injured or laid open to injury from mice and mold as to effectually kill them; and in the other the heavy rains may produce the same result. Yet trees *can* be transplanted at almost any time, as has been done in London and Paris at the World's exhibitions, where full grown trees have been borne from one locality to another without injury or any apparent detriment to their growth.

If growing and full-leaved, the leaves ought to be taken from the twigs, otherwise the rapid evaporation of moisture from the roots by means of these lungs will certainly kill them. By the first of October in the northern sections of the country our fruit trees have ceased growing—such as cherries, plums, pears, etc. If the leaves are removed they may be transplanted without injury.

But the soil to which they are transplanted should be mellow, friable, and fine, so that it can be sifted well in among the roots and leave no interstices for water, frost, or mice. The roots should also be well covered and the stems buried to a depth of one or perhaps too feet, with a mound covering the roots, to be removed in the spring.

TRIAL OF STEAM FIRE ENGINES.

On Tuesday last we were present at a competitive trial of two steam engines manufactured the one by the Amoskeag Company, of Manchester, N. H., the other by the Gould Machine Company, of Newark, N. J. The trial was under the direction of the Metropolitan Fire Department of this city, and was undertaken to test the value of the claims for superiority made by the makers of the latter engine.

The Amoskeag steamer, *Metropolitan*, has a cylinder eight inches diameter, twelve inches stroke. The Gould engine has a cylinder seven and one-half inches in diameter, and ten inches stroke. The manufacturers assert that by their improvement in introducing two more pumps than are ordinarily employed, one of their second-class engines will throw a greater amount, and more streams of water, than a first-class steamer of other makers.

In the first trial for rapidity in generating steam, the engines were practically on a par. Both were then supplied with two hundred and fifty feet of hose, to which was attached a one and one-eight inch nozzle. The streams were thrown nearly equal distance, the Amoskeag perhaps throwing a few feet further than her opponent, her steam and water gages showing at the same time a pressure of eighty and one hundred and sixty pounds, to fifty-five and one hundred and forty pounds respectively of the Gould engine. In the second test, but fifty feet of hose was used and with an open butt of two and one-half inches. The steam from the Gould engine was now thrown much further than the Amoskeag. Even when the former engine was partially disabled by breaking one of the four patent division pumps, its superiority in throwing a greater volume of water was very evident.

The last test was forcing a stream of water through one thousand feet of hose with the nozzles first used, attached. The result showed that the Gould engine with one pump working with ninety pounds of steam and two hundred and twenty of water pressure, could throw water to a distance of one hundred and forty eight feet. Her competitor with one hundred and sixty pounds steam, and two hundred and twenty-five pounds water, threw a stream one hundred and fifty-four feet.

The hose used on this occasion stood a very severe test, and satisfactorily demonstrated its great strength above that made of leather. This rubber hose, patented through this office by Messrs. Perry and Torrey, has a filling of duck cut in strips and so wound that the warp threads of the fabric will cross each other at right angles. It stands a water pressure of over three hundred and fifty pounds without bursting, and the water never oozes through to the outside. This hose has been adopted by the fire departments of this and other cities on account of its superior strength and durability.

Coal Gas Explosions.

When coal is stored in bulk in a confined space, highly explosive gases are given off which may accumulate and on being ignited cause the destruction of the confining structure. This catastrophe frequently happens on board vessels freighted with bituminous coal, and the provision should always be made, as we intimated in an article bearing on this subject some months since, for thoroughly ventilating the hold of all vessels engaged in the coal-carrying trade. The latest accident of this kind reported occurred on board the English screw steamship *Conservator* on a passage from Sunderland, bound for London. The cargo consisted chiefly of dust coal, and the gas appears to have been set on fire by a naked light that was burning in, the forecastle. The lamp, it appears further, was purposely placed there under the supposition that it would consume the coal gas as it arose from the hold. With what success it accomplished its purpose, three of the crew who were severely injured by the explosion, can best testify.

The Ailanthus.

There is a great hue and cry throughout the West just now against the Ailanthus; but a writer in the Cincinnati *Times* thus defends it: "The Ailanthus tree is a native of the northern provinces of China, brought from there in 1750. The tree will grow in any soil, and to a large size where scarcely any other tree will grow at all. It grows so rapidly that it may be cut down for fuel every fourth year. As fuel, the wood is superior to that of most other trees; for open fires I prefer it to any other wood. It makes a clear, bright flame, and throws out a great deal of heat. Its charcoal is of a superior quality, and its ashes rich in potash. Its wood burns well when green, and every branch and limb may be cut into stove wood, leaving no brush on the ground. The wood is hard and of a fine grain, and well fitted for cabinet making. Sooner or later our farmers must grow wood for fuel and for cabinet making, and the Ailanthus tree offers itself as the most available tree for that purpose.

OFFICIAL REPORT OF PATENTS AND CLAIMS

Issued by the United States Patent Office,

FOR THE WEEK ENDING JULY 30, 1867.

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.

67,155.—EAVES TROUGH, BRACKET, AND CORNICE.—John N. Ball, Buffalo, N. Y.

I claim a combined cornice, eave trough, and brackets, A B D, as a new article of manufacture, constructed and used in the manner substantially as described.

67,156.—CLOTHES-LINE FASTENING.—Samuel A. Barr, Pittsburgh, Pa.

I claim the within-described clothes-line fastener, as a new article of manufacture, consisting of a plate, A, with perforated lugs, B B, cast upon it, which receive a pin, C, through their perforations, and having, also, a recess formed between, and perforated ears, outside of said lugs, as and for the purpose specified.

67,157.—PLANE FOR CUTTING BLIND SLATS.—J. L. Bess and Adam Hagny, Keokuk, Iowa.

We claim the arrangement of the slitting cutters, E E E1, edge cutters, D D, and swing cutters, C, in a frame, A A1, expansible by means of set screws, G G, all as herein described and for the purpose specified.

67,158.—HOOP SKIRTS.—F. A. Brewster, Springfield, Mass.

I claim, 1st, The springs extending from the tape, b, around the skirt to the tape, b1, in combination with the bands, a, and one or more semi-elliptical springs, d, the whole constructed substantially as and for the purpose set forth.

2d, In a hoop skirt, divided wholly or partially down the front, I claim the auxiliary ribs, or tie springs, f f, applied and operating substantially as and for the purpose herein set forth.

67,159.—CARPET STRETCHER AND TACK DRIVER.—W. Brown, New York City.

1st, I claim the combination of the inclined carpet stretcher with the vertical column and tack-driving apparatus, arranged and operating in the manner and for the purposes described.

2d, The combination of the tack-conducting tube and the cord and pullies, with the inclined shaft and vertical column, arranged and operating in the manner and for the purposes described.

67,160.—RELAY MAGNET.—Walter C. Brownson, Wellsville, Ohio.

I claim the use of one or more adjusting or counter-balance magnets, W, in combination with the armature lever, K, of a telegraphic relay instrument, and its receiving magnet or magnets, A, when said adjusting magnet or magnets are excited simultaneously with the receiving magnet, by the same electrical current, the whole operating substantially in the manner and for the purpose set forth.

67,161.—GAS-PIPE JOINTS.—C. Bruss, Jr., Worcester, Mass.

1st, I claim the combination of the tubular stem, B, and grooved disk or plate, A, with the corresponding grooved cap, I, and its tubular stem, C, under the arrangement and for operation as set forth.

2d, The combination with the concentrically grooved plates or disks, applied to each other as described, of the valve and its spindle, mounted and arranged in the joint, in the manner herein shown and described.

67,162.—UMBRELLA.—Chas. O. Buell, Stamford, Ct.

I claim the combination with the flange of the runner or crown piece of an umbrella, of a washer so arranged as to enclose between said flange and washer the rings or wires that hold the folding parts of the structure, substantially as described.

67,163.—PORTABLE WRITING AND COPYING CASE.—A. G. Buzby, Philadelphia, Pa.

1st, I claim a copying book having a case or receptacle in one of its boards or covers, as and for the purpose described.

2d, The strip, e, having a recess and elastic band, g, for the confinement of an ink stand and pen, as set forth.

67,164.—SHEEP SHEARS.—Geo. W. Carpenter (assignor to himself and Samuel Williams), Northville, Mich.

I claim the combination of the narrow blade, A, with the crooked brace, B, and the addition of the thumb plate, C.

67,165.—CAR SEATS.—J. R. Chiles, Richmond, Va.

1st, I claim the brace, I, in combination with the double joint, L, substantially as and for the purpose described.

2d, The combination and arrangement of the chair back, B, the joint, S, the cushion seat, M, and the roller, m, substantially as and for the purpose described.

3d, The foot rest, P, fixed to a ratchet bar, which slides in a socket beneath the seat, and supported by resting on the floor of the car, substantially as described.

67,166.—CALENDAR CLOCK.—C. M. Clinton and L. Mood, Ithaca, N. Y.

1st, We claim the construction and use of the clutch cog wheel, E, when made of the several parts, and in the manner described, for the purpose of its combined use with, and means of motion of the thirty-one, or other similar wheel of a calendar clock, thereby preventing the motion of the said wheel or wheels from being affected, or the said wheel or wheels from being misplaced by the position of the clock, as described.

2d, We claim the specific combination of the cross bar, F, clutch wheel, E, held in place by its spring, I, with beveled teeth, controlled and held by the stud, J, the same making a whole, and acting on the wheel, B, or its substantial equivalent, as described.

3d, We claim balancing the cross bar, F, so that the motive power of the calendar shall be in the rod, c, and not in any use of the cross bar as a weight lever.

4th, We claim the specific device of the tumbler, M, attached to any part of the cross bar, F, and acting by an elbow joint or lifting action on the stop, D, as described.

5th, We claim the projection, L, from the stop, D, for the purpose of a point of action on the stop, D, by the tumbler, M, as described.

6th, We claim regulating the action of the tumbler, M, by the stud, O, when virtually made and acting as described.

7th, We claim the combination of the wheel, B, the stop, D, projection, L, tumbler, M, stud, O, and cross bar, F, or equivalents thereunto, the same making a whole, and being constructed and operated as described, thereby preventing the motion of the wheel, B, or similar wheel, from being affected, or the wheel itself from being misplaced by the position of the clock, as set forth.

67,167.—EYE GLASS.—Geo. N. Cummings, Providence, R. I.

I claim the employment or use of the Guides, E E, when operated in the manner and for the purposes set forth.

67,168.—SEEDING MACHINE.—Herman V. Davis, Amherst, and George E. Smith, Blakeville, N. H., assignor to George E. Smith.

1st, I claim the seed box or hopper, D, mounted upon the vibrating lever, C, and operated from wheel, B, in the manner substantially as described.

2d, The vibrating hopper, arranged and operating as described, in combination with the funnel-shaped seed run or discharge opening, substantially as described.

3d, The vibrating hopper, provided with discharge openings of different sizes, and arranged to turn upon a center pivot, as described.

67,169.—KNIFE CLEANER.—C. F. Dean (assignor to himself and John S. Parker), St. Johnsbury, Vt.

I claim the combination and arrangement of the presser, C, and its screw, E, with the box, A, and its elastic lips, substantially as described.

I also claim the combination of the spring, D, with the presser, C, its screw, E, and the box, A, having elastic lips as described.

I also claim the combination of the slide, B, and the grooves, s s, with the box, A, the presser, C, and its strip of leather, d, applied to an india-rubber cylinder, c, or its equivalent, the whole being arranged substantially as specified.

67,170.—EMBALMING AND PRESERVING DEAD BODIES.—E. de la Granja (assignor to himself and Herman Susmann), Boston, Mass.

1st, I claim the preparation above described for injection into the veins and arteries, substantially as specified.

2d, The preparation above described for filling the cavities of the head, chest, and abdomen, substantially as specified.

3d, The process of preserving dead bodies above described.

67,171.—MOLD FOR CASTING INGOTS.—Henry Dickinson, Jersey City, N. J.

I claim the above-described construction and arrangement of a mold for casting steel and other ingots, substantially as and for the purposes set forth.

67,172.—PORTABLE OVEN FOR DRYING FRUITS.—George Diffenderfer, Lewisburgh, Pa.

I claim a double-wall portable fruit drier which is adapted for application to a stove in place of a portion of the stove pipe, and which is constructed and strengthened, substantially as described.

67,173.—CULTIVATOR.—W. A. and C. E. Dryden, Monmouth, Ill.

1st, We claim the frame, a a, in connection with the extended braces, b b, substantially as described and for the purpose set forth.

2d, The slotted axle, in combination with frame, a a, and seat pieces, h h, for the purpose set forth and substantially as described.

3d, The sliding seat piece, k, in combination with pieces, h h, for the purpose set forth.

4th, The vertical adjustment of seat, as described.

5th, The arrangement of pieces, y y w w and x, for giving circular motion, substantially as described.

6th, The slotted fulcrum, in combination with the frame, a a, for the purpose set forth and substantially as described.

67,174.—WATER WHEEL.—Robert Dunbar, Buffalo, N. Y.

1st, I claim the rim, F, connected with, and extending downwardly from the plate, K, on a circle of less diameter than the hub of the wheel so as to form, in combination with the plate, K, and stationary disk, E, the lesser annular chamber, G, and in combination with the hub, the larger annular chamber, J, for the purposes and substantially as described.

2d, The holes, i, in the plate, K, opening a communication between the chambers, M and N, through the annular chamber, J, substantially as shown and described.

67,175.—WATER WHEEL.—Robert Dunbar, Buffalo, N. Y.

1st, I claim a hub made flaring in the upper part thereof, as represented at A, in combination with the forward inclination of the bucket, in connection therewith, for the purposes and substantially as set forth.

2d, I claim giving a plane surface to the lower part of the face of the bucket of said wheel, lying between the cylindrical part of the hub and the anti-friction band, D, substantially as described.

67,176.—MACHINE FOR RAKING AND LOADING HAY.—W. A. Duncan, Syracuse, N Y. Antedated July 13, 1867.

1st, I claim the rake bar, O, suspended by the standards, N, from the draw bar, J2, hung by the adjustable rods, K, on hooks, L, in combination with link pieces, l1, pivoted at one end to the projecting arms, T, of the draw bar, J2, and at the other end to the projecting arms, S, of the rake bar, O, substantially as described for the purpose specified.

2d, The clearer board, D3, attached to the extension arms, E3, and gatherer board, F2, hung from the triangular frame, G2, all secured to the frame, A, when arranged to operate together substantially as described for the purpose specified.

67,177.—APPARATUS FOR EXHIBITING HYMNS, ETC.—H. V. Edmond, Norwich, Ct.

I claim the arrangement of the winding rollers, B C, apron, D, and friction rollers, I J, substantially as shown and described for the purpose described.

67,178.—HARNESS.—Henry L. Eshelman, Elizabethtown, Pa.

I claim the arrangement of the double segments or curved cross pieces, K K1, in combination with the adjustable pole, O P, and hinged side pieces or beams, B B1 and C C1, in the manner and for the purpose specified.

67,179.—THREAD CONTROLLER FOR SEWING MACHINES.—G. A. Fairfield, Hartford, Ct.

I claim a thread controller consisting of a lever and connecting bar, arranged substantially as herein described and for the purpose herein set forth.

67,180.—BROOM HEAD.—D. P. Farnham, Janesville, Wis. Antedated July 15, 1867.

I claim. 1st, The combination and arrangement of the handle, A, cap, B, and the clamp, D, secured to the cap, and operated by the screws, C C, that have their threads working into each other when the whole are constructed, arranged, and used in connection with the proceeds of winding or covering the ends of the corn, substantially as and for the purpose set forth.

2d, The combination and arrangement of the handle, A, cap, B, and clamps, D and E, operated by the screws, C and F, when the whole are constructed and used substantially as and for the purpose set forth.

67,181.—MOLDS FOR CASTING METALS.—J. Farrar and Wm. Groves, Providence, R. I.

We claim the combination, in any flask for casting the above-named articles, of the outer case, A, the flanges, a a, the coarse inner lining, B, composed of certain suitable materials, as set forth, and a finer grained lining, C, composed of another combination of materials to be mixed and applied, substantially as described.

67,182.—ROUGE PAD.—Harriet M. Fish, New York City.

1st, I claim uniting or combining with a soft cotton or other suitable fabric, a solution consisting of the afore-mentioned ingredients, without intending to confine myself to the proportions thereof as therein given.

2d, The manufacture of a rouge pad by uniting or combining with a soft cotton or other suitable fabric, a coloring matter, consisting of the above-mentioned ingredients, or their equivalents for this purpose, substantially as described.

67,183.—RUFFLING ATTACHMENT FOR SEWING MACHINES.—Mary T. Fitch, Lockport, N. Y.

I claim the combination of the weight H, cord E, bearing g, and hook f, or equivalent, substantially as and for the purpose set forth.

I also claim in combination therewith the roller S, arranged and operating substantially in the manner and for the purpose specified.

I also claim the special combination of the spiral spring p, washer o, friction rings n, nut and set screw q r, and loose pulley g, with the weight H, cord E, hook f, and roller, S, the whole arranged and operating as described.

67,184.—METHOD OF ORNAMENTING TIN, ETC.—Louis Fitzmaier (assignor to Atwater, Benham & Co.), New York City.

I claim, 1st, Ironing prepared paper on its back side by means of a hot plating iron for the purpose of obtaining a straight and glossy appearance of the same, substantially in the manner and for the purpose described.

2d, The use of a composition consisting of lithographic varnish and chrome yellow, substantially in the manner and for the purpose described.

3d, Rolling over the moist side of the paper by a wooden, flannel-covered hand roller, whereby a uniform impression of the drawing is produced on the tin, etc., substantially as described.

67,185.—COFFEE GENERATOR.—C. Fobes, Whitewater, Wis.

I claim, as a new article of manufacture, a coffee generator constructed as described.

67,186.—SPRING FOR BEDS AND LOUNGES.—Francis Fraps (assignor to himself and B. C. English), Sprinfield, Mass.

I claim a spring for beds, lounges, etc., formed of wire a, wrapped around a cylinder b, so that a loop extends out from each side at an angle, the ends of the wire being inserted in the ends of the cylinders, substantially as described.

67,187.—ADJUSTING TIRES TO WHEELS.—W. J. Garland and N. Morgan, Winchester, Ill.

We claim the arrangement of the tire D D', with its lugs E and F, screw a-bolt b, and slot c, substantially as described, in combination with a continuous felloe A, and its chamber, B, constructed substantially as and for the purpose set forth.

67,188.—PLOW BEAM.—William Gilman, Ottawa, Ill.

I claim the employment for plow beams of a hollow and tapering wrought-iron pipe, substantially as described in the foregoing specification.

67,189.—MACHINE FOR LINING PERCUSSION CAPS.—Derick N. Goff, Wolcottville, Conn.

I claim the punch g, to cut out the disk of foil, in combination with the pressing punch h, and mechanism for presenting the percussion caps successively, substantially as set forth.

67,190.—MACHINE FOR TRIMMING PERCUSSION CAPS.—Derick N. Goff, Wolcottville, Conn.

I claim a revolving cutter formed with a chisel edge, in combination with a die to hold a percussion cap while the edge thereof is trimmed by the action of said revolving cutter, as set forth.

67,191.—BREAD CUTTER.—W. S. Gray, Worcester, Mass.

1st, I claim the combination, substantially in the manner described, in a bread-cutting machine, of a sickle shaped cutter rotating in a vertical plane parallel with a head block moving in a path at right angles to the cutter, for the purposes specified.

2d, The combination of the cutter, the crank handle, and the brace, all arranged and operating as described.

3d, The combination, substantially as described, of the head block, the feed bar, and the working lever with the cam on the cutter shaft, for the purpose set forth.

4th, The combination as described of the feed bar, the retracting spring, and the adjusting screw, with the pawl on the head block for the purpose of regulating the thickness of the slice.

67,192.—LOCOMOTIVE HEAD LIGHT.—E. L. Hall, Utica, N. Y.

I claim the tube B, constructed and operating substantially as described, and for the uses and purposes mentioned.

67,193.—STEP LADDER.—D. B. Hedden, Newark, N. J.

I claim the strips A B, brace F, and stay G, made of bent stuff, substantially in the order and for the purpose named.

67,194.—TUBE-HOLE CUTTER.—Wm. H. Henshall, Philadelphia, Pa.

1st, I claim the improved tool, as a whole, constructed and arranged as herein shown and described.

2d, The combination of the cutter D, adjusting collar F, and the countersink tool G, constructed and arranged as shown and described.

3d, The combination of the threaded spindle A, feed wheel or nut C, spiral spring E, collar g, and the cutter D, constructed and arranged as shown and described.

67,195.—MACHINERY FOR PREPARING FLOOR OIL CLOTH.—Seth W. Herrick and Charles G. Gilbert, Jr., Salem, N. J.

We claim the described arrangement of the rollers, D and D', the cylinders, C and C', the friction pulley H, with its strap h', and treadle, h2, and the weighted swinging-frame E, the said parts being combined together in a suitable frame A B, so as to operate substantially as and for the purpose described.

67,196.—CLOTHES-LINE HOOK.—J. L. Howard, N. Y. City.

I claim a clothes-line hook, constituted of a rigid bracket extending into the form of a hook, between the jaws of which there is embraced and supported a roller of non-corrosive material turning on a vertical or nearly vertical axis, the whole being combined and applied substantially as described for the purposes explained.

67,197.—BELT COUPLING.—R. J. Jordan, Elkhart, Ind.

I claim the plates B, provided with inclined depressions or pieces, e, formed on the sides of the slots c and c', and spear-head rivets b, in combination with the belting A, substantially in the manner and for the purpose as herein set forth.

67,198.—PRINTING PRESS.—Anson Judson, Brooklyn, N. Y.

1st, I claim the combination with the segment H, of the pin G, and jaws J, by which the said segment is rotated intermittently to produce, by means of the pinion K, wheel M, and rack N, or their equivalents, the backward motion of the bed, substantially as set forth.

2d, The combination with a cylinder B, having segments E, at each end, which mesh intermittently into racks D, at each side of the table of the segment H driven intermittently by the pin G, substantially as and for the purpose hereinabove described.

67,199.—SUSPENDING CLAW FOR HORSE HAY FORKS.—C. S. Kershaw, Sherburne, N. Y.

I claim as an article of manufacture the suspending claw, the same consisting of the jaw A, provided with hook a, at one end, and the connecting hook or eye b, at the other end, and combined at right angles with the claw C c, by means of pivot D, substantially as herein described and for the purpose specified.

67,200.—KNIFE SHARPENER.—Thomas K. Knapp (assignor to John Goulding), Worcester, Mass.

I claim the peculiarly-formed frame with its four forks C, and a hole through its center to receive the sharpening bar B, substantially as shown and set forth.

2d, Cutting the teeth a, upon the sharpening bar B, substantially as and for the purposes set forth.

3d, The combination with the double-forked frame A, of the sharpening bar B, set on thumb screw D, ferule E, and handle F, constructed and combined together substantially as and for the purposes set forth.

67,201.—HORSE COLLAR.—Daniel Lincoln, Johnsonburg, N. Y.

I claim a locking or coupling device, as herein described, inserted into or connected with the lower parts of a horse collar, for the purpose set forth.

67,202.—CORN-CAKE MACHINE.—Hiram and Charles Littlefield, Tewksbury, Mass.

1st, We claim the pressing follower, when constructed as shown and described, viz., with stationary or unyielding bars B, and arranged to operate as and for the purposes specified.

2d, And in combination with the pressing follower, constructed as described, the stamping follower A, and blades g, springs C, and pressing frame G, in the manner and for the purpose set forth.

67,203.—WATER WHEEL.—W. G. McGargy, Kutztown, Pa.

I claim the slanting scroll buckets A, sliding gates B, lever C, and crank D, when constructed, arranged, and operated as herein described and for the purposes set forth.

67,204.—STEAM-ENGINE SLIDE VALVE.—Philip C. McManus, Troy, N. Y.

I claim the steam tube or post A, provided with flanges D, and shoulder X, pressing on the valve C, substantially as set forth.

Also, I claim the guide H, substantially as described, to hold in proper adjusted position on the valve C, the steam tube A, as set forth.

Also, I claim the arrangement of the steam tube A, with the india-rubber springs N N, for the purpose of giving to the flange D, of the steam tube A, a constant yielding pressure upon the valve C, substantially as herein described.

Also, I claim the arrangement of the collar I, bolts K, and nuts L, and india-rubber springs N, substantially as set forth and described.

67,205.—CHURN DASHER.—F. McTarnahan, Santa Clara, Cal.

I claim a churn dasher constructed as herein described.

67,206.—FANNING MILL.—Stuart Miller and Ira J. Chase, Barrington, Ill.

We claim the lower and the upper floors A and B, of the fan chamber, shaped so as to direct the blast of the fan upwards under the scives, constructed substantially as herein set forth and specified.

67,207.—HEDGE SHEARS.—J. O. Minor, Wapello, Iowa.

1st, I claim constructing shears with cutting edges b b', and cutting edges, a a', substantially in the manner described and for the purposes specified.

2d, The adjustable stop f, applied to one of the shear arms, substantially as and for the purpose described.

3d, The supporting strap C, applied to trimming shears substantially as described.

67,208.—WHIFFLETREE COUPLER.—Francis B. Morse, New Haven, Conn. Antedated June 7, 1867.

I claim the combination of the elastic presser with the recess d, and the screw bolt c, when the whole is constructed, combined, and fitted for use substantially as herein described.

67,209.—CAR COUPLING.—Smith O'Blenis (assignor to himself and C. H. Stark), Greensburg, Pa.

1st, I claim the hook E, constructed, arranged, and operating as described.

2d, The combination substantially as described with the bell-mouth casing of the slotted yielding coupling hook, having both a horizontal and a vertical movement in its bearing, whereby the hook acts as a bumper, and is also made self-locking.

67,210.—BAYONET ATTACHMENT.—P. A. Oliver, Elizabeth, N. J.

I claim a spring catch D D', arranged as represented relatively to the bayonet socket B b, and adapted to operate relatively to the barrel A, and projections a, or its equivalent, substantially in the manner and for the purpose herein specified.

67,211.—HARVESTER.—Henry Pease, Brockport, N. Y.

1st, I claim the hub D, in combination with the pitman u, crank 40, bevel wheel y, bevel pinion 41, rollers b b, seat supports c c'', arm or arms d d, pitman passage R, and ground wheel B, substantially as described and for the purpose set forth.

2d, The hub D, in combination with the arms d d, pitman u, and pitman passage or opening R, substantially as described and for the purpose set forth.

3d, The hub D, in combination with the rollers b b, pitman u, hollow bearings r r, and pitman passage or opening R, substantially as described and for the purpose set forth.

4th, The double or grooved rollers b b, in combination with the hub D, and tread rim o, and internal gear 46, substantially as described and for the purpose set forth.

67,212.—DOOR BELL.—Chester Penfield, New Britain, Ct.

I claim the revolving prong cam h, in combination with mechanism for striking a bell, substantially in the manner as described.

67,213.—LOCK LATCH.—N. Petre, New York City, assignor to himself and Joseph H. Suggett.

1st, I claim the eccentric barrel K, in combination with the latch bolt F, and notched hub, E, substantially as described for the purpose specified.

2d, The notched eccentric K, in combination with the spring latch bolt F, and notched hub B, as described, whereby the latter is prevented from engaging with the latch F, when locked, substantially as described for the purpose specified.

67,214.—CUT-OFF STOP COCKS.—Wm. H. Pollard (assignor to Downs & Co.'s Manufacturing Company), Seneca Falls, N. Y.

I claim the valved, swiveled spout C', and clamping nut D, in combination with the valved outlet pipe C, of a double discharge pump, the whole arranged and operating in the manner and for the purpose herein set forth.

67,215.—MODE OF SEALING FRUIT JARS.—Ebenezer Purdy, Ithaca, N. Y.

1st, I claim making a tubular orifice in the cover of a fruit can, with the larger end of the tubular opening on the inside of the jar, for the purpose of closing the opening by a suitable plug or cork drawn or inserted in the same from the inside of the can, as described.

2d, I claim making a suitable plug to fit the described tube or orifice, retracting and inserting the same from and into the said orifice or opening from the inside of the can or jar, for the purpose of opening and closing the same at pleasure as described.

3d, I claim attaching the described cork or plug to a cord, E, or other suitable instrumentality, for the purpose of bringing the plug from the inside of the jar tightly into the opening, as described.

4th, I claim the combined whole, made of the parts, D, the tube or tubular opening in the cover, C, the cork or plug, F, inserted from the inside of the jar, string, wire, or instrument, E, holes, G, operating together substantially as described.

67,216.—CARBURETING APPARATUS.—Franklin Ransom, (assignor to T. F. Frank), Buffalo, N. Y.

I claim two or more air wheels, B, mounted on the same shaft, and connected by the concentric cylinder, L, in combination with the receiver, C, and tub, A, arranged substantially as and for the purpose set forth,

I also claim in combination with the wheels, B B, the brakes, h h, actuated by the float, M, and lever, v, for regulating the operation of the apparatus, substantially in the manner specified.

I also claim the regulating vessel, J, and tube, N, arranged within the carbureting vessel, E, and operating substantially as described.

I also claim the shield, G, in combination with the fibrous material, H, and vessels, J E, as and for the purpose specified.

I also claim in combination with the carbureting vessel, E, the reservoir, F, for supplying the hydro-carbon liquid to the former, operating in the manner set forth.

67,217.—MANUFACTURE OF GAS.—John T. Rich, Philadelphia, Penn. Antedated March 25, 1867.

1st, I claim the process for preparing atmospheric air for chemical union with decomposed hydro-carbons for the purpose of forming a permanent heating or illuminating gas, substantially in the manner set forth.

2d, The combination of the steam pipe, h, funnel-formed mouth, a, of the pipe, b, and condenser, K, said parts being constructed and arranged substantially as set forth.

3d, Mixing a purified product of atmospheric air with hydro-carbon gas for dilution, either before or after decomposition of the fluid or other hydro-carbon, substantially as set forth.

67,218.—SIFTER, EGG-BEATER, AND SPICE-MIXER.—C. Rosenberry and T. Worth, Chicago, Ill.

1st, We claim the revolving heads, D and D', so connected by rods that they can be separated for the insertion of various styles of beaters to adapt the implement to different uses when said heads are mounted on a revolving shaft, and placed in a case, A, substantially as described.

2d, The combination of the beaters, I, mounted on the shaft, B, having the wheel, M, attached, and the beaters, K, driven by the tube, C, and wheel, N, when arranged to be operated by the double wheel, K K', as shown and described.

67,219.—GEAR-CUTTING WHEELS.—Thomas B. Russell, Salem, Mass.

1st, I claim the combination of the spindle, M, pivoted boxes, F and L, the sliding frame, E, and the swing brace, D, for the purpose specified.

2d, The improved apparatus when the several parts are made and arranged substantially as described and used for the purpose set forth.

67,220.—FIRE-PROOF POWDER MAGAZINE.—Rufus S. Sanborn, Ripon, Wis.

I claim the application of a bath of steam to the interior of a magazine or other vessel for the reception of gunpowder or other explosive materials, in order to secure the contents from explosion when the magazine or vessel is exposed to a high degree of heat.

67,221.—COMBINED HORSE RAKE AND HAY SPREADER.—E. E. Seymour and S. J. Taylor, Rome, N. Y.

1st, We claim a revolving rake provided with a driving band, and with stops, K, or their equivalents, so that the implement may be adjusted to be used as a rake, or as a tedder, as may be desired, by sliding the rake head toward or away from the driving wheel, as and with the effect set forth.

2d, The revolving rake head, M, mounted in bearings at the ends of the sliding arms, B B, so that the same movement by which the rake head is brought in contact with the stops will loosen the band, G, and it will cease to operate the rake,

3d, In combination with the rake-head, M, and sliding bars, B B, the levers, F E and L, substantially as and for the purposes set forth.

4th, In combination with the arms, B B, and guides, I I, the adjusting screws, R R, substantially as and for the purpose set forth.

67,222.—ROLLING CUTTERS FOR PLOWS.—J. H. Sherman, Galesburg, Ill.

1st, I claim the frame, B B', separate from the standard, but attached to it by means of sockets or socket, allowing a lateral play of the frame about the standard, substantially as set forth.

2d, The form of sockets, C C', fitting the standard at its front edge, but sufficiently open at the back part to allow a lateral swing of the frame, substantially as and for the purpose set forth.

67,223.—WATCH.—O. F. Stedman, Ravenna, Ohio.

1st, I claim the band or spring, E, with its ends embracing the pillar posts on each side of the barrel closing the space between the plates, C and D, of the movement as and for the purpose set forth.

2d, The packing, d d, in combination with the band or its equivalent, for the purpose of closing the channel, substantially as specified.

67,224.—WATCH CASE.—O. F. Stedman, Ravenna, Ohio. Antedated February 22, 1867.

I claim the diaphragm, G, when arranged in connection with the case in such a manner as to form a shoulder for the support of the movement plate, K, and so constructed that it is held in position by the movement screw, a, or its equivalent, substantially in the manner and for the purpose described.

67,225.—OILER.—Frederic Stone, New York City. Antedated July 17, 1867.

I claim the bent or folded air tube, d, applied to one oiler, in the manner and for the purpose set forth.

I also claim the drip cup, c, and tube, d, in combination with the oiler, substantially as and for the purposes set forth.

67,226.—FEEDING APPARATUS FOR CARDING MACHINES.—Daniel Tainter, Worcester, Mass,

I claim the combination with a carding machine, picker or lapper, of two or more feed aprons or creepers, arranged relatively to each other as herein described, so as to deliver the material they carry to a single set or pair of feed rolls.

67,227.—CAST-STEEL CAR WHEEL.—John Blake Tarr, Chicago, Ill.

I claim a cast-steel car wheel which has been condensed by high pressure when in a molten state after it has received its general final shape, substantially as and for the purpose described.

67,228.—MILK PAN.—William Templeton, Rockville, Pa.

I claim the combination of a pan or vessel, A, and a air chamber, X, substantially as and for the purpose described.

67,229.—PROCESS OF TREATING PAPER STOCK TO MAKE PULP.—Joel Tiffany, Albany, N. Y.

I claim the introduction and use of a highly heated boiling liquor into the stock, inclosed in a close boiler immediately after the air has been exhausted therefrom, in combination with the vacuum produced within the boiler by such exhaustion of the air, substantially in the manner and for the purpose above described.

I also claim the above process in combination with the use of atmospheric or pneumatic pressure, substantially in the manner and for the purpose above described.

67,230.—COTTON PRESS.—David R. Torbet, Columbus, Ga.

I claim the so constructing and arranging of the press box and its connected co-operative parts as that it may be swung clear out from under the platen or frame to be filled, and swung back and fastened so that pressure from one or both ends may be applied, substantially in the manner and for the purpose described.

67,231.—COTTON BALE TIE.—C. Ulmer, Mobile, Ala.

I claim the within described buckle or tie provided with opening, D, slot, e, and toothed corners, c c c c, substantially as and for the purpose set forth.

67,232.—DUST PAN.—Marcus Vanderhoven, Utica, N. Y.

I claim the mode of connecting the bed or plane, C, with the sides, A, and back, B, upon their inner surface, at a line nearly or quite central, as represented in Figs. 1 and 2, the whole being arranged as and for the purpose set forth.

67,233.—ROOFING COMPOSITION.—James R. Van Horn and J. B. Roberts, Newtown, Pa.

We claim the combination with coal tar or naphtha of the mineral above described, as a composition for roofing.

67,234.—CORK PULL.—J. D. Van Zandt, Brooklyn, E.D., N.Y.

I claim the construction of the prong of a cork drawer in two parts, the one part in the handle, the other sliding upon the fixed prong, combined with the pivoted swing bar, the whole arranged and operating in the manner and for the purpose described.

67,235.—STEP LADDER.—Timotheus Vogelmann, Hamilton, O.

1st, I claim the ladder, A, constructed with the grooves, a a, in combination with the ladder, B, constructed with the ribs, g, arranged and operating in the manner and for the purpose described.

2d, The hinge clasp, C, represented in Fig. 4, in combination with the rails of ladder, A, all constructed, arranged, and operating in the manner and for the purpose described.

3d, The combination of double hooks, h, and brackets, i, constructed, arranged, and operating with hinge clasp, C, and ladder, B, in the manner and for the purpose specified.

67,236.—DIE FOR FORMING COTTON TIES.—Chas. W. Wailey, New Orleans, La.

1st, I claim the die, A A' B, and cutter, D, in combination with the separating bar, E, when constructed, arranged, and operating in the manner described, for the purpose of stamping or cutting out buckles to be used as cotton ties, from suitable plates or bars of iron, as set forth.

2d, The combination of the said die and its appendages with the matrix, G, when the latter is constructed as described, and is provided with the movable bar, J, or its equivalent, as described, for the purpose set forth.

3d, The combination of the said die and and its appendages, matrix, G, and movable bar, J, with the bent arm, F, when these parts are constructed and arranged relatively to each other substantially as described for the purpose set forth.

67,237.—WHIP SOCKET.—Theos Weaver, Harrisburg, Pa.

1st, I claim a whip socket in sections, flared or widened at a place suitable for the insertion of a locking device or line holder, substantially as herein set forth.

2d, A whip socket provided with a set of single clutches, rigidly attached or removable, to grip the rod in a dash, in combination with a brace, substantially as herein set forth.

3d, The mode of preventing the revolution of a socket at its bearings on a rod, by means of the indented arcs, 1, 2, 3, 4, in Figs. 1 and 5, for the purpose specified.

4th, The locking fastening as shown in Figs. 3 and 8, and otherwise described.

5th, The combination of the bands, B' K' B' K', with a socket for the purpose specified.

6th, The slides, o' o', the holes, 9, 9, 9, 9, Fig. 3, in combination with the brace, Fig. 5, and the screw, E, for the purpose herein specified.

7th, The combination of a tumbler or tumblers with a locking thimble provided with a flange at the top, the teeth, 1, 2, 3, 4, key hole, g, key guard, 13 the toothed lock shield, 1, 2, 3, 4, the ledges, R V A, handle, H, stop, S', when made to operate by a key as herein set forth.

8th, The combination of the subjects of the seventh claim with a circle of notches as shown in Fig. 4, or with two circles as shown at 12, Fig. 3, for the purpose herein set forth,

9th, The combination of ring, A, with a hook, H', for the purpose specified.

10th, Clothing or covering the parts of a lock that come in contact with a whip stock in a socket with a suitable material, substantially in the manner as and for the purpose herein shown and described.

11th, I claim inserting a key in a vertical or upright position in a whip lock, as shown in Fig. 1.

67,238.—BED BOTTOM.—P. W. Webster and Wm. H. Prescott, Concord, N. H.

We claim the side pieces, a, end pieces, b and d, slats, c, and wires, f, when combined to form a reversible spring bed, substantially as described.

67,239.—FIRE ESCAPE.—Carl Weidling, New York City, assignor to himself, Alexander Lieder, and Charles Kinkel.

1st, I claim the upper frame, F G H, with its windlass, I, and chains or ropes, K K, all combined with the ladder as and for the purpose set forth.

2d, In combination with the upper frame constructed and arranged as described, I claim the lower frame, A B C D, with its turn table, as and for the purpose set forth.

67,240.—MACHINE FOR POLISHING WOOD.—Edward Weisenborn, Hudson City, N. J.

1st, I claim the combination of two endless aprons, H E, and the grooved guide blocks, e', with the supporting table between the aprons, for receiving, holding, and carrying the pencils under the polishing blocks, and discharging them therefrom arranged, constructed, and operating in the manner and for purposes described.

2d, The combination of the aprons, table, and guide blocks aforesaid, with the polishing blocks, J J, constructed and arranged and operating in the manner and for the purposes described.

3d, The combination of the bent vertical pressure springs, M, with the polishing blocks, J, the springs being provided with slots and buttons for adjustment as described, constructed, arranged, and operating in the manner and for the purpose described.

4th, The combination of the polishing blocks, J, with the side pieces or supports, j, to guide the polishing blocks and support them at the desired point, so that the pencils may pass under them with facility as they are carried along by the aprons, and at the same time receive the required pressure for polishing.

67,241.—CONSTRUCTION OF VESSELS.—N. F. Weston, Boston, Mass.

I claim the application to the outer surface of the hull of a navigable vessel, of a closed boxes or tanks, so constructed and arranged as to answer the purpose of either buoys or ballast, as well as being productive of other advantages, substantially as hereinbefore shown and described.

I also claim in combination with the outer tanks, A' A', the inner compartments, a' a', essentially in manner and for the purpose as specified.

67,242.—MAGAZINE FIRE-ARM.—James A. Whitney, Maryland, N. Y. Antedated July 19, 1867.

1st, I claim the breech block, E, constructed with a carrying chamber, g, arranged below and back of the solid recoil face, f, thereof, in combination with the barrel and a suitable cartridge magazine, substantially as and for the purpose specified.

2d, So combining the arm, e, of the operating lever with the breech block, E, that the forward movement of the said arm shall not only elevate the breech block to bring the recoil face thereof away from, and the carrying chamber in line with the bore of the barrel, but shall also operate to force the cartridge from such chamber into the said bore substantially as herein set forth.

3d, The combination of the downwardly extending spur, D, of the breech block, with the arm, e, of the operating lever, substantially as herein set forth for the purpose specified.

4th, A slot formed in the breech block and extending through or into the carrying chamber, g, thereof, of such shape and so arranged in relation with the arm, e, of the operating lever that the said arm by its forward movement shall simultaneously hold the breech block in a stationary position and force the cartridge from the carrying chamber into the barrel, substantially as herein set forth.

67,243.—COTTON PRESS.—Young F. Wright, Green Hill, Ga.

I claim in combination with the arch, nut, and sweeps, operating in connection with the platen screw, as herein represented, the hinging or pivoting of the arch, so that it and its several appliances may be run or swung around upon a curved horizontal, or nearly so, way, to clear the top of the press box, to allow it to be readily filled, substantially as described.

67,244.—LAMP FOR DESTROYING INSECTS.—John Zimmerman, Royalton Center, N. Y.

I claim the lamp constructed as described, with a socket to secure it on the top of a pole, double walls with air orifices, and whose wick tubes are provided with perforated flaring nozzles, as described and represented.

67,245.—SLATE PENCIL SHARPENER AND HOLDER.—W. H. Alcorn, New York City.

1st, I claim providing a slate frame with a combined slate pencil holder and sharpener, for the purpose set forth.

2d. The semitubular plate, B, when provided with one or more lugs, b, or their equivalents, and with a spring, C, and with a corrugated surface, c, all as set forth.

67,246.—OYSTER OPENER.—J. E. Alger, New York City.

1st, I claim an apparatus for opening oysters, the arrangement of a fixed jaw, G, substantially as and for the purpose herein set forth.

2d, The combination of a reciprocating knife or opener, H, with a support having grooves or recesses, c, for adjustment and retention of the oyster to and against the action of the knife, substantially as herein set forth.

67,247.—BRUSH RACK.—John Ames, Lansingburgh, N. Y., and N. H. Horton, New York City.

We claim a rack for exhibiting paint, varnish, and other similar brushes, as specimens, consisting of a shallow box, A, provided with one or more cleats, B or B', arranged substantially as herein shown and described.

67,248.—WASHING MACHINE.—Chancy L. Andrews, Connecaut, O.

I claim the combination and arrangement of the box, A, frame, B, with parallel grooves, B'. in the side pieces, pins, C, corrugated roller, D, handle, E, and bars, F, substantially as set forth.

67,249.—MACHINE FOR PACKING FLOUR.—H. A. Barnard, Moline, Ill.

I claim the two pulleys. G and E, and the compound or double brake, K M, in combination with the shaft, F, friction wheel, J, weight, L, and the barrel support, C, substantially as herein shown and described and for the purpose set forth.

67,250.—PAPER CORSET.—Joseph H. Beal, Edward J. Sawyer, and Granville S. Webster, Boston, Mass.

We claim as an improved article of manufactnre, a corset made from paper or paper pulp or their treatment by a combination with other materials, substantially as explained.

67,251.—STOVEPIPE DRUM.—J. F. Beckwith, Albion, N. Y.

I claim the cylinder, A, provided with vertical pipe, B, beveled flanges, C C, air tubes, D D D, damper plate, E, and cap, I, all being constructed, arranged, and used in the manner and for the purposes set forth.

67,252.—CORN AND COTTON SCRAPER.—C. Billups, Norfolk, Va.

1st, I claim the standard, C.

2d, The slots, c c', when used for the purpose specified.

3d, The mold board, E, having two horizontal slots, e e', for the purpose specified.

4th, The detachable landside and the method of attaching it, as described.

5th, The center board or pivot cutter, C, working in connection with the landside, substantially as and for the purposes described.

6th, The slot, d, through which the center board or pivot cutter passes, and the mode of securing and fastening the same.

7th, Claims 5th and 6th as applied to all plows.

67,253.—MACHINE FOR LINING PERCUSSION CAPS.—Amos S. Blake, Waterbury, Ct.

1st, I claim a slide for carrying the caps to the die and punch for being acted upon by the latter, when such slide is arranged to have an intermittent forward and backward motion, as the punch moves up and down through the die, substantially as and for the purpose described.

2d, In combination with the above a plate or plates suitably constructed to receive the caps, and so arranged and operated with regard to the slide for carrying them to the punch and die as to feed and deliver the caps to the slide, substantially as described.

67,254.—MEAT CUTTING MACHINE.—William Bliesner, St. Louis, Mo.

1st, I claim the combination of the feeding apparatus, A, with the meat-cutting machine, all arranged as specified.

2d, The continual motion of the knives in three different directions, as and for the purpose described,

3d, The simultaneous motion of the knives, b2 b3, by means of the lever, b*, and the eccentric wheel, c1, as and for the purpose described.

4th, the arrangement of the shaft, c13, with the cog wheel, c11, and the rack, c12, which permits the drawing back of the piston without affecting the remainder of the machinery.

67,255.—STEAM GENERATOR.—Charles T. Boardman, Pawtucket, R. I.

I claim the arrangement. substantially as herein shown and described, of the single and double sections, G G', constructed of horizontal and vertical tubes with steam spaces or chambers, and set for passage of the draft in reverse and return directions relatively to them, as herein set forth.

67,256.—GRAIN DRYER.—Henry Boden, Olney, Ill.

I claim the arrangement and construction of the steam chambers, C C C, with their receiving and discharge steam pipes, E E, on the outside, and draft flues, G, on each side of the coolers, D D D, below, when arranged, constructed, combined, and operating as herein described and for the purposes set forth.

67,257.—SUSPENSION TURN TABLE.—John C. Bonnell, Fort Madison, Iowa.

I claim the arrangement of the wheel, H, shaft, J, bolt, G, and dog, I, in combination with the swinging frame, in the manner substantially as and for the purposes specified.

67,258.—SASH SUPPORT AND FASTENER.—J. C. Bonnell, Fort Madison, Iowa.

I claim the combined dog and cam, D, having a beak upon its outer end and a shoulder on its top whereby the beak may catch into the opening in the sash and check the window or support the same by its cam in the desired position, when arranged within a metal box, C, formed of one piece of metal and held in position, as well as being pivoted by the screws that connect the box to the frame as specified.

67,259.—WATCH.—Felix Benoni Bouscatié, Paris, France.

I claim 1st, The combination with the bridge of the escapement of the scape wheel and its pinion under the arrangement and for operation as herein set forth.

2d, The construction and arrangement of the disk for supporting the balance and escapement substantially as herein described.

3d, The combination with the supporting disk of the bridge and balance and escapement pivoted on the same as shown and described.

4th, The combination and arrangement of the regulator with the ballance wheel and its hair spring substantially as and for the purposes herein set forth.

5th, The arrangement of the bridge for carrying the escapement substantially as and for the purposes described.

67,260.—FANNING MILL.—John J. Bradner, Pine Creek, N. Y.

I claim the toothed rack, F, and the stud, F, or their respective equivalents attached to the conductor and screen of a fanning mill substantially as and for the purpose described.

67,261.—STRAW CUTTER.—J. D. Burdick, New Haven, Conn.

I claim 1st, The shifting spur gear, G, provided with a concentric pinion, H, in connection with the pinions, d d, on the feed roll shafts and the intermediate pinions, K L f, all to operate so as to vary the speed of the feed rollers according to the length of cut required substantially as shown and described.

2d, The intermediate pinions, K L f, placed on fixed studs or axes in combination with the pinions, d d, on the feed roller shafts arranged substantially as and for the purpose specified.

3d, Securing the fixed cutter or leger blade, M, to its bed piece by means of bolts, h h, the heads of which are fitted in oblong slots, j j, in the cutter or plate substantially as and for the purpose set forth.

4th, The adjusting keys, O O, passing vertically or nearly so through the fixed cutter or leger blade and arranged in relation with the frame or head, D, of the feed rollers substantially as and for the purpose specified.

5th, Constructing the fixed cutter or leger blade, M, of curved form in its transverse section, and having the inner edge of the same slotted as shown for the purpose set forth.

6th, Securing the arms, Q Q, of the cutter, P, to their shaft, J, in the manner shown or in an equivalent way to admit of the slipping of the arms on the shaft or the turning of the latter within the former in case the cutter meets with any material obstruction in the prosecution of its work.

67,262.—MACHINE FOR LAYING RUBBER SHEETS TO BE CUT into Threads.—D. H. Buzzee, East Hampton, Mass.

I claim 1st, The combination in a machine for laying rubber sheets of the cylinders, B and C, and tension device or brake arranged to act simultaneously upon both ends of the feeding cylinder the whole being constructed for operation together substantially as specified.

2d, The combination with the feeding cylinder, C, of the split clamping rod, D, arranged to occupy a recess in said cylinder in direction of its length and gearing with the same essentially as herein set forth.

67,263.—KNITTING MACHINE.—A. C. Carey, (assignor to himself and H. K. Moore), Malden, Mass.

I claim 1st, The combination of revolving and vibrating jacquard pattern cylinders with sliding needles on a straight frame for the purpose of knitting irregular tubular work substantially as described.

2d, Also combining and arranging in connection with two rows of needles two jacquard cylinders that are at times both thrown forward together at other times thrown forward alternately first one and then the other and at times cease to revolve as the style, shape or pattern of the article that is being knit may require substantially as described.

3d, Also, In combination with vibrating jacquard cylinders and with needles in straight rows the wires interposed between the jacquard and the needles by which the needles are operated from the jacquard substantially as and for the purpose described.

4th, Also the use of nibs or projections on the wires that are interposed between the jacquard and the needles and remote from the ends of said wires so that the needles in the line of such nibbed wires may be moved forward far enough by the jacquard to catch and hold the yarn but not to knit and thus prevent the making of holes in the knit work substantially as described.

5th, Also the combined use of a pattern wheel having a toe and heel segment thereon and the jacquards for operating the pawls by which the jacquards are turned on their axes substantially in the manner and for the purposes described.

6th, Also a yarn tension composed of the arm, 8, post, 7, turning arm, 9, guides, 12, and suspended weight or ring, 13, arranged to operate in the manner and for the purpose substantially as herein described.

67,264.—MACHINE KNITTED STOCKING.—A. C. Carey (assignor to himself and H. K. Moore), Malden, Mass.

I claim as a new article of manufacture, a machine made knitted stocking, the toe of which is commenced in the center of the two rows of straight needles and the heel of which is knit upon one of the two straight rows of needles of the machine while the portions are the product of both rows, by which means I produce a heel of other closely knit, without holes or openings, and of better shape and form than heretofore knit by machinery, and bearing a greater similarity, with regard to the toe portion, to hand-knit stockings, substantially as herein described.

67,265.—DEFLECTOR FOR HOT AIR REGISTERS.—S. Hamilton Canghey, Baltimore, Md.

I claim the box, A, with its perforated top doors, E d and G, and water tank, arranged substantially as described and represented.

67,266.—CHURN.—C. J. Chalfant, Unionville, Pa.

I claim the right angular buckets, E, secured to the inner circumference of the revolving cylinder churn, c, in the direction of its length, substantially as described for the purpose specified.

67,267.—BUTTONS.—Victor Chalet, Hoboken, N. J.

I claim the combination of a button or stud, A, with a ground or slotted shank, B, and sliding spring plate, D, all made and operating substantially as and for the purpose herein shown and described.

67,268.—HEMP BRAKE.—Erastus Christianson, St. Joseph, Mo.

I claim a hemp brake having frame, A, platform, B, cog wheels, C, circle H, set screws, L L, cog wheels, M, and lever, N, constructed, combined and operating substantially as specified.

67,269.—SLIDE FOR RULES, SCALES, AND TABLES.—F. J. Coffin, Newburyport, Mass.

I claim the slide, A, or its equivalent, in combination with a rule, scale or tablet, the said slide containing one set of dimensions, or factors, to find out the contents or product, in connection with another set of dimensions, or factors, marked on the rule, scale or tablet, substantially as shown for the purposes herein specified.

67,270.—CLOTHES DRYER.—Israel A. Coons, Middleton, O.

1st, I claim the adjustable folding frame, A' B', connected with the stand on uprights, A A, by means of the links, e e, or slots, M, when constructed, arranged and operating in the manner and for the purpose described.

2d, The fastenings represented in fig. 4, in combination with uprights, A A. arms, B B, or their equivalents. folding frame, A' B', when the several parts, arranged, combined and operated together, substantially as and for the purpose described.

67,271. — WASHING MACHINE. —LeRoy Corille, and William Keeler, Oxford, N. Y.

We claim the reciprocating frame, E, and roller, D, in combination with the perforated or other washboard, C, springs, J, and trails, f, all made and operating substantially as herein shown and described.

67,272.—MODE OF APPLYING WINDOW SHADES TO WINDOWS. H. J. Cox and Wallace Hill, Long Eddy, N. Y.

We claim the spring, D, pulleys, d d, and cords, t f, connected with the shade roller, E, in combination with the cord, G, and ring, i, and tack or hook, k, or their equivalents for holding or securing the bottom of the shade when necessary all arranged substantially as and for the purpose set forth.

67,273.—HORSE POWER.—J. C. Cox, Greenville, N. C.

1st, I claim the cross pieces, E, beveled at their ends and provided at both ends with horns, G and H, interlocking each within the cross pieces in the manner described as and for the purpose specified.

2d, The combination of the pulleys, P and R, gear wheel, T, and pulley, V, with each other and with the frame, O, and rope, F, substantially as described and for the purposes set forth.

3d, The combination of the weighted lever, E' ratchet wheel, D', shaft, C', pulley, B', and cord, A' with each other, with the frame, O, and with the sliding frame, S, substantially as described and for the purpose set forth.

4th, The combination of the pulley, G' and weighted frame, H, with the frame, O, the pulley, R, and rope, F, substantially as described and for the purpose set forth.

67,274.—SCALE BEAM.—A. B. Davis, Philadelphia, Pa.

I claim the combination with each bar or weight of a stop rendered adjustable in the manner described or any equivalent to the same.

67,275.—SAW MILL.—J. C. Delavigne, New Orleans, La.

1st, I claim the pivoted walking-beam frame, F, having at one end the saw, H, its lower cross bar, b, connected to one end of pitman, E, whose outer end is pivoted concentrically to disk, D. on shaft, a, when all are constructed, arranged and operating as herein set forth for the purpose specified.

2d, The spring boards, K K, pivoted by link bars, e e, to each end of the walking beam frame, F, as herein set forth for the purpose specified.

67,276.—LIGHTING CIGARS.—W. B. Doudes, Canton, Ohio.

I claim as a new article of manufacture, a cigar, bearing the composition substantially as described and provided with the match in the manner and for the purposes specified.

67,277.—VAPOR BURNER FOR HEATING.—C. W. Duncan (assignor to himself and H. S. Saroni), Baltimore, Md. Antedated July 26, 1867.

I claim, 1st, An apparatus for generating heat in vapor stoves as above described, regulating the supply of fluid to the retort or heating chamber, in the manner and by the means hereinbefore specified that is to say, by locating the valve which regulates the flow of the oil or other fluid at or near the point where the fluid enters the said retort, substantially as and for the purposes herein set forth.

2d, In combination with the retort or heating chamber of a vapor stove, and valve seat located at or near the point of junction of said retort with the pipe which connects it with the fluid reservoir as specified, I claim the valve constructed and arranged so as to operate on the axis of the said pipe, substantially as and for the purposes herein shown and described.

67,278.—PAINT CAN.—Horace Everett, Philadelphia, Pa.

I claim a metal ring, B, and its flange, b, combined with the body and cover of a paint can, substantially as set forth for the purpose specified.

67,279.—FRUIT GATHERER. — Leonard Fleckenstine (assignor to himself and Peter F. Binkley), Manor Township, Pa.

I claim, 1st, The arrangement of the hinged finger supports, A, with their pin or pivot, a, in combination with the hinged jaws, E, for operating them in the manner and for the purpose described.

2d, In combination with the jaws, E, I claim the ratchet wheel, c, click, D, spring, I, between the supporting lugs, H, arranged in the manner and for the purpose set forth.

3d, I claim the united double levers, K, for operating the jaws, E, by means of cords, k, in the manner specified.

4th, I claim the arrangement of the cheek pieces, L, hinged above to the jaws, E, and attached to the pole, in the manner and for the purpose set forth.

5th, I also claim the leather cap and sack, revolving on its pivots, a, and provided with fixed and rigid fingers, F, on their respective supports, A B, arranged and operated in the manner specified.

67,280.—RAILWAY CHAIRS.—William Foster, Logansport, Ind.

I claim, 1st, The wedge, F, and gib, E, in combination with the chair, D, supporting bar, C, and rails, A, substantially as herein set forth for the purpose specified,

2d, The plates, C, and bolts, a, in combination with the supporting bar, C, chair, D, wedge, F, gib, E, and rails, A, substantially as herein set forth for the purpose specified.

67,281.—FILTER.—Alcander Fox, Poughkeepsie, N. Y.

I claim the combination of a series of labyrinthine filtering compartments, substantially as herein specified and described.

67,282.—SHIPS' DAVIT.—L. F. Frazee, South Amboy, N. J.

I claim, 1st, A four sided frame, M, hinged or pivoted at its lower edge to the vessel, substantially as and for the purpose set forth.

2d, The combination with the frame, M, of the sliding supports, E and E, constructed, attached, and operated substantially as specified.

67,283.—BASE BURNING STOVE.—C. H. Frost, Peekskill, N. Y.

I claim so arranging the cylinder, a, and the direct and indirect draft openings and passages that the said cylinder becomes an ascending channel for the escape of the products of combustion when the draft is direct and a descending channel for the supply of air to the fire when the draft is indirect, substantially as set forth.

67,284.—DRILLING APPARATUS.—A. J. Fullam, Springfield, Vt.

I claim the arrangement of the drill stand, A, engine, E, securely attached thereto, pitman, F', fly wheel, F, pinion, a, drill, B, and pipe, J, substantially as described and for the purpose specified.

67,285.—ROW LOCK.—William Fuzzard, Chelsea, Mass.

I claim the application of row blocks to a row boat in such a manner that the former will, during the operation of rowing, be moved automatically from the motion of the oars for the purpose of increasing the length of the sweep of the same, substantially as set forth.

67,286.—CLAMP FOR PAINT BRUSHES.—G. R. Gardiner (assignor to himself and B. W. Bentley), Westerly, R. I.

I claim the combination of the band, C, adjusted by means of the slide and pins with the spring fastener, F, for vertical adjustment substantially as described for the purpose specified.

67,287.—CORN HARVESTER.—W. N. Gates, Manchester Center assignor to O. J. Whitney, Hopewell, N. Y.

I claim the arrangement of the gavel discharger, P, provided with teeth, o, and resting upon the concentric frame, e, and the reel, O, provided with the points, h, gearing directly with the spokes of the supporting wheel when the said parts are combined in a corn harvester in the manner and for the purposes specified.

67,288.—LATHES FOR TURNING ECCENTRICS.—J. B. Gayle, Portsmouth, Va.

I claim the combination of the adjustable eccentric support, F carriage, E, ways, H, and sliding tool stock, I, arranged as described for the purpose specified.

67,289.—COTTON CULTIVATOR.—Charles Gibbon, Hicksford Va.

1st, I claim the combination of the front and rear plows, H H I I, with the hinged main frame, A, and lever, K, substantially as and for the purpose specified.

2d, I also claim the rotary cutters, G G, in combination with the scraper plows, H H, and the rear plows, I I, all arranged substantially in the manner as and for the purpose set forth.

3d, I further claim the pivoted bar, M, on the frame, A, in combination with the rotary cutter shaft, F, and the lever, K, all arranged substantially as and for the purpose specified.

67,290.—DOOR SPRING.—William Gilfillan, Syracuse, N. Y., assignor to himself and M. L. Van Horn, New York City.

I claim the hollow drum or casing, H, with its eccentric arm, P, and coiled spring, K, when connected with the door frame through a cord, R, or its equivalent and combined and connected together, substantially as and for the purpose described.

67,291.—PISTON FOR DOUBLE ACTING PUMPS.—C. B. Gill, Rochester, N. Y.

I claim the piston, A, having the passage, g, and the webs, b b, arranged as described and operating in the manner herein set forth.

67,292.—BOTTLE STOPPER.—John H. Gould, Newburyport, Mass.

I claim a stopper for bottles consisting of a rubber or other suitable ball held and attached to the bottle neck by a coiled spring, substantially as and for the purpose described.

67,293.—MANGLE.—Henry Gransden, Dubuque, Iowa.

I claim the rollers, D E F, the hook. G. the spring, H, the aprons, C, the fly wheel, B, and the braces, J, arranged substantially as herein shown and described in combination with the frame, A, for the purposes set forth.

67,294.—WASHING MACHINE.—Wellington Green, Kinzua, Pa.

1st, I claim the box, C, constructed with a close-fitting cover, E1 E2, with slats, D, upon its bottom, with scolloped pieces, F, upon one or both ends and pivoted to stationary supports, B, substantially as herein shown and described and for the purpose set forth.

2d, The combination of the balance weight bar, I, with the oscillating box, C, substantially as herein shown and described and for the purpose set forth.

67,295.—CULTIVATOR.—A. M. Griswold, Momence, Ill.

1st, I claim the adjustable rods, o o, and the adjustable brace rods, j j, for the purposes specified.

2d, The joints, i i, when combined with the rods, o o and j j, and plow-bearing beams, E E, substantially as and for the purposes set forth.

3d. The cams, m m, when combined with the braces, n n, the rods, s s, and bar, r, and operating in the manner and for the purposes described.

67,296.—FRUIT PICKER.—E. W. Gurner, Haverstraw, N. Y.

I claim the basket, A, provided with the projecting splints, c c, at one side and the projecting elastic splints, b b, at the opposite side, the splints, each pair being connected at their ends by the strips, d, and having the cores, C D, applied, and all arranged substantially as and for the purpose set forth.

I further claim the canvas or other material, d*, attached to the splints, b b c c, in connection with the projecting splints, c' c', substantially as and for the purpose specified.

67,297.—FLOOR CLAMP.—J. F. Hammond, Providence, R. I.

I claim, in combination with the bed piece, A, the lever, C, the pawl, D, the steel, E, and sliding piece, B, provided with the blocks, F and G, either with or without the truck, i, substantially as described and for the purposes set forth.

67,298.—RUBBER FABRIC.—John Haskins, Roxbury, Mass.

I claim the within-described article of perforated rubber as an article of manufacture, the same being used as and for the purpose set forth.

67,299.—TOBACCO PIPE.—J. S. Hawley, Virginia City, Nevada.

I claim the lining, C, of the tobacco pipe, when cut from a corncob and inserted in the bowl, A, as herein set forth for the purpose specified.

67,300.—HEATING TOP PLATES OF WAX-THREAD SEWING MACHINES.—William F. Hayden, Brookfield, Mass.

I claim, 1st, The combination with the top plate of a wax-thread sewing machine of a chimney, G, whereby the lamp for heating the wax can be placed under or below the top plate of the machine, substantially as and for the purposes set forth.

2d, The combination with the top plate, B, of the chamber, E, substantially as set forth.

3d, The combination with the top part, B, of the chambers, E and H, chimney, G, and pipes, I and K, substantially as and for the purposes set forth.

4th. The combination with the front part of the plate, B, of the gage, O, and thread knife support, p, substantially as set forth.

5th, Supporting the tension wheel on the stand, L, the said wheel being arranged with the pipes, I K, as shown and described.

67,301.—CORN HUSKER.—H. N. Hill, Pontiac, Mich.

1st, I claim the knives, F and G, in combination with each other and the spring treadle, J, substantially as described for the purposes set forth.

2d, I claim the slide, C, and the spring treadle, J, arranged and operating substantially as described in combination with the knives, F and G, as and for the purposes herein set forth.

67,302.—STEAM ENGINE SLIDE VALVE.—G. H. Hoagland, Port Jervis, N. Y.

I claim the combination with the valve box, D, arranged within the steam chest, of the valves, N1 N2, controlling openings in communication with the steam ports, essentially as and for the purpose herein set forth.

67,303.—CORK RECEPTACLE FOR BOTTLES.—Alexander Honrath, New York City.

I claim the forming or manufacturing of bottles and other receptacles of glass, earthenware, or other material designed for holding liquids and provided with cork stoppers with a cavity, b, in order to hold a spare cork, substantially as shown and described.

67,304.—BEDSTEAD.—Joseph Horner, New Brunswick, N. J.

I claim attaching the front and rear ends of the sacking bottom, E, to cylinder, B B', which are fitted in bearings, a, attached to the side rails, b, of the bedstead at the head and foot portions thereof in combination with the grooved wheel, f, and forked plate, C, ratchets, c., and pawls, d, all arranged and applied substantially as shown and described.

Also the bent rods or hooks, F, attached to the side rails, b, of the bedstead and passing through oblong slots, h, in the sacking bottom, substantially as and for the purpose specified.

I further claim the combination of the sacking bottom, cylinders, pawls, and ratchets, grooved wheel and forked plate and the bent rods or hooks, all arranged and applied to a bedstead, substantially as and for the purpose set forth.

67,305.—HORSE RAKE.—Charles Howard, Bearsville, N. Y.

I claim the combination of the lever, c, the cross-foot lever, K, and the spring tops, g, with the sliding bars, b b, of the rake head, D, and the thills, a a, of a horse rake, arranged and operating substantially as herein described.

67,306.—WHEEL-SPOKING MACHINE.—Alexander Humphries, and John Keethler, Mount Oreb, Ohio.

We claim a wheel-spoking machine consisting of the following members, to wit: the axial shaft, G, adjustable pillow blocks, I and J, swiveling table, L, and sliding rest, o, constructed and operating substantially as and for the purpose set forth.

67,307.—FASTENING FOR LASTS.—William S. Huntington (assignor to Joseph Silliman), New York City.

I claim the button fastening for lasts constructed as described consisting of the spindle, B, revolving freely in hollow screw plug, D, which is screwed into the last, the lower end of said spindle projecting beyond the said plug, as herein set forth.

67,308.—FENCE—F. W. Huxford, Boonsborough, Iowa.

I claim the combination of an inclined or angular top, D F, with the vertical part of the fence, substantially as herein shown and described and for the purpose set forth.

67,309.—DEVICE FOR SNUFFING LAMPS.—Julius Ives, Brooklyn, N. Y.

1st, I claim a snuff tray which is adapted for being applied to the burner of a lamp for the purpose of receiving the snuff during the act of trimming the lamp wick, substantially as described.

2d, The combination of a snuff tray and scraper, substantially as described.

67,310.—CLOTHES POST.—C. P. Jadwin, Carbondale, Pa.

I claim the box base with drum crank and ratchet attached and hollow past with pulley and rope, as herein described and for the purposes set forth.

67,311.—CAR COUPLING.—W. R. Jamison, Taylorstown, Pa.

I claim the bumpers, A and B, coupling link, C, and coupling pin, D, constructed substantially as herein shown and described in combination with each other as and for the purpose set forth.

67,312.—MODE OF MANUFACTURING VENEERS.—Edward Jewett, Ridge, N. H.

I claim the mode of manufacturing veneers herein set forth by compressing the veneer continuously from the point where it is severed from the bolt to a distance in the rear of the edge of the cutter, substantially as set forth.

67,313.—SHAVE FOR BOOTS AND SHOES.—Albert E. Johnson, Oxford, Mass.

1st. I claim a tool or implement for the shaving of the edges of boot and shoe soles having one of its handles so curved in the direction of its length as to allow the shave to be passed about the curve of the upper at the shank, substantially as described and for the purpose specified.

2d, The guard lip, J, to the knife, in combination with the adjustable guard, K, substantially as described for the purpose specified.

67,314.—SHOE STRETCHING DEVICE.—Wiley Jones, Norfolk, Va.

1st, I claim a detachable swivel connection for securing the cap or shell to the screw rod, substantially as set forth.

2d, The key or lateral projection, c, one or more, on the end of the tenon, b, of the screw rod, A, in combination with the circular recess or counter sink, d, in the outer side of the shell or cap, D, concentric with the pole, a, and the slot, e, one or more, corresponding in number to the keys or projections, c, in the side of hole, a, substantially as and for the purpose set forth.

67,315.—MANUAL POWER MACHINES.—T. L. Kenworthy and A. Silvers, Collinsville, Ohio.

I claim the arrangement and combination of the treadles, D and D', extending in front of the main frame, A B, and operating conjointly with the winch, o, when constructed and applied in the manner and for the purpose described.

67,316.—MACHINE FOR MAKING SLATE FRAMES.—William Kester, Cherryville, Pa

1st, I claim the construction of the frame-holding device, N, consisting of the sidewise adjustable bed, b', sliding table, c', notched horizontal disk, d', spring catch, f', oblong plate, e', fitting over pins on the disk, c', hinged arms, g', and horizontal locking bars, h', substantially as described for the purpose specified.

2d, The construction of the slate holder, P, consisting of the lid, i, in which the plate, k', slides, rectangular rest, l', against which one corner of the frame fits, a rectangular rest, m', having hinged lever, n', secured thereto, substantially as described for the purpose specified.

3d, The trough, c, arranged in relation with the cutters, D D, saw, e, concave cutters, E, cutters, F, spring roller, m, and rollers, g g, when constructed and operating substantially as described for the purpose specified.

4th, The construction of the revolving drills, K, crank shafts, L, having bearings in the uprights, M, and fitting in the vertical bar, t, connected to the eccentrics upon the shaft, u, all operating as described and arranged in relation with the frame holding device, N, substantially as described for the purpose specified.

67,317.—MATCH SAFE.—P. Killin and H. C. Yates. Decatur, Ill.

We claim the match safe constructed of described consisting of the box, A, divided into two parts, B C, by the partition, b, necks, c, curved wire spring, d, loop, e, grooved strip, g, pivoted feeder, i, sliding wires, h h', serrated spring jaw, m, plate, s, and cover, a, all arranged as described for the purpose specified.

67,318.—WATER ELEVATOR.—Philip H. Kimball, Prophetstown, Ill.

1st, I claim the combination of the guides, W, levers, V, and bar, S, all arranged to operate substantially as set forth.

2d, The bar, S, in combination with spring, R, friction roller, Q, trip lever, P, arranged to ship the drum, D, substantially as set forth.

3d, The drums, B, in combination with drum, D, and gearing, b a, H H' M, substantially as described.

4th, The combination of drum, B. wheel, M, gearing, H H', lever, F, toggle J, all arranged and operating substantially as described.

67,319.—AUTOMATIC MOLASSES GATE.—Philip H. Kimball, Prophetstown, Ill.

I claim the combination of a weighing or scale beam, M, carrying a movable weight, C, with a suspended platform, F, tripping devices, U L H, and with an arm or lever, W, secured to and operating the faucet or cork, S, of a barrel or other vessel, all substantially in the manner and for the purpose herein set forth.

I claim also the combination of an alarm bell, A*, with an arm, W, attached to a cock or faucet, S, when said arm is made to close said faucet automatically, substantially in the manner and for the purpose herein described.

67,320.—MODE OF TREATING RATTAN.—Louis Klein, Dansville, N. Y.

I claim the compressing of rattan or calamus as and for the purpose specified.

67,321.—PORTABLE OVEN.—Mary H. Leland, Milbury, Mass.

1st, I claim a portable oven, B, in which are combined a fire space, C, oven

or chamber D, and a valve to drop into the top of the stove to turn the draft through the space, C, substantially as set forth.

2d, The combination with the bottom of the oven of the adjustable dampers d d', substantially as and for the purposes set forth.

3d, The combination of rib, a, tube, b, with the damper rods, c c', and dampers, d d', substantially as and for the purposes set forth.

67,322.—METALLIC LOOP.—Chas. H. Littlefield, Turner Me.

I claim the metallic plate of the described form when the part, H, is bent as described, to receive and retain the buckle and when the wings, A or B, are turned over so as to lap the harness strap, as and for the purposes described.

67,323.—MINING AND TUNNELING MACHINE.—Richard C. M. Lovell, Covington, Ky.

1st, I claim the combination of the tra erse track, the traverse platform and the adjustable carriage on which the engine is mounted, substantially as described.

2d, A mining or stone cutting machine adjustable longitudinally and laterally by means substantially as described and having two cylinders whose piston rods are connected to a working beam.

3d, I claim in cambination with the carriage, E', upon which the engine is mounted, the shaft, e, the splined wheel, E, cogged rail, A', or B', and rotating devices, d" a' d6, or their equivalents deriving their intermittent motion from the reciprocating motion of the working beam or its motors—the pistons.

4th, I claim the combination of the traverse platform, D, the carriage, E', the threaded shaft, g, e, and clutch nut g, operating substantially as described.

5th, I claim the combination of the carriage, E', with its rack bar, d', on the traverse platform the pawl, d'", and latch, d"", constructed and operating substantially as described.

67,324.—VALVE FOR STEAM ENGINES.—Richard C. M. Lowell, Covington, Ky.

I claim the arrangement of the pistons, i i, ports, m m, and double acting valve moving piston, T, substantially as described.

67,325.—BREAD CUTTER.—John Madden, Cleveland, Ohio.

I claim chamfering the bottom of the table immediately under the horizontal knife, C, in combination with said knife for the purpose and in the manner substantially as set forth.

2d, The horizontal knife, C, and table, A', in combination with the sliding frame constructed and arranged in relation to each other as and for the purpose set forth.

67,326.—SPRING SEAT.—Joseph I. Mabbett, Titusville, Pa.

I claim the frame, A A A, in combination with the rod, C C C C, and the elastic bands, 1 2 3 4 5 6 7 8, when the same are constructed as described in the aforesaid combination for the purposes set forth

67,327.—COTTON GIN.—Fones McCarthy, Orange Springs, Fa.

1st, I claim the feeding of the cotton to the drawing cylinder of the gin in a vertical direction, substantially in the manner as and for the purpose set forth.

2d, The fixed or stationary toothed bar, D, in combination with the reciprocating or vibrating toothed bar, E, when arranged or placed so that their teeth will be in a space between the feed box and the drawing cylinder down through which the cotton is fed to the drawing cylinder, substantially as shown and described.

67,328.—MACHINE FOR DRYING SIZED OR DYED CORDS, SKIRT-WIRE WEBBING, ETC.—Donald M. Inroy, New York City. Antedated July 20, 1867.

1st, I claim a series of steam drying pipes, i i, arranged in ranges in the manner specified in combination with cylinders, k, placed between the ranges of pipes as and for the purposes set forth.

2d, I cla m the hand hole and cover, s, in combination with the cylinder, k, journal box, m, packings, n and q, and pipe, p, as and for the purposes set forth.

67,329.—ALARM WHISTLE.—William J. McLea, (assignor to himself and Charles F. Young,) Buffalo. N. Y.

1st, I claim the alarm whistle, C, constructed, arranged and operating in the manner substantially as herein described.

2d, So arranging the indicator in reference to a blank whistle or valve, that when the latter is raised for speaking through the tube, the indicator will be closed in the act of raising the valve substantially as set forth.

67,330.—FLOOR CLOTH AND CARPETING.—John B. Meldrum, Paterson, N. J.

I claim a carpet, drugget, or floor cloth, composed of bleached or whitened jute cloth, printed upon in figures as described.

67,331.—CIRCULAR SWINGING CRADLE AND BABY-WALKER.—Walter M. Messick, Louisville, Ky.

I claim a circular swing cradle and walker constructed substantially as described.

67,332.—FENCE.—William A. Middleton, Harrisburg, Pa.

I claim the headed bolts, C C, passing through the fence panels and top of the metal straps, D, when said straps are passed from the sill over the top of the fence and there secured by the nut in the manner and for the purposes specified.

67,333.—CORSET.—Wesley Miller, New York City, assignor to Francis E. Beal, Granville S. Webster, Edward J. Sawyer, and Paul P. Todd.

I claim an improved article of manufacture, a corset constructed in whole or in sections of raw or partially tanned hide or parchment, substantially as before explained.

I also claim perforating the said corset, for the purpose of ventilation and ornament essentially as set forth and explained.

67,334.—COTTON BALE TIE.—John F. Milligan, St. Louis, Mo.

I claim the tie piece, A, provided with the mortiser, b and b', the corners thereof being acute and shaped in the crescent form of cross section as herein described and when furthermore arranged with a central rail, a', of diminished thickness, substantially as and for the purpose set forth.

67,335.—FERTILIZER.—J. K. Moore, Millville, N. J.

1st, I claim the powdered clam or oyster shells as a fertilizer substantially as set forth.

2d, The ground shells, when used with the ingredients specified in the manner substantially as and for the purposes set forth.

67,336.—KNIFE CLEANER.—Curtis C. Morgan, Auburn, N. Y.

I claim the body, A, constructed as set forth in combination with box, B, and roller, C, when all are arranged as described.

67,337.—WINDOW CURTAIN.—D. G. Morgan, Jordan, N. Y.

I claim the arrangement of the plates, a a, wires, i i, and cords, D D', in combination with the roller, C, ratchet, y, and dog, m, whereby the curtain is raised or lowered and secured by the spring rod, in the manner substantially as and for the purposes specified.

67,338.—SQUARE.—J. Morss, Philadelphia, Pa.

I claim the slotted blade, B, and thumb screw and nut, or their equivalents, in combination with the stock, A, its parallel edges, a a, and bottom, f, of the slot arranged at right angles with the said edges, the whole being constructed as and for the purpose herein set forth.

67,339.—WARDROBE OR CLOSET.—Ignatz Moser, Cincinnati, Ohio.

1st, I claim the provision in a closet or wardrobe of the revolving frame, E, e e' F J J', as and for the purpose stated.

2d, In combination with the frame, E e e F J J', I claim the curved guards, K.

3d, I claim a closet or wardrobe composed of separable parts, A B C, fastened together by clamps, D d, and keys, K, or their equivalent for the purpose set forth.

67,340.—STEAM BOILER.—Richard Needham, Dukinfield, Eng. Patented in England Dec. 26, 1861.

I claim the combination with a steam boiler of one or more funnels or open mouthed skimmers so constructed and arranged and provided with an exit pipe as to collect the scum from the surface of the water substantially as herein above set forth.

67,341.—CLOTHES-LINE HOOK BLOCK.—Joseph W. Norcross, East Boston, Mass.

I claim a clothes line or hook block, the shell of which is provided with an aperture, a, and loop, b, and made in one continuous piece of iron or other metal as shown and described.

67,342.—BOAT AND TRUNK.—J. A. Olmstead, New York City.

1st, I claim the convertible boat and trunk composed of three sections hinged to each other and arranged to fold together, substantially as herein set forth.

2d, The lockers, d, arranged in relation with the space. e, of the central section, B, substantially as and for the purpose herein set forth.

3d, The lockers, g arranged in relation with the space, e, of the stern section, A, substantially as and for the purpose herein set forth.

4th, The rowlocks, a*, constructed and arranged to serve as handles when the boat is used as a trunk, substantially as herein set forth.

67,343.—BUCK SAW FRAME.—Solomon Oppenheimer, Peru, Ind.

I claim the above described attachment to the saw frames or its equivalent, when used and applied for the purpose and in the manner shown and explained.

67,344.—COOKING STOVE.—D. E. Paris, Troy, N. Y.

I claim 1st, the revolving damper or flue plate made to operate in the chamber under the reservoir as follows, when lying horizontally it drives the heat or products of combustion under the bottom of the reservoir, when turned up vertically, allows it to pass directly into the exit pipe, and shuts it off from the reservoir by closing the opening through, or under the back of the stove.

2d, I claim the return flue chamber, or open seat under the reservoir, connected with the central rear flue of the stove, by an opening through or under the back plate of the same, in combination with the revolving damper or flue plate, within said chamber, and the reservoir above.

3d, The construction of the annular cap or top rim, N, which shall entirely surround the top of the reservoir, with the outer edge of said rim turned both upward and downward, so as to form at once a finished molding for its outer edge and also a water guard for the purpose of conducting any water spilled upon the top down into the reservoir, substantially as herein shown and described,

4th, I claim the backward and forward motion of the heat, in other words, a return flue, underneath a reservoir, situated in rear of a driving flue cooking stove, in combination with a revolving damper, or a controlling flue plate creating or directing such flue as it passes out from the rear flue or flues of the stove and then back again for the purpose of heating the reservoir.

67,345.—BLOWER.—Wm. A. Parmele, New Haven, Conn.

I claim 1st, The oscillating fans, D, with valves, E, in combination with the bottom plate, A, with valves, B, and case, F F1, forming an air passage, F2, said parts being respectively constructed and arranged substantially as set forth.

2d, The fans, D, attached to the shafts, C C', in combination with the arms, I I', connecting rods, H H', and pulley, G, and arranged to operate substantially as set forth.

67,346.—CORKING BOTTLES.—C. H. Porter, Albany, N. Y.

I claim a screw furnished with an eye or loop at one end when such screw is inserted in a cork substantially as and for the purpose described.

I also claim in combination with the above, a chain having a spring catch or their respective equivalents and hung to the neck of a bottle substantially as described for the purpose specified.

67,347.—TRESTLE AND SCAFFOLD SUPPORTER.—Jacob Reef, Jr. (assignor to Wm. H. Williamson, Frank Powers, and Hiram W. White), Olney, Ill.

I claim 1st. The extensible tie bar, D D', when used in combination with the sliding bars, A A', legs, B, B', and diagonal braces, E E', as and for the purposes set forth.

2d, The legs, B, connected to the bars, A A', by bolts, G, affording rigid lateral support, and adapted to fold longitudinally against the bars as represented.

3d. In combination with the sliding legs, B B', of a trestle of the construction described. I further claim the two bands, a a, one attached to the upper end of the sliding leg, B', and enclosing the leg, B, the other attached to the lower end of the leg, B, and enclosing the leg, B', as and for the purposes set forth.

67,348.—MACHINE FOR ROLLING HORSE SHOE BARS.—Abram Reese, Pittsburgh, Pa.

I claim 1st. A pair of cylindrical metallic rolls, one grooved and the other flanged with a projecting creaser or creasers, i, in the bottom of one or more of the grooves, and one or more projecting formers, s, on the outer face of the corresponding flanges, in combination with one or more spring guides, f, all constructed arranged and operating substantially as described.

2d, A pair of cylindrical metallic rolls, one having one or more creasers, i, on its outer cylindrical surface, and the other shouldered or made with a recess, h, and print, s', in combination with a vertical friction roller, n, all constructed arranged and operating substantially as and for the purposes above described.

67,349.—WEIGHING SCALES.—W. W. Reynolds, (assignor to the Howe Scale Company, Brandon, Conn.

I claim the arrangement and combination of the weight holder or disked cap, C, with the standard, B, the lever, A, and its fulcra.

I also claim the combination and arrangement of the extensions, b b, and the studs, c c, or the equivalent thereof, with the weight and scale pan supporters, as set forth.

67,350.—MANUFACTURE OF IRON.—William Haden Richardson, Glasgow, North Britain.

I claim, 1st, The process or processes of manufacturing or producing improved malleable iron, as hereinbefore described or any mere modification thereof.

2d, The introduction thereof of a blast or blasts of air or air and steam either separately or combined into the body or mass of metal in the puddling chamber facilitating the manufacture and for the purpose of improving the quality of iron (in contradistinction to blowing air or steam upon the surface of the charge), as hereinbefore described or any mere modification thereof.

3d, The process of manufacturing iron by first introducing air or steam into its mass in the puddling chamber and afterward finishing it in the manner of puddled iron, as hereinbefore described or any mere modification thereof.

4th, The use and construction of hollow rabbles, passages or openings for the purpose of introducing a blast or blasts of air or steam into the mass of molten metal in the puddling chamber, as hereinbefore described or any mere modification thereof.

5th, The introduction of pulverized oxide of manganese (or other substance containing oxygen in combination) into the mass of molten metal in the puddling chamber, as hereinbefore described or any mere modification thereof.

67,351.—GANG PLOW.—D. C. Riggs, St. Joseph, Mo.

1st, I claim, in combination with the plows, B, the employment or use of horizontal or rotary cutters, D G, arranged and applied to operate in the manner substantially as and for the purpose set forth.

2d, The lifting or elevating bar, K, when arranged in connection with the axle, draft pole and plow beams, to operate in the manner substantially as and for the purpose specified.

3d, The shaft, L, on the axle, H, provided with the arms, k k l, and arranged in relation with the elevating bar and plow beams, to operate in the manner as and for the purpose set forth.

67,352.—PUNCH AND SHEARS.—D. D. Robinson, Niles, Mich.

1st, The wheels, D and E, with their punches and dies, all constructed, arranged and operating substantially as described.

2d, The stand, A, having at one end the die wheel, E, and rack-inclined plane, L, at the other, with the portion, b. of the shears supported about its middle in combination with the spring beam. B, with the punch wheel, D, at one end, the rack-inclined plane, L', at the other, and bearing the portion, a, of the shears, the rollers, m m, being arranged therewith and operating substantially as described for the purpose specified.

3d, I claim the set screw, R, in combination with the adjustable inclined plane, L, and the geared rollers, m m, substantially as described.

67,353.—DOUGH KNEADER.—P. W. Robinson, New Bedford, Mass.

I claim the combination of the frame, A, rollers, B, tray, C, and adjustable corrugated roller, D, substantially as described for the purpose specified.

67,354.—WATER TANK AND REFRIGERATOR.—William Rosenkranz and Michael Esch, St. Paul, Minn.

I claim the tank, E, when arranged as herein shown and described in combination with the drawer, H (perforated), false bottom, D, revolving ring, I, and case, A, of a refrigerator, all made substantially as set forth.

67,355.—MACHINE FOR GRINDING REAPER KNIVES.—Edwin M. Scott, Auburn, N. Y.

1st, I claim, in combination with disk, C, the slides, B B, and thumb screw, d, as and for the purpose set forth.

2d, I claim the disk, C, slides, B B, loose bolt, E, lever, G, all combined substantially as and for the purpose specified.

67,356.—TOBACCO PIPE.—Charles E. Searles (assignor to himself, Edwin Hoyt and Lafayette Farrington), Stamford, Conn.

I claim the combination with the bowl and stem of a tobacco pipe of the socket, C, and cup, D, both provided with an aperture or apertures in the top and the former with the holes or apertures, d e, on opposite sides and the latter with the holes, i j k, on opposite sides, all arranged and operating substantially as herein specified.

67,357.—HANGING STIRRUP.—Prentiss Selby, San Francisco, Cal,

I claim combining with the ordinary stirrup straps of a saddle an elastic strap that will constantly tend to keep the stirrup to the foot of the rider, while his weight is taken upon the ordinary leather strap, substantially in the manner and for the purpose described.

67,358.—APPARATUS FOR MAKING SHEET-METAL PANS.—William Serriss, Sidney, Ohio.

1st, I claim the combination of the two clamping plates, a, with the adjustable gage, f, substantially as and for the purpose specified.

2d, The arrangement of the gage, f, between the clamping plates, a, for operation substantially as herein set forth.

67,359.—SPRING BED.—T. W. Shapleigh and M. J. Colman, Boston, Mass.

We claim the arrangement and combination of the cross bar, C, the screw, D, and nut, E, with the slat and the conical spring with the base coil connected with the next coil of the spring, substantially as set forth.

67,360.—CALIPERS AND DIVIDERS.—Leonard Shelters (assignor to himself and John Pattee), Manchester, N. H.

I claim the combination of the calipers and arms, B B', together with the points, H H', forming the legs of the dividers and turning on the pivot, C, and on which arms are marked the divisions of a rule or scale, and the stop, D, the thumb screw, G, in the slot, F, or their equivalents, substantially as set forth.

67,361.—BOILER CLEANER.—W. P. Slensby, Chicago, Ill.

I claim the arrangement of the circular plates, C C, secured together by rods, a, band, D, thimble or rings between said plates, screw rod, E, substantially as herein shown and described, whereby to clean the interior surfaces of steam generators and the exterior surface of the boiler tubes, and at the same time agitate the water in the boiler.

67,362.—BED BOTTOM.—Eleazer Small, Dennisport, Mass.

I claim the perforated bars, C C, with metal plates, D, at each end, for securing the pins, e e, of the bed bottom as constructed, and to adjust the same to suit the size of the bedstead, all constructed and used in the manner as specified.

67,363.—WINDOW BLIND.—Hiram Smith and T. J. Lumis, Norwich, Ct.

We claim the construction of movable blind slates with square shoulders, b b, in combination with stiles which are constructed with rounded or reduced edges, substantially in the manner and for the purposes described.

67,364.—ESCAPE PIPE FOR STEAM ENGINES.—Joseph Smith, Philadelphia, Pa.

I claim a steam escape pipe for high pressure engines, locomotive or stationary, whose inlet and exit openings shall be of uniform or nearly so areas and of much less area than a portion at or near the exit thereof, so that the steam can expand, loose its force, and become muffled, before its escape into the air, substantially as and for the purpose described.

67,365.—MACHINE FOR PULLING HOP POLES.—William Smith, Nunda, N. Y.

I claim the attaching of the iron beveled jaws to the end of a beveled lever and working within a quadrangular band, which gives the jaws a side draft upon the pole thereby raising it perpendicularly up the more force applied to the lever, the more firmly the jaws grasp the pole or anything that is to be drawn out of the ground.

67,366.—METHOD OF PRESERVING WOODEN PILES.—W. Harrold Smith. Memphis Tenn.

I claim the wooden pile, timber or structure, A, protected substantially in the manner and for the purposes set forth.

67,367.—CAR COUPLING.—P. H. Snelling (assignor to himself and James Nutt), Wartrace, Tenn.

I claim the combination of the spring-pressed plunger, B, within the draw head having an upper projection or lip, d, in front, coupling pin, D, and stirrup. E, all for operation relatively to and in connection with the coupling link, substantially as specified.

67,368.—DRAW HEAD FOR RAILROAD CARS.—W. S. Shotwell, Patterson, N. J.

1st, I claim the shoulders, a2, upon the drawheads, B, constructed as described whereby the drawheads are prevented from slipping by each other when brought together, substantially as herein shown and described.

In combination with the above, I claim the springs, e e, upon the inner end of the draw head and upon each side of the cross bar, d, whereby the shock of the drawhead upon the shoulders, a2, as they approach each other is partially relieved, substantially as described for the purpose specified.

67,369.—SAWS.—W. R. Stephenson, Transfer Station, Pa.

1st, I claim the teeth, B B' constructed as described provided respectively upon opposite sides with the inclined grooves, b, and having the cutting lips, c d, and inclined bevel surfaces, a, as herein set forth for the purpose specified.

67,370.—Suspended.

67,371.—PROP BLOCK FOR CARRIAGE TOPS.—W. H. Stickel, Knightstown, Ind.

I claim the prop block, A, when provided with the dovetailed groove, e, adapted to receive the corresponding dovetailed elastic removable strips, D, operating as described for the purpose specified.

67,372.—ROTARY HARROW.—P. B. B. Stiles, Galesburg, Ill.

1st, I claim the rotating harrow wheels, A, formed by the combination of the rim, a4, arms or spokes, a, clamping plates, a3, and cutter pins, B, with each other, substantially in the manner herein shown and described and for the purpose set forth.

2d, The combination of the adjustable loops or clevises, F, with the cutter pins, B, and coupling bar, D, substantially as herein shown and described and for the purpose set forth.

3d, The combination of the draft bars, C, and short chains, c1, with the center pins, B, and axle. G, of the sulkey, substantially as herein shown and described and for the purpose set forth.

67,373.—BURNING FLUID.—M. L. Stoddard, Corning, N. Y.

I claim the within named ingredients when mixed in the proportions herein set forth for the purpose described.

63,374.—APPARATUS FOR CUTTING FILES.—S. A. Sutton, Pawtucket, R. I., assignor to himself and Lysander Flagg, Smithfield, R. I.

1st, I claim the adjusting of the cutter, T, relatively with the face or surface of the file blank by means of the pivoted bar, N, circular plate, V, with cutter arm, Y, attached, and the arm, k, of the nut, J, to act upon the bar, N, substantially as shown and described.

2d, The regulating of the force of the blow of the hammer by means of the arm, U' bearing against the spring, Q, and operated by the arm, k, of the nut, J, and the pivoted bar, M, substantially as shown and described.

3d, The cutter arm, Y, pivoted in the bearing, s, of the bolt, W, in combination with the cutter, T, and semi-cylindrical bed, A' for the blank, substantially as set forth.

67,375.—DOGS FOR SAW LOGS.—Samuel Sykes, Chippewa Falls, Wis.

I claim the part, F, forming with the body of the dog, a bent lever as and for the purpose herein shown and described.

67,376.—PROPELLER.—C. E. Foley, Brooklyn, N. Y.

I claim the arrangement of the shaft, B, sleeve box, E, plate, D, crank, G, ratchet wheel, h, spring, i, clutch, J, shifting lever, k, spring, O, and stud, m, substantially as described for the purpose specified.

67,377.—SPITTOON FOR RAILROAD CARS.—Morris Traver, Poughkeepsie, N. Y.

I claim the construction and arrangement of the convex disk, E, to whose under side is secured the spring rod, E, within and supporting the hollow cone, C, working through the braced plate, G, and pressing up the said disk, E, against the braces, M, of the box, A, as herein set forth for the purpose specified.

67,378.—FOLDING CHAIR.—Gregor Trinks, New York City.

1st, I claim the scolloped bars, g, or their equivalents in combination with the seat, B, cross bars, f, and side pieces, A, of a folding chair constructed and operating substantially as and for the purpose described.

2d, The adjustable slides, f, in combination with the flexible arm pieces, h, of a folding chair constructed and operating substantially as and for the purpose set sorth.

67,379.—HARNESS HAMES.—Seth G. Tufts, Maineville, Ohio.

1st, I claim the strip, B, provided with flanges, b1, overlapping the sides of the hame, A, and fitting with grooves in the sides thereof, so that their outer sides shall be flush with the sides of said hame, as herein set forth for the purpose specified.

2d, The combination of the strap piece, E, with the open hame tug hook, C, and with the hame, A, substantially as herein shown and described and for the purpose set forth.

67,380.—HEDGE-TRIMMING MACHINE.—Armstrong Tweedy, Collinsville, Ohio.

1st, I claim the cutter, O, in combination with knives, R, when constructed, arranged, and operating in relation to the frame, G G1, in the manner and for the purpose described.

2d, The combination of the cutter, E, with bar, L, plate, M, post, P, and rod, J, when arranged to operate conjointly with cutter, O, and knives, R, in the manner substantially as and for the purpose specified.

67,381.—SADIRON HEATER.—David Utley, 2d, Moscow, N. Y.

1st, I claim the combination of the sides, B, with the shell, A, so arranged as to slide around and cover the slots around the handles, as herein set forth.

2d, The employment of the thickness of sheet metal, m, in combination with the slides so arranged as to be notched to adapt them to different sized handles, as herein set forth.

3d, Retaining the slides in position in the shell by the grooves, i, and projecting rim, k, as specified.

67,382.—APPARATUS FOR KINDLING FIRE.—Henry Van Ausdall, Keokuk, Iowa.

I claim the portable fire kindler, constructed as described, consisting of the hollow metallic cylinder, A, closed at each end, and having supply tube, B, the vertical parallel wick tubes, C, four or more, secured together by means of the cross piece, D, ball, E, pivoted at each end of the cylinder, A, adjusting wire, G, handle, H, attached to vertical rod, F, all arranged to operate as herein set forth for the purpose specified.

67,383.—COOKING STOVE.—Charles Van De Mark, Phelps, N. Y.

I claim the openings, b b, in the top plate of the stove, in combination with the cross partition, G, and valve or valves, a, for the purpose herein specified.

I also claim the notches or openings, i i, at the sides of the front boiler openings, in combination with the openings, b b, substantially as and for the purpose herein specified.

I also claim the combination of the boiler or heater, D, and the stove, each constructed substantially as described, and both operating together substantially as and for the purpose herein specified.

I also claim the division plate, h, either with or without the plate, g, on the boiler, for the purpose specified.

67,384.—DREDGING MACHINE.—Jean Louis Vergniais, Paris, France.

I claim, 1st, The undulating lower face of the sucker, having perforations on the sides of the undulations, substantially as described.

2d, The combination with the induction and eduction valves, K D, and the pump chambers, B, or the jointed pipe and perforated undulating-faced sucker, substantially as described.

67,385.—PAINT.—J. P. Vainsonheller, Urbana, Ohio.

I claim the fixing of the color of any pigment that may be used, by its combination with lime and copperas, as and for the purpose described.

67,386.—LIFTING JACK.—Richard Walter, Batavia, N. Y.

I claim the lever, C, stop block, D, and serrated plate, F, when acting in conjunction, as and for the purpose herein set forth.

67,387.—HARROW.—James Walsh, Stark county, Ill.

I claim the straps of iron, B B and C C, with their hooks, e, and eyes, d, or hinges, and arranged in pairs, the jaws, a b c, on their undersides, also the regulating holes, i i, also the attachment or extension straps, D D, for carrying additional timbers, E E, all for the purposes described, and combined in the manner above stated.

67,388.—MOP WRINGER.—Charles E. Wareham, Sedalia, Mo.

I claim, 1st, The roller, D, set in the swinging frame, E, which is journalled in B, all as set forth, in combination with the roller, C, also journalled in B, in manner and for the purpose substantially as described.

2d, The mop wringer, composed of two rollers, D and C, mounted in the uprights, B B, on floor, A, castors, a, substantially as described.

67,389.—GRAIN BINDER.—George Warner, West Liberty Iowa.

1st, I claim the combination with the bar E, arm F, finger G, and wire H, the griping, cutting, and twisting device composed of the wheel K, provided with teeth g, the holder L, with knife l, slotted wheel P, and revolving forked bar e', all arranged to operate substantially as and for the purpose set forth.

2d, The shaft S, for giving motion to the griping, cutting, and twisting device connected with the shaft B, by the gearing X Y, in combination with the pin u, attached to the slide v, the holes b', in the wheel X, and the bar V, connected with an arm o, on shaft p, and provided with the slide U, having the forked bar e', attached, and also provided with a pendent pin g', fitted to the grooved hub Y', all arranged to operate substantially in the manner as and for the purpose set forth.

67,390.—TABLE-LEAF SUPPORT.—William Whitworth, Cleveland, Ohio.

I claim one or more springs E, placed upon the side of the hinged arm D, in combination with the slotted stay C, in the manner as and for the purpose substantially as set forth.

67,391.—MODE OF PUTTING UP AND PRESERVING BUTTER.—John Wilcox (assignor to himself and John Hooker), Springfield, Mass.

1st, I claim the combination of the cups a a a, with each other and with the main jar A, substantially as specified for the purpose set forth.

2d, I claim the elastic cushion c, in combination with the bar b, grooves g g', and followers e, as and for the purpose specified.

3d, I claim a packing k, for the protection of the cups a a a, within the main jar A.

4th, I claim a butter cup and stamp or marker a, when made in one and the same piece, substantially as and for the purpose described.

67,392.—VALVE GEAR.—Furman R. Wilson, N. Y. City.

1st, I claim the combination of the crank Q, sliding lever M, and valve-rod L, in the manner and for the purpose substantially as set forth.

2d, The combination of the rod K, cam c, lever r, and rod U, in the manner and for the purpose substantially as set forth.

67,393.—BAG FASTENER.—Abraham M. Wright (assignor to himself and F. R. Witmer), Safe Harbor, Penn.

I claim the arrangement of the ring, D, cord, C, link, B, in combination with my combined hook and wedge lever, A A', all constructed and operating in the manner and for the purpose specified.

67,394.—MACHINE FOR BURRING WOOL, ETC.—Robert J. Clay, Greenpoint, N. Y., assignor to himself, J. T. Husted, E. G. Burling and Cornelius Corson.

1st, I claim the combination, with suitable feeding mechanism and knife or clearer, J, of a rotating cylinder, provided on its periphery with smooth comb-like plates or strips, arranged to encircle the cylinder, and with their teeth in tangential relationship thereto for operation together, substantially as specified.

2d, And in combination therewith I claim the construction of the plates or strips, F, with their teeth, a', beveled from beneath or inner faces thereof and their rear edges, b', inclined from above or outer faces of the same, essentially as shown and described.

3d, The combination, with a cylinder encircled by comb-like strips, of a knife or clearer, J, arranged on its clearing edge or edges to occupy an inclined position relatively to the strips or the latter an inclined relationship to the clearer for operation together, substantially as herein set forth.

4th, In combination with the feeding rolls, guiding plate, or tray and laying roller, or their equivalents, the comb or comber, H, having a curvilinear travel across or relatively to the feed, essentially as specified.

REISSUES,

2,701.—BRIDGE.—David Hammond and W. R. Reeves Canton, Ohio. Patented June 21, 1864.

We claim, 1st, The arch, A, constructed of the side pieces, a a, top piece, b c l moling pieces, c c and n n, bolts, d d, nuts, e e, the whole combined substantially as herein specified.

2d, The combination of the arch, A, constructed as hereinbefore specified,

the string pieces, D D, suspension rods, B B, diagonal brace, C C, and shoes, E E, substantially as herein set forth.

2,702.—Method of Casting the Driving Wheels of Horse-powers, Harvesters, etc.—E. P. Russell, Manlius, N. Y.—Patented Aug. 15, 1865.

I claim, 1st, Placing the pulley pins of driving wheels in the sand or mold by means of a model driving wheel so as to secure equidistance between the pins, substantially as and for the purposes specified.

2d, The combination of the driving wheel, A, the pin, C, and the friction roller, B, constructed in the manner and arranged substantially as described.

2,703.—Plow.—Frederick Volkman, Hoboken, N. J., assignee of Bruno Velkman. Patented Nov. 27, 1866.

1st, I claim a plow cart that is made and operating substantially as and for the purpose herein shown and described.

2d, The device for raising and lowering the front end of the plow beam, L, by means of the screw shaft, I (fitted in the axle, D, and sliding block, b), the nut, c, and plate, f, balance bar, e, links, g and r, all made and operating substantially as herein shown and described.

3d, The adjustable links, n, when so made by the application of a set screw, n', substantially as and for the purpose herein shown and described.

4th, The draft chain, K, attached to the underside of the plow beam and to the landside of the same or, in other words, to the lower left-hand edge of the same, substantially as and for the purpose herein shown and described.

5th, The perforated axle, D', in combination with the frame, B A E, and sliding block, b, for the purpose of allowing the lateral adjustment of the screw shaft, I (or its equivalent), substantially as and for the purpose herein shown and described.

6th, The manner herein shown and described of adjustably securing the draft bar, G, to the plow cart by means of the perforated axle, D', bolt, h, and semi-circular front plate, D, and pin or set screw, S, all made and operating substantially as herein shown and described.

7th, In combination with the device for adjusting the plow beam up and down the wheel, F, of the cart, when so arranged that by its adjustment the axle of the cart can be sunk more or less, as set forth.

8th, Hanging the front end of the plow beam directly to the screw shaft, I, by means of links, f g, balance bar, e, and nut, c, all made and operating substantially as herein shown and described.

9th, The draft chain, K, when secured to the plow in the manner described in combination with the laterally as well as obliquely adjustable draft bar G, as set forth.

2,704.—Cider Mill.—W. N. Whiteley, Jerome Fassler and Oliver S. Kelly, Springfield, Ohio. Patented Dec. 15, 1863.

1st, We claim the press beam, B, constructed with the lugs, G G, upon its lower part and at a distance from ends, as and for the purpose shown and described.

2d, The arrangement of the posts, A A, press beam, B, girder, C, rails, E E, post, F, and platform, I, to form the frame of a combined grinding and pressing fruit mill, as set forth and described.

2,705.—Stripping Top Flats in Carding Machines.—W. B. Bates, Mansfield, Mass., Administrator of the Estate of George Wellman. Patented March, 18, 1856. Antedated Nov. 25, 1853.

I claim, 1st, The combination of the segmental gear and its set rim or locking plate, with the pinion and its locking plate or recess, as a device for imparting an intermittent rotation to mechanism from a continuous one, for the purpose of operating the stripping mechanism, or that which moves the clearing frame, from one top to another substantially as described.

2d, The combination of the said device for producing intermittent rotation, with the mechanism that lifts, strips, and lowers the top card to another substantially as described.

3d, The combination of the said device for producing intermittent rotation, with the mechanism that moves the cleansing frame from one top card to another, substantially as described.

4th, Combining and arranging the segmental gear and its set rim or locking plate, with the two pinions, each with its locking plate or recess, placed on opposite sides of said segmental gear, so as to operate the stripping apparatus, and move the cleansing frame alternately, substantially as described,

5th, The combination and arrangement of the mangle pins or teeth in the arc of a circle directly attached to the cleansing frame and concentric with its movements, for the purpose of avoiding intermittent gearing, substantially as described.

6th, Mounting the stripper card upon radial arms that have their centers or axes below the stripper card and near the axis of the cleansing frame, substantially as described.

7th, The combination of the cams, X X, with the levers, Y Y, carrying and operating the stripper card, substantially as described.

8th, The combination of the cams, X X, with the lifting rods, Z Z, and the levers, Y Y, arranged to operate in connection, substantially as described.

9th, The combination of the cams, X X, with the chain belts, Q', the chain pulleys, R', and shaft, M, arranged and operating substantially as described.

10th, The combination of the guide, E', on the cleansing frame with the stationary guide, D', on the frame of the machine co-operating substantially as described.

11th, The combination of the springs, F', and the pins, E', and lifting rods, L, and their application to the frame, S, substantially as described.

12th, The mechanism for cleansing the stripper card arranged and applied substantially as described.

2,706.—Stripping Top Flats for Carding Machines.—William B. Bates, Administrator of the estate of George Wellman, Mansfield, Mass. Patented Dec. 6, 1853.

1st, I claim the combination and arrangement of a continuously revolving radial arm and pin, or crank pin, and a circular locking plate connected therewith, with a series of intermittently revolving radial working grooves to receive said pin, connected with a locking plate provided with segmental recesses corresponding to said grooves and to the other locking plate, substantially as described.

2d, Combining with the cleansing frame, a mangle gear and the mechanism herein described for imparting an intermittent motion to the same suitably arranged, by which the cleansing frame is moved from one top card to another in any order desired, in both directions, and held at rest while the cleansing operation is performed, substantially as described.

3d, So combining and arranging the cleansing frame, the mangle gear and pinion, and mechanism for giving it intermittent motion, when the motion of the cleansing frame is from one top card to the next but one, that when the pinion passes around the extremity of the series of pins or teeth of the mangle gear to the opposite side of the same, the distance of the point from where the pinion starts to where it stops on the mangle gear will correspond to the movement of the cleansing frame from one top card to that next to it and thus shift the order of cleansing the top cards when the frame is moving in opposite directions, substantially as described.

4th, Attaching the stripping card to radial arms, so arranged that by the oscillation of said arms the stripping card will be carried beneath the raised top card to cleanse the same, substantially as described.

5th, Forming the working faces of the cams that raise the top cards in separate and detached segments, placed so as to act in succession in combination with a series of projections or working surfaces on the device that raises the top cards substantially as described.

6th, The combination and arrangement of the several correspondent parts of mechanism both new and old, so as to form a complete apparatus by which the top cards of a carding machine may be automatically stripped or cleansed, substantially as described.

2,707.—Bridge.—Zenas King, for himself and assignee of P. M. Frees, Cleveland, O. Patented Oct. 1, 1861.

1st, I claim, viz: The construction and arrangement of the arch when the same increases gradually in its vertical and lateral dimensions from the ends A' A'', of the arch to its center or crown, substantially as and for the purpose set forth.

2d, The construction and arrangement of the arched or curved stay plates or channel irons in combination with arched bridges, for the purpose specified.

2,708.—Centrifugal Sugar Machine.—Alexander Mackey, New York City. Patented June 18, 1867.

I claim, 1st, The combination with the centrifugal cylinder of a distributor arranged within but detached from the said cylinder, substantially as and for the purpose herein set forth.

2d, The distributor, C, constructed essentially as shown, in combination with the centrifugal cylinder, B, and arranged in relation thereto substantially as and for the purpose herein set forth.

2,709.—Cooking Stove.—Daniel E. Paris, Troy, N. Y., assignee by mesne assignments of James R. Hyde. Patented June 10, 1862.

I claim, 1st, A reservoir thus situated and constructed with a concave front, next adjoining said rear flues, the back of which latter shall be of a similar and conforming shape, for the purpose set forth and herein explained.

2d, Bolting or fastening the reservoir to the upright plate of the stove, substantially as herein shown and described.

DESIGN.

2,713.—Coffin.—Henry Hoffman, Jenner's Cross Roads, Pa.

Note.—Fifty-four patents in the above list were obtained through the home office of the Scientific American, exclusive of a number solicited through the Washington branch.—Eds.

PATENT OFFICE DECISIONS

BEFORE THE BOARD OF EXAMINERS-IN-CHIEF OF APPEALS.

Interference Between the Applications of M. and D.

Elisha Foote for the Board.

M. has a patent granted Feb. 10, 1863, for a self-raking apparatus applied to a single-wheel rigid-bar reaping machine. The improvements consist in applying the same self-rake to a two-wheeled jointed-bar machine. D. has an extensive manufactory of reaping machines at Auburn, N. Y. M. appointed an agent residing at that place to endeavor to procure the adoption of his rake upon the two-wheeled reapers manufactured there, and instructed him fully, in February, 1865, as to the manner of making the application. In July following he went there personally, procured their adoption by D., spent two or more weeks in D.'s manufactory making the application, and entered into a contract with him for the use of his patent for a stipulated rent.

It is alleged by D. that the apparatus constructed under the supervision of M. was imperfect and did not operate satisfactorily; that the pulleys were not of the proper relative sizes, the cams were not of the right shape, etc. If all be admitted that he alleges to the full extent that he claims, it would fall short, in our judgment, of making him an inventor. It is a mistake to suppose that the one who perfects the mechanical details is entitled to the patent. An inventor need not necessarily be a mechanic. He has a right to employ the mechanical skill and experience of others to carry out his conceptions, and it has been said that even their inventions in reference to details belong to him. It is hardly to be expected that the first structure should be perfect; a trial and some practice usually suggest many alterations, and these do not by any means deprive an inventor of his right to a patent.

We entirely agree therefore with the Examiner in awarding the patent to M., and his decision is affirmed.