The Great Chaudiere Dam on the Ottawa.

The Ottawa Times gives an account of the great Chaudiere dam on the Ottawa river, which was formally opened Oct. 16th. It states that it has been ascertained that for years past the water in the Ottawa during the autumn months has been gradually decreasing in volume, and never before has it been so low as this season. The cause will doubtless remain a mystery until the end of time. In fact so low had the water fallen, that for a time apprehensions were entertained that the great mills and factories at this place would be compelled to shut down in consequence. This would have been almost a calamity, had the necessity for it arisen, as many thousands derive their livelihood from their constant operation. However, human ingenuity came to the rescue, and provided a certain and lasting remedy.

An arrangement had been effected sometime since between the mill-owners here and the Government, that the former might construct a dam in the bed of the river, just above the Chaudiere Falls, for the purpose of raising the water in the rear, with a view to augmenting the supply in the ponds and "flooms" connected with the mills. Then arose the difficulty about drowning the adjacent country on both sides. This was provided against by the removal of an island, in the immediate vicinity of the dam, to low water level, so as to adn it of its escape when high. This part of the work has been so managed, that the obstruction caused by the dam in low water will be equaled by its facility for escaping during high water—there being an exact quantity of high water obstruction removed to equal that put in to affect the low

It was no ordinary undertaking to control the impetuous waters of the great Ottawa, and subject their powers to the manipulation of man—to obey his will, and to be obedient to his wishes and desires; but with all old Ottawa's greatness it has been brought down to usefulness, and compelled to exercise a certain amount of industry before taking its departure for its final home in the bosom of the Atlantic.

The entire length of the dam is nearly 400 feet, built of framed beams strongly bolted, and securely fastened to the is now in so good condition that I would not exchange it for solid rock in the bed of the river. Its width at the base is 74 feet and 62 feet at the top, with a secure bed of stone presented to the current. The island which was removed was about two acres in extent, and stood about 5 feet 6 inches above the water level. This furnished 9,0.0 yards of stone which were used in filling in the dam.

The New Metals.

The Boston Journal of Chemistry says:—We presume but comparatively few of our readers have had opportunities of examining the new metals brought to light by spectrum analysis. The two most remarkable, casium and rubidium, are lars of which appeared in our issue of the 22d July—we have in pure naphtha. The expense of eliminating these rare and contributions they intend to exhibit. We learn that liberal sparsely disseminated metals is so great, their cost is marvel ously high. A specimen of rubidium in our possession cost us at the rate of more than seven thousand dollars a pound, or one dollar the grain. These two new alkaline metals were discovered by Bunsen, a few years ago, while experimenting upon some mineral waters with the spectroscope. By no other method of analysis could they have been discovered. In examining the waters, he observed some bright lines he had not seen in any other alka'ies which he had investigated. He felt certain that these lines indicated a new metal or metals, just as Adams and Leverrier, from the perturbations of the planet Uranus, were convinced of the existence of Neptune. The amount present in the substance examined could not exceed the one thousandth part of a grain; hence, the quantity held in the water was infinitesimal. To obtain a manageable quantity, Bunsen evaporated forty tuns of the Durkheim Spring water, and from this vast amount obtained of cæsium only 105 grains of the chloride, and of rubidium 135 grains! How few know anything of the magnitude of the labors of chemists engaged in research. Since the dis covery of the new metals, in the spring water of Durkheim, they have been found in many other springs, in mica, and other old plutonic silicates; also, in the ashes of beetroot, tobacco, coffee, and grapes. The mineral lepidolite contains considerable rubidium, and most of the specimens in the hands of chemists were obtained from that mineral. We can not predict for the new alkaline metals any very great practical use in the arts.

The other new and interesting metals which we find in our collection are lithium, thallium, and indium. The first of these is of white color, and fuses at 180°. It is the lightest metal known, being almost as light as cork. Before spectrum analysis was discovered it was supposed the lithium salts were very rare; but the wonderful spectroscope reveals their presence in almost all waters, in milk, tobacco, and even in human blood. A very strange plant is the tobacco plant. How singular, that atoms of the rarest and most remarkable of all the metals-cæsium, rubidium, and lithium-should be found in this pungent weed! When volatile lithium compounds are heated in flame, they impart to it a most magnificent crimson tinge; nothing in ordinary pyrotechny can compare with it. If one six-thousandth part of a grain of lithium be present in a body, the spectroscope shows it when it is vola tilized, or burned.

Sumac,

Considerable inquiry having been recently made for information upon the subject of sumac, the commerce in which

the Staghorn sumac, Smooth sumac, Dwarf sumac, Poison sumac, Poison ivy, and the Fragrant sumac. The sumacs have a resinous, milky, acrid sap, and several varieties are poisinous. Several kinds, among which are the most common varieties in this country, namely, the Staghorn and Smooth sumac, contain tannin and yellow coloring matter, and are considerably used for tanning light colored leathers and in dyeing. It is also used in calico printing for producing yellow, grey, or black or brownish yellow, according to the mordant used in the operation. A number of varieties grow in different parts of Europe, which are used for the purposes above specified. The cultivation of this tree for its market able products has largely increased in some parts of the United States during the past four or five years The parts of the tree which are gathered are the leaves, the peduncles, young branches, and panicles, of which considerable quantities are exported."

The Richmond Enquiror says: "Large quantities are gathered in the counties of Eastern Virginia, and sent to Richmond, Alexandria and Fredericksburg for sale. It is dried and packed in bags, and sells readily for from \$1.75 to \$2 per 100 pounds. It grows spontaneously, and the crop of next year is improved by breaking off the growth of the present year."

The mordants used in dyeing with this substance are either tin, acetate of iron, or sulphate of zinc. The first gives yel low, the second grey or black, according to strength, and the third brownish yellow.

A Challenge from a Lady.

NEW YORK, Oct. 20, 1868. Messrs. Wheeler & Wilson, No. 625 Broadway:

Gentlemen: -Referring to the challenge of Mr. Pratt whose Wheeler & Wilson Sewing Machine has been in use ten years without repairing, I beg to state that I have used my Wheeler & Wilson Sewing Machine, in family sewing, fourteen years, without even the most triffling repairs, and it your latest number (now upward of 350,000). One needle served me more than a year for fine sewing.

Can any one beat this?

Mrs. ANNE WARNER. Yours truly,

Any one who can give a better report than this will be en titled to one of our new tucking gages.

WHEELER & WILSON MANUFACTURING Co.

CHILIAN AGRICULTURAL EXPOSITION.—With reference to the Agricultural Expisition to be opened at Santiago, in Chili, South America, on the 1st of April next-the particustrikingly like the metal potassium; and so greedy are they to state that the Chilian Minister expresses the hope that for oxygen, it is necessary to keep them constantly immersed manu acturers throughout the country are preparing the and extensive preparations are being made by that Government for the accommodation of all.

OFFICIAL REPORT OF PATENTS CLAIMS AND

Issued by the United States Patent Office.

FOR THE WEEK ENDING OCTOBER 27, 1868.

Reported Officially for the Scientific American.

PATENTS ARE GRANTED FOR SEVENTEEN YEARS, the following being a schedule of tees: -

being a schedule of fees:

Un sing each tavest.

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On film application for Design (three and a balf years).

On film application for Design (seven years).

On film application for Design (four een years).

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

Pamphletscontaining the Patent Laws and full particulars of the mod of applying for Letters Patent, specifying size of model required, and much other nformation useful to Inventors, may be had gratis by addressing MUNN & CO.. Publishers of the Scientific American. New York.

83,355.—Harvester Rake —Philip Ammerman, Cynthiana,

I claim the guide bar, k. and beveled block or cap, t, in combination with rak., A, and endless chain, C. sub-tan laily as and for the burpose described.

83,35.5.—Sugar Pan Derrick.—Joseph D. Ayers, East Greensborough, assignor to J. O. Cutter, and William Wallace Goss, I claim, i.t., the combination, in a sugar ban derrick, of the guide beams, B. guide past, G. rotating ubright, A pulley, k., cords, a b. derrick beam, C. drum and crank handle, b. all constructed and operating substantially as shown and described, and for the burpose set forth.

2d. The frame, m m o o, hook rods, h o h h, and braces, q, q, with the parts specified in clause 'rist of the claim, all substantially as shown and described, and for the burpose set forth.

83,357.—MANUFACTURE OF PIGMENTS FROM THE SULPHURETS of ZINCANDLEAD.—Nathan Bartlett, Centerville, N.J., assignor to binself and Franklin Osgood, Richmond County, N.Y.

1 claim, 1st, The manufacturing or pigments from the sulphurets of zinc and lead, combined in the manner and by the means substantially as herein described

21, Also, the pigment made from the sulphurets of zinc and lead, as a new article of manufacture. Ky. I claim the guide bar, k, and beveled block or cap, t, in combination with ak.. A, and endless chain, 0.80 b tan lally as and for the purpose described.

i. Also, the pigment made from the sulphurets of zinc and lead, as a new cle of manufacture.

AUTOMATIC CAR COUPLING.—Wilson Bragg, Con nersville, Ind.

I claim the combination of the chain, E, sliding block, C, and coupling pin, F, substantially as and for the purposes specified.

83,359.—Hot Air Register.—Thomas W. Brown, Reading,

Pa.
Iclaim the improvement of having the sectoral lever "xed directly to the lat journal, when the slats are pivoted to the frame, and to a connection bar having no pivoted connection with the sectoral lever, as set forth, the whole being substantially as described and r-presented. Whole being substantiatly as described and presented.

3,360—Spring.—Frederick Cajar (assignor to himself and James Anderson), New York civ., I claim elliptical or arched springs, made of corrugated sheets or plates, arranged as herein shown and described, substantially, as and for the pur-

et forth MILL FOR TEMPERING CLAY.—George Carnell, Sam-

nation upon the subject of sumac, the commerce in which seems to be growing in this country, the following from the New York Mercantile Journal will be of interest:

"The sumaes belong to the Rhus genus of the order of Ancardiaceæ of plants. Gray, the botanist, makes six varieties of sumae found in America from Virginia northward; namely,

their connecting or reciprocating appliances, constructed, arranged, and operating sub-tantially as and for the purposes set forth.

83,363. FOLDING PERAMBULATOR.—Andrew Christian, New Yorksitz

83,363. FOLDING PERAMBULATOR.—Andrew Christian, New Yorkelty.
I claim, lst, Extending the front uprights, D, of a folding perambulator downward, to form supports for the front axi-J, as set forth.
2d, Extending the rear uprights, E, of a folding perambulator upward, to form supports for the state of the

83,304 — SEEDING ULACHIME.— N. A. Clopton, day to the Cloutor, Fauquier County, Va We claim the combination and arrangement of the reciprocating slides, k 1, vibra ing arms or levers, b, connecting pipes or hats, j, pivoted arms, g f, and springs, 1, or their equivalents, constructed and opera ed to the manner substantially as shown and described, and for the purp se set forth.

83,365.—Machine for Edging Metals.—William Crossley

Chicago, Ili.

I claim the combination of the slotted guide, C. C., carriage, B. E., clamp A., track, G. G., slides, M. M., crank screw, and slides, F. F., construct as and for the purpose set forth.

Lohn M. Cullen and Andrew J.

for the purpose set forth.

83,356—DRILL PRESS.—John M. Cullen, and Andrew J.
Bard. Pittsburg, Pa. and, Pittsburg, Pa.

c claim, not any of the specified parts in severalty, but the improved, consisting of the several parts specified, all combined, constructed, a., a nged as d. Seribed.

-FRUIT JAR.—Edward M. Davis (assignor to Henry M. Collins, Benjamin F. Collins, and Homer Wright), Pittsburg, Pa.
I claim, 1st, The method, substantially as described, of labeling preserve cans and other similar vessels, in the act of sealing the covers of such vessels

2d, Thecover, B, constructed with names radiating from its center, and adapted for use upon a preserve vessel, having an index of a suitable description upon it, substantially as and for the purposes described 83,368—ATTACHING STRINGS TO TAGS.—Benjamin L. Dennistre Maria

55,500 — ATTACHING STRINGS TO TAGS.—Benjamin L. Dennison, Boston, Mass.

I claim, 1st, The combination of the metallic clasp, a, with the string and label card, substantially as and for the purp see described.

21, The metallic clasp, a, figs. 2 and 5, constructed so as to operate as a class, a needle, and a bar, at the same time, substantially as and for the purpose, described.

83.369 —Combined Hinge and Fastener —Leonard Felker,

Tewke-bury, Mass.
I claim the combination and arrangement of the support, e, with its stem, c, and pir tle, o, latches, h and i, and catches, b and b', and wings, if, with or without the plate, a, when arranged to operate as and for the purpose describes and set forth

83,370.—FehD WATER HEATER FOR STEAM GENERATORS.—

R. R. Fenner (assignor to himself and Eti Hatherstadt). Ur.ana, Ill. I claim the arrangement of the supply pipe, E. exhaust pipe, C. ingress pipe, B. water delivery pipe, G. niter, I, and vessel, A, substantially as hereafter the 83,371.—SCREW TAP.—Walter K. Foster, Cambridgeport,

Mass.

I claim the arrangement of the main and lateral oiling passages, a b. and the groove, d, in one of the ranges, of screw cutters, the whole being substantially as described.

83,372.—PROCESS FOR THE MANUFACTURE OF IODINE.—Jules

83,372.—PROCESS FOR THE MANUFACTURE OF IODINE.—Jules Fonzerat and Lucien A. Tartiere, Quogue, N. Y., assignors to "The Alga Chemical Wo ks," New York city.

We claim. 1st, Filtering the Calcinized and boiled mussels, preparatory to their distillation, as set forth.

2d, The application of peroxide of manganese to the making of iodine from mussels, as set forth.

3d, The process herein specified of producing iodine from mussels.

83,373.—SPRING BED BOTTOM.—Thomas J. Gaffney and Charles H. Du ks, Detroit, Mich.

We claim the leather strips, H, in combination with the longitudinal top slats, G, and transverse steel oars, E, whereby the slats are secured to the bars, as herein shown and described.

bars, a berein shown and described.

83,374.—VULCANIZED INDIA-RUBBER BELTING.—Dennis C. Gately, Newtown, Conn., a signort). New York Beiting and Packing Company. Antedated October 2, 1868.

I claim, 1st, Beiting or banding for driving machinery, composed of paper or other pulped and calendered material, combined with india-rubber or other vulcanizable material, substan tally as herein set forth.

2d, The use, in combination with paper or other pulped and calendered material, of a vulcanizable cement, applied either externally as a coating, or both internally, as a coment between swyral layers of paper, and externally, substantially as and for the Durposes st forth.

3d, The vulcanizing ofpaper pelitics, with rubberor other material or compound capable of vulcanization, but we-n metal plat is or otherwise, as herein indicated, so as so produce a smooth surface on the betts, substantially as set for

53.375.—Spinning Machine.—John Goulding, Worcester,

Mass.
I claim, 1-t, The combination of the segment cam, k, in two parts, elastic roller, j, b, ake lever, s, with its pin, u, and disk, v, or their equivalents, for giving an intermittent feed to the roving, and so that the quantity of roving given out fir each revolution of segment cam, k, can be regulated substantially as set forth.

given out fir each revolution of segment cam, k, can be regulated substantially as set forth.

2d. The segment cam, k, in two parts, elastic roller, j, brake lever, S with step nn u, disk, y, frum, G, follers, J I and spool c, in combination with the twisting tube, K, provided with a stable b', or hielf equivalents, to produce a counter twist to the roving, substantially as set forth.

3d, the segment cam, k, in two parts, elastic roller, j, brak lever, S, with its bin, u, disk, v, drum, G, roller, J, t-pool), c, twising tube, K with stable, b', in combination and drawing rollers, c'c'd', flyer, F, spindle, F' bobbin, g', or their equivalents, to produce yarn from roving, substantially as set forth.

4 h, The conical cam, R, or its eduivalent, mounted on the traversing shaft, N, in combination with the tappet arm, b', lever, k', sliding wedge, n', chain wheels, T, and chain, l' which support the spindle rails, M', substantially as set forth.

ветюти. 83,375.—Воцт-неадіно Масніне.—Robert Gracey, Pitts-

burg, Pa.

1 claim, 1st. The weighted lever, F, link, G, and togglearms, KK, in combination with the header, N, and steam cylinder, A, arranged and operating substantially as described.

2d. An adjustance spring bumper head, J, arranged in relation to the weighted grop beam, F, toggles KK, and piston in steam cylinder, A, for regulating the tarow of boltheasing dies, substantially as and for the purposes bereinbefore set forth

83,377.—DIE FOR BOLT-MAKING MACHINES.—Robert Gracey, Pitt-burg, Pa.

Pittsburg, Pa.

1 claim, 1st, The compination of the dies, a a', die blocks, b b' and plunger, f. with or without the socket, o, said parts being arranged substantially

1 claim, 1st, the comminance, and parts being arranged substantially as described.

2d The griping dies, a a', with raised projection, d, in combination with the die blocks, b o', having water passages, n n', when so arranged, substantially as hereinbefore described, as to form an en losed space for the passage of water around the raised portion of the dies whenever the heading tool is withdrawn.

83,378.—INDEX.—Henry H. Hall, Boston, Mass.
I claim the within-described index or rabular guide to 1, dexes, consisting of the combination of letters and figures, substantially as and for the purposesset forth.

I claim a folding table, made with a three part top, A B C, in combination with flat iron bolder, H I, higged leg, G, supporting a pivoted bear er, S, and bearer, T, constructed and arranged to operate substantially as and for the purpose set forth.

80,380. CHECK-VALVE FOR Section 1.

Joel Hayden, Jr., Haydenville, Mass.
I claim the combination of the valve, J. cup, F. connecting rod, G. outlet, B. and lot. C. with a partition, A, an 'valve seat, B, between them, whereby the fluid or liquid is enabled to close the valve by its pressure against the cup, when the "alve is reli ved from outside force, substantially as herein described and shown.

Hawar Hophort Lorgan N. I.

83.381. - Buckle.—Henry Herbert, Jersey City, N. J. I clam the self-fastening buckle, consisting of a frame and two slotted slides, for the turpose substantially as described.

83,3×2.—Hot Blast Apparatus for Puddling and Other furnaces.—Hot Blast Apparatus for Puddling and Other furnaces.—P. Hoop, Jr., and R. Hoop, Berlin Cross Roads, Ohio.

We claim, 1st, The rings, C. provided with the lugs, e, in combination with the foundarion plates, c., as and for the purpose described.

2d. The rings, C. in combination with the pides, by made in three or more sections, and having their middle portions outside the chimney, as and for

83,383.—DEVICE FOR SHARPENING SAWS.—David Huffman,

Lursy, Va. I claim the block, A, jaws, BB, and screws. cc. when constructed and arranged as described, and for the purpose set forth. 83 384.—Steam Generator.—R. W. Humphreys, Clarks-

ville, Tenn.
I claim a steam boiler, in the form of a hollow cylindrical annular ring, with fire box and fire flues, and smoke stack, attached substantially in the namer herein shown and described.

majner herein shown and described.

83,385.—ELEVATOR.—Amos B. Hunt. Matteson, Mich.
I claim, 1st. The crane, B. crane pot. A. showes or pulleys, arranged at
the points diffused is rope or rord, C. arranged on the sheaves and passing
down throng the axis of the crane, in combination with a sweed bar. G. all
substantially asset forth.

21. The swivel hook, I and its accessory parts, m. J. n. in combination with
the pin. o. and trip ing device, r. q. all substantially as herein set forth.

36. The crane, B. when constructed of plants and parts, a a g.c. b. d. substan july as described, in combination with the crane post, A. pearing
bocks, h. sweep bar. G. cord or rope, C. and pulleys at the points, d. fu
and l. all asset forth.

83,383.—Plant Protector.— J. M. Hurt, Blacks and
Whites, Va.

Whites, Va. 1 (elaim, as a new article of manufacture, the plant protector, consisting of the cylinder, A. adapted to rest upon the ground over the plant, perfor and circumferentially near 1 stop, a B, and provided with the horizontal glass top, C, as here in described for the purpose specified. 83.387.—Shoulder Brace and Suspender. — Ebenezer

55.50%—SHOULDER BRACE AND SUSPEADER.—EDENCER.

Jennings, Jr., New York city.

I claim. 1st, A combines shoulder brace and suspender, consisting of two straps crossing each other at both ends in adult-bile slides, substantially as described, either with or without an adjustable slide at the back crossing.

2d, The adjustable double slide, cut from a single piece of sheet metal, or other suitable material, substantially as described.

83,388.—BEE HIVE PROCTECTOR.—Alfred S. Johnson (assurnor to himself and Lyman B. Balcon), Wanpan. Wis.

I claim. 1st, The casing or box, A, composed of paper or papier mache, for encasing a bee hive, substantially as herein shown and described.

2d, The shield or projection, a, attached to the case, covering, or box, substantially as and for the purpose specified.

83,389.—APPARATUS FOR MAKING EXTRACTS FROM TAN BARK.—Thomas W. Johnson, New York city.

I claim the arrangement of a secondary subtrating tank, J, and two sets of squeezing rollers, G M, in combination with the crushing rollers, A, saturating tank, C, and elevators, E K, all substantially in the manner herein shown and described.

83,390.—Knitting Machine.—Daniel Kidder, Franklin, N. H.

I claim, 1st, The detachable stock, D, adapted and employed for the reception of the cams and varn feeder, substantially as set forth.

2d. The yarn feeder, G, elevating cam, F, and slotted depressing cam, E secured to the stock, D, substantially as and for the rurpose described.

83,391.—LAMP CHIMNEY CLEANER.—Michael J. Lourrentz (assignor to himself and John Myers, Jr.), Leavenworth, Kansas. Ante-dated October 17, 1868.

dated October 17, 1868.

I claim, as a new article of manufacture, the holder for lamp chimney clean ers, consisting of the two rods, A. A., each double headed, the rod, A. passing through the button at the inner end of the rod, A., and vice versa, where by the cleaning material is held between the inner head of one rod and the outer head of the other, as herein shown and described.

outer head of the other, as herein shown and described.

83,392.—APPARATUS FOR ILLUSTRATING SPHERICAL TRIGONOMETRY.—Stebhen N. Manning, Kankakee, Ill.

I claim the combination and arrangement of the hinged sector, plates, and wires, constructed substantially as described, for the purpose of illustrating and demonstrating the problems of spherical geometry and trigonometry, by forming the diagrams so as to show all the parts in their true relative positions and proportions.

83,393.—PINTLE OR BUT HINGE.—Lorenz Maschauer and William Frankfurth Milwankee, Wis.

William Frankfurth, Milwaukee, Wis.

We claim the pintle, B, made of uniform diameter in its middle and upper part, and provided with a tapering expanded lower end, c, in combination with the tapering internal diameter of the upper eye, a substantially as and for the purpose set forth.

for the nurpose set forth.

83,394.—BRICK KILN.—John McDonald, New York city.

I claim the tunnel or kiln, provided with a door at each end, and with chimney, and with apertures through the side walls, for the management the fires, substantially as described, in combination with movable platform on which the bricks to be burned are to be stacked, with archways in which the fires are to be made for burning the bricks, substantially as and for the purpose described.

purpose described.

83,395.—SINGEING MACHINE FOR FABRICS.—Peter McEwen,
Jersey City, and Wm. McKenzie, Hudson City, N. J.
We claim the arrangement of the rollers, b cf., scretching bars, e.e., g. g., and
rows of burners, 1 m, for presenting both sides of the fabric to be sluged, as
and for the purpose set forth.

-RAILWAY SWITCH STAND.-R. L. McGowan and Walter Fletcher, Alliance, Ohio.
We claim the lever. c. in combination with the sliding key, b, slot. a, and recesses, a', substantially as descibed.
83,397.—BILLIARD CUE.—J. N. McIntire, New York city.

83,397.—BILLIARD CUE.—J. N. McIntire, New York City. Antedated October 6.1868.

I claim a telescopic billiard cue, baving a false or spring but, so constructed as to yield to any pressure, and again resuming its natural position, substantially as described for the purpose set forth.

83,398.—SEWING MACHINE.—Nicholas Meyers (assignor to Edward L. Chamberlayne and Emerson C. Pomeroy), Buffalo, N. Y. 1 claim the feed plate, c', in combination with the shank, c, arma a' a", spring bar, c', and eccentric, b, as and for the purpose described.

83,399.—WASH BOILER.—C. E. Miller, Indianapolis, Ind.

53,399.—WASH BOILER.—C. E. Miller, Indianapolis, Ind. I claim the combination of the false bottom, C, perforated hinged flaps, D V; columns, F, and nozzles, G G', all constructed and arranged to operate substantially as and for the purposes herein described.

83,400.—Holddack.—Ruffus Moody, Monmouth, Me. I claim the loop, b c d, in conjunction with the plate, e, piece, f, plate, k, and hinge, h, to be operated by the breeching strap of the harness, as herein described, when attached to a carriage shaft, as and for the purposes set forth.

83,401.—Elbow Joint for Stove Pipes.—H. B. Morrison, LeRoy, N. Y.

183,401.—ELBOW SOLAT FOR STORE LEROY, N.Y.

LeRoy, N.Y.

I claim, 1st, A cast iron elbow, for stove and hot air pipes, made entire, with a suitable connecting and disconnecting joint, substantially as set forth.

2 l. An elbow, for stove and hot air pipes, in which the joint is so formed and connected that the arms or ends of said elbow may be turned to any position, from a right angle to a straight length, as described.

3d, The combination and arrangement of the lugs, F. notches, g, groove, b, and tongue and groove, cd, the whole constituting the joint, as herein described.

83,402.—Machine for Preparing Husks for Mattresses.

William Nash and Montgomery Kenfield, Malden, Mich.
We claim the arrangement and combination of the feed rollers, E and F
the spiral cutting cylinder, D, and the series of slitted springs, a a a, as con
structed, and operating substantially in the manner as and for the purposes
herein set forth.

herein set forth.

83,403.—Burron.—Chas. N. Nickerson (assignor to himself and Wm. Hodgkins, 3d), Gloucester, Mass.

I claim the combination of the sleeve, E, stud, A, and spring, C, substantial-

ly as described.
93,404.—CONVERTIBLE PLOW AND CULTIVATOR.—Johnson

95,404.—UONVERTIBLE PLOW AND CULTIVATOR.—Johnson Orr and Henry H. Martin, Oxford, Ohio.

We claim, 1st, The combination and arrangement, substantially as described, of the frame, A C, c C, swinging hangers, D a and D'd', adjustable bars, E e and E'e', nuis, G G', ring botts, F f and F'l', pins, H, apertures, I plow beams, J J', pivoted sheths, K k, ties, M, pins, N, handles, O, biaces, R, rand R'l', and catch, S, for the object stated.

2d, The construction of the brace, T, with depressed partions, t, t, to serve as sceps, and an eigensted central portion, t', to which the seat, F, is attached, all as herein described.

83.405.—GRINDING MACHINE.—John L. Otis, Leeds, Mass. 83,405.—GRINDING MACHINE.—John L. Otis, Leeds, Mass. I claim; in a grinding machine, in which the article to be ground is moved past the face of the grinding wheel or stone, the hanging of either the stone or wheel, or of the clamp frame that carries the thing to be ground, in arms or a swinging frame, whose center of motion is remote from the center of motion of the wheel or stone, for the purpose of grinding the tool or implement on a concave from a greater radius than that of the stone or wheel, substantially as described.

Also, the feeding along of the tool or article to be ground, past the face of the wheel or grindstone, by means of the vibrating frame, reversible pawl, and is spring arm or support, and the rachet plate, acting together in the manner and for the purpose described.

83,406.—Tension Device for Sewing Machine.—D'Arcy Porter (assignor to himself and Thomas H. White), Cleveland, Ohio.

Porter (assignor to himself and Thomas H. White), Cleveland, Ohio. I claim the tension device, consisting of the grooved wheel, C', shaft, B', cap or box, c', spring, I', screw, H', stay, D', and spring, G', all arranged upon standard, A', and with relation to each other and to the thread, E', and so 83,407.—Reservoir Cooking Stove.—Julius F. Quimby,

as to operate substantially in the manner and to the purpose described.

83,407.—RESERVOIR COOKING STOVE.—Julius F. Quimby,
Troy, N. Y.

I claim, 1st. Combining the chamber or flue, c, of a water reservoir or tank, C, when constructed and arranged with a cooking stove, substantially as brevel the corribed, with the diving or descending flue, e, thereof, so as to divert a portion of the unspent currents of heat going theredown therefrom, and making them pass directly into and horizontally through said flue, c, witerour flue, e, a franch flue of the diving flue and making said reservoir flue, e, a franch flue of the diving flue and making said reservoir flue, e, a franch flue of the diving flue and manner substantially as and for the purposes hereinbefore set forth and shown amone substantially as and for the purposes hereinbefore set forth and shown are reservoir or tank. C, as arranged at the rear end side of a cooking stove, respectively, with the diving and rising flues, e and f, thereof, by means of apertures, a and a? in the stove, opposite to the ends of said flue, c, in manner substantially as described and shown for the purposes set forth.

3d. The combination with each other of the extended or branch flue, c, passing in horizontal direction around the end sides and back side of a water reservoir or tank, C, the cross flue, b, as passing in horizontal direction around the end sides and back side of a water reservoir or tank, C, the cross flue, b, as passing in horizontal direction around the end sides and some first flues, e and as connected with the respective ends of said flue, c, in manner substantially as herein described and shown for the purpose set forth.

4th. In combination with the damper, G, branch flue, c, aforesaid, and the aperture, a, in the diving flue, e, the employment of a damper, d, to close the opening to said flue an air-chamber, for the purpose as herein before set forth.

83. 408.—Compound for Preserving Cheese.—Fitch Ray-

83.408.—Compound for Preserving Cheese.—Fitch Ray-

mond and August Miller. Cleveland, Ohio.

We claim the herein described compound for the purpose set forth.

83,409.—Mode of Preventing Mildew or Injury to FiBROUS MATERIALS DURING THEIR MANUFACTURE.—Edwin T. Rice, New
York city.

83,409.—BIODE OF TABLET MANUFACTURE.—Edwin T. Rice, New York City.

I claim moistening flax or other fibers with the material specified, so as to prevent mildew or other injury to the same while being manufactured, substantially as set forth.

83,410.—BIT STOCK.—George Richards (assignor to himself and Dexter E. Pease), Richland Center, Wis.,
I claim the handle, A. provided with the sockets, B. B., to receive adjustably both the shank, b, of the rest. D, and the shank, a, of the tool-holder, C. whereby the leverage of the handle is adjusted equally from the rest and tool notder, as herein shown and described.

83,411.—STOP DEVICE.—Peter Rodier, Detroit, Mich.
I claim a lever, resting in smtable bearings, and operating automatically, both to stop a bell, by compressing it between the end of sall lever and another rigid body, upon the opposite side of the belt, and also to release its hold upon the belt, both operations being performed by the action or movement of said belt itself, substantially as herein described and set forth.

83,412.—MATCH COMPOSITION.—William H. Rogers, New York city.

York citys.

York citys.

I claim the use of caoutchouc, (or india-rubber), or gutta-percha, in a composition for the manufacture of matches, substantially as and for the purposes described.

S3,413,—DISH RACK.—E. A. Sawyer, Portland, Me.
1 claim the dish rack, as described, having the pan or base, a, with the hor
izontal parallel pairs of helices, all combined and arranged as and for the
purposes set forth.

purposes set forth.

83,414.—FABRIC FOR COVERING STEAM BOILERS, ETC.—
William C. Selden, Brooklyn, and Charlton B. Kid, New York city.
We claim the non-conducting coating herein described, composed of fi-William C. Selden, Brooklyn, and Charlton B. Kid, New York city.
We claim the non-conducting coating herein described, composed of fibrons mineral, secured between layers of strong material, substantially as and for the purposes herein set forth.

83,415.—Hot-AIR FURNACE.—Eli Slater, and Anson H. Platt,

Philadelphia, Pa.

We claim the combination of the inner combustion cylinder or chamber, a, outer radiating cylinder or chamber, o, surrounding the same, and the close base, b, all constructed and arranged so that the draft and products of combustion pass down from the first, through the firegrate, g, into the base, and thence up through the space between the two cylinders, substantially as and for the purposes herein specified.

Denial Snell (assignor to

for the purposes herein specified.

83,416.—Wood-sawing Machine.—Daniel Snell (assignor to himself and J. H. Gano), Springfield, Ohio. Antedated May 28, 1868.

I claim the combination of the spikes or spur points, C.C. in the forward ends of the bed timbers, to pierce the log to be sawed, and the grab or cant hook, B, in addition thereto, hinged or tastened to the forward cross beam, the whole constructed substantially as described as and for the purpose specified.

...Furifying Illuminating Gas.—Peter Spence,New

Section.

83,417.—FURIFYING ILLUMINATING GAS.—Peter Spence, Newton Heath, Manchester, England.

I claim the use of protosilicates and protocarbonates of iron, specially the slags before mentioned, for purifying gas, for lighting, from sulphureted averagen, and also the use of these substances, as specified, for the product of dry copperas, or the copperas of commerce, and the use of said dry copperas for purifying gas from ammonia.

83,418.—CAR BRAKE.—Joseph Steger, New York city.

I claim the combination of the roller, G, lever, E, friction bar or plate, L, and axle, B, substantially as described, for actuating the brakes of a car.

83,419.—PORTABLE GAS APPARATUS.—M. C. Stebbins, Springfield, Mass.

I claim the combination of the vessels, C and D, and the gasometer, B, with their pipes and connections, all arranged and operating substantially in the manner and for the purposes herein specified.

83,420.—BLASTING VESSEL.—J. B. Stoner, L. Mendelson, and Theodore Crommelin, New York city.

We claim, ist, So applying a ballssting weight, B, to a casing, D D', or its equivalent, that such weight can be raised or depressed bodily, and at the same time it is free to swing in a direction with the keel of a vessel, substantially as and for the purposes described.

2d, The arms, b, of weight, B, provided with a pin, C, whose ends are fitted to slide up and down, and to oscillate in grooves, c, formed in the case, D D', substantially as described.

83,421.—BLIND SLAT OPERATOR.—L. W. Swafford, E. Butler, and J. R. Hess, Muscatine, 10 wa.

83,421.—Blind slat Operator.—L. W. Swafford, E. Butler,

and J. R. Hess, Muscatine, Iowa.
We claim the bent arm. G, and slotted lever, E, arranged, with relation to
the blind slats and window casing, in such a manner that their combined action shall adjust said blind slats in any required position, as berein shown and

83,422.—CAR BRAKE.—Benjamin Tatham and Joseph Steger

83,423.—MANUFACTURE OF VINEGAR.—H. A. Tilden, New

83,423.—MANUFACTURE OF VINEGAR.—H. A. Tilden, New Lebanon, N.Y.
I claim the jacket, f, around the vat, a, with the openings, 2 and 3, in combination with the heating coil, g, as and for the purposes set forth.
83,424.—HYDRAULIC PRESS.—J. B. Tunstall, Boydton, Va. I claim the arrangement, herein described, of cross head, D, attached to levers, E f, by link connection, x, segment gearing, o.o. rack, g, press head, G, shat, F, pulley, f, with its cord and weight, all constructed and operated as set forth.
83,425.—METHOD OF CONSTRUCTING WROUGHT-IRON COL-

UMNS.—Geo. Walters and Thos. Shaffer, Phenixville, Pa.
We claim an improved column, formed by the combination of the segmental bars, C, skewback bars, A, and interior rings or bands, B, with each other, substantially as herein shown and described, and for the purpose set

83,426.—Ring for Spinning Machine.—J. W. Wattles, Canton, Mass.
I claim my improved ring, as made with the traveler supporter or rail, a, and the ofling trough, b, arranged as represented in the accompanying drawings, and as hereinbefore described, such being so as to cause the traveler, on ceasing to revolve on the supporter, to dip is lower part into such groove as and for the purpose specified, when such groove may be supplied with labricating fluid.

lubricating fluid. 83,427.—Rotary Steam Engine. — James D. Whelpley.

Boston, Mass.

I claim, 1st, The friction cradle, consisting of exterior bearing rolls, b, and the interior ring, a, in combination with the abutment ring, G, substantially as described.

and the interior ring, a, in combination with the abutment ring, G, substantially as described.

2d, The arrangement of the interior friction ring, a, whereby its axis of revolution coincides with the axis of revolution of cylinder, A, substantially as described.

3d, The arrangement of the steam cylinder, D, revolving on its axis, perpendicular to the axis of its piston cavity, and carrying the recurrocating piston E, combined with the rod, F, abutment ring, G, and friction roll, a, substantially as described.

dionlar to the axis of its piston cavity, and carrying the reciprocating piston E, combined with the rod, F, abutment ring, G, and friction roll, a, substantially as described.

4th. The arrangement of the steam cylinder, D, the reciprocating piston, E, rod, F, abutment ring, G, and friction rolls, b, substantially as described.

5th, The combination of the eccentric, m, gib, l, eccentric, k, gib, i, and valve plate, h, with reference to the rod, n, and ears on the induction pipe, H, substantially as described.

6th, The arrangement of the valve chest, C, valve plate, o, with the packing, p, and adjustable eccentric, x, substantially as described.

7th, The arrangement of the cylinder, A, with the trunnion, K, revolving with it, abutment ring, G, and its friction cradle, b and a, and the neck, B, of the steam chest revolving with cylinder, A, with reference to the fixed steam pipe, H, substantially as described.

Sth, The arrangement of the valve plate, h, revolving about a ring, k, held from revolution by ears on pipe, H, there by allowing, linear motion when combined with the adjustable interior eccentric, m, pivoted on the axis of revolution of cylinder, A, substantially as described.

83,428.—APPARATUS FOR TOLLING GRAIN.—Wm. S. Widger and Wm. M. Read, Fairfield, Iowa.

revolution of cylinder, A, substantially as described,

83, 428.—APPARATUS FOR TOLLING GRAIN.—Wm. S. Widger and Wm. M. Read, Farrfield, Iowa.

We claim the rotary funnel, A, having a spout provided with the movable part, C', adjusted by means of the slot and set screw, all arranged and operaring substantially as herein set for th.

83, 429.—TRAP NET.—Wm. S. Wilcox, Wellington, Ohio.

I claim, 1st, The supplementary funnel, G, and cover, C', as arranged, in combination with the funnel, C, and pound, A, in the manner as and for the purpose set forth.

2d, The use of weights, J, for sinking and anchoring the net, in combination with thooys, in the manner substantially as described.

83, 430.—CONDENSER.—Wm. L. Winans, Clarges Street, England, and Thomas Winans, Baltimore, Md. Patented in England March 23, 1866.

We claim the means herein set forth of constructing the condensers of steam engines, and providing for the drawing off therefrom of the greasy water or soum that may accumulate therein.

83, 431.—BEER COOLER.—George Winter, Buffalo, N. Y.

I claim, 1st, The tanks, A, in combination with the reservoir, B, and conducting pipes, D, all parts being constructed, arranged, and operating substantially as herein described.

2d, Supporting the tanks, A, within the reservoir, B, by means of the npright posts or rods, B', and cross bars or tie rods, C, substantially as set forth.

8d, The reservoir, F, in combination with the tanks, A, for the purposes and substantially as herein described.

83, 432.—WARDROBE BEDSTEAD.—Albert A. Young (assignor to himself, Helen J, Dalton, and Geo. W. Armstrong), Boston, Mass.

I claim the combination and arrangement of the several parts of the ward-robe bedstead, to wit, the case, A, with its offers apparent parts of the ward-robe bedstead, to wit, the case, A, with its offers apparent parts of the ward-robe bedstead, to wit, the case, A, with its offers apparent parts of the ward-robe bedstead, to wit, the case, A, with its offers apparent parts of the ward-robe bedstead, to wit, th

tally in the manner and for the purpose set forth.

33,433.—PROCESS AND COMPOSITION FOR TANNING LEATHER.

-G. Zippe (assignor to himself and Werner Werner). New York city.

I claim, 1st, The composition herein set forth for impregnating hides during the tanning process.

2d, The process heren set forth of tanning hides.

3d, The soaping compound herein described for insolubly binding the metallic contents of the tanning compound.

82,434.—CARTRIDGE.—John Abraham and Thos. R. Bayliss, Birmingham, England. Patented in England March 20, 1868.

We claim, 1st, Making a series of longitudinal, oblique, or helical incisions in the metallic cases or shells of the said cartridges, for the purpose and substantially as hereinbefore described, and illustrated in the acccompanying drawing.

stantially as nereinfector described, and the described, of the percussion drawing.

2d. The construction, substantially as herein described, of the percussion chamber, by forming the same, as shown and set forth, of a blank, independent from the cartridge case, and securing it in the rim of the case, as herein described.

3d, The combination with a cartridge case provided with a percussion chamber constructed as described, of a primed percussion pin, enlarged at its base, so as to close tightly the said chamber, substantially as nerin set forth.

83,435.—Washing Machine.—Anson T. Adams, Indianapo-

83.435.—WASHING MACHINE.—Anson T. Adams, Indianapolis, Ind.
I claim. 1st, The application of the lever, A B, and the perforated bottoms F G and H I, to an ordinary wash boller, for the purpose and in the way substantially as herein set forth.
2d, The combination of the hook, g h, and the lng, a c, with a common wash boller, with perforated bottoms, constructed as aforesaid, and used in the way and for the purpose herein set forth.
83,436.—FLYER FOR SPEEDERS.—John H. Aldrich (assignor to nimeelf and John C. Whitin), Northbridge, Mass.
1 claim the flyer substantially as described, having the arm of the fiver and the detachable presser connected by a spiral guide and worm, so that when turning one way the presser detaches from the flyer, when there is no bobbin or spindle for it to press against, and turning the other way, it stops by the presser arm itself coming in contact with the end of the flyer arm, tuns forming a more direct passage for the roving to the presser arm, substantially as described.

83,437.—VINE CUTTER AND GARDEN CULTIVATOR COMBINED. Prudden Alling, Norwalk, Ohio.

I claim the wheel, B, cutter, C, cuitivator, D, and beam, A, combined and arranged to operate in the manner as and for the purpose set forth.

83,438.—Grain Cleaner.—John E. Anderson, Boiling Springs, Pa. The scouring wheel substantially as described, when forming part of a grain cleaner, as set forth. 2d. The arrangement of the scouring wheel above the fan wheel, with the chuteboard, K, inclined screen. L, and chaff box, B, all substantially as set

83,439.—Sash Fastener.—Daniel Armstrong, Chicago, Ill. I claim the arrangement of the tbimble, B, and coil spring, m, the latter fitting into the ends of the bolts, A A', and operating both of them at the same time, in combination with thimbles, G G, pins, d d, and thumb pieces, c.c., as and for the purpose set forth. 83,440.—Compound to be Applied to the Hair.—Benj. F.

c c, as and for the purpose set forth.

83,440.—Compound to be Applied to the Hair.—Benj. F.

Atwood, New York city.

I claim, 1st. A hair stimulating compound consisting chiefly of a decoction of quince seed and smart weed, substantially as herein described, as a new article of manufacture.

2d, The addition to the said quince seed and smart weed, of sage, sweet fern, and hemlock bark, to form a modification of the compound, substantially as described, the whole being softened with giveerin, all as set forth.

83,441.—PEAT MACHINE.—N. Aubin, Plattsburg, N. Y.

I claim the cylinder, A, provided with the stationary shear bladed cutters, E, shaft, C, with trough shaped revolving knives, F, and mold, D, with its removable bottom, d, having angular projections, di, all arranged together together and operating substantially as and for the purpose herein set jorin.

83,442.—CAR BRAKE.—Wim, W. Babcock, Harmar, assignor to himself, A. W. McCormick, and Samuel S. McNaughton, Marietta, Ohio, I claim, 1st, The combination of the screw spindle, C. cross bar, G lever, H, and pake head, I, when said parts are constructed to operate substantially as described.

2d. The combination of the screw spindle, C. cross bar, G, lever, H, arm, J, and wedge shaped brake head, K, when constructed to operate in the manner set forth.

3d, The arrangement of the brake heads, I K M, wheels, B B, levers, H L, cross bar, G and screw spindle, C, as described and shown.

83,443.—Saw Grinding Maching.—John G. Baker (assignor to Henry Disston), Philadelphia, Pa.

I claim, 1st. Asaw grinding machule in which two stones are so arranged.

to Henry Disston), Philadelphia, Pa.
I claim, 1st. Asaw grinding machine in which two stones are so arranged that a line drawn through their centers shall be at an angle with the blade of the saw, as and for the purpose herein set forth.

2d, The combination of the above with the guides, E and E'.

83,444.—STEAM ENGINE VALVE DEVICE.—William Baxter,

83,444.—STEAM ENGINE VALVE DEVICE.—WITHIGH PARCO, Newark, N.J.
I claim, ist, The piston, K, and barrel, J, in combination with the valve, H, substantially as herein described.
2d, The regulating valve, g, in combination with the barrel, J, piston, K, and valve, H, substantially as herein set forth.
83,445.—STEAM GENERATOR.—William Baxter, Newark, N.J.
I claim the arrangement of the dre box, A, flues, D, jacket. F, pipe, K, and steam dome, G, substantially as set forth.
83,446.—SPLICE FOR RAILROAD RAILS.—Sidney A. Beers.
Brooklyn, N. Y.

83,446.—SPLICE FOR RAILROAD RAILS.—Sidney A. Beers. Brooklyn, N.Y.

I claim the combination and arrangement of the flat bolt and nut with fishing plates, as illustrated by letter e, fig. 1", and letter c, fig. 3, when applied to any form of rail.

Also, the device for preventing the nut from working loose, as illustrated by letters c and d, in fig. 1", whether used separately or in combination, for the purposes above set forth,

83,447.—Shirt And Drawers Combined.—Erastus S. Bennett (assignor to himself and Justus Smith), Brooklyn, N. Y. Antedated Oct. 7, 1838.

I claim, 1st, The combination of the shirt or body, E. drawers or legs, F, and the reinforced portion, B and C C, all substantially as described and for the purposes set forth.

24, In combination therewith, the drawing string or adjuster, a a, applied and operating substantially as described.

83,448.—Mold Blacking Machine.—Benj, S. Benson, Baltimore, Md.

53,440.—MOID DIAGRING MACHINE.—LOLLY More, Md.
I claim, 1st, Supplying the brush and mold with blackwash, or facing, for coating the inner surface of pipe molds, through a hollow shat or tube, while the brush is spreading and smoothing it.
24. The reservoir. D, communicating pipes, E F, valves, e' c, and hollow revolving shaft, in combination with a revolving reciprocating brush.
3d, The spool, H, and pawl or latch, h, in combination with the cord. In and milevs. 1 i. onlleys, 11.

4th, A revolving reciprocating brush, in combination with a force nump, or arranged that it will supply the brush with the blackwash at the time of

its being rotated. 83,449.—TEA KETTLE BOILER.—Alfred Berney, Jersey City,

N. J.
I claim a combined tea kettle boiler, pitcher, and measure, made of tapering form, as described, and provided with a handle, lid, and spout, and graduated into quantities, essentially as herein shown and described.

83,450.—STIRRUP.—John Bond, Versailles, Ill.
I claim as a new article of manufacture the riding sirrup consisting of the elastic pendent prongs, A, between which the oscillating foot piece, B, is pivoted in such a manner as to fall out when the elastic prongs are spread apart, as herein described, for the purpose specified.

83,451.—Mode of Soldering Galvanized Iron.—Patrick

B. Bonner, New York city.
I claim the process of soldering galvanized iron, substantially as herein described and set forth.
83,452.—Horse Rake.—S. C. Brinser, Middletown, Pa.

scribed and set torth.

83,452.—Horse Rake.—S. C. Brinser, Middletown, Pa.

1 claim the combination and arrangement of the lever, H, curved as described and shown, with the connecting rod, F, having a series of holes in its rear end; the frame, K, having the series of holes, K; the arm, E, and the rake teeth, B B, when the said parts are so constructed and combined together as to operate in connection with a plin in the frame, K, substantially in the manner described.

83,453.—SCISSORS.—Sarah H. Brisbane, Fordham, N. Y.

1 claim, 1st, The combination with a nair of scissors of a gage or measure, B substantially as and for the purposes set forth.

24, A pair of scissors one blade of which is provided with a slot at right angles to the line of its cutting edge, in combination with a gage or measure, B, substantially as and for the purposes set forth.

83,454.—Trace Fastening.—James Brown, Matteawan, N. Y.

1 claim, 1st the socket, A, having a tapering dovetabled groove formed in its outer end the strap or bar, B, having its rear part dovetabled and tapering, and having a cross head, b', formed upon its rear end, and the spring, C, or eqvivalent, in combination with each other, substantially a sherein shown and described, and for the purpose set forth.

21, Forming an inclined recess, a', in the bottom of the forward end of the dovetabled groove in the end of the socket, A. to receive the end of the spring, C, in detaching the fastening, substantially as herein shown and described, and for the purpose set forth.

83,455.—Hose Coupling.—Henry C. Bull and Samuel T. Shelley, Louisville, Ky.

We claim a hose connents. consisting of the following elements: The je-

Shelley, Louisville, Ky.

We claim a hose coupling, consisting of the following elements: The remaile portion, E, with its concave shoulder, f, the male portion, F, having the clastic ring or tube secured therein, and the eccentric ring, D, all constructed and combined substantially as herein described.

83,456.—AUTOMATIC SPADING PLOW.—Francis L. Cagwin, Lolier 1.

Joliet, III.

I claim, 1st, The spades, a, when operating in the manner and by the devices described, so as to enter the ground on the cycloid line, as set

devices described, so as to enter the ground on the cycloid line, as set forth.

2d. The maintaining of the parallel between the spades, a, from the time of their entry into the ground until the heel of the spades comesto a rest up against the drum or disk, b, to any given point, either before or past the hinge, by means of the traction and weight of the machine causing them to urn on their hinge, as described, by means of the machine causing them to original postition, as described, by means of the upright lever, e, and spring, 1, as set forth, regulated to stop at any given cycloid point by means of the device shown in fig. 5, or its equivalent.

4th, The spades, a constructed with a craink and hinge, when attached, as set forth, to the periphery of the drum or disk, b, in combination with the upright lever, e, and spring, i.

5th, Arotary spader or plow, constructed with spades, a hinged to the drum or disk, b, as shown, in combination with a frame, constructed and operating substantially as set forth.

6th, The mode of leverage, substantially as described, to force the spades into the ground, and to raise them out of the ground, when desired, as set forth.

forth.
The combination of all the parts described, when arranged and operating as set forth.

83,457.—STEAM GENERATOR Charles W. Cahoon, Portland, Me.
I claim, 1st, The boiler, A, with the pipe, B, flexible by means of the joints, D, D, having the coupling, E, and valves, substantially as herein set forth and described.

D D, having the coupling, E, and vaives, substantially as determined and described.

2d, The combination of botler tank, F, with the boiler, A, and with reference to the carriage C, substantially as herein described.

3d, The combination of pipe, G, flexible, as described, and having the coupling, whereby to convey the residuum of the carriage reservoirs into the boiler tank, F, as described.

4th, In combination with the boiler, A, having a supply pipe, B, for concetting with the carriage, C, to supply the tanks therein, as described, the relief pipe, b, with its valve, c, substantially as described.

23,458.—Double Oven Cooking Stove.—Edward Card, Providence R. 1.

83,458.—Double Oven Cooking Stove.—Edward Card, Providence, R. 1.
1 claim placing the forward oven, with its accompanying flue, upon joints or hinges, substantially as described.
Also, the division plate, h, in combination with either of the division plates for 1, and plate, a, substantially as described.

83,459.—PEACH BASKET.—Henry Carpenter, Brooklyn, E. D., N. Y. Antedated October 17, 1868.
1 claim securing the raised boutom of the peach basket upon the inner hoop, D, by n.eans of the central flatten, a, let into said hoop at each end, beneath the bottom, and by the wires, c, and screws, b, all arranged as described, whereby the bottom and batten are raised above the lower edge of the hoop, D, and prevented from being knocked into the basket, when the latter is inverted and used as a seat, as herein sbown and described.
38,460.—IRONING TABLE.—Patrick P. Carroll, Washington, D, C.

58,400.—IRONING TABLES ton, D. C. 1 claim a combined ironing and work table, consisting of the sliding parts, C CC, and supplementary legs, D D, in combination with a table of the usual form and construction, substantially as nerein shown and described.

83,461.—ELEVATOR FOR BUILDINGS.—Dexter H. Chamber-

lain, West Roxbury, Mass.

I claim the rods. c.c, or tiefr equivalents, in combination with the wedges, d.d, or their equivalenis, and the cross head, C, substantially as and for the purpose set forth.

Also, the levers, H. H., spring, h., and pin, G., in combination with the wedges, d.d, and the rods, c.c, for the purpose described.

83,462.—LAMP.—Theodore Clough, Dobb's Ferry, N. Y.

I claim the two opposite segmental wick tubes, in combination with the air jet pipe, having a gas burner nozzle, when arranged in combination, substantially as described.

83,463.—Hammer.—T. S. Coffin, Harrington, Me.

Claim the harchet, D. adapted to be removately attached to the han head, A, having the short claws, B, by means of the screw, E, and he any desired position by the spring catch, a b d, as herein described for purpose specified. specified.—CAR COUPLING.—F. Coffrin, Claremont, N. H.

I claim the levers or keepers, it he pins, h, the spindles, g, the springs, it he staple, l, the hooks, e, and link, D, all arranged and combined substantially as and to operate for the purpose specified and set forth. 83,465.—Machine for Twisting Jack Bands.—J. Collier

Morenci, Mich.
I claim the combination of the hook, H, levers, I and L, sliding wheel, C, nocks, F, and springs, G K, substantially as and for the purpose described.
83,466.—STAVE MACHINE.—William S. Colwell, Allegheny

City, Pa.

I claim the combination of the wheels, fg h and i, with the rack, e, for imparting a reciprocating motion to the ram, B, substantially as herein described and set forth.

83,467.—REFRIGERATOR AND COOLER.—Levi Richardson

83,467.—KEFRIGERATOR AND COOLER.—Levi Richardson Comstock and James N. Cherry, Keokuk, Iowa.
We claim, 1st, The combination of the ice chamber, K, with the horizontal detachable strainer, L, and chamber, I, and hinged lids, C C, as and for the purpose specified.
2d, The combination of the non-conducting chambers, A P, and the trough, O, and pies, N and M, as and for the purposes specified.
83,468.—CALL BELL.—Ezra G. Cone, East Hampton, Conn. I claim the combination, with a suitable handle, of two gong shaped or open monthed bells, provided with a suitable chapter or clappers, substantially as arranged, and as herein specified.
83,469.—Coo Wheels for Gearing.—Horace I. Crandall, Be-ford, Mass.

Beiford, Mass.
I claim, 1st, The teeth of cog wheels, for gearing, constructed as hereinbeore described.

I claim, 1st, The teeth of cog wheels, for gearing, constructed as hereinde fore described.

2d, The thickness of the teeth spaced at right angles from the center line of the same, substantially as set forth.

3d, The meeting point of the root and point face circles inside of the pitch circle, in accordance with the rules as specified.

4th, The radii, I is a weeping the faces of the teeth, obtained from the wheel containing the least number of teeth in a set, as so described.

85,470.—HAY ELEVATOR.—F. A. Crane, Zanesville, Ohio.

I claim, 1st, The combination of the plank A, having lashings, B, side rails, C, with the truck, D E E, rollers, G, catch lever, H, having a shoulder, h, and stirrup plate, I, shoulder cleat, J, expanding pulley, a a, having shoulders, k, with india-rubber block interposed between them, rope, K, and pulley. L. all constructed and operating together, substantially as shown and described.

2d. The pulley, constructed as described, of the circular plates, a a, having radial shoulders, k, clamping between them the india-rubber disk, b, in such a manner that the wint not the disk and the distance between the plates are

2d. The pulley, constructed as cescribed, of the circular plates, a a, having radial shoulders, K, clamping between them the india-rubber disk, b, in such a manner that the width of the disk and the distance between the plates are made adjusable for the purpose specified.

83,471.—PRINTING PRESS.—Royal Cumming, Newport, Vt. 1 claim, 1st, The pressure cylinders, C'', in connection with the reciprocating type beds, B B', and the paper feed rollers, I I', J J', all arranged to operate in the manner substantially as and for the purpose set forth.

2d. The combination of the two impression cylinders, C'', revolving in opposte directions above the reciprocating beds, B B', with the paper carrying cylinders, I I', J J', substantially as described for the purpose specified.

83,472.—SUBSOIL PLOW.—John Custer, Corsica, Ohio.

1 claim, 1st, The share bar, D I K, with slots, d and h, when constructed and used in combination with the plow beam, A, and rear beam, B, substantially as and for the purpose herein specified.

2d. The peculiar arrangement and combination of the share and shoe, F G, boirs, If, and share bar, D I K, the several parts being arranged substantially as and for the purpose specified.

3d. The peculiar arrangement and combination of the share and shoe, F G, with common point, g, the cutter, E, share bar, D I K, and plow beam, A, the several parts being arranged substantially as and for the purpose specified.

specified. 83,473.—Washing Machine.—John Dare, Liberty, Ind.

83,473.—WASHING MACHINE.—John Dare, Liberty, Ind.
I claim the arrangement of the roller, D, pawl, i, and ratchet, f, for allowing the same to move without revolving one way, and to revolve the other, when suspended from the arms, C, and exterior adjustable springs, B, and operated by the double lever, H, all asherein shown and described.

83,474.—TELLURIUM.—John Davis, Allegheny city, Pa.
I claim, 1st, Protting one pole of the earth to the disk, 8, and pivoting it to the crank, 7, and operating said disk and crank through the medium of disk, 6, wheels, tx15, and endless screw, 15, the whole being constructed, arranged, and operating in the manner substantially as herein described, and for the purpose set forth.

2d, The inclined disk, B', in combination with disk, ol, stem, 18, and arm, 11, provided with friction wheel, 12, and disks, being constructed, arranged, and made operative through the medium of the mechanism herein described, and for the purpose set forth.

83,475.—A PPARATUS FOR TRANSPORTING, EXTENDING, AND

and made operative through the medium of the mechanism herein described, and for the purpose set forth.

83,475.—APPARATUS FOR TRANSPORTING, EXTENDING, AND ELEVATING PIPES AND HOSE.—Lester Day, Buffalo, N. Y.

1 claim, 1st, the reservoir, M, swivel, G, windlass, I. and the extension pipe, C E, in combination with the platforms, A and B, as and for the purpose described.

2d, Pipes, E and F, the latter having a spring cover, u, guide rope, f, annular coupling, g, and belt, v, in combination with case, C, socket, D, raising and lowering devices, ij k in, and guides, r s, as herein set forth.

3d, The hollow axile, N, with bars and supports, J, as specified.

83,476.—TRACE FASTENER.—F. W. Dean, Tremont, Ill.

Claim the loop. B, hinged to the rear of the single tree. A, and salanted to

claim the loop, B, hinged to the rear of the single tree, A, and adapted to tagainst the montside of the pin, a, outside the trace, and the equivalenthe noop, B, as shown at D d and e e, all operating as described, for the mose specified. 93,477.— Stitching Horse.— Thomas Depp, San Marcos

Texas, 1st, The combination of the seat, D, lever, F, and strap or cord, H, with each other and with the bench, B, and clamps, C, substantially as herein shown and described, and for the purpose set forth. 2d, The combination of the foot lever, K, and strap, or cord, I, with the lever, F, and bench, B, substantially as herein shown and described, and for

An arrangement of mechanism by means of which the jaws or the ps of a stitching horse may be closed to hold the work by the weight of the workman when sitting upon his seat, substantially as herein show

-Combined Corn Planter and Cultivator. -

83,478. — Combined Corn Planter and Cultivator. —
Charles Dyer, Coal Run, Ohio.
I claim the described arrangement of the flexible tubes, G, rigid tubes, H, standards, I, farrow shares, J, seed coverers, Lx, pivoted braces, Jx, standard, N, shares, M, pivoted brace, O, connecting rod, f, crank shaft, g, and lever, Kx, as herein set forth for the purpose specified.
83,479.—BEE HIVE.—Duncan Edge, St. Mary's, Ill.
I claim a beehive, having the stationary central chamber, with the drawers, B, and doors, C, arranged on opposite sides thereof, all constructed as described.

described. 83,480.—Wringing Machine.—S. F. Emerson, Seville, O.

83,480.—WRINGING MACHINE.—S. F. Emerson, Seville, O. I claim, 1st, The bearing plate, C2, furnished with axes, C and C1, substantially as and for the purpose set forth.

2d, The bearing plate, C2, furnished with axes, C and C1, slot, d, and hook d', substantially as and for the purposes set forth.

3d, The curved slot, d, and hook, d', in combination with the gears, c c1 b b', rollers, B BI, slotted plate, G, wedge-snaped bearings, h, and plate, C2, with the axes, C C1, substantially as and for the purposes set forth.

83,481.—SHOVEL PLOW.—W. B. Evans, Bracken county, Ky. I claim the circular conformation of the rear portion of the beam, the front or inner part of which is formed of steel, and reduced to a sharp cutting edge and bent do wnward at its lower end, for the reception of the plowshare.

83,482.—HORSE HAY FORK.—John Gilmore, Phænixville, Pa. I claim the turning knuves, C C, provided with the projecting pleces, d d, to prevent the knives from cutting through the hay when the latter is being elevated, substantially as set forth.

83,483.—ROTARY STEAM ENGINE.—Levi F. Goben, Spring

Hill, Mo.

I claim, 1st, The construction of the central cylinder, A, with longitudinal channels anapted to receive the pistons, C, of the cylinders, B, substantially as herein shown and described.

2d, The steam chambers, D, having ports, ef, and adapted to receive the cylinders, B, provided with pistons, C, substantially as herein shown and de-

sorribed.

3d, The combination of the central cylinder, having longitudinal grooves, the cylinders, B, provided with pistons, C, and the steam chambers, D, with ports, gf, all arranged within the case, A, to operate substantially as de-

ed. , The means for operating the cut-off valve, consisting of the arms, n n rank, g, all arranged to operate substantially as herein shown and de-83,484.—ROTARY STEAM ENGINE.—G. W. Goodwyn, Peters-

burg, Va. I cleam. 1st, The combination of the rotary valve, H, with the arms, tt R R, when so constructed and operating that, by the rotation of the min shaft, the arms, R R, shall be caused to strike and turn the valve, H, substantially as described.

2d, The arrangement of the shaft, B, with the arms, R R R t t t, the rotary valve, H, and the induction port, G, substantially as described.

83,485.—BOTTLE STOPPER.—William Graff, Philadelphia, Pa.

I claim the ribbon C, or its equivalent, passing around the bottle and over the stopper, in combination with a flexible strip, D, adapted to the ends of the ribbon, and to grooves in the said stopper, all substantially as herein de 83,486.—Campaign Badge.—H. C. Griggs, Waterbury, Conn.

I claim, lst, The combination of the base plate, constructed with the raised surface. A, and provided with perforations, a, with the ring, B, constructed so as to be applied to the plate, and secured through the perforations, sub-

so as to be applied to the plate, and secured through the perforations, substantially as described.

2d. The arrangement of a common pin upon the plate, so as to be secured and held by a noten in the said plate, and so as to secure the badge, substantially in the manner herein set forth.

83,487.—CULTIVATOR.—A. M. Griswold, Momence, Ill.
I claim, 1st, The trucks, B, the slides, F, one or both, when arranged with relation to the rod, D, and beams, E, and to operate as and for the purposes set forth relation to the rod, D, and beams, E, and to operate as and for the purposes set forth.

2d, The extra shovel, A, when arranged upon the beams, E, substantially as described and set forth.

83.488.—Coupling for Railroad-train Heaters.—J. R.

Guy (assignor ta Rice & Guy), Springfield, Obio.

I claim, in combination with the permanent pipes, G, and elongated, open sockets, H, constructed with flaring mouths, the tubular coupling formed by a single rigid pipe, I, terminating with balls, I', fitting said sockets, substantially as and for the purpose set forth.

- Spring-bed Bottom. - Charles Hacker, Euphe-

mia, Ohio.

I claim the combination of the slats, H K, the spiral springs. A D, the cush oned rail, B, the cords, E F, in the manner shown and described and for the surpose specified.

38,490.—DEVICE FOR SCUTTLING VESSELS.—John Hall, Marsh-

55,490.—DEVICE FOR SOUTHERS.

field, Mass.

lelaim the device above described, consisting essentially of the metallic plece, C, having the flanges, c c', the former expanded sufficiently to form a bed, for the gate to slide apon, and having the guide flanges, e e, the gate, G, the rod, R, swivel joint, F, and screw rod, M, all combined in the manner and or the purpose set forth.

83,491.—GRAIN DRILL.—W. N. Hamilton, Odessa, Del.

83,491.—GRAIN DRILL.—W. N. Hamilton, Odessa, Del.

1 claim, 1st, The employment, in the fertilizer hopper or receptacle, of an adjustable bottom, capable of being moved from or toward the distributing wheels, so as to morease or diminish, at pleasure, the size of the openings from which the fertilizing compound in the hopper is discharged, substantially as and for the purposes set forth.

2d, The combination, with the fertilizer receptacle and distributing wheel or wheels, arranged beneath and relatively to the receptacle, as described of an adjustable buttom, binged to the front of said receptacle, and actuated by a set screw, united to said bottom, and mounted in bearings attached to the frame of the machine, under the arrangement and for operation substantially as set forth.

3d, Forming the adjustable bottom of the hopper, and the saddles attached to the same, of metal, cast in one piece, as and for the purposes specified.

fied.

4th, The employment, in machines such as described, of distributing wheels formed of glass, porcelain, or other silicate, or of metal enameled or coated with a silicate, substantially in the manner and for the purposes shown and set forth. 83.492.—Sewing Machine.—Henry J. Hancock, New York

city.

I claim the combination of the needle bar slide, I, with its wings, z z, inclined guides or ways, J. J., presser foot, K., made capable of independent lift from the cloth, but reciprocating in the direction of the feed, together with the needle par, from or through a rock shaft or center, i, common to both, substantially as specified.

83,493.—FISHING NET.—Smith Harper, Leipersville, Pa. I claim a fishing net, constructed as described, longer at the bottom than at the too, and the bottom line small and weak, and provided with balls, substantially as and for the purposes herein set forth.

83,494.—Apple Corer and Quarterer.—John M. Hassam, Mount Vernon, Me.

stantially as and for the purposes herein set forth.

83,494.—APPLE CORER AND QUARTERER.—John M. Hassam, Mount Vernon, Me.

I claim the combination with the spring plunger, F cross bar, G, knives, K or Q, and corer, J, of the conveyer, L, and the extended conveyer or spout, N, whereby the cores and the quarters or slices are conducted to separate places of deposit, substantially as described.

83,495.—COMPOSITION FOR THE MANUFACTURE OF BURIAL CASES.—J. R. Hathaway, Westfield, N. Y.
I claim, 1st, The compound herein described, substantially as and for the purpose described.

2d, Burial cases, made either wholly of the compound herein described, or in part of the same, and wood, or other suitable material, as a new article of manufacture, substantially as and for the purpose set forth.

83,496.—ARTIFICIAL LEG.—George B. Head, Albany, N. Y.
I claim, 1st, The bar, J, in combination with the stand, A, connected with the foot by one or more rocs, and operated for unlocking the knee joint, substantially as shown and described.

2a, The combination of the bur, A, and the disk joint, h, and its square pivot, with the colled spring, i, whereby the leg is thrown forward, substantially as described for the purpose specified.

3d, The stop, N, in combination with the bar, J, substantially as and for the purposes set forth.

4th, The combination of the bar, J, and rods, B B', with the stand, A, knee joint and foot, whereby the pressure of the toe or ball of the foot npon the ground, in the act of walking, relieves or unlocks the knee joint, substantially as secribed, for the purpose specified.

83,497.—TRUCK AND W AGON REACH.—Philip Hicks, Chicago, 11.
I claim, 1st, The reach made of two wooden parts, A B, connected by a

83,497.—TRUCK AND WAGON REACH.—Philip Hicks, Chicago, Ill.
I claim, 1st, The reach made of two wooden parts, A B, connected by a metallic carved splice, consisting of separate plates, P, or of solid metallic tears of the specified.
2d, The metallic block, K, constructed and secured to the curved part of the reach or splice, substantially as and for the purpose set forth.
83,498.—TILL ALARM.—Austin D. Hoffman, Minneapolis, assignor to himself and Frank Brewster, Austin, Minn.
I claim, 1st, In combination with the drawer, A, a revolving knob, C, ring, C, rod, D, notched disk, E, and projection, I, the pins, F, lever, G, and bell, H, arranged to operate substantially as described.
2d, The disk, E, constructed with pins, F, substantially as and for the purpose set forth.
3d, The combination of the knob, the adjustable ring, C' shaft, D, and

pose set forth.

3d, The combination of the knob, the adjustable ring, C' shaft, D, and notched wheel, E, with the projection, I, substantially as and for the pur-

noticed wheel, h, with the projection, I, substantially as and for the purpose set forth.

4th, The disk. E and pins, F, so arranged in relation to the lever and bell, that the bellshall be struck when the disk is turned, after a pin has been projected behind it, substantially as and for the purpose set forth.

83, 499.—Box Opener — Leonard Holtzscheiter (assignor to A, B, Shipley), Philadelphia, Pa,
I claim the within described instrument, composed of the handle, A, blade, D, and head, C, constructed and arranged as set forth for the purpose specified.

D, and head, C, constructed and arranged as set forth for the purpose specified.

83.500.—HASP LOCK:—M. G. Imbach, Hartford, Conn.

1 claim the arrangement of the casing, I, sliding plate, E, spring bolt, D escutcheon, H, latch, A, and staple, C, all constructed and operating substantially as and for the purposes herein set forth.

83.501.—NEEDLE.—Samuel Ivers, New Bedford, Mass.

1 claim my improved needle, made substantially as described and represented, that is, with an opening leading out of one side, rather than one end of the eye, and also with an inelastic head at the upper end of the eye, and with an elastic head at the upper end of the eye, and with an elastic head at the upper end of the eye, and with an elastic head at the upper end of the eye and with an elastic head at the upper end of the eye and with an inelastic beauting to operate as set forth.

83.502.—DYEING TEXTILE FABRICS WITH ANILINE COLORS.

1. O. Iversen, Madison, Wis.

1. claim, 1st, The herein-described mode of treating aniline colors before they are dissolved in the dyeing compound.

2d, The herein described compound of bichromate of potash, alum, and soda-ash, with an aniline color, substantially and for the purposes set forth.

forth. 83,503.—TRAM FOR GAGING MILLSTONES.—Thomas R. James, St. Louis, Mo.
I claim the tram bush, C, constructed as described, bearing the vertical mandrel, D, adjustable arm, E, and screw gage pins, F, when secured to the runner by being wedged into the recess provided for the driver, in such a manner as to step the spindle, D, in the bail, B, of said runner, as herein shown and described.

83,504.—FRUIT Box.—T. B. Jones, Radnor, Ohio. I claim abox or basket, constructed with a hinged bottom (which bottom is provided with a bail for dropping and closing the same), for handling fruit and other articles, constructed, arranged, and operating substantially

fruit and other articles, constructed, arranged, and operating substantially as and for the purposes set forth.

83,505.—STEAM GENERATOR.—Thomas B. Jordan, South Lambeth, England, assignor to B. H. Bartol, Philadelphia, Pa. Patented in England Oct. 28, 1865.

I claim, 1st. The combination of the unright pipes, E, horizontal pipes, B, and a steam chest or reservoir, E, substantially as described.

2d, A generator constructed substantially as described, and having its lower portion embedded in the brick work, substantially as set forth.

3d. The combination with a chamber containing a steam generator, of two or more flues having independent dampers, substantially as set torth. The combination with a chamber containing a steam generator, of two or more flues having independent dampers, substantially as set torth. The combination of the combination with a chamber containing a steam generator, of two or more flues having independent dampers, substantially as set torth. The containing a factor of the combination with a chamber containing a steam generator, of two -Smoke-stack for Locomotives.-J. A. W. Justi,

83,506.—SMOKE-STACK FOR LOCOMOTIVES.—J. A. W. Justi, Savannah, Ga.
I claim, 1st, The gate formed by the rings, K KI, etc., or their equivalent arranged in the ring, G, and under the plate, H, substantially as described and fitted into the smoke-stack of a locomotive, for the purpose of arresting sparks, asnes. etc., as set forth.

2d, The combination within the smoke-stack of a locomotive engine, of the pipe, B, having an enlarged upper end, of the cap, C, ring, D, deflector, E, cap, F, ring, G, plates, K KI, etc., or their equivalents, plate, H, and ring, p, all arranged substantially as herein shown and described.

3d, The caps, C and F, and the ring, E, constructed with inward and downward bent inner edges, substantially as herein shown and described.

3c, 507.—WHEEL PLOW.—James Kay, Salem, Ind.

1 claim, 1st, A two-wheel single riding plow, having the plow, E, and its standard, C, secured to a hinged frame, C, as described, in combination with lateral, front, and rear braces, arranged for sustaining said standard, substantially as described.

2d, The brace bar, I, connected to the bar, n, of the plow, E, passed through the standard, C, and secured to the bar, n, of the plow, E, passed through the standard, C, and secured to the bar, n, of the plow, E, passed through the standard, C, and secured to the bar, n, of the plow, E, passed through the standard, C, and secured to the bar, n, of the plow, E, passed through the standard, C, and secured to the bar, and the plow, the his enable to the plant and the plant has the plant white his enable to the plant and the plant has been the plant and the plant has been the plant and the plant has the plant has been the plant and the plant and the plant has been the plant and the plant and the plant and the plan

through the standard, C', and secured to the frame, v, substantially as accreted.

3d. The combination of levers or treadles, ef, with a plow which is applied to a hinged frame, C, upon a two-wheel carriage, one of which levers or treadles is adapted for raising the plow and its frame, while the other is adapted for depressing said parts, substantially as described.

4th. The brace, g, connected to the bracket, d', and the seat standards, c', substantially as and for the purposes described.

5th, The adjusting screwrods, c', applied to the hinged frame, C, and supporting this frame upon the axle, A', of a single riding plow, substantially as and for the purpose described.

6th, in a machine which is constructed as described, the three holdback rods or chains, p p s, attached to the doubletree, substantially as and for the purposes described.

83,508.—CAR BRAKE.—Peter Keffer (assignor to himself and E. G. Fishburn), Reading, Pa.

1 claim a railroad car brake consisting of a yielding wedge shaped frame.
C, constructed and operating substantially as herein described, in combination with brake shoes, B and B', hung to the cer or truck, substantially as

83 509.—Cultivator.—J. H. B. Keller, Chambersburg, Pa. 85 509.—CULTIVATOR.—J. H. B. Keller, Chambersourg, Pa. I claim, 1st, The pwoted standards, G. arranged in connection with the roos, J. india-rubber spriogs, I. and beams, E. all arranged in the manner substantially as and for the purpose set forch.

2d. The levers, K. attached to the beams, E. and arranged in relation with the driver's seat, D. substantially as and for the purpose specified.

83 510.—RAILROAD SWITCH.—Michael Kelly, St. Charles, Mo.

I claim the lugs, C C, and guard rails, E E, when arranged relatively to each other as set forth, in combination with switch rails, A, as shown, for the purpose explained.

eared piece, A, eye piece, B, bolt, E, and nut, F, all arranged, combined, and operating as described.
83,512.—AUTOMATIC CAR COUPLING.—Perley Laffin, War-

83.512.—AUTOMATIC CAR COUPLING.—Perley Laflin, Warren, Mass., assignor to himself and John J. Sprague, Providence, R. I.

1 chaim, 1st, the combination with the draw piece, B, the projecting arm, C, and its slotted standard or upright piece, b, of the hinged or pivoted arm, D, and the prop, G, and toggle pin, E, attached to said arm, substantially in the manner described, the whole being arranged to operate as set fortu.

2d, Incombination with the parts named in the preceding clade, the rod H, constructed and arranged to operate in connection with the swinging arm D, substantially as described.

3d. The combination and arrangement with the arms, C and D, of spring g, and serve, h, substantially in the manner and for the purposes set forth.

83,513.—Machine for Cutting Paper.—Hervey Law, Chatham, N. J.

83,513.—MACHINE FOR CUTTING PAPER.—Hervey Law, Chatham, N. J.
I claim, 1st, in machines for trimming books the turning of the bed, S, on which the paper is cut, by the receding movement of the bed from the knife, after the completion of each cut, so as to present an uncut side of the pile of paper or books to the knife at each upward movement of the bed, substantially as set forth.

2d, Giving the bed, S, and consequently the paper to be cut, a lateral horizontal movement at the termination of its upward oblique movement, in order to effect a clean cut, substantially as shown and described.

3d, The automatic mechanis n, substantially as shown and described, for operating the clutch lever, H, and stopping the machine at the completion of the cutting of thefour sides of the paper or piles of books on bed, S, as, see forth.

of the cuiting of thefour sides of the paper or piles of books on bed, S. as set forth.

4th. The pendent projections, rr'r" r"", at the under side of the bed, S. in connection with the projections, ss', on the puper sinface of the fixed bed, J. for the purpose of holding the bed, S, in proper position relatively with the knife, C. when the paper is being curand also when receding from the knife, and at the same time admit of the bed being turned at the proper moment, substantially as set forth.

5th, The trip on the fixed bed, J, composed of the fixed part, t. the pivoted part, t', and the spring, u, when used in connection with the projections on the beds, S J, and arranged to operate in connection therewith, substantially as and for the purpose set forth.

83,514.—BEEHIVE.—Benjamin Leckrone, Somerset, Ohio.

1 claim, 1st, The device for hanging the frames. J J, so that they are independently attachable to or removable from the sliding boxes which support them, such device consisting essentially of the rods, m m, flattened at, o, and operating, in connection with the hook, n, and the perforated lug, r, substantially as described.

operating, in coancetion with the hook, n, and the perforated lug, r, substantially as described.

2d, The combination and arrangement of the eed rack, D, and cleaning box, C, substantially as described.

3d, The noxes, F If F2 when constructed with the front doors hinged at aa, latched at a', having the catches or hooks, d, by which the slide boards can be attached to them as pleasure, and containing the comb frames, JJ, sibstantially as described.

4th, The arrangement and combination of the ventilating aperture and beentrance, c, the foraminated slides, II, the foraminated plates. H H, and the space, K, between the front of the comb boxes and the wall of the hive, for the purpose of affording a free ventilation to all parts of the hive, whether the bees are confined or free.

5th. The arrangement of the entrance, c, cleaning box, C, feed rack, D, boxes, F F If E2, comb frames. JJJ, windows, G G, ventilators, H H, and door, E, substantially as and for the purpose set forth.

83,515.—GAGE FOR STONE WARE.—A. W. Loomis, Atwater, Ohio.

Ohio.

I claim the adjustable gages, G and F, in combination with the handles, D E, when arranged, in relation to a potter's wheel, in the manner as and for the purpose specified.

83,516.—GOVERNOR FOR STEAM AND OTHER ENGINERY.—Jos.

the purpose specified.

83,516.—GOVERNOR FOR STEAM ANDOTHER ENGINERY.—Jos.

Theodor Lossen, Würzburg, Bavaria.

1 claim, 1st. The arrangement of the spur wheel, F, pinion, G, weighted lever, I, and vane arms, L, substantially as shown and described.

2d. The inverted bucket or air shell, M, having an air cock, b, and vessel, N, in combination with the spur wheel, F, pinion, G, weighted lever, I, and vane arms, L, substantially as herein set forth.

83,517.—GRAIN DRILL.—John T. Lynam, Jeffersonville, Ind.

I claim the combination and arrangement of cutters, F, springs, E, and the tubes, D G, all applied to a seed drilling machine, to operate in the manner substantially as and for the purpose set forth.

83,518.—WRINGER ROLLER.—A. Magowan, Boston, Mass.

I claim the elastic roller, having its core-tormed by winding the square mandrel, A, having radial arms, D, with a string or cord steeped in liquid raw india-rubber, an outer rounding filling, composed of longitudinal strips, E, being interposed between the winding string and mandrel, as herein described, for the purpose specified.

83,519.—CULTIVATOR.—James Mallon, Lockport, Ill.

1 claim, 1st. The handles, E, brace, Q, in combination with the bar, 5, pivoted to the under side of the tongue, reciprocating bar, g, braces, P, rods, I, and braces, G', for giving a lateral motion to the snovels, as set forth.

21, The braces, G G', in combination with bars, F F', shanks, J J', and stirrups, d, substantially as set forth.

36, The combination of the draft rod, 11, spools, T, bars, F F', cams, V, and lever, X, substantially as set forth.

41, The hill protector, K, pivoted to the brace, G', and arranged substantially as set forth.

88,520.—HARVESTER.—L. J. McCormick, W. R. Baker, and J. J. Engling (assignors to C. H. McCormick & Beather). Chicago Jul.

183,520.—HARVESTER.—L. J. McCormick, W. R. Baker. and

tally as set ford.

83,520.—HARVESTER.—L. J. McCormick, W. R. Baker, and L. Erpelding (assignors to C. H. McCormick & Brother, Chicazo, Ill. We ctaim, 1st, The combination, substantially as set forth, in a two-wheeled harvester, of a tongue, with its rear end pivoted so that the tongue can play laterally in a socket over the main axle, a corrugated laterally solted brack et on the front of the main frame, a correspondingly corrugated socket on the tongue, and a vertical clamping bolt connecting the socket and bracket whereby the angle of the tongue to the line of draft can be varied and pracket.

2d. The shields, S. constructed as described, attached to the main frame, and enclosing the counter shaft, the pinions which drive it, and the backing ratchets, for the purpose set forth, for joint operation, of the counter shaft, the adjustable bevel goar, O, and its sliding clutch, with the nut and removable pinion on the front end of the crank shaft, whereby we vary the speed of the cutters by using a single gear wheel on the counter shaft without mov fing either shaft.

4th, The arrangement, as described, for joint operation, of the finger beam, the shoe, and the stirrup, with the horn, I, and dog, L, whereby we lift the divider end of the finger beam first in raising the cutters.

5th, The combination, as set forth, of the shoe, H, and arched shield, i, with the roller, provided with wooden bushing.

83 521.—SCHOOL DESK.—John Mealey, Fairville, New Bruns-

the roller, provided with wooden bushing. 83,521.—School Desk.—John Mealey, Fairville, New Bruns-

co.j.021.—ECHOOR DEER. COME RECARD, FAITVILE, NEW BRUIS-wick.

I claim, 1st, The adjustable desk, G H, in combination with the seat, C, and its supports said desk adapted to be folded back, to form a back rese for the seat, substantially as snown and described.

2d, in combination with the adjustable desk, G H, the seat, C, and its supports the hinged back, D, as herein described, for the purpose specified.

83,522.—MACHINE FOR FORMING THE HOOK OR EYE ON POT BAILS, ETC.—Jacob Miller, Washington, Pa.

I claim the disk, c, provided with the mandrej, e, and pin, f, combined with the lever, B, furnished with a forming roller, c, and guide, J, constructed arranged, and operating as herein described, and for the purpose et forth 83,523.—MACHINE FOR BENDING OVAL HANDLES FOR TIN WARE.—Jacob Miller, Washington, Pa.

WARE.—BAORING FOR DEMORAGE OVAL HANDLES FOR TIN WARE.—Jacob Miller, Washington, Pa.
1 claim the frame, A, provided with the slots, B and e, pin, J, forms, C and brace, I, and used in combination with levers, D, provided with rollers, constructed, arranged, and operating as herein described, and for the purpose set forth.

83,524.—GAGE FOR CIRCULAR SAWS.—Warren P. Miller, New

York city.
I claim the gage for rounding circular saws, consisting of gage point, h. gage rod, g. nut, k. tube, f. plug, c. and curved arms or forks, m. m., in connection with grooved collar, b, all constructed, combined, and arranged substantially as and for the purpose specified.

83,525.—Bolt Cutter.—Thomas W. Moore, Rich mond, Ind I claim the arrangement of the shear blades, le vers, and swiv el pivot pins in the manner described and for the purpose set forta.

83,526.—Waste Saver for Carding Engine.—Charles F

83,526.—WASTE SAVER FOR CARDING ENGINE.—Charles F-Morrison, Ritton Glen, N. Y.
I claim, 1st. The described arrangement of the horizontal waste carriers E F, with relation to the doffer, D, cylinder, C, feed rollers, B B', and stripping roller, G, as herein described, for the purpose specified.
2d. The horizontal waste carriers E F, constructed as described, of small with ribs, widely spaced upon the belts, and adapted to be shaken, in the manner described, for the purpose specified.
83,527.—STEAM GENERATOR.—E. P. Mosman, deceased (Alberts, Rolles and Sargh E, Mosman, administrators), Norwich, Coul.

bert S. Bolles, and Sarah E. Mosman, administrators), Norwich, Conn I claim, 1st, An evaporizer for a steam boiler, consisting of a case or hell. H, with an inclosed diaphragm, I, arranged within it, substantially as described.

2d, The combination of short flue boiler sections and evaporizers, con

2d, The combination of short flue boiler sections and evaporizers, con

structed, arranged, and communicating and described described 3d, A feed water hearing chamber, combined with a short flue boiler section or sections, substantially as described.

4th, The manner, substantially as shown and described, of conducting the water from a chamber, j, horizontally over the fire chamber, and thence vertically through said fire chamber.

The Manlage New York city. arranged, and com

vertically through sai vertically through said are chamber.
83,528.—Steam Generator.—T. H. Muller, New York city.

83,328.—STEAM GENERATOR.—1. II. Infiller, New Tolk City. I Claim, 1st, The heads, E. provided with openings, a, in their sides, and openings, b, in their tops, placed eccentrically toward the center lines of the pipes, O, substantially as shown and described.
2d, The perforated tubular brackets, n, through which bolts, m, pass, arranged with relation to water jacket, f, and heads, E, substantially as set forth.

This can be seen that the heads of the seen that the heads, E, and in closing the pipes, D, substantially as shown and described.

83,529.—COMPOSITION FOR FORMING TILES, FLOORS, AND FOR OTHER PURPOSES.—Joseph Neubrand, Green Point, N. Y.

1 claim the combination of the within described articles for the purpose

specified.
83,530.—Tweer.—O. G. Newton, Edinburg, Mo.
1 claim the combination of thoseparts with the adjustable bearing for the shafs, G, as arranged and described.

83,531.—Paper File.—Baruh Ney, and Henry Hofheimer, Alexandria, Va. We claim the paper file, A, provided with an outer supporting edge, A' counterbalanced by the advertising frames, E, arranged and combined substantially as shown.

83,532.—BEE HIVE.—Abner Niebel, Tiffin, Ohio 80,002.—DEE HIVE.—ADHER IN 18081, 1 HIII., OHIO.
I claim, 1st, The feed box, A, constructed as described, in compartments, with wire cloth top. door, and ventilating holes, and provided with dirt drawers, B B, and sildes, e e, and with blocks, c c, covering the openings, b b, substantially as and for the purposes herein set forth, 2d, The combination of the feed box, A, chambers, D D, honey boxes, E 83,511.—THILL COUPLING.—Wilson W. Knowles, Plantsville, Conn. Antedated Oct. 17, 1868.

I claim the combination and arrangement of the center piece, C, with the

E, and cap. H, all constructed as described, and operating substantially as and for the purposes herein set forth.

and for the purposes heren set forth.

83,533.—APPARATUS FOR PRESERVING AND FREEZING FISH,
MEARS, Erc.—Phi ip Nunan, Sandusky, Only.

I darn, in a meet and fith preceiving house, having compartments, B. B.,
which walls, as herein described, the combination of the vessel, C, pipes, D
and E, and v ssels. F e F F, all suspended in the house, so as to allow a
space below them, for the articles, substantially as herein shown and described.

space below them, for the articles, substantially as herein shown and described.

83.534 — BAG FASTENER.— Charles H. Nye, Vineland, N.J.

1 claim the described arrung-ment of the handle, D. buckle, B., and strap, A., secured to the bag, for the purpose specified.

83.535 — WASHING MACHINE. — E. F. O'Neill, Prairie du Chien, Ws.

1 claim the combination of the bow lever, D., board, I. apron or flange, J. arms or bars, G., and three or more corrugated reliers, H. with each other, ard with the tub. A., and cylinder, B., substantially as herein shown and escribed, and for the purpose set forth.

83.535.—SEAT BACK.—W. H. Paige (assignor to himself, John Sweedy, and James W. Russell), Springfield, Mass.

1 claim the metallic springs, b), a tatached to the body or frame, A, the ends of said springs having a bearing in the channels, n or n', with the screws, a a, or other protruberances therein, the whole, when covered and stuffed, forming a seat back, all constructed and operating substantially as berein described and set forth.

forming a seat back, all constructed and operating substantially as berein described and set forth.

83 537.—COhn PLOW.—Clinton J. Paine, Young America, assignor to himself and Henry Creswell, Warren County, Ill.

I claim, 1st, The curved draft bar, B, running from the inside of the center of the wheels forward and upward, substantially as and for the purposes herein set forth.

2d, The strangement of the curved plow beams, F. F. coupled to the curved draft bar, B, as and for the purposes herein set orth.

3d, The bar, E, running fsom the outside of the center of the wheels, and aeross the top, as and for the purposes herein set forth

4th, The combination of the forked ends, a a, of the plow beams, and the pins, b h, and plates, c c, forming a hinged coupling, substantially as and for the purposes herein set forth.

the purposes therein set forth.

83,538. KNIFE AND FORK HOLDER.—John W. Patten, North Greenbush, N.Y.

1 claim, 1st., The longitudinally supporting device, A, mount don a standard or standards, BB, which extend up from a rod, C, substantially in the manner and for the purpose described.

2d, The combination of the longitudinal supporting device, A, standards, BB, rod, C, and spring clamp or clamps, DD, substantially in the manner decigned.

3d The rod, C, with clamp screws, a, fitted to the standards of supporting device, A, substantially as described.

3dfTherod, C, with clamp screws, s, little to the stendards of capper-addedice, A, substantially as described.

83,539.—Roofing Compound.—M. Pinner, Buffalo, N. Y.

1 claim a cement composed of the ingredients above specified, in substantially the proportions and for the purposes set forth.

63,543.—Apparatus for Shuffling and Dealing Cards.

Description of Litene Piquet, Sartrouville, France.

I claim, 1-t, The transverse meral wires, H, in combination with the box, A, substituting as an for the purpose set forth.

2d, The combination of the clock movement with the distributing roller, J, the spring. D, the platform, D1, and the pin, F G, constructed and operating substantially as and for the purpose described.

3d, The platform. D1, in combination with the spring, D, the pin, F G, and distributing roller, J, constructed and operating as and for the purpose set forth.

83 451.—CHAIR SEAT.—Cornelius Platt, New Haven, Conn. l claim the chair seating herein described, as an article of manufacture consisting of the compound foundation, a and b, covered, and so as to be applied to the chair frame, substatially in the manner herein set forth.

83,542—FURNACE FOR THE MANUFACTURE OF IRON AND STEEL—Augus e Ponsard, Paris, France.
I clai a furnace for the manu acture of from and strel, constructed substantially as specified, and provided or fitted with tubes or ore, carbon and flux receptacles, B & In communication at their base with the basin, D, o the furnace, essentially as shown and described.

83,543. -FLED WATER HEATER. Louis B. Powelson, Pittsburg. Pa
I claim not any of the specified parts in severalty, but an improved feed
water apparatus, consisting of the several part specified, all combined, constructed, and arranged as described.

83.544.—BED LOUNGE - James D. Pratt, Cleveland, Ohio. I claim so arranging the springs, E and F, on the flat horizontal bars, C and D, that the middle of the entire space of the b-d shall present a soft and elastic surfare, substantially as shown and described.

83,545.—Photographic Room. — George K. Proctor, Sa

83,545.—Photographing purposes, an apartment or noom, baying its interior of such a curved form as for flect and concentrate the rays from a lamp, or other light, up in the person or object to be photographed, substantially snown and described.

2d, The opening, c in the room or apartment, A, for the purpose of adjusting the camer, outside of the room in oroper position with the person or object to be photographed within the room or apartment, substantially as set forth.

3d, The employment of magnesium, when used for illuminating purposes, in connection with a room or apartment, A, constructed in the manner or form as shown, and for the purpose specified.

83,546.—THILL COUPLING.—Robert Pyle, Wilmington, Del. I claim, 1st, The die, as constructed, in combination with the bolt and washers, as shown and described 2d. The combination of the die, a, and screw bolt, c, with the clip iron. k, tie iron, f, and thill iron, with an eve or nonked end, constructed and operating in the manner and for the purpose substantially as herein shown and described.

83,547.—ROAD GRADER.—James M. Ragsdale, McCoy's Station, ind.
I claim, 1st, The arrangement of the wheel, E, plow, R, and revolving arms, 4 H, when connected with the frame, A, and constructed and operating,

substantially as specified
26. The combination of the hinged axle, B', and lever, K, with the frame.
A, provided with the wheel, E plow, R, and arms. H H, and connected to operate as set forth.

83,548.—Photographic Printing Frames.—Byron Reed,

Kokomo, I. d.

I claim, ist, Placing an indefinite number of papers, prepared for receiving potographic impressions from a negative, in a frame at one time, substantially in the manner herein shown and described.

2d. The frame, A, constructed substantially as described and arranged for receiving a large or a small number of papers, substantially as set forth.

88,549.—STEAM PUMP.—A. J. Reynolds, Chicago, Ill.
I claim, 1st. A warer eleviting engine, hiving two cylinders, arranged one upon the other, the upper one for receiving the stram, which aids in expeling the water therefrom, and which by means of its condensation, can es a vacuum to be created therein, and another, into which the stram from the latter's caused to flow by the discharge of the water from the former, and in which the steam from the upper cylinder is condensed, substantially as described.

Scribed.

2d. The combination of cylinders, A and B, and float or piston, M, with its aper ares or pa sages, O, substantially as described.

3d. The combination of the float or piston, M, and valve, P, substantially as rth. The combination of the rod, E, float, M, valves, P $\, {f Q} \,$ and $\, {f X} \,$, substan-

taily as described.

5th, The combination and arrangement of valves Q and X, on rod, E, and valve, W, in the h ad of cylinder, A, substantially as set torth.

6th, The arrangement of valve, H, in relation and with reference to valves, X at a W, substantially as set forth

83,550.-GATE -John F. Rogers, South Bend, Ind. I claim ag te constructed as described, having he rail, a, for sustaining the lateral pressure, placed at the bottom of the gate, in combination with the short post, D, the rollers, A, their supporting p sets. E, and connecting bar, A', and posts, E', all constructed and arranged, as and for the purpose of farth.

83,551.—FURNACE FOR THE MANUFACTURE OF IRON AND

FOR OTHER PURPOSES.—Henderson Ross, Pittsburg, Pa. Antedated September, 30, 1868.
I claim so constructing the fire chamber of furnaces used in the manufacte of front and steel, that the interior walls of said chamber shall consist of iron, which are surrounded with water, substantially as herein described, for the purpose set forth.

83,552. — WATER-HEATING APPARATUS. — John C. Ryan

Chicago, Ill.

I claim the combination of the pipes, E D L C, with the boiler, A. stove, S, and coll, B, whereby the circulation of water is effected, a above described, and at the same time the stram is taken from the pipe, D, or vessel, A and conveyed to the beater, H, as herein set forth for the purpose specified.

83 553. -Hot-water Heater. George H. Sellers, Phœnix-

v:11., Pa.

I claim, in combination with the external water chamber, C, the cylindro conical fire chamber, A, as and for the purpose substantially as described. Also, in a hot-water heater, the lumediate connection of the water chamber with the street mains, so as to avoid the necessity of a reservoir, substantially as described.

83.554.—Screw Cutting Lathe.—H. F. Shaw, West Rox-

bury, Mass.

bury, Mass.

claim the arrangement, substantially as described, of the lever, L, pryoted at L, the mat. N, having a slotten sh nk, N, thereon, the adjustable connecting button, K, carringe, G, phyoted with the saviveled at distable disk, H, and the screw, x, or their equivalents, for the purpose described.

83,555 —F ASTENING FOR CARRIAGE CURTAINS. — Ephraim

Shepard, New York city.

I claim the tube, B slotted substantially as shown, to form a spring, b, in combination with the cy., E, in the curtain, D, all constructed and arranged to form a new and improved curtain tastening, as set forth.

83 556.—RAILWAY CATTLE GUABD.—D. B. Shirk, Brunner ville, Pa.

I claim the arrangement of the crank, cc', when not in the same plane, on the top of a sheft, which shatt is provider with pickers, P, and a certral weight w. appended below, and when operated by a hinged lever, L, with its open jaws, J, the lever being pivoted at one end, all combined and operating substantially in the manner and for the purpose specified. 83,557—Loom.—A. W. Silvis (assignor to himself and S. B.)

85,57 — LOOM.—A. W. Silvis (assignor to minist and S. D. Shott), Birmingham, Iowa.

1 claim, 1st, The arrangement of the picker staff, a, with its enlarged lower end notched at a2 the swingin reversing pawl, al, provided at its enlarged lower end with doubt in lines, the hinged spring hooks, a3, and the bridge, a5, all perating as described for the purpose specified.

2d. The arrang ment of the pawl, b", hacket, bit, secreted to the lay, the pattern cylinder, b2, catch pawl, b3, and plyed diright-angular harness levers b3, all constructed as herein described for the purpose specified.

37, The combination of the right angled harness levers, b5, with the harness trames and pattern cylinder, substantially as and for the purpose set forth.

83 558.—Jack for Turning Shafting.—Alfred Sims, Brook-

tyn, N,Y.

tyn, N,Y. 83,559.— Shuttle for Looms.—C. E. Smith and F. T. Jaques.

Lowell, Mass.

We claim the twisted shank, C, provided with the removable tip, B. constructed substantially as shown and described, in combination with a shuttle.

83,560.—Tool for Turning and Planing.—J. P. Smith, Glasgow, Scotland.

I claim the within-described formation and adaptation of the under surface of the part, c, to fit tightly and firmly to the properly curved surface of the tool, b, there vature of each being uniform through the whole length, by rolling, molding, or otherwise, the part, c, and the tool, b, being used, in compination with the part, a, substantially as and for the purposes herein set forth

rorn. 83,561.—Нач Rack.—Wilson Smith, Tod Township. Ohio.

83,561.—HAY RACK.—Wilson Smith, Tod Township. Ohio.

1 claim, 1st, The rack, composed of side pieces, a and d, and the rangs or cross pieces, b b b, when applied to managers, by hinring or attaching it to the top of said manger, and at the side next to the animal that feeds therefrom substantially as shown and described.

2d, The combination of marger, g, the rack, a b b d, and teed trough or troughs, if, all as sown and described.

83,562.—HAT HO. K.—C. L. Spencer, Providence, R. I. I claim the combination of the hook strap, and tongs, when constructed to operate substantially as set forth and for the purp se specified.

83,563. STATION INDICATOR.— Elihu Spencer, Ottawa, Canada.

Canada.

I claim, 1st, The cutting out or otherwise constructing the plates, c. so as oferm frames, over or on the arransparent or semi-transparent fabric, d, secured, having the names of the stations upon them, in combination with c. adde, lamp, or other tight, D, placed at one end of the box, A, and arranged oas to throw the rays of light within the same, substantially as and for the

so as to throw the rays of light within the same, substantially as and for the purpose specified.

2d, The a justable or sliding bar or stop, E, arranged and applied in the manner substantially as and for the purpose set forth.

3d, The hell-operating mechanism, composed of the lever, K', spring, I, right-angular p ates, H H, and hammers, G G, all arranged to operate by the turning of the heads, B, sub-stantially as and for the purpose specified.

4th, The flaps, L, when applied to the box, A, and used in connection with the drop catch, M, substantially as and for the purpose specified.

83.564.—CULTIVATOR.—W H Stratzman Big Lick, Va.

I claim the arrangement of the sandards. B B, oblique bar, C, rack bar, I, and keeper, E, with nuts, g, and plows D, all as herein setforth.

83,565.—Beehive.—L. M. Stoops. Grandview, Ind.

I claim ist, The periorated tube, B, placed in the bottom of the hive, at its front side, and provided with the entrance, F, all substantially as shown and described.

described.

2d. he ventilating tube, G. provided with openings to admit air through the sides of the bive, and other openings leading into the brood chambers and inner boxes, substantially as herein set for h.

2d. The arrangement of the brood chambers, C. C. ventilating tube, G. feed box, H, and honey boxes, II, all constructed substantially as and for the purposes herein set forth

- WASH BOILER.—Jerome B. Sweetland, Pontiac,

85,900. WASH COLLEGE. WASH AND A COLLEGE. WITH A STATE OF THE PROPERTY OF THE

er in set 1 rth.
36, The reversed bottom, B, provided with a partition or wall, J, and inged pallet or valve, L, the latt-rextending up into the tube, E, substanally as and for the purpose berein set forth.
3,567—CORN PLANTER.—C. W. Thiessen, Effingham, Ill.

I claim, 1st, The drop-box, constructed as neserined, of the parall 1 ribs, d, one of which is provided within the seed receptacles, i m, as herein septib and shown. rm and shown. 2d. The circular seed receptacle, E. coastructed as described, and secured the inner face of the wheel, B, within the flange, c, as herein set forth and lown.

shown.

3d. Pivoting the connecting rods, j, of the slides, g, by m ans of a common pin. K, to thest ationary axe of the revolving, wheel, so that, by the revolution of the wheel, the slides will receive reciprocating motion in the drop boxes, substantially as set forth.

4th, The arrangement of the circular seed recentacle. E, and slides, g, up on opposite sides of the wheel, B, as herein described, for the purpose specified.

83,568.—HARVESTER. -James Toay, Mineral Point, Wis.
I claim, 1st, The wheel, A, constructed substantially as shown and described.

cribed.
2d, The plate, B, constructed substantially as shown and described.
3d, The continuation of wheel, A, plate, B, and the framework of a harresting machine, substantially as shown and described.

83,569 — CULTIVATOR. —P. R. Totten Adams, Ill.
1 claim, lst. The bow shaped lever, K. in connection with the treadle, L, combined and arranged substantially as and for the purpose specified 2d. The connecting of the beams, GG, of me inner plows, H, by means of staple-passing through oblong slots, e, to admit of the lateral movement of said plows, substantially as set forth.

83,5:0. - HASP FOR TRUNK LOCKS .- Leonhardt Uitting (as

co., v.v. - LIABY FUK IRUNK LOUKS.—Leonhard Uitting (assign or to nimself, G.Massa, Ch. Ammlung, and H. Zimmerm.n), Philadelphia, Pa.

claim hinging the swinging hasp, B, to the upper edge of its plate, b''', so that it can be reely turned sufficiently upward to allow the plate, b''', to be fastene; to the trunk-iid by rivets, b5, which wil' be covered by the said basp when the trunk is clos d and locked, substantially as and for the purpose set forth and described.

pose set form and described.

83,571. — FODDER CUTTER. — Elias F. Varner, Harveysburg. Ohio.

I claim, i-t, The provision, in a fodder cutter, of the knife, N, having one interectuting edg., n, and one hooked cutting edge, n', and belug fine nished with a slotted shank Oo, or its equivalent, for attachment to a drivig shaft, in the manner herein described.

2d, The combination and arrangement, substantially as described herein, of the feed rollers, CC, springs, D, ratchet wheels, cC, pivond feed hands, E e' e', cross head, F, no procaumg bar, G, spring, H, adjustable cam, it, driving shaft, J, and fly wheels. K, for the object xplained.

3d, in combination with the knife, N, nn', driving shaft, J, nut, L, and washer, I, for the purpose described. 83,572. - Door Hinge. -- Anton W. Walter, Canton, Ohio.

r claim, 1st. A hinge, composed of two leaves, having eyes or lips turned up at their outer or inner edges, and combined with a hinge pin, substantially in the manner and for the purpose herein specified.

2d, In combination with a hinge, contructed as needle specified, a spiral spring, S, arranged and used substantially in the manner and for the purpose specified.

83,573.—TURNING TOOL. - William H. Whitlock, Rising Sun, Ind.
I claim the hand tool for turning, herein described, composed of the stock, A a a 'a', bit or cutter, B b o' b'', set screws, C C', and ha dle, D.

83,574 — Grist Mill. — Bennett Whitney, New Brunswick, N.J.
Iclam, ist, The arrangement of the elastic packing, H, interposed between the upper stone, E, and the curb, C, substantially as and for the purpose set

10rth.
5d, In combination with the stone, E, the pins, h, slotted sliding bars, i, slotted plate, r, adjustable plate, L, stationary screw, 1, and nut, 1, all operating as described, for the purpose of adjustably suspending the stone, r, in framing, as herein shown and described.
3d, The reversible Z-shaped bars, M, when provided with hooks, 1, arranged

to support the hopper and shoe of the grist mill, as berein described. 83.575 - Preparation of Roofing Fabrics. - Jay J. Wiggin, Syracuse, N. Y. I claim, 1st, The box or bed, C, constructed as and for the purpose de-

ben. The three rollers, BBB, constructed and arranged substantially as and the nurno e described.

20. The three rollers, B B B, constructed and arranged season.

31. The rolling apparatus composed of the three rollers, B B B, the frame, A A, and the parts contained in the same, constructed and arranged substantially as a d for the purposes set forth and descriped.

4th, The heating and keeping hot the rollers, B B B, by the production into them of either hot water or steam, substantially in the manner set forth.

5th, The pricess her in described, of coating felt, piper, and other roofing fabrics, the same consisting in the use of heated rollers acting over a clabed, or its equivalents, constructed substantially as described.

83,576. -Roo ING COMP ISITION FOR HOUSES, BOATS, BARNS,

Erc. - J y J. Wiggin, Syracuse. N. Y.

Brown and in ade of the intredients before described, in the reportions above set forth, substantially as and for the purpose described. 83 577.—Combined Tools -John D. Wilkinson and E. O

Boyle, Pla tsburg, N. Y.
I claim, comboing and securing or pivoting the wire gage, A, dividers, C, rule, D, equare, E, and calipers, F and H together, when made to correspond ip dimensions with each other, as and for the purpose set forth.

16 of mensions with each other, as and for the ourpose set forth.

S3,578 — HARVESTER — Miletus J. Wine, Long Glade, Va.

1 c am, 1st, The chute, M, having its rear end left open, and attached only to the oper but at its front end, when stranged between the grain wheel, w, and the apron, and below the level of the atter, in the mainer and for the ourpose specified.

24, In connection with the belt, C. for moving the apron, A, and the chute, M, for receiveing the grain from said apron, the rock shaft, G, the rake, J, the nide pulley, N, and the treadle, t, or arm, z, when combined and arranged to operate m the manner and for the purposes substantially as specified.

83,579 - WATER WHEEL -A. N. Wolf, Sheridan, and Joel

Hase, Bernyil's, Pa.
We claim the combination of the casing, A, whee', E, chutes, B B, hinged rates, UC and ring, a, all constructed, arranged, and operated substantially is set forth.

REGISTERING SCALE.—David Wolf. Easton, Kansas. I Claim the arrangement of the dial place, E. pawil, shaft, C. wheel. P., with its pin. g. and waist p.n. d., the hammer, J. and beil, k. as constructed, in combination with the beam, A. to be operated by a platform or weighing scale, substantially in the manner as described, for the purposes herein set forth. 83,581. Stop for Umbrella Runner.—Joesph Wright,

Philadelphia, Pa.
I claim a stop for umbrella runners consisting of a staple baving legs, a al, of different teograbs, and a shoulder, a2, substantially as described.
\$3,582 — EXTRACTING GOLD AND SILVER FROM THEIR ORES

—John W. Knawell, Washington, D. C. I claim the use of finely divided iron, prepared according to Bischoff's patent process, in connection with the amalgamation of gold and silver ores, as herein described and set forth.

REISSUES.

34,150.—Water Wheel.—Dated Jan. 14, 1862; reissue 1,791, dated Oct. 11. 1864; reissue 3.163.—Division A.—James S. Goode and John W. Bookwalter, Springfield, Ohio, executors of the estate of James Leffel, deceased.

deceased.

We claim, 1st, A wheel having two series of buckets, both receiving the water horizont liv, and one series discharging the water vertically and the other toward the center, substantially as described.

2d, The annular diaphragm, D, constructed and arranged to operate in combination with the buckets above and below, substantially in the manner and for the purpose set forth.

34.150.—WATER WHEEL.—Dated January 14, 1862; reissue 3.150.—Water William 11.1814; reissue 3.159.—Division 3.—Lines S. Goode.

1,791, dated October 11, 1834; reissue 3 169.—Division 3.—James S. Goode and John W. Bookwalter, Springfield, Ohio, executors of the estate of James Leffel, deceased.

We clim, in combination with a water wheel having two series of buckets, an upper plate, covering the wheel, with a horizon all flange, and a lower cylinger and flange, and a series of chutesfor directing the water to said buckets, substantially as d scribed.

WATER WHEELS. - Dated January 14,

ets, substantially as a scribed.

34.150 — CASE FOR WATER WHEELS.—Dated January 14, 1862; reissue 1,792, dated October 11, 1864; reissue 3,173—Division A.—Jas. S. Goode and John W. Bookwalter, Springfield, Olio, executors of the estate of James Leff-d deceased.

We claim, 1st, A case for a water wheel, composed substantially of a crown plate, A, with a horizon all flange, c, projecting beyond the periphery of the wheel, a cylinder, R, with a correspondingly projecting flange, c, and a series of oscilla lag gares, placed intermediately between the flanges, substantially as described.

as described.

2d. In combination with a case, substantially such as described, an upper and lower support for the water wheel snaft, a tachel to the case, substantially as described.

3d. The upper plate, A, when constructed with the flange, c, cut away to admit of the movement or oscillation of the gate plates, substantially as described.

scribed.

4th, The bolts that hold the crown plate and cylinder by their flanges, in proper position, in combination with the case, and the means for sustaining the wheel, substantially as described.

the wheel, substantially as described.

34,150.—GATE FOR WATER WHEELS—Dated January 14, 1862; reissue 1,792, dared October 11, 1864; reissue 3,171—Division B.—Jas. S. Goode an John W. B. okwalter, Springfield, Ohio, executors of the estate of James L. ffel, deceased.

We claim, 1st, The gates, H., when constructed substantially as described, so arranged around the wheel as to form converging throats, and so pivoted that when closed there shall be an equilibr um of pressure on the opposite ends thereof, substantially as set forth.

24. Gates, H., which have their faces from, z" to z', outwardly flaring, and their faces from, z' to z, when closed, on a curve concentric with the wheel, and pivoted to fianges, c and e, at a point, d, in the eniddle of the latter faces, sub tantially as set forth.

72,323 -LIFTING APPARATUS FOR GRAIN DRILLS -Dated

December 17, 1867; reisus 3,172.—Chas E. Patric, Macedon, N. Y. I claim, 1st. The employment of the racks, R, and pinions, w, in connection with the hand lever, F, and shaft, H, for the purposes set forth, whether the lifting chains are marie to wind upon the shift or n m. 2d, The arrangement of the locking latch, D, with the shaft, H, when it is also made to act as a support, substantially as and for the purposes set forth, 3d, The arrangement of the guaros, G, with the rack, R, and pinions, w, substantially in the manner herein shown and described, and for the purposes set forth.

esset forth.

4th, The combination of the shaft, H, with the devices for raising the same, when constructed in such a manner that, by turning the shaft on its axis, it is caused to rise and fall, for the purpose set forth.

66 904. -COMBINED PLANTER, HARROW, AND CULTIVATOR.-

66 904. —COMBINED PLANTER, HARROW, AND CULTIVATOR.—Dated July 16, 1867; reissue 3,173.—Peter P. Runyon, Johnson Letson, George J. Janeway, and E. McDonaid, New Brunswick, N. J., assigness by mesue assignments, of David D. Stelle. We claim, 1st, The employment, in combination with the main trame and driving wheels, of a rotatory framehung on said axle, at ibstantially as described, for the purposes set forth.

2d, The employment, in combination with the oscillating frame, in which the cultivator is hung, of a lever, u, and retaining bar, I, or the equivalents, for depressing the rear end of said frame, so arranged that it may be conveniently handled by the driver while in uls seat, as described.

31. The combination of the rod, k, spring, n, a d vibratory valve arm, m, with the cam, I, the whole arranged to operate as and for the purpose set firth.

Orth.

4th, The adjustable slides, and series of slots in tube, p, for varying the charge of send to be deposited each time, as and for the purp sesset for h.

5th, The adaptation to the same transvers cultivator shaft, g, of different sets of removable harrows and hoes, as described. 74.077 - WEATHER STRIP. - Dated February 4, 1868; reissue

74,077 — WEATHER STRIP. — Dated represely 4, 1805; reissue 3,174.—E. S. Torrey and J. Torrey, New York city, assignees of Washingtor L. Gilroy.

We laim, 1st. The insertion of a flar, classic strip litts a molding, such as a over described, in an inclined post ion to its surface, as herein set for a.

20, Also, affixing said clastic medium into the groove in the rigid molding, by means of suitable cem-nt, as and for the purposes specified.

20, Also, amking said elastic mention to the groove in the rigid molding, by means of suitable cement, as and for the parposes specified.

14,363.—METHOD OF BOTTLING FLUIDS UNDER GASEOUS PRESSURE.—Pail Schmt. New York city, assignee of Jan Quantin and H.A. Pintard, and administrators of Aiphones Quantin, deceased. Dated March 4,1856; relesue 3,175
I cialm, 1st, fee above described device for filling bottles or other vessels with serated water and sirup may be discharged from said cozies common to both, substantially as shown and described.

2d, The combination and arrangement of the sirup-measuring chamber, and a rock or valve for admitting the aerated water thereto, sbustantially as shown and described.

3d, The arrangement of the sirup conduit and the water conduit, as a consequence of which the water ar some distance from their common outlet, substantially as shown and described.

4th, The combination and arrangement of a valve or cock for drawing the water, a vessel for rec-iving and dispensing the sirup, and the pipe or passage connecing the same, as a consequence of which the ejection of the sirup is accomplished by the manipulation of the valve or cock for drawing the water, as wessel for rec-iving and dispensing the sirup, and the pipe or passage connecing the same, as a consequence of which the ejection of the sirup is accomplished by the manipulation of the valve or cock for drawing the water, substantially as shown and described.

5th, The construction and arrangement of the vent opening and closing device, and the water drawing valve or cock, as a consequence of which they are both operated simultane unly by the movement of water-drawing valve, outstantially as shown and described.

18,752.—Coffre Pot.—George R Chittenden, Chicago, Ill.,

and C. A. Smith, Milwaukee, Wis, A. signees of J. McGregor, Jr. Dated April 11, 1854; extended seven year v. reissne 3,176.

We claim, 1st, A tea or coffee pot, when made with two receptacles, one for tea or coffee, and the other for water, substantially as described.

2d, A tea or coffee pot, so arranged that the hear shall be communicated to the tea or coffee through a water or liquid medium, substantially as described.

Inventions Patented in England by Americans. [Compiled from the "Journal of the Commissioners of Patents."]

PROVISIONAL PROTECTION FOR SIX MONTHS.

2,745.-MANUFACTURING GAS.-Jas. Stratton, Philadelphia, Pa. Sept. 5, 1868.

2,795.—Condensing Apparatus for Steam Engines.—Franklin Ransom, Buffalo, N Y. Sept 10, 1868 2,797.—Mode of Constructing Beams and Girders.—O. Coffeen Evans, United States, Sept. 11, 1868.

2 315.—Machinery for Manufacturing Brushes.—Joseph Sheldon, New Haven, Coan. Sept. 12, 1868 2,831.—STEAM PUMPING ENGINES —James R. Maxwell and Ezra Cope, Cincinnati, Onto Sept. 15, 4868

2.833.- Toy.-Wm, W. Rose, New York city. Sept. 15, 1868. 2 839—Machine for Hulling and Cleaning Grain.—Jas. F. B. Marshall and augustus Jones, Boston, Mass. Sept. 15, 1868.

2,8 2 -Covering for Walls and Other Surfaces.-Frederick W. Armstrong, Plainfied, N. J. Sept. 16, 1868. 2.846. - APPARATUS FOR "BESERVING FOOD, ETC. - Charles Havard and Manuel X. Harmony New York c ty. Sept. 16, 1868.

2,859 —MANUFACTURE OF HEADS FOR DOLLS —Geo. H. Hawkins, New York city. S-pt. 16, 1868. 2863 —APPARATUS FOR RAISING FLUIDS.—Henry C. Sergeant, New York city Sept. 17, 1868.

2.865 - Explosive Compound. - Joseph Hafenegger, San Francisco, Cal. Sept. 17, 1868. 2,885.- WRINGING MACHINE -C. H. Hudson, New York city. Sept. 18, 1968. 2.947.—ADHESIVE STAMP.—A. C. Fletcher, New York city. Sept. 25, 1868.

3 007.—Tuffed or Pile Fabrics, and Machinery for Manufacturing the same,—John T. Waring, Yonbers, N. Y. Oct. 1, 1968.

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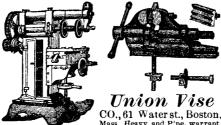
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U. S. PATENT OFFICE.

WASHINGTON. D. C., Sept. 12. 1868 }

Martin P. M. Cassiy, of Granada, Kansas, dini istrator of the estate of Isaac H. Seer, decased, having petitioned for an extension of the parent granted to Henry Carter, assign e of said Soft that Isaac H. Sey, or an improvement in "Making Nuis," it is ordered that sain petition be heard at this filee in the 12th excession. Objections, depositions, and other papers, such the excession. Objections, depositions, and other papers, and the filed in this office twenty days before the day of hearing.

17 S. H. HODGES, Acting Commissioner of Patents.

U. S. PATENT OFFICE,

WASHINGTON, D. C., Oct 24, 1868. }

Aaron Palmer, of Brockport, N. Y., having petutioned for an extension of the parent granted him on the 30th day of January, 1855 for an improvement in "The Construction of the Frame or Grass Harves'ers," it is ordered that said petition be heard at this office on the 11th day of January next.

/ ny person may oppose this extension. Objections, depositions, and other papers should be filed in this office twenty days before the day of hearing.

ELISHA FOOTE, Commissioner of Patents.

U. S. PATENT OFFICE.

WASHINGTON, D. C., Oct. 24, 1868.
William F. Shaw, of Boston, Mass., having petitioned for an extension of the patent granted to him on the 23d day of January, 1855, for an improvement in "Gas Heater," it is ordered that said petition be heard at this office of the 18th day of January next.

Any person may oppose this extension. Objections, depositions, and other papers, so only be filled in this office twenty day before the day of hearing.

ELISHA FOOTE, Commissioner of Patents.

U. S. PATENT OFFICE.

WASEINGTON, D. C., Oct 24th, 1868.;

James Easterly, of Albany, N. Y., having petition of for the extension of a patent granted to him in the 18th day of February, 1855; relaxed in two divisions, numbered respectively 3009 and 3,010, on the 30th day of June, 1868, for an improvement in "Base-burning Stoves," it is ordered that said petition be heard at this office on the 25th day of January next.

Any person may opp se this extension, Objections, depositions, and other papers, should be filed in this office twenty days before the day of hearing.

ELISHA FOOTE, Commissioner of Patents.

U. S. PATENT OFFICE.

WASHINGTON, 1, C. Oct. 16, 1863.

Jotham S. Conant, Hackens ca. N. J. having pe itioned for an extension of the patent granted him on the 16th day of January, 1855, to ran improvement in "Sewing Machines" it is ordered that the said petit in be heard at this office on the 28th day of December next.

Any person may oppose this extension. Objections, depositions, and other papers should be fixed in this office twenty day, before the cay of hearing.

19 3 ELISHA FOOTE, Commissioner of Patents.

U. S. PATENT OFFICE.

Washington, D. C., Oct. 7 1868.
Fanny Holmes, of Whit-hall, N. Y., executrix of the estate of John E. Newcomb, decreased having petriuned for the extension of a patent granted the said John E. Newcomb n the 9th day of January, 1855, or an improvement in "Grain Harvesters," it is ordered that said petition be heard at this office on the 14th day of December next.

Any nerson way opposed.

Any person may oppose this extension. Objections, depositions, and other papers, should be filed in this office twenty rays before the day of hearing.

18 3 S. H. HODGES, Acting Commissioner of Patents.

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