#### THE DENTISTS AND THE HAND RUBBER CONTROVERSY.

This case (Goodyear vs. Rust), which has excited a great deal of interest on the part of the dental profession, has just been decided by Judge Shipman, at the United States Circuit Court, Hartford, Conn.

#### OPINION.

Court, Hartford, Conn.

OPINION.

This is a motion for a preliminary injunction founded upon the well known Nelson Goodyear patent for vulcanizing rubber and other similar gums. The validity of this patent has been so often sustained by adjulactations that no question will be considered in deciding the present motion except that of intringement. The brill of compilant in this case is supported by affidavits, which clearly entitle the compilation in this case is supported by affidavits, which clearly entitle the compilation in this case is supported by affidavits, which clearly entitle the compilation to the injunction prayed for, unless the respondent's proofs overcome or avoid their effect. The respondent works under the natent of Edward L. Simpson, and uses the compound made in accordance with the process described in that patent. The compilation as described in his patent, and is therefore an infringement of their rights. This is denied by the respondent and the question, so far as it is necessary for the determination of this motive, is now to be decided.

Avoiding all useless rehearsal of the details of this Goodyear patent, and of the repeated litigations to which that patent has been subjected, it may be briefly stated that the process covered by it is secured by mixing about four ounces of sulphur and one pound of rubber, and subjecting this mixture to not less than 360° to 275° of heat, Fabrenheitscale. This under proper conditions of place, and time, produces the compound or substance known as vulcanite, a material now well known in the mechanic arrs. The vital question involved in the present controversy relates to the proportion of sulphur and rubber, and time degree of heat. Does the Simpson process substantially embrace these proportions, and this degree of heat? If it does, then it is an infringement of the complainants rights.

The respondent denies that the Simpson process does embrace all these proportions as effective agents or active forces in accomplishing the work of vulcanization. In supp

them by grinding between warm rolls. He then subjects this mixture of rubber and vulcanizing compound to a heat of 320° Fah. The result is a vulcanite.

Without rehearsing the details of the analysis presented by Prof. Seely, it may be stated that the quantity of this compound, which is necessary to perfectly vulcanize one pound of rubber, contains, in some form, notimuch iess (to use the language of Goodyear's specificador) than four ounces of sulphur. In other words, this amount of sulphur goes into this quantity of the sulphur chemically combines with the oil and forms what Prof. Seely calls vulcanized oil, and the other haff exists in the mass of vulcanized oil in the form of free sulphur. Vulcanized oil alone, when mixed with rubber will not vulcanize the latter. according to the evidence before me. Prof. Seely says: "The effect of vulcanized oil on mixing and heating with rubber is not at all chemical. The rubber does not in any obemical sense become vulcanized. Whatever advantage there be in the use of vulcanized oil with rubber must be wnoilly due to physical and molecular causes, and cannot be accounted for-on any theory of vulcanization based on Goodyear's processes. A quantity of vulcanized oil out alm of Goodyear's processes. A quantity of vulcanized oil containing four, or evensix teen ounces of sulphur, may be mixed and heated with one pound of rubber, and not an atom of Goodyear's hard rubber can be produced."

He then goes on to say: "Simpson's compound scomposed of vulcanized oil and free sulphur no doubt acts upon the rubber with its full efficiency; and in estimating the vulcanizing or narigening properties of the compound, the value of the free sulphur, if any, must be conceded. It is therefore necessary to compute the amount of free sulphur in Simpson's compound, the value of the free sulphur, if any, must be conceded. It is therefore necessary to compute the amount of free sulphur in Simpson's compound, the value of the free sulphur, if any, must be conceded. It is therefore in the mass of

sulphur."
What partof the benizon playsin the compound does not appear from the evidenc. But I gathered from Simpson's specification that "its vaporizing qualities more perfectly expet the tumes of the sulphur as well as the odol from the oil, and render the compound nearly, if not perfectly odorless."
In the performance of this office it may be an improvement on Goodyear.

process.

It is conceded then, what vulcanized oil (oil and sulphur chemically conbined), will not produce, when mixed with rubber and heated, vulcanite. There is no proof that the benzoin renders the vulcanized oil any more effective as a vulcanizing agent. It is equally conceded by the respondent's evidence that the quantity of free sulphur in Simpson's compound, cannot alone vulcanize. It is asserted that the vulcanized oil and the free sulphur scattered through it does successfully vulcanize, whenever the mass of compound applied to one pound of rubber contains in the whole not much less than four ounces of sulphur in all, free and combined. Such a proportion of the mass to the pound of rubber is necessary to comply with the conditions of Simpson's patent.

pound applied to one pound of rubber contains in the whole not much less than four ounces of sulphur in all, free and combined. Such a proportion of the mass to the pound of rubber is necessary to comply with the conditions of Simpson's patent.

We have then Goody ear's invention, which consists in combining not much less than four ounces of sulphur with one pound of rubber, and submitting the same to not much less than from 260° to 275° of heat, Fabrenheit scale.

We have Simpson's process, which consists of combining not much less than four ounces of sulphur with one pound of rubber, and subjecting the same to a pear of 230°. Fabrenheit scale, and the same to a pear of 230°. Fabrenheit scale, and the same to a pear of 230°. Fabrenheit scale, and the same to a pear of 230°. Fabrenheit scale, and the same of the sulphur set for the sulphur is first chemically combined with dl. forming a new substance termed vulcanized oil, which there, though acting in the same mass write the remaining half of the sulphur as an anxiliary vulcanizing agent, acts in a different way from the free sulphur tisel'. In other words, half the quantity of sulphur necessary to vulcanize under Goodyear's process has disappeared and exists no longer except as it is represented in a new chemical substance called vulcanized oil. The other half remains. But nether the half that remains nor any quantity of the new agent can alone vulcanize. Yet the two, acting together, at once perform this important office and produce the same result as Goodyear's combination.

I have said that it appears from the evidence that the chemically combined elements of the compound of Simpson alone will not produce, when mixed and heated with rubber, vulcanize. I infer this from the language already cited from Professor Seely's affidavit where he says "A quantity of vulcanized oil containing four, or even systeen onness of sulphur, may be mixed and heated with rubber, vulcanized oil and the definition of vulcanized oil in combining a distinction between the processe

elements in chemical combination is powerless without the aid of the uncombined free sulphur, which is scattered through the pores of the combined mass.

Now it may be asked, how do these two agents, viz., vulcanized oil and free sulphur, by their united forces perform the work of vulcanization? No part of this work is assigned by the evidence to the benzoin. It cannot be done by the chemically combined oil and sulphur alone. It cannot be done by the free sulphur alone. The latter tothe extent of its effective power, for all that appears in this case, works in the same way that it does in Good year's process. The effect of the former (oil and sulphur chemically combined) Prof. Seely says is not chemical, but "must be due wholly to physical and molecular causes." But whether the auxiliary vulcanizing force, whatever it is, exerted by the chemically combined oil and sulphur, is supplied by the latter or noi, does not appear by the proof. From what has long been known, however, of the vulcanizing power of sulphur, when mixed and heasted with rubber, that agent, though combined with another substance, would naturally be looked to as the seat of this force.

It may be true that, as Professor Seely says, the effect of vulcanized oil in lardening rubber is not due to chemical but "to physical and molecular causes." Of the nature or significance of this distinction in the scientific sense I do not presume to speak. But ido not see how this lact avoid Goodyear's patent. I do notfind in his specification any evidence that he created his lyention upon any such nice scientific distinction, or that he limited his claim to sulphur when werking, through chemical, as distinguished from "physical or molecular" laws. If the validity of his patent rests upon such a scientific problem as this, I think its solution should, in the present case, be left to final hearing. The suggestion of such a problem, may parte affidavits, at a very late stage of a series of protraced litigations in which every other defense has thus far tailed, i

There can be no question but Simpson uses a degree of heat within the scope of Goodyear spatent.

Let an injunction issue.

For the complainants, C. T. Blake, and Hubbard and Hyde. For the respondents, S. D. Law, and H. T. Blake.

## The Right to Use Sewing Machines.

Uniterportates Circuit Courst.—Gordon Mackay against Benjamin Wolff.—The plaintiff in this suit is the inventor and patentee of a machine for sewing the soles of shoes to the "uppers," an invention from which it is said he has made during the last five years the enormous sum of \$85,000,000. The machines are sold only on condition that the persons using them shall put upon each pair of shoes manufactured by them a stamp purchased of the leventor. The case same upon a motion of the plaintiff for an injunction to restrain the defendant from using the machine on the ground of a breach of the contract in the matter of putting stamps upon each pair of shoes manufactured. The case has already been argued in N w York upon two similar motions which were dismissed, . The case was fully argued and the decision served.

We find the above item in a Brooklyn paper. We knew that the sewing machine folks were all rich, but we do not believe that Mackay has made so many millions out of his patent. It is simply ridiculous.

## OFFICIAL REPORT OF

# Patents and Claims

## Issued by the United States Patent Office.

FOR THE WEEK ENDING NOVEMBER 17, 1868. Reported Officially for the Scientific American.

PATENTS ARE GRANTED FOR SEVENTEEN YEARS, the following being a schedule of fees:— On ning each Caveat...... On filing each application f ning each Cavest.

Biling each application for a Patent, except for a design
issuing each original Patent.

appleat to Commissioner of Patents.

application for Kessue.

application for Extension of Patent
granting the Extension. 

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

84.045.—DEVICE FOR RAISING AND ADJUSTING WICKS IN LAMPS.—Joseph Bell Alexander, Washington, D. C.
I claim, 1st. The making of the rack, with the guides, H and H', and the stops, Land L', by striking it up of one piece of sheet metal, substantially as

described and for the purposeset forth.

2d. The combination with any lamp, of the pimpor wick tube, A, the sliding wick holder, B, the rack, C, the plmion, D, and the oow epring, S, when arranged together substantially as described and for the purpose set forth.

84,046.—Device For Saw Carriages.—Levi Black and Mil-

54,040.—DEVICE FOR GA., ton Gaffney, Logan, Ohio.
We claim adjustable plates, a and b, holders, F and H, sliding stop or clamp, E, and plate, D, herein described, constructed, combined, and arranged to operate in the manner and for the purpose set forth.

84,047.—WATER WHEEL.—J. H. Bodine and T. A. Hill,

84.047.—WATER WHEEL.—J. H. Bodine and T. A. Hill, Mount Morris, N. Y.
We claim, 1st, The arrangement of the top feed vertical discharge wheel, B, in connection with the flanges a a, upon the lower edge of a curs, which has the gate at tistop, its sine walls being water tight, substantially as and for the purpose herein set forth.

2d, The gate, I, when cast with recesses or concaves, e. e, on its under surface, substantially as specified.

3 The arrangement of wheel, B, gate, I, arm, v, screw shaft, T, block, R, working upon the screw shaft and spindle, S, operating the screw shaft by means of cog gearing, W, when said parts are constructed to operate in connection with each other, in the manner and for the purposes above described.

84,048.—Portable Forge.—John B. Bolinger (assignor to himself and L. R. Fitch), Detroit, Mich.
I claim, 1st, The pulleys, o and q, formed of rubber, with metallic faces or beripheries, substantially as described, in combination with the pulleys C

and process, as seasons as a seasons and the combination with the princys of the process of the

04,000.—W ASHING MACHINE.—Wesley Cornell and Thomas L. Blakely. Buchanan, Mich. We claim, 1st, The eccentric cams. K, adjustable ways, G, and guide blocks, M, when constructed substantially as set forth. 2d, in combination with all the above named parts, the box, A, slide bars, C, rollers, E, and rubber board, L, all operating substantially as spec ified.

84,051. — Harvester. — Alexander G. Donnelly, Breesport, N.Y. I claim the wheel, D, con tructed and operating as herein described and

for the purposes set forth. 84.052.—BEE HIVE.—Benjamin Douthett, Pittsburg, Pa. 84,052.—BEE HIVE.—Benjamin Douthett, Pittsburg, Pa. I claim a hive ferbees, having all of the herein described characteristics, that is to say, a box divided on a vertical line, so as to form two equal and distinct parts, A, and with an india rubber packing. T, between the two, each part or half of the hive being provided with a horizontal part tion, E, molined bottom and perforated plate, F, and a wire gauze, m, extending from the partition to the bottom, and a narrow horizontal box, P, beneath the hive, open at both ends, and provided at each end with a metallic currain, N, as a passage way, common to each balfof the hive; the whole being constructed, arranged, combined, and operating substantially as and for the purposes hereinbefore set forth.

84,053.—Manufacture of Iron and Steel.—Francis Elegishaven Flessbarge and Augusting E Stayner Heilier, Nova Scotia

purposes mennerore sectorin.

84,053.—MANUFACTURE OF IRON AND STEEL.—Francis Ellersbausen, Ellersbause, and Augustus E. Stayner, Halifax, Nova Scotia, and Adolph Graman, New York cty.

We claim, 1st. As a new article of manufacture, pig bloom or pig scrap, being a conglomerate of castiron, oxides, wrought fron, and particles of matter more or less nearly appreaching one or other of those substances produced by admixing, and bringing in contact with fluid castiron, oxidizing substances in a solid state, in such a manner and in such quantity as to produce a solid condition of the mass.

2d, The mixing of cast fron with an oxidizing agent, one or other of which is rendered fluid by heat applied previously to such mixing.

3d, The production of wroughtiron fromeast fron, by mixing with the latter, while fluid, a sufficient amount of oxidizing material to produce a solid condition of the mass.

4th, The production of wroughtiron from oxides of 100, by mixing the latter with molten cast fron to such an extent asto produce asolid conglomerate of the two.

5th, The employment of detersive agents and useful alloys, by mingling them, or either of them, with the oxides used in the process hereinbefor described, so that they shall become part of the conglomerate, and have such intimate contact and connection with the mass as to produce their proper chemical effects when it is afterwards subjected to the action of heat.

84,054.—STEAM ENGINE SLIDE VALVE.—John S. Everitt and Ossian Cook, Oshkosh, Wis.

We claum in the process hereinbefor and connection is the process hereinbefor and connection with the way as the process hereinbefor and connection with the mass as to produce their proper chemical effects when it is afterwards subjected to the action of heat.

84,054.—STEAM ENGINE SLIDE VALVE.—John S. Everitt and Ossian Cook, Oshkosh, Wis.

84,094.—STRAM ENGINE SLIDE VALVE.—John S. Everitt and Ossian Cook, Oshkosh, Wis.

We claim, 1st, The valve boles, S S, of the valve, H, with lugs, r r, constructed and arranged reautively to the cams, n n, arms, m m, provided with slots, x x, and the valve stem. C, as a means of adjustment in compensating forwear of valves and valve sears.

2d, The valve case, A A, when constructed substantially as described, and arranged relatively to the slide balance valve, H, as herein set forth.

3d. The arrangement of the hollow balance slide valve, H, throttle valve, F, with the valve case, A A, injection and ejection pipes, I I', supply pipe, K, and exhaust pipe, K', substantially as herein set forth.

A, and exhaust pipe, K., substantially as herein set forth.

84.055.—Suspending Clamp.—Dan. P. Foster, Waltham, assignor to himself and N. M. Lowe. Boston, Mass.

I clam a suspending clamp, formed of two segment cams, BB, pivoted to the supporting frame, A, and connected by a link, C, substantially as described and for the purpose set forth.

scribed and for the purpose set forth.

84,056.—POTATO DIGGER.— Hamilton France, Hinmansville, N. Y.

I claim, 1st, The geared wheel, E, shaft, F, pinion, G, and arms, H in connection with theaxle, A, frames, C and I, connecting rods, J, for the purpose of grying a vertical vibratory motion to the grate, K, substantially as herein described.

2d, The frames, C and I, hinged together at their front ends, in connection with the axle, A, and lever, Z, when constructed and operating substantially as herein specified.

3d, The bar, N, arms, R and U, lever, Q, fulcrum, S, and pin, T, in connection with guides and standards, O, axle, P, and tongue, V, when combined, arranged and operating substantially as and for the purposes herein described.

arranged and operating substantiarly as and to the purposes herein described.

4th, The combination of the above named parts with the wheels, B and X, bails, M, and seat, Y, when constructed, arranged and operating substantially as herein set forth and shown.

4,057.—CHUCK.—Charles F. Hadley, Chicopee, Mass., assignor to Clifford Arrick, Belmont county, Ohio.

1calm, 1st, The arrangement of the adjustable and, F, bevel gear, F, divided ring, G, and securing pins, h, or there equivalents, constructed substantially as described and for the purpose set forth.

4, The arrangement of the adjustable and, E, bevel gear, F, divided ring, G, annular groove, d, and securing pins, h, or their equivalents, in combination with the bevel pinions, D, constructed and operated substantially as and forthe purpose set forth.

84,058.—WASHING MACHINE.—Mortimer S. Harsha (assignor to himself and Edwin Meredeth), Batavia, Ill.

and forthe purpose set orth.

84,058.— WASHING MACHINE.—Mortimer S. Harsha (assignor to bimself and Edwin Meredeth), Batavia, ill.

I claim the combination of the bars, F. F., pivoted at their centers to the frame, B, the two rollers, D.D., having bearings in in opposite ends of said oscillating bars, F.F. the roller, C, stranged beneath and be tween said rollers, D.D., and the cam wheels, A.A., all arranged and openating so as to give the roller, C, substantially as herein shown and set forth.

84,059.—Tweer.—Adam Herbig (assignor to himself and Thomas Blactourn), Corry, Pa.

I claim the circular duck's nest, A, provided with the inlet pipe, d, and the outlet pipe, d', placed opposite each other, and with the damper, c, all arranged and operating substantially as described.

84,060.—Watch Escapement—Julius Hietel, John Wenzel Hletel, and John Loomis Geissler, Philadelphi, Pa.

Weclaim, 1st, The described construction of the self-regulating lever, C, for warch escapement, consisting of the arm, b, fitting around the staff, and provided with a shoulder, e, against which rests the end of the shorter arm, d, said arms being connected by the spring, f. as weren set fortis.

2d, the combination and arrangement in a watch escapement of the balance wheel, A, spring lever, C, paring for the service of the plane wheel, A, spring lever, C, and made and operating substantially as herein shown and described.

84,061.—Rein Holder.—Isaac Hull, Stamford, Conn., assignor to himself and J. Ferguson Morsell.

I claim a device for holding driving reins, composed of the clamp, A, and spring, B, constructed an operating substantially as herein specified.

84,062.—METALLIC FENCE.—Michael Kelly (assignor to himself, William Lalor, and James Slammon). New York city.

I claim the construction of thorny fence by taking the thoms. B, in holesin the wire, 4, in the manner and for the purposes herein set forth.

84,063.—HAY CUTTER.—Henry Kinsey, F. W. Kissell, J. E. Smith, and J. M. Srith, Ligonier, Pa.

We claim, 1st, The knives, H, constructed and operating substantially as herein shown and described, and for the purpose set forth.

2d, The combination and arrangement of the double crank, f', of the shaft, F, bent pitman. J, and vertical sliding rod or bar, I, having arms, 112, formed upon it. with each other and with the slotted knives. H, substantially as herein shown and described, and for the purpose set forth.

3d. The combination and arrangement of the ratchet wheels, L, sliding pawls. P, short arms, Q, rock shaft. R, long arm, S, and pitman. T, wite each other and with the feed roller form the said sliding bar, I, substantially as herein shown and described.

84,064.—VALVE FOR STEAM ENGINES.—Ralph R. Lee, and George H. Wren (assignors to themselves and John C. Northall) Mahanoy city, Pa.

We claim, 1st, The main valve, C, constructed substantially as herein

we claim, 1st, The main valve, C, constructed substantially as herein nown and described. shown and described.

2d, The comonaction of the valve, C, with the stationary heads, F G, of the steam chest, substantially as herein shown and described.

3d, The arrangement of the valve, C, and heads, F G, with relation to the steam ports, D, substantially as herein shown and described.

84.065.—Reel for Grain Binders.—Sylvanus D. Locke, Janesville. Wis.

84,065.—KEEL FOR GRAIN DINDERS.—STREAM, Janesville, Wis. I claim the combination of the reel, A, spring, D, and brake, E, either with or without the pins, I, or with or without the cylinger, B, substantially as and for the purpose set forth.

84,065.—Car Coupling.—James Osman, and John F. Pot-

ter, Linden Hall, Pa.

We claim the p-votes plate. I, having the guides, e.e, or their equivalent, when employed in connect on with a draw heas, substantially in the manner and for the purposes described.

and for the purposes described.

84,067.—ANTI-FRICTION WASHER.—U. H. Reed, Jeremy Lake, and Luther Sisson North Easton, Mass.

We claim the combination of the parrs, A. B. and D. and the spherical balls, substantially as and for the purpose described.

84,068.—Windows Shuffer.—Frank A. Reiher, Cincinnati, Ohio, assignor to Frank A. Reiher and Company. I claim the arrangement of the two series of lipped or flanges slats, I II III V. I'' I'' I'' I'' racks, D. D', pindons, E. and guiding grooves, 12341'2' 3'4', substantially as set forth.

84,069.—Spring Bed Bottom.—Gustavus Reneky, and Sam-

84,009.—SPKING DED BOILDE.

uel Kiess, Edgerton, Ohio.

We claim the arrangement herein described, of the longitudinal slats, A. blocks, C, transverse slats, B D G, double looped springs, E, grooved and slotted blocks, F, metallic loops, I, and straps, H, as and for the purpose specified.

specified. 84,070.—Machine for Separating the Pulp from Fib-

specified.

84,070.—Machine for Separating the Pulp from Fibrous Substances.—Gelston Sanford, Bergen Point, N. J., assignor to the Mailory and Sanford Fiax and Hemp Machine Dressing Company, New York city.

I claim. 1st. The holding planks, F, suspended vertically upon each side of the rotary scraper olsk, when thefeed openings therein are arranged above the horizontal plane of the axis of said disk, as berein described, for the purpose specified.

2d. The vertical holding planks, F, suspended above the disk, A. free from contact with the combs. E and adapted to be operated by the cam levers, G, to press the material to be operated upon against the radial combs from opposite sides, as herein shown and described.

3d. The described arrangement of the rotating disk, A, the radial combs, E, upon opposite sides of said cisk, the suspended planks, F, having the fred openings and the sputs. I, the side radial, and cam levers, G, all operating as described, for the purpose specified.

84,071.—Harness Tree Pad.—William A. Sharp, and John A. Shannon, Tama city, Iowa.

We claim the pad, F, made heart shaped, or triangular, to increase its bearing surface parallel with the animal's back, and having formed mon its outer and small end the loop, G, for the passage of the ug buckle strap, whose upper end is secured by a rivet passing through the bole, H, and also provided with the twolings, C, between which the tenon of the terret is secured by the bolt, E, all arranged and operating as described, for the purpose specified.

84,072.—Venting Metallic Cores.—Amos Shepard (assignor to "Union Marufacturing Company," New Britain, Coun. I claim venting the interior surface of the molten metal which comes in contact with the solid metal by means of grooves, d, formed in the solid metal, substantially as described, and for the purpose herein specified.

84,073.—Cloth Drawers.—H. P. Wetmore, Elizabeth, N. J., and J. G. Hirckoock, New York city.

34,075.—CLOTH DRAWERS.—H. P. Wetmore, Enzadeth, N. J., and J. G. Hickcock, New York city.

We claim, as a new article of manufacture, cloth drawers, formed in pieces A and B, having the joining seam extended across the back of the leg, at or near the knee join, sub-tantiquy as and for the purposes herein set for h. 84,074.—Machine For Spreading Paint or Mascic.—John

O4.04.—MACHINE FOR SPIKEADING I AIM! OR MASTIC.—Some W. Wheeler, Cleveland, Ohio, assignor to H. H. Wheeler, New York I claim, ist, The spreader or roller, B, in combination with the abron, E, and rollers, F F', when operating conjointly and reversely in relation to each other, for the purpose sp-cified.

2d, The guards, J, springs, K, as arranged, in combination with the apron, E, and in relation to the trame, A, and spreader, B, in the manner as and for the purpose set forth.

-Corn Planter.-Lorenzo D. Wyatt, Castleton, Ind., assignor to himself, samuel Farley, and Edward McManama. I claim the arrangement, A B C D E F. and G. and the agitator, N, all arranged and operating substantially as described, for that purpose. 84,076. — PAPER BAG MACHINE. — Christopher Amazeen,

New Yorkcity. I claim, ist, The arrangement of the knives, G and H, with the collars, I and the spring forwarders, J J, substantially as and for the purposes here-

I, and the spring forwarders, J J, substantially as and for the purposes nereinset form.

2d. The arrangement of the cog wheel. n', on the main shaft, h, and rear
wheels, v' v', secured in slots to the frame, A, so that the former may be
changed, and the latter are movable, for the purpose of adapting the machine to making bags of riflerent sizes, substantially as herein set forth.

3d, The bag former, K, constructed as described, in combination with the
pressing roller, d', for the purpose of forming the bag, and pressing down the
pasted side of the same, substantially as herein set forth.

4th, The arrangement of the rollers, r and w, one placed under the rear end
of the bag former Kf and the other under the pressing roller, d', the rubber
carriers, p, p, and the rollers, b' b', which latter are provided with rings to
hold the carriers in proper position, and constructed as described, and operaring substantially as and for the purposes herein set forth.

84,077.—Thill Coupling.—William Wallace Anderson,
Camden, N. J.

Camden, N. J.

I claim the steel spring, b, in combination with the segments or arches, d and E, which bear upon the shaft pin g but do not touch each other, and with the screw bolt, a, the whole arranged and operated substantially as and for the purpose herein set forth.

84,078.—SAFETY APPARATUS FOR LAMPS.—Cephas Apple-

bee, Lyndon, Vt. 1 claim my improved arrangement of the air pipe, d', with the annular-body, A, and its series, d, of gas discharging holes.

Also, the combination and arrangement of the neck, c, and the male and female connection screws, a b, with the annular body, A, the air entrance tube, d', and the gas educts or series, d, of discharging holes, arranged in such body, as-hreinbefore specified.

84,079.—FLUE CLEANER FOR BOILERS.—William C. Baker, New York city.

New York city.

I claim the tube scraper, constructed and arranged as specified, so as to form a partition for directing the products of combustion, except during the operation of scraping the tubes, as specified.

Charles H. Pascott

84,080.—CHECK HOOK FOR HARNESS.—Charles H. Bassett,

l claim the arrangement of the contealheaded spindle, F, through the bolt of base of the hook, and provided with a spring arranged within the body of the bolt and spindle, so as to operate in the manner herein set forth. 84,081.—Debris Check for Pumps.—Sanford O. Blanding,

Smithfield, R. I.

I claim a debris check or strainer, c, water charging pipes, D. E, and air chamber, A, arranged and combined substantially as described, for the purchamber, and an experience of the purchamber of the purchambe

poses specified. 83.082.—Waist Belt.—Almena R. Boylson, Chicago, Ill. I claim a metallic belt supporter, made in sections, with an elastic or flex-ble piece, b, interposed between the sections, a, substantially as and for the urnoses specified.

purposes specified. 84,083.—CATAMENIAL SAC.—George E. Brinckerhoff, Brook-

lyn, N. Y.

I claim a catamenial sac, with four elastic straps, two of which are longer that the other two, and all attached to the sac, so that the latter may be adjusted on the body of the wear-r in such manner that it will not interfere with the performing of the ordinary functions of nature, substantially as shown and described.

84.084 — HORSE HAY FORK.—J. H. Brinton, Thornbury, Pa. Loken is trong a constant of the performance of an education below that the performance of the second property of

34,034—HORSE HAY FORK.—J. H. Brinton, Thornoury, Fa. I claim, ist. The use of an adjustable ball or other enlargement upon the operating rope of a hay elevator, for automatically unloading the same, substantially as here no set forth.

2d, The combination of the adjustable ball, H, with an arm, F, jointed to one of the jaws of a hay elevator, connected to the other by a cord, b, and having an opening, e, for the passage of the operating rope, the whole beng constructed, arranged, and operating substantially as and for the purpose described. 84.085.—Horse Rake.—Henry L. Brown, Adrian, Mich.

84,085.—HORSE RAKE.—Henry L. Brown, Adrian, Mich. 1 claim the segmental gears. G and K, lever, L, quadrant, M, stop, N, and spring, 9, substantially as herein described, and for the purposes specified. 84,086.—ROLLING MILL.—William Brown, Smethwick, Eng. 1 claim, 1st. The combination and arrangement in rolling machinery such as described of two sets of rolls, having parallel axies, the one set consisting of two rolls, and the other of three rolls, driven at different speeds, substântially in the manner and for the purposes herein set forth.

2d., In conjunction with two sets of billeting or reducing rolls, the one consisting of two and the other or three rolls, driven at different speeds, and combined as herein specified, the arrangement of the flattening and edring grooves formed in said rolls, as described and shown, for preventing the necessity for turning the bar on passing from one set to another.

84,087.—HAY SPREADER.—J. M. Burdick, Ilion, N. Y. edder teeth F F. bars, E.E., with cranks, H.H., and revolving ring, I, constructed and arranged to operate substantially as described.

2d, In combination with the teeth, F.F., the loop, b, and clamp, a, for fastening said teeth upon the bars, E.E. substantially as described.

3d. In combination with the tedding devices above claimed, hinging the shafts to the main frame, A, and making their direction, relatively to said frame, adjustable, by means of the link, M, rock shaft, N, and hand lever, O, to raise and lower the tedder frame as required, substantially as described.

84,088.—Sash Supporter.—Robert M. Campbell, Cam-

bridgeport, Mass.
I claim the within-described sash sopporter and lock, consisting of the plate, C, with its friction roll, D, in combination with the screw, E, and a projection, c, locking the sash when closed, operating substantially as described. 84,089.—Heat Radiator.—William B. Choate, Galt, Cana-

da West.

I claim, 1st In combination with a radiator of serpentineform, the method of placing the flanges, d and f, on the end plates, substantially as shown and describes.

2d, Depressing the flue of the radiator after the curves or turns, so as to form a series of diving flues, substantially as and for the purpose set forth. 84,090.—Horse Rake.—Lyman Clinton, North Haven, Conn. I claim the combination and arrangement of the two treadles, D. E., with the axie, A, the one fixed directly to the axie, and both in relative position to each other, so as to be operated in the manner specified. to each other, so as to be operated in the manner specified.
84,091.—MACHINERY FOR FOLDING AND CORDING THE EDGE

54,091.—MACHINERY FOR FOLDING AND CORDING THE EDGE of Paper—John E. Coffin, Portland, Me.
I claim, 1st. The creasing rolls, c. d. chutes, b b', of guards, pasting disks, 123, grooved as shown, pressing roll, m. and finishing rolls, p. q. all arranged and combined substantially as and for the purposes set forth.

2d. The pasting disks, 123, provided with grooved edges to Jeceive the cord, c' substantially as allown.

84,092.—MEANS FOR SECURING SPRINGS TO SLATS OF BED-Bottoms.—Z. S. Cracraft, Lacon, Ill.
I claim securing the semi-elliptic spring, b, to the slat, d, by means of the coupling piece, e, provided with the bent lips, e'e', passing through slots in the slats, substantially as described.

84,093.—SASH FASTENER.—William J. DeGrummond, Cincinnati, Ohio,

84,093.—SASH FASTENER.—William J. DeGrummond, Cincinnati, Ohio.
I claim the series of springs marked, For F', and the pieces, D or D', or the equivalent of said devices, in combination with the catch, E, and the series of cavities or notches, K, as and for the purposes described.
84,094.—Corn Plow.—Thomas Dillon, Highland, Ohio. Iclaim, 1st, The tenoned plow-beam, E, pivoted in the beam, A, and provided with a bent arm, F, by which it is adjusted at any hight desired, substantially as herein set forth.
2d, The curved plow blade, H, provided with an ear or lug, I, for the purpose of attaching it to the plow beam, E, substantially as herein set forth.
84,095.—ATTACHING HANDLES TO CROSS-CUT SAWS.—Samuel of Staton. Philadelphia, Pa.

ot, 009.—ATLACHING HANDLES TO CROSS-COT EARLS—CHIME el Dission, Philadelphia, Pa.

I claim the socket, B, forming a part of the slotted stem, b, and having an internal screw thread for the end of the handle, D, in combination with the grooved washer, e, and a ferrule, E, having an internal screw thread adapted to a threadon the socket, the whole being constructed and arranged substitution and for the number seat forth.

as and for the purposeset forth.
- Compound for Treating Leather. — August

Doepp, Newark, N.J.
I claim a compound for treating leather, the chief ingredient of which is oleate of glyceryl, asset forth.

84,097.—PLOW.—V. C. Duclos, New Harmony, Ind.

I claim, 1st, The arrangement of the notched standards, J. J., arm, K. and pin, d, for the purpose of regulating the plow, substantially as herein set

forth. 2d, The combination of the hounds, C C, hinzed beam, F, arm, K, standards, JJ, and lever, L, all constructed and operating substantially as and for the purposes herein set forth. 84,098.—5480 FASTENER.—William Edson, Boston, Mass. I claim the segment wedge, F, horn, H, and leaf, A, operating in combination with the plate, B, substantially as described and for the purpose se

84,099.—Take-Up for Sewing Machine.—John V. D. Eld

redge, Detroit. Mich.

I claim the combination and arrangement of the needle bar, F, provided with pin, G, face plate, B, provided with slot, I, take-up spring, E, and spring lever. A, with the curve, H, and projection, D, all constructed as described and shown. 84,100.—Post Driver.—Joseph Ellenberger, Easton, Ohio

Antedated Nov. 13, 1868.

I claim the arrangement of the adjustable guides, K. K. grooved weight, R. slotted beam, B. pulley, g. cord, f. and windlass, I, with the frame constructed as specified, with its various parts, for operating as herein set forth, 84, 101.—Shielding Arches For Evaporating Kettles.—

84,101.—SHIELDING ARCHES FOR EVAPORATING KETTLES.—

James English, Syracuse, N.Y.
I claim the combination of the enclosing shield, C, with the cogs, a a, in the ends of the sections forming the joint, the whole arranged as described, and operating in the manner and for the purpose specified.

84,102.—W ASHING MACHING.—Caroline F. Fleming, Belleville, Ill. Antedated Oct. 28, 1868.
I claim the roller, B, when formed of the sector pircus, b, and combined with tee shaft, C, by the washer plates, c, substantially as set forth.

84,103.—CANDLE CAP.—James H. Foote, Pittsfield, Mass.
I claim, a candle cap, a, when provided with an annular flange rest, b, in the form and manner described, as a new article of manufacture.

84,104.—Hydrant.—Charles E. Frazier, Baltimore, Md.
I claim, 1st, The cap or top, BC, constructed and operated in the manner substantially as shown and described, and for the purpose set forth.

2d, The combination of the hollow screw H, and the valve stem I, arranged, constructed, and operated in the manner substantially as shown and described, and for the purpose set forth.

3d, The combination of chamber, F, screw, H, rod, I, and hollow pis on b, arranged, constructed and operated in the manner substantially as shown and described, and for the purpose set forth.

84,105.—Threshing Machine.—Peter Geiser, and Daniel

84,105.—Threshing Machine.—Peter Geiser, and Daniel

b, arranged, constructed and operated in the manner substantially as sho nand described, and for the purpose set forth.

84,105.—THRESHING MACHINE.—Peter Geiser, and Daniel Geiser, Waynesborough, Pa.
We daim, 1st. A threshing machine and separator, combining in its construction, the following elements, viz, on adjustable feed board, a cylinder and concave, two sets of reciprocating rakes, and a series of spur wheels and intermediate pinions for driving both rakes from the fan shaft, substantially as set forth.

24, The combination of the fan shaft, the two sets of reciprocating rakes and the pinions, UZ X XI X2 and X3, and arm, with wrists supporting the intermediate pinions, X and X2, substantially asset forth.

3d, The arrangement of the shields in relation to the gearing for driving the rakes, substantially asand for the purpose set forth.

4th, in combination with the reciprocating rakes, the intermediate notched bars, the sildes and guides, the cranks, and the system of driving gearing, substantially asset forth.

5th, So arranging the parts of the driving mechanism, that the motion of the several parts shall be communicated from one to another at a regularly reduced speed from the cylinder to which the power is first applied, substantially in the manner set forth.

6th, The cast shoe, side plates with pivot or joint bearings, shelf or apron recesses, adjustable slide board, flanges, and with notches recesses to receive the second roller shaft, substantially asset forth.

7th, The shoe, when constructed with combined metallic and wooden sides, and so arranged in relation to the case of the separator, that blasts of air may pass between the shoe and the case, substantially as and for the purpose set forth.

8th, in combination with the fixed register plates, the oscillating inner plates V1, counceted by a tie, V2, and having one side loaded so as to open the refrister by gravity, and a regulating weight attaches to the hook. V3, said parts being so rranged in relation to the blast as to operate substantiall

projection, v. when used in communication that as herein specified.

2d, The bollow piston, A, provided with the opening, H, forming an eduction passage, substantially as described.

3d, The vane, C, having an enlarged head, forming the follower, B, as specified, as arranged in relation to the trip, D, and valve, E, as herein described and forthe nursus specified.

and forthe purpose specified.

84,107.—Sash Lock.—Joseph U. Gerow, Brooklyn, N. Y. I claim the arrangement and construction of the slotted and suspended

plate, A, to which is attached the projecting fastener, D, with the weighted handles, C', in combination with the cam, B, and lock-plate or case, E, as shown and described. 84,108.—Propeller for Canal Boats.—Samuel D. Gilson,

shown and described.

84,108.—PROPELLER FOR CANAL BOATS.—Samuel D. Gilson, Oswego Falls, N. Y.

1 claim, 1st, The canal boat, with pairs of shafts, a a, carrying propellers, B, of small diameter, and applied on each side of the center of the boat, at its stern, upon said shafts, which are all on the same or nearly the same horizontal plane, and driven substantially as described.

2d, The combination and arrangement of two small steam boilers, depressed engine, and boiler room, E, and shafts, a a, with small propellers, B, in pairs, on each side of the center of the boat, substantially in the manner and for the purposes described.

84,109.—MAGAZINE STOVE.—James Gray, Albany, N. Y.

1 claim, 1st, In a base burning stove, having a fuel magazine suspended free from the grate, and having a nunobstructed free space around and below it, and having an illuminated casing surrounding the same, the construction of descending flues, N. N., passing from the brim of the fire-pot, C, and outside the base, A', and near the front of the stove, in combination with ascending flues, L and O, chamber, IR, and descending flue, T'', substantially as shown and described of the object of the stove, in combination with ascending flues, C and O, chamber, IR, and descending flue, T'', substantially as shown and tescribed of the proposes set forth.

3d, The combination of the intermediate air chamber, J, the descending flues, N M, the annular flue, K, and the ascending flue, C, and hooded chute. I, with its top fine opening, T, substantially as herem set forth.

5th, The revolving cover or valve, Q, in combination with the coal reservoir, H, and the hooded chute, I, substantially as a for the purposes herein set forth.

6th, In a coal stove or furnace, having a depressed fire pot and a supplying

set forth.

6th, In a coal stove or furnace, having a depressed fire pot and a supplying reservoir sustained free from the grate and fire pot, and so arranged that the inflamed gases may burn in a free space, so constructing and arranging

such stove or furnace that a portion of the products of combustion arising from the fire will be conducted up, around, and above the reservoir. H, and hooded chute, I, to the top of the stove, and at the same time another portion of said products of combustion will be carried down outside the fire pot, to and around the bottom of the stove, thereby producing an equal degree of heat over the entire surface of the stove, substantially in the manner ber ein described.

84,110.—Hydrocarbon Burner.—John Gray, San Fran-

S4,110.—HYDROCARBON BURNER.—John Gray, San Francisco, Cal.

I claim the above described adjustable burner, consisting of the cylinder, B, plug E, adjusting stem, D, and openings, a a, constructed and arranged stibstantially as described.

S4,111.—WRENCH.—A. C. Greth, Reading, Pa.

I claim, 1st, The roller, B, moving in the slides e e, when applied to the jaw of a wrench in the manner described, for the purpose set forth.

2d, The shell or case of substantially the described construction, when carrying the roller, B, and fitted to be placed over the jaw of an ordinary monkey or key wrench, in effects as and for the purpose set forth.

S4,112.—GAS AND STEAM FITTINGS.—Albert Hallowell,

Lowell, Mass.

I claim the mold or molds constructed and arranged substantially as described, for the purpose of forming finished fittings or parts of fittings, as and for the purpose specified.

34.113.—Roasting Iron Ores by Waste Gases.—Alexander Happen New York eith.

ce, 110.—LOASTING IRON ORES BY WASTE GASES.—Alexander Hawar, New York city.

I claim the combination, as set forth, with the kiln, of the open top for charging the raw ore, the open bottom for discharging the roasted ores, the flue encircling the roasting chamber and communicating with it by the slits, d, and a fan for forcing in the heated waste gases escaping from the blast funace.

84,114.—Machine for Forming Tin-Lined Lead Pipe.-

A. Hamon, Paris, France.
I claim the combination and arrangement of the sliding cross head, F', vertically slotted nuts and sorews, f'H, or their equivalents, and pillars, C', for the purpose of adjusting the die, e, to the mouth of the mold, in the manner described.

2d, The combination and arrangement of the lifting apparatus, consisting of a cylinder, G, and the paris thereto attached, with the slotted nuts and screws, H f, or their equivalents, and pillars, C C', for the purpose of confining, releasing and moving the cross head, F', at the times specified and for the purpose set forth. for the purposes set form. 84,115.—Washing Machine.—Wm. S. Harrison, German-

town, Tenn.
I claim the frame, F, hinged at one end of the stationary tub, and provided with levers, G, connecting the board, A, and with an adjustable lever for operating the iterior board, B, with slotted arms, m, all as herein shown and described.

described. 684,116.—Padding or Stuffing for Harness.—Henry

84,116.—PADDING OR STUFFING FOR HARNESS.—Henry Hauer, Philadelphia, Pa. I claim the stuffling of collars, saddles, and other parts of barness, with granulated cork, combined with a gum elastic or other equivalent cement as and for the purpose berein set forth.

84,117.—DRYING KILN.—B. R. Hawley, Normal, Ill.

I claim, ist, The drybouse or kiln, A, when provided with an inlet, b, surrounding the fire box, at or near the base of the house, and with the heating chamber. B', which is to be so arranged as no conduct the heated air to the top of the build lng, and the upcast shafts or chimbers, D, when the latter are arranged to take the vitiated or spent air from the bottoms of the chambers, A, substantially as described and for the purpose shown.

2d, The fire box, B, the smoke tubes, C, and the hot air chambers, b and B', when constructed and employed as and for the purpose set forth.

84,118.—CHAIR.—Dayid B. Hedden, Newark, N. J. Antedata to Nov. 5, 1868.

I claim, 1st. The seat, C, constructed with one or more pins, d, and the holes, E, with the plags, P, substantially as and for the purpose set forth.

2d, In combination with the said seat, the legs, A B, constructed and secured in the manner described.

84,119.—COMPOSITION ROOFING.—Clement F. Hinman, Chi-

cured in the manner described. 84,119.—Composition Roofing.—Clement F. Hinman, Chi-

cago, III.

Iclaim a roofing composition composed of coal tar, clay (or other similar suitable substance), glycerin, and dissolved in dia rubber, either with or without animal oil, substantially as and for the purposes specified.

84,120.—ROOFING COMPOUND.—Dwight Hitchcock, Syra-

duse, N.Y. 1 claim a roofing compound composed of the within ingredients, in about the proportions mentioned. 84,121.—SEEDING MACHINE AND CULTIVATOR COMBINED.—

the proportions mentioned.

84,121.—SEEDING MACHINE AND CULTIVATOR COMBINED.—
Sidney S. Hogle, Berea, Ohio.

1 claim. 1st. The revolving cultivators, E, as arranged in combination with the jointed frame, A, for the purpose and in the manner substantially as set forth.

2d. The combination of the revolving cultivators, E, and rollers, B B', in the manner as and for the purpose specified.

2d. The combination of the revolving cultivator, E, rollers, B B', and seeding boxes, substantially as and for the purpose specified.

2d. The combination of the revolving cultivator, E, rollers, B B', and seeding boxes, substantially as and for the purpose specified.

4th, The special construction and arrangement of the drill box, A', when operated in the manner as and in combination with the cultivators, E, and rollers. B B', for the purpose described.

5th, The slotted standards, I', revolving cutters or disks, F', in combination with the box, D, in the manner as and for the purpose set forth.

6th, The windings, wings, or ribs, d, as arranged in combination with wings c, and roller, I, for the purpose specified.

8th, The combination of the toothed wheels, K, rollers, B B', agitator, I, and chain, I, for the purpose specified.

8th, The combination of the toothed wheels, K, rollers, B B', agitator, I, and chain, I, for the purpose specified.

8th, The sample of the purpose set forth and described.

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-Iron Window Shutter.—Benj. A. Jenkins, La

84,124.—IRON WINDOW SHUTTER.—Benj. A. Jenkins, La Crosse, Wis.
I claim, 1st, Metal slats, a, which, in transverse section, are of a form very similar to the letter U inverted, the leaves of each slat being pressed together, so as to leave an air space between them and form an eye just below the arch of the U, to receive and confine the pivot on which the slat is hung all as herein described and shown.

2d, As a new article of manufacture, the metal window sbutter, with its hinged sides, made of U iron, and its closing sides of a similar shaped iron, lapping at the closing edges, said sbutter having its slats double, and pivoted to the arch of the U iron, and also having its bar, which adjusts the slats, made of U iron, and connected to the slats by iron brackets, all as described.

3d, The arranged of the U sheet metal hinging facing strips, G d, in combination with the double slats and U metal trame, all in the manner described and shown.

4th, The pins, c, carrying slats, a, with bent ends, in combination with the retaining strip, b, as herein described.

84,125.—LEMON SQUEEZER.—John Klepzig, San Francisco, (2a).

Gal.

I claim the movable button, E, with its opening, H, the spiral spring, F, in combination with the two levers, A and B, operating substantially as and for the purpose specified.

84,126.—CASTER.—Charles Lewando, Boston, Mass.

I claim in a ball caster, the concaved friction rollers, D D' D'', said rollers running on inclined axles, made substantially as described and for the purpose set forth.

Wm Louden Cedar township, Iowa.

84,127—Elevaror.—Wm. Louden, Cedar township, Iowa

84.127 — ELEVAROR. — Wm. Louden, Cedar township, Iowa. I claim, 1st, The within described arrangement of the bar, N, for suspending the track or railway, A, substantially as set forth.

2d. The manner of attaching the pulley, E, to the track or railway, A, substantially as shown and described.

3d, The adjustable stop. P, when provided with a projecting pin or hook around which the hoisting ropes fastened, substantially as shown.

4th, The lever, L, so arranged and operated that it can be used both as a latch and as a brake, substantially as shown and set forth.

5th, The combination of the levers, L, L', having a flexible or sliding connection, substantially as and for the purpose set forth.

6th, The levers, L L', having a flexible connection, in combination with a weight for producing, and a stop, F, for releasing the pressure on the hoisting rope, substantially as and for the purpose set forth.

7th, So arranging the latching apparatus that the hoisting rope will pass by instead of through it or around it, and the latch be released by one edge of the piate, S, coming in contact with it, substantially as set forth.

8th, The guide or keeper, K, for the purpose specified.

84.128.—WomB Supporation.

I claim, ist, The instrument herein described, consisting of the curved rods, A B, having their forward ends provided with the plate, b, and claws, a', and pivoted tog ether by means of the pur, a, substantially in the manner and for the purpose described and set forth.

2d. The instrument, A B, in combination with the external supporter, C, as described and shown.

3d. The arrangement of the adjusting screw, D, by pivoting it to the rod, B, and sliding it in a slot in the end of therod, A, as described and set forth.

84,129.—SCRUBBING BRUSH AND MOP.—Jabez F. Mason, Brooklyn N. Y.

Brooklyn, N. Y.
I claim, 1st, A handle attachment for a scrubbing brush formed of the ring c, flange, i, stem, e, and screw, in combination with the plate, b, and thumb screw, g, substantially as and for the purposes specifics.

2d. The mop frame on the stem, e, in combination with said handle attachment for a scrubbing brush, substantially as specified.

84.130.—Coffin.—Silas Merrick, New Brighton, Pa.

I claim in the construction of coffins, burial cases or caskets, the sheet metal bottom, A, the angle iron, B, the sheet metal side and end plates, C C the strip of wood, D, the rubber packing, E, in combination with the cast metal top, F, arranged substantially as and for the purposes herein described and set forth

and set forth.

84,131.— MANUFACTURE OF LAMPBLACK.— Adolph Millochau, New York city, assignor to himself, Jules Marcelin, Louis A. Geyer,
and Edwin D. Barnes.

I claim the use of lampblack as a porous material, to supply oil to the
flame in the manufacture of lampblack.

84,132.—Steam Device for Washing Buildings.—Charles Nivert, Paris, France.

I claim the combination of the injectors, A A, their delivery pipes, I, tank, C, communicating through pipes, a a, with the injectors and steam generators. Geometric actions with the injectors through pipes, d, the whole being arranged and constructed as herein set forth.

84,133.—Dropper for Harvesters.—A. L. Peters and G.

M Peters, Lancaster, Olno. We claim, 1st, A dumping platform, which is adapted to be swung or vibra-

ted, in the arc of a circle, to a position behind the frame, for discharging the gavel, while at the same time it preserves its parallelism with the finger bar.

ger our.

2d, The tilting or dumping platform, in combination with means for operating the same, whereby said platform is adapted to be swung to a position
behind the main frame, and there tilted upon a pivot or hinge parallel
with the platform and at right angles to the path of the machine, as set

forth The parallel arms or links, C C', or their equivalent, for supporting and ating the platform, as described

operating the platform, as described.

4th The commonation of the parallel arms or links, platform bar, and tilt-ing platform, hinged or pivoted thereto.

5th, The retaining teeth, in combination with the platform bar and tilting.

5th. The retaining teeth, in combination with the platform bar and tilting platform.
6th. The arrangement of the fulcrum of the cut-off in being operated to intercept the failing grain, shall be moved downward and forward in the arc of a circle, the center of which is in rear of and below said cut off, as described.
7th. The inclined way or cam on the heel of the shoe or drag bar, for rais ing the platform as it is swung to the rear of the frame for the discharge of the gavel, substantially as described.
8th. The angular extension of the platform arm C', or its equivalent, operating in combination with the platform, substantially as described.
9th. The forked lever, or its equivalent, for operating the cut-off, in combination with the vibrating cam or cam rod on the platform arm, C', or platform, substantially as described.
10th. The combination of the swinging and tilting platform cut-off, and means for operating the same, substantially as described.
84,134.—Apparatus for Evaporatus Cane Luce.

84,134.—APPARATUS FOR EVAPORATING CANE JUICE.—S. A. Poohé, St. James Parish, La.
I claim the boiler, A, when constructed substantially as described, and combined with a set of sugar kettles, as and for the purpose set forth.
84,135.—LUBRICATOR.—Wm. M. Rennyson, Pottsville, Pa.

I claim the combination of the reservoir. A, neck, B. shoulder, a, rnbber asket, C, and strap, D, all constructed and operating substantially as and for the purposes herein set forth. the purposes herein set forth.

84,136. — DITCHING MACHINE. — Leonard Rickard, Danville, III.

ville, III.
I claim the arrangement of the point, I, mold boards, H H and B B, adjustable wings, D D, and braces, C C, all constructed and operating, substantially as herein set forth.

tially as herein set forth.

34.137.—Refering Fore-And-Aft Sails.—William C. Rogers,
Newark, N. J.
I claim the combination and arrangement of the pinion, K, endless screen,
L, and crank, M, attached to the upper side of the jaws, P, and operating
the roller at its inner end, as herein described and for the purposes set
forth.

84,138.—Harvester Reel.—John L. Rohrer, Upper Lea-'cock, Pa.
I claim, 1st, The rake, F, arranged upon the beater of a harvesting machine and adjustable thereon. so that its teeth may be projected beyond or withdrawn from the edge of the beater, substantially as and for the purpose teaching.

described.
2d. The revolving beaters or blades. D. and their adjustable rakes, F. in combination with a pin, i, arranged eccentric to the axis round which the blades revolve, and connected to the rakes, substantially as and for the purpose specified.

94.139.—FRUIT BOX.—James S. Shields, Medora, Ind.

I claim, ist, A box or crate, having its ends secured therein by means of cleats on the end pieces and grooves on the sides, top, and bottom of the box, substantially as shown and for the purpose described.

2d, In combination with the ends of the box the secret springs, F, substantially as shown and described.

84,140.—SHOEMAKER'S SHAVE.—J. Y. Simons, Troy, N. Y. Iclaim, 1st, The combination of the bars, B and C, and lugs, I I, the knife, D, cap, G, and screw, A, substantially as and to the effect hereinbefore set forth.

orth.

2d, The formation of the handle, A, in such a manner as to give space for the fingers below them, and with downward projections at their ends, substantially as set forth.

84,141.—APPARATUS FOR RAISING FENCES.—Thomas J. Smith, Jackson, Mich.
1 claim the combination with the lever of a carriage jack of a hook, H, substantially as and for the purpose described.

84,142.—WRENCH.—William S. Smoot, Washington, D. C.
1 claim a wrench, constructed with a head, A, handle, B, and sliding jaw, C, when arranged substantially as and for the purpose set forth.

84,143.—FIRE PROOF COMPOUND.—Robert Spencer, New York city.

York city.

I claim a fire proof molding compound or paint, composed of the within-describeding reddent; mixed together in about the proportions set forth.

84,144.—LEVER POWER FOR SEWING AND KNITTING MA-

CHINES.—GreenleafStackpole, New York city.

I claim, ist, The application to the sewing machine and knitting machine, and an auxiliary lever power, consisting of the riction wheel, E, or its equivaent, when used to produce continuous motion by the alternate application friction to its opposite sides, substantially as and for the purposes set

orth. 2d, The cord, I, frame, j, and thumb nut, L, substantially as and for the pur-

2d, The cord, I, frame, j, and thumb nut, L, substantian, as an expose set forth.

3d, The brake, P, as and for the purpose set forth.

84,145.—Log Cart.—John Stitt, St. Johns, Mich.

I'claim, 1st, The arm, E, cast with hollow axle, F, when constructed and operating substantially as herein described.

2d, The weighted lever, T, pawl, S, and rachet wheel, R. in combination with windlass, O, rope, M, block, N, and chain, U, when arranged and operating substantially as described.

3d, The combination of the above-mentioned parts with the cross ties, H, hounds, I, pole, J, braces, K, hook, L, bearing, Q, evener, X, and connecting rods, Y, operating substantially as herein described.

84,146.—Scrubbing Machine.—Worden E. Stoddard, Fort Edward, N. Y.

34,146.—SCRUBBING MACHINE.—WOLUER
Edward, N. Y.
I claim, ist, The arrangement of the holiow shaft, D, pinion, F, eog wheel, G, shaft, H, crank, J, bottom, B, and crossbar E, all substantially as and for the purposes herein set forth.

2d, The combination of the hollow shaft, D, and stationary collar, M, with the movable collar, N, plate, O, arms, P P, rods R R, collar, S, arm, T, and screw, V, all arranged and operating substantially as and for the purposes herein set forth.

3d, The arrangement of the hollow shaft D, provided with a slot, a, and the rost b, substantially as and for the purposes herein set forth.

4th, The combination of the hollow shaft, D, and tub A, with a circular brush, scourer, or dryer, when arranged and operating substantially as and for the purposes herein set forth.

2d, 142 Evanuation Lounge.—Charles Streit, Indianapolis,

Ind.
I claim the slats, B, attached to the movable front rail, A, movable pieces
I and J, and to the strip, C, in combination with the slats, E, attached to the
strip F, and the slats, D, attached to the front and rear rails of the principal
frame, when constructed and arranged to operate substantially as herein dusorthed.

scribes. 84,148.—Hydrocarbon Burner.—Edward W. Taylor, Nor-

84,148.—HYDROCARBON BURNER.—Edward W. Taylor, Norristown, Pa.
I claim, 1st, The improved process of producing in intensity, and at small
expense, heat and other effects of combustion by burning petroleum and
other liquid and liquescent fuel on the surface of an open plate, surmounted
and combined with an incombustible covering, without the intervention of
sand or other materials, the combustion being racilitated and the effects intensited by the employment of a current of steam passing juto the fire
chamber, substantially as shown and described.
2d. The blast apparatus assisting in said process, being the arrangement
described, of the air passage, D, in combination with the steam receptacle,
E. arranged to move up and down, and the method of bringing heated steam
into union with the air at a point and in a mode as described, so as to form
a most intimate union, and at the same time creating a powerful blast, conveying the mixture into combination with the burning fuel.

8d. The combination of a fuel plate with a blast apparatus, assisting in the
combustion of liquid and liquescent fuel, substantially as shown and described.

sorthed 4th. The slide, P, as a device for the purpose of accommodating hydrocarbon burners to fireboxes and other spaces of varying sizes, without requiring the burners in such cases to be constructed on different scales. 84,149.—Hoop Skirr.—William H. Towers, Boston, Mass. I claim, as a new article of manufacture, a boop skirt, consisting of the bustle hoops, a a, flounce hoops, b b, and suspending wires, D D, arranged substantially as herein described.

substandarly as nereind escribed.

44,150.—Field Roller—Wesley Westfall, Chelsea, Mich.

1 claim the frames, B B B and C C C, when constructed as described, and secured by the pins, F, to bear the rollers, A'A", all arranged, constructed and operating as described as giown. 84,151.—Harvester.—Cyrenus Wheeler, Jr., Auburn, N. Y.

84,151.—HARVESTER.—Cyrenus Wheeler, Jr., Auburn, N. Y. I claim, ist, A main frame having a tubular projection on one side, for supporting the bevel wheel shaft, in combination with an axle for the driving wheel, bolted to the other side, substantially as 4 escribed.

3d, A main frame, having a tubular projection on one side, for supporting the bevel wheel shaft, in combination with an adjustable axle on the other side, for receiving the driving wheel, substantially as and for the purposes described.

3d, In combination with a main frame and an adjustable crank frame, an adjustable axle, as and for the purposes set forth.

4th. In combination with a main frame, an adjustable crank frame, an adjustable tougher frame, and an adjustable axle, substantially as set forth.

5th. So uniting the platform with thefinger barns to compensate for the sam of the platform or its tendency to spring or bend when in use in reaping.

54,152.—ILAITWAY RAIL COUPLING.—John T. Wilson, Pittsburg, Pa, assignor to himself, Frank Rahm, and Thomas J. Louis, same place.

I claim strengthening the joints between contiguous rails by means of the

place. I claim strengthening the joints between contiguous rails by means of the chairs, c, and the inclined wrought iron splice piece, E, having horizontal flanges, d, struck up upon it, and connected together and an arting the ends of said rails, in the manner and for the purpose described.

Also, in combination with the chairs, splice piece, and ends, or joint relevent therails, the joint rails R, tell to the base of the rails, and to the splice piece, substantially as and for the purpose described.

84,153.—Burglar Alarm.—Herman John Wolters, Chester, Mass.

Mass.
I claim, 1st, The combination, with the horizontal sliding of the for actuating the hars, of the approximates, and their pointers, c', moving in slots formed in the case, A, and arranged with relation to the numerical figures or letters attached to the said case, as herein shown and specified.
2d, The combination, with the vibrating bar, s, operated by the rods, t, as described, and the tripper, m, to which said bar is attached, of the vibrating match carrier, and its actuating spring, arranged to operate in connection with the friction plate, k, and lamp, a, as herein shown and specified.

3d, The herein-described construction and arrangement of the friction

plate supertor, h, so that it may be adjusted to any desired distance and angle, with respect to the swinging match carrier, as and for the purposes set forth. 84,154.—Grape and Vine Trellis.—T. G. Yeomans, Wal-

worth, N. Y. I claim the combination with the independent wires, C.C., of the lever, B. having openings at different points, whereby said wires are connected thereto, and thereby tightened, and a sliding ring, d, for holding the wires whenso tightened, substantially as described.

84,155.—Open or Middle Ring.—B.F.Zinn, Mount Rock, Pa. I claim the oval or circular parts, A A and B B, with the trapezoidal actensions, C and D, and the trapezoidal apertures, C and D, and the rivet or bolt and screw, E, connecting the parts, A A and B B, all combined and operating in the manner and for the purpose herein set forth.

84,156.—REEL.—Elijah Baker, Lorraine, assignor to himself and Angusus L. Baker, Mannsville, N. Y.
I claim the screw, b. nut, D. and hooks, a a, in combination with the arms, A.A. by means of which said arms may be secured together or disconnected,

AA, by means in which said a limb has been also been as the for the purpose herein specified.

Also, in combination with the above, the pins, E E' E'' E''', the latter made adjustable by means of the screw, F, substantially as and for the purpose herein shown and described.

84,157.—MODE OF FASTENING STRAPS TO BOOTS.—Peter H,

54,151.—MODE OF FASTENING STRAPS TO BOOTS.—Feter H, Baker, Vrginia City, Nevada.

I claim the plate A, constructed as described, provided upon its outer edges with the long teeth, a and upon its inner edges, opposite to each other with the short teeth, a', said plate secured to the boot and strap by inserting the teeth and lapping the outer rows, a, over the inner rows, a', upon each side of the frame, as herein described, for the purpose specified.

84,158.—WATER WHEEL.—Vincent M. Baker, Preston, Minn I claim, 1st, The buckets, C. composed of the three parts, a a' b'. constructed and arranged as described, to be acted upon by the water, as herein

structed and arranged as described, the set forth.

2d. The gates, D. composed each of two plates, ef, arranged as shown, and connected to the rim, h. by rods, g, in combination with the tangential plates d, between the rims, A, B, all being constructed, arranged, and made to operate substantially in the manner as and for the purposeset forth.

84,159.—Door Spring.—Warren S, Barlow, Paterson, N. J.

d, between the rims, A B, all being constructed, arranged, and made to operate substantially in the manner as and for the purposes of torth.

84,159.—Door SPRING.—Warren S. Barlow, Paterson, N. J.

Iclaim the within described combination and arrangement, with a door or blind A, and casement, B, of a spring, C, and stud, D, insuch a manner as that the opening of the door or blind shall draw or extend the spring, substantially as herein set forth.

84,160.—Awning For Horse Cars.—Manfred C. Battey,

stantially as herein set forth.

84,160.—Awning For Horse Cars.—Manfred C. Battey, Washington, D. C.

1 claim, 1st., The combination of the pole, A. and hinged arms, B. C., with a system of ropes and pulleys capable of folding or expanding said hinged arms, in the manner sescribed.

2d. The arrangements of pole, A. hingedarms, B. C., fixed arms, D. F., and ropes, G. I., substantially as described and shown.

84,161.—SHAFT COUPLING.—A. Bigelow, Hamilton, Canada.

1 claim the shells, B. B., on shaft, A., in combination with the rings, D., and sockets, F. which receive the shafts, G. f., the rings and sockets being connected together and to the shells respectively by the bolts, E. H., with the bolts, F. passing through the bolts, H. all being constructed and arranged substantially as and for the purpose set forth.

84,162.—Padlock.—Amos S. Blake, Waterbury, Conn.

1 claim theframe, A. provided with the spindle, B., in combination with the cup, C., provided with the catch or bar, D. or its equivalent, and the cone E., attached to the cup, all being constructed and arranged substantially as and for the purpose specified.

84,163.—VELOCIFEDE.—E. K. W. Blake, Chicago, Ill.

1 claim, 1st., 3 he combination with the driving axles having the fixed ratchets, C., of the loose pulleys, B., actuating pswis, and propelling belts, the stantially as and for the purpose described.

2d. The combination with the axle of the guiding wheel, of the slotted guide brackets, L, swinging bearings, K, adjustable footrests, L, and retracting springs, M, all substantially as and for the purpose described.

84,164.—Extension Spoke.—D. C. Brewster, Kent, Ohio.

84.164.—EXTENSION SPOKE.—D. C. Brewster, Kent, Ohio.

Oz., 102.—EXTENSION SPOKE.—D. L. Brewster, Kent, Ohio., I claim the socket, F. tenon, C., screw, D., and thim ble nut, E., all constructed and arranged as shown and described, in combination with the spoke, A., and felly, B., substantially as and for the purpose set forth.

84,165.—HOEING MACHINE.—H. C. Briggs, West Auburn, Me. I claim, 1st, The combination of the cross bars, A and B, longitudinal bars, C. runners, D., curved parts or pieces, G., and plowsorhoes, I, with each other, substantially as herein shown and described and for the purpose set forth.

t. The combination of the inwardly protecting adjustable hoes, J, with ear ends of the runners, D, substantially as herein shown and described

the rest ends of the runners, D, substantially as herein shown and described and for the purpose set forth.

34. The draft irons, H, constructed as desired, in combination with the curved parts, G, of the runners, D, substantially as herein shown and described and for the purpose set forth.

4th. The combination of the adjustable bar or slide, L, with the hinged tongne, K, and front cross bar, A, substantially as herein shown and described and for the purpose set forth.

4th. The combination of the adjustable bar or slide, L, with the hinged tongne, K, and front cross bar, A, substantially as herein shown and described and for the purpose set forth.

1th. A 166.—BRUSH.—Almos W. Brown, Lansingburg, N. Y. I claim as a new article of manufacture, the horse brush having its parts, A A B, connected together by the transverse leather blugs, e.e., and by the longitudinal metallicspring, d, covered with strips of venering, b, as herein described, for the purpose specified.

44,167.—GARDEN ROLLER.—Jas. B. Brown, Peckskill, N. Y. I claim the combination of the weight, D, and shank, a, with the shaft, B, squared portions, b b, handles, C, and roller, A, as herein shown and described.

84,168.—Contact Pad for Photographic Printing.—J.

Bnothell, Portland, Oregon.

I claim the use of the elastic pad, a, filled with fluid, air, or gas, and also the eyeicts, b, with the attendant screws, together with the diaphragm, e, substantially as set forth and for the purpose described.

84,169.—TANNING PROCESS.—C. J. Bugh, Eau Claire, Wis. I claim the improved tanning process, substantially as herein shown a cribed. 170.—Bridle.—W. F. Clark, Hagaman's Mills, N. Y.

84,170.—BRIDLE.—W. F. Clark, Hagaman's Mills, N. Y. Iclaim, 1st, The revolving bit, A, having pulleys, a b, and working in the plates, B,substantially as herein described.

2d, The combination of the gag runner, D, rein, C, and martingales, E, with the bit, A B B a b a b, substantially as herein described.

84,171.—SKATE.—W. F. Cornell (assignor to himself and S. Hurlbut), Adrian, Mich. Antedated Nov. 7, 1888.

1 claim a skate having the following characteristics: arched brackets, B, sliding ball flanges, M, adjustable sectional heel tlanges, E, padded hinged metallic straps, PF, bands, H, with yokes, I, hinged band, K, and hinged ankle support, G, constructed, arranged, and operating as herein represented and described.

ankle support, Geomstructed, arranged, and operating as are term represented and described.

84,172.—PAPER FILE.—E. H. Craige, Brooklyn, N. Y. I claim, 1st. The combination of a base plate, A, having an upricht pin or pointed wire, a, with a weight, C, having one or more holes, b, the whole constituting a paper file, substantially as and for the purpose herein shown and described, as a new article of manufacture.

2d, The angular base plate, A B, having a pin or pointed wire, a, in combination with a weight, C, having one or more holes, b, the whole constituting a paper file, substantially as and for the purpose herein shown and described as a new article of manufacture.

84,173.—Corn Sheller.—Elihu Doud, Oshkosh, Wis. I claim an outer half cylindrical shell, constructed in segments, d ef, in the manner described, when used in combination with the toothed roller, i, spring S, plate, C, and hopper, C', as and for the purposes described.

-Process for Ageing and Rectifying Copal Var-

nish.—Desso Duduit, New York city.
I claim the process for rectifying and ageing copal varnish, substantially asterin described. 84.175.—STEAM VALVE.—O. P. Dunbar, Norwalk, Ohio, and

H. D. Dunbar, Hartland, Vt. We claim, 1st. The herein described steam valve, consisting of the heads, finance, M, ring, N, and nib, a, when constructed substantially as set

forth. 2d, The bridge, O, as arranged in relation to the valve, for the purpose

specified. 84,176.—PUMPING ENGINE.—C. E. Emery, Brooklyn, N. Y. I claim, 1st, The combination, with cylinder, A, main piston, J, and the equal heads, M and N, of auxiliary piston, E, of the ports, e fg h, in a valve race operated by E and e't' g' and h', in the valve seat, when arranged substantially in the manner specified.

2d, The arrangement of the exhaust passages, f' and g', with reference to the ports, B and B', substantially as described, to accomplish the results specified.

specified.

3d, The combination of two auxiliary pistons, the first to operate the valve of the second in both directions, without the assistance of tappets, and the second to operate the main valve in the usual manner to accomplish the results specified.

4th, The connection of a moving piston or cylinder with the seat of its slide valve, in such manner that the motion of the piston or cylinder causes the valve seat to follow the initial movement of the valve, and close (and, if necessary, reverse) the ports, and thus bring the moving piston or cylinder to rest, substantially in the manner described to secure the results specified.

ned.

5th. The passages, r' and s', so arranged, in combination with r and s, as to admitsteam to the auxiliary piston, E, after the valve, P, has moved the de sired distance.

admit steam to the auxiliary piston, E, after the valve, P, nas moved the ue sired sistance.
6th, The expraexhaust ports, Z Z, when arranged as shown, in the face of the valve, substantially as described.
7th, The particular arrangement of the valve seat piece, Q, with the valve chamber, R, and the face of the pump cylinder, at w.

84,177.—PERMUTATION LOCK. — William F. Ensign, New

84,177.—PERMUTATION LOCK.— William F. Ensign, New York city.
I claim, 1st, The slide, H, bars, J K, with stump, L, attached to the latter, in connection with the bolt-locking mechanism, composed of the bar, 0, wheel N, pivoted beit, F, arm, M. and spring, 1, all arranged to operate in connection with the bolt, I, in the manner substantially as and for the purpose set torth.

2d. The step-like projections, k, at the free or disengaged end of bar, K, when used in connection with the wheel, N, for the purpose specified.

3d. The annular plates, R R'R'', R'', provided with the internal annular grooves, connected by passages, g', in connection with the raveler, W, all arranged for operating the tumblers substantially as set forth.

4th, The totched runs, T' T'' in connection with the pricors, e'e, attached to the slides, V V, having springs, I', bearing against them, all arranged in connection with the true blers, C U' U'', substantially as and for the purpose specified.

5th, The combination of the tumblers, U U' U'', toothed rims, T T''', plates, R E' R''' R''', traveler, W, and hub, F, all arranged to operate in the manner substantially as and for the purpose set forth.

84,178.—Corn Planter.—Snyder Filson and W. E. Kinert,

84,178.—CORN FLANTER.—Shyder Filson and W. E. Kinert, Blufiton, Ind.
We claim, 1st, The movable notched collar, o, provided with arm or arms, k, in combination with the lug, n, on the s haft, a, when operated by means of one of the wheels, M, which is firmly secured to said shaft, substantially as and for the purposes herein set forth.

2d, The cross bar, g, provided with the arms, h and 1, in combination with the movable notched collar, o, and arm, k, for the purpose of moving the clides, H H, substantially as herein set forth.

3d, The lever, l, arranged, as described, on top of the box, D, in combination with the bar, m, and movable notched collar, o, for the purpose of throwing said collar in and out of gear with the lug, n, substantially as and for the purpose herein set forth.

84,179.—MILKING PAIL.—R. A. Fish, Worcester, Mass.

C4.179.—MILKING FAIL.—IV. A. FISH, WOITCESTET, Mass. I claim the manner of securing the pail while milking by allowing its weight to rest upon its knees on the curved springs, A. Said springs are made of steel, and tempered, and firmly fastened to the nail, the lower portion of which projects above the rim of the pail, with an aperture in them, through which the bail passes. Said springs can be attached, either in from or rear of the ears of any ordinary pail in use, and can also be fastened to a hoop, and firmly secured to the pail in the usual manner manner of hooping. These springs can also be constructed of iron, or other metal, or of wood, or ther equivalents, arranged substantially in the manner described and for the purpose set forth. ose set forth

pose set forth.

84,180.—MODE OF MAKING COMBINED WOOD-AND-WIRE Fence.—Geo. Fletcher, Sr., Greensburg, Ind.

I cludin, 1st, The mode of constructing a wood-and-wire fence, by means of a stationary crab or anchor. U, and a loom, adapted to be drawn over the ground in manner substantially as set forth.

2d, in the described combination, the suspended and detachable batten, R, and notches, SS, as and for the purpose stated.

3d, In this connection, the gage or knife, V, upon the frame, K.

and notchies, S., as and of the purpose states.

3d, In this connection, the gage or knife, V, upon the frame, K.

84,181.—DEVICE FOR BENDING SCROLLS.—Edwin Gibbs, Painesville, Ohio.

I claim the finishing scroll former, B, and the scroll former, A, constructed and combined as and for the purpose set for th.

84,182.—WINDMILL.—Chas. Goodwin, Beardstown, Ill.

I claim, 1st, The arrangement of the vane, F, in an inclined position upon the shaft, D, and operating in connection with the wheel, G, as here'n described for the purpose specified.

2d, The arrangement of the wings, H, shafts, i, straight springs, K, and ring d, operating as described for the purpose specified.

84,183.—RAILROAD CAR STOVE.—E. M. Grant, J. B. Van Dyne, and T. R. Pugh, Nashville, Tenn.

We claim, 1st, In combination with the base tank, A, the bottom, b, with its apertures and lids or valves, d. made and arranged in the manner and for the purposes herein set forth and described.

2d. The arrangement of the bottom, b, in the stove, forming, between it and the water ling in the tank, the space, C, as shown and for the purposes deciried.

scribed.
84,184.—CULTIVATOR.—A. A. Harmon, Olney, Ill.
I claim, 1st, The plows, HH, attached by clevises to the front bar of the disgonally braced open frame, A B D E F, and connected by a cross bar, I, which admits their adjustment as to relative distance, and causes them to swing by a parallel motion as they are deflected laterally, substantially as described.

2d, In combination with the said plows, thus attached and connected, the sliding foot bar, K, arranged as described, and adapted to hold the min ele-

2d, In combination with the said plows, thus attached and connected, one sliding foot bar K, arranged as described, and adapted to hold them in elevated position, for the purposes described.

84,185.—AXLE BOX.—E. P. Haskell (assignor to the Hale Patent Washer Co.). New Bedford, Mass.

I claim, for employment with axle boxes, and washers, the hub plate, g, constructed with the internally projecting ring on flange, h, substantially as and for the purpose described.

84,186.—SADDLE.—G. H. Hayden. New Market, Ala.

I claim is the Asadde provided with a tobacco Dine. A, and a case, C, hay-

O'S, 100.—SADDLE, —V. II. HAYUEH. NEW MATKET, ARA.
I claim, 1st, A saddle, provided with a tobacco pipe, A, and a case, C, having a lookingglass secured therein, and otherwise arranged substantially as and for the purpose described.
2d, The combination, with the cantle of a saddle, of an adjustable back piece, I, substantially as and for the purpose described.
3d, The back piece, I, provided with the lugs, K, arranged to slide on the rods, I, and with the jointed braces, M, substantially as and for the purpose set forth.

rods, L, and with the jointed draces, M, substantially as and for the purpose set forth.

84,187.—METHOD OF ETCHING RELIEF PLATES FOR SURFACE Printing.—Charles Henry, Brooklyn, John McLoughlin, Morrisania, and Edmund McLoughlin, New York city.

We claim, 1st, The transforming of stoched plates into relief plates, in which the relief linesshall be of the same continuous material as that composing the body of the plates, by the process and in the manner substantially as herein described.

2d, The filling of the etched lines upon the plate with varnish, or other protecting gum or compound, in the manner and for the purpose specified.

3d, As a new article of manufacture, relief plates, of metal or stone, for printing and similar purposes, prepared direct from etching, and in which the raised surfaces shall be of the same continuous material as that composing the body of the plates.

84,188.—Stone-Drilling Machine.—C.W.Hermance, Schuylerylle, assignor to W. P. Ostrander, A. H. Pearsall, B. G. Schults, and A.

84,188.—Stone-drilling Machine.—C.W.Hermance, Schuylerville, assignor to W.P. Ostrander, A.H. Pearsall, B.G. Schulls, and A. L. Filme, all of the State of New York.

1. L. Filme, all of the State of New York.

1. Claim, 1st, The arrangement of one or more flanges or cams, or their equivalents, on the side of a wheel, for the purpose of operating a machine, by raiging a certain part thereof and letting it fall again when said flanges or cams operate from the periphery to the axle of the wheel, that is, commence the raising at or near the periphery, letting go near the axle, substantially as herein set forth.

2d, The tube, H. having its sides slotted and notched, as described, in compressing the spring, J, thereby regulating the force of the drill operated by said spring, substantially as shown and described.

84,189.—Nail-cutting Machine.—Cyrus D. Hunt, Fairhaven, Mass.

84,189.—NAIL-CUTTING MACHINE.—Cyrus D. Hunt, Fairnaven, Mass.
I claim the arrangement as well as the combination of the gears, i.k., their crank pins, b., the connecting reds, g. b. the arm, f. rocker shaft, e. toothed sectors, c. d. shaft, I, toothed sector, if, and gear, G. as applied to the vibratory arm, F. and the tabular shaft, E. the whole being for effecting the vibratory motions of the said arm, and the reciprocating semi-rotary movements of the nail place carrier, as set forth, 84,190.—TANNING APPARATUS.—S. Hosmer, Concord, Mass. I claim the combination, with a vessel arranged for tanning in vacuo, of an agitating wheel, B, or its equivalent, substantially as and for the purpose described.

MACHINE FOR HOLDING THE CUTTERS OF MONING

84,191.—MACHINE FOR HOLDING THE CUTTERS OF MOWING MACHINE WHILE BEING GROUND.—D. W. Jameson, Warren, Ohio. I claim, 1st, The flanged rod, C, grooved bar, D, forming the sliding joint, E, as described.

2d, The flanged rod, C, grooved bar, D, in combination with the bar. D, uprights, A, cross bars, B B', and foot pieces, B', all constructed and arranged to operate as and for the purpose described.

84,192.—PERMUTATION LOCK.—William Johnson, Milwauke, Wis

194,150.—I Endough Land Leading Lee, Wis. Guard, 1, and fence, h, in combination, with plate, L, substan-

kee, Wis.
I claim, ist, Guard, I, and fence, h, in combination, with plate, L, substantially as described.

2d, The stop, O, held in slot, P, by shaft, T, in combination with tumbler, U, substantially as and for the purpose set forth.

3d, Kev bit, Y, socket, Z, rubber ring, a, and nut, b, in combination with leep stem, X, sub stantially as described.

84,193. — APPARATUS FOR ROASTING COFFEE. — William Johnston and John D. Flansburgh, Philadelphia, Pa.

We claim the elevated condenser, C, with its valve, C', the tube, D, and the tube, E, in combination with the hollow perforated sliding shaft, at, the roasting vessel. A. and the furnace, B, the saidparts being constructed and arranged to operate together as and for the purpose set forth and described.

84,194.—CULINARY VESSEL.—A. C. Kasson (assignor to himself and Nelson C. Gridley), Milwaukee, Wis.
I claim, 1st, The vessel, B, provided with its central steam chamber or tube, I, with its openings and sides and a series of compartments, C, constructed and arranged to operate substantially as described.

2d, The vessel, A, provided with the compartment, F, and the drip chamber, G, substantially as and or the purpose set forth.

3d, the combination of the vessels, A and B, the latter having the annular flange, t, futting into the drip chamber, G, of the former, when said parts are constructed and arranged for joint operation, substantially as set forth.

81,195. — PETROLEUM STILL. — Edward G. Kelley, New York city.

81,195. — PETROLEUM STILL. — EGWARG G. Kelley, INEW York city.

I clam, 1st, The gate, F, arrranged in combination with the two vessels, B C, to regulate the gravity of the products of distillation, substantially as and for the purpose hereinshown and described.

2d, The petroleum still, consisting of the cylinder, B C, the latter having the shells. D, and the former being provided with the automatic in cleator, I J, all made and operating substantially as herein shown and described.

84,196.—Refrigerator.—Theodore Dwight Kellogg, New

York city.

I claim the combination of the casing, B, hining B, ice chamber. G n. graining, g, strips, b b b'b', openings, c c, boxes, C C, and wire cloth, W W, all constructed, arranged, and operated in the manner and for the purpose 84,197.—Telegraph Instrument.—George W. King,George-

Town, D. C.
I claim the core, D, acting as an armature, and oscillating in the helix, B, when pivoted to the supporting spring, I, in the manner and for the purpose herein described. 84,198.—Apparatus for Holding Sheep.— Giles D. A.

Krigbaum, Zanesville, Ohio.

I claim the sheep-holcing table, Aprovided with the holes, a, the legs, B, and pivoted levers, b, notched to coincide with the holes in the table, all arranged and operating as described, whereby the sheep is suspended beneath the table, with its feet clamped in the holes, a, by the levers, b, as herein set forth for the purpose specified.

84, 199.—WAGON TOP BOW.—S. C. La Halt, P. Listeman, and

84,199.—Wagon Top Bow.—S. C. La Hait, F. Listeman, and C. Hadley, Collinsville, 131. Antedated November 9, 1888.
We claim arranging the central hoop, A, in hinged parts, a at and a2, and the end hoops, B, is hinged parts, b bt 52 and 58, so that the said parts may be folded together into small compass, substantially as set forth. 84,200.—Box.—Joseph J. Leighton, Boston, Mass. I claim a round or cylindrical wooden box, composed of two or more layers of wood wound spirally around in opposite directions, and glued or otherwise secured together, substantially as herein specified.

otherwise secured together, shostantiarly as herein specimen.

84,201.—Low Water Allarm for Boillers.—Edgar W. Mandeville (assignor to himself and Charles D. Johnson). Ithaca, N. Y. I claim, 1st. The faucet, E, as arranged and constructed, whereby the opposite ends of the same receive the two pipes, G and H, one from the upper and the other from the lower part of the globe, E, as set forth.

2d. The construction of the faucet, B, with reference to the pipes, G and H, and the arrangement of the steam passage in the faucet leading to the

whistle, whereby, when the globe, E, is full of water, no steam can pass to the whistle, but when empty, the turning of the fancet open the passage, and the whistle gives the alarm.

3d. The arrangement of the direct connection between the globe, F, and fancet, B, by the lever, C, whereby to operate these sever alparts, in combination, through the three parted passage in the fancet, as set forth.

84,202.—HYDRANT.—J. W. Marshall, Williamsburg, N. Y. Iclaim the plug, D, with openings of supply, L, and waste discharge, M, in combination with the plug seat, C, spiral spring, E, and hand lever, N, operating together in manner substantially as and for the purposes described and set forti. 84,203.—WATER WHEEL.—Albert M. Maynard, Savov. Mass.

C4,205.— WATER WHEEL.—AIDER IM. MAYBARG, SAVOY, MASS. I claim, 1st. The chutes, C, rates, D, diaphragm, B, and external barrel, A. in combination with the turbine wheel, all constructed and arranged to operate substantially as described.

2d. The combination and arrangement of the V-shaped buckets, b, with the box, a, diaphragm, d, hoop, e, external band, A, diaphragm, B, carrying the sleeve, n. the collar, m, rods, I, chutes, C, and gates, D, as herein described, for the purpose specified.

steeve, n. the collar, m. rods, l. chutes, C. and gates, D. as herein described, for the purpose specified.

84,204.— WASH BOILER.—Antoine Michel (assignor to himself, James S. Hannan, and Napoleon Moisau), St. Louis, Mo. I claim, 1st, The arrangement of a heating flue, B, withineach conducting bloe, C, for the purpose of accelerating and directing the flow of fluid.

24, The combination of the vessel, A, its flues, B. duct, C, perforated at c, and discharging head, D, perforated at d, substantially as and for the purposes set forth.

84,205.—Sheet Metal Roofing.—Ezekiel Mills, Baltimore,

Md.
I claim the continuous metallic strips, jointed and coated by the process herein described.

84,206. — OSCILLATING STEAM ENGINE. — Frank Millward

04,500. — USCILLATING STEAM ENGINE. — Frank Millward (assignor to himself, Dexter D. Hardy, and Henry C. Dart), Cincinnati, O. I claim, ist, The combination and arrangement of the frame, J. cylinder A. and V-shaped joint or hinge, substantially as shown and described. 2d, The arrangement of the pivots, Kand L, by which the wear between the parts thereof may at anytime be taken up, substantially as shown and described.

scribed.

3d, The arrangement of the adjusting screws, MN, with reference to the V-shaped pieces K and L, for the purpose of taking up lost motion, and preserving the pivots in line.

4th, The oscillating side pipes, E G, and flexible tubes, I, for the purpose specified.

4th, The oscillating side pipes, E th, and near the cubes, 1, 12 th specified.
5th, The arrangement of the independent valve motion, P Q R S, or its mechanical equivalent, for the purpose of recip rocating the valve the short distance equal only to the "iap" of the valve, and the slight additional distance necessary to give a proper "lead" to the engine, substantially as described.
84,207.—FRUIT BARKET.—Charles Moore, Stratford, Conn. I claim a fruit basket, constructed out of a single piece of sheet metal, cut and swaged up in the desiredsnape, substantially as shown and described.

84,208. — MACHINE FOR THE MANUFACTURE OF ELASTIC

54,2005.— MACHINE FOR THE SALES AND TUBES.—Joel Moulton, Boston, Mass.
I claim, 1st, A machine so constructed and operating as to hold and rotate the roll shaft, and to cause the elastic material and its accompaniments to be wound about such shaft, and condensed or tightly driven thereon, for the

the foll shart, and to cause the elastic material and its accompaniments to be purpose substantially as before explained.

2d, As an appurtenance or a part of the above described machine, a device for folding and maintaing, in an upright position, the elastic material as its feet to the shart, and also for introducing mto the fold of the elastic material as metallic wire or string, for the purpose as before premised and described.

3d, For the purpose of condensing the folds of elastic material about the shatt, and for supporting one end of it in position while winding, the combination and arrangement of the case, c, with its cam groove, i, and the circular carrier, i, with its bunters, g, etc., the whole being arranged and operating essentially as berein shown and described.

4th, in combination with the last described arrangement of parts, the slid ing carriage, p, with its shat, supporting chack or bearing, o, such chuck being applied and operating as before derred to and described.

5th, Applying the auxiliary frame, c, to the main frame, at an angle to its longitudinal axis, in manner and for the purpose as herein shown and exhalt.

5th, Applying the auxiliary frame, 100 and 100 longitudinal axis, in manner and for the purpose as herein shown and explained.
6th, The combination and arrangement of the endless bands, b3 b3, and the rollers, v v, etc., or their equivalents, for producing the same result, in combination with suitable supporting and feeding rollers, as and for the p rpose before set forth and exhibited.
7th, The general combination and arrangement of the bunters, g g, etc. and the shalt supporting and operating adjuncts, the sliding carriage, p, and the mechanism or folding and "wiring" the elastic material or strips, the whole operating together to produce results before set forth and explained.

whole operating together to produce results before set forth and explained.

84,209.—METHOD OF DETACHING RUBBER ARTICLES FROM THE MOLDS IN WHICHTHEY ARE VULCANIZED.—Joel Moulton, Boston, Mass.

I claim, 1st, As a machine for loosening the adhesion of vulcanized articles to their molds, the employment of the clearing rods, c c', so arranged and operated as to produce this effect by their combined rotary motion and longitudinal movements; and

2d, Supporting the clearing rods, c c', within or by means of the dually arranged sliding head stocks, a a', and mandrels, bb', or their equivalents, the the head stock and mandrels being actuated by the pinions, a', and pinions, 11', or other mechanical devices, and the whole operating together as described; and

3d, The general combination and arrangement of the dually arranged head stocks, a a' supported substantially as described, with the mandrels and clearers connected, as explained, the twin or dually arranged pinions, d', and 11', and gears, g', and p p', and q q', the shafts, h r m, and m', the posts, ff', the cradle or clutches, n u', being adjuncts or important estails of the machine, the operation and general arrangement of the above described combination being as here inbefore shown and elucidated.

84,210.—Lightning Rod.—David Munson, Indianapolis, Ind 1 claim the lightning conductor, composed of the sections, A, formed a secured together as and for the purpose set forth. 84,211.—STEAM VALVE.—Francis S. Pease, Buffalo, N. Y.

84,211.—STEAM VALVE.—Francis S. Pease, Buffalo, N. Y. I claim, is the oscillating steam valve, consisting of two segments, V and V, constructed and operating as and for the purposes described.

2d. The combination and arrangement of the packing, L. and the slots, v. in the valve, V. V. Substantially as and for the purposes explained, 84,212.—THILL COPPLING.—Levi Pentz. Canton, Ohio.

I claim 1st, The rubber block, G, when constructed with concave front face, d, upper rear flange, a, and lower side and rear flanges, c. bc, and useful in combination with the thill iron, H. F. H, and clip arm, B, constructed as specified, substantially as and for the purpose specified.

2d, The combination of the rubber block, G, constructed as specified in first claim, the thill iron, H. F. H, with elliptical pin, E, and the clip, A, with arm, B, provided with the slot, D, hole, C, and curved wedge part, n, the several parts being arranged in the manner and for the purpose herein specified.

84.213.—POCKET LANDERN —Cooked W. Potton D.

ified.

84,213.—POCKET LANTERN.—George W. Putnam, Peterborough, (town of Smithfield.) N. Y. Antedated November 7,1868.

I claim the lantern, constructed as described, adapted to receive the case, containing the candle and match chamber, M, in such a manner as to leave an airchamber, U, containing the sliding handle, P, between said case and lantern, to prevent the heat senerated in the latter from communicating with the chambers, M, as herein described, for the purpose specified.

84,214.—FRUIT JAR.—Nat. Raymer, New Sterling, N. C. I claim, as an article of manufacture, a stopper or cork for fruit jars, made as described, viz., furnished with a shortmetallic tube, through which the air may be readily drawn, and by the pressing together of which the jar is hermetically sealed.

as described, viz., furnished with a short metallic tube, through which the lar may be readily drawn, and by the pressing together of which the lar is hermetically sealed.

84,215.—OIL Box —J. W. Rhoades, Clyde, Ohio.

Telaim the combination of the oil-box, A, cut-off, C, tubes, c2, and d, and shoulder, f, all constructed, arranged, and operated substantially as and for the purpose set forth.

84,216.—CoAL SITTER.—C. K. Rice, Marlborough, Mass.
I claim, 1st, The combination with the ash box, A, and coal box, B, of the sieves, C E and D H, substantially as and for the purposes set forth.

24, The combination of epocal arrangement of the sieves and frames, C, and B, in respect to each other and the box, B, substantially as shown and described.

34, The combination of the projection, b, and pin, a, with the box, B, and sieves, C and D, as shown and described.

84,217.—FRUIT JAR.—S. B. Rowley, Philadelphia, Pa.

I claim the combination of the screw ring, D, and its flange, i, the thin metal cap, B, and its flange, i', the rib, d, shoulder, b, and screw thread, a, of the jar, and the Fum ring, h, the whole being constructed, arranged and adapted to each other, as and for the purpose here: set forth.

84,218.—SPINNING JACK.—Jacob Sands, Waterloo, N. Y.
I claim, its, The combination, with the sliding block, A, trigger, f, spring-catch, 1, and belt shifter, k, of the vibrating catch, d, on the carriage, when arranged substantially as and for the purpose described.

34, The combination with the sliding lock, A ind belt shifter, k, of the weighted lever, n, when arranged substantially as and for the purpose described.

34, The combination with the sliding lock, h, trigger, f, spring-catch, 1, and belt shifter, k, of the vibrating catch, d, on the carriage, when arranged substantially as and for the purpose described.

34, The combination with the sliding lock, h, trigger, f, spring-catched.

34, The combination with the sliding lock, h, trigger, f, spring-catch, 1, and belt shifter, k, of the vibrating catch, d, on the c

Charles A. Seely, New York city.

Charles A. Seely, New York city.

I claim, 1st, The process of generating a gas or vapor of high tension, for lighting and heating purposes, as described.

2d, The combination of the generator and the pipes or other receptacles containing hot water as described.

3d, The combination of the generator with the escape pipe and stop-cock as described.

scribed.
The prevention of condensation in the gas conducting pipes, substan-

tially as described. 84,220.—Generating and Applying Carbonic Oxide for

84,220.—GENERATING AND APPLYING CARBONIC OXIDE FOR Treating Metals.—Thomas Shaw, Philadel phia, Pa. I claim the employment of hydrocarbon-fluids for the purpose of generating carbonic oxide, for operating on heated metals, as descried. 84,221.—Power Hammer, Thomas Shaw, Philadelphia, Pa., assignor to hipself and Phillip S. Justice. I claim, ist, The combination of the hammer, flexible stray, links, spring, walking beam, connecting rod, and crank shaft, substantially as herein described.

24. The method, substantially as herein described, of simultaneously tightening the driving belt and releasing the friction or clutch belt, so as to suddenly start the machine, and by a reverse movement to as quiekly stoptem machine.

the machine. 84,222.—Hydrant and Gas-Pipe Stop.—Frederick Shickle. (assignor to Shickle Harrison & Co.), St. Louis, Mo. 1 claim the stop box, A, cap, B, and their lug, A, and pivot pin, b bl. when constructed and arranged as and for the purpose herein set, forth and de-

84,223.—Instrument for Affixing Stamps.—C. B. Sill (assignor to himself and John Goldsborough), Wilkins, Pa.

I claim, the combination of the cutter and affixer, **D**, sponge, a, a spring feed, and the within-described devices, or their equivalents, turough the medium of which the spring feed is "set" on the downward movement of the affixer, as and for the purpose described. 84,224.—Fire-Arm.—Charles Slotterbek, San Francisco, Cal

54,224.—FIRE-ARM.—Charles Slotteroek, San Francisco, Cal. Antedated May 18, 1868.

I claim the combination and arrangement of the plate, B, springs, di and l, trigger, k, serreg, and hammer, f, when operated in the manner subtantially asshown and described and for the purpose set torth.

84,225.—PROCESS FOR PRINTING IN COLORS.—Hiram F.

Smart, Worrester, Mass.
I claim the mode of printing in colors from a single plate or engraving, substantially as and f. r the purpose described.

84,226.—R GISTER FOR TIME AND PRICE.—Kilburn Smith,

84,225.—R&GISTER FOR TIME AND PRICE.—Kilburn Smith, Lowell, Mass.
I cleim, 1st. The circular flange. F, in combination with the moving dial, A. in the manner and for the purpose set forth.
2d, The outer flange, H, in combination with the stationary circles of figures and indicating lines for the purpose and substantially as described.
3d, The pointer stands, E, having each a point, d, when used in combination with the flanges, for H, and the moving dial. A, or the stationary figured circle between said flanges, for the purposes and in the manner substantially as described.
4th, The pivoted arm. J. in combination with the dial, I, for the purpose and substantially as described.

84227.—Latch.—Albert Spangler, Philadelphia, Pa.

I claim the sliding face plate, E, with its slots, e' and e'', in combination with the loose collar, D, and fixed shank. C, and the sliding spring bolt, F, the said parts being constructed and arranged so a sto operate as and for the purpose cescribed.

84,228.--TARGET.-William Stein, Camden, N. J.

I claim, 1st, The swinging plates or arms, C.C., hinged or pivoted to the rotating frame or disk, B, substantially as herein shown and described, to form a target in which the aim will automatically indicate when it is hit, as set

2d. The rotating frame or disk, B. carrying the hinged or pivoted plates, C, substantially as herein shown and described.

3d. The screen, E, having the aperture, g, in combination with the rotating frame, B, and with the plate, C, hinged or pivoted thereto, as see forth.

4th, An automatically adjusting rarget consisting of the ritating frame or disk, B, of the hinged or pivoted plates or aims, C, of the stat ionary incline. D, rerforared screen, E, and ball arrester, E, all arranged in combination with each other, and made and operating substantially as herein shown and described.

84.229.--Maching for Sharpening Saws.-A. R. Stewart,

Original Harbor, New Brunewick.

I claim. 1st, The combin ation and arrangement of the table, b, adjustable saw rest. n, pivoted arm, c, verteal shaft, d slotted segment, h, segment, k, and sector slide, m, all constructed and operating substantially as herein described for the nurpose specified.

2d, The adjurtableguides, rr, and the wedges, tt, connected with the sawrest, combined with the stud, s, on the table, b, constructed, arranged and operating as described.

operating as described. 84.230.—Excavator.—Barna T. Stowell, Quincy, Ill. 1 claim, 1st. The cutters, mm, when constructed in the student form described and shown, and attached to the rotary cylinder, G, in the manner

ned.
The arrangement of the disk, J.J., connecting bars, M.M., scraping ses, N.N. and sinuous cutters, m.m., when the several parts are construct-the manner described.

ed in the manner described.

ed in the manner described.

al, in that class of construction in which the rotary cutting cylinder onerasts to move the machine forward in the manner herein described, the arrangement of such cylinder borizontally across the machine in front of an inclined apron, C, so that the cylinder shallout the dirt and to row it back upon the apron, while at the same time, it draws the machine forward, substantially as described.

4th The arrangement of the horizontal rotary cylinder, G, apron, C, 4th The arrangement of the foreign and counters, P, P, substantially as described.

84,231.—Combined Rake and Hoe.—Henry Thacker, Onei-

da, N. Y.

I claim as a new article of manufacture, the combined rake and hoe, cast in one piece, the cross head, A. being sharpened between the times, B. to form a straight cutting edge, as herein described for the purpose specified. S4232.—BEE: HIVE.—J. H. Thurston, Rainsborough, Ohio I claim the slide, n, and lever, o, pivoted in the recesses cut in the partition, b, between the same and the spare honey boxes, C. C., said lever extending to the outside of the hive whereby the capacity of the opening, In. is regulated, or communication closed between the noxes, C, and chamber, as as herein shown and described for the purpose specified.

84.233.—GUN LOCK.—Nichael Tromly, Washington, D. C. Iclaim, 1st, A hammer constructed with the parts, A and B. operating together, substantially as described.
2d, The combination of said hammer with the nipple, n, and guard, G, in the mannerset forth.
3d, A hammer, constructed with the depression, m, shoulders, i i, and lip or projecting plate, o, substantially as described.

84,234.—Hydrocarron Burner.—Louis Verstraet, Paris France.
I claim, 1st, The reservoir, A, constructed with a double casing or wall, and filled in with the absorbent, C, substantially as and for the purposes described.
2d, Withdrawing the venerable to

and filled in with the absorbent, C, substantially as and for the purposes described.

2d, Withdrawing the vapor which rises from the petroleum, or other mineral oil or liquid, from the reser voir, preventing thereby its escape into the atmosphere, and the accumulation thereof in the reservoir, substantially as described and for the purposes set ferth.

3d, Collecting and using in the boiler the water produced by the contensation of the vapors it, the smoke flues, substantially as described.

4th, Discharging into the furnace and utilizing as fuel the vapors rising from the off in the reservoir, substantially as shown and described.

5th, Producing a current of air through the reservoir, in contact with the oil therein, substantially as and for the purposes described.

6th, The filling, C, in combination with an oil reservoir, substantially as and for the purpose described.

7th, The air discharge tube, E, closed at its base, having a contacl end, perforated at e, and surrounding the closed content ended tube. E'', in such a manner as to have an annual space, m, between them, and arranged with relation to the air supply pipe, F, and gas pipe, N, as herein described, for the purpose specified. the purpose specified. 84,255.—Paper Making Machine.—James Viney, Man-

chester, N. H.

I claim, ist, Extracting the water or moisture, to a greater or less extent, from the pulp on the wire cieth or felt apron, on its way to the pressing rollers, by the removal of atmospheric pressure, as described, or in any equiv-lent manner.

2d. The adjustable slides, E. on the boxes, A. by which the aperture in the top of the box is made to correspond with the width of the paper, substantially as described.

tially as described.

84,236 — MACHINE FOR PICKING WOOL.—Wm. Wadsworth and E. H. Semple. St. Louis. Mo. We claim the combination or the cleansing cylinder, B. roller, C. arranged in adjustable bearing boxes, c3, and having tadial arms. C. and brushes, c1 c2, the slide, F. and slotted floor, F., all constructed, arranged, and operating as and for the purposes set forth.

r the purposes set forth.

Waite, Blue Earth City, Minn.

Wind Wheel.—R. Waite, Blue Earth City, Minn.

84.237.—WIND WHEEL.—R. Waite, Blue Earth City, Minn. I claim the wind wheel constructed as described, of the case, A, having the flanges, B C, the drait regulator, D, horizontal shaft, G, and the spiral wind wheel. E, having a variable diameter and pitch, all arranged and operating as described, for the purpose specified.

84,238.—CULTIVATOR.—Thomas Waite, Plymouth, Ohio. I claim the side beams, C, when provided with slots, D, for the insertion and adjustment of the standards, E, in combination with the beam, A, for the purpose set forth.

84,239.—STEAM WHISTLE.—Bernhard Weinmann, Cincinnation long.

84,239.—STEAM WHISTLE.—Bernhard Weinmann, Cincinnati, Ohlo.

I claim, 1st, The adjustable piston, E, arranged in the upper end of a steam whistle, substantially as herein shown and described.

2d, A steam whistle consisting of the tube, A, plug, B, which has the stem, d, head, e, and the adjustable piston, E, all constructed substantially as herein shown and described.

84,240.—SPRING BUT.—William Wells, Ashtabula, Ohio.

I claim the pawl, 1, and the ratchet teeth, h, when arranged substantially as and for the purposes herein shown and described.

84,241.—DESICCATED COCOANUT.—Giles B. Williams (assignor to Elisha M. Alien), New York city.

I claim an improved article of confection consisting of desiccated cocoanut meat combined with sugar and the bicarbonate of soda, substantially as set lorth.

FROTH ARRESTER FOR BEER GLASSES.—Johann

Winkier, Hadson City, N. J. 1 claim the oval froth arrester, A, provided with a notch, b, and arranged substitutially as and for the purpose described. 84,243.—ELECTRO-PLATING.—Justin P. Woodworth, Brook-

84,243.—FLECTRO-PLATING.—Justin P. Woodworth, Brooklyn, N.Y.
I claim the method substantially as set forth, of depositing different thicknesses of plating or metallic coating on different portions of an article at one operation, by obstructing and deflecting the electric bath in its passage between the two poles, substantially as described.

Also, the rack or holder, fig. 1, or its equivalent, for holding the articles to be plated properly, and for receiving and adjusting by suitable means the said obstructing derives, substantially in the manner described.

84,244.—Beer Cooler.—John Yates and Edgar Deuell,

Brooklyn, N. Y.

We claim, lat, Connecting the ends of the pipes or tubes, A, by means of boxes, C, divided mto compartments by means of partitions, a, the ends of the pipes or tubes passing through suitable standards or places, B, into the compartments of said box s, substantially as shown and esscribed.

2d, inclosing the series of pipes or tubes, A by means of doors, E'E', hinged to one of the boxes, C, substantially as and for the purpose herein set forth.

34, The combination and arrangement of the piston packing, r, air passage c, and valve, v, in the manner and for the purpose specified.

4th, Discharing the completed box or other hollow article from the bottom of the moid, substantially as set forth.

5th, The molds, H, made with r-movable bottoms and permanent perforated liming; as distinguished from removable limings, substantially in the manner specified.

6th, The ways, W, in combination with the common bed plate of the molds. H, for the purpose of allowing the latter to have a reciprocating movement to bring the molds alternately beneath the plunger, in the manner and for the purpose described.

7th, Forming abox or other hollow article from pulp, by forcing a plunger down into the mold containing the pulp of which the box or other article is to be made, as set forth.

### REISSUES.

RUBBER GOODS.—Dated June 18, 1867; reissue 3,198.—John W. Cobb, Melrose, (for himself), and Edwin A. Hill, (assignee of John W. Cobb), Quincy, Mass
We claim the combination of a matter. 65,794.—MACHINE FOR FILLING CYLINDRICAL MOLDS FOR RUBBER GOODS.—Dated June 18, 1867: reissue 3,198.—John W. Cobb.

Melrose, (for bimself), and Edwin A. Hill, (assignee of John W. Cobb), Quincy, Mass
We claim the combination of a molding cylinder, M, and a grinding roller, R, substantially as described, and mechanism for revolving the two at different speeds, as and for the purpose explained.
Also, the combination of the pressure roller. S, the molding cylinder, M, and a grinding roller. R, substantially as described, and mechanism for revolving the molding cylinder and grinding roller at different speeds, as and for the purpose specified, the pressure roller having applied to it mechanism for revolving it at the same speed with the molding cylinder. If 19,855.—IGE PITCHER.—Dated April 6, 1858; reissue 3,194.
—Henry G. Reed, George Brabrook, and Herry H. Fish (trading as "Reed & Barton"), Tanuton, Mass., assignees of Ernest Kanffman.
We claim, 1st, An ice pitcher having an attachable and removable lining, and a continuous or unbroken outer wall and bottom, when so constructed that the lining can be attached or removed through the top of the piccher.
24, the nee pitcher having the liner portion or Infing. B, fitted to the outer portion or cassing. A, with screw threads, or their equivalents, which make at tight joint, but provide for its ready removal and removal, as set forth.
70,272.—Mode Of Lighting Street Gas Burners.—Dated October 29, 1867; reisyne 3,195.—E. P. Russel (for himself) and

Dated October 29, 1867; retssne 3,195.—E. P. Russell (for himself) and Porter Tremain, (assignee of E. ?. Russell.) Manhus. N. Y. I. Claim a small supplemental burner, A, to be kept burning constantly, and the pipe leading thereto, when operating in connection with a main burner, substantially as and for the purposes set forth.

the pipe leading thereto, when operating in connection with a main burner, substantially as and for the purposes set forth.

37,469.—MACHINE FOR STIBLING LARD.—Dated January 20,1883; relssue 3,796.—William J. Wilcox, New York, N. Y.

I claim, 1st, The employment or use, for the purpose of scirring lard, of perforated or slotted dashers, E.F., attached to staves, F.F., which are secured to reciprocating rods or bars, U.C. moving in coposite directions, all constructed, combined, arrangel, and operated substantially in the manner herein shown and described; and; also, the last above-mentioned parts, in combination with said tank, constructed, and operated substantially as above described.

2d. The combination of two or more dashers, moving backward and forward in the tank, in opposite directions to each other, substantially as described for the purpose set forth.

36,159.—SEEDING MACHINE.—Dated August 12, 1862; relace 3,197.—Division A.—William M. Jones and D. W. Hall. Horicon, Wis, assigness by meane assignments, of W. M., ones and E. Tyler, W. claim, 1st, The chamber of recess, n. formed on the inside the cap, K. and tocated between the seed opening in front of the cap, to allow the edges of the buckets or partitions to pass up under the cap without injuring one seed, substantially adescribed.

2d. Forming and arranging the cap, so that a space shall be left at the rear for the seed to beath to fall from the buckets as soon as they are turned fire nonge to cause the the seed to roll or slide over their edges, substantially as described.

as described.

15,659.—HARVESTING MACHINE.—Dated September 2, 1856; reissue 633, dated March 15, 1859; reissue 3,198.—Division A.—William A. Kurby, Auburn, N. Y.

1 claim, 1st, The combination of the single plate, H, with the main wheel, substantially as and for the purpose descr. bed.

2d, Also the combination of the main wheel, K, single plate, H, and rim, L, when connected together and operating in the manner and for the purpose set forth.

2d, Also, placing a vibrating wheel on the outside of the main frame, or so

pose seriorum.
Ed. Also, placing a vibrating wheel on the outside of the main frame, or so
that the outside of said frame does not bear on the outside of the wheet in

that the outside of said frame does not bear on the outside of the wheet, in combination with the triangular shaped frame on the inside of the wheet, substantially as described.

4th, Also, hanging the seat to the plate, H, and to the standard, S, in the manner and for the purpose set forth.

5th, Also, a hinged lever seat, and outside supporter therefor in combination with a wheel having no outside frame or support, substantially as herein represented.

6th, Also, in a harvesting machine having no outside supports to the driving wheel, attaching a support for the driver's seat to the outer end of the axle of said wheel, substantially as described.

7th, Also, in a harvesting machine having its frame in two parts, and hinged together around the box containing the pinion shaft at one point, the plate, seement, and helding mechalism, at another point, for sustaining and holding the frame at any desired high, substantially as described.

segment, and abiling mechanism, a sanother point, for sataning and holding the frame at any desired hight, substantially as described.

15,659.—HARVESTING MACHINE.—Dated September 2, 1856; reissue 673. Dated March 15, 1859; reissue 3,199. Division B.—William A. Kirry, Anburn, N.Y.

Akirry, Anburn, N.Y.

Claim, 18t, In a har vesting machine, with its frame wholly on one side of the driving wheel, and the driving wheel having no outside support, a foot support for the driver on the side of the wheel opposite the frame, substantially as described.

2d. Also, In a harvesting machine with a frame wholly on one side of the driving wheel, and said driving wheel having no outside support, the making of the frame in two parts, one of which supports the driving wheel and a portion of the gearing, and the other part carries the other portion of the gearing, and forming a projection on one part of the frame around the plant on shaft, and a corresponding opening in the other part, which will passon and around said projection, a bus forming a join, the center of which is over any control of the part of the frame in two parts, one of which supports the driving wheel and a portion of the gearing, and the other part carries the other part or portion of the gearing, and did the projection on one and the opening in the other as executed, die use of the lung flange, or guide, a, on one part of the frame, and a corresponding recess n, on the other part tereof, in which said ung flange, or guide, works, for the purpose of holding the two parts, with their gearing in position laterally, so as to prevent motion to either side, substantially as described.

64,554.—FRICTION PAWL.—Dated May 7, 1867; reissue 3,200

FRICTION PAWL.-Dated May 7, 1867; reissue 3,200

Jos. Moore San Francisco, Cal.

Jos. Moore San Francisco, Cal.

I claim asan improvement in bolsting apparatus, a pulley, which shall be on the one hand, under the control of a brake, bearing upon its outer surface and, on the other hand, connected with the shaft by the pawl and ratched device, or its equivalent, within the puller, substantially in the manner and for the purposes set forth.

64,139.—MANUFACTURE OF STARCH SUGAR.—Dated April 23, 1867. relssue 3,201.—Narcisse Pigeon, Brooklyn, N. Y.

Iclaim, let. The within-described process of mannfacturing a pure sirup, and crystallizable sugar slup, from prepared fecula, cellulose, or other similar matter, by freeing it from saits, empyreumatic oils, &c., substantially also electibed, and by trysting the matter so as to convert the whole deatring, cellulose &c., lato crystallizable sugar slrup, substantially in the manner above described.

we described.

I, The within-described process of manufacturing a hard crystallized sufrom fecula, or other similar substances, substantially as herein set forth.
3d, The above-described part of my process, which consists in freeing the sirup of any acid, by the double neutralization, substantially in the manner above described.
50,016.—WEATHER STRIP FOR DOORS AND WINDOWS.—Dat-

OU.U16.—WEATHER STRIP FOR DOORS AND WINDOWS.—Dated Sept. 19, 1865; relissue 3,202.—Benjamin B. Savary, Boston, and Frederick O. Raymond, Haverhill. Mass., assignees, by mesne assignments of issac F. A. A. Lynch.
We claim, 1st, A weather strip, composed of two strips or pieces of wood and an interposed projecting strip of vulcanized rubber, or equivatent elastic material, united by tacks, or otherwise, substantially as herein setforth.

24. The symployment with A productions.

forth.

24. The employment, with a weather strip of otherwise ordinary or suitable construction, of vulcanized rubber, held in and arranged to project from face of weather strip in contact with the door or other part to which said strip is affixed, substantially as and for the purposes herein set forth.

30, The improved weather strip, as made with the strip of elastic material or indiar ubber, cc. to project in opposite directions from the two faces of the divided holder or molding, a b, substantially in the manner shown, and described.

described.
4th. The combination with the elastic strip, projecting from the rear face of the molding, as described of the rebate, d, made in the molding, and arranged, with relation to the said elastic strp, substantially as specified. 56,457. — Machne for Polishing Enameles Paper.—

50,457. — MACHNE FOR POLISHING ENAMELED PAPER.—
Dated July 17,1865; reissue 3203.—Samuel Shepherd and Joseph Greeley,
Nasnua, N. H., assignees, by mesne assignments, of Samuel Shepherd and
Amm M. George.
We claim, 1st, The combination of a rotarypolishing device with an endless carrying device, moving at a lower velocity than the polishing device,
and supporting table, bed, or ways to the carrying device, substantially as
herein set forth, for the purpose specified.
2d. the combination, with an endless carrying device to the paper or other
material to be operated on, of a polishing device, arranged to reciprocate
across the line or plane of feed, substantially as specified.
3d Providing an elastic bearing for the paper or material under the rotary
polishing device, by making either the endless carrying device, or support

ou rroyloing an elastic bearing for the paper or material under the rotary polishing device, by making either the endless carrying device, or support upon which it lests, elastic, substantially as herein set forth.

4th Giving the rotary polishing device a reciprocating movement transerisely to the feed, as produced by the engless carrying device, simultaneously with its rotary motion, substantially as herein set forth, for the purpose specified.

the pulp in the mold, by the introduction of the plunger into it by a quick 3,239.—COACH LAMP GLASS.—James H. Downs, (assignor to motion, substantially in the manner described.

C. Cowles & Co.), New Haven, Conn.

34, The combination and arrangement of the piston packing, r, air passage

5,53.—COACH LAMP GLASS.—James H. Downs, (assignor to C. Cowles & Co.), New Haven, Conn.
3,240.—COACH LAMP.—James H. Downs, (assignor to C. Cowles and Co.), New Haven Conn.
3,241.—CARPET PATTERN.—Israel Foster, Philadelphia, Pa.
Two Patents.
2,242.—CARPET PATTERN.—Israel Foster, Philadelphia, Pa.
Two Patents.
2,242.—Enging LAP.—Alongo Franch, Philadelphia, Pa.

3,243.—Fruit Jar.—Alonzo French, Philadelphia, Pa.

3,244.—Ornamental Type for Printers.—Julius Herriet, (assignor to David Wolfe Bruce), New York City.
3,245.—Ornamented Printers' Type.—Julius Herriet (as-

sgnor to David Wolfe Bruce), New York city.
3.246.—SCALE DISH.—John W. Kissam, New York city.
3,247.—Ladies' Collars and Cuffs.—Robert Macdonald,

New York city. 3,248.—FLOOR CLOTH PATTERN.—Charles T. Meyer, Bergen, N. J., assignor to Edward C. Sampson, New York city. 3,249.—CLOCK CASE.—Carl Muller, New York city. 3,250.—PRINTERS' FLOURISHES.—Conrad Reuter, Cincin-

nati, Ubio. 3,251.—Trade Mark.—Edgar A. Robbins, Wrentham, Mass. 3,252.—Cuspadore.—Samuel Roebuck, and John Roebuck,

New York city. 3,253.—Clock Case.—Solomon C.Spring (assignor to Welch,

5,505.—CLUCK CASE.—SOIOMON C.Spring (assignor to Weich, Spring & Company), Bristol, Conn.
3,254.—TRADE MARK.—David W. Storer, Bangor, Me.
3,255.—HARNESS TRIMMINGS—Charles M. Theberath, and Jacob H. Theberath, Newark, N. J.
3,256.—BRANCH OF A GASOLIER.—James Frederic Travis,

3,250.—DRANCH OF A SHEET STATE OF A SHEE 3,259 — STEAM BOILER PUMP.—Leonard Egleston (assignor to Rumsey & Company), Seneca Falls, N. Y. 3,260 and 3,261. —TRADE MARK.—D. Foerster, Zanesville, O.

3,262.—STANDARDS OF A SCHOOL DESK.—Calvin W. Sher-wood, Chicago, Ill.

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No.37 Park Row, New York city
Office in Washington, corner of F and 4th streets,

Patents are granted for Seventeen Years, the following being a Patents are granted for Seventeen Years, the following being a pose specified.

\$4,245.— MANUFACTURING BOOTS AND SHOES.—August

Destony, New York city.

1 claim the within described method of manufacturing boots and shoes, that is to say, securing the insole by a stitch whose parts are twisted and crossed in or at each and not at each and substantially as and for the purpose specified.

DESIGNS.

Bestony, New York city.

1 claim the within described method of manufacturing boots and shoes, attained the purpose specified.

5th, The pressing plate, T, applied in relation with the rotary polishing device, and support or ways to the latter, substantially as large the insole by a stitch whose parts are twisted and crossed in or at each and hole, substantially as and for the purpose specified.

5th, The pressing plate, T, applied in relation with the rotary polishing device, and support or ways to the latter, substantially as herein set iorth, for the purpose specified.

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5th The pressing plate, To applied in relation with the rotary polishing device, and support or ways t