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* Pamphlets giving full particulars of the mode of applying for ying size of model required, and much other information usefult
niventors, maybe had gratis sy adressing MUNN \& CQ., Publisher 1,601.-John Adt, of Waterbury, Conn., for an Improved Lock
Iclaim the bolt, B, provided with the yoke, C , at its inner end, in
 case
forth.
fin
TThis invention relates to a small lock of simple construction, designed for doors of buildings. The object of the invention is to obtain lock which may be readily inserted in the door, and without cutting a little amount of metal and in a very economical manner.]
1,602.-P. Andrew, of Cincinnati, Ohio, for an Improve ment in City Railways
I claim, tirst, The arrangement of a quadruple track upon a single
row of pillars provided with cross-arms for suspending the cars therefrom, as set rort ilaim the arrangement of the guide rails, E, to obviate
She neces, Ialso cor using flanges on the car wheels, in the manner and
the the necessity of using flanges on the car wheels, in the manner and
for the purpose set forth.
Third, I claim, the arrangement and combination of levers, $K$ and $L$


reach in the manner and for the purpose set forth.
Fifth, Iclaim the combination of the gear aparatus, $\mathbf{P}$ Q, with
rope, $\mathbf{Z}$, and bar, R, for attaching and detaching the cars from the propelling ropes.
Sixth ${ }^{\text {chaim }}$ the arrangement and combination
band, $T$, as described and for the purpose set forth.


## 1,603.-Nathan Barrett, of New York City, for an Improve

 ment in Pumps?I claim the two pump cylinders, $D \mathrm{D}$, attached to the ends of a walk,
ing beam, B, counterpoised thereon, and having their piston rods, ${ }^{\prime}$,
connected by levers and gearing or segments, in such a manner that ing beam, $B$, counterpoised thereon, and having their piston rods, $F^{\prime}$,
connected by levers and gearing or segments, in such manner that
the pistons wil be operated automatically by the oscillating of the
beam, $\mathbf{B}$, and all arranged to operate as and for the pur pose set [The object of this invention is to obtain a pump which, in its oper[The object of this invention is to obtain a pump which, in its oper-
ation, will lift only the amount of water it discharges, the weight of ation, will lift only the amount of water it discharges, the weight of
the whole column of water which is lifted in the ordinarylift pumps the whole column of water which is lifted in the ordinarylift pumps
being avoided. To this end two pump cylinders are employed which are connected to the ends of a walking beam and connect the piston rods by suitable gearing and levers, one cylinder being made to balance 1,604.-L. A. Beardsley, of South Edmeston, N. Y., for an ,604.-L. A. Beardsley, of So
Improved Portable Crane
I claim the combination of the windlass, J, circular way, A, and arm or brace, G, constructed and operated substantially as shown, with
each other and with the crane, D E, all in the manner and for the pur
pose shown and described. IThisinvention relates
Thisinvention relates to a novel crane intended for the use of the armer as well as for the engineer. It is constructed so as to com
bine with strength, lightness and portability, and be of a size adapted to the purpose it is intended to secure.]
1,605.-David Bell, of Buffalo, N. Y., for an Improved Screw Propeller
First, I claim the socket, $\mathbf{F}$, formed on the back of the blade, sub
stantially as and for the purpose set forth.
Second, I claim the wrounht arm
Second, I claim the wrought arms, $D$, connected to the hub in the process of casting in combination with the removable blade, substan
tially as described.
Third, I clamm the combination of the wedges, $j$ with the dovetail Third, I claim the combination of the wedges, j, with the dovetail
spaces between the shoulders on the hut and blade for the purpose
of changing the pitch of the wheel, substantially as described. 1,506.-B. C. Bibb and G. F. Needham, of Baltimore, and Apparatus for Curing Tobacco:
I claim the combination and arrangement of a furnace, $A$, a hot air
jacket, $B$, with or without evaporating pan on its top, heating pipes, $G$
$G$, direct dratit pipe, $D$, and hot air distributing pipe $H$, for the pur. $G$, direct draft pipe, $D$, a and hot air distributing pipe, He, for the pur
pose of drying tolaccoin a barn or other building, substantially as set porth.
1,607.-G. G. Bishop, of Norwalk, Conn., for an Improve ment in Machinesfor Making Felt Cloth
First, I claim the carrier combs, $N \mathbf{N L}$, and parts attached thereto, or
equivalents, in combination therewith, to constitute the said carrier equivalents, in combinaterice or the purpose, substantially as set forth.
combs, as a complete der
Second, I claim the use of the carrying screws, $J$ and $L$, having attached thereto cams, S and V , for the purposes specified, and traverse
rails, $T$ and U, in combination with the carier combs, N and N2, and
parts attached thereto, or equivalents, substantially as set forth, for the purposes described. bination wiun the carrier combs, $N$ and N2, and parts a atached thereto,
substantiall as described, and for the purpose set forth.
Fourth, $I$ also claim the use of the pin, $R$, in the back of the carrier comb, $N 2$, in
combs,
$P$ combs, $\mathbf{P}$ and $P$, for the purpose substantially as described, and for
the purpose of operating the faller combs, as set forth. 1,608.-R.Blackwood, of Philadelphia, Pa., for an Improved Hydraulic Jack :
I claim the construction and arrangement of the cylinder, D , and the
valve seat part, $\mathrm{D}^{\text {, together }}$, in the manner described, and in adjust
able com binationwith the disk, m, whichformstheremovable boitom of the oglinder, $B$, as specified, the said part, $D^{\prime}$, containing the valves, Q H I, and the ways, o o, all constructed and arranged together so as substantlally in the manner described.
I also claim m ming the then recess, $\mathbf{x}$, in the hand lever, $F_{\text {, }}$ so asto
In and
operate in cumb nation with the pin, w, in the manner described for the parpose of allowing greater facility in ansmestip or disconnecting 0 avoid, or operate the stem, $\mathrm{K}^{\prime}$, by 1,609.-F. B. Blanchard, of Brooklyn, N. Y., for an Im proved Steam Boiler:
I claim the arrangement of the upright tubular superheating vessel,
F, upright tubular teed water heating vessel, G, and interposed cham
ber, b, in combination with each other and with the otherwise separa ber, b , in combination with each other and with the otherwise separa
ted smoke-box, $\mathbf{D}$, and chimney base, E, substantially as specified.
1,610--F. B. Blanchard, of New York City, for an Improvement in the Application of Blowers to Furnaces
of Locomotives:
of the fan shaft, the friction roller or rollers, $G$, and
H, the whole applied relatively to the driving or
locomotive, and operating substantially as specified Second, The regulating valve, $f$, applied and operating in the trunk of the blower, under the control of the engineer, substantially as spec
ified. fied.
This invention relates to the driving of the blower by friction from he peripheries of the driving or other wheels of the locomotive to ef fect combustion in a closed furnace, and consists in furnishing the
blower shaft with friction pulleys or rollers, to work in contact with blower shaft with friction pulleys or rollers, to work in contact with nished shaft in bearing movable toward and from the axis of said wheels under the control of levers, for the purpose of bringing the lower into or out of operation at pleasure. 1
,611.-Horace Boies, of Hamburgh, N. Y., for Improve ment in Washing Machines
rarses, I claim a which rollers a nd frames constiturted in two rectangula frames, E F, which rollers and frames constitute two movable rubbers
the one being supported upon the other, in combination with mechan
ism for transmitting the said rubbers alternate ism for transmitting the said rubbers, alternate and simultaneous
movements in opposite directions, and in parallel planes for the pur poses and substantially as described.
Secon d, I claim the arrangement
Second, I Iclaim the arrangement of the bars, $Q$, including , slots, $r$
and spring arms, S incuding sheaves, $\mathrm{S}^{\prime}$, with incline slot, ${ }^{\prime}$, spring
U, and lever, T , so that the downward movement of the lever, $T$, will U, and lever, T, so that the downward movement of the lever, 'T, will bring the spring arms into such position as to cause the sheaves to bear
with a due amount of pressure upon the rubber frame, Ewhile the
rubbers are in motion, and so that said spring arms will withdriw au rubbers are in motion, and so that said spring arms will with driw au
tomatcally from such position when the pressure is removed and allow
che rubber to be turned up into a vertical position, for the purpose substantially as described.
1,612 .-D. M. Boyd, of Indianapolis, Ind., for an Improved Tilting Device in Shingle Nachines
I claim the horizontal adjustable plane, $F$, with the lever, $V$, together
with the spring, $X$, and the trigger, $P$, with its appendages, the coi spring. S, and the scroll spring, O, when these parts or their equiva
ents are arranged substantialy in the manner and tor the purpose set forth $\dot{q}$ the object and nature of the Invention being to secure the tilt-
ting of the block ta bie of the shingle macchine at the proper moment
and to avoid any change of the tabje during the time the shingle is be. 1,613.-Martin Colton, of Sardinia, N. Y., for an Improved Spoke Shave
I claim the conbin
I claim the conibination of the adjustable cam face, $C$, with the
stock, A, and knife,, , arranged and operating for the purposes and
ubstantially as set forth,
,614.-John F. Cory, of New York City, for an Improved
Bit Stock
I claim the combination of the case, $H$, with the shank, $G$, and sock-
et, $C$, by means of the universal joint, in the manner and for the pur
oses set forth et, C, by means
poses set forth.
1,615.-Abner Cutler and N. Jenkins, of New York City, for an Improvement in Toy Pistols
We claim, first, So constructing a toy pistol that the projectile wil be thrown by a direct blow of the hammer, substantial) a de described.
Second, Casting the body, that is to say, the barrel and the stock, in
twosimilarparts, each representing exteriorily one half of the body, wo similarparts, each representing exteriorily one half of the body,
and each having interiorly a groove, which, when the two parts are leught together, form $s$ the bore, and having also ap propriate recepta les yor the mechanism, as
Third, The spring piece,
ubstantially as described
1,616.-A. W. Dewey, of Boston, Mass., for an Improve ment in Water Elevators
I claim my improved water elevator, having its separate parts, viz.
 other, and so to.operate together, substantially as shown and de.
1,617.-A. K. Eaton, of New York City, for an Improve-
ment in the Process of Manufacturing Malleable Cast
Iron and Steel, and in the De-oxydizing of Iron Ores : ing carbon from cass iron in the production of malleable iron or steel, Second, The use, in combination with the decarbonizing processes,
of the carbonic oxyd generated by such processes in the reduction of 1,618.-H. N. Fryatt, of Belleville, N. J., for Improvement in Decolorizing Sirups
1 claim the use of bone black or any other substance capable of decolorizing fluids, assisted by centrifugal force, as in the ordinary cen-
trifigal mach me, as a nnode of and for the purpose of decolorizng sac
charne juices, sirups,

1,619.-Mathew Gill, of Battle Creek, Mich., for an Im provement in Life or Safety Ship:
I claim, first, The employment of the two nected and secured together, as described, the timbers of the uper
hull projecting down externally and internally over the upper edge of
he lower hull, for the purpose of keeping the upper in proper positio hhe prower hull, for-the purpose of keeping the upper in proper position
upon the lower, substantally as set forth.
Second, The arrangement unt Second, The arrangement of the rods, a a a a, the cross timbers, $d$ d,
and thebraces, $c$ cc, in the manner and for the purpose set forth.
Third, The employment ot the levers, $J$, rack bars, H $H$, as con-
structed when used in connection witie the rods, a as and for the structed, when use
purpose described.
1,620.-J. W. Hardie, of New York City, for an Improvement in Needle Setter and Threader for Sewing Machines:
I claim the needle setter provided with an adjustable gauge, to adapt
to different sewing it to different sewing machines and lengt hs of needles, andin combina-
tion therewith, in one single and complete instrument, the needde
threader so arranged as to redles, substantially in the manner and tor the purposes specified.
1,621.-L. A. Hoffman, of Prussia, for an Improved Galvanic Metal Friction Brush
I claim as a new article of manufacture the described electro-galanic metal friction brush, the same consisting of a stock containing a
series of coper and zinc plates arranged alternately and having felt or other suitabe absorbent interposed, as specined, in combination vith
the curved leather strap, studded with rows of pins of plated silver
wire, and the curved zinc plate at the back thereof, the whole being onstructed an
poses set forth
1,622.-L. P. Jenks, of Boston, Mass., for an Improved Machine for Detaching the Short Fibers from Cotton Seed
rom cotton seed by the short fibers not now removed by the cotton gin ally as described and set forth
1,623.-Gilbert Jessup, of Chapinville, N. Y., for an Improvement in Seeding Machines
Channeled side with the casting , F F G, or holding frame, with two seed entrances, for the purpose of sowing fine or coarse seed from the same
nopper, substantially as described.
1,624.-Davoust Kern, of York, Pa., for an Improved Process for Preparing the Flanking of Leather for Soleing
I claim the prescribed manner or process of treating or preparing
the tlinking of all and every kind of leather used for soling boots,
shoes, $\delta$ ac., also for belting, Ik ewlse for cards, whether machine, hand or otherwise, hater 1,625.-Charles Korn, of Meriden Conn., for an Improved Machine for Dressing Leather



T , for adiusting the bembition of the pivoted knee, n , wedge, R , and slide, 1,626.-Jacob Kuhn, of Centerville, Pa., for an Improve ment in Machines for Hulling and Cleaning Clover ${ }_{\text {First, }}$ I cl
First, I claim constructing the teeth, $n$ n, of the cylinder, $A$, in the
manner form set forth and descrbed; the samebeing arranged therean in relation to each other, in the manner specified.
Se cond, I claim constructing the in ner side of the concave, $B$, with se inges, oo, of teeth, , nd the groover, p p, between the said ridges,
sid set forth and described, and tor the purpose of receiving and operat corstructed substantially as described. Third, I also claim making the hopper with the two distinct apart-
ments, E E, as set forth, he apartment E, beng fitted with the adments, E E', as set forth, the apartment E, beng, fitted with the ad
ustable slide, r, for regulating and allowing the discharge of the
contents of the siad apartment only into the screen carrier below
whilst the apartment, $E^{\prime}$. communicates only with the huller, as and Whilst the apartment, $\mathrm{E}^{\prime}{ }^{\prime}$.
for the purposes specilied
1,627.-A. Lebkiicher, of Belleville. Ill., for an Improve I claimt in lubricating compound derived from the use of rosin oil I claim the lubricating compound derived from the use of rosin oil,
nuriatic acid, zinc, lime, olive oil, and water, in the manner herein
set forth. fort
[This invention consists in a compound produced by mixing rosin oil Which has previously been refined by means of zinc dissolved in etwer r desore slaked and powdered lime as abor r described, together with a certain quantity of olive oil and sof ater, which is added after the xnixture of rosin oil and lime has been heated and allowed to settle, thereby producing a lubricator, which, gummy and glutinous, but keep the journals and other parts to which may be applied, cool and so as to be easily cleaned.

1,628.-Joel Lee, of Galesburg, Ill., for an Improvement in Water Elevators
First,
or the parmose of unclutching the in combination with the brake, $\mathbf{P}$ Second, The combination and arrangem ent of the pawl, 0 , and Sake $P$, as described and for the purpose set forth.
Third, The spring, R in com bination with the sloted lever, $N$, for the
purpose of clutching the cran $k$ and raising the brake from the catch, Fourth permiting it to fall into the ratchet as described. Fourni, bail or hoop placed at or near the top of the bucket $k$, for horizontal bail or hoop placed at or near the top of the bucket, $k$, for
the purpose of preserving the equalibrium of the bucket and afturding
convenience in dipping small quantities of water therefrom, when de
sired as described

1,629.-H. S. Lewis, Chicago, Ill., for antmprovement in ,629.-H. Srocesses for Refining Lard:: I claim the pan having a double bottom, inclining downwards from
the sides towards the center and woth an arrangem ent of steam and 1,630.-Isaac Lindsley, of Providence, R. I., for an Im-,630.-Isaac Lindsley, of Providence, R. I., for an Im-
provement in Looms for Weaving Hair Cloth : I claim frist, Confining and compressing the lengths of
end, and reciprocating or otherwise changing the position of the come
pressed position with respect to the device used to select as pressed position with respect to the device used to select asingle lengt
therefrom, and present the end thereo to the hook, nippers or other
device theref rom, and present the end thereof to the hook, nippers or other
device, used to insert the length of hair or other material in the web,
in the manner and for the purpose substantially as in the manner and for the purpose substantially as spectificd.
Second, $\mathbf{I}$ clam the lance, $\mathbf{k}$, or its equivalent, substantially as described, for the purpose specitied.
Third, I caim the yielding pad, i, or equivalent, in combination
with the lance, $k$, or is equivalent, arranged and operating substantiwith the lance, k, or its equivalent, arranged and operating substanti-
ally as described for the purpose specitied.
Fourch, I claim the mode of operation substantially as specified, by Fourth, I claim the mode of operation substantially as specified, by
means of which a smgle length of the wett, or several lenths are seans oct and separated from the compressed mass or portion of the
weft and presented the hook, nippers or other device used to insert
the weft in the Fifth, I chairy the mode of operation substantially as specified, by
means of which, in case the lance or equivalent device fails, to select means of which, in case the lance or equivalent device fails, to select
a length of the weft from the compressed mass,
it econsequence torto do so are
substantialy 1,631.-Dennis G. Littlefield, of Albany, N. Y., for an Improved Fire Pot for Coal Stove
I claim in the construction of oase-burning stoves as arranged and fitted substantially according to the specincatin in my Leters a
of January 24, , 85 , the combination of the supplying cylineler, M, M,
with the rings, or framing, U R, constructed as described in this spewith the rings, or framing, $\mathrm{U} R$ R, constructed as described in this spe-
cification, so as to admit of the use, , $\begin{aligned} & \text { removal, and replacement of sep- } \\ & \text { arate bars of soap stone, fire clay, or analogous heat-resisting sub- }\end{aligned}$
1,632.-John McCormick, of Madison, Ind., for an Improved Boiling Apparatus
said chamber being hermetically sealed, thereby retaining its contents, thus consiituting them a fixed permanent, unevaporating part of the the
apparatus; as set forth and for the purposes specified in the foregoing

1,633.-Samuel Metzler, of Naperville, Ill., for an Improved Belt Coupling
I claim the combination with the ends of a pulley belt, $C$, of the two
metal plates, A A and the screw bolts, B B; the said parts being con structed and applied in the manner and for the purpose described. 1,634.-George A. Mitchell, of Turner, Maine, for an Imclaim the pad, E , buited to the upper and soles by screws or rivets,
securing the heel porion of the boot or shoe firmy together, as
sibed, and for receiving the heel, to be thereon secured for the purpose set forth
1,635.-Porter Mitchell, of Greenfield, Mass., for an Im proved Heating Apparatus and every pair of deflectors of a damper whereby direction to each ar 1,636.-H. U. Morse and H. A. Morse, of Canton, Mass., for an Improvement in Tobacco Cutters
curved racks, a a ${ }^{\prime}$, wo two toothed sectors, ber, $b^{\prime}$, and the stanstren with two movable cams, $\mathbf{H}$ 'I', a and rests s, TII, arranged and combined with the
lever, D, frame, $\mathbf{B}$, and the knife carrier, C , and so as to operate sub.
stantioly lever, D, frame, B, and
stantially as described.

## 1,637.-H. A. and L. B. Myers, of Elmore, Ohio, for an Im-

 wrovement in Grain Drills:1,638 M 38.-Mark S. Palmer, of New Bedford, Mass., for an
Improved Machine for Filling and Folding Medical Powder Papers:
I claim first, The feed roller, $\mathbf{D}$, bed plate, $\mathbf{E}^{\prime}$, spring pressurc plate,
$\mathbf{D} 2$, and knife, $\mathbf{D 3}$, in combination with the reciprocating fingers or pns, $e$ e2, working in slots through the lower plate, E, all arranged
with relation to the folding box and operating substantially as herein described. The folding box, constructed with , jinisited folding sides, $F$
Fecond,
, F , operating as de scribed, in combination witil the reciprocating bot
tom plate, E 2 , and its side botiom plates, et e4, as set forth. Third, The pressing or creasing block, H, operating between suitable
guides, $h$, when said block is arranged in relation to the folding bux, guides, $h$, when said block is arranged in relation to the folding box,
and operates as described, to crease the paper preparatory to the told-
ing operation; and in combination with creasing head, I claim the hoding tingers, $n n$, or their equivalents, operating substantialy
and tor the purposes set orth.
Fourth, I claim, in cennection with creasinghead, H , the plunger, J ; tu,
tue, I, tube, $m$, case,, , reciprocatng measuring block, $M$, and hopper,
$b^{\prime}$, all arranged and operatmg conjointly, substantially as herein de-
[This invention relates to certain novel improvements in machinery for preparing strips of paper, filling them with certain quantities of powder, and for folding the powder up in the papers in a proper man-
especially tor folding papers containing homeopathic powders, or for folding and filling papers with seidilit powders, but by varying the size of the parts which reeeive the papers and fold them, the
may be a adpted for folding large or small papers of powder.]
1,639.-George Parr, of Buffalo, N. Y., for an Improved Camp Chest :
I claim a camp chest constructed in two parts, A and, B having fold-
ing legs, D, hinged thereto as shown at e, with springs, $\begin{aligned} & \text { F, (or hookss } \\ & \text { for holding the legs in a perpendicular position, for the purposes and }\end{aligned}$ for holding the legs in a perpendicular position, for the purposes and
substantialy as described.
1,640.-R. H. Peck and E. M. Gifford, of Wolcott, Vt., for Improved Tube and Pail Machine
We claim the arrangement of the mandrel, $\dot{G}$, the swinging frame,
$\mathbf{H}$, carrying the knives, $h$ and $h$, the clamp, F Li, and the rests, I and
$\mathbf{N}$ substantially as and for the ourpose set forth.
1,641.-C. H. Perkins, of Providence, R. I., for Improved Machine for Making Horse Shoes :
I claim, frst, The combination and arrangement of afseparate ham-
mer and creaser with a single helve. so that while one is at a state of
rest and disconnected rest and disconnected from the helve, the other shall be connected
therewith and capable of being operated by it independently of the therewith and capable of being operated by it independently of the
other, substantially as described.
Second, I claim the use of a separate hammer and creaser capable Second, I claim the use of a separate hammer and creaser capable
of acting independently of each other in combination with the in-
struments for giving the first bend to the shoe blank, substantially as described.
Third, I claim constructing the face of the hammer with a raised
rm, as described, for the purpose of giving shape to the shoe and also For facilitating the escape of the scale as it is tormed.
Fourth, I claim the combination of the prongs, 26 , and scraper, 27,
or their equivalents, for the purpose of removing the shoe after it has
 Fiith, I claim the mode of operation substantially as specified, by
means of which the prop is removed from the hammer helveto permit the operations of plating and creasing the shne to be performed, and
at such times relatively to the revoluion of the wild cat as to prevent at such times relatively to the revolution of
half blow from the hammer, as set forth.
1,642.-T. W. Porter, of Bangor, Maine, for an Improve ment in Ox-Yokes
I clam, first, The,'pieces, A and B, in the construction of ox-yokes,
when arranged substantialy as described
Second, I claim furming the ends of yokes of two or more layers of
wood, the grain or frer of one or more layer or layers being placed
ransversely to that of the other or others substantially as described
ransersely to that of the other or others substantially as described.
Third, I claim forming that part of the yoke which bears upon the Third, claim forming that part of the yoke which bears upon the
neck of the ox, y bending the wood so that the direction or curvature
of the grain or fiber shall conform to the curvature of said part of the Fourth, I claim the bow holder, or pin, when used in combination
Fith the yoke substantially as described and for the purpose specified. 1,643.-J. A. Preston, of Boston, Mass., for an Improve ment in Bottle Stoppers:
I claim a bottle stopper made with its valve and valve stem entirely
flass as set forth ior the pnrpose specificd.
1,644.-George Race, of Norwich, N. Y., for an Improve ment in Water Elevators
 and
substantially as and forthe purpose set forth.
I turther claim the particular arrangement of the spring, $F$, substan I further claim the particular arrangement of the spring, $F$, substan-
tially as shown and described, wherey the spring, E, is made to ter
form the double function of a friction brake and spring, as set forli. [The object of this invention is to obtain a water-elevating devic which will admit of being operated with greater facility than usual. The invention relates to that class of water elevators in which a wind lass and bucket are employed, and consists in the employment or use of a ratchet placed level on the windlass shaft, in connection with a
wheel attached permanently to the wudlass shaft, and encased within wheel attached permanently to the wimlass shaft, and encased within spring and an eccentric and brake, whereby the bucket may be elevat er by the rotation of a crank, and released at anytime so as to descend in the well as gradually as may be desired, and suddenly stopped a ny desired point, thedescent of the bucket being under the perfec ,
1,645.-George M. Rhoades, of Hamilton, N. Y., for Im provement in Machines for Trimming Teasels : one ormore teeth as described, and for the purposes se, prorth.
Second, Surrounding tube, $c$, with an adjustable outer tube, $I$, substantiaily in the manner and for the purposes set forth.
Third, Retainlng the outer tube I, at any desired degree of elevation
by means of check nuts, $\mathbf{H}$, and springs, $\mathbf{F}$, in, combination with rods, by means of check nuts, $H$, and springs, $F$, in,
g, substantially as represented and described.
1,646.-W. B. Rhoades, of South Dedham, Mass., for Im proved Clothes Wringer :
proved rolls B and $\mathbf{C}$, with the sliding bearings, g, in combination
with the levers, $D$, and springs, $k$, arranged and operating substantially
1,647.-N. H. Richardson, of Fitchburg, Mass, for Improved Ratan Machine :
Ratanist, Thine rolls, K,in combination with the rolls, $H$, upon the
1 claim, firs,别 than the later, $H$, as set forth for the purpose explained. I claim so connecting the scrapers with the feed rolls in
ad vance of them by means of the connections described, or their subad vance of them by means of the connections described, or their sub-
sth atial equivalents, that they shall be simultaneonsly separatod for
the entrance of the ratan, as set forth for the parpose described. 1,648.-C. W. Saladee, of Pine Island, Texas, for an Im-
provement in Steam Plows:
I clatim, frrst, The combination of the several parts shown and de-
scribed, for the purpose of combining in one machine the facilities of plowing, sowng the seed, rolling and harrowing at one operation, as
others.
Second, Iclaim the pece: Inat construction and arrangement of the
plows, x, and colters, $f$, Fig. 1 , in combination with the angle iron
 beyond the line or cir cle described by the points of the plows, in the
manner and for the eimportant purpose set forth.
Fburt, I claim the radius bars, or, Fi, 1, but more particularly
shownin Fig 3, sha It, Q Q, shifting pinions, S S, in combination with
 the ground a teach revolution of the p. sirs, and for the additional pur-
pose of throwing out of gear either one or both of the drums, C , to
facilitate the turning of the machine, as shown and described. 1,649.-Herman Schroder, of New York City, for an Improvement in Breech-loading Firearms:
I claim, frrst, The movable breech pin, $F$, when operating as described to cock the lock and lock the barrel.
Second, The mevable breech pin, operating as described, in combin-
ation with the expansive ann ular charge chamber, $f$, as and for the purpose specified.
Third, The shoulders, $h$, on the
og,
, 1,650.-Wm. F. Sheldon, of East Mendon, N. Y., for an Improvement in Melodeons
I claim, frst A movable keyboard, so combined with the reeds of a the ald of as axifed.
tiall as ane the so-applied movable keyboard with the reeds,
Second, Combining Second, Combining the so-applied movable keyboard with the reeds,
or thelr equipalent, by means of interposed levers, $L \mathrm{~L}$, applied and
operating eubstant
 in any desired position.
1,651.-M. A. Shepard, of Bridgeport, Ill., for an Im-
provement in Water Elevators:
I claiman oscillatingor swinging box, C, divided into two compart-
ments, c c, by a central partition, $b$, and said compartments subdivi-
ded into compartments, e $e^{\prime}$, by partitions, $\mathrm{f} \mathrm{f}^{\prime}$, the compartments, e
$\mathrm{e}^{\prime}$, communicating with each other by openings, g ,
to ond and all arranged to operate substantially as and for the purpose set iorth.
[The object of this invention is to obtain a simple device for elevating [The object of this invention is to obtain a simple device for elevating
water and other substances, either by the oscillating of the device alone on snitable journals, or by the rocking of the support to which he device is attached. The invention is applicable to vessels of navi.
gation, serving, while the vessel is in motion, as a self-acting means cor elevating water from the hold.]

1,652.-D. H. Shirley, of Boston, Mass., for an Improve
ment in Skates:
I claim, first, The arrangement of the screw box to the heel-locking
screw, below heel portion of the body of the skate, essentially as shown and described.
Second, Securing the skate at the heel by the button or head of the heel screw, arranged and apphed to gripe on or against the heel of the
boot or she, as set forth. Third, The combination of a heel-locking screw with a step or set-off
in the body of the skate in front of the heel, and fitted with prongs or
spikesto gear with the front of the heel or the boot or shoe, substancially as specified.
Fourth, The combination of the heel-locking screw, spiked set-off or Fourth, The combination of the heel-locking screw, spiked set-off or
sether, essentially front of the heel, and toe cap, all for operation to 1,653.-H. T. Stanard, of Wayne, Mich., for an Improvement in Sash-holders
ing as specified, $L$, and ,654.-Leopold Thomas, of Allegheny, Pa., for an ImI claim attaching the piston rod of lifting pumps, by which the plunger is operated, to the upper valve itselfing in pumps, by manner as that the
irst part of the motion of the piston rod, either on its up or down Stroke, shall be to open or close the valve, as the case may be, while
the plunger itself is moved by the further stroke of the piston rod, sub-1,655.-J. A. Whitney, of Maryland, N. Y., for an Improve ment in Brakes for Vehicles:
 operated by the mav
scribed and shown.
[This invention relates to an improvement in operating wagon bakes, either by hand or by the movement communicated to them $b$. he rise and fall of the draftpole.]
1,656.-W.F. Wickersham, of St. Louis, Mo., for an Im proved Excavating Machine
I claim the arrangement and combination of the frame, $C$, the eleva-
ors, $H$, the leader, $P$, the scraper, $J$ and the cart, $M$, the whole to be
constructed jointly substantially in the mand
1,657.-M. D. Wilder, of Laporte, Ind., for an Improve
ment in Water Elevators for Cattle: I claim, first, The carriage C, placed on a cir
claim, frss, The carriage, C, placed on a circular track, B, in con
nection with the annuar apron, D, frame, fence, $K$, and pump
ormed of the reciprocating tube, Q, plunger, $R$, and cylinder formed of the reciprocating tube, Q, 'plunger, R , and cylinder, $\mathcal{E}$, the
pump being operated from the carrage, C , and all arranged substan
tially as and for the purpose set forth. Scond, The arrangement, as show, of the annular trough, $L$
straight trough, M, and stationary curved discharge pipe, V , whereby
the water is $\begin{aligned} & \text { ischarged into the straight trough, } \mathbf{M} \text {, the motion of the }\end{aligned}$ trowh not interfering with the proper delivery of the water.
Third, The arrangement of the shaft, E, crank pulley. F, connect-
ing rod, $P$, collar, , and rotating tube, $\mathbf{H}$, substantially as shown, to erve as a means for communicating power from the carriage, C , to
the pump. che pump.
Fourthe employment or use of the decoy vessel, $N$, when used in
connection with a pump and its operating mechanism, substantially as nd for the purpose specified
[This invention relates to a new and improved water-elevtiting de may be which stock may raise their own water, and to which a horse sists in the use of an annular apron placed on a carriage and circular track, in connection with a fence and pump, all arranged to effect the desired end.]
1,658.-J. D. Custer, of Norristown, Pa., assignor to Wm
McNiece, of Conshohocken, Pa., for an Improvement in Cutting Saw Teeth:
I claim the combination of the plunger, $G$ G, and its long screw and
long nut, 4 , with the toothing punches, $J$, all substantially as de-
scribed and shown, for toothing and setting saws. 1,659.-J. E. Earle, of Brooklyn, N. Y., assignor to him
self and Samuel Hathaway, of New York City, for an
Improvement in Machines for Making Tape Trim-
mings:
I claim the folders, DE FG and $H$. or their equivalents, constructed
and operating in the manner and for the purpose substantially as specified.
Also, the combination described of folding:instruments, D E FG and
, the pressers, $\mathbf{E}^{\prime}$ and $\mathbf{F}^{\prime}$, and the conti nuously rotating spool-holder, $H^{\prime}$, all censtructed and operating togethe $r$ in the manner and for the purpose set rorth.
Also, in combination with a folding instrument, operating substan-
tially as described, the carrier, $D^{\prime}$, rotating therewith, for the purpose set forth.
Als, in combination with a folding instrument, $D$, and carrier, $D^{\prime}$, a
holder, $\mathrm{C}^{\prime}$, operating in the manner and for the purpose specified. 1,660.-D. R. Gamble (assignor to himself and J. M. Con-
nel), of Newark, Ohio, for an Improved Washing Machine:
I claim the special arrangement of the roller or balls, $a^{\prime}{ }^{\prime}{ }^{\prime}$, with the
evoving arms, in combination wwith the ribs or projections,
he
upen the side and bottom of
he purpose set forth.
1,661:-W. R. Kay and H. E. Kay, of Westerly, R. I., as-
Mass, for on Improved Car Brake: Mass., for an Improved Car Brake :
bined and connected, by means or suitable gearing, substantially as

 Second, We claim the ratchet levers, $P$ and $P^{\prime}$, in combination with
the pawls, $N$ and $N^{\prime}$, and chain,, , or itt equivalent, so arranged that
the winding of the chain on thedrum, $\mathbf{C}$, in eitherdirection brings into
 spustantially as and for the purpose specified.
Fourth V e claim the ecombination or the toggle, W , the levers, V
and V , the tie, v , and the jornted or flexible strap, R , substantially as ad for the purpose set lort
1,662.-William Lape (assignor to himself and Fred'k R. Stow), of Troy, N. Y., for an Improvement in Plows: I claim a plow having its landside, $A$, share, $B$, moldboard, $C$, and
beam, $D$, all constructed and united together in the manner shown and
described. described
1,663.-W. G. Mackay, of New York City, asssignor to P.
P. Comen, of Bridgefield, Conn., for a Machine for Bronzing Wall Paper, \&c.:
I claim the arrangement of the trough, $\mathbf{C}$, bronze distributor, $E$, in the manner described and forthe purpose specified ${ }^{\text {and }}$ and operated
In combina ton with the same I Ilim the whipping plates, $\mathbf{K} \mathbf{K}$,
when arranged and operated in the manner described and for the purwhen arranged a
pose as set forth.
1,664.-J. W. Osborne, of Melbourne, England, assignor
to S. T. Hooper, of Charlestown, Mass., for an Im
to S. T. Hooper, of Charlestown, Mass., for an Im-
prqvement in Photography:
sansfiers, of a paper prepared by applying, in coniunction with the bumen to the surface of the paper, and coagulating the ulbumen so Second, I claim the mane and and app the purpises or geatiosescribed; and in coniunction
with albumen, for the formation of the coating of organic matter apwith aibumen, for the formation of the coating of organic matter ap-
pliedto the surface of pholithographic transer paper, which geiatine,
by its swelling properties when acted upon by moisture, enables me to btain the result described
1,665.-G. W. Richardson (assignor to himself and Robert Glover), of Grayville, Ill., for an Improvement in Harvesters :
I claim the arrangement and combination of the bracket frame, $G$,
raft pole, A, and driver's seat, $S$, with the getring. $D E \underset{O N}{ }$, and
shaft, $M$, substantially as and for the purpose set torl: ['The object of this invention is to obtain a simple and eflicient ar angement of parts to render the draft of the machine as light as pos ible, and, at the same time, admit of a very ready raising and lower ,
666.-G. H. Smith (assignor to S. O. Smith), of Roches ter, N. Y., for an Improvement in Gas Regulators : I claim, first, The employment in portable gas regulators, of a long
ylin drical valve, operating as described, and moved longitudinally by
mol on confned ari, to the covering of which the valve is connected.
Second Attaching the valve to one leaf of a double diaphragm, or to Second, Attaching the valve to one leaf of a dou ble diaphragm, or to
ring of rubber attached to the single diaphragm, substautially as and es set forth.
1,667.-Wm. F. Trowbridge (assignor to F. Bingham• \& Co.), of Feltonville, Mass., for an Improved Machine claim the skiving machine consisting essentially of the revolving cutter head, $F$, and adjustable collar, $K$, arranged and operating sub-
stantiallyas described. RE-ISSUES.
98. - Wm. N. Whiteley, Jr., of Springfield, Ohio, for an Im provement in Harvesters. Patented Nov. 25,1856 : a harvesting machine, the sector plates, $\mathrm{f}^{\prime}$, provided with the adjust-
able boxes, $\mathrm{g} \mathrm{g}^{\prime}$, or their equivalents, substantially as shown and deable boxes, g g g' or their equivalents, substantially as shown and de-
scribed, for the purposesspecified.
Second, In combination with the sector plate, f, a projecting lip for
the shipper's fulcrum pin, substantially such as shown and described,
for the purposes specified for the purposes specified.
Third, Retaining the pinion on its shaft by means of the shipper, or
its equivalent, by which said pinion is thrown in and out of connection its equivalent, by which said pinion is thrown in and out of connection
with its clutch pin substantially as shown and described, for the pur pose stated.
Fourth, . connecting or combining the driver's seat of harvesting
machines with the front end of the frame of the same, when used for machines with whe front end of the frame of the same, when used for
reanin, that when the diver is on his seat his weight will either raise
and hold up the rear end of the wheel frame to and hold up the rear end of the wheel frame to which the cutting ap-
paratus is connected, or both the rear end of the frame and the center
of the finger bar, for the purposes specified. designs.
68.-C. S. Chaff'ee (assignor to the Bay State Glass Company), of East Cambridge, Mass., for a Design for blers.
69.-H.W. Hayden, of Waterbury, Conn., for a Design for a Mat for Daguerreotype Cases.
70.-James Hutchinson (assignor to J. E. Whipple), of Lansing burgh, N. Y., for a Design for an Oilcloth Pat tern.
71.-James McDuff (assignor to N. McGraw and W. A. Tay lor), of Morrisania, N. Y., for a Design for Coffins.

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