ing operation that, in the successive passages of the rollers the lines of the impressions do not come exactly in the same place, and impressions produced are rendered imperfect; and steel plates are so hard that a good transfer is only obtained by many repetitions of the operation of the rollers, and the rollers soon wear out. It has been attempted to decarbonize the faces of steel plates to give them the requisite degree of softness, but this has not been successful. The object of this invention is to obtain plates which have a desirable softness of surface, and the requis ite hardness or strength of body to resist the heavy pressure'to which they are subject; and to this end it consists in combining a layer of steel and a laye of fine iron, by welding, casting or any other suitable method of uniting the iron forming the face and the steel forming the back of the plate. Alfred Sellers, of New York city, is the inventor of this improvement

Lrfe-boat and Pontoon Bridge. -The object of this invention is to obtain a life-boat which may, when not required for use, be compactly folded and stowed away in a small space and still be capable of being readily adapted for use, and possess the advantage of always rightingitself if thrown into the water. The invention consists in having a series of air chamber formed of india-rubber, gutta-percha or any other suitable air-tight and water-proof fabric, provided with infiating tubes so arranged that the chambers may be readily filled with air and the latter retained therein, and having a metallic keel attached to the central air chamber, the upper surface of the boat being provided with a netting and the under surface having a rope applied to it; all being arranged in such a manner as to effect the desired end. Edward L. Perry, of New York city, is the inventor of this improvement.

Fastening for Breast-pins.-This invention consists in a single or double U-shaped clasp hinged to the under side of the breast-pin, stud, button, or other similar article, in combination with a point projecting from the under surface of said breast-pin, button or other article, and passing through all but one of the shanks of said clasp in such a manner that when the clasp is turned back, it can be readily hooked over one or both ends of a dress; or the ends of a sleeve or other part of a garment can be readily entered between its shanks, and on closing it down the point penetrates the fabric between its shanks, and the breast-pin, button or other article is firmly retained in the desired place; it consists, further, in the applica tion to a button or other similar article of a double clasp, the main clasp being hinged to the under surface of the button, and the secondary clasp to the last shank of the double U-shaped main clasp in combination with two points, one projecting from the under surface of the button or other similar article, and the other from the inner surface of the secondary clasp in such a manner that one end of a shirt sleeve, or other part of a garment, can be secured in the main clasp and the other end in the secondary clasp, and the degree of tightness with which the shirt sleeve or other part of a garment is fastened, can be regulated at pleasure. Gaspard Buhler, of Newark, N. J., is the inventor of this improvement.

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1,668.-Packing Projectiles for Rifled Cannon.-John Absterdam, New York City I caim, trst, onstructing a projectile for rifle cannon with one or
more bands or bearings of an anti-friction metal that expands in
cooling or that does not shrink in cooling, for the purpose herein de Scriben. Sawing the end of the expanding, cup in several cuts diag
Sally to the axis of the projectile, substantially as described. 1,669.-Manufacture of Gun Barrels.-Walter Baker Ilion, N. Y I claim as a new article of manufacture the forming of a solid cone
seat upon a hollow gun barrel, from the metal at the butt of the eat upon a hollow gun barrel, from the metal at the butt of the
same, withoutwelding, in the manner substantially as shown and de
scribed. cribed.
41,670.-Feed Bag.-Joseph Becker and Wm. Tustin Philadelphia, Pa.:
We clain, first, The strap, A', running obliquely under the throat
of the animal and fastened by a loop upon the rear top side of the
bag, substantially as and for the bag, substantially as and far the purpose descrioed.
second, The sieve or ventilator,, fg. 2, or its enuivalent, at the
bottom of the bag, as herein described, substantially as and for the second, The sieve
bottom of the bag,
purpose set forth.
41,671 .-Machinery to aid in puddling Iron and Steel
-Henry Bennett, Wombridge, England. Patented -Henry Bennett, Womb
In claimimproved apparatus or mechanism to be used in the pro
scss of pudding iriron, steel. iron or steel, and constructed substantial
I as herein more fully set forth and specifled.
41, 672.-Water Elevator--B. B. Bignall, Owego, N. Y.: I claim the reel, B, having the spurs, kk , of nearly the same trans
verse thickness at the base and top, and the bearings, 11 , respective
ly on each side of the spurs, for the support of the chain, substan Iy on each side of the spurs, for the support of the chain, substan
tially as herein set forth.
I also claim the toothed reel, B, constructed as described, with the I also caim the toothed reel, B, constructed as described, with the
main chain, , auxiliary chain, ${ }^{\text {on }}$, and bucket, D, all arranged and
operating substantially as and forthe purpose herein specified. 41,673.-Street-sweeping Machine.-H. S. Blood, New Orleans, La.:
I claim, frst, The rotating brush, J, in combination with the dirt
plate, K , provided at its lower end with the elastict strip, M , arranged
oo operate in the manner substantially as and for the purpose spectSied. Second , The endlessapron, $\mathbf{N}$, placedin the box or dirt-receiver, $L$ ornation with the brush, $J$, for the Third, The operating of the endless apron, $N$, from the driving
Fheel, ${ }^{1}$, by means of the shait, $0 \mathbf{S}$, gearing, $\mathbf{G}^{\prime} \mathbf{P} \mathbf{Q}$, and end less belt, , as described.
Fourth , The operating of the door, W, from the lever, $A^{\prime}$, simul-
taneously wifh the throwing and out of gear of the pinion, $P$, with
he wheel, $G^{\prime}$, substantially as described the whee, $\mathrm{G}^{\prime}$, substantially as described.
Fifth. The combination of the rotatinn brush, J, endless apron, $N$
nd dirt-plute $K$ all constructed and arranged Fifth, The combination of the rotating brush, J, endless apron, $N$,
and dirt-pute, $K$, all constructed and arranged to operate in the
manner substandilly as and for the purpose herein set forth. [This invention consists in the employment of a rotary brush placed in an oblique position in a mounted frame and used in con-
nection with a curved inclined dirt plate and a dirt receptacle pronection with a curved inclined dirt plate and a dirt receptacle pro vided with a dirt-discharging apron, all arranged to operate in such manner that the dirt will be cleanly swept up from the pavement
the street, and discharged at suitable or desired intervals in piles.]
41,674.-Working and using Sugar Evaporators.-Luk W. Bodwell, Ann Arbor, Mich.

I claim the combina tion and arrangement of the eccentric shaft plate, f, opening, T, enlargement, s in connection with the arch,
combined and arranged as and for the uses and purposes set forth in
the foregoing specifcotion. specification.
675.-Protecting Lead Pipe against the Action of Wa ter.- Leopold Brandeis, Brooklyn, N. Y.: tion with sulphepplication of hydrogen or any other gas in combina Which watercannot act, and thereby do away with any danger of
lead.-poisoning, even if water should be kept standing in suchpipe or
vessel. 41,676.-Opening and closing Iron Blinds or Shutters.-
William H. Brown Worcester, Mass.:
I claim, first, The combination with a sliding blind of the slats, b
oonnecting rod, c, lever, $G$, rack bar, $u$, and sliding shaft, $n$, with it gear, m, arranged and operating together, substantially as and for
the purposes set forth. Seconp, The combination with a sliding blind of the lip, e, spring, l ,
ratchet wheel, $\mathbf{o}$ and pawl, t, for the purposes stated. 41,677.-Cultivator.-C. J. Buchner, Paxton, Ill.:
 scribed.
mounted inention relates to a corn-planter of that class which are of the invention is to obtain a plow of the class spectied which may of the invention is to obtain a plow of the class specilied which may
be manipulated by the driver with the greatest facility and be completely under his control, and also have a draught equalizer of simple construction to insure an even pull of the team and an uniform draught movement of the machine.]
41,678.-Fastening for Breast-pins.-Gaspard Buhler, Newark, N. J.:
I clalm, first, The single ordouble t-shaped clasp, B, hinged to the
under or inner surf under or inner surface of a treast-pin, button, stud or other si milar
article, and operating in combination with the point, f, projecting,
from the iner surface of sad breast-pin or other article, substantial
iy as and for the purposes herein shown and Iy as and for the purposes herein shown and described.
Second, The application of the secondary clasp, $\mathbf{C}$, in combination
with the main clusp, B, points, $f f^{\prime}$, and: button or other simular arwith the main cessp, B, points, ff f' and: button or other simpllar ar-
ticle, A, arranged and operating in the manner and for the purpose
substantially as set forth. 41,679 . - substantialy as set forth.
41,679. - Governor. John P. Burnham, Chicago, III.: I claim the lever. ., with the silotted link, h, and friction wheel, $G$,
in combinatlon with the rocking shaft, C , and sleeve, g , of the gover-
nor, A, all constructed and operating in the manner and for the pur
pose substantially as herein khown and described. [This invention consists in a slotted llnk secured to a lever which is suspended from a rock-shaft in combination with an ordinary ballgovernor and with a friction wheel, which works within the slotted link in such a manner that when the balls of the governor fly out, the slotted link is pressed up against one side of the friction wheel, and the steam-valve is closed or the effective surface of the sails of the wind wheel decreased, and when the balls sink down, the link is pressed up against the opposite side of said friction wheel, and the steam valve is opened, or the effective surface of the sails increased, and by this means the speed of an engine and wind-wheel can be rendered self-regulating.]
41,680.-Sugar-cane Mill.-Wm. H. Clark, Cincinnati,
Ohio, and Walter E. Edgerton, Spiceland, Ind.: cane claim, filsst, So arranging the conn ecting gearing of three-roll
faces nearly in contact, for rous may be purpose hereed and worked withtheir
second Supribed. aces nearly in contact, for the purpose herein described.
second, Supporting the lo wer enas of the roll shatis in oil-tight cup boxes, adustable vertically, substant ially as described
Thir, Ar ranging the sta-rods or boltes, e e, \&c., obliquely in oppo.
 Firth. The false plate, $\mathbf{E}$, adjustable to the lower end of the un-
fanged rolls, $\mathbf{B}$, and resting against the circumference of the flange stantially as described. 1,681--Sugar-cane Mill.-Wm. H. Clark,
Ohio, and R. R. James, Rising Sun, Ind.:
We claim, first, In combination with the regular main-pressure
roll., and delivery roll, , , the use of the ffuted feed roll, ${ }^{\text {E }}$, when arranged and operating in connection with the former is the man. when the latier is so constructed and in the end plate and cap, hothe plate as to torm
in connection therewith a plain face on the inner side, as and for the
 bination with either a plain or futed feed roll, for the purpose de-
scribea.
Fourth, In combination with the juice channel, j, extending into
the triangular space between the rolls, we claim the bridge plate, $k$, the the purposs space betifween the rolls, whe
for tift Fift h, We claim the grooves, m, in the end plates and the grooves,
n, in the eads of the rolls either separately or in combination for the
purpose described. 41,682.-Sofa Bedstead.-Francis Cotton, Brooklyn, First, I claim tightening the sacking, B, substantially as described.
or the purpose specified. or the purpose specitied.
Second, $I$ ciaim the use of the hinged levers, $\mathbf{E}$, constructed as

1,683.-Door Bell.-Nathan F. Cone, La Crosse, Wis.: First, I claim, in combination with the bridge or bar, B, the screw-
threaded stem, $A^{\prime}$, formed or cast in on e piece with the bell, A, soas to avoid or permanently close any apert
 within the bell and employ
manner herein explained.
[This invention relates to that class of door bells in which the striking mechanism is operated by rotating the knob, and the present immeans of attachment.]
41,684.-Fixed Ammunition for Fire-arms.-George Conover, Middletown, Conn.:
I claim the combination with the shell, A, of the chamber. B, disk,
d, nipple, a, and percussion cap, i , substantially as and for the pur-
oose herein specified. d, nipple, a, and perc
pose herein speci fed.
[This invention
[This invention relates to the use in Axed-ammunition cartridges, for loading in front of the chamber or chambors of or at the muzzle of a fre-arm, of a second charge of gunpowder, for the purpose of expelling the case or shl or in at the muzzle of the fire-arm, in which the cartridge is used ; it con-41,685.-Mode of manufacturing Alcohol from Olefiant 41,685.-Mode of manufacturing Alcoh
Gas.-E. A. Cotelle, Paris, France
I claim forming alcohol from olefant gas and water by means of
diluted a acids acting only by their presence without reconcentration or their presence with
as herein described
41,686.-Gang Plow.-F. R. Crothers, Sparta, Ill.
that the forrne winging swing forward of to the frame of thinge machine so
nation with the thrusting contion in combination with the thrusting connecting rod. N, chond or chion, in combi.
windlass, p, all applied and operating substantially as described. and windlass, , all applied and operating substantially as described.
Second he use of a stif rod, N, In combination with a windlass,
p, and a hinged axle, $D$, operating substantially as and for the purposes described.
Third. . The manner of at tach ing the draft pole, $P$, to the plow beams,
substantially as and for the purposes described. 41,687. - Preparation for destroying Vermin.-John W. Dodge, New York City. Ante-dated Feb. 21, 1864: I claim the withindescribed composition, mixed together, of the
ingredients herein specifred, substantially in the ma nner and about
in the proportion set forth. in the proportion set forth.
[The object of this invention is a composition which will, in every case, kill all kinds of vermin that infest the human head or body, and
also cattle and plants, and which is equally effective on bedbugs and also cattle and plants, and which is equally effective on bedbugs and fleas.]
41,688.-Machine for making Splints for Barrel Hoops. claim the Within-described machine for pre N. Y.:
I claim the within-described machine for preparing at one opera-
tion, hoop splints ready for market, said machine being constructed
and operating substantially as set forth. tion, hoop splints ready for market, said
and operating substantially as set forth.
41,689.-Rocket.-Isaac Edge, Jersey City, N. J.
I claim a telescope tail to guide and rotate a rocket in is filight, by
means of wing itied to rods held at each end by rings made to slide
or close on the rocket and be partly withdrawn and fastened to the or close on the rocket and be partly withdrawn and fastened to the
end of the rocket when in use, the wings being then expanded and
secured from spreading by means of ties or straps, substantially as
described.
41,690.-Refrigerator.-John N. Ehrsam, Hoboken, N.J. Ante-dated Feb. 12, 1864 Inole areat or the bottoment of the tre water-chamberator, in combination with the
ice chamber, B and the serpentine ice chamber. B, and the serpentine pi pe. E, connected with and re.
ceitinthe discharge from said ice-chamber, all asherein shown and
described. ceiving
described.
[This invention consists in the application to a refrigerator of a salt water reservoir in combination with the ice chamber and with a ser pentine metal pipe conducting the ice water through the salt-water reservoir in such a manner that the temperature of the salt water is
brought down to and kept at a low temperature by the action of the ice water passing through it, and thereby an additional refrigerating agent is obtained.]
41,691.-Lime-kiln.-Edward B. English, Philadelphia,



41,692.-Turn-over Shirt-collar.-Nathaniel Evans, Jr., Boston, Mass.: I claim a turn over sbirt collar with a concave bottom and turned
orer on a line parallel with said bottom, substantially as setforthand
cor the purposes described.
41,693.-Churn.-S. D. Frazier, Tekonsha, Mich.
I. claim the combination and arrangement of the central dasher, wings, $K$ K $K$, when the same revolve in opporms., ine, and ang angular
ruspended from the top of the churn, substantially as herein are forth.
I Ilso claim the slotted plate, $\mathbf{I}$, in combination with the central
dasher shaft, a, and the adjustable pinion, E, whereby the same de-
 41,694.-Skate.-Henry Getty, Brooklyn, N. Y Y :
1 claim the means of adjusting the parts, E and $\mathrm{E}^{\prime}$, as he

Horse-shoe 1,695.-Tool for clipping and clinching
I claim the combi ed arrangement of the clinching jaws, a b, and
utting lips, D D arranged reatively with each other and with the evers, A and $\mathbf{B}$ (to which they are respectively conn ected), and with
theraicrum in,
herein subecifted. substantially in the manner and for the purposes
41,696.-Railroad Track-raiser.-Prosper Gillett, Han-
I claim the lever, $G$, and pawl, $F$, in combination with the plates, I claim the lever, $G$, and pawl, $F$, in combination with the plates,
b, and pin, a and with the rack, c, and lever, E, all constructed and
operating in the manner and for the purpose substantially as shown described
The object of this invention is a combination of levers with ower can be provided with a suitable toe, whereby a considerable rranged in relation to each other and to the toothed rack that by he action of one lever said toothed rack can be released and dropped to its original position.]
41,697.-Gas Stove.-James S. Gray, New York City : 1 claim, arst, The combination of the wick tube, the vapor tube
the valves. the wirckuaze screw, and the heater-cap, with the central
aritube, subsuntialy in the manner described for the purposes set
Socond, The central tube, K, combined with the outer tube, J, as
th,698.-Clothes Frame.-John Greek, Evansville, Ind.: I claim the combination of the post, A, the, hubs, C C the arms, b $b^{1}$, jointed together at or near their extremities, and the cord, D,
passed through or around both the nuper or lower members of the
arms, all as hereinbefore described and for the purposes specified. 41,699.-Rotating Valve for Stea
claim, first, Constructing an oscillating valve with induction and eduction passages so arranged around its periphery that the steam
will enter at one end and exhaust at the opposite end of each valve, Second, A tapering or conical valve having induction and eduction
Stan


 substantially as and for the purpose set forth.
1,700.-Self-feeding Blacking Brush.-Gideon Hamil-
 pleasure through the tubes, m, isist.ant i, the thumb handle, $k$, the
Second The valive, he the valve stem, i,
combined spring and stufer, a, when used substantially as and for bed.
41,701.-Metallic Shank for Boots and Shoes.-Edward Conn.:
I claim the combination with a metallic shank of an auxiliary 41,702.-L Lamp.-James Higgins, Cambridge, Mass.:
 eald partubeing constructed, arranged,
and for the purposes herein specibed.
[By this invention a much larger and more brilliant flame may be roduced, and the lamp adapted to burn as brightly when most of the oil is exhausted as when full.]
41,703.-Smut Mill.-Simeon Howes \& A. Babcock, SilWe claim so constracting a smut mill having two stationary cryin-
ars of air from the bottom thereof, sial be forced or drawn upards tirougt the casing of the scourng beaters,
and also a draft between paian casing and the outer casing of the
mill, both drafts nititn| in a fan chamber directly at the top of the
scouring apparatus, ant centrally thereof, substantially as fescribed seouring apparatus, anth ch
for the purpose set forth.
41,704.-Turning Bayonet Sockets. John Humphreys, Mill the combtnation and urrangement of the rotary cutter
claim the come head or stock, G, and the slide rest, F, Fith the tool carriage, D, and
and for the purpose as upecifled.
41,705.-Machine for washing Wool, \&c.- James Hunter,
North Adams, Mass.: North Adams, Mass.:
I claim the cylinder, O, provided with floats, y, having an oblique

rranged for joint oper
41,706.-Machine for coping Sash.-Tisdil B. Jones, Paterson, N. J.:
I claim the combination of gouge, $\mathbf{F}$, slide, $\mathbf{D}$, and
andever, $\mathbf{C}$, when
constructed and operating substantially as described.
41,707.-Saw-mill.-John L. Knowlton, Bordentown,
I claim the employnent or use in a sawing machine for sawing
ship and other cirmber in curved and beveled form, of a feed roller,
E, arranged substantially as herein shown and described, so as to add
, arranged substantially as herein shown and described, so as to ad-
mit of a vertical adjustment and also of an obiuqu adjustment rela-
ively with the saw, for the purpose specifled.
1 also claim in compination with the feed roll
[This inventier, $M$, as and for the purpose set forth.
Whereby the same is.rendered capable of being thrown in contact
with or freefrom the log, and also of being adjusted in such a manDer as to cause the log or stuff to be fed to the saw in a direction corbe straight or curved, thereby causing the saw to work in line with the cut and avoiding much friction in the working of the former, as well as much wear and tear. The lnvention further consldsin a particular manner of grooving the feed roller, whereby the $\log$ is preusing in connection with the feed-roller a swivel pressure-roller for keeping the $\log$ firmls upon its bed while being sawed.]
41,708.-Washing Machine.-William Kyle, New York City:
I claim the relative arrangement of the axles and body or case,
and combining the barss ad described, the whole operating in the man-
ner and for the purposes set forth.

41,709.-Cultivator--John Lacey, Chtearo. Ill.:
, and the holes, a and b, the movable beams, $A^{\prime}$ and $G$, stirrup,, $\mathbf{I}$, and Second, Theglating and adjusting the draft of the plows
necting bar, s , bow, $T$, pivon of the lever, R, the rest or solt, stop, e and d , with the movablebeams, Third, The combination of the bars, $\mathbf{I}$, stirrup, $\mathbf{I}$, and chain, $\mathbf{M}$,
With the movable beams, $A^{\prime}$ and $\mathbf{G}$, Fourth, Hinging the reer ends of the movable beams, $A^{\prime}{ }^{\prime}$ betweeu
the front and rear plows by the pin, c, so as to move such front and the front and rear plows sy the pin, c, so as to move such A front and
rear plows in opposite directions, ali being constructed and operating
substantially as set forth and specified.
41,710. - Separating and sorting Ores, \&c.-Edward Law-
son, Island Pond, vt.

## I claim the sind Pond, Vt.: <br> Ing caim the sorting or separating of ores and other matter, by plac- uch diameter thin at a cylindicial or orther suitable sha ped vessel of

 while it is elevated by the ore or or other mard pressure of a column bept water, and by reducing or fitpy jing the pressure of said column of water, there or orher matter bealnwed to separate and dispose itself in lay-
ers according to their spe in fic gravity sultstantialy as set forth ers according to their speevific gravity, substantialy as set forth. I furt her chaim the elevating of the sort ed or sqp a ated ore or other
matter, within the vessel aforesaid, by means of a piston interposed
between the ore or other matter, and the ascendmg column of water under pressure, for the purp ose of preserving the relative vosition of
the layersor parts of the separated ore or other matter while the ame are being discharged from the vessel, as herein described. This invention consists in sorting or separating ores and other matter through the agencies of hydrostatic pressure and specific
ravity. In ca rying out this invention a cylindrical or other suitable shaped vessel of proper dimensions is employed, the lower end which communicates with an elevated reservoir the induction pipe being provided with a valve and the vessel provided with a perfor ated plunger.]
41,711.-Beehive.-Horace Markham, Henderson, Ill.: I claim heaving the entrance slide provided with hooks, m, in com.
bination Fith nocche, n, in the hive front, so as to regulate the size
of the entranceaperture, as here shown of the entrance aperture, as here shown and described.
[This invention relates to an improved feed chamber applied to the hive and arrangedin such a manner that the bees may, when neceschamber trap. The invention alsorelates to an improvement in a slide applied to the bee-entrance, and arranged in such a manner that the bee-en trance may be increased or diminished in area as circumstances may prese. invention fu ther relates to an means for 41,712--Mode of preserving Chopped Meats, \&c.-W. C.

Marshall, Ne w York City:
claim, frst, The use of cyllindrical tubes, A, of cotton or other pose of preserving animal flesh or meat.
Second, The application of elastic bands, B, to the bags, A, after
the same have been filled and tied, substantially as and for the purthese set forth.
IThis invention consists in the employment or use of cylindriac lubes made of cotton or other textile fabrics, and tied up at the ends intestinagesin such a manner that said tabes take the place of the intestines generally used in the manufacture of sausages and that be preserved with a saving in labor equal to fifty per cent of can ordinarily required; the invention consistsalso in the application to saidcylindrical tubes, after they have been clled with meat and tied at the ends, of elastic bands made of india-rubber or other suitable ner that by the action of the bands the covering tube is always drawn up tight to the meat and no retying of the bands is required as the its bulk diminished.
41,713.-Grain Drill.-Anton Maschka, Chicago, Ill.: ranged respectively in front and in the rear of the seed covers, the
levers, $A A^{\prime}$, rope, $X$, and crank shaft, $s^{\prime}$, for the purpose of planting
the grein the grain at various, depths and for adussting the depthe of of the seed
covers, $\mathrm{P}^{\prime}$, substantially in the manner herein described. 41,714.-Sel
tol, Vt.: I clam, , irst, The combination of the sliding frame, $E$, draft pole, Second, In combination with the above, I claim the hook, I, and
eye, $h$, for preventing the movement of the frame, E , as explained. The obll ber his which desired by a very simple manipulation] when desired by a very simple manipulation.]
41,715.-Hay-elevating Fork.-D. F. Neikirk, Republic, Ohio:
I claim, irst, A hay-elevating fork constructed substantially as
herein described and hinged to its handle at a point about miday of
the lensth of its tines, and controlled by means of devices all for the purposes seet forth.
Second, A pivotal connection, $d$, when passed through the
point Second, A pivotal connection, d, when passed through the fork at a
pinin about midway of the length of the tines, and supported by de-
vices, ef, in the manner and for the purpose described. 41,716. - Washing Machine. - J. E. North, Candor, N. Y
 Heront, I claim the trough, J, employed in combi ation with the
shaft, , 'and aperture, b, in the manner and for the purposes deThird, I claim the combination with the shaf, $F$, and rod, $D$, of the
segment, $S$, and rack, $D^{\prime}$, as aad for the purpose specified. [This invention chiefly consists in the employment of a novel system of levers by which the power required to operate the rubbers may be increased or diminished in conformity with the strength of 41,717.-Con
,717.-Connection for Barrel Rafts.-R. W. Park, Alle-
gheny City, Penn.: gheny City, Penn.:
 herein shown and set forth. or near their ends, in the manner as
 41,718.-Securing Bits in Braces.-Obed Peck, Windsor, I claim the screw, C, , passing Itransversely through the socket, $\mathbf{B}$,
and provided with thenut, form a projection, f, to fit in a recess, $g$, in the shank, b, of the bit,
substantially as and for the purpose herein set forth.
[This invention consists in having a screw pass transversely through the socket of the brace or bit-stock, sald screw being provided with a form a projection which, by means of a nut on the screw, is drawn Into a recess in the shank of the bit, so as to frmly secure the bit to 1, 710 or bit-stock.]
41,719.-Boat and Pontoon.-Edward L. Perry, New York City. Ante-dated Feb. 7, 1864 :
I claim the combination of the chambers, $\mathbf{A}^{\prime} \mathbf{A}^{\prime}$, bars, b, , winging
keel, $\mathbf{D}$, and rope, $\mathbf{E}$, all constructed and arranged substantially as
and for the purpose specifled. 41,720.-Hook for fastening Umbrellas.-Wm. H. Richards on, Philadelphia, Pa.:
claim the hook-astenng for umbrellas and other articles of wearling apparel, constructed and operating substantially as and for the
purposes specifed. 41,721.-Machine for cutting Tobacco.-F. W. Riterhoff we C. A. Colquitt, New York City We claim, frst, The application of one or more oscillating adjusta-
ble levers, $H$, in combination with ca me, $G$, tappets, $J$, lever spring
catch, $L$ pat catcl, L, ratcbet wheel, N, scr ew span de, M, follower, O, box, F, and
cutter-wheel, D, all constructed and operating in ehe manner and for
the purpose substantially as herein shown and described. the purpose substantially as herein shown and described.
Second, The laterally-sliding nut, $\mathbf{P}$, in combination with the screw
spindle, $M$, and box
, constructed and operating in the manuer and 41,722.- Baling Press.-Benjamin Roberts, Clintondale, I claim thecombination of the levers, $\mathbf{G} \mathbf{G}$, links, $\mathbf{F}^{\prime} \mathbf{F}^{\prime}$, props, $\mathbf{H} \mathbf{H}$,
 41,723.-Apple Mill.-George S. Rust, Chester, Ill:: I claim, frst, Attaching the concaves, $D D^{\prime}$, of fruit mills to the
ends of pendant pivoted arms, $d d^{\prime}$, at an intermediatepoint between the ends of these concaves, substantially as and for the purposes de-
scribed Second, While not claiming broadly alternately vibrating con-
caves, I do claim supporting said concaves or crushers, by means of pivoted vibrating armor, d d, in combination writh a rototing drum or
its equivalent, substantialy as and for the purposes described. Trs equivalent, substantially as and for thep urposes described.
Thlrd, The eve-botis, d d serving as hing es and adjusting devices
to the conca ves, substantially as described. 41,724.-Plates for printing Bank-notes, \&c.-Alfred I claim the manufacture of plates for engraving and printing pur-
poses, composed of a laver of iron and alayer of steel, combined poses, composed of a layer of iron and a layer of steel, combined
substantially as herein described, the iron forming the face and the
steel the back of the plate, as herein specified. 41,725.-Button-hole cutter.-Michael M. Shellaberger, Randolph County, Ind,:
I claim the guide, e, and guard, d, in combination with a button.
hole cutter, constructed and operated substantially as herein set
41,726.-Mode of raising Sunken Vessels.-Joseph H. Smith, Cohasset, Mass.:
 41,727.-Fibrous Batting or Wadding.-John T. Stoddard, Plymouth, Mass.:
I claim my itmproved hannufanture of throue batelne, as made sul;-
stantially in manner and for the furpoac as hercin betore apecificd. 41,728. Y.: Cultivator.-James Swart, Hoffman's Ferry, I claim the mould-board, A, constructed with @at-faced wings, e e,
narrow at the base and wider toward their ends, having straight lo eredges, f $f$, and rounded outer ends, , $g$, all as herein shown and
explained and for the purpose specified. 41,729.-Paint Composition.-William Ten Eyck, Pike I clalm compounding and mixing together the aforementioned in
gredients to form a paint composition, substantially as herein de
scribed. 41,730.-Mosquito Canopy.-M. L. Thompson, Brooklyn I clatm the folding canopy frame, composed of the $x$ bars, $a$ and $b$,
and double cross bars, a and e, to which are attached the cords or
lines, fand, as, and and for the purposes specified. In also claim, the arms, h h, and cords, k , in combination with said
canopy frame, for the purposes specite 41,731.-Machine for treating Compressed Cotton and Mills, Bury, England. Patented in England, July 30, 1862:
I claim the arrangement and construction of the closed steaming lowseliaving a perforated false bottom and receiving the steam be-
lot forth. 41,732.-Breech-loading Fire-arm.-James Warner Springfield, Mass.:
It clarm the construction of the sem1-cylindrical recess, f , of a diam eter corresponding to that of the fiange of the metalicic cartridge, in
combination with the semi-cylindrical breech-piecee pojection, h, the
recess, 1 , and the hammer, E, as herein shown and described


 41,732.-Hay-elevating Fork.-Seth Wheeler, Albany, I claim, irst, A horse-fork for handling hay and other substance,
constructed with curved teeth or tines which converge toward one constructed with curved teeth or tines which converge toward one
another and are united so as to dispense with the ordinary cross-
head and yet afford a suspending loop or eye, substantially as and for the purposes set forth.
Second, Attaching the tines, $d$ dee, to the tines, $A$ a a , in the
manner described. 41,734.-Harvester.-Wm. N. Whitely, Jr., Springfield, Ohio:

## I claim connecting the external or ground face of the wheel, $\mathbf{B}$, Wit hthe internal gear, ${ }^{\text {n }}$, , by a convex siderim for prajecting portion $j$, substantially as described, for the purpose set forth.

 41,735.-Foot Shield.-Dewitt C. Winans, New York I claim the employment or use of a shield, $D$, constructed of meta or other suitable materlal and of such a form as to encompass thefoot t hil eits ends rest upon the sole of the boot or shoe, and place
or adjusted in such a or adjusted in such a position as to be interposed beweeen the foot
and the skate straps to relieve the former of the pressure of the latand the skate straps to relieve
ter, substantially as set forth.
41,736.-Battering or piercing Ram for Naval Offense and Defense.-Jerome B. Woodruff, Washington, D. C.: 1 claim, first, The arrangement of the steam cylinder and a hentiow same being fitted to move up or down in a groove, water-tight, so
that the plunger can be changed in its position, while in operation,
substantially $n$ the man ner herein described substantially ln the manner herein described.
Second,, claim the plunger, $C$, the same $b$ e
Second, I claim the plunger, C, the same being in serted at the rear
end, and passing through the hollow piston, D, and secared in it
place, to be operated by steam-power in the manner described for place, to be operated by steam-power in the manner described, for
the purpose of ofiense and defense in naval warfare, as specified. 41,737.-Bolting Flour, \&c.-J. Wright, St. Louis, Mo.: I claim, Brst, The spiral screen, D', one or more attached to a ver
tical rotation shart, A, in connection with a spiral chute, D, also
attached to the shatt, A, tiee screen and chute, being encompassed by attached to the shatt, A, tle screen and chate, beinn encompassed by
a case, E, and all arranged to oper ate, as and for the purp ose herein
set fort set forth, The hopper, $F$, attached to the shaft, A, above the screen,
Second, The
D, in combination with the stationary scraper, G, and the opening, n , In the bottom of the hopper, for the parpose herein set forth.
Third, The annular troughs, $I T$, on the base, $B$, and underneath
the screen, $D$, and chute, $D$, when used in connection with the screen and chute arranged on the shaft, $A$, and the spouts, $J J^{\prime}$, for the pur
pose specifed. [This invention consists in having one or more spiral screens and a spiral chute attached to a vertical rotating shaft and enclosed by a ed or screen d, will be allowed to pass down and over the screen and chute as the latter revolves, and be bolted or screencd in the most
horoughmanner. The invention also consists in using in connection with the spiral screen and chute aforesaid, a hopper, which is als attached to the screen shaft, has an opening 1 it its bottom, and is arranged to operate with a scraper in such a manner that the flour or other substance to be boted or screened wil be fed properly the glving a veical and a hal mation to the seren lan glving a to ensure a perfect operation or cause, samprenting clogging, and causing the and chute.]
41,738.-Lifting Jack.-Ebenezer Young, Camden Cen
Ire, Mich.:
I claim the lever, c, pro vided with oblong slots, , having notches,
d, at its outer end, in combination with the bail, D, and a suitable rraue in which the lever, C , is titted, fill all arranged, to operate sub-
stautially in the manner a and for the purpose herein set forth. 41,739.-Potato-digger.-Peter Antonides, Freehold, N.

Jork City:
York City:
I claim, frst, The fork, F, attached to the front part of the bar, D,
when used in combination with the share, C, and screen, E, as and When used in combination with the share, $\mathbf{C}$, and screen, E , as an
forthe purpose specitied.
Second, The hooks or curved terminals, d , at the ends of the $\underset{\substack{\text { prongs, } \\ \text { specined. } \\ \text { c. }}}{ }$
[This invention relates toan improvement in that class of potato diggers which are composed of a share with a screen attached to it back erect. The invention consists in attaching to the front part of a potato-digger of this kind a fork, arranged in such a manner as to eff ect a partial separation of the earth from the potatoes, bef ore the atter fall or pass upon the screen, thereby relieving the screen or greatly aiding it in its work. The invention also consists in the emplopment or use of an inclined bar, attached to the implement in weeds, grass, and similar trash, which prevent it from operating perfectly. The inventionfurther consists in having the outer prongs of the screen at each side formed with hooks at their ends in order it is drawn along, and to separate the potatoes therefrom, so that they will be left upon the top of the earth.]

41,740.-Horse Rake.-James B. Drake (assignor to A B., E. F, S. S., \& L. B. Sprout), Picture Rocks, Pa.: rein described.
eeth wherebs thes may be elevated with great facility and returne automatically to their working position.]
41,741.-Lock and Latch.-H. H. Elwell (assignor to the
Norwalk Lock Company), South Norwalk, Conn.:
I claim the employment or use of a sliding or adjustable pin, d, in
the lever, D, in connection with a recess, bin said lever to receive
the inner nd of the latch-bolt, C , substantialis as and for the purpose herein set forth.
41,742.-Machine for stamping Carpenter's Squares.-
Horace K. Jones (assignor to Hart Manutacturing
Company, Kensington, Conn.:
I claim tirst, 'he combination of the loose and remorable roller,
, self-ail justing bed, $G$, and carriage, $F$, constructed, arranged, and K, seif-aljusting bed, G, and carriage, F, constructed, arranged, and
operating, substantially as and forthe purpose set forth.
self cond, The conbination of a roller puhich carries the dies with a
surpiusting bed and a weighted lever, substantially as and for the

41,743.-Cultivator.-John Lacey (assignor to himself,
Conrad Furst and David Bradley), Chicago, Ill.:
claim the combination and arrangement of the novable adjustable frame, B, p, voted lever, D, segment pinion, C, and rack, , with
pulleys, a, roo, b, and foot evers, k $\mathbf{k}$, the whole constructed and
operating in the manner and for the purposes herein set forth. 1,744.-Car Brake.-George S. Miller, Thompsonville, Conn., E. B. Peck, Bridgeport, Conn., and William
G. S. Miller \& E. B. Peck Conn., assignors to said

We claim the employment of the fanges, G H, upon the axle, $\mathbf{B}$,
in combination with a dounte-acting lever, $J$, and connecting rod,, ,
substantially as and for the purpose described. 41,745.-Watch-guard or
41,745.-Watch-guard or Safety Chain.-Edwin J. Morse (assignor to himself and Josiah D. Richards), North
Attleborough, Mass.:
 bined, ${ }^{\text {b }}$ a
plained.
41,746.-Harvester.-Edgar M. Smith (assignor to Mitchell, Vance \& Co.), New York City:
I claim in combination with the main driving, and supporting
wheels running loosely on their a ale or jourana s. the main gear
wheels, $\mathbf{D}$ running loosely on the hubs of said drive wheels, and har
 the manner and for the purpose herein described and represented.
I also claim the arrangement of the two setts of plates and boxes,
on the opposite sides of the main trame, so that the cutting appara-
tus may bearranged on eitherside as set forth.
I also claim in com tus may be arranged on either side as set forth.
I also claim in combthation with the two setts of plates arranged
on opposite sides of the main frame, the curved bar or brace, $F$, ex.
tendng from one to the other, so as to leave unobstructed space at $I$,
 I also claim in combination with the loose and shifting main
wheell, and main cogged earar, the pinions, b, permanenty arranged
on the shatt, s, so that sad loose and shifting whels will when on
eitherside of machine mesh, with said pinions as set forth, whicheitherside of machine mesh, with said pinions as set forth, which-
ever end of the machine goes oremoot.
Ialso claim banging the reel blades. to the reel shaft, by means of
the crossed arms, and adjustable heads, hubs, or sockets, for the I also claim hanging the reet blades, to the reel shaft, by means of
the crossed arms, and adjustable heads, hubs, or sockets, for the
pumposeot enarang dininishing the circumference of the reel,
substantially as described. 41,747.- Screw Wrench.-George C. Taft, Worcester, Mass., assignor to Thomas H. Dodge, Nashua, N. H.:
claim the combination in a wrench in whichthe strain is transferred from the ferrule to the shank as described, of one or more
grooves, b, with perpendicular rear and bevelled or inclined front
side or sides, with one or more projections, e, of corresponding form, 41,748.-Grain-dryer.-Henry Wood, Montreal, C. E.; ret L. Haselden, Montreal, C. E., executrix of Richard Haselden, deceased
We claim, frst, The employment or use for the purpose of drying
grain of a cylinder, , , revolving on wheels, $a^{\prime}$, and hubs, a ${ }^{\text {an }}$, secured to its circumference and provided onits inside with spiral flanges, d,
and lifters, e, substantialy in themannerherein shownand described.
Second, The steam coils
 Third, The rotary cooler, , , provided with spiral passages, ${ }^{\text {, }}$, be-
tweon two perforated cylinders, $i$, and with fan-blowers, $k$, to which



## RE-ISSU ES.

1,623.-Folding Chair.-John A. William F., \& Isaac N. Dann, New Haven, Conn. Patented Jan. 6, 1863 :
egs of folding chairs. When the said armsare pivoted or hinged to
the two legs which sustain the front of the seat, and the other or upper end of the arms secured to the back by means of slots, where-
by the several parts may be folded into a compact form without dis
connecting the sald curved arms from either back or leg. 1,624.-Sash and Door Fastening.-Ross Johnson, Fred erick, Md. Patented May 25,1860 :

1,625.-Sewing Machine.-A. B. \& N. H. Shaw (assignee
${ }_{1862}$ A. B. Shaw), Swanton, Vt. Patented Dec. 16
I claim the combination of the lifting cam and pin, $x$, with the
eed lever, and a spring applied to the said lever, to operate sub-
tantially as and forthe purpose hereinspecitied.
,626.-Harvester.-Mitchell, Vance \& Co. (assignees by
mesne-assignments of John Powers \& E M. Smith)
mesne-assignments of John Powers \& E. M. Smith I clai m, first, The combination of the upwardly curved arms, $D$, as andfor the purpose described.
Second, The combination of the outwardly curved arms with the
wide-spread bearing or boxe, b, for the purpose of. bracing the
shoe and finger bar to the main trame in the direction of their great. est strain, substantially as described.
Third, The combination of the siding lever, $\mathbf{N}$, with the tifting
segment, $K$, and shoe, $\mathbf{C}$, and their flexible connections, o
 Furth, The carved, flanged, or angle-iron barp or plates, $\begin{aligned} & \text { fi, for } \\ & \text { uniting the lonpitudinal pieces, rr, as herein represented and for the } \\ & \text { purposes described. }\end{aligned}$
prth, The guard fingers having backs, $h$ and led ases, $k$, extending
continuossy alon the bar so sa so present closed surfaces in front
and beneath, and formed with channels or grooves,i, extending be-
ad beneath, and formed with channels or grooves, i, extending be
neatht the sickle bar, and partialy around the boltholes, 1, and open
at the back to permit the ready escape of moisture, um, or other
oreign matter, and thus avoid choking or clogging, subst,
oreign matter, and thus avoid choking or clogging, substantially a
described.
design.
1,903.-Stop-cock.-Henry G. Morris, Philadelphia, Pa.

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 mony to the able and efficient manner in wwhich you discharged your
duties as Solicitors of Patents while $I$ had the honor of hodang the
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tanned (and I doubt not justly deser wed) the reputation of energy,
marked ability, and uncompromising fdelity in performing your pro
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are concerned in new inventions.
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