52,095.-Pegging Jack-Albion K. Washburn, BridgeWater, Mass:
claim the mproved arrangement of the actuator, $H$, relatively
the Leel and toe supporters, such actuator under such arrange.
 against the trant
before explained.
52,096.-Lifting Jack.-A. F. Wagner, Ilion, N. Y
I' clation the brackets. F, progyetiny from the stan ard, A in com-
 petracted by the foot, all as herein de seribed.
52,097. - Car Coupling.-Hazen Webster, Elgin, Ill.:
First, I claim thie catco or hook, g, when placed at, and irmly and for the purposes set forth, , provided with a catch, $f$, and placed
 other one similarly coastructed.
Third, I clayn the arrangeenent and combinstion of the hooks, B ,




52,098. - Horse Rake. - A. Wells, Morgantown, W. Va.:




## 2,099.-Rallroad Frog.-William Wharton, Jr., Phila-

 delphia, Pa.: 2,100 .-Ship Building.-Norman W. Wheeler, Brooklyn, N. Y.:

 52,101. -Triangular Beam Engine.-Normañ W. Wheel I claim conncecting, the working pistons with the crank by means

2,102.-Well-boring Apparatus.-George L. Witsel, Philadelphia, Pa. Antedated January 3, 1866 : Frrst, 1 claim providiag for giving a rotary and vertical motion to
shaft, D, which is adapted for receiving on it 1 lower end the tubu-




 thally as
Fith , esorcribed. claim $a$ center discharging drill provided with cutting
 2,103.-Churn.-George Wolf, Williamsport, Md.:

 52,104.-Sulky Plow.-Thomas Wolfe, Girard, 111. : Firct. I claim the connecting of the front ends of the plow beams,



Third. The adi.1stable trame, s. constructed and appyied to the
Hlow beams, G G, substantally ae and for the purpose speciled. (This invention relates to a new and improved plow, of that class which are connected to a mounted fram
and are commonly termed sulky plows.]
52,105.-Cartridge Retractor for Revolving Fire-arms.
I claim a lever for iemoving metalite cartrigges or empty cases
from the chambers of cylinder in revolving fire arms, pivoted fur ther forward tban the bottoms of the chambers, or in such a man
ner as to act directly by lever power upon the cartridges or cart-
ridge cases, substantially as herein set forth.
52,106. - Wrench and Drill.-Nathaniel W. Woodbury South Danvers, Mass.
I claim the combination of the handle, A K, reversible revolving
atchet head, $\mathbf{B}$, and spring pawl, $\mathbf{C}$, when so arranged as to form French for the maniputation of a \&et screw cr for the insertion of
the drill socket, 0 , or other bushings foranalogous purposes. IThe objectof this invention is to produce an implement which hall combine in itself a set screw wrench and a ratchet drill. The ool is, among other uses, especially applicable to turning set screws in places difficult of access, where other wrenches will not operate, and for boring holes in wood and iron in angular direc tions, and in places not easy of access with other tools ]
2,107.-Vulcanizing Flask.-A. B. Woodard, Alfred Center, N. Y.:
First. I clalm closing the flask by the pressure of steam itself ually heuted. the flasks are autonatically compressed, and alldan
ger of crushing the plaster mold and the teeth is avolded With the boiler, clamp, and fask, constructed and operating sub Third, the inclined planes, j , on the foner surface of the bo: ler, i combination with the clamp and flask, conntructed and operatin Hourth, The segmental connections, e, ot the clamp, in combina
tion withthe fet surfaces on the fask and with the boller, substan
tially as and for the purpose set forth. tally as and for the purpose set forth.
2, 108.-Washing Machine.-Joseph Adams (assigno Wis.:
I claim the two pendant hinged frames, H H, attached to bar, G,
and con ected bV springs, 1 , to operate in comblnation with the
double concave bed, B, substantially as and for the doub
59,109.-Fan.-Gustav Anton (assignor to himself, Ja cob Hirne, and Fren's Bruviere), Philadelphia, Pa. handle of wood or other suitable material, in the manner described. 52,110.-Shoe.-John C. Bailey (assignor to Charle I claim the shoe upper made not only with the
the quarters, and provided with the alits, $g$, $h$, arranged in it as de
scribed, but having one or more straps, ef eftending from one or
both one both the quarters, 8 as as 10 b.
silts of the fiy, as specifled.
52,111.-Automatic Feed Apparatus for Steam Genera tors.-John B. Collen (assignor to himself and


I claim the reservor, A, lts supply pipe. W, the valves, c c. and
fooat, G, the whole beng constructed and operating and anplicd to a

 Third, The comb nation of the w.
de. E, With the sleeve, $C_{\text {, and }}$ and for
scribed for the purpose set forth.
51,112.-Buckle.-Samuel P. Crafts (assignor to O. B. North \& Co.), New Haven, Conn:
Thenam constructed and ar of the lever. B. with two tongues, H I ,
stantially as and for the p.rpose specifirate in the maner substantially as and for the ar parpose specified.
52,113.-Feed Apparatus for Steam Generators.-
Charles Henry Ford assignor to himself, Hayward,
Hutchinson, Jesse L. Hutchinson and Elias. S Hutchinson), Baltimore, Md.:
I claim the arrangement with the vessel, A, of the valved water
ripe, E, and the steam pipes, $\mathbf{D C}$, proceeding from a tid to the
boiler and boiler and provided with suteable vaives, the whole substantially
as describes and represented and for the purpose set forh. des and rort
114.-Steam Damper Regulator and Indicator.-
Charles Henry Ford (assignor to himself, Hay-
ward Hutchinson, Jesse L. Hutchinson, and Elias
T. Hutchinson), Ealtimore, Md.: First, I claim the arrangement ot th, adiustable post, $K$,
weighted lever, $\mathbf{F}$, piston, $\mathbf{B}$, and the packing arrangemente b,
substantiaily as described. substantiaily as described.
F the rod I claim in combination with the piston, $B$, and lever,
thand rock shaft, $R$ actuating the dampler, F, the rod or chain, I. and rock shaft, R, actuating the dampler,
H, and furnace door, $X$, one or both, substantiall as described. 52,115.-Automatic steam Generator.-Charles Henry

Ford (assignor to himself, Hayward Hutchinson,
Jesse L. Hutchinson and Elias S. Hutchinson) Baltimore, Md.
First, I claim a suspended boiler so arranged relatively to the
fire and counterpoise weights that, by evaporation and loss of
water or by the fire and counterpoise weights that, by evaporation and losis of
water or by the nntiux of fetd water, it shall rise or fall respective-
iv, and by said motion actuate devices to open or close the aper1v, and by said motion actuate devices to open or close the aper-
tures which regulate the supply of water, substantially as herein set forth.
second, $I$ claim in combination with a steam boiler, Which is
vertically
qdustable as described,
the devices which operate to open and close the dampers, furnace doors whereby control the
draft or supply of air to the furvace, substantially as herein set
forth 52,116.-Cotton Seed Machine.-F. A. E. G. de Massas, Hoxton, Eng.
First, I clarm a revolving cy linder with a rough surface, as deor cords and partly perforated shlindrical casing composed partal as specifed, the two
acting in combination. substantally as set orth. Second, in comuination with a revolving cytinder and a cylin
drical casing, both substantially as. set forth, I claim a fan and a
spout, the whole combination acting subsantially in the manner
and for the purpose set forth.
117.-Locomotive Engine.-Robert Francis Fairlie, London, Eng.:
First, I claing the arrangement of the fre hox and the two boilers
extending from opposite sides thereot with the two bozie frames, second, I. claim the arrangement of two trucks, each provided with tour or more wheels and with one or more steam cyinders. in ubstantially as and for the purpose set torth.
Trbe_object of this haveation 18 sto obtain a large amount of racitve power, and at the eame tixnelito avold ang. excesslve pressure of the driving wheels of a locomolive, also to provide for the locomotive adaptug itself readly to the turning of sharp curves
without the disadvantages usually attending the action of large without the disadvantages usually att

2,118.-Brush for Cleaning Horses.-John Hawosth Manchester, Eng.
I ciaim groomiag and cleaning horses and other quadrupeds
means of abrus attacbed to a pole or shaft, having loose handle and a suitable shaped pulley through whicn puley a rotary motion
simparted to the said brush by connecting it with any suitable
driving power substantially river powe, as abe
This invention relates to brushing and cleaning horses and other quadrupeds, by the brush or ocher instrument hus used is fis or oher pows The brush or other instrument thus used is ixed to the end of
a pole furnished with loose handles, and with a roller or pulley, is ssed the band or strap to the shaft for driving the same. The oanother, and when used is to be guided by the attendant over the surface of the animal to be brushed and cleaned, thereby conomizing manual labor and performmg the operation expedi ously and effectually, and removing the dandruff or other im purities of the skin without the use of the curry-comb.]
2,119.-Sash Supporter.-Francis P. Catlin, Hudson, Mich.
r claim as a new article of manufacture, the sash supporter and
astener, constructed and operated as herein specifled.

## REISSUES.

,146.-Auger.-Russell Jennings, Deep River, Conn Patented Sept. 30, 1855. • Reissued Oct. 3, 1865: spur, substantially as nerein described and for the purpose herein
,147.-Ornamental Chain - Sackett Davis \& Co.
rovidence, R. I., assignee of James Lancelott.
Patented March 22, 1859
I claim, First A sheet-metal chaio composed of links the base of ormed oy bending each arm longitudinally, at the same angle, or
nearly so, with one of the outer angles of the base, su that a cross chain shall, when bent down, bear against the angular side of two of the arms of the next succeeding lunk, and therebv enable the
chain to withstand a strain nearly equal to the cohesive strengtlo of he metal, the article being substantially as specifled.
 he chain and giving to it the
nstead of from sheet metal.
,148. - Horse Rake.-Ariel B. Sprout, Hughesville, Pa. Patented June 6, 1865:
I claim the use of a foot lever for holding up the rake head of a
horso rake which bas the point or center of vibration of the teeth
arranged in rear ot said rake head, as herein described and for the purpose set forth.
S, second, The combination of the foot lever, $E_{\text {, }}$ with the roller, presain of the rake head and for rard with the elevation of said
saks head, and travels upon said roller, being rigidly fixed to the
machine, as herein described and set forth.

vertical play to the bar, F , for the purpose herein described and
set forth Fourta, I claim in combination with the strap, g, the movable
rings or their equivalentis, for the purpose of preventing the ver
tical play of the bar, F , rel tively to the cleaners, under the cir cumstances describec. Fitth, I clainn the extension in front of the axle of the cleaners,
G, which suport the rake head soas bv their vertical adjust ment
to regulate the hight of the rake head from the ground at a given sixth, I claim the rotating notche 1 puntled bolts, $h$ h', with
grooves therein corresponding to similar grooves on the hug, H,
 position, said spring being held in its coll ed position by

## DESIGNS

2,241 and 2,242.-Plate of a Stove.-Lewis Rathbone Albany, N. Y. (Two claims.)
2,243.-Trade Mark for Pens and Pen Boxes.-John B. Waring, New York City

## 4

. O. sends us a plan of a pump which is intended to elevate a column of water without the application of any force, and sks:-" Is there anvthing in the nature of things to prevent this arrangement for the elevation of water to an unlimited hight lease obl ige with an unequivocal answer." ANs -We unequivo reply that there is nothing in the nature of things to preven your contrivance trom operating except its lack of motive power. Like all perpetual motionists, you will doubtless aver that you do hat one lifts limself by getting within a tub and tugging at th hand les
A. W., of N. B.-By the rotation of the earth, bodies at the equator are carried from west to cast with a velocity of about seventeen miles perminute, while near the poles they oove more s'owly. When a river runs northrard the waterconstantly reaching ground that is moving eastward less rapidly than itself, and consequently it tends to run upon the easter bank. If the ice in the St. John pushes up the western bank
 ation of the bottom or the course docs not cut becter for being rubled with charcoe
. J., of Mass.-The best way to learn to be an engi neer is to begin at the fnot and obtaina situation as direman un en ralload, if possible, or in nome factory. he :are frequent hanic to name the books in which a mau who is a good m anic can learn to run an engive. The only road we know is th dister experience, and that is of cen a hard one to travel. It is "mant how to fire as well as how to handle a startag bar.
D., of N. Y.-Saw dust is bad stuff to throw down between the weather boards of a buiiding, it absorbs moisture and soon rots, or at least sweats, making a very bad smell, ber-
sides lnjuring the building.
F.-Drilling supports combined with lathes are not new; but if sou have invented anynew combination or construc tion thereof, a patent may be obtained.
H. F. H., of Mich.-The cotton manufacturers of New England generally run their water wheels with a velocity, at the circumference, or about six feet per second. The best overshot wheels yield about 70 per cent of the whole power of the wa.er, the best turbinesaoout 90 per cent. With oversho wheels there sgreat loss of power from back water, but not with a on water wheels.
T. L. W., of Ga.-At the great trial in Philadelphia the turbine of J. E. Stevenson, No. 200 Broadway, New York, yielded 88 per cent of the whole power of the water, besides the friction, long been preferred to overshots, but they are now being super long been preferred to overshots, but they are now being super
seded by turbines. There is no gain by increased leverage-what seded by turbines. There is no gai
Projectile, of Mass.-We have no doubt of the correctness of the answer. The resistance of theair to a projectile during its ascent prevents it from rising so high as it would in a vacuum, and, as it does not rise so high, it would not acquit e the same $v$ locity during its descent, even if it fell through a vacuum; but if it falls through the atmosphere the resistance of the air still fur ther diminishes its velocity.
A. H., of Conn.-Iron is the best metal for your boiler tubes. An iron vessel is stronger than a copper one of the same dimensions. Tubes a quarter of an inch thick and one inch dem eter are amp
. L. R., of N. C.-For some nitroglycerin, address Prof. Charles A. Seely, No. 246 Canal street, New York. It is a very poisonous and dangerous substance.
L. F. H., of Ohio.-Hot-air blast gives a more intense heat, as less of the heat generateJ br the combustion is consumed in warming the air of the blast. There would be no advantage in mixing cold air with the hot
. M., of N. Y.-You should apply to the internal revenue collect or of your disirict to learn the amount ot your taxes A. R. S., of Ohio.-Red lead and boiled oil is the cheapest paint we know of foriron work. The quickness with which it dries varles with the amount of "drier" you putin.
. W. D., of N. J.-Smee's Electro-plating is generally acknowledged as the best hand-book on the subject. The latest so soon as they become public property.

