Very nicely and skillfully calculated were his maneuvres. Traversing the Thames at an exceedingly low elevation, the balloon just grounded upon the shore, within a dozen yards of the water.
"Distinctly to understand the fierce excitement of the next three minutes, it should be borne in mind that the fire was still roaring merrily away; that the machinery, so admirable for its special purposes, would have caused sad havoc had there been anything like a general upset; and that at this particular moment six men could esert very little control over a balloon capable of containing 460,000 cubic feet of air.
' Touching the shore, the balloon tore away, the hig canvas flapping, the bright fire burning; while right in front rose a stone embankmeut. The shocks were rough, and had the travelers been novices in this particular method of locomotion we might now have some awkward casualties to relate. Just betore each bump, however, the men made a little leap, and thus balked its force, as a cricketer to catch a ball draws back his hand instead of protruding it. Still, with all these precautions, it seemed half an hour-and there was a strong inclination to cheer when the threatening stones were passed. On now into a potato-fiell; another rise; a wild tendency to leap at a chimney; a strong 'exhibition' of restraint in the shape of a hundred sensible Englishmen tugging away at the ropes, and obeying the orders that were given --and the whole thing was over."

## recent american patents.

The following are some of the most important improvements for which Letters Patent were issued from the United States Patent Iffice last week ; the claims may be found in the official list:-

Machine for mulking Cows.-Most of the devices heretofore invented for milking cows involve the general idea or principle of suction. Rubber gloves are stretched upon the animal's teats, and suction is produced by working a small pump. In the present improvement all suction is a voided, and by an ingenious arrangement of mechanism each teat is seized and squeezed, first at the neck of the teat, then in the middle, aod lastly, at the extremtty, thas closely the itating the operation of hand-milking. II. V. Belding, of Oppenheim, Fulton county, N. Y., is the inventor.
Round and Hulf-round Files.-The ordinary round and halt-round fies are constructed by first rolling or swaging the steel in the desired form, technically termed blanks, and these blanks are then cut in order to form the file. The flat files may be constructed in this way in a perfect manner, but round and halfround files cannot be perfectly cut, as the cutting tool destroys the rotundity of the surface, which, instead of being round or half-round, is of polygonal forin. By this improvement these files can be made with a perlect curved surface, either circular or semicircular in its transverse section. To effect this the blanks are constructed out of sheet-steel plates of any desired dimensions, according to the size of file required, and said blanks are cut either manually or by a machine, in the same way as the ordinary flat or tri-lateral files. These plates are then heated and bent so as to form a circle or semicircle in their transverse section, and then tempered. The files thus constructed may remain in shell form or in cases where weight and solidity are required, they may be filled with wood or soft metal, a tang to receive a handle being attached to one end of them. By this arrangement a file of the kind specified is obtained with a perfect curved surface, and consequently one which will operate much more perfectly than those constructed in the ordinary way. Besides a saving in metal is effected as well as in the cost of manufacture. J. Nelson Jacobs, of Worcester, Mass., is the inventor.
Breech-loading Fire-armat-This invention relates to an improvement in that class of breech-loading fire-arms in which the breech is closed by a breechblock sliding transversely across the bore of the barrel. The invention consists in the employment of a a valve and screw in combination with the transversely sliding breech-block in such a manner that when the latter is in position, by turning the screw the valve is set up tight against the end of the barrel and a perfect joint between the breech block and bar
rel is effected; the invention consists, also, in a notched socket in the inner surface of the breechblock in combination with a flanged expansion washer, the stem of which fits into said notched socket and can be locked therein by a suitable bolt or other equivalent device, in such a manner that said flanged expansion washer will move in and out with the breech-block, requiring no separate handling, and when said washer is worn out it can be easily removed and replacel without loss of time. Alfred Krupp, of Essen, Prussia, is the inventor. For further information address Thos. Prosser, No. 28 Platt street, New York.

Improved Cigaretto.-Cigarettes, as usually made, are formed $\mathrm{l} y$ wrapping a small quantity of fine-cut tobacco in a sheet or piece of paper and folding in the ends. In using these cigarettes it is well known that the tobacco is constantly escaping into the mouth and that an unpleasant odor is caused by the burning paper. This invention obviates both these difficulties; first, the paper is prepared with a view to obviate this disagreeable odor and taste of the paper; and secondly, the end that is inserted in the mouth is so formed that the tobacco cannot escape, and yet a free draught is insured; and to effect this, the invention consists in the employment or use of a mouth-piece made by coiling a short piece or strip of stout paper or thin pasteboard, and inserting the coil in the end designed for the mouth, or, more properly speaking, by widding and pasting the paper tube around this mouth-piece which gives the size to the cigaretto. This mouth-piece forms a firm hold for the teetls and is of sufficient length to prevent the fire reaching the lips when the cigaretto is nearly consumed. The cigarettos are about the length of an ordinary cigar, and nearly a hall-inch in diameter.
We have tried the article and find it to be a very good thing. The filling of those we have used was of the finest Turkish tobacco, thus giving the benefit of the best tobacco in the convenient shape of a cigar, and withal we consiler the cigaretto a very good, convenient, and cconomical articlefor smoking. The inventor of the above is E. Berg, of New York City, and the patent bears date August 2, 1864, and further particalars may be had of Messrs. Berg \& Co., mas facturers, 133 Chatham street, New York city.

## Zopissa.

Is a composition invented by Mr. Szerelmy of London, which has of late acquired quite a reputation, on account of the manifold uses to which it can be applied. Among specimens that have been exhibited, are pieces of tile, chalk gypsum and soapstone, coated with the zopissa composition. Articles of wood and iron which had been exposed for over a year to the influences of the London atmosphere and to sea water, were found not to have been affected by either rust or decay. A cheap and artistic imitation of leather has been made out of cotton tissue, impregnated with the zopissa, and well dyed, imitating the various colors and shades of water-proof animal leather.

Grafting Animals.-The Intellectual Observer says:-" Dr. Paul Bert has published a work on the curious subject of animal grafts. He succeeded in making Siamese twins of a couple of rats, and in many other monstrosities. He exclaims, 'it is a surprising spectacle to see a paw cut from one rat, live, grow, finish its ossification, and regenerate its nerves, under the skin of another, and when we plant a plume of feathers under the skin of a dog, what a miracle to see the interrupted vital phenomena resume their course, and the fragment of a bird receive nourishment from the blood of a mammal.'"

Salmon eggs have been successfully transported from England to Australia, although the voyage occupied more than three months. Two or three ova boxes were kept at Melbourne, and others were sent to Tasmania. On being removed to the hatching boxes in the ponds, a large portion of the ova was found to be dead, but those that remained alive amounted to many thousands, and are amply sufficient, if they should all continue to thrive and become living fish, to insure the complete success of the experiment, and stock the waters of Australia with the most delicious known table-fish.


SSUED FROM THE UNITED STATES PATENT-OFFICE for the week ending august 9, 1864. Reported ofictally for the ScionviA: a merican.
Pamphlets containing the Patent Laws and full , articulars of the mode of applying for Letters Patent, specifying size of model required and much other information useful to inventors, may be had gratis by addressing MUNN \& CO., Publishers of the Scientific ameridan, New York.

43,752.-Knife and Scissors Sharpener.-- William H. Al corn, New York City



(This invention consists in the employment of a three or mor sided file, attached to a horizontally-swinging lever by means of sleeves, so that it can be readily removed and iurned to bring a fresh
side fnto use, in combination with a suitable socket to hold a knife or a palr of scissors in such a manner that whe an to tion is imparted to the lever, and the knife ol'scissors areptang mo their respective sockets, the file will act on the cutting edge and sharpen the same in a simple and casy manner:?
43,753.-Mode of locking Railroad Car-seats. - David H. Baker, Jersey City, N. J.:
 43,754.-Milking Machine.--H. V. Belding, Oppenheim, N. Y.:
cisim the

I chaim the une of one or more pressers, $G_{f}^{\text {f }}$, acting substantially in the manner and for the purpose herein shown and described.
I also clalm the combunation of the plates, L
$\mathrm{L}^{\prime}$, with $t$ the pressers G, (a', substantaly as herein shown asd described ior the purpose
set forth
also claim the combination of the winged shat, $E$, with the ners
herein shown chand described.
a
 Uescribdd.
I also claim the arrangement of the pan, $K$, with the pressers,
$G Q^{\prime}$, and plates, $L L^{\prime}$, as herein slowin and described. 43,755.-Pump._Wm. A. Bemis, Lyndon Center, Vt. ©
 and appl
scribed.
[Thisinvention relates to a new and improved pump, designed for general use, and it consists in the employment or use of two plungers or pistons, the rods of which are comnected by a lever and having other levers applied to them and all arranged witha platform in such a manner that the person in operating the punp may ap ply his power to it in the most favorable and advantageous manuer
The plungers or pistons are also packed in such a manner as to en The plungers or pistons are also packed in such a manner a
sure the perfect working of the same with but little rriction.]
43,756.-Bee-hive.-T. F. Hingham, Gowanda, N. Y. I claim, trst, A bee-hive construcced win triple walls, a b c, with
spaces d, d, between them, substautially as aud lor tite purpose space s, d,
speed tied,
Second,
 deing provided with opennags ir silts and the unuer one, $i$, mude
 pencifed.
spectarta,
Fron
tourth, Therim, A, in combiuatiou with the coirer, B, arranged
and aptied as and tor the pur ose specithed. IThis invention has for its ubject the oltaining of a bee-hive which will effectually protect the bees during the winter scason, and the providing of the same with an entrance well adapted for it and which will be capable of being adjusted to suit the various circum stances required in bee-culture. The invention also has for its of lect the constructing of the comb-frames in such a manner that they will econonomize in space and at the same time effectualy suppor the combs; the invention bas further for its object the obtaining of an extension cap to the hive so arranged thit supplemental spare, honey-boses may be added or applied when necessary, and also the employment or use of a box and cap for the proper feeding of the bees when needed.]
43,757.-Valve Gear for Stean Engines,-I. W. Bowers Cincinnatl, Ohio. Ante-dated Jan. 27, 1864 I claim, frss, Operating the valve, H , by the lifters or their equiva
lents when they are arranged within the valve-cbamber as snown and for the purpose describecu
Second, phe combination of the valves, $H$, rock-shart, m, and
cranks, w, with the weights, mi'", substantialls' as described and for
the purpose set forth the purpose set forth
Third, The several devices in combination, by which the port o steam- alves and the exhaust or outlet valves are operated, whe
combin d substantialy as described and iortle purpose set torth.
Fourth the combination of the forked-sliding bar Fourth, the combination of the forkedssliding burpose set forth,
brating bar, $K$, and can on ritl the
substant
s, when constructed and arranged Firth, The construction and arrangement of the connecting bar, $g$,
and palls, r r, with the crauks, m'm, when constructed substantial
iy as described nn for the purpose set forth
43,758.-Soap.-D, B. Chapman, Hopedale, Mass.:
I claim the compound soap made suustantially as hereiubefore de
cribed.
lyn, Nutomaton Dancer.-Isaac S. Clough, and Vincent Fountain, Jr., North Shook lyn, N. Y., and Vincent Fountain, Jr., North Shore,
N. Y.: I claim suspending the figure, A, from an clastlc cord, $\mathbf{B}$, stretched orm, D, so that the motion of the tiguritisk, E, attached to the plat
of the cord and the contact of the tect of the tigure with the beying or
disk produces a musical sound [Thisinvention con ists in suspending a foure with jointed limbe
from anelastic cord stretched between uprights, over a suitable plat form in such a manner that by touching the cord with the finger the feet of the jointed figure are caused to touch the platform and if the taps on the cord are repeated in quick succession the figu.e begins to dance on the platform.
43,760.-Composition for desulphurizing Coal.-Jos. H. Connelly, Wheeling, West Va.:
lime in combination with petroneum or its products forced in the form of spray in a steam boiler, or other furnace substantially in the LThe object of this invention is to mix with the petroleum a certain desulphurizing composition which when forced by a jet of steam to combine with the iron.]
43,761.-Ferrotype Card-mount.-John H. Daniels, Bos ton, Mass.:
I claim as a new astride of manufacture a plate or card mount,
made of as single shetet of paper recessed for the reception of the
card or piate aud per forated so as to frame the same in the manner substantia 7 as herein set forth.
I also clas in the metho herein described of cutting and receessing 43,762.-Elastic Stud or Button.-A. Eliaers, Boston, Mass.
I ciaim forming an elastic hollow socket with a projecting nin or
shoulder on its in side that fits into a corsesponding groove on the 43,763.-Apparatus for Signaling. -Philip Howard Colomb, Fnlham, Kingdom of Great Britain I claim, frst, the use for night signaling, of a light (or lights)
shewn or exposed during varying points of time regulated as de-
scribed. scribed. The use for day signaling, of an opaque or othet clearly,
second, The
visible body (or bodies) shewn or exposed during varying periods of time reguated as described.
Third, The use for the purposes described of a notched bar or other
equivalent arrangenent for enabling the levers or otber connecttons eqhereby motion in imparted from the pins' projections, deprecsions,
or holes, to be a justed so as to be acted uron by or holes, to be a diusted so as to be acted upon by the required sets of
projections depressions or boles, or to be shown out of action as reFourth, The employment of levers, or equivalent parts, addjustable
endwise upon an angular or other bar, for the purpose of imparting ethe notion received from the proi.cations, derpresions or holes., , 0 as
to regulate the appearance and disappearance, or expansion and to regulate the appearance and disappearance, or expansion and
contraction or exchange of position or form, of the signaling ob-
ject or obicts.
Fifth, The use
 being driven with a continuous, motion for the purpose of regulating

43,76t.-Tuyere for Blast Furnaces.-William M. Ever-
ett, Malden, N. Y. Ante-dated Feb. 4, 1864
I claim, first, The combination and arrangement, of the removable
bottom, , with the conical portion of the tuvere, 0 , and the beveled
 slide, C, with the arm, D, and the arm $E$. ${ }^{\text {a }}$,
stantially as and for the purposes set fortli.
43,765.-Machine for surface-sizing Fibrous Materials.w. Fuzzard, Malden, Mass

I claim, frst, A revolving brush cylinder, $D$, or its cquivalent, in
connection with a partly submerged roller, $\mathbf{c}$ and an adiustable
roiler or bar, $\mathbf{E}$ a arr roiler or bar, E, arrang id to operate in the manncr substantially as
and for the purpose herein sef forth. Second. The shi ld or guard arranged and combined with the
brusl| cylinder, ,r its equivalent, and with the roller or bar, E , to
operate as and for the purpose described
[This invention relates to a new and useful improvement in machinery for applying glazing or size to fibrous materials, such.as cot ton wadding, etc.]
43,766.-Grain Separator.-Daniel Geiser, Waynesboro, Plain, first, The combination of the stationary notched bars, $\mathbf{D}$ D, and reciprocating toothed bars. B B, constructed and operating
sub stin tial $y$ as and for the purposes herein shown and described. scond, The comblination of the reciprocating toot hed barse, $B$ B,
and toothed rock shaft, $E$ e, constructed and operating as and for
the purposes specifed. the purposes specified.
lhird, The swinging plate, $G$, composed of one or more parts and
placed on the box or case, A, when used in connection with the placed on the box or case, A, when used in connection with the
toothed bars, B, for the prrpose set forth.
Fourth, The metal screan, J, placed at the outer ends of the bars,
F, when used in connection with the toothed bars, B, for the pur D, when used in connection with the toothed bars, B, for the pur Fifth, The reciprocating bar, 0 , provided with notched plates, j ,
and fitted in a box, N, having a perforated bottom, t, for the purpose
of conves ing the tailings into the elevator box, P , as set forth. This invention relates to a new and improved machine for separ machine.]
43,767.-Miter Dove-tailing Machine.--Franklin A. Gleason, New York City:
claim the construccion and arrangement of the dovetail cutters,
 as described
43,768.-Obtaining and transmitting Power.-James
claimeph Gorman, Cincinnati, Ohio :




 and osellating frame. B, or its equivalent, constructed and operat
arrangement of weights and levers, and to avoid the dead centers in transmitting the power thus obtained by a peculiar arrangement of cranks and arms.]
43,769.-Steam Geuerator.-Solomon Greenhalgh, New I claim, the trapezoidal steam chambers, $F$, arranged in combina

[This invention relates to certain improvements in that class of steam boilers which are used to generate steam for heating purposes. In such boilers it is part'cularly desirable to obtain the
steam as dry as possible, so that the same, in pas: ng through the heatersin the various parts of the building to $b$ : heated, wll deposit the smallest possible quantity of water.]
43,770.-Apparatus for forcing Water by Pneumatic Pressure.-John P. Gruber, New York City :
I claim, frst, In a fountain which is to be operated by the elastic
pressure of condensed air, the arrangement herein described, that is
to say, a reservorr containing the water or other liquid to be operated
u pon so contrived that it may at pleasure be subjected to, or relieved upon so contrived thatit may at pleasure be subjected to, orre with
from, the elastic preasure of condensed air, in combination with a
valve so construc edand arranged that it ehall automatically close When the pressure is applied and open when it is removed, substan
tially in the manner and for the purposc berein-before set forth Second, In a fountain which is to be operated by the elastic force
of concosed air, I clalm so constructing the same that the valve
thene through which the fluid is to be received into the reservoir shall be
kept closed by the pressure of the air from within, and shal open
automaticall wh , that pressure is removed, substantially in the kept closed by the pressure of the air from within, and shall open
automaticall whenthat preessure 18 removed, substantially in the
manner and for the purpose herein-before described. 43,771. - Hearth of a Cooking Stove.-George Himrod Chicago, Ill.
I claim, frrst, Support ing the removable ton, B, upou the isolated
supports, arranced and operating substantially as and for the purpoes herein specitied and shown.
Second, In combination with the above I claim the employment of
the stops or projections, b, for the purposes specified.
43,772.-Pointing Wire for Pins.-Orin L. Hopson and We claim, first, Pointing wires or rods by a revolving divided die that is pressed together, substantially as and for the purpose specifed Second, We claim the arrangement of the adjustable radial cams,
k , revolving shatt, , jaw, d, and dies, i, substantialy as specited. jaw, d, and dees, i i, oror refulating the amount, said dies shall be al-
lowed to open, as set forth. 43,773.-Machine for making Flour-sacks.-J. M. Hurd, clain, ir t , The two leaves, $A$ and $B$, or their equivalents, sub-
 43,774.-Apparatus for heating Glue.-Robert Jackman, New York City
I claim a glue-heating apparatus adapted to apply steam directly
to the water iul which the kettles are immersed and to supply a lib-
cral quantity of distilled water when required, substantiall in the eral quantity of distilled water when required, substantially in the
manner and for the purposes herein set forth. 44,775.-Construction of Round and Half-round Files.I claim the process herein described, Mass.:
I claim the process, berein described of constructing round and
half round files, to wit, by forming the blanks of flat metal plates cuttring the same, and then bending them in the round or half round
form. 43,776.-Device for cutting Tenons on Metallic Rods, etc.-C. JHlsof, Worcester. Mass.
I claim the combination of the cutter, ege, and gage, oper ating
together, substantiilly in ths manner and for the purpose described. 43,777.-Machine for dressing Weaver's Harness.-John and Joseph H. Kendrick, Providence, R. I.

 Second, The mode of operation, subitantially as specitied, by
means of which the revolving brushes, $G$ G, or other equivalent in-
 the harness only during its movement in one direction, as herein de
scribed.
43,778.-Machine for making Chains.-L. King, Cleveland, Ohio :
I claim constructing a chain, of the erorm herein represented, from
a sngele rod or wire, by one continues process, by means of an au
tomatic macline, constructed arranged, and having all its parts
operated substantially as described. 43,779.-Bee-hive.-Joseph Lash, Mount Vernon, Territory of Nebraska:
I claim, frst, The ventilators, F F, in combination with the trough forth, ingombination with the ventilators ind trough or trap. 43,780.-Machine for loa ding Meta lic Cartridge Gases. I claim cutting a croove, 1 , in the under fais, Pa .
I claim cutting a groove, 1 , in the under face of the loading wheel,
B, and fastening a block, mith one or mare resting tlats, cand d,
and one or more nctined lanes, a and b, on its upper face to the

43,781.-Horse-halter.-Enoch H. Le Baron, Mattapoisett, Mass.:
I claim a rope halter made by "unlaying" the strands of a part of the clape a rope hatiter made by unlaying" the strands of a part of
"heapotall," pattingor braiding up that portiou which fornust the
as describe" and spicing it together, in the manner substan، ally
43,782.-Corn Planter.-Fredrich Loos, Denver City, Territory of Colorado :
I claim the cylinder, E, its recess, e, piston, f, spindle, h, and the
projection, the whole being arranged within the packed box, B , in
respect to the heoper, c , and respect to the hopper, , , and tube, $D$, substantially as and for the
purpose herein set forth. 43,783. - Apparatus for cutting-out Knitted Stockings.-
Wm. Martin, Philadelphia, Pa.: 1 claim the arrangement described of knives with straight cutting
edgesi B B, and zig-zag cutting edses, a and $\mathrm{a}^{\prime}$, for the purpose
speciffed. 43,784.-Boot and Shee.-Charles Mayer, New York City. Ante.dated June 3, 1864 I claim the employment of the pin, c, and hinges, a, in combina-
tion with boots and shoce, substantially in the manner and for the This invention relates particularly
shoes or "balmoral" boots, andthe prin to animprovement in laced is to enable the wearer to take off said boots or shoes without unlacing them, simply by withdrawing a pin. Furthermore, by the applacation of this improvement to boots or shoes the ankle of the foot is braced or supported, and the wrinkling and creasing of those parts contiguous to the back seam of such boots or shoes is pre vented. 1
43,785.-Manufacture of Table Cutlery.-Alex. McGuire, I c im im forming a "nib-bolster" for table cutlery by the "drop"
rocess, substantially as and for the purposes described. 43,786.-Flat-iron Heater.-George R. Moore, Lyons, Iowa:
 described and for the purposes set forth.
second, Ialso claim the rim or fange, h , of the casing D , extend-
ing above the gridde, E, for the purpose of protection against cold ing above the griddle, E, for the purpose of protection against cold
currents of air.
43,787.-Tanning Apparatus.-Joseph Mouren, Mar-43,787.-Tanning Apparatus.-Joseph Mouren, Mar-
seilles, France : I claim, frst, The method of tanning hides or skins by placing
hem in a ve.sel each between two layers of tan betore injecting the Second, The construction of the tanning vessel, that is to say,
making the of cast-iron and of a columnar, form lined with
lead bad, substantially as set forth.
43,788.-Umbrella.-Francis V. Noette, Brooklyn, N. Y.: structur es, the cmployment of metal sockets, D and E, ormed from parts of the framework,
purpose herein set forth.
43,789.-Lumber Measure.-A. M. Olds, Chicago, Ill.:
able disk, C, or its equivalent, operating substavtiakly as and for the
purposes herein set $\begin{aligned} & \text { orth and show } n \text {. }\end{aligned}$ purposes herein set torth and show n.
second, I claim the combination of the disk, C, the shaft, J, and
bent rod, $\mathbf{d}$, arranged and operating substantially as and for the purpose specifled. the combination of the expansible wheel, B, and
Third, I claim
the worm, , with the system of wheels, E F $\mathrm{G} H \mathrm{H}$ I or their equiva-
lents, substantially as and foI the purposes berein delineated and se the worm, D, with the systern of wheels, E F G G H I or their equiva-
lents, substantially as and foI the purposes berein delineated and se
forth. 43,790.-Fence Post.-Jerome Palmer, Painesville, Ohio: antidestrue manner of combining a wood or other post with an
or sill, $A$, with the broad cond tructing the unper portion of the base
 bination with a wood post having faccs, or an open aperture, ci cor-
responding to the facesof the said tongue, C , and provided with the
bolts b bind bolts b and a a. for ensuring the post ag ainst splitting, and securing
it to the said tongue, and loca ted as shown, or inon posts with such
corresponding faces or plane, as shown in Fig. $G$ substadtially as
herein stated and for the pursose

43,791.-Dough-kneader.-A. Judson Palmer, Brooklyn,
N. Y.: I claim the conical hopper, A, in combination with the stirrer or
kneading bar, B, arranged within the hopper, to operate substan
tially as and for the purnose berein set forth 43,792.-Clasp for Bank Bills, etc.-Charles Perley, New I claim a metallic spring clasp or file for oank bills, etc., held to-
gether in substantially the manner described and slown. 43,793.-Hawse Pipe-stopper.-Charles Perley, New York City:
I claim a divided stopper adapted to recelve the cable, and fitting
to the pipe passing sado cable, substantially as specifed. 43,794.-Damper.-Hyland Raymond, Racine, Wis. I claim the annular plate, E, in combination with the plate, C, $\mathbf{C}$ or
less diameter than the drum, A, the two plates becing arranged with
in in the drum, and one of them being
ner substautially as herein set forth.
[This invention relates to a new and improved heat radiator, de signed to be applied to the pipes of stoves, furnaces, and the like, to preventthe heat from passing into the flue or being carried off by the pipe, and cause it to be radiated into the room.]
43,795.-Machine for cutting Rasps.-Alexander N. Redman, Boston, Mass. Ante-dated July 23, 1864 . scribed for forme and Second, Imparting to the rasping tool emplosed, the necessary up
and dow movenents to form the rasp, by means of the arin-whee and down movements to form the rasp, by means of the arin-wheef,
g. lever-frame $k$, and horizontal lever-arm, $q$ arranged and operating ogether as specified. fulcrum, $r$, and lever, $g$ arranged and onperating together as herein
above set forth, accoss the blank bar while it ts fed along to the said
tool at regulai and proper intervals of time 43,796.-Lithographic Power Press.-Edward Reynolds, Mansfield, Conn.
screw m , and the a tiusting slot, 1, a a described by means of the set I allo clalme the employment of a distributing cylinder and ink
rollers, ab c, when having regular lateral movements imparted to them, substantially as and for the purpose set forth. and out of contact with the stone, and a back movement upon the
stone, substantally as specifled.
I also claim giving to to the roll, , and to the damper, their verti-
 one oscillating plat, h , (or one on each side or the manhe) actuating
the two leveres, substantilly as set forth
I also claim in a machine organized with a stationary bed, recinpo-

 I also claim the manner of interruping or throwing out of action I also claim the mechanism for operating the nipper fingers, closing
them upon the sbeet when the tympan begin tom move and opening
them and releasing the sheet when the tympan returns to its normal position substantialty as set torth.
I also claum actuating the tympan br the scraper curved arm, $\mathbf{v}$ and nrojection, u, onerating substantially as set forth.
I also claimm adjusting the stope by means of a series of elevating,
screw shafts, geered to and operating by a center screw shaft, substantially as described.
I also claim the combined employment of the tympan and nippers
for the double purpose of carrylng the sheet to the stone, and back therefrom to its first position.
43,797.-Churn.-George W. Sayre, Pisgah, Ohio:
I claim the arrangement of the double rebated central upright, $\mathbf{D}$,
provided with the clasps, ab, and slides, $\mathbf{E}$, furnished with adiusting pins for the dashers, when o
scribed for the purpose set forth.
43,798.-Soda Fountain.-Carl Schultz and Thomas War ker, New York City. Ante-dated July 28, 1864.
We claim first, Surrounding the soda fountain, A, with an atmos-
phere of a pressure equal to that of the gas contained in the said
 43,799.-Hoop Toy.-Reuben Shaler, Madison, Conn.: I claim the combination of a spring or its equivalent with hoop
toys, when arranged so as to give to the toy a tilting motion from the revolving hoop substantially as specified.
43,800.-Soap.-Charles E. Salisbee, Detroit Mich.
I claim the producing of soap in the form of a the dry powder
with powers of cleansing as aforefaid, using for that purpos the
aforesaid ingredients, or any others substantially the aforesaid ingredients, or aryy oth
which will produce the same eftect.
43,801.-Igniting Fuses for Shells.-Charles W. Smith, Evans, $\mathbf{N}$. Y. Ante-dated February 1,1864 .
claim a portable fuse primer adapted to be transported ly and to be attached at the end of a time fuse jusp previous to the
ingertion of the shell in the gun for the purpose of igniting the fuse
at the moment of at the moment of discharge. William H. Starry, Franklin 43,802.-Grinding Mill.-William H. Starry, Franklin I claim the mode substantially as described of automatically ar
resting the motion of a grinding mill when running empty by means of the dlisengasing mechanism, $\mathbf{C} D \mathrm{D}$ E m m $\mathrm{N} O Q$, or devices substan
tiallv equivalent. 43,803 .- Combined Air and Steam Engine.-0. M. StillFirst, I claim in an englne op
First I I clalm in an englne operating with the aid of the pressnre
in the furnace relieving such engine of resistance bv maintaining
the steam in the steam generator ine
the stean in the theamg zenerhator, $B$, at a pressune much minhtaining
that in the furnace through the nozze, that in the furnace through the nozzle, Gi3, or its equivalent so as to
performe the triple functions, substantially in the manner and for the
purpose set forth. purpose set forth.
Second, I claim in combination with an engine operating by the
pressure in the furnace, $A$, the steam generator,, , steam blast, $F 3$, Second, I claim in combination with an engine operating by the
pressure in the furnace, A, he stam generator, B, steam blast, F3,
and air induction, $H^{\prime}$, arranged relatively to the furnace, A, and to and air induction, $\mathrm{H}^{\prime}$, arranged relatively to the furnace, A, and to
each other, substant and and for the purposes herein st forth.
Third, I claim in such angines regulating the temperature of the gaseous matter passing to the working cylinder by means of the
valve, f, arranged relatively to the passages, $F F$. F F3, or their
equivalents, substantially in the manner and for the purpose hereequivalents, substantially in the manner and
in set forth.
43,804 .-Gang Plow and Seeder.- Draper Stone, Pitts-43,804.-Gang Plow and Seeder.- Draper Stone, Pitts-
field, N. Y.: flelm , N. Yomination and relative arrangement of the draugh
I claim, A , diagonal plough beam. B, ribbed joint plate $C$, tie bolt, $t$ beam, A, diagonal plough beam. B, ribbed joint plate C, tie bolt,
(one end oi which is connected to the ear, , of the washer plate, w"t
with the seed box, B, and its appurteances all being harraged and
operating conjointly in the mander and for the purposea

43,805-Apparatus for rectifying Alcohol.-Macklot Thompson, St. Louis, Mo.: I claim First, The empioyyuent in rectir ying stills or apparatus of
columns composed of tiagram sections in combination with inverted cups having forizontal flanges at their borders substantially in the
manner and for the purposes set 0 .

 outhy in the manner and for the purposes described.
tiall
Third. The employment in rectify jin stills or
 the manner and tor the purposes described.
43,806.-Lock.-Charles B. Toll, Boston, Mass. I claim my improved. lock hereinbefore described as having the
series of rotary tumblers, stationary, divisional and recessed plate $s$,
 43,807.-Shoulder Brace.-Albert W. Upton, Lowell,

## Mass. I Claim the combination and arrangement of the auxillary brace strass $F$ F, with the shoulder straps A A and the arm strays, B B,

 belt.
3,808.-Tilling the Soil.-W. Wadsworth, California, Cal.:




This inventien relates to a new and improved machine for forking up and pulverizing the soil to a requisite depth.
43,809.-Shears.-Theodore Wallis, Scipo, N. Y. tion wiaim the pulley, I, and the connect
43.810.-Radiators.-William Washburn, Boston, Mass.


43,811.-Straw-cutter.-D. H. Whitlemore, Worcester I claim, irst, The lever, b , ears, c d, convex surface, c , with the the
orre. iponding concave ot d, when comlined and arranged as and for the purpose specitied.
Second, $\begin{aligned} & \text { claim the inclined plane of the step, } h \text {, when combined } \\ & \text { with the corresponding shape of } c \text {, and used as and for the purpose }\end{aligned}$ with the
set forth.
43,812.-Hemp and Flax Brake.-John Bryant (assigno
to himself and Allen L. Baily), Akron, Ind.
which is attached to to the bibrationg, connected to the bar or rod, E medium or the zig- zag bar, E , and sprin, $G$, ar ange
sulustantially as and tor the purpose herein set forth.
This invention re!ates to a new and useful improvement in the dinary fax and hemp brake, and it consists in a novel manner of perating the same from a rotary driving shart, whereby the ma chine may be operated by any convenient motor, and the brak aw being impeded by tough flax or hemp or other substance be tween it and the stationary jaw.]
43,813.-_Process of hardening Iron.-Thomas Chappel Vm. Ashley Jones, Winona, Minn.
We claim the within described process of hardening iron or othe
metal by hringing the article to be hardened when heated to a white netal by hringing the p piece of old cats-iron ketue, or orther similar
heat ln contact wid tha
cast-iron heated to a melting heat, and then cooling suddenly, sub
tantially as herein specitiel.
[This invention is based on the discovery that by heating a piece of on or steel to a white heat, and at the same time heating a piec melting or that kind whichis used for kettles or other ves.els to a melting heat, and then quickly rubbing the two together or by dipbove described, melted in a crucible, for a short period of time, the wo will so blend that by at once cooling the same in waterit will beome so hard that no dle will touch it.]

43,814.-Device for tapping Boots and Shoes.-Gurdon
Conkling (assignor to Caroline A. Conkling), Con
klingsville, N. Y.:
tion with a last-shapedpiniece, $B$, and wedge, e, all construct ed an [This invention consists in the employment or use of sole plat made of metal or other suitable material and provided with a pro jecting toe flange in combination with a piece of board cut out ac cording to the outines of last and wase the sole by means of said last-shaped board and wedge the sole plate are firmly secured on the inside or a bor shoe, and a new half-sol can bo put on wion the necesity of having a ing to the boot or shoe to be soled, and so that any person, particu the necessary meansfor the purpose of tapping their own boots or shoes.]
43,815.-Stove Cover of Cooking Stoves.-George Him rod \& C. G. Moulton
Himrod), Chicago, lll.:
We claim the combination of the cover, $B$, provided with the cou vex perimeter as shown, with the concave bed of the boiler hole, C
arranged and operatling as and for the purposes herein specifled and
43,816.-Eyeletting Machine.-Timothy K. Reed, North
Boston, Mass.:
claim in connection with an inclined chute and hopper, con structing the hopper with eyelet passages leadllig fromper, the sid
thereor when said passagesare o orranged as to direct and convel
 taneously uy the lever, g.or its equivaient, substantialy as set orth
I also claim causing the pin, o, to withraw during the dessent o
the lower set and enter the lower eyeie in the chute, as said eyele comes over the set, substantially as set forth,
I alsoclain the combination of the lifter bar, spring, s, and rod
operating in the manner described, for eftecting the movement $\mathbf{v}_{\text {a }}$ operating
of the pin,
on
43,817.-Grain Separator.-Otis W. Stanford (assignor to himself and Robert W. Gilchrist), Lebanon Ohio
claim




Third The arrangernent of grass, seed screen, I , double inclined
 43,818.-Power Press.--Moses G. Wilder, Meriden,
Conn. assignor to himself and H. B. Birelow, New Haven, Conn.
Iclaim, frst, The combination of the larch bolt with an eccentric
wrist and roll, when arranged to catch and release the roll, as and
 43,819.-Sewing Machine.-Charles H. Wilcox (assignor England May 31, 1802
 the stitich or loop is nearly or quite drawaw up to the surface of the
materialbeing sewed, and then releasing the thread suddenly, so as

43,820.-Breech-loading Fire-arm.-Alfred Krupp, Es-
I claim, first, The valve, F, and screw, $\mathbf{D}$, in combination with the transversiels shinding breech.blocc, B, constructed and overatitg in in
the ma nner and tor the pur pose, substantially as herein specified.
 sin with the expansion washer, G. constructed and
stantiall as and for the purpose set forth.
3.821. Ohoto-galvanography.-Paul Emiele Placet Paris, Frince: Paris, France :

 43,822.-Photo-sculpture.-Francois willieme, Paris,
Iraing the process by means of which $I$ obtain sculpture of any
desired sizh, from a living or inert subject, sail process consisting in



## RE-ISSUES.

1,735.-Lamp.-Cahoon Manufacturing Company (as signees by mesne-assignments of Charles W. Ca
hoon), Portland, Maine. Patented Feb. 19, 1861 :
 I talos claim the coubination or the chimney-holder, chimney
astenings, support for the chimney, joint, and thumb plate; the Whole operating substantially as set fo
I also clain the cornbina tion of the



1,736.-Stirrup.-Cyrus W. Saladee, Paducah, Ky



## Extension.

Bolt and Rivet Machine.-Wm. E. Ward, Rochester N. Y. Patented July 30, 1850: Wara, Rochester

 operation to determine or aage the length of rod or wire which
shall be eleft proj jecting beyond the griping dies for forming the nex


heading die
described.


ATENTS

FOR-SEVENTEEN YEARS

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ee required on thequred on fling an applicationf or a patent is $\$ 16$. Other change


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Crculars information concerning the propercurs to be parsue in obtaining patents in forcign countries through MUNN \& CO'

