

ISSUED FROM THE ONITED STATES PATENT OFFICE for tie week pining april $17,1860$.
[Reported Officially for the Scientific Amikrican.]
** Pamphlets giving full particularay of the mode of anplring for


27,877.-S. M. Allen, of Niagara Falls., N. Y., for an Improvement in the Manufacture of Thread and Yarn:
I claim the new article of manufacture-the same consisting in
thread and yaro, made by combining ordinary short-stapled fibrollas materials like cotton or woom, with a ororn tifer prepared from long
stapled fibrous materials, like flax, herm, jute, silk, china, Flass, and similar subetances, , by both the tleerctrbe , mecchanicnl recuction and
chemical treatment refred to, so that when eo combined they can chemical treatment referred to, so that when an comb
be spun on the ordinary cotton and woolen machinery.
27,878.-S. M. Allen, of Niagara Falls, N. Y., for an Improvement in the Method of Reducing Lon Improvement in the Mibrous Materials:
I claim the method described of prepating long-stapled vegetable
fibrous material, for thepurpose of spinning therefram both coarse fibrous material for thepurpose of spinnigs enerefram both coarse
and fine yarn orthread, by combining the drscribed mechanicare-
duction of the said fiber, with its chemical treatment, as set forth. 27,879.-Caleb Bates, of Kingston, Mass., for an Improvement in Stump Extractors:
I chim the employment of the crossed pawle, E F F in combinatiou
with the rack bar, Gead, B, and levera, C C, as and for the pur-
pose show and deacribed.


creased.
If further claim the emploympnt of the knife-edged trunnions, $\boldsymbol{g}_{\text {f }}$ f,
in combi ation with the head $B$ and penduloue rode, e , as and for
27,880.-T. H. Bell, of Washington, D. C., for an Improvement in Hanging Bells:
I elaim constructing and combining the several parts of the appn.
ratus, subssantially as before descri od, so as to admit of the ppull
wire" runalag ofila any desired direction.
27,881. Wm. A. Bird, of Newark, N. J., for an Improvement in Sliding Carriage Seats:
I claim the steady pine, be thes more or lese than two, and the evethe manner and for the purwee set forth
Alan, the irong ind whe when used in connection. wt th the
steads ping, to ingure the firmness of the seat.
27.882.-E. W. Blake, of New Haven, Conn., for an Impoovement in Machines for Breaking Stones: I claim, firt, Oonstru tong and renporting che fired jaw of the sild machine forbreaking stones, in puch manaer that it can be inverted
when worn, and confining it to ito place by the check pieces, as de-
 Third. The employmentofthe toggle brock and wedge, as described,
for the more convenient and preciee edj stment of the $s \geqslant 0$ of the
27,883.-Wilson Bohannan, of Baltimore, Md., for an Improved Padlock:
I clasim arragging the bolt, $C^{\prime}$, on top of the bolt, $C$, and pivoting
the two together by means of $a$ pivot, $a$, and controlling the operathe two together by means of a pivot, a, and controlling the opera-
tuon of the sime, by means of the two guide stop, $D D^{D}$, And two
epringe, $F^{\prime} F^{\circ}$, in the manner and for the purpose described.
27,884.-S. D. Bowker, of Geneva, Ohio, for an Improvement in Self-detaching Whiffle-trees:


 to the donble tree, or the draw bar of the thills. hy means of the
chank, E, and serew nut for the purpoee of malntalning its ordinary
horizonal mowement, asidescribed.
27,885.-R. P. Boyce, of Erata, Miss., for an Improved Currying and Leather-dressing Machine:
I claim the rotatingcylinder A, and pressure roller, P, or its equiv-
alent, in connection wwith the reciprocating frame $K$, the currying knife, M, stone, N, and brash
eration, as and for the purpose set forth.
27,886.-T. F. Card, oî Cincinnati, Ohio, for an Improvement in Fire-plases:
 dithe whole being constructed and combled in the manner set borth coforma movablo and adjutable deflecting plate a
plied at any hlght io a fre-plece of any dimensions.
27,887.-J. M. Clark, of Philadelphia, Pa., for an Improvement in the Bleactring of Grain by Sulphurous Acid:
I claim the bleaching of wheat and rye, by expooing the same to
the action ofsulphuric scidgas, substantially as set forth.
27,888.-E. S. Collins, of Aspen Wall, Va., for an Improvement in Tobacco Presses:

28,889.-Hezekiah Conant, of Willimantic, Cona., for en Improvement in Looms:
 as aet forth.
27,890 - George Coombs, of West Falls, N. Y., for an In proved Mangle:


27, 891.-Louis Daser, of Washington, D. C., for an Improved Sextant:
I claim, first, The combination of a spring click and micrometer
wheel with the taugeut screw of a sextant, substantially as and for the purpose set forth.
Second, The combination with the tangent screw of a sectant, of the
stop nut, for the purpose explained.
27, 892.-T. B. DeForest, of New York City, assignor
to himself and Wallace \& Sons, of Ansonia, Conn.,
for an Improvement in Lanterns:
I claim the combination of the fastening springs, $S$, and the en
circling band, $B$, with the lamp of a lantern, when said lamp and en
 purposes specified.
27, 893.-David Donald, of New York City, for an Im
proved Machine for Cutting Veneers:
I claim, first, Combining with a laterally sliding knife stork, $C$, a
oothed edmental arm,, and a toothed dilding rack, $J$, aubstanilally
 Second, The arrangerment of laterally adjustable guide grooves, i,
and vibrating arms, Sin combination with the recipocating log car-
rier, Lin congtructed and operating substantially as and for the pur

[An engraving and full description of thisinvention will appear in a few weeks.]
27,894.-S. P. Dunham and A. Hipple, of Kilbourne, Ohio, for an Improved Churn:
We claim the combination of the hollows, $c$, of the side pieces of
the outter dasher, with the webe, ata att ched to the inner wail of the
 ieces of the outer dasher, when theee com
ransed as and for the purposes specifled.
27.895.-Lovett Eames, of Kalamazoo, Mich., for an

Improved Mortising Machine:
and auker hv cam, $G$ ', when the eame receives its motion fromth
 ot that said wheel may be forcibly brongint into contact withe either
the d num or shatt byy a rocking movement of the foot tover, at the
option of the attendant, essentinlly asdescribed and represented. Second, Iclaim fiving a eimultaneous reciprocating movement to
bolt wheel, $C$, to thint of the auper and chiselitnck, ED, by means o the duplicate cam, G2 bar Li, nud yotc. 1 , or their equivalents, for
the purposes and substantially as set fartio
7,896.-Wm. M. Ellis and J. B. Ellis, of Washington
D. C., for an Improvement in Casting Fire-plugs: We claim preventing the heat of the molten metal from injuring
the brass or other metal, which is to form the lining or seat surface for the plug or valve, by the use of the block, $d$, or its equivalent, as
set forth 27,897.-J. R. Ender, of Trenton, La., foran Improvement in Hats:
I claim a hatprovided with a lining oflampblack, charcoal, or othe
quivalent non-condu wng substance, ae shown and described. [The object of this invention is to provide for a hat that protects the head in the hottest summer day, as well as in winter time, and it consists in arranging in the crown of the hat a stratum of charcoa un, while the smallspecific gravity of these materials do not increase the weight of the hat sufficiently so as to make it inconvenient for the wearer.]
27,898. -Isaac P. Frink, of Newark, N. J., for an Im
proved Reflector for Gas-liphts:
Tith claim the arrangement of a rectangatar prramidal reflector, $A$

[This invention consists incombining with a rectangular truncated pyramidal reflector, a curved cover of such a form and at such a dis wards through the opening in the top of the reflector are turned bact by the cover through said opening. The sides of the reflector are strengthened and ornamented by beads, which also serve to catch such rays as would otherwise eecape over the edges of the reflec tor without any useful effect; and a hinged section is secured to one of the sides of the reflectors, whereby the rays oflight can be concentrated more or less on any given point.]
27, 899.-F. F. Fowler, of Crane township, Ohio, for an
Improvement in Elevators for Hav, \&c.:

27,900.-Theodore Grundmann, of Freeport, Ill., for an
Improvement in Machine for Crushing Sugar Cane
 and di
forth.
ГThe
The object of this invention is to obtain a simple, compact, and fewhent cane-crushing machine, one that can be attended with but ew hands, and have a great working capacity. The invention con in connection with a series of pressure cylinders, whereby the deaired
in end is attained.]
27,001.-Martin Hallenbeck, of Albany, N. Y., for an
Improvement in Harvesting Machines:
I claim the arrangement of the bent or crank-shaped axle, $\mathrm{C}^{0}$, to Ink, as described.
I claim the co
rame in combination with the armanke of the finger bar, hinged to the hed.
7,902.-James Hare, Jr., of Paterson, N. J., for an Improved Oil Cock:
I claim the arrangement of the nut, $D^{\prime}$, in combination with the
movable plav, A, and with the stationary
operating substan constructed and perating substantially as and for the purpose specified.
Trhe object of this invention is to produce a cheap and effective consenta in the arrangement of an oil cap in which the plug is alway hpp peifectly tipht by means of a nut which e rewe down over the adjustea.]
27,903.-G. W. L. Hazen, of Indianapolis, Ind., for an
Improvement in Sugar Mills:


27,904.-L. Hermance, of Saratoga Springs, N. Y., for an Improved Beer Pitcher:
I claim the combination or valves, $\mathrm{C} D$, with n , pitcher, when ar-
ranged in the mavuer and for the purposes described.
[This invention consiste in arranging at the base of the spout of the pitcher, a valve, which is acted upon by a spring forkeeping it down tightly in its seat, and in connecting with this valve a suitable ever, which passes around the outside of the pitcher top, is pivoted 0 each side of the same, and connects with a second valve which loses a vent hole in the pitcher top, the whole being arranged eo as be operated simane the pressure of the thumb of the and holding the pitcher.]
27,005.-Cornelins Hood, of Seneca Falls, N. Y., for an Improvement in Pumps:
I clainin the arrange me nt and combination of the hollow inst on, IF,
wit the internal eliort eylinder, $G$, sand external crlinder, $D, v n l v e s ; ~$ $b$ and annular valve, d, to orm a continuous-acting pump, substan. 27,9
27,906.-J. L. Howard, of Hartford, Conn., for an Improved Coupling Attachment for Cords, Ropes, \& c .:
I clain the emplosment of the tuben $A$ in combination with the
rope or beltand the socket, C , subetantially as and forthe purposes
shown and deecribed. hown and deecribed.
[The object of this invention is to obtain a simple and efficien means for connecting together the ends of ropes, coras or round belts, and also for attaching the same to any fixturc. The invention concal tube, which embraces the end of therope, cord or belt, and is fitted vithin a conical eocket to effect the desired end.]
27.907.-Stephen Hughes, of Hamilton, Ohio, for an Improvement in Flour Separators:
${ }^{-}$claim, 1 st, The construction of the beater with shoulders, $\mathbf{E}$, and
 27,908.-J. M. Jay and J. Danner; of Canton, Ohio, for an Improved Fgg-beater:
We claim the combination of the beating devier, represented by
ctters B C and $\mathrm{D}, \mathrm{in}$ combination with the case, I , substantially as
and for the purposes st forth letcrs
and for the purposes sct forth.
27,009.-Wm. Jeffers, of Pawtucket, R. I., for un Improvement in Pump Valves:
I claim the combination of the two valvee, $B C$, with each othcr and
with the seat, $A$, and the hingee, a $a$, ay and for the purpoee shown
27,910.-R. W. Jenks, Jr., and F. A. Steere, of Provi-
dence, I . I., for an Improvement in Brakes for City Railroad Cars:
We clalm the combination with sp-ito $G$, working in a suitable
slide box, of the pawt bar, $H$, braks bar, with its ahoc, $K$, the
 puraso pet forth.
We futher claim
by the draught rod, the lever, c , arranged a a get forth, ind operated
purposes specified.
[Thie invention consisto in the amagement of an elliptic spring, or that are made co operate upon a colindrical dram whect fixed to the axter, chat, by the combination of a clutch attachment and ratchet wheel, the driver mas apply the brakes at any moment to said drum. which will cause either axle of the car wheel to act against the spring and compressit, after which the spring will exert a powerful force to urtherretard the motion of the car by the friction of the brakes on the drum wheel alone. The ame force, viz., that of the epring, will ive a forward impulse to the car when the brakes arc relicred. The application of the brakes will be made by the driver by a simple movement of his hand, and their release will be effected bs the dranght of the horses in starting off. Very little power will be requisite in either instance,]
27,911.-J. B. Jones, of Brooklyn (E. D.), N. Y., for an Improved Machine for Forming Vessels of Sheet Metal:

 manner and for the purpose set forth.
Scond, I claim the clutcln

 the blank on the
quired distance.
27,912.-Henry Johnson, of Washington, D. C., for an Improvement in Vapor Lamps:
I claim, first, The pipe, B, when used as a fluid ninp and genera tor
or vaporizer, and also whipnused as a gus pipe in culuectlon with nib , fouthe convesance of fuld from the supply pipe foc generating or
 Garibed.
7,913.-B. J. Lane, of South Framingham, Mass., for an Improvement in Shoemaker's Awls:
I claim the combination of the projection or shoulder, $c$. nut $b$, nd
sotted screwcone, f, substantially as defcribed, whereby the projecion or shoulder, c. ie made to perform the function of driving the
pegs, and also serve as a means to facilitate the screwing-up of the negs, and also serve as a means to racilitate the screwing-up of the
nutantially ansequently, the securing of the awl to the handle, eub. 27,914.-Daniel Lee, of Boston, Mass., for an Improved Steam Trap:
I claim my improved steam trap-cxpander, an made tubular or holI aleo claim my improved mode of arranging or combining the
fubular-expander with its valve and case; vin. bs having the ex-tubular-expander with ite valve and case, vin, bs having the ex-
pander at or nearone ofit fastened to and opening through one cond
ofthe case while at it other end it it connected

27,915.-C. T. Liernur, of Mobile, Ala., for an Im-
provement in Testing the Wear of Railroad Rails and Wheels:



27,916.-Loomis Mann, of Ionia. Mich., for an Improved Machine tor Making Eave Troughs:

 Second, ILliaim notching the edpee of the bar, D, and clamping late, C, where they crusg the lan or the plates, toad mit of thirir bing specified.
27.917.-T. H. McCulloch, of Peoria, Ill., for an Im provement in Grain-drying Machines:
I. Claine the tubee , C, coanclal chamber D, a and hollow pluged dhaf arranged to form steam or hot air paesages g E L 4 h heat the chan
 or the purpose specified.

CThis invention conesists in the employment or use of a series of ubes and a conical chamber placed within a rotating inclined shell whereby the article or substance to be aried or acted upon by heal whin a limied opace and consequenls bs a very compact efficlently and expeditioualy performed.]
27,918.-W. S. McEwen and N. A. Patterson, of King
ston, Tenn., for an Improvement in Overshoes and
Boots and Shoes:
We claim a tube, formed around the edge of the mouth of a ehoo having a corrugated inside surface, the corrugations communi
[This invention consists in combining with a shoe, grooved, corru gated or ribbed on ite inner surface, a suitable covering or shield for the edges of the mouth of the ehoe, for the purpose of preventing water, dusk, te., from falling or working down the grooves of the uarters and vamp from the mouth of the shoe; the same to be mad the mouth of the shoe in any convenient manner.]
27,919.-J. H. McGehee, of Athens, Ala., for an Im provement in Grain Scparators:
I claim, firat, Arranging a a pivoted selt-adjnsting float or board
scrose the lower end of the second sievo, so that the wheat, in passing
 therevith, substantially as and for the purposes aet forth
Second, Beveling the slats of the flue from their inner ed
abecona, Beveling the slats of the flue from their inner ed ge to within
27,920.-J. V. Merrick, of Philadelphia, Pa., for a Improvement in Steam Carriages:
I claim, first, Theuse of a surface condenser immersed in water
when the water ued for such surface condenser is cooled, or ppar
tially cooled, by the passage of currents of air, in the manner se When the water uped for such surface condenser is cooled, or par
tially cooled, by the paseage of currents of air, in the minner se
forth.
forth.
Second, The combination of the boiler and engines with surfac
conclenser and cooling spparatus, when constructed, arranged and concenser and cooling spparatus, when constructed, arranged and
operated substantially as dercribed, for the purpose of propelling car
riages by steam, substantially as set forth.
27,921.-Azel Reynolds, Jr., of North Bridgewater
Mass., for an Improved Staging-supporter for Me chanics' Use:
 that one set may urectit bear or sugtain
the other supports the post, as deqcribed.
I also claim arranging tie two bracke
I also clumparranging the two brackets and posts and combining
them torether, substantially as represented in Fig. 4, and as above
them toget her, substantially as represented in Fig. 4, and as above
described.
I also claim combining with each post an adjustable socket, carrs
ing ear-piecea or bea:ers for the reception of the etruts, as described
ralso claim combining a lateral rest, b, with each bracket, the amme
beeng to support the bracket laterally againt a wall or another such
27,922.-James Montgomery, of Baltimore, Md., foran Improvement in Steam Boilers
I clalm combining with a boiler which has a seriea of horizontal
flues ortubeab or a boiler of any form other than that apecified in my
above-mentioned Letters Patent, but which has the flue space or pas. sage leadlng from the fire chambar to the tubes or flues at one en't of
the eand chamber, a grate of the whole or nuarly the whole len ${ }^{\prime}$, of of
the boiler with one or more fire. the boiler, with one or more fire-doors at each end, substanti
ar the parpose set rorh
27,923. -James Moore and Archibald Kelly, of Pitts
burgh, Pa., for an Improved Machine for Making Picket Fence:

and twister, $I$, as described and for the purpoases set forth.
Second, The use of the carriage, $b$, when used in combinat
the twisters,, , reels, $v$, nad cam whel, A , as described and set forth.
Third, The use of guides, $H$, when need in connection with the car-
riagea, b, and ways, 11 , as descri bed and for the nurpose set forth
Fourtin, The comhination of the take-up reel, $\mathbf{B}$, ratchet whei,
ratchet pawl, D, and frame, c, when arranged, constructed and oper
27,924.-P. A. Morley, of Brooklyn, N. Y., for an
Improvement in Lanterns:
 panying drawings.
27,925.-Milo Peck, of New Haven, Conn., for an Im provement in Atmospheric Hammers:
I claim interposing a wood en planking or other onn-conduct ing
material between the frame which supportg the mechan barmmer, and the bedplece which formorts the mechanlam of a trip
the fwane and the anvil, wubstantially as described, for the purtion of

27,926.-Jonas Perkins, of Braintree Mass, assignor to N. S. C. Perkins, of Norwalk, Ohio, for an ImMachines
I olaim the mathod, substantially as described, of communicating
power to sewing machanges by means of self-locking and unlockin
clutches or wheels, arranged, the one to drive the other in one di power to sewing wachtaes by means of self-locking and unlockine
culucties or whelel, arranged the one to drive the other in one di-
rection only, when said clutehes are nung for independent and joint
rotation on separate ahafis or distinct axial bearings-the one of
which is attached to a lifing or opening and closing portion of the
machine, and the otherdisconnected therefrom, forthedotile purpose
machine, and the other disconnected therefrom, forthedouble purpose
of nreventing the machine from being impronerly driven backwarde,
andto facilitate the exposire of the underworko aleo wherebv the'ma chine, when driven by a band or belt, may be opened without un shipping the band.
27,927.-Jehu Mitchell, of Aleppo township, Pa., fo an Improved Churn


27,928.-E. B. Requa, of Jersey City, N. J., for an Im provement in Hopse-powers



27,929.-John Robinson, of Eli, of Sharptown, Md for an Improvement in Seed Planters
I claim the combination of the clutch rod, $O$, and wire, $s$, wit rigger, n, at the hande, Git the whioe arranged and operating
connuection with the aduattible indicating wheel and dropping de

27,930.-R. E. Rocers, of Philadelphia, Pa., for an Im provement in Steam Generators:
Iclaim coustructing steam, generators or boilers of the rings as se
arth e eitner nlone or in combination with the interior sheet, uubstain ialls as described.
27,931-H. S. Root and T. Lloyd, of Muncy, Pa., for n Improvement in Straw-cutters
We claim the combination of a vibrating box with a stationary
kife, when the whole is arranged so as to cauee the weight of the
Wesclibed.
with the gears, o and $p$, or their equivalente, subatantially, as herein Wef the pears, o and $p$, or their equivaiente, substantialiy ns hereio
before described, for the purpoe of feeding the material intermi
ently, as herein before specified, for the purpose set forth.
27,932.-Jefferson Short, of Leavenworth, Kansas
Territory, for an Improvement in Machines for
Crushing Quartz:
I claim the appication and combination and arrangement of


other. 1 further claim the invention of the double revolving cylin.
Aer, which revolves independent of upright shaftand driving wheel.
 $\stackrel{\text { and }}{\substack{\text { anga. } \\ \text { ing. } \\ 27, ~}}$

7,933.-Horace Smith and D. B. Wesson, of Spring
field, Mass., for an Improvement in Filling Metal lic Cartridges:
I claim a cartridge in which fulminate is contaiped in the hollow,
annular, projecting base, substantially af described, without being
7,934.-Wm. Steinmetz, of Philadelphia, Pa., for an
Improvement in Eyelet Machines:
I claim giving a sharn ang led, pointed shape to the extremity on
the shank, $d$, of the puncho $f$ my
improved eyelet machine, when
 panying draw ing and bien it is ured in con nection with a per fora-
ted die plate, substantially in the manner and for tho purpese set
27,935.-John Taney, of Austin, Texas, for an Improve ment in Apparatus for Boring Artesian Wells:
I claim combining with the tubeg, B and $\mathrm{E} i \mathrm{i}$, which are provided
with arms, HH and H , and with dovetail grooves in their gurfacea, With arms, HH and Ha, and with dovetail groove in their surfacea,
Valven, R and
ner and
27,936.-Wm. Thumpaon, of Detroit, Mich., for an Im
 are combined and and blat of and is entral parined substantially in the man
(This invention consists in the employment of a cylinder of me tal or other suitable material, of a suitable size, having two compart wents in each end, communicating with the interior of the cylinde by valvular openings, and with the outer air at one end and with the rge at the other end; said cshider to be partially divided lougtitu rith metean arr-l ght diaphragm or parinion, and to be party fille tory or recking iner iquia, so that by giving to the cylinder a vibra on each side of the diaphragm, fror one end, and forced out at the ther ond, by virtue of the contained fluid always keeping its equili har

27,937.-J. S. Tripp, of Danby, N. Y., foran Improved
Saw-filer:

tached and operated as deecribee.
27,938.-W. C. Turnbull, of Baltimore, Md., for an
Improventent in Compressed Air Engines:
I claim the application to compresed air en gines of an expansion
cut-of which
ts operated by a positive motion, but the stroke of
 sity yirectily to and alillow it to expand in the cylinder. for each stroke of the piston, s8 is necesary to drive
subtantially in the manner described.
27,939.-P. L. Weimer, of Lebanon, Pa., for an Improved Mode of Actuating Governor Valves of Steam Engipes:
I claim the movable rockghan, 1 . operated in the manner set forth




27,940.-I. P. Wendell, of Philadelphia, Pa., for an Improvement in Journal Boxes
I claim, frot, The double washer, E., of leather or or other , nitasble
material, the wedge-formed
strap bolt, G, and the follower, $H ;$ the naterial, the wedge.formed strap bolt, G, and the forlower, H ; the

27,941.-George Westinghouse, of Schenectady, N. Y.
for an Improvement in Grain Separators:
I claim the combination of the carriere D Dand E, the cartier, $\mathbf{D}$ reeting on the inner end of carrier, E, whet the the carriera are sus
sended from the thresher frame or otherwise for the purpose set forth.
(This inventlon consista in a novel arrangement of two carriers o djusted or set in proper thresher, wherebs the parts may be readily most effedent mnonor.]

27, 942 -C. K. Williams, of Haddonfield, N. J., for an Improved Warhing Machine
It withm, hret, we artangementin the adjustable dividing boara down bet ween ruides sttached to the levers, subsetantially as and for the purpoe set torth.
Becond
The
arrani
 27,943.-Hiram Abbott (assignor to himself and L. A. Lyon), of Wakeman, Ohio, for an Improvement in Heading Bolts:
I claim the nuljustable, jawe, B, the header and follower, a b, and
he
guides,
D, operating as
dect 27,944.-W. W. Allen and James Mnlyneux (assignors
to themselves and J. I. McKnight), of Bordentown,
N. J., for an Improvement in Sewing Machines:

We clas., a circle with teeth on itt peripnery to feed the cloth or
material beink sewed, when aid circle is arranged to turn on a eta-
tionary ring through which the needie may be thronded, whether
said circle is arranged above or below the cli th.
27,945.-Henry Belfield (assignor to himself and S. W
Hoffman), of Philadelphia, Pa., for an Improve-
ment in Pumps:

 set forth, ,o that a simula neous reciprocating motion, in condras
directions, may be imparted to the said buckets by the rotation of
gid shaft, $D$, and so that the two barrels may be in a direct line witb said shaft,
each other.
27,946.-James Blake (assignor to himself and Henry
Blake), of East Pepperell, Mass., for an Improved Auger
 enlargement, C vith or mithout the center
arranged as and for the purposes eet forth.
[This invention and improvement in augers consists in forming on he end of the auger shank or stem an enlarged cylindrical portion having a auitable screw thread cut on it, and a short spiral groov
 while the cutter on the end of the cylindrical screw portion serve ile the on the end of the cylindrical screw portion serve hich enlargement passes an adjustablecutter, which immediatels succeeds the screw on the enlarsement, and forms a hole in size ac ording to the distance the cuttic. end is set from the axis of mo ion.]
27, 947,-J. W. Brigas (assignor to himself and J. W Joralemon), of Cteveland, Ohio, for an Improve ment in Window-sash Supporters:
I claim the combination, construction and arrangement of the
double-acting epring bolt, $C$, with the frame
ar drum,
prine, coiled souble-acting epring e, leather strap, $R$, and fric
scribed, for the purposes set forth.
27,948.-C. G. Cross (assignor to himself and G. H Bailey), of Chicago, Ill., for an Improvement in Tension Apparatuses for Sewing Machines.
I claim the employment, in combination with a friction apparatue
 regularity of the
ially as described.
27,949.-L. C. English, of Canton, N: Y.. assignor to himselt and G. M. Angier, of Wasiangton, D. C. or an Improventent in Stump Extractors:
I claim, irst, The described stump extractor, provided with two

 Whth the double gears
Third, I claim the adjustable wheele, $\mathbf{E}$
foot pieces, $D$, subetantially as described.
27,950.-D. G. Fletcher (assignor to himself and James Yates), of Racine, Wis., for an Improvement in Heat Radiators:
I claim the arrangement and combination, as shown and described
f the perforated conical cylinder, $\mathbf{C}$, reciinters, $F$, $\mathbf{G}$, ir space, $\mathbf{E}$
CThis in vention in an improvement in heat radiatora through whic he smoke and heated air, ascending from a furnace or ordinary stov mizids fuel by a ion in the upward passage, and radiating it into the room. The in ention for effecting this object consits in combining with a crin drical drum a partialls perforated and conicallining or iuside crlin der, and, in conjunction with these two cylinders, peculiarly ar anged registers, whereby the draft may be perfectly controlled.] 27,951.-F. F. M. Fletcher, of Georgia Plains, Vt., as
ignor to himself and J. M. Edny, of New York
City, for an Improvement in Windmills:
I claim the emplosment or use of the cone, L, anplied to the re
ol
27,952.-Joseph Koehler (assignor to himself and Hein ich Soltmann), of New York City, for an Improved Head Gear for Stopping Runaway Horses:
I claim the combination of the blinders, $g$, compression pade, 0 , slid
ng rod, $n$, and inclines with the check rein, $h m$, and collar, 1 , eub-
27,953.-George Munger (assignor to himself and E. P.
Dean), of New Haven, Conn., for an Improved Ma Dean), of New Haven, Con
chine for Polishing Wood:
I claim combining with suitable rotating smoothing disks, adjust
ble or self-adjuetlng feed and presaure rollere, for the purposes and
seantially in the manner set forth.
27,954.-E. W. Tarbell (assignor to himself and Edwin Simonds), of Boston, Mass., for an Improved Stenm Boiler:
I claim the combination and arrangement of the water and ateam
space, $a$, the transverse water space, $b$, and the scrirs of bent connection tubes, c. c. the furnace, d, the surnoke or heat chamber, e, and
the connection tube or tubee, $f$; the whole forming un uprigbt boile he connection tub
27,955.-J. P. Woods, of Trov, N. Y., assignor to him self and A. Johnson, of Parkman, Ohio, for an Im proved Copper's Tool:
I claim the dewribed barrel head-parer, consisting of the ntock, $A$ parth, or tharir equirilanta, are conetructed and aringeetsispecifid

Re-issue.
S. S. Gray and S. A. Woods (assignees of S. S. Gray) of Boston, Mass., for an Improved Machine for Planing Lumber " out of Wind. Patented Aug. 22, 1854:
We claim, first, The peculiar construction of cutter head de-
scribed, the cutter head itself boing made use of to turn and break the shaving in the manner of a double iron plane turn and break
thermore, made concave, for the purpose of facilitating this opera therm.
tion.
Seco Second, The clamp, as described, for the purpose of doging the
lutber to the bed of the machine; the body of the clamp being piv
oted at d, and forced up by the acrew, F, orits equivalent; the dog, h, being adjustable therein in the manner and for the purpose set
forth.
Third. The described method of securing the dos, $M$, to the bed of Third, The described method of securing the dof, M, to the bed of
the machine, by meangof the efeeth or corg, 1, and the mortises in
the side plece, mi, forthe purpose set forth.
 forth.
extension.
S. F. B. Morse, of Poughkecpsie, N. Y., for an Im provement in Electro-magnetic Telegraphs. Patented April 11, 1846:
I claim the employment, in a main telegraph circuit of a device
or contrivance calleet the receriving magnet, in combination with
a short local independent circuit or circuits, each having a register

 raph line as will enable, me to obtain with the aid of a main gal vanic
atcry and circuit, and the intervention of a local bastery and local
incuit, such motion or power forregleting as could not be obsained
thert ise withoutthe use of a much larger calv anic battery if at all.
 paratus called the "sell-stopping apparatus, connected with the
clok-work of the resister, or seting sid register in action, and
stopping it with the pen lever, $F$, as de der ibed.
Third. I also claim, as my invention, the combination of the point topping it with the pen lever, F, as described.
Phird. I Ilso c clainm as my invention, the combination of the point
oroind of the penand pen lever, or its equilalent, vitht the eroved
oller, or other equivalent de vice, over which the paper or other ma-


William Wheeler, of New Britain, Conn. (formerly of
West Poultney, Vt.), for an Improvement in Curry-
West Poultney, Vt.), for an Improvement in Curry-
combs. Patented $\Lambda$ pril 25̃, 1846:
I claim theso combining of the trough-like bars which constitute
the comb teeth, with the other parts, in the manner set forth, as to the comb teeth, with the other parts, in the manner set forth, as the
constitute a curry-comb with an open back. I do not claim the
troukh-like conbs or the hollow back, individually, but ouly in their
combination, as herein full made kuovn.

Nore.-Trimity of the patents reported in the above official list were secured through this office. Last week Forrt-six of the num-
ber issued were obtained through the same source; and on the second week previous, FORTY-ONE, making a total of ons IUENDED AND GEventezen Letters Patents iss ued to the clients of Munn \&\& Co. in three weeks.

## Hote dey Mexine

T. J. K., of Va.-You say that if a stone is dropped from a point as high as one can reachin a railroad car, it will fall on that place in the floor over which it is held, notwithstanding that the car may have mored somedistance while the stone was falling;
and you ask for an explanation. A universal property or law of matter is inertia, by which all bodies at rest are disposed to remain at rest, and all bodies in motion are disposed to continuc in motion in the same straight line, unless some force acts upon them to change the state of rest or to change the direction or velocity of the motlon. The stone moving along with the car continues this motion simply becamse there is nothing to prevent it from doing so. In regard to the table, we think it was raised by the involuntary and unconscious contraction of your own muscles and those of your absociata, while you supposed that you were holding it down.
B. B. H., of Mass.-The letter of A. J. H. has gone to Che paper-makers, and we do not remember his full name.
C. C., of Mass.-'Take a solution of nitro-muriate of gold (gold dissolved in a mixture of acquafortis and murintic acid) and add to a gill of it a pint of ether or alcohol, then immerse your
copper chnin in it for about 15 minutes, when it will be coated with a film of gold. The copper must be perfectly cleanand free from oxyd, grease or dirt, or it will not take on the gold.
J. G., of Ind.-Our Pbiladelphia correspondent's idea of saving steam by compression was this:-When all the steam is in from the Doiler it mull a stam eng valve and the piston head rith steam which does no work, thus watting it. Noir, if this is filled by steam compressed from the previousstroke to a density corresponding with that in the boiler, when the steam first begins to enter the cylinder, it will begin to axert its full power on the piston, and the compressed steam will exert a forco in expanding equal to that required to compress it.
F. G. D., of N. Y.-Your assignment, to hold good against a subsequent purclaser, should ber recorded in the Patent Office within three months from the date of execution. An assignment holds good against the seller for any length of time, whethe person, and the second purchaser should get his assignment on record at the Patent Office, the first purchaser would be deprived of his legal rights under his assignment, and his only remedy would be to recover damages against the person from whom he purchased
for fraud, in selling the eame property to another which he had convesed to him.
E T. Q., of N. H.-In regard to planets falling together, the several principles which you cite are undoubtedly correct, and they would settle the point as sou suplose, were the earth held by falls as well as the pebble or the sun, as the power drawing the two bodies together exerta the same force on each, and as the inertia to be overcome is proportioned to the mass, is it not plain that the greater motion-in other worda, the greater velocity - must $_{\text {st }}$ be imperted to the amaller bods.
M. S., of S. C.-We advise you to employ sand for the bedding of your horsesinstead of straw. We believesand to be E. G. W., of Mass.-You will find a description of the method of makingliquid quartzand dental paste for teeth in anothe column.
J. M., of Cal.-We have never seen Liebig's "goldomof gold. The only sure way of doing this is by assaying it.
C. B., of Ohio.-You can use a cast iron mold for cast ing iron fn, if yousmoke theinside, but wrought iron forms the best mold for such castings.
C. \& I., of N. Y.-If you had detailed experiments with the soluble glass, they would have been valuable as new informa ation; but the same information which you communicate was pub lished on page 70, Vol. XIV. (old series), of the Scientifio Aner CAN.
W. D. F., of Texas.-If you wish to obtain some seed from the PatentOffice, write to Hon. Thomas G. Clemson, Wash lagton, D. C.
M. A., of Maine.-A model of the size you specify would be received atthe Putent Office. You can send it to us with the . D. P of Conn.-In Vol. I. (old scries) of the traction engine so recent as you imagine.
G. C., of Oxford.-We do not know of any machine capableof dressing the fingers commonly used in grain cradles. It dion aborious work
D. B. W., of L. I.-A strip of copper and a strip of zine, united together by a copper wire, form a simple galvanic battery
W. R. S., of Pa.-Your battery, which has an outer zinc cell, containing sulphuric acid, and an inner porous cup containlng nitric acid, in whlch is placed the negative strlp of platina, is called Groves', afer its inventor, Profesor Grove, of London. Silver
plated articles, by the galvanic process, are rendered bright by rut plated articles, by the galvanic process, are rendere
bing their surfaces with a common burnishing tool.
J. H. A., of Mich.-A durable mucilage is made of roasted starch. Oil of cloves hasa preservalive power inany of th
Aqua Regia, of N. Y.-We have seen gold 24 carat fine.
L. W. R. B., of S. C.-Asphaltum does make a solid and durable cement for brick walls in damp places. It is exten sively used for that purpose in this city. You can get it of Rey
nolde, Devoe \& Pratt, No. 106 Fnlton-street, this city. They hav nolds, Devoe \& Pratt, No. 106 Fnlton-street, this city. They hav
two qualities--one at seven cents and the other at four cente pe pound.
W. J. L., of N. Y.-If you have any works on astron omy whichasertthat the sun completes thecircle of the ecliptic in in a siderial year. You will find on page 200 of the present roluse of the Sourninio Averions, directions for constrocting a very simpla apparatus which will make this matter all plain to you
C. C. P., of Ohio.-You can give any depth of black walnut stain to wood by using decoctions of logwood of different degrees of strength. The finishing of furniture in the best styl ing afer varnishing.
S. S., of Va.-There is no work published in this countrg containing colored plates for paintersand others, illustrating the解
A. G., of Zornhoff:-We have no American work that would be altogether instructive to you on sawmille. The back volumes of the SCuENTiPIC Anerican contain more useful in forms
tion on circular and other sawmills than any work extant. tioa $\mathcal{G}$ Y
F. G., of N. Y.-Patents are granted on trade-marks as well as on other ornamental designs. The government fee for a
design patent is $\$ 15$. The specifications for such patents are prepared at the office of this paper.
W. R., of Pa.-Articles that are silver-plated by ${ }^{-t}$ the electrotype process have a dull, frosted surface, which is resdered
bright anerwards by rubbing the surface with a common surnish ling tool, slightly moisted with wate
R. F. W., of C. W.-Practically, we have no doubt that a piston rod is at rest for a brief apaceof time on the dead point, though, if the machinery were absolutely perfect, it would not be space of time," but say it would be ar 's for an manaly. Ilim may be infinitely long, as in fact it is, but it cannot be infinitely
D. J. T., of Miss.-Some plaster-of-paris mixed with lac varnish will make a quick-drying and water-proof cement for leather, but it will not adhero long. No very adhesive cement with which we are acquainted, will dry immediately afer it is pu on. India-rubber dissolved in naphtha, and made into a proper consistency with Paris white, may suit sourpurpose. Let ue hear from you regarding the pegging machine-how it operates, and how much work it can do.
W. B., of Ohio, asks as follows:-"Suppose A owns the patent for a certain drain plow, and B geta a machine that in finges A's patent, and C employs $B$ to cut some drains forhim, and pays B a certain price perrod. Can A hold C liable for dama
ges, or must he look to B alone for damages o" Answer.-A mus ges, or must he look to $B$ alone
look to $B$, alnne, for damages.
S. A., of Va .-Glycerine is sold in all the druggists stores in this city, but most of it comes from London. Therei one manufactory in Philadelphia, where a very pure article is ceats for a pint of it.
H. K., of Minn.-The stone which you send ns is agate. Some agates of a fine quality are ranked among the precious stones, but this specimen is simply colored quartz and is of no
value whatever. We abail, bowever, keep it for a while, subject to your order.
M. L. C., of Conn.-To make vinegar from alcohol, you must use spongy illatinum, not the clear metal. Place th platinum in a glass jar, and introduce the alcohol in drops, so as to fall on a saucer containing the platinum, when slow combustio will soon kike place, and the vapor which condenses on the glas will be pure acellic acia. The alohol ahould be heated to 90 Fah. Great quantities of acetic acid used to be manufactured in thi manner in $G$
J. T., of Ill-You can make copal varnish quick drying if yon use litharge, sugar of lead or sulphate of zinc in the boiled oil which youemploy with the gum copal. Uuless your var nish is laid on in several coats, and each thoroughly dried, it will not take a good polish. You can polish any kind of rood highly without any varnish at all, by rubbing the surface with a smoot piece of cork and some oil. Gum shell-lac, dissolved ial C. C. P., of Ohio.-The metal which you send us is iron. If you found it in a little yellow cubeit was the bi-sulphuret
of iron; that ia, a combiuation of sulphur and iron in the proportion of iron; that ia, a combination of sulphur and iron in the proportion
of $2 x$ ounces of iron to 82 ounces of sulphur (Fe S2).
W. H. R., of N. Y.-We think that a water tank made in the usual way with bricks, and lined with cement, willanswer for containing hot water quite well, if it is well made. The wate should be heated in a separatevesscl; and when the cement is new it will make the hot water rather hard for washing purposes.
J. E. S., of N. Y.-It is the oxyd of zinc which is cm ployed for painting. If you give two coats of whitc lead, then the third and last of white zinc on the outside, von will have a very durable and beautifully painted cottage. We arc of opinion
the zinc is not so durablefor the prime coating as white lead. W. A., of N. J.-Plaster-of-paris made into a paste, with a weak solution of alum and some marble dust added, is a good plaster for marble blocks, \&c. A solution of glue, marbmang com position marble ornaments.

## Money Received

At the Scientific American Office on account of Paten Ofice business, for the week ending Saturday, April 21, 1860:E. P., of N. Y., $\$ 30$; J. R.I., of N. Y., $\$ 55$; D. F., of Pa, $\$ 10$ D. N., of N. Y., $\$ 30 ;$ A. D., of N. J. $\$ 30$; G. P. McC., of Pa.
 Conn., $\$ 30 ;$ J. F., of N. Y., $\$ 30$; J. S., of Wis., $\$ 25 ;$ J. H. D., nf
$\mathrm{Ky.} \$$,60 ; II. P., of N. J., $\$ 25$ C. A. JI., of Mich., $\$ 30$; D. G. P., Ky., $\$ 60$; II. P., of N. J., $\$ 25$; C. A. JI., of Mich., $\$ 30$; D. G. P.,
of N. J., $\$ 20$; J. C., of N. Y., $\$ 33$ : J. C., of Mase., $\$ 25$; J. B. f N. J., $\$ 20 ;$ J. C., of N. Y., $\$ 33:$ J. C., of Mass., $£ 25 ;$ J. B
McC., of Iowa, $\$ 25 ;$ N. M., of Ohio, $\$ 30$; J. M., of Pa., $\$ 30 ; \mathbf{H}$ $\mathrm{Mc}_{\text {. }}$ of $\mathrm{N} . \mathrm{Y} ., \$ 30$; P. L. W., of Pa., $\$ 30$; J. P. A., of Ga, $\$ 30$; H. G., of Mass, $\$ 25$; J. S., of N. Y., $\$ 100$; D. G., of $\mathrm{Ml} ., \$ 25$; J.
G., of La., $\$ 100$; T. W.. of R. I., $\$ 12$; S. J. S., of N. Y., $\$ 15$;


 $\$ 25$; G. C., of III., $\$ 25$; J. E. M., of N. Y., $\$ 55$; D. C. J., of L. I.,
$\$ 30$; A. P. P., of Conn., $\$ 181$; II. M. W., of Conn., $\$ 25$; F. \& P. of Ind., $\$ 25 ;$ H. W., of N. Y., $\$ 30 ;$ J. C. P., of Maine, $\$ 20$; J. \&
S., of Ala., $\$ 25 ;$ T. H. B., of Mo., $\$ 35 ;$ J. A., of N. Y., $\$ 30$; R. C. B., of N. Y., $\$ 35$; C. J. W., of Fla., $\$ 30$; $\boldsymbol{\Lambda}$. J. G., of Muse,
$\$ 30$; W. B., Jr., of N. Y., $\$ 275$; W. N. M., of Mass., $\$ 30$; S. L. A. $\$ 30$; W. B., Jr., of N. Y., $\$ 275$; W. N. M., of Mase., $\$ 30$; S. L. A.,
of N. Y., $\$ 2 \mathrm{j}$; D. T., of Mace., $\$ 30$; J. M. B., of Conn., $\$ 30$; W. R of N. Y., $\$ 2 \overline{5}$; D. T., of Maєs., $\$ 50$; J. M. B., of Conn., $\$ 30$; W. R.,
of Ohio, $\$ 30$; L. K., of Conn., $\$ 25$; O. F., of Ind., $\$ 30$; R. B., of N $\mathbf{Y}_{\text {. }} \$ 30$; O. K., of $\mathbf{N .} \mathbf{Y}$., $\$ 30$.
Specifications, drawings and models belonging to par fies with the following initials have been forwarded to the Paten Office during the week ending Saturday, April 21, 1860:-
B. \& B., of Mass. (two cases) ; J. C., of Mass.; A. K., of Ill.; F P., of Ind.; J. C., of N. Y.; J. S., of Wis.; O. L. \& J. W. T., of N. Y.; A. J. G., of Mass.; J. E. M., of N. Y.; C. \& B., of Iowa; J. I.; G. W of Iowa; G. F., of Ill.; W. McA., of Mich.; T. W., of Mass; R. \& S., of Ala.; D. H., of N. Y.; J. G. W., of Ga.; J. R. I.; of N. Y.; J. I. I., of In.; R. C. B., of N. Y.; W. F., of Mass.; D. G. P., of N. J.; H. M. W., of Conn; P. G. McC., of Iowa; J.
H. H., of Vt.; D. S., of N. Y.; H. G., of Mas.; J. D., of N. Y.; H. H., of Vt.; D. S., of N. Y.; H. G., of Mas.; J. D., of N. Y.;
H. P., of N. J.; D. G., of III.; P. M., of Conn. (three cases) ; D. H. P., of N. J.; D. G., of III.; P. M., of Conn. (three cases) ; D.
T., of Mass.; E. \& K., of France; S. L. A., of N. Y.; L. K., of Conn.; T., of Mass.; E. \& K.. of France ; S. L.
C. \& G., of France ; J. C. P., of Mainc.

## Literary Notices.

The War in Nicaragua-written by General William Walker. Published by S. H. Gortzel \& Co., Mobile, and No. 8 Warren-8treet, this city.
By the receipt, of this book, we perceive th
haired, drawling freebooter is still out of prison.
Hitchcock's Anatomy and Physiology-published Thy Ivison, Phinney \& Co. Nos. 48 and 50 Walker-street, this city. This is no doubt one of the best class books for teaching the import-
ant subects of which litreats. It Ie complled and prepared by the
venerable Dr. Hitchcock, of Amherst College, and his son, Edward
Hitchcock, Jr., M.D.


Wells' Lawyer and United States Form Boof Published by John G. Wells, corner of Park-row and Beekman


