the voyage being 13,405 miles; the average speed was 275 miles per day. The demand for crinoline wire in Sheffield has greatly fallen off, but the best quality of steel wire for ropes is in good request. The metal market is quiet, and almost without change in prices.

## WEEKLY SUMMARY OF INVENTIONS.

The following inventious are among the most useful improvements patented this week. For the claims to these inventions the reader is referred to the official list on another page:-

## HYDRAULIC MOTOR

This motor consists of a cylindrical chamber with two gates, a central hollow shaft and a snail-shaped piston. The shaft is divided by a horizontal partition; so is the snail-shaped piston. The shaft has a supply opening above the partition, and a discharge or exhaust opening below the partition. The piston has an opening at front above its partition and one at back below the partition. The water under pressure passes down the hollow shaft through the piston, and, by its direct pressure, moves the piston round. As soon as the force of the water is spent, one of the gates opens and the dead water exhausts through the back of the piston and passes off through the lower part of the hollow shaft. We have seen this motor in operation, and we think it a most excellent contrivance ; it being portable and capable of being attached to the hydrant pipes of buildings, and operated by the water flowing through the same. As a small power for single lathes and like machines it will be found very convenient, and as a power for pressing tobacco its advantage will be very great. Wm. Kennish, of London, England, is the patentee.
knitting machine.
This inventiow consists in so applying and operating the frame needles, rib needles and sinkers of a ribbed knitting machine, that after the sinkers have given the loops to the frame needles, the rib-needles take the loops directly from the sinkers at the back of the frame needles. It also consists in the construction of the sinkers of a ribbed knitting machine with recesses in whtch the needles are arranged to operate, and across which the loops are extended in such a manner that the needles have their operation greatly facilitated. It also consists in the novel construction of, and mode of applying, pressers in combination with bearded needles, whereby they are caused to operate upon the needles in a proper manner by the movements of the needles themselves. It also consists in a novel mode of applying and operating two fingers in combination with the selvedge needles of straight knitting machine to aid them in forming the selvedge. And it further consists in an improved mode of driving the yarn guide of a straight knitting machine. The credit of this contrivance is due to John Chantrell, of Bristol, Conn.

## knitting machine.

The knitting of hosiery with properly-shaped heels and toes by the continuous operation of a machine without stopping to adjust the work, is something which has often been attempted by many ingenious mechanics, but we believe no machine has ever been made to do it successfully, up to the time of the invention of the improvements of W. H. McNary, which form the subject of the claims which appear in this week's list. These improvements, which are of comparatively simple character, effect this desirable result in a very perfect manner. The claims explain the nature of the invention as well as can be done without an illustrated description. The patent is assigned to the McNary Knitting Machine Company, whose office is No. 5, University Building, this city.
This invention has been also patented in several European countries, through the Scientific American Patent Agency.

## FLOCK-CUTTING MACHINE.

The object of this invention is obtain a machine that will operate rapidly in cutting flock, perform the work perfectly, and at the same time be capable of being so adjusted as to admit of the ready discharge of foreign substances without injuring the cutting device. The tock from which flock is prepared, being most generally, the refuse from cloth and woolen manufactures, is liable to contain foreign substances such as nails, bits of metal and the like, which are a great detriment to the cutters of a flock-cutting machine, and hitherto the keeping of the cutters of such machines in perfect order, has been
attended with considerable expense which is obviated by this invention. The inventors of this improvement are J. Tilton and E. Ritson, of Sanbornton, N. H.

## molding machine.

The object of this invention is to obtain a machine by which green-sand molds for casting pipes may be expe ditiously formed, and the pipes cast in a vertical position, the difficulty hitherto attending the shrinking and bend ing of the cross-bar avoided, and the mold enabled to be formed at its ends with male and female screws, so that the pipes may be cast with the same. The invention is applicable to the forming of molds for cylindrical, polygonal, elliptical or other shaped pipes. This improvement was designed by William Doyle, of Albany, N. Y. grain-weighler.
This invention consists first, in hanging the scale or receiver which is to contain the grain while it is being weighed, on one end of the scale beam in such a manner that it will tilt and discharge its contents at a given time, and then return to its former position for receiving another supply; and it consists in suspending said receiver or weighing box to the scale by a weighted lever having its fulcrum or center of motion in the end oî this beam; and in adjusting the weight on the lever so as to give a slight preponderance to this end of the lever, and thereby insure the return of the receiver after dischargits contents;-to $\approx$ proper position for receiving and holding the grain flowing from the hopper, until the desired weight is attained, when it will be instantly discharged by the preponderance of the opposite end of the weighted arm. It consists, second, in combining with a weigh ing box suspended on the end of a weighted arm, having its fulcrum in the end of a scale beam, a novel device for op.erating and regulating the flow of grain from a hopper to the weighing box, whereby the discharge and cut-off may be automatically effected, and with an upward movement of the gates or valves which are operated, so as to close alternately in supplying the grain from the hopper to the receiver, and opened simultaneously by the return of the receiver after the discharge of the measured quantity. It consists, third, in combiang in mon manner with the two-throated hoppers and the manner of affecting the cut-off of the grain from the hopper to the receiver, a secondary weight which is brought into action after the first discharge is cut off, so as to allow the second discharge to charge and tilt the receiver, thus obtaining a nicety and accuracy in the filling and discharging of the receiver at the instant the required weight is attained. The device has been patented to Lovett Eames, of Kalamazoo, Mich. paint-mixer.
The nature of this invention consists in a novel arrangement of fixed knives or blades in the bottom of a tub with revolving knives, or knife-edged arms, fixed to a rotary arm, driven by suitable machinery, whereby the paint will be thrown towards the circumference of the tub and receive a thorough mixing action from the arms, and at the same time the movable and fixed arms will be arranged in such relation to each other that they will pass each other in pairs at equal distances from the center of the shaft, and diametrically opposite each other, and not pass between any two pairs in the tub at the same time, and under the same circumstances. The object of this invention is to give to the semi-liquid contents of the tub a thorough mixing by the action of the fixed and revolving arms, at the same time to equalize the operation of the revolving arms by preventing more than two of these from passing each other at the same moment. The patentees of this invention are C. W. Brown and G. W. Banker, of Boston, Mass.
molding shot and shell.
This invention consists in the employment for adjusting the pattern of a mold-board with a central aperture to receive a circular projection on the under side of the pattern, and with a circular flange on one, and a rim on the other side, to fit on one side over a rim turned to the end of one of the semi-flasks, and on the other into a flange projecting from the end of the other semi-flask, said rim and flange in the semi-flasks being at the same time so arranged that they serve as guides for the flasks when the same are connected; and this invention consists also in combining with the flanged end of the lower semi-flasks a cross-shaped gage with a half circular recess for the purpose of adjusting the core. The credit of this invention is due to David Huestis, of Cold Spring N. Y.


ISSUED FROM THE UNITED STATES PATENT OFFICE
[Reported Officially for the Sotentifio Amritioni.]
Pamphlets giving full particulars of the mode of applying fo
patents, size of model required, and
much other in formatein patents, size of model required, and much other information use
fitl to inventors, may be mird gratis by addresping MUNN \& CO.
Publishers of the Sorratric Amprcan, New York.

28,245.-Wm. Clare Anderson, of St. Louis, Mo., for an Improvement in Lifting Jacks:
I claim the rack-bar, B, and the lever, C, the latter being provide with an oblong slot, e, through which and the uper parting of the bsar
B, the fulcrum pin, D, passes, the rack-bar being fittedin a stand B, the fulcrum pin,, , passes, the rack-bar being fitterd in a stand, A
or equivalent device, to operate as and for the purpose set forth.
I further claim, in connection with the lever, C , and rack-bar, B arranged as shon', the lugs or projections, g, attached to the lev
and at such a distance from the bar, $B$, to operate as specified.
[This invention consists in the use of a hollow stand or upright,prodided with a base and a pawl at its upper end, and having a rack ba the upper part of which a slow which it is ap plied, and to remain permanent after raising the article by the weight of the article alone; no other adjustment of the lever being required.]
28,246.-Luther Atwood, of New York City, for an Im-
provement in Construction of Apparatus for the Re-distillation of Coal Oils:
I claim a separating chamber, constructed substnntially as de
scribed, when arranged and combined with a volatile oil still and scribed, when arranged and combined with a volatile oil still and
condenser, in such manner as to gradually separate and condens the heavier parts of the oleaginous vapors formed, and continuousl return them the the stil, for a further acrion od pass them over to the
same time preserve the lighter vapors, and
condenser, substantially as described, and substantially for the pur oses set forth
28,247.-I. A. Benedict, of West Springfield, Pa., and G. W. Cummings, of Conneaut, Ohio, for an Im provement in Ditching Machines
W, in claim first, The arrangement of the sleeve, $G$, sliding shaft pinions, in the manner and forthe purpose described.
Second, We claim the adjusting puidea, OO', and gides, $\mathbf{P P}^{\prime}$, in
combination with the movable buckets, M, when arranged and oper-
and combination with the movable buckets, th, when arranged and oper
ating conjointly in the manner and for the purpose get forth.
Third, We claim the spring and lever, in eombtration with the revolv.
effied.
28,248. -Dana Bickford, of Westerly, R. I., for an Improved Compressed Air Ensine
I claim one or more reservoirs for connpressed alr, with movable or any similar power, for the ppurpose of keeping upa uniform pres
sure upon the contained air, combined with an engine, of aay form sure upon the containe air, combined with an engine, of any form
for the
purpose of propelling vehicles or machinery, the whole con

28,249.-J. S. Black, of Bloomfield, Ky., for an Im provement in Bee-hives:
I claim the combination nnd arrangement of the bee palace con-
structed as described with the moth trap constructed as described for
tho purpose set forth. [This invention co
entral or main chambers, two constructing the bee palace with two central or main chambers, two side gums orchambers, two top cham
bers and a moth trap. The top and side chambors serve for the bees to commence their work in, and the main chambers serve for them to extend their operations. The moth trap serves to catch all the moth or enemies of the bees, which a e caused to fall down from the main work chambers by the attack of the bees. This appears to be a good palace for the queen and her co-workers.]
28,250.-Wm. N. Brown, of Camden, N. J., for an Improwement in Vapor Burners
I claim the oombination of a heat conductor, with a non-conductor In hydro-carbon vapor burners, for the purpose of securing to the ploying a metallic heat conciutor, encased in a non comer, ofting or set forth in the above given description of my invention, and in the
drawings hereunto annexed, or any other mode substantially the drawings hereunto annexed, or any other mode
same, and which will produce the intended effect.
28,251. -Andrew Buchanan, of Jersey City, N. J., fo an Improved Arrangement for Balancing Slide Valves of Steam Engines:
I claim, first, The combination with a slide valve, to which the
steam is admitted from the under side of a valve, A, arranged with
 as and for the purpose specified. Second, The arrangement of the with lege, $e$, and fitting on Second, The arrangement of the cap, $F$, with lege, e , and fitting on
a seat, , around the hollow sten, D.
A, constructed and operating subetantially as and for the purpose deThibed. The arrangement and combination of the valve, A, mova-
Third, B , cap, $\mathbf{F}$, and regulating pins, $f$, constructed and operating ble seat, B, cap, F, and regulating ping, f, constructed and operating
substantialv as and for the purpore eet forth.
Fourth, The arrangement of the pipe. G, communicating with the staurth, The arrangement of the pipe. $G$, communicating with the
stem for the purpese described.
[The object of this invention is to regulate the pressure of the steam on the upper and on the underside of a slide valve, according to the difference between that portion of the under surface of said slide Valve which is exposed to the pressure of the steam and the entire upper surface of the valve; and this device is more particularly apboiler acts on the underside, thereby producing a tendency to lif up boiler acts on the underside, thereby producing
the valve and cause a leakage of the steam.]
28,252.-A. L. Currier, of Washington, D. C., for an Improved Saw-set:
I claim, first, The construction and arrangement of a series of rotating punches and their corresponding matrices working together, time, thereng of sawpe aleting the operation, by passing it once through
the operation. the operation
Second, Iclaim the upright guides, the adjustable glide, B, to re-
gulate the degree of set in asws, in comblnation with the rotating gulate the degree of set in saws, in combinatio
punches, as described, for the purposes specified.

28,253.-H. L. Castile, of Memphis, Tenn., for an Improvement in Axle Boxes:
I chim the employment of the con--sided block, G having the.base
resting upon the journal, B, in combination with hee inclined sided sided seat, A , as shown and de scribed, so that a space, J, will be left betwen the upper part of the block $G$, and the seatt A, A,
ofthe block will be lateralls compressed, all as set forth.
[This invention consists in preparing suitable blocks of any wood, by boiling them in oil until the sap or juices of the wood are all driven out and the pores are filled with oil; and, in this condition, the blocks
are cut pyramidal or wedge-shaped, or what might be termed the are cut pyramidal or wedge-shaped, or what might be termed the
frustrum of a quadrangular pyramid, with their bases curved out, so as to conform to the periphery of the journal and with the fibers of the wood, all perpendicular to the axis of the axle.]
28,254.-A. W. Chase, of Ann Harbor, Mich., for an
Improvement in Invalid Bedsteads:
I claim the peculiar shape or construction of the bed posts adapting
them to the open or false mortises, with the head and footboards them to the open or false mortises, with the head and footboards boltt so keep them in position, or allow any desired change, substan-
tially as and for the purposes set forth.
28,255.-John Chantrell, of Bristol, Conn., for an Im-
provement in Knitting Machines:
I claim, first, So apply ing and operating the frame needles, the rib
needles and the sinkers of a ribbed knitting machine, in combination needles sad the sinkers of a ribbed knitting machine, in combination
with each other, so that after the sinkers have given the loops to the
frame needles the rib needles take their loops directly from the Fith eacn other, so that after he siles take their loops directly from tho
frame needles the the
sinkers at the back of the frame needles, substantially aspect fed. needles are arranged
 stantially as set forth.
Fourth, I claim a applying the selvedge fingers, and operating them
by means of an arm attached to a slider which operates the needles, by means of an arm attached to a slider which operates the needles,
substantially in the manner specified.
Fifth, I claim combining the bar which carries the yarn guide with Fifth, I claim combining the bar which carries the yarn guide with
a slider which operates the needles by means of grooved blookg, a slider which operates the needles by means of grooved blooks,
Q $Q^{\prime}$ and epring catches, $R R^{\prime}$, acted upon by stationary wedges, $y^{\prime}$,
substantially as described.
28,256.-J. E. Cheney, of Lowell, Mass., for an Improvement in Machinery for Winding Laps:
I claim the method of winding a lap lightly upon a small wood
roller, disconnected from any weight or motion, otherw ise than that given to it by the rollers between which it revolves, by the combina-
tion of the three rollers, or their equivalent, arranged substantially
as and for the purpose described.
28,257. -Orville Choate, of Morrisville, Vt., for an Improved Mop Wringer:
I claim the arrangement of the togglo levers, a a b b, within the
uprights or frame, $\mathrm{B}^{\prime}$, in combination with the pressing rollers, $\underset{\text { scribed. }}{\mathbf{C} \text { c and }}$
[This invention consists in applying to any ordinary portable pail or bucket for holding witer, two rollers suitably arranged over the same, and hung and arranged so as to be opened or closed, or so as to recede or approach each other by operating a foot treadle connected
with them; the object being to squeeze or press the water out of with them; the object being to squeeze or press the water out of
mops-such as are used for washing windows, floors; \&c..-atthe same time, the bucket will serve to receive the water pressed out, and to contain the water to be used for washing purposes.]
28,208-T. G. Clayton, of Washington, 由. C., for an
Improvement in Vapor Lamps:
Improvement in Vapor Lamps:
I claim the converting of the fluid into gas or vapor below the il-
luminating flame by means of the combined generator and burner, B and the jets of burning vapor below said burner and generator, the
whole operating as described and for the purposes set forth. whole operating as described and for the purposes set forth.
Second, The burner and generator, $B$, having the gas -cha
 making an oxyyydrogen flame,
erator and burner, as set forth.
28,259 -J. B. Cornell and Wm. W. Cornell, of New York City, for an Improvement in Metallic Rolling Shutters:
We claim preventing the longitudinal slititing of the individual
slats of

We also claim giving the metallic bosses upon the face of ourim-
proved rolling shutter, such a shape that they will prevent the edges
of the slats of said shatter from being forcibly separated from each proved rolling shutter, such a sh
of the slats of said shatter from
other, substantially as set forth.
28,260.-John Dougherty, of Cold Spring, N. Y., for an Improvement in Molding:
I claim the temple block, M, combined with a hollow shaft, B, and
screw shaft. $G$, and operated substantially in the manner and for the
purposes set forth. purposes set forth.
[This invention is an improvement in arranging the templets
that are used in loam-molding for casting large work-such, for that are used in loam-molding for casting large work-such, for
instance, as steam cylinders, large pipes, fly-wheels, and such instance, as steam cylinders, large pipes, fly-wheels, and such
molds as cannot be conveniently and accurately made in the ordinary method of molding. The method of molding such work in loam is at present attended with many difficulties familiar to those skilled in the art; and it is the special object of this invention $t$ o remedy this. The invention consists in a novel arrangement of gearing, combined with the central spindle carrying the templet, for giving to said templet or templets, of any description, according to the kind of work to be performed, a vertical reciproc
motion, or a vertical motion combined with a circular motion.]
28,261. - Wm. Doyle, of Albany, N. Y., for an Improvement in Molding Iron Pipes:
I claim, frrst, The core bar, $K$, made in sections or with joints, $S$,
in combination with a sand mold, when the sections of said bar are constructed with flanches, $t$, for supporting the sand, substantiall
as described. Second, The arrangement of the bars, $p$ p, of the flask with rings,
q and the points, $\mathrm{L} M \mathrm{P}$, substantially as shown, to admit of the
ready adjustment of the same, as set forth. Third, The emplogment or une of the stationary screw, N, and
cylinder,
and the titted on the being provided with an internal screv thread Fourth, The employment operate ase, for and for the purpose spesecified forth. of the

sciew thread to receive the screw, $S$.
Fif th, The cutter, $H$, attached
a
 cast, and used in connection with the screw and gearing, or other
proper mechanism, for the purpose of forcing the cutter down through
the flask concentrically with the core bar, $K$. the flask concentrically with the core bar, $K$.
Sisther, The guide rod, I , and fited within the slinder or
tube, $G$, and provided with a socket, n , substautialy as shown, for

28,262.-Lovett Eames, of Kalamazoo, Mich., for an Improvement in Automatic Grain-weighing Ma chines:
I claim the combination of the weighted pendulum lever, F , with
the scale beam, F , and weighing box, $\mathbf{D}$, in the manner and for the
purpose substantiall I also claim the combination, in the manner shown and described of the gate, $\mathrm{C}^{\prime} \mathrm{C}^{\prime}$, with the double-discharging bottomed hopper, $\mathbf{B}$,

28,263.-Louis Engler and E. F. Krauss, of Paris, France, for an Improved Insulator for Electrodes:
 apening, a, the eides, ce cof whoee throat proiect in
onterior of the lining, substantially as described.
28,264.-J. W. Evans, of Forsyth, Ga., for an Improved Combination of Shovel and Tongs:
I claim the combination and arrangement of the shank of the shovel,
c, with the axis of the lea,
n. the le latch,
g , and spring, $h$, and the
28,265.-E. N. Foote, of Saratoga Springs, N. Y., for an Improved Filling for the Soles of Boots and Shoes:
I Claim the filling of boots and shoses, made and ingerted substan-
tially as I have described, and for the purposes set forth. 28,266.-J. Fraser, of Rochester, N. Y., for an Improved Clothes-frame:
standard, A, by means of and arrangement of the arms, $D$, with the stantially in the means of the crank pivot, gor or its equip yalent, bub.
and for the purposes shown and deecribed. 28,267.-Thomas Fry, of Brooklyn, N. Y., for an Im-
provement in Hanging Window Sashes:
If claim, first, Arranging that characero of window eaghes which can


 and weather strip, substantially as set forth.
[This invention allows of a window sash being turned down to and held firmly in a horizontal or inclined position, so that they
may be washed on both sides with great convenience from the inside of the room. The sashes are hung on right and left screw pivots, which bind the sash laterally as they are turned down and release them as they are turned up. The pivots are attached to sliding strips, which rise and fall with the sash. Theese strips and the sash are locked in ${ }^{\circ}$ a vertical position by means of sliding pieces which spring out from the framewhen the sashes are turned up, and close the weather spaces. This is a most excellent contrivance. A patent tor it has been applied for in England.
28,268.-F. H. Furniss, of Cleveland, Ohio, for an Im
provement in Railroad Jacks:
claim the arrangement of the sleeve, $F$, with the arm $E$, and
ev, $\mathbf{B}$, nind standard, $\mathbf{A}$, in combination with the sliding jack frame When
Whed.
28,269.-Emerson Gaylord, of Chicopee, Mass., for an impro
claim a bayonet scabbard shaped and finished by the application

,270.- James Greenhalgh, Sr., of Pascoag, R. I., fo an Improvement in Harness Frames for Looms:
I claim the combination of the hollow heddle bars, A A A and the
rods, d in insertad within the esaid hats to eecure the loops at the ends of the ledderes, bubstautuaty aredescribed.
[This invention consists in a certain construction of the frames fo prevented catching against the next frames, or their headles, and the headles are kept stretched better than by the usual mode of secur ing them.]
27,271.-J. H. Haskell, of Baltimore, Md., for an Im proved Machine for Stretching Leather




 substantially as and for the purpose set porth.
28, 271.-C. F. Hitchings, of New York City, for an Im proved Boiler for Heating Buildings:
I claim, frrst, The water-jacketed chamber, B, in combination with
 Inth,
Seond, The diaphragm, $\mathbf{C}$, , formed by an indentation in the
nner shell, $f$, of the chamber, $\mathbf{B}$, or its equivalcont, for the purpose
fet forth. iner she
set forth.
28,273
8,273.-I. H. Hobbs, of Philadelphia, Pa., for an Improvement in Machines for Hoisting Persons, \&c., from one story in a building to another:
I claim the application to a building of any suitable kind, of either
single reciprocating frame, A or A



28, 274.-A. G. Holcomb, of New York City, for an Im-
provement in Telegraphic Instruments:
I claim, first, Producing an additional movement of the armature substantially ay aet forth.
Second, The arrangemento t the steel cores, ${ }^{i}$, and iron bush cores,
in combinition with the coils of the , in combination with the cons of the electromagnet.
8,275 .-James Holland, of Conshohocken, Pa., for an
proved Post Butt:
proved Post Butt:
I claim an earthenware post butt, made substantially as described,
o as to receive the bottom of the post entirely within

28,276. - Richard Hubbard, of Milton, Ind., for an Improved Bedstead Fastening:


28, 277.-David Huestis, of Cold Spring, N. Y., for an
Improvement in Molding Shot and Shells:
I claim, first, The emplogment for adousting the pattern of a mold-
boardion with
bination with the eentri- amperture,


28,278. - C. S. Irwin, of Madison, Ind., for an Improvement in the Construction of Machinery for Cleaning Starch:
I claim the rotating disk brugh, C, placed on the box or receiver, A,
in conection with the bed or plattorm, D. also placed on the box or in connection with the bed or platiform, Da, aliso placed on the box or
receiver, all being arranged as and for the purpose set forth.
[The object of this invention is to suppersede e the manual process [The object of this invention is to supersede the manual process he same for crust forms on the sides of the lamps in the preliminary drying process, and this crust has heretofore been removed by scraping with
knife, an operation which consumes considerable time and is a knife, an operation which
attended with much waste.]
28,279.-Z. L. Jacobs, of Hebron, Conn., for an Improvement in Screw Plates:
I claim, as an improved article of manufacture, a screw plate, pro-
Vided with changeable pivoted dies, $\mathrm{E}, \mathrm{sc}$,
and plate $A$, , stock, C , pins, N ,
28,280.-Pomeroy Johnson, of Whitney's Point, N. Y., for an Improvement in Felling Trees:
I claim the combination of the pole or scantling, B, provided with
a steel or proper metal point, a, the fixed pulley block or shieve, $D$ a steel or proper metal point, a, the fixed pulley block or shieve, D
and rope, C , with animal or other power attached; all being arranged
and applied substantially as and for the purpose set forth. and applied substantially as and for the purpose set forth.
[The object of this invention is to facilitate the felling of trees dispensing with much of the cutting or chopping operation, an the same time to place the falkig of the tree und the com ment and use of a pole or scantling provided with a metal point o and, and having a rope attached, which passes through a fixed pulley block, whereby, with the aid of a team or other power, th desired end is attained.]
28, 281.-M. M. Jones, of Morrisville, N. Y., for an Improvement in Cotton Presses:
I claim the particular arrangement and combination of mechanism


28, 282.-Wm. Kennish, of London, England, for an Improved Hydraulic Motor:
I claim a diaphragmed snail or other suitably shaped piston, $\mathbf{C}$
which has an opening in its face and another one in its back, in
combin ation with a dian
 pon ding gopenings
purposes set forth.
28,283.-Richard Ketchum, of South Dansville, N. Y. for an Improvement in Mowing and Reaping Machines:
I claim the combination of the cross-bar, $K$, having supporting d, for operation by the corrugated driving whe eeh , B, all arrangerged upon the axle, A, for actuatin
and for the purposes set fort
28,284.-W. A. Kirby, of Buffalo, N. Y., for an ImI claim, in combination with the rod and lifting wheel, the lever
and $\begin{aligned} & \text { rod, } \\ & x\end{aligned}$ with their attachmente, substantially as described, for th and rod, $x$, with their attachmente, substantially as described, for the
purnose of raising, lowering and holding the cutters at different 28,285.-F. L. Langley, of Troy, N. Y., for an Improved Shoemaker's Float
I claim constructing and arr nging the several parts of the
achine substantially as described whereby the rasp may remain movable upon upon its axis, or rigidly fixed there $n$, as may be re
quired, for the purposes set forth.
28,286.-J. P. Ledy and Wm. Boyers, of Mount Car
roll, Ill., for an Improved Apparatus for Breachy Cattle:
We claim the metallic sheath, A, in combination with the pad, $\mathbf{C}$
and clasp, D , constructed in the manner and for the purpose specl-
fied.
28,287.-George Little, of New York City, for an Improvement in Sewing Machines:
I claim the adaptation of a cylinder, piston, rod and valves to, and
onstituting a part of, a sewing machine, the whole combined, con structed, arranged and operating substantially as set forth.
28,288.-T. J. Mayall, of Roxbury, Mass., for an Im
provement in Machines for making Rubber Hose:
I claim, first, An organized machinc for the formation of spiral,
rubber or gutta percha hose or tubing, the same consisting essentially rubber or guta percha hose or tubing, the same consisting essentially
of a traveling carriage carrying the fabric of which the hose or tubing
is to be formed, and a reversible guide, to whiche such automatic motions are given, as to wind the said fabric in spiral layers upon Second, I claim the combinaton of the traveling carriage carrring
the fabric of which the hose is to be formed, and made to receive a the fabric of which the hose is to be formed, and made to receive a
reciprocating rectilinear motion, in any proper manner with the re-
versible guide, the two so operating together that the said guide shall be reversed in position as soon as the fabric is wound spirally in one
direction upon the mandel whereby the fabric fs fed along and
guided in two opposite direct whens upon the mandrel so as to form spiral layers crossing each other, as set forth.
Third, I claim the combination of the traveling carriage carrying
the supplying reel and the mandrel upon which the hose is to be
wound, as set forth.
28,289.-John McKellar, of Thomaston, Maine, for an Improvement in Beer Powders:
I claim the said composition or beer powder, made substantially as
described.
28,290.-W. H. McNary, of Brooklyn, N, Y., for an
Improvement in Knitting Machines:
H, claim, first, The threaded wheel, D, with its movable switch, $\mathrm{D}^{\prime}$, H, arplied substantially as described, in combination with the needle
ring, or other equivalent device carrying the needles, to produce the
rotary or traverse movement of the needles in either direction, as may be neeessare.
Second, The revolving and longitudinally moving studded cyllnder,
applied and combined with the movable switch wheel, by means of a orked lever, $G$, and revolving buttons, $h h^{\prime}$, or their equivalents, and operating substantially as described, for the purpose of shifting the
mitch as often as is desired to reverse the rotary or traverse movement of the needles.
Third, I claim the lating wheel with its adjustable arms, M MP
applied and operating substantlally as described, in combination with the needie ring and with suitable apparatus for throwing the studded
crinderinto gear with the main shaft for the purposoo regulating
the lenth of the complete circular portions of the wort Flonth, of claim complete circular portions of the work.
Fourth the the the studded cylinder, $H$, with the dis-
engaging apparatus, by which it is made to throw itself out of gear engaging apparatus, by which it is made to throwitself out of gear
with the main shaft when knitting all round the wh de series of the
needles is required to be resumed after knitting round a portion of the series only
Fifth, 1 claim combining the stitch hook bar, S2, with the main
haft, or otber rotary shaft, of the knitting ma hine, by means of one shaft, or other rotary shaft, of the knitting ma hine, by means of one
or more cranks Z Z, and controling the movementroduced by such
crank or cranks by means of a sloted arm, S', wroming on a fixed
cuide-pin 24, substantians of
 Sixth, I claim giving the stitch hook bar the necessary lateral move.
ment to complete the throwingoff of the loops from the needles and
to enable them to pass the needles as they desoend to take anothet
loop by means of the cams, $Z^{\prime}$ ' $Z^{\prime}$, at the sides of the wrists of its driving cranks, substantially as described.
Seventh. I claim combining the rockshaft which carries the thread
guides with thith whel D, by means of a fork, U4, or its
equivalent, substantially as and for the purpose describe 28,291.-George Millard, of Waterbury, Conn., for an Improved Chimney Cowl:
I claim the arrangement of the friction rollers, J , to run upon the
edge of flanch, B , in combination with the corvl, C , as and for the edge of flanch, $B$, in combinati
purposes shown and described.
[This invention consists in arranging an ordinary curved chimney cowl or cap on the chimnny top, so that it will be free to revolve by the action of the wind on a vane, and so that it will be securely at ached to the chimney so as not to be blown off; at the same tim he rain will be prevented from beating down the chimney flue]
28,292.-Harris Morse, of Columbia, Cal., for an Improvement in the Treatment of Snow or Ice, to Convert it into Large Blocks:
I claim the said process of treating snow or small pieces of ice, in
order to convert the same into large blocks or masses fit for preservaorder to convert the same i
tion and use, as described.
28,292.-S. D. Nelson, of Pittsburgh, Pa., for an Im provement in the Manufacture of Shovels:
I claim the shovel, as a new article of manufacture, having the
back strap imbedded in the back of the shovel blade, arranged and constructed as described, and for the purpose set forth.
28,294.-David Niven, of Rochester, N. Y., for an Improvement in Potato-diggers:
I claim suspending the grate, share and clearing wheel together
upon the axle by the supporting wheels, by means of the buils, $h$ h upon the axle by the supporting wheels, by means of the buils, h h, h ,
yoke, k, and axis of said cearing wheel, as described, or theirequiv-
al ents, in combination wi th a lever, E , so that the said grate share al ents, in combination wi tha a lever, E , so that the said grate, share
and clearing wheel may be continually graduated by the attendavt
to any depth, and adjusted to the undulations of the ground or raised
machine, as specified.
I also claim forming the upper surface of the circular concentric grate bars, , , with serrated edges, $m m$, in combination with the in
tervening teeth, $n \mathrm{n}$, of the clearing wheel, for the more effectual tervening teeth, n n, of the clearing wheel, for the more effectual
separation of the tubers from the earth, substantially as set forth. 28,295.-R. F. O'Brien, of Boonville, Mo., for an Improvement in the Construction of Flues:
I claim the metal base, B, formed of the bottom plate, a, sides, $b$ b,
and flanches $c$, appled to the timbers A A, as shown, and perfo-
rated at its bottom or corrugated to recelve and hold the plaster or
[This invention has for its object the building of brick flues or chimneys on the flooring timbers of buildings, without the dangeror liespecially designed for building flues orchimneys on the upper flooring timbers of buildiges, to receive a stove pipe from below.] 28,296.-Alanson Ordway, of Stratham, N. H., for an Improved Tweer: I claim the combination of the rotating circular grate, $C$, with the
horizontal sliding grate, E , and levers, D F, as and for the purpose
described.
[The object of this invention is to obtain a simple and economical tweer by which the blast from the bellows is placed under perfect control and its action upon the fire regulated as ooonson may re-
quire; the tweer also serving the purpose of a grate, to effect the disquire; the tweer also serving the purpose of

28,297.-S. W. Palmer and J. F. Palmer, of Auburn
N. Y., for an Improvement in Silk or Thread Reels:
We claim securing the slotted arms of a silk reel to the spindle on
which they turn in such a manner that they can be extended and contracted at pleasure and folded up parallel to each other, and so
that they can be rigidly secured to each other and to the spindle in that they can be rigidly secured to each other and to the spinde in
any desired position, by meann of a thumb-s.erew, without prevent-
ing the spindle from freely turning in its bear. $n$ js,
28,298.-J. G. Perry, of South Kingston, R. I., for an Improved in Sausage Machine:
I claim the combination of the sliding knives, D , with the cylin-
der, C , substantially as herein described and for the purpose set
forth. der, C,
forth.
28,299.-I. W. Pettibone, of Norfolk, Conn., for an Improvement in Vapor Lamps:
I claim the combination of the vapor valve at the mixing chamber
with a supplementary valve-the two being constructed and operawith a supplementary valve-the two being constructed and opera-
ting substantially a setforth.
I also clain the combinatio of the mixing chamber with an air I also clain the combinatio on of the mixing chamber with an air
tube or tubes, to deaden the whistling noise which generally accompanies such burners.
I also chime arrauging the air tube in such a manner with refer-
and ence to the mixing clamber of the vapor burner, that it can be re-
moved therefrom, to permit cleaning, substancially as herein set
forth. forth.
28,300.-G. B. Phillips, of Newark, N. J., for an Improved Wrench:
I claimga curved bar provided with a rack of teeth, in combination
with a scroll nut for traversing and holding the sliding jaw, as decribed for the purpose specified.
28,301.- W. C. Pitts, of Austin, Texas, for an Improvement in Seed Planters:
I claim the arrangement of the double hoppers, e f, double tubes
or ducts, B and single seed slide, do perating tosether in the
manner and for the purpose set forth and described.
28,302.- J. S. Pond, of Cleveland, Ohio, for an Improved Washing Machine:
I claim, first, The construction and arrangement of a compound
rubbing board, having a series of alternate ridges and rollers, to compress and rub at the same time, as described or the purposes
specified
Second, The compound rubbing board in combination with a fluted oller or its equivalent, as set forth.
28,303.-J. T. Price, of Rockville, Ind., for an Improved Sediment Collector for Steam Boilers
I claim the system of pipes, F G I, applied to a boiler in connec-
tion with a heater, D-the whole arranged substantially as described, or the purpose set forth.
[This invention cousists in a novel system of pipes applied to a biler of the fre-grate, for the purpose of collecting a bridge in the rear of the fire-grate, for he purpater and preventing its deposit in the boiler.]
28,304.-T. J. Price, of Industry, III., for an Improvement in the Construction of Evaporating Apparatuses:
I claim constructing evaporating pans with a series of dampers,
D D D D, inserted between the cross partitions, B B B , and
operated with a series of levers, $i$ i i $i$, subetantially s shown for operated with a series
i. pe purpose specified.

28,305.-A. F. Reeder, of Bloomington, Ill, for an Improvement in Rotary Engines:
I claim the engine constructed with a cylinder of the form describ-
ed, with a partition, I , with the induction ports in in its abutments

${ }^{\text {cribed. }}$
[This is a very ingenious and simple improvement in rotary en sines.]
28,306.-J. H. Rollins, of Wapello, Iowa, for an Improved Vapor Lamp:
I claim the combination, with
emovable, tlanched, screw bottom, a, and globe, I , so that the ge the wise shown and described.
[This invention relates to an improvement in that class of lamp which are designed for burning volatile hydro-carbons, and which aporize the fluid in a chamber distinct from, but connected with,
he fount, by the heat from the illuminating flame. The object of the fount, by the heat from the illuminating flame. The object of
the invention is to facilitate the cleaning of the lamp and also to pre vent a shade being cast by it, while permitting the use of a gles globe.]
28,307.-W. J. Sanderson and Sidney Stanton, of Sy-
racuse, N. Y., for an Improvement in Steam Boiler Feeders:
We claim the arrangement of a discharging valve constructed in boilers, A, solid float, B, within the boiler, balanced by a weight
without, and the steam whistle, $G$, connected with the balancing
beam, E, as describe d, when the val ve, $J$, operates as set forth, to rebeam, E, as describe when the val ve, J, operates as set forth, to re-
culate the amount of water in the boiler, and the whole constructed.
arranged and operated in combination, substantially as described.
28,309.-J. M. Scribner, of Middleburgh, N. Y., for an
Improvement in Lathes:
1 claim the arrangement of devices $\varepsilon$.s described, for traversing the
leg or article, cut to and from the cutter, and rotating it at the same ime by the mechanism described, or its equivalent, so as to cut or
form curves on the article so turned and $t$ aversed, substantially as
28,309.-Philander Shaw, of Boston, Mass., for an Im-
provement in the Method of Preparing and Mold
ing Wood into Dif erent Forms:
F claim the method or process of treating wood, consisting in com-
pressing it within molds and afterwards heating it while thus con-
Also the processure.
ine treating wood by impregnating it with steam
And resinous, oil $y$ or other water-proof matter and mineral or metal and resino as,
lic salts and preservative cheremicals and dyes, or any of these or
their substantial equivalents, prion'to, and in combination with, the

28,310.-Marvin Smith, of New Haven, Conn., for an
Improved Peach-parer:
I claim the combination, with the stationary hollow concave rail,
, standard, a, and fork, , of the sliting, hollow, concave rail,
tandard, d, fork, $F$, and spring, $o$, as and for the purpose shown and standard
described
28,311.-S. J. Smith, of New York City, for an Improved Nutcracker:
I claim the combination of the fixed and durvad nartion, a lever,
 [This invention consists in the employment of a cam lever that is acted upon by a coiled springarranged in such a relation to a curved fixed jaw and operated by a lever having an eccentric motion, that
two jaws will be obtained, one a curved and the other a straight one, two jaws will be obtained, one a curved and the other a straight one,
between which nuts of any ordinary size or kind may be placed and cracked with greater facility and with little power.]
28,312.-Lydia W. Stiles, of Brooklyn, Ohio, for an Improved Butter-worker :
I claim the special arrangement of the workers, $\mathbf{B} \mathrm{B}^{\prime}$, hinged to
the adjustable post, E. .5in combination wivh the revolviug bowl when 28,313.-Abraham Stoler and S. A. Sisson, of Bristol

Pa., for an Improvement in Harvesters:
We claim the arrancement of the caster wheel, $H$, with its frame
$G$, connected to cie
 purpose substantially as described.
We also claim thecombination and arrangement of the rod, $M$, and levers interposed between the caster wheel frame and pi voted shoe
S , for adjusting the cutting apparatus, substantially as described. 28,314.-A. M. Swain, of Lowel।, Mass., for an Improvement in Water Wheels:
I claim, first, The annular chamber, $I$, arranged substantially as shown, and provided with slots to rece, Ive the guides, e, when the
later are attached to the cylinder
Second, The arrangement of the purpose set forth. Second, The arrangement of the guides e, and cylinder, $J$, at
tached to curb, $B$, and chamber, forming the gate, when said parts
are arranged in relation to the wheel, $G$, substantially as and for the are arranged in relation to
purposes speified.
Third, The adjusting of the block, E, by means of the bar, b , and set screws, $c$ for the pur
for the wear of the step.
[The object of this invention is to obtain a simple and efficient horizontal water wheel-one that will have all its parts accessible for repairs and which will give the maximum power of varying heads with an economical use of the water.]
28,315.-R. A. Tilghman, of Philadelphia, Pa., for an into Fatty Acids and Glycerine:
I claim the process of decomposing fats into fatty acids and glyce-
rine by means of water at a lifgh temperature and pressure, either with or withou the presence of an alkali-those portionss when partly saturated with glycecrine.
2. Arranging the fat and water in Blallow layers so as to give an 2. Arranging the fat and water in siallow layers so as to give an
increased surface of permaneut contact betweent them.
3. Gausing the fat and water, arranged in shallow layers, to flow in opposite directions so as to bring fresh water in contact with the
partly-decomposed fat.
28,316.-Jeremiah Tilton, of Northfield, N. H., and
Edwin Riston, of Sanbornton, N. H., for an Im-
provement in Machinery for Cutting Flock
We claim the employment or use, in a flock-cutting machine, of
two cutters, II $J$, arranged substantially as shown, so that one cutter, tivo cutters,
H, will have a rotary motion and a vertical adjusting nnoveunent,
and the other cutter, the purposes set fort
28,317.- Malrice Vergnes, of New York City, for an Improvemement in the Construction of Voltaic Gas Batteries:
I claim the use, in gas batteries or combined acid and gas batteries, of pous platized coke, subtand
Iorthl also olaim the general arrangement of the whole battery or appa-
ratus, substautially as described.

28,318.-J. H. Wait, of Portsmouth, Ohio, for an Im provement in Mechanical Movements: I claim constructing a crank with an elongated wrist pin set obiiquely made to give any desired lenth of stroke or throw within the capa-
city of the crank, without retariang the moticu thereof, iu the man-
ner substantially as described.
28,319.-C. P. S. Wardwell, of Lake Village, N. H., for an Improved Swift. Ante-dated April 25, 1860: I I claim the spring, D, in combination with the jaw formed by lips,
28,320 C. O. West J R. Smith, J
Janney, R. Hunt, Amos Hatchett, D. W, George Janney, R. Hunt, Amos Hatchett, D. West, Eliel West and G. Garner, of Martinsville, Ohio for an Improvement in Ditching Machines:
We claim, first. The employment of the fin, M, in combination
with the inclined bottom, $I$, as and for the purpose shown and dewith the inclined bottom, $L_{\text {n }}$, as and for the purpose shown and de-
scribed.
Seco $d$, The combination of the rib, $e^{\prime}$, with the inclined bottom, B, as ard tor the purpose set forth.
Tustard, The employment af a hinged triangular beam, $A$, and ad-
jut combination with the plow as and for the purpose Fhivn and desclibed.
Fourth, The combination with the plow, the beam, A, and sled, $F$,
of the adjustable pivoted brace-rod, $K$, standard, $\bar{I}$, and front braceof the ad, justable pivoted brace-rod, K , standard, 1 , a
rod, $J$, as and for the putposes shown and described.
[This invention consists in an improved machine for forming ditches or trenches of any desirable width or depth, or having either perpendicular or inclined sides. The machine consists in a shovel plow peculiarly constructed, by which the earth, in the operation of digging, is thrown up and out from the ditch and away from its edges a sufficient distance to prevent its falling back again. The above claims will give an idea of the machine.]
28,321.-I. W. Wetmore, of Erie, Pa., for an Improvement in Railroad Chairs
I claim, first, The lip chair, $E$, formed for a longitudinal wedge
under the rails and fitting them exactly, because of the trimming under the rails and fitting them exactly, because of the trimming of
the web, u u, the upp er surface of the base of the chair being beveled Second, The wedge, $G$, passing between all the spikes except onel
and held in place under the joint by notches, $h$, catching the spike, $R$, 28,322.-J. M. Whitney, of Astoria, N. Y., for an Inproved Sash-fastener:
I claim, as an improved artic
I caim, as an improved article of manufacture, a window sash-
fastener composed of a plate, a, hinged noose strut, C , and a hinged
dog,
[This invention consists in arranging, in combination with a strut or band that is fastened to the meeting bar of the inner sash, a inged dog, which catches under a suitable noose in such a manner that the sam [in ] window
28,323. - Dudley Wood and Albert Byrington, of Byron, Ill., for an Improvement in Plows:
We claim the arrangement of the tubular beam, $A$, tubular stand-
ard $B$, secondary joint, $b$, and inside coupling bolts, a $a$, substantially
as described. 28,324.-C. W. Brown and G. W. Banker, of Boston Mass., assignors to G. W. Banker and G. O. Carpenter, of South Reading, Mass. for an Improve ment in Machines for Mixing Paint:
appeotuim the method of constructing and arranging the ${ }^{\text {mixing}}$ apparatus in s sucl, a way that the fixed arms in the tub shall be set so
as todescribe scrolls from the central tube, or center of the tub, and
arranged in such a relation to the parallel revolving arms that they as to describe scrolls from the central unbe, or center of the tub, and
arranged in such a relation to the parallel revolving arms that they
wil pass each other only in pairs, at nearly equal distances from the
axis of the spiner ine in the manner described and represented, for
the purpose set forth.
8,325.-Patrick Mihan, of Boston, Mass., assignor to himself and M. A. Lane, of q harlestowll, Mass., for an Improvement in the Construction of Condensors of Stills.
I claim the combination of a conical mouth-piece, $\mathbf{F}$, of the supply
pipe, E , with the conical bottom, b , of the reservor, C , substan-
tially as and for the purpose specified.
[This invention consists in combining an annular steam chamber around a vessel that contains cold water, and the elevated conica bottom of said vessel with a conical receiving chamber, in such a manner that if said vessel is placed on a kettle containing boilin water, the steam arising from the latter, by coming in contact with the conical bottom and with the cold wallsof the steam chamber, con denses and collects in the conical receiving chamber, from which it is drawn by a suitable faucet; and it also consists in the arrange ment of a conical mouth-piece at the end of the supply pipe, in com Wination with the conical elevated bottom of the reservoir, for the
purpose of spreading the cold water over all parts of said bottom, and purpose of spreading the cold water over all parts of said bottom, and
to enable it to act with the best possible effect in condensing the stean to enable it to act with the best possible effect in condensing the steam hat may come in contact with it.]
28,326. - Purches Miles, of New Haven, Conn., assignor to A. P. Plant, of Plantsville, Conn., for an Improved Bedstead Iu stenin!:
 thread, ${ }^{\prime}$, with $t$
purpose set forth.
[The object of this invention is to obtain a lock joint or fastening by which the ralls and posts of bedsteads, or other two similar part to be connected, may be drawn firmly together in close contact and locked by a dovetail ; the locking of the dovetail and the drawing of the parts together being simultaneously per
ment of $\varepsilon$ lever or the turning of a shaft.]
28, 327.-J. H. Parker (assignor to E. H. Ashcroft), of Bos on, Mass., for an Improved Hand Drill: I claim the arrangement of the spring clutch with the drill-carrier
and its lever, and within, so as to be protected by the sleeve or cap,
, substantially as specified.
28,328.-J. H. Parker (assignor to E. H. Ashcroft), of Boston, Mass., for an Improved Hand Drill:
I claim my improved hand drill, as constructed, not only with the
pplication of a male screw, $G$, and a concentric oil-holder or tubu-
ar cap, $L$, directly to and so as to proiect ar can, $L$, directly to, and so as to project from, the drilll-carrier, $A$,
ut with the tubular $\varepsilon$ ank of the female screw exteded directly but with the tubular \& iank of the female screw extended directly
from the pivot, F , or a handie, K , intervening between the two, as
described
described.
I a also clain connecting the chambers, M N, by one or more pas-
sages, $b$, separate from the female screw, that the oil may pass from one clamber into the other, under circumstances and for the purpose set forth
28,329.-Wm. C. Pitts (assignor to Wm. A. Pitts), of
Austin,
Austin, "Eexas, for an Improvement in Plows:
Ilaim the construction of the plow with double points with the
hole in the center, 0 that either end may be turned to the ground
and fastened to the stock or "helve" of the same, by the bolt the hole in the center, so that either end may be turned to the ground
and fastened to the stock or 'hel ve of the same, by the bolt through
the hole in the center, so that when one point wears outor breaks off the other can be turned down; also, the separate bar, 30 constructed
as to fit and sustain the plow, as specified.
And I her

28,330.-Ephraim Risssell, of Coatsville, Pa., assignor
to himself and J. S. Wiley, of Sadsbury, Pa., for
an Improvement in Seed Planters:

 28,331. - Edward Savage, of Cromwell, Conn., and H. S. North, of Middletown, Conn. (assignors to the

Savage Revolving Fire-arms Company, of Middle
town aforesaid), for an Improvement in Revolving Fire-arms:
We claiin placing the coiled spring which forces back the rotating
cylinder away fram the muzzees of the charge chamber, and covering

 dust from
with
descric bed

## 



 lunger, and connected with the said head by a tulcrum pin, $k$ and
with hene plunger by a cam-like slot, $b$, and pin, p, substantially as
[This invention conslsts in certain improvements in the revolve hich constitutes the subject of the patent granted to H. S. North on June 7,1856 .]
28,332.-Wm. Shields (assignor to Joseph Lockett and Robert Leake), of Manchester, England, for an Im
provement in Machines for Engraving Rollers, \&c.
Patented in England, Oct. 30, 1857:



28,333.-Emil Trittin (assignor to himself and J. A. Cummings), of Philadelphia, Pa., for an Improvement in Burners for Vapor Lamps:
I claim, frst, The tube, $A$, with its chamber, $\mathbf{C}$, and slotted top, a,
in combination with the stem, D , and the attac.3ment, E , or its equivalent; the whole being arranged substantially as and for the purpose
 arranged aüd opefating substantially as specified.
8,334.-Jedediah Weiss (assignor to himself and Chas Brodhead), of Bethlehem, Pa., for an Improvemen
in Telegraphic Machines:


 28,335 .-D. H. Williams, of Alleghany, Pa., assigno to himself and R. B. Fitts, of Philadelphia, Pa., to himself and R. B. Fitts, of Philadelphia, Pa.,
for an Improved Apparatus for the Combustion of for an Improved Apparatus for th:
I claim the use of steam under presurucce for the purpose of forcing



28,336.-T. T. Woodward, of South Reading, Mass. assignor to himself and Whiton, Browne \& Wheel
right, of Boston Mass., for an Improved Signal Apparatus:

 ceesfulli i $i$ nite the se
mechanical devioes
Sechand. Thearrangement of devices for rotating the apparatus and
ingiting the charges at the same time the same conssiting of the
spring tion igniting the clarges at at the same time the the same conspating of the
spring hamm mer and cam-grooved cylinder, c , both actuated, as de
scribed, by the rod.

## re-issues.

W. E. Kidd, of New York City, for an Improvement in Bonnet Frames. Patented April 13, 1858:
I claim making the tip of bonnet frames of two separate thickneses
of the fabric known as .cape net,"'by suljecting the samine, while in
 thicknesses at one and the same operation, substantially as de
scribed.
I alsoclaim making. the crown of bonnet frames of two separate
thicknesses of the fabric known as cape net, by subjecting the sume,
 required form to impart the required shape, and effect the union of
the two thicknesees at one and the same operation, substantially as


H. F. Knoderer and L. F. Knoderer, of Chillicothe, Ohio, for a Composition for Preventing Incrustation of Steam Boilers. Patented Jan. 3, 1860:
We claim the application of a conpound of alum, glie, wood-ashes
and wheat-bran, prepered and applied as specified, to pereventincrusand wheat-bran, prepared and appilied as specified, to prevent incrus-
atation on the interior of steane boirers and pipes, of whatever kind,
that
Samuel La Forge, of Cleveland, Ohio, for an Improvement in Waterproof Leather Goods. Patented Feb. 28, 1860:
I claim the article of manufacture named, prepared from the un-
dressed skin exposed to heat, coated with the charged rubber soludressed skin exposed to heat, eoated with the charged rubber solu
tion or compound, and then subjected to the vulcanizing process, as
set forth.
D. M. Mefford, of Jeffersonville, Ind., for an Improve ment in Corn Huskers. Patented Dec. 22, 1857: I claim the combination of husking rollers and peressure flap, oper
ating substantially as and for the purpose set forth.
Clark Tompkins and John Johnson, of Troy, N. Y., for an Improvement in Knitting Maehines. Patented
We clatm the apparatua
anison with the needle eclinder, as
manner wnd forthe purpose set forth.
We cllos claim revolvivit the
Ne clso claim revolving the shaping plates, $S$ and $C$, by a positiv motion with, and at the same evoloctty nastesh et anke-ap motion, sub-
tantially as deseribed and for the purnoses speifed. ADDITIONAL IMPROVEMENTS.
Mahlon Gregg, of Philadelphia, Pa., for an Improved Machine for Cutting Tenons on Spokes. Patented Feb. 9, 1858
I claim operating the carrier, B, aud bearer, C, upon the faceplate,

 | pose specified |
| :--- |
| Ialso claim | gether in relation to each other and the carrier, B, in the manner de

Josiah Lyman, of Lenox, Mass., for an Improved Pro tractor. Patented May 25, 1858
I claim, first, The arrangement of the several verniers, limbs, purposes set forth the peculiar arrangement of the sliding vernie
 ately, as the case may require
Third, Iclaim, as an impro
adjusting the several verniers of the scalt ese plate to their correspond
ing scales
M. Gibney, of New York City, for a Design for Spoon and Fork Handles.
Jas. Greer and R. I. King, of Dayton, Ohio, for a Design for a Stove.
H. S. Hubbell and T. H. Wood, of Buffalo, N. Y., tor Design for Stove Plates.
Jacob Resor, of Cincinnati, Ohio, for a Design for Stovès.
John Siddons and J. C. Hart, of Rochester, N. Y., for a Design for a Stove Plate.
Wm. W. Stevens (assignor to N. P. Richardson \& Co.), of Portland, Maine, for a Design for Parlor Stoves

Note.-In counting the above list of claims, we observe there were ninety-six patents issued for the week ending May 15th. Of this conducted through this office.

## Note8s luqgine

A. F. W., of C. W.-It will require no more fuel to run a steam engine at 150 revolutions per minute than 70 during ten hours, provided the entire work is equal. It requires about the 5 same amount of fuel to run an engine at 60 lbs . pressure as at will be a provided the expansion is properly conducted and ther higher speed, it is understood that less steam is employed at each revolution, but that the total quantity is the same for both speeds. G. S., of Ala. - We do not advise you to use lead pipes for conveying water for domestic purposes, as some of the metal mas be taken up in solution by the water, and thus poison the life that your yard and garden are 90 feet above your spring, and you wisi to convey the water from the latter 500 feet to the former, and ask "what proportion of the water can you get from the power of the water itself-can vou get a fall of from one to 12 feet ?" We do not understand your questions, because you hav not slated whether your spring has any fall or not. If it has a 12 feet through a three-inch tube, 500 feet long. If it has no fall it feet through a three-inch tube, 500 feet long. If it has no fall C. L., of C. W.-We have not seen the machine to which you refer, and cannot therefore give you the desired informW. H. B., of Conn.-We believe the British steame "Persia" has made the quickest eastward passage, and that the time was about 9 days 2 hours. The last passage of the American steamer "Vanderbilt" to New York, made in 9 days, 12 hours and 30 min borne is claimed as the quickest westward passage. It must be $i_{s}$ mu in mind, however, that the average time of passage "astwar bilt's" less than hat westward, and we think that the "Vas the "Persia's" eastward. The passage between Liverpool and St Johns, Newfoundland, has been made, we believe, within six days. See, also, an article on this subject in our present issue.
W. P. H. of Conn.-We have no means of ascertaining the moun machine-made hosiery manufactured in this coun try. There are many m?chins patented in this country, and on beel, which make men's nosiery (socks) with a properly sla been without a seam up the leg; but two machines have alvay from one to the ther Such mete fork B. Aiken, of this city. A company-called the McNary Knitting Machine Company-has just started, and has applied for patents on procine which makes the sock from beginning to end, with proper heel. James J. Wilson, of this city, is president or manager American which will rite a like likes, both American, which whil kno a sock like a bag or one end of a sausage sale, but whe the have been ared they resi bag form. There never has been a machine to knit ladies hosier with a properly shaped leg, without a seam up the leg; and we believe that if such a maching could be invented, it would be one of the most remunerative things ever got up. The English hosier manufacturers have long desired such a machine.
H. P., of Maine.-The velocity of water in a sluice or tunnel is in proportion to the perpendicular hight of the fall, not foot fall is 11.28 feet per second.
S. R., of N. Y.-Thirty-three thousand pounds of water falling one foot per minute exeits a force of one horse-power. Conquently, to calculate the horse-power which a water wheel would have if there were no waste, you multiply the number of pounds of feet which the water falls in passing through and divide the product by 33,000 . The power exerted by undershot breast-wheels ranges from, say 35 to about 60 per cent of the whole power of the water the remainder being lost in friction leakage, \&c. On pages 11 and 200 of the present volume of the Scientifio American, you will find full directions for bleaching wax.
G. M. H., of Maine.-There is no perfect fire-proof wash for shingles known to us, but the silicate of soda is an excellent partial one. As it will be difficult, however, for you to procure this solution, we advise you to use a wash composed of common lime, sulphate of zine, salt and skim milk. Use a pound of salt and the same weight of the sulphate of zinc to each bushel of lime, and to every gallon of the wash add a quart of the skimmed milk. Dimpfelrs bloweris a very good one for your purpose, id so as to prevent at the Novelty Works, this city. It
G. J. L., of N. H.-Electro-magnetism has been frequently suggested as a suitable agent for car-brakes, for the purpose of polarizing the wheels; it is not, therefore, patentable as a new application. You may, however, be able to secure a palentin this object. The machine to whieh you refer in the museum of this city is not a perpetual motion. If yon consider a wedge to be city, is not a perpetual motion. If you consider a wedge to be a inserted; but it is so different in its nature and application from the common lever, that it is justly held to be a separate " mechan. ical power," and the two should never be compared together.
J. Q., of N. Y.-It is impossible to keep copper tanks bright in which water-either cold or hot-is kept. The metal combines with a minute quantity of the oxygen in the water, and forms a thin film of the oxyd of copper on the surface; this is sometimes called "tarnish." The outside of copper kettles, exposed to a coal re, son ger wit known to us for keeping it bright.
W. R. McF., of Tenn.-Hot-air engines are unsuited for fire-engines, because they are too bulky in proportion to their power. Compact high-pressure steam engines are necessary for
running through the streets and exerting great force in ejecting the water.
J. G. L., of N. C.-By coating your cast iron pump with hot asphalt, and then allowing it to dry thoroughly, it will not
be liable to rust afterwards. The water pipes in our city are of be liable to rust afterwards. The water pipes in our city are of cast iron, and yet they do not communicate a peculiariron taste to
the water. Pipes made of tin will not be affected by the water in he water. Pipes made of tin will not be affected by the water in N. P., of Del.-Your method of plating with alloys of gold may be patentable, but the patent must be for the process. You will find a chapter on the reduction of alloys by the galvanic battery in "Smee's Electro-metallurgy." This author states that he had not been able to reduce a perfect reguline alloy; but he lays down the principles by which such deposits may be made.
F. R. R., of N. Y.-The dark-brown substance which the ouxd of appears to be a mixture of the oxyd of iron and the oxyd of alumina, and would make a cheap paint.
powder is apparently a mixture of "green marl sand."

## MONEY RECEIVED

At the Scientific American Office on account of Patent Office business, for the week ending Saturday, May 19, 1860 :J. Y. H., of Pa., $\$ 10$; C. C. H., of N. Y., $\$ 32$; W. L., of Mass., Mass., $\$ 25$; S. P. G., of Wis., $\$ 30$; J., of Mass., $\$ 25$; M. \& B., of Pa., $\$ 25$; W. A.S., of N. Y., $\$ 10$; D. G. G., of.L. I., $\$ 25$; W. A., C., a., $\$ 25$; W. A. S., of N. Y., $\$ 10$; D. G. G., of.L. I., $\$ 25$; W. A. C.,
of IIl., $\$ 100$; C. E. L. H., of Conn., $\$ 25$; G. W. C., of N. Y., $\$ 100$; J. K., of N. Y., $\$ 10$; S. Y., of Ala., $\$ 30$; D. \& H. W. W., of Pa., $\$ 30 ;$ J.
J., of Pa., $\$ 25$; J. S., of W1s. of Mich., $\$ 25$; J. S., of Wis., $\$ 25$; C. G. E., of Wis., $\$ 30$; G. W. B., of N. Y., $\$ 30$; W. H. A., of Iowa, $\$ 55$; G. C., of Pa., $\$ 300$; H. H. A., of Iowa, $\$ 25$; D. D. A., of Mass., $\$ 35$; J. F., of N. Y., $\$ 25$; C. M. Y.,
of N. Y. $\$ 30$; W. S. H., of Miss, $\$ 30$; D. of N. Y., $\$ 30$; W. S. H., of Miss., $\$ 30$; D. \& O., of Ohio, $\$ 20$; G. M., Ohio, $\$ 25$; G. K. H., of N. Y., $\$ 33$; H. H. H., of Ga., $\$ 25$; H. L., ., of N. Y., $\$ 30$. H. Ohio, $\$ 30$; McN. K. Co., of N. Y., $\$ 300$; C. A. L. L., of Mich., $\$ 25$; B. N. H., of Ill., $\$ 10 ;$ S. K., of Conn., $\$ 30$; F. A. H., of Mich., $\$ 35$; J. F. W., of La., $\$ 30$; J. M., of Mio, $\$ 22$; C. F. F., of Ind., $\$ 25$; F. D. L., of N. Y., $\$ 37$; E. B., of Ind., $\$ 20 ;$ P B., of Ohio, $\$ 35$; W. M., of Mass., $\$ 30$; II. N., of Pa., $\$ 25$; F. McM., of Fla., $\$ 35$; E. H., of Cal., $\$ 30$; T. \& C., of Ky., $\$ 55$; A. S.,
of N. Y., $\$ 30$; T. H., of Cal., $\$ 25 ;$ G. W. G., of Mass., $\$ 30 ;$ B. C, of N. Y., $\$ 3$, ; T. H., of Cal., $\$ 25$; G. W. G., of Mass., $\$ 30$; B. C.
C., of Ga., $\$ 30$; C. B. M., of Wis., $\$ 10$; H. A. H., of N. Y., $\$ 30 ;$ J. McD., of Ill., $\$ 60$; J. C. R.. of Pa., $\$ 30$; G. S. A., of N. Y., $\$ 250$ E. D., of Conn., $\$ 35$; L. J., of N. Y., $\$ 30 ;$ F. S., of III., $\$ 60 ;$ D. F S., of Ga., $\$ 25$; H. C. G., of III., $\$ 25$; J. K., of Ohio, $\$ 30$; W. T., of Conn., $\$ 30$; H. J. H., of II1., $\$ 35$; C. M., of N. J., $\$ 100$; J. I., of III., $\$ 25$; S. A. G., of N. Y., $\$ 35$; C. W., of Va., $\$ 30 ;$ M. K., of N. III., $\$ 25$; T. A. G., of IIl., $\$ 30$; L. D. L., of Ill., $\$ 30$, J. J. H.. H., of $\$ 25$; J. E. A. G., of Va., $\$ 35$; G. H. C., of Maine, $\$ 25$; S. B. L., of Pa., $\$ 30$.

Specifications, drawings and models belonging to parfies with the following initials have been forwarded to the Paten Office during the week ending San
G. H. C., of Maine; C. E. L. H., of Conm.; H. H. H., of Ga.; G.
M., of N. Y.; J. F., of N. Y.; T. D., of Ohio W. H. M., of N. Y.; J. F., of N. Y.; T. D., of Ohio ; W. H. L., of N. Y.; P.
\& B., of Ohio ; S. F. B., of Mass.; D. G. G., of L. I.; W. F., of L B., of Ohio; S. F. B., of Mass.; D. G. G.., of L. I.; W. F., of
Mass.; F. S., of In. (2 cases) ; J. M., of Mass.; S. K., of Ohio ; J. B. Mass.; F. S., of Ill. (2 cases) ; J. M., of Mass.; S. K., of Ohio; J. B.,
of Va.; M. \& B., of Mass.; R. S., of R. I.; H. N., of Pa.; J. J., of of Va.; M. \& B., of Mass.; R. G., of R. I.; H. N., of Pa.; J. J., of
Pa.; J. S., of Wis.; J. J. McD., of Ill. (2 cases) ; H. H. A., of Iowa Pa.; J. S., of Wis.; J. J. McD., of Ill. (2 cases) ; H. H. A., of Iowa.;
E. P. W., of N. Y.; J. H., of Pa.; C. C. H., of L. I.; F. L. L., of Mich.; R. A. W., of Pa.; S. A. G., of N. Y.; H. C. G., of Ill.; o. G. S., of Ga.; J. H., of II.; J. J. H., of N. Y.; J. G. A. G., of Va

