dawn grows gradually brighter, and on the 20th of THE HECKER AND WATERMAN EXPERIMENTS. March the peaks of ice are gilded with the first level rays of the six-months' day. The bringer of this long day continues to wind his spiral way upward, till he reaches his highest place on the 21st of June, and his annual course is completed.

THE MONITOR SYSTEM.

Mr. John Ericsson has written us a letter in which he positively refutes the statements that have anpeared in some of the daily papers, and which have been re-echoed abroad, concerning the inefficiency, cost, and general worthlessness of the monitor system.

Captain Ericsson states truly that we have been able to put a fleet of iron-clad ships afloat without one dollar of expense for experiments. The total cost of the monitor fleet now afloat is very little over \$12,000,000. The English experiments with the Armstrong breech-loader and other ordnance (which by late English advices appear to have been condemned), cost more money than this.

It is also claimed that the latest experience with these vessels at sea completely disproves the assertion that they are unseaworthy. The report that the monitors cannot use their guns in a sea-way, or open their ports is not correct. The mechanical arrangement provided to permit the ports to be opened can only be used on the turreted ships and not on broadside iron-clads. The Dictator can carry coal enough to go to St. Petersburgh, Russia, if necessary, and with 800 tuns of water in her coal-bunkers and ready for steam, her gun-wale is four feet above water.

Captain Ericsson concludes by saving that the European Powers are well aware of the value of the monitor system, and that two fleets of iron-clads, precisely like ours are now being built on the Baltic sea; one on the eastern and the other on the western slope.

WAGES PAID FOR SKILLED LABOR.

Workmen and laborers are now receiving comparatively high wages in this city, or what would have been high had the price of provisions, etc., remained at reasonable figures. As it is, the compensation is small, and we shall doubtless hear of interruptions until the prices are adjusted more equably. Even now there is discontent, and we advise all those workmen who have good steady employment to remain where they are, as there seems to be plenty of men here now in most branches of trade.

Machinists, vice hands, receive on an average \$2.70 per day of ten hours, overtime extra; metalturners, \$2.80; molders, \$2.80; coppersmiths, \$3; pattern-makers, \$2.80; blacksmiths, \$2.90; painters, \$2.25; carpenters, \$2.50; boiler-makers, \$2.75 to \$3; printers, on daily papers, consider it a poor night's work if they do not make \$5-their work being paid for by the 1000 ems-but the average pay by the week is \$16; conductors on our city cars receive \$2 for twelve hours' work, and there are too many applicants seeking for the places.

These prices, it will be remembered, are not the outside, but the average rates. Very many machinists receive \$3 and upwards, but they are extra good workmen. We have given the prices as they are paid in our large machine-shops.

REBEL IRON-CLADS.

The World publishes a long account of what it calls "a formidable rebel iron-clad;" said iron-clad, consisting of railroad iron, as usual, laid in tiers one after the other. It has somehow happened that the rebel iron-clads cannot find 'a favorable opportunity to sink our wooden vessels, and, notwithstanding their tremendous powers of offense, they prefer the certainty of safety in port to the certainty of being sunk if they venture to attack us. A fourth-rate wooden gun-boat (the Sassacus) recently drove one of these terrible iron-clads back to her dock, and, although we frequently hear of the existence of more of these dangerous crafts, we fortunately escape being sunk by them.

There are no formidable rebel iron-clads in existence, nor will there ever be, so long as railroad iron is used to plate them with.

In our last number we published an account of four series of experiments of 30 hours each, the steam being cut off at different points in the stroke. In that account we gave the most important elements in the experiments, but as intelligent engineers may like to know some of the other conditions, we complete this week the history of the experiments by a statement of all the observations which were not given in our last issue, together with the calculations of the fuel and water consumed, and work done per hour and ner minute.

The mean revolutions of the fan per minute during each 30-hours run were with-

%ths cut-off			68.45
ds cut-off.			68.4
1/2 cut-off	• • • • • • • • • • • •		68:34
4th cut-off		• • • • • • • • • • • • • • • • • • • •	68 41
he consumption of	fuel non	comare for	t of anot

surface per hour was with-

9·000

The pressure of steam in cylinder at point of cutoff was given last week; the mean pressure in the cylinder at end of stroke was with-

%ths cut-off. %ds cut-off. ½ cut-off. ¼th cu -off.	24.042
33ds cut-off	19.184
1/2 cut-off	18-170
¼th cu -off	14.846

The total horse-power developed by the engine per indicator, including overcoming back pressure against niston, was with-

ood, was wret	
%ths cut-off	
3 ds cut-off	 11.639
3% cut-off	 12:121
3ath cut-off	 11.682

The mean back pressure against the piston during its stroke in pounds, was with-

buoke, in pounds, was with	
%ths cut-off	4.05
%ds cut-off	4.87
2 cut-off	3.83
% cut-off. %th cut-off.	

The gross effective horse-power, per indicator, was

%tn8 cut-on	
%ths cut-off	
36 cut-off	
½th cut-off	
The net horse-power applied to fan was with-	
%ths cut-off. 8839 %ds cut-off. 8392	
3/ds cut-off8:392	
36 cut-off	
ath cut-off9049	
The pounds of feed-water consumed per hour,	per
total indicated horse-power, were with—	

The pounds of combustible consumed per hour, per

total indicated horse-power, were with-
 % ths cut-off
 5-52-7

 % ds cut-off
 4-822

 % cut-off
 4-309

Ath cut-off	4143
Temperature of feed water, with-	
%ths cut-off	107:15
ds cut-off.	107 15
th cut-off	104.42

Temperature of water discharged by the air-pump,

%ths cut-off	 	111.26
% cut-off	 	110-07
th cut-oft	 	

Vacuum in condenser in inches of mercury, per open gage, with—

Phono	facta	with	thons	nublished	loot mook	
ths	cut-off.				26·67 26·63 26·01	
36 Cut	-otl				26.53	
23ds C	ut-off				26.67	

These facts, with those published last week, will enable the lesson of this series of experiments to be fully understood. Next week we shall give the history in full of another series.

Sailing of the "Fire Queen."

On Saturday, July 9th, the splendid new steamer Fire Queen, Capt. Henry W. Johnson, commander, sailed from this port via St. Johns for Shanghai, China. Among the passengers was Mrs. Johnson, the commander's beautiful young wife, who, for a second time, accompanies her husband to the Chinese Empire. The Fire Queen is the fifth steamer built by Cant. Johnson for the Chinese trade, and she is a very superior first-class vessel, 300 feet in length. Her arrangements and decorations are superb, and if she reaches her destination in safety-of which there is but little doubt under her experienced commanderwe think she will astonish the natives of the Celestial Empire somewhat. The best wishes of the many friends of those on board attend them on their long

It is said that five hundred men are now hard at work on both ends of the Hoosac tunnel.

How to turn Greenbacks into Gold.—Send three dollars of them to this office and thus enjoy a year's subscription to the Scientific American. Ten to one that the information you thus obtain will result in bringing into your coffers, before the year is out, a hundred times more money in gold, than the amount of your first investment.

MESSRS. HURD & HOUGHTON, 401 Broadway, New York, have sent us a copy of a neatly-bound pamphlet containing the evidence given in the Chenango boiler explosion. Every engineer should send for a copy of the work, as it contains a great deal of information.



ISSUED FROM THE UNITED STATES PATENT-OFFICE FOR THE WEEK ENDING JULY 12, 1864.

Beported Officially for the Scientific American.

Pamphlets containing the Patent Laws and full particulars of the mode of applying for Letters Patent, specifying size of model required and much other information useful to inventors, may be had gratis by addressing MUNN & CO., Publishers of the Scientific AMERICAN, New York.

Process for treating Hair.-William Adamson,

Philadelphia, Pa.:

Philadelphia, Pa.:

I claim simultaneously drying and deodorizing the hair of hogs und other animals by subjecting it to the direct action of the products of combustion of coal or other fuel, substantially in the manner described.

ner described.

43,467.—Machine for Spinning and Reeling.—George Albright, Oskaloosa, Iowa:
I claim, first, The movable frame, B, carrying a series of spindles, C, in combination with the rising and failing clove-frame, G, reel, I, and with a recess in the top cross-bars, C, of the main frame, A, and pins, n, projecting from the front side of said main frame, all constructed and operating in the manner and for the purpose substantially as herein shown and described.

Second, the adjustable clasp, I, in combination with the rising and failing clove-frame, G, and spindle frame, B, construct d and operating in the manner and for the purpose substantially as set forth.

(This invantion consists in a move-pie frame containing a series

[This invention consists in a movable frame containining a series of spindles so arranged that it can be changed from a horizontal to a vertical position in combination with a vertically sliding clove frame and with a reel in such a manner that when such movable frame is brought in a horizontal position, the spindles are properly situated for spinning, and if the movable frame is brought in a vertical position, the spindles are properly situated for reeling.]

43,468.—Hydraulic Machine for washing Ore.—Joseph M. Allinwood, Timbuctoo, Cal.:
I claim, first, The insertion of the diaphragms or guides, inside of the pipe for preventing the water from forming a spiral column or stream at the instant of discharge; And secondly, The combination of the parts set forth accompanying this specification, constituting a new and improved machine.

ang this specineation, constituting a new and improved machine.

43,469.—Metallic Sole-plate for Boots and Shoes.—Francis W. Bacon, Jersey City, N. J., and Solon Dike, New York City:

We claim a corrugated steel or metal shank and plate with a counter turned up around the heel at any desirable height, and all from the same piece of metal as shown in Figs. 1 and 2.

from the same piece of metal as shown in Figs. 1 and 2.

43,470.—Cultivator.—Frank Barney.—Bloomington, Ill.: I claim the hand lever, H, with its swivel fulcrum, K, in connection with the crank shaft, G, binged rear standard, E, and swivel front standards, E, all constructed and operating in the manner and for the purpose substantially as herein specified.

43,471:—Valve Gear for Steam Engines.—Henry and Frederick J. L. Blandy, Zanesville, Ohio:

We claim the method of connecting the valve rod, a, with the eccuric strap, G, by means of the off-set arm, c, diagonal brace, I, and rod, H, forming a frame which is jointed to the end of the valve rod substantially as described and represented.

[This invention consists in an improved a transcement of the valve.]

[This invention consists in an improved arrangement of the valve shest and valve, and of the connections between the valve rod and eccentric, whereby the power to drive the valve is transmitted in a more direct manner. The invention is applicable with more especial advantage to horizontal engines on which the valves are on the top of the cylinder, in which case it dispenses with the rock shaft common-

-Sorghum Evaporator.-Caleb Bond, Richmond,

45,4%.—Corganian Despending Ind.:
I claim, first, The combination of the furnace, A, and the flues, D P_i , E E, one above the other with the dampers, a b c, and d d'd', by which the heat is thrown at will against both, either, or neither of the pans, or against a smaller or larger portion of the rear pan, and at the same time avoid or infringe upon the forward pan. Second, The vertically adjustable wooden rail, f, provided with hooks, P_i , in combination with the pan, G, as described for the purpose of attaching and operating a bag containing some clarifying materials.

[This invention relates to certain improvements in the means for regulating the draught and directing the heat in an apparatus for evaporating saccharine juices in a manner that either of the pans or both can be heated to any desired degree or cooled off at the pleasure of the operator, simply by changing the position of a few dampers and without increasing or diminishing the fire. It also relates to certain improved means for removing the scum and clarifying the juice.l

43,473.—Musical Demonstrating Board.—Wm. H. and Geo. W. Bowlsby, Monroe, Mich.:

We claim, first, The sliding-bars and scales, B B, with their attachments, c c, and d d, in combination with the enharmonic scale diagram, G.

cond, The movable note-pins, E, for the purpose set forth. hird, The combination of the said device with a book and bound it, as shown and described. ourth, The combination of all the devices for the purpose set

-Machine for filling Spools.-Wm. Breitenstein,

New YOR CITY:

I claim the guide or arm, R, arranged as described and operating in the manner, and for the purpose substantially as set forth.

I claim supporting the spindle, J, with its pulley, H, so as to be capable of being lifted upward when arranged in combination with the guide or arm, R, and acting together substantially in the manner and for the purpose specified.

43,475.—Artificial Fuel.—Wm. Budd and J. L. Husband,
Philadelphia, Pa.:
We claim the impregnating of corn-cobs with oil, as hereinbefore
more fully set forth.

43,476.—Steam Boiler.—Wm. Budd and J. E. Husband, Philadelphia, Pa.:

We claim the counter-draft combustion chamber, bloket-ports any opening in the nature thereof as counter-draft air holes such chamber and the bonnet base smoke pipe to form a count draft combustion chamber as hereinbefore more fully set forth.

43,477.—Turning Lathe for Wood-turning.—John Coleman, Argyle, N. Y.:

I claim, first, Arranging the knives, H' and H'', upon the pivoted bed-plates, O and O', as described, when said plates are operated by the hand-lev ers D and D', and the eccentrics, E.

Second, The combination of the pivoted bed-plates, O and O', with the eccentrics, E, which are operated by the levers, D and D', or their equivalents for the purpose set forth.

Third, Gaging the concentric action of the knives, H' and H''. by means of the set serves, D, apped through the tele-holts, c, substantially in the manner and for the purpose described.

tially in the manner and for the purpose described.

43,478.—Grain Separator.—Jacob Chum, Shelby, N. Y., and George A. Fisher, Alabama, N. Y.:

We claim, first, Cleaning or separating grain by means of two or more endless beits, substantially as shown.

Second, We claim mounting the belts in such a manner that they can be inclined to a greater of less angle, substantially in the manner shown, when used for the purpose herein set forth.

Third, In combination with the endless belts, B, I claim the reloving brush, D, when the parts are arranged to operate as and for the purpose above set forth.

43,479.—Sheet-metal Can.—Hiram A. Cram, Whitestone

3,473.—Sheet-metal Can.—Hiram A. Cram, wintestone. N. Y.:

I claim the combination of a flat metal disk or ring, A. provided with an annular flange, a, with the bottom of a sheet metallic can when the said disk or ring is so combined by means of the binding then the said disk or ring is so combined by means of the binding lescribed.

43,480.—Hay Press.—G. W. D. Culp, Allensville, Ind.:
I claim, first. The combination of the beater, D, working in inclined
ways, B b, with the box, A, in an inclined or horizontal position,
substantially as described and represented.
Seco. d. I claim an eccentric elliptical or other irregularly formed
drum or roller, E, employed in connection with beater, D, and ways,
B B, to apply an increasing power to elevate the beater, D, as explained.

anned.

3,481.—Mode of baling Hay and other Materials.—Edward Dorr, Rockford, ill.:

1 claim the mode of baling stalks and unmanufactured fibrous marials by winding the material progressively upon itself while under ressure, substantially as set forth.

I also claim the mode of forming ventilating openings in bales of alks, and unmanufactured fibrous materials, substantially as set rith.

forth.

43,482.—Machine for baling Hay and other Materials.—
Edward Doir, Rockford, Ill.:

I claim the combination of a compressing shaft, lateral confining heads, platform and springs, operating to compress hay, cotton, and similar materials into a bundle or bale, substantially as set forth. I also claim the combination of the preceding combination with a roller and springs operating to compress the material in the layer previous to its compression into the bundle or bale, substantially as set forth.

orious to its compression into the bundle or bale, substantially a forth.

also claim the combination of the first preceding combination in a conveyer, file whole operating substantially as set forth.

also daim the combination of the first preceding combination to the first preceding combination to a carriage fitted with dingers, so operating both the ma terial magathered and baled or bundled from the ground, substantially a soft.

set forth.

I also claim the combination of the first preceding combination with a carriage fitted with fingers and gathering methanism, operating substantially as set forth.

I also claim the construction of the compressing shaft in two parts tapering in opposite directions, substantially as set forth.

-Washing Machine.- William M. Doty, New

3,483.—Wasning Machine.— William M. Doty, New York City:

I claim the combination of the pivoted oscillating arms, B, inlined dash-board, D, removable hand lever, C, and stationary tub., all constructed and operating in the manner and for the purposes erein shown and described.

The object of this invention is a mechanism for washing which an be readily introduced into the stationary wash-tubs, which are usually made of marble or other suitable material and permanently fixed in those rooms or apartments in which the washing is to be a mplished; said mechanism being provided with a dash-board ich can be used for pounding or pressing the clothes, or which can used for pounding or pre be fastened in such a position that it can be conveniently used in place of the ordinary wash-board.]

43,484.—Variable Exhaust for Locomotives.—John Dykeman and John Bolton, Greenbush, N. Y.:

I claim the plates, C C C C, etc., fastened at their lower ends to the conical sockets, B, overlapping each other from a point near their attachment, and suificiently numerous to make them readily approx mate the shape of a frustum of a cone, without opening the joints in combination with the copps, E E, which by depression contract the nozzles, and by elevation admit of their expansion.

[The object of this invention is to provide for the contraction an enlargement of the exhaust outlets without breaking or changing the direction of the ascending column or columns of steam.]

43,485.-Fishing-line Reel.-Darwin Ellis, Waterbury.

Conn.:

I claim the combination of the elbow-shaped lever and its appendages, with the wheel, Fig. 4, and pinion e, when the whole is constructed, combined, and fitted to produce the desired results, substantially as herein described.

43,486.—Heel-fastening for Skates.—H. N. Gallagher, Geneva, N. Y.:
I claim the plate, b, provided with one or more clamping screws, s, and plates, a, in combination with the crescent plate, d, when they are constructed, arranged, and operate conjointly in the manner and for the purpose described.

43,487.—Corn Harvester.—B. M. Fowler, Brooklyn,

N. Y.:

I claim the employment or use of reciprocating scythes, E, in a sination with the crank axle, C, wheels, B B', track-clearers, F, ruck, A, constructed and operating in the manner and for the ose substantially as herein shown and described.

[This invention relates to certain improvements in that class of machines which serve to cut standing corn. The invention consists in the employment or use of reciprocating scythes secured to the rear cross-bar of a truck which rests on four wheels, from the axle of one pair of which motion is transmitted to the scythes by means of a crank, pitman, and balance-lever, or by any other suitable mechanism, in such a manner that in drawing said truck through a corn field, by the action of the scythes the corn is cut, and the oper tion of cutting corn can thus be effected with little exertion and in a

43,488.—Skate-fastening.—H. N. Gallagher, Geneva,

N. Y.: claim, first, Making the side clamps, B and C, self-adjusting, lat-l!, by pivoting them to the foot-piece, A, as set forth and for the pose described. econd. Providing the pivoted clamp, C, with several adjustments rally, substantially as shown and for the purpose specified.

43,489.—Fabric for the Manufacture of Enameled Collars, Cuffs, etc.—Henry E. Gibson, Camden, N. J.: 1 claim the material, substantially as set forth, and its exclusive use in the manufacture of enameled shirt collars and similar articles of dress.

43,490.—Watch Case.—Fayette S. Giles, New York City: Iclaim the bezil, e, and cap, f, combined with each other and with the case of the watch by means of the hinges, g h, block, i, and pivot, i, substantially as herein specified.

[This invention consists in .. cap and bezil hinged togeth tached to the case of the watch by means of a pivot upon which they are capable of rotating in planes perpendicular to the dial. whereby the use of a double-case can be dispensed with, and the case can be changed from a hunter to an open face, and vice versa, without detaching any of its parts.]

43,491.—Gas-pipe and Stair Rods.—Mitchel Gould, New-ark, N. J.: I claim, as an improved article of manufacture, a tube, constructed in the manner substantially as herein shown and described.

[This invention relates chiefly to the manufacture of ornamented or brass-covered tubes, for conducting gas. An ingot composed partly of brass and partly of iron is rolled and drawn into tubular form, the inner tube being composed of iron and the outer of brass party of brass and party of from is roused and drawn into thouse form, the inner tube being composed of iron and the outer of brass The claim describes the particular virtue of the improvement, which it is said, results in great economy in the manufacture.]

43,492.-Wood-turning Lathe.-Timothy Gray, Lowell

Mass.:

I claim the tool stocks, H and M, with cutters attached, a b and e, n combination with the squaring-down and cutting-off sutters, cand d, and adjustable nut, f, on the transverse screw, g, and stop, j, or their equivalents, substantially as described and for the purposes

enset form.

493.—Machine for mining Coal.—Wm. W. Grier and Robert H. Boyd, Hulton, Pa.:

6 claim, first, One or more series of rotating augers, constructed stantially as described, for the purpose of mining coal.

bond, We claim monuting the augers, D, in the sliding frame, n combination with the adjustable frame, B, substantially as de-

We claim adjusting the frame, B, by means of the hinged screw bolt, b, and sliding collar, d, or their equivalents, sub-

ools, c, screw bolt, b, and sliding collar, d, or their equivalents, subtantially as shown.

Fourth, We claim having the driving shaft, G, in the swinging rame, F, substantially as and for the purpose set forth.

Fifth, We claim the combination and arrangement of wheel, E, thaft, I, provided with its pinion, t, wheels, J and H, and rack, K, ubstantially as described.

Sixth, We also claim the combination of the spring, R, rack, K, and frame, B, substantially as and for the purpose set forth.

43,494.—Hoop Lock for Casks.—Thomas Hanvey, Elma, N. Y.:
I claim the above-described hood locks consisting a fail.

N. Y.:
claim the above-described hooplocks, consisting of the lock cast
A, wooden hoop, B, and wedge, C, when constructed substan
y as and for the purposes set forth.

43,495. - Clasp for Hoop Locks. - Thomas Hanvey, El-ma, N. Y.:

ma, N. Y.:
I claim, as an improved article of manufacture, a hoop clasp made of maleable iron, substantially as herein described.

43,496.—Washing Machine.—Giles M. Harris, Conesus Center, N. Y.:
I claim the bearings, fff, in combination.

Center, N. Y.:

I claim the bearings, ff, in combination with the rubber, D, and bed, C, so arranged that the said rubber may be adjusted to, or further from, said bed, substantially as herein described.

I also claim the strips, i, in combination with the bottom, B, rubber, D, and bed, C, and arranged in such a manner as to support the clothes, c, that are being washed, above the bottom of the receptacle to keep them free from dirt, and to direct the water to the center of the clothes, substantially as herein set forth.

I also claim the bearings, ff, strips, i I, rubber and bed, D C, inclined bottom, B, and boards, H H, the whole arranged, combined, and operating substantially as herein specified.

43,497 .- Percussion-cap Box .- Thomas Harvey, Balti-

40,497.—PURINSION—CAP DOA.—INDIMAS HAIVOJ, MORE, Md.:

I claim the employment of an annular cap-holder freely mo within a circular or cylindrical case, and provided on its interiface with teeth, ee as to be operated or revolved by an interior; substantially in the mannershown and described.

43,498.—Cooling-tub for Water and Beer.—Anthony Hanstetter Philadelphia, Pa.:
I claim the combination of the tub, A, the lar, c, and the circular plate, f, constructed and arranged substantially in the manner and for the purpose specified.

Portable Water-closet.—Enoch Hidden, New

43,499.—Portable Water-closet.—Enoch Hidden, New York City:
I claim, first, Providing a portable water-closet, having a sealing cover, with a hinged seat, sub-stantially as described.

Second, The combination with a portable water-closet of an extensible jointed fastening, which will admit of the seat being adjusted and also removed at pleasure, substantially as described.

Third, The combination of the locking lever with a portable water-closet, substantially as and for the purpose described.

Fourth. The arrangement of a handle, C, or its equivalent, with the cover of a water-closet thaving a hinged or adjustable annular seat above it, substantially as described.

Fifth, The vessel, A, which has its interior surface covered with enamel or other non-corrosive substance, and has a hinged sealing cover in combination with an adjustable seat, the whole constituting a portable water-closet, substantially as set forth.

43,500.—Harrow-teeth.—Eben N. Higley, Lake Vil-

lage, N. H.:
claim making harrow-teeth in sets of two or more teeth attached
he same stock, and pivoting the said stock to the harrow-frame,
stantially as and for the purpose herein specified.
also claim the webs, a a. on the harrow-teeth, for strengthening
m, arranged substantially as set forth.

43,501.—Lock.—George Hopson, Bridgeport, Conn.:
First, I claim, in combination with the shaft, B, and guard wheels D, of a dial-lock, the spurs, C and C', or either of them, so ar ranged as to rotate the tumblers thereby, and to retreat or sink into the shaft, substantially in the manner and for the purpose above specified.

specified.

Second, I claim the arrangement of the tube, K, relatively to the shaft, B, head, B3, and guard wheels, D, or their respective equivalents, as herein specified.

Third, I claim the series of guard wheels, D, with the differing notches, d1 d2, and the pins, O, arranged relatively to the ehaft, B, and spurs, C1 C2, so as to operate in the manner substantially as herein specified.

notches, dl d2, and the puns, v, and spurs, cl C2, so as to operate in the manner substantially herein specified.

Fourth, I claim, in a dial-lock, the within-described arrangement and form a grand wheel, lie in one and the same plane, for the purshed be terein specified. P, lie in one and the same plane, for the purshed by the lie of the purshed by the lie of the lie of

-Pump.-Benjamin J. C. Howe, Syracuse, N. Y. I claim the valve, d, and apertures, c' c', as described.

I also claim the combinations of the valves, h, and lever, m, in combination with a pump having a hollow piston rod, w, valve, d, ports, c c c, piston, b, rod, a, as shown and described.

ports, c.c.c., piston, p. rod., a, as snown and described.
43,503.—Window-shade Fixture.—F. J. B. Hubert, New York City:
I claim the rack-bar, C. provided with the pulley, B, and the rack, c, the latter having its teeth curved, forming parts of arcs of circles, in combination with the inclined wheel, D, having a coil or volute

thread, d. on its face, to gear into the rack, c. all arranged and an plied to the plate, A, and bar, B, substantially as and for the purp perein set forth.

This invention relates to a new and improved means for adjusting I has invention teraces to a new and improve means to adjusting the lever-pulley over which the roller-cord of the shade passes, where-by said cord may always be kept in a proper state of tension, to ensure the turning of the roller in order to raise and lower the shade.

43,504.—Safety Escutcheon for Locks.—Henry Hunger-ford, Brooklyn, N. Y.: I claim supporting and confining the movable blotting-plate, A, on the outer surface of the scutcheon-plate by means of the guides and grooves, b b, and thumb-screw, D, or its equivalent, all as set forth.

43.505.—Brick Machine.—Freeman Jacobie. Albany.

43,505.—Brick Machine.—Freeman Jacobie, Albany, N. Y.:
First, I claim the intermediate chamber, B', forming a vertical continuation of the horizontal or nearly horizontal chamber, B, and also communicating with the press-box, D, substantially in the manner and for the purpose described.

Second, The combination of the rotary discharger, C'e e', or its equivalent, with the intermediate chamber, B', substantially as and for the purpose herein set forth.

Third, The combination of the three boxes or chambers, B B' and D, communicating with each other, with the conveyer, C, and revolving discharger, C', all constructed and operating substantially as and for the purpose set forth.
Fourth, The adjustable hinged table, F, arranged beneath the press-box, D, and clay-box, B', substantially as and for the purpose set forth.

Fifth, The combination of the reciprocating follower, G, a platform, F, and press-box, D, constructed and operating substantially as described.

43,506.— Arsenical Soap.— Harry Jennings, Boston,

Mass.: MASS.:

I claim a combination of whale-oil soap, or other suitable soap, and arsenious acid, mixed in such proportions as to adapt the compound for the destructionor removal of vermin or impurities upon the skins of living animals.

[This invention consists in a composition of whale-oil soap and arsenical acid mixed together, with or without some coloring matter, such as venetian red, in such a manner that a soap is produced which can be used with advantage for the destruction of fleas and other parasitic insects which infect living animals, and that this soap when mixed with coloring matter can be readily distinguished from ordi-

43,507... Amalgamating Barrels.—James B. Johnson, San Francisco, Cal.: I claim, forming the outer shell of the amalgamating barrel or cylinder in several longitudinal sections, so that they may be easily taken apart and relined, substantially as and for the purpose de-scribed.

43,508.-Washing Machine.-H. P. Jorns, Davenport,

Iowa:
I claim a dasher, C, for a washing-machine, which is constructed with a regularly stepped and concave surface, in contradistinction to a flat fluted surface, substantially as described.

a flat fluted surface, substantially as described.

43,509.—Apparatus for clarifying Cane-juice.—W. A. Jordan, New Orleans, La.:

First, I claim the combination together of the stove, water-tank, purifying box, and juice-clarifying receptacle, in the manner and for the purpose herein shown and described.

Second, Passing the gas successively into a rain of water and a rain of cane juice. substantially in the manner and for the purpose herein shown and described.

Third, The employment of the spherically-shaped perforated covers, F J, to produce said rains, substantially in the manner herein shown and described.

Fourth, The combination of the wast-pipe, I, when constructed and operating as shown, withthe water-box, E, as and for the purpose set forth.

(Without an engraving it would be difficult to describe the invention more fully than the claims set it forth. The improvement appears to be one of value. Its object is to clarify the juice in a bett quicker and cheaper manner than heretofore; and in these points it appears to possess the elements necessary to success.

43,510.—Planing the Rim-bases of Guns.—Edward Kay-

43,510.—Planing the Rim-bases of Guns.—Edward Kaylor, Pittsburgh, Pa.:
I claim the mode herein-before described planing Irregular curved metallic surfaces by means of a revolving chuck, furnished with one or more cutters capable of adjustment in a straight line towards or from the center of the chuck, and whosecuting-points are caused automatically to move parallel to that portion of the curved surface which it is latended they shall plane, that is to say, towards or from the axis of said body, by means of curved groves which actuate the chuck arbor, through the instrumentality of the guide-pins adjusted therein, or their equivalents, substantially as described.
The use of the grooved the regular guide-pin or pins and adjustable representations of the groover which are guide-pin or pins and adjustable purpose of communicating the required curved motion to the purpose of communicating the required curved motion to the purpose of communicating the required curved motion to the purpose of communicating the required curved motion to the mode of planing around the "sight" masses and lock masses of guns, by giving to the gun an oscillating motion on front of a non-revolving cutter susceptible of motion to and from the gun by means of the trunions halt, v, fitman, w, and crank shaft, y, or their equivalents, in combination with the cutter-shaft susceptible of automatic horizontal motion, substantially as described.

43,511—Scale-beam.—Joel F. Keeler, Pittsburgh, Va.:

43,511—Scale-beam.—Joel F. Keeler, Pittsburgh, Va. : First, I claim the wrought-iron weighing-lever, constructed as decribed. Second, The combined main pivots when made as described. Third, I claim the construction of the main pivot-holder, m h, with he arrangement of the pivots therein, substantially as shown.

43,512.—Turning-lathe.—Folbert Kirst, Westfield, Mass.
Antedated July 6, 1864:
I claim the adjustable center, i, in combination with the jaws, aa'a', and set screws, m, when used for the purpose and in the manner herein described, and forming a part of a chuck for a turning lathe.

ing-lathe.

43,513.—Churn.—Patrick Killon, Mount Healthy, Ohio:
I claim making the dasher in two parts, B.B. with a separate rod,
33, to each, inclosed by the loose ring, c, so that the two parts may be
operated separately, in the manner described, or united and operated
as a single dasher, for the purpose herein set forth.

43,514.—Feeding Device for Sewing Machines.—W. A. Mack, Cleveland, Ohio:

Mack, Cleveland, Onto:
I claim the slides, E.F., and cap, H., in combination with the lever,
D, and rimmed wheel, C, when arranged and operating conjointly as
and for the purpose set forth.

43,515.—Roller Press for finishing Photographs, &c.— David Marshall, Pittsburg, Pa., and Benjamin Mar-

shall, Mariette, Ohio:

Iclaim, first, The use of a machine for finishing photographic pictures consisting of the combination of an upper roll and a lower roll or segment of a hollow cylinder so constructed as to be easily heated by the fame of a lamp or otherwise, substantially as for the purposes hereinbefore described.

Second. Asking either on both of the cylinder was a second.

hereinbefore described.

Second, waking either or both of the rolls in machines for finishing photographs slightly higher or of greater diameter at the edges man in the middle, so as to prevent the polished face of the lower roll being struck by the upper roll when the card is discharged, substantially as described.

Third, Chamfering down the edges of the body of the segment roll, so as to allow of the easy insertion of the photographic picture between the rolls, substantially as described.

43.516 — Process to wrocess.

A3,516.—Process for preserving Meats.—W. C. Marshall, New York City:
I claim, first, Expeding the meat to be preserved, previous to putting it up in packages, to a heavy pressure, substantially as and for the purpose berein specified.
Second, The press box, C, with its movable screw-top, D, follower, G, and hinged end, I, constructed and operating substantially as and for the purpose herein shown and described.

Third, The frame, L, applied in combination with the package, K, adpress-box, C, in the manner and for the purpose substantially as

43,517.—Water Elevator.—Wm. Meigs, Waynesville, Ohio:

Ohio:

I claim the curved bar, I, attached to the bucket, J, by a pivot, d, provided at its lower end with a valve, f, and having a pulley, H, attached to its upper end, undermeath which the rope, F, passes; all being arranged substantially as shown to cause the valve, f, to cover and close, under the gravity of the bucket and its contents, the discharges pout, K, of the bucket at the latter is elevated, and also to cause the valve, f, to open under the gravity of the bar, I, when the bucket, J, is suspended or held up free from the rope, F, as set forth. I (also claim the pins, g g, attached to the bucket, J, the notches, h, in the guides, L, and the adjustable inclined planes, N, attached to the latter, to operate substantially as and for the purpose specified.

in in the guices, D. in the adjustantially as and for the purpose ached to the latter, to operate substantially as and for the purpose pecified are claim in connection with the well curb, provided with a rising and falling bucket, a windlass having its drum arranged so a lostide longitudinally on its shaft while rotating with the latter, and the means substantially as herein described, keeping the bucket tope, f, in line with the fixed pulley, G, as set forth.

43,518.—Grinding Edge Tools.—L. D. McLelland, McGregor, Iowa:
I claim, first, The employment or use of the forked lever with its point fulcrum in combination with the cross-bar and clamp, for the purpose set forth as described.
Second, The adjustable cross-bar with its clamps, for the purpose set forth as described.

43,519.—Grain Shovel.—B. E. Miles, Washington, Ill.: Iolaim a grain shovel provided with a top or cover, substantially as and for the purpose herein set forth.

as and for the purpose herein set forth.

43,520. — Meat-mincing Machine. — Purches Miles, New York City:

I claim, first, A straight range of fingers or beaters on a revolving shaft in combination with stadonary cutters and with a spiral wing to feed the meat to the cutters, whereby the delivery of the meat from the machine is dependent upon the introduction of additional material to be cut, as set forth.

Second, I claim a series of stationary knives formed with curred cutting edges as set forth, in combination with a series of fingers passing between such cutters, whereby the meat is separated with a drawing cut, as specified.

Third, I claim a perforated detainer applied to a meat-mincer, substantially as specified to retain the meat until properly comminuted, as set forth.

43.521.—Bolt-heading Machine.—James Minter, Worces-

43.421.—Bolt-heading Machine.—James Minter, Worcester, Mass.:

I claim, first, Making the heads of the bolts by the squeezing action of heading dies, G G' G* G** H*, operating substantially as herein described.

Second, The heading dies, G G' G* G** H*, arranged in combination with each other and with the screws, d g* d* g**, substantially as herein specified, so that said dies can be readily adjusted to suit heads of different sizes.

Third. The spring dogs, ff' f* f** g** carriages, I I' I** I** M, with shoulders, i!*, and dies, G G' G* G** M*, in combination with the K-shaped piece, K, or its equivalent and with the foot lever, L, constructed and operating in the manner and for the purpose substantially as herein shown and described.

Fourth, The spring rod, j**, in combination with the elbow lever, N, dog, g**, vertical heading die, H*, and foot lever, L, constructed substantially as heren specified so that the dogs of the horizontal heading dies are allowed to drop into gear in advance of the dog g**, journal box, o, and vertical heading die, If*, constructed and operating as and for the purpose set forth.

Sixth, The hinged lever, O, and cam, P, in combination with the foot lever, L, and with it the several working parts of the machine have reached the desired position.

Seventh, The combination of the swivel arm, W, with the hand lever, R, and movable isw O' constructed.

position.

Seventh, The combination of the swivel arm, W, with the hand lever, R, and movable jaw, Q', constructed and operating substantially as and for the purpose shown and described.

43,522.—Propeller.—O. C. Phelps, New York City:
I claim, first, The employment or use in stern propellers for vessels, of an iron frame-work, arranged so as to support the rear end of the propeller shaft, and admit of the lateral movement of the same, substantially as described.

c, substantially as described.

cond. Connecting the steering chains with the rear end of the eller shaft, substantially as set forth. ind, The shaft or stern, K, when used in combination and coned with the propeller shaft, G, substantially as and for the purspecified.

Rock Drill.-John Phillips & Albert Tschop.

43,523.—Rock Drill.—John Phillips & Albert Tschop, Siddonsburg, Pa.:

We claim, drst, The adjustable frame, A, in combination with the adjustable prop or support, C, constructed and arranged as shown and described for the purpose of regulating the position of the frame, A, and drill, R, to bote cr drill in a vertical or in a more or less inclined position, as set forth.

Second. The combination of the endless belts, H, provided with the projection, m, the collar, r, on the drill-shaft, Q, the screw, Q, on shaft, N, and the warm wheel, P, on shaft, Q, all arranged in the sliding frame, E, to operate as and for the purpose herein set forth. Third, The strap, F, statched to the shiding frame, E, and fitted in a clamp, J, on the frame, A, in combination with the collar, u, on the shaft, Q, arranged in relation with the lower cross-piece, t, of the frame, E, to operate as and for the purpose set forth.

Fourth, Therack, M, on the frame, E, in combination with the adjustable or sliding purion, 0, on the shaft, K, for the purpose of elevating the frame, E, as set forth.

43,524.—Pianoforte Action.—Frederick Pistorias, Chi-

43,524.—Pianoforte Action.—Frederick Pistorias, Chicago, Ill.:
I claim, first, Adapting the action of a "square" or "square grand" planoforte, by means substantially as described, to operate with the hammer or hammers, squarely and simultaneously upon the strings and produce a vertical, uniform and simultaneously upon the strings and produce a vertical, uniform and simultaneously upon the strings and produce a vertical, uniform and simultaneously upon the strings and produce a vertical, uniform and simultaneous vibration theory, and stated the hammer action may be at different angles to the keys and upon bearings independent thereof, substantially as set forth
Second, So adapting the action of a square planoforte and the support thereof, that the keys, in may be applied indirectly to the action in such manner that the entire key-board or any one or more of the keys may be readily removed and replaced at pleasure, without disturbing the action, or the action removed without disturbing the keys, substantially in the manner described.

Third, Adapting the hammer or the damper movements to operate in conjunction with counter keys, b, and independent removable keys, i, substantially as described.

Fourth, The adaptation of counter keys, b, independent removable keys, i, and independent frame, C, for application to a square plano, in the manner substantially as described and for the purpose set forth.

Fith, The horizontal and independent action supporting frame, C,

in the manner substantially as described and for the purpose set forth.
Fifth, The horizontal and independent action supporting frame, C, when constructed so as to be adapted for use with a square plano, in combination with the removable key-board, G, substantially as and fortithe purpose set forth.
Sixth, The arrangement of the hammers, a', in such relation to an independent action, and the strings of a square planoforte, that said hammers operate squarely and simultaneously upon the strings and each hammer that is acted upon, substantially as described.
Seventh, The arrangement of the adjustable pads, j, with the independent action, for the purpose of regulating the amount of movement of the jacks upon the hammer butts, in the manner described.
Eighth, Arranging the damper crank or lever, H, upon frame, C', directly over and parallel to the counter-key, b, substantially as described.

scribed.

Ninth, Applying the hammer check, c. to the hammer ruler or back rail, E, and operating said check part; by the counter, k b, and partly by its own gravity, substantially as described.

Tenth, Acapting the action of a "square" or "square grand" pianoforte, to operate when arranged at different angles to the keys and upon bearings independent thereof, substantially in the manner

berein described.

43,525.—Harvester.—J. R. Pressey, Dubuque county, Iowa, M. A. Wheaton, Suisan City, Cal., and David Sheets, Pike county, Mo.:

We claim the combination of the wheel, D, toothed rim, F', lever, J', rollers, E' E', guides, g g, secondary lever, j, connecting rods, 11, and sickle, I', all constructed, arranged and operating in the manner and for the purposes herein specified.

[This invention consists, first, in an improved means for operating

taining to the grain or grass wheel, the manner of adapting the same to the machine. The object of the invention is to obtain a means by which the sickle may be operated with less friction than ulual, and the machine rendered capable of being turned with greater facility, and one in which the draught will be materially di-

43,526.-Pocket Tobacco Pipe.-Philip C. Rowe, Boston,

Mass.:

I claim a tobacco pipe constructed with double walls to form two chambers communicating with each other by means of one or more perforations, c'c', in combination with a draught tube, 0, a stem, D, and an opening or collar provider with a plug or stopper, F, all arranged substantially as herein set forth.

Tranger substantiary as interest set form.

(This invention relates to a new and improved tobacco-pipe, designed to be carried in the pocket while in use or while being smoked. The invention consists in constructing the bowl of the pipe with double walls, and having the chamber formed by said walls nicate with the tobacco chamber by means of perforations. stem of the pipe is a flexible tube which communicates with the chamber formed by the double walls, and a flexible bentube is at-tached to the cover of the bowl; whereby an extremely portable de-vice is obtained, and one which may be used or smoked with far less inconvenience or embarrassment than the ordinary pipes in use.]

3,527.—Manufacture of a Bi-basic Soap.—Daniel Shat-tuck & Clinton K. Daniels, Chicago, Ill.: We claim the manufacture of a bi-basic soap, composed of corn-neal, and animal oils or grease, by the process herein described.

-Washing Machine .- D. H. Thearer, Drakes-

ville, Iowa:

I claim, in combination with the two oscillating rubbers, F. G, the dirt chamber, B, arranged within the suds-box, A, substantially as and for the purpose set forth.

[This invention consists in the employment of two oscillating rub-

bers placed within a suds-box provided with a dirt chamber, where by clothes may be washed and thoroughly cleansed.]

43,529.—Cartridge Retractor for Revolving Fire-arms.

R. D. O. Smith, Washington, D. C.:

I claim, first, In combination with an automic device for removing the shell of an exploded metalic cartridge from its chamber in the sylinder, a device by means of which said automic device may be prevented from operating when it is not desirable that it should operate

rate.

Second, In combination with the hammer of the lock of a revolving fire-arm, the cam o, bolt K, and spring, S, substautially as described and for the purpose set forth.

Third, In combination with the bolt, K, the channel, M, substantially as described and for the purpose set forth.

Fourth, In combination with the cam, O, the lever, n, and plates w, substantially as described and forthe purpose set forth.

Fifth, In combination with the cylinder of a revolving fire-arm, a device to cause the said cylinder to revolve one stage during the first half of the motion of the hammer from "rest" to "full cock." 43,530.-Machine for drying Wool.-P. Stillman, Wes-

43,530.—Machine for drying Wool.—P. Stillman, Westerly, R. I.:

1 claim, first, The construction of a wool-dryer, the wool-holding box of which is square or of other form substrutially the same, the perforated bed being of an area whose length and breatth are of equal dimensions, in combination with a fan, and the air chamber the sides of which are tapering at equal inclinations from the borders of the box toward the center, substantially as herein set forth.

Second, The employment, in combination with the perforated bed of wool-dryers, of a fan, the axis of revolution of which is at right angles to the bed, substantially as set forth.

Third, The combination with a central pan situate in a horizontal plane of a bed of a square, or equivalently the same area, arranged in a plane parallel to the fan, so that the blast may be diffused equally, or nearly so, over thewhole surface of the bed, or substantially as the forth.

Fourth, The combination of square bed, or bed substantially the same, with an air chamber, the iddes of which converge from the

tially as set forth.

Fourth, The combination of square bed, or bed substantially the same, with an air chamber, the sides of which converge from the said bed towards a fan case, and central fan revolving upon a verical spindle, the whole being arranged for operation in the manner and for the purpose described.

43,531.—Raking Attachment to Harvesters.—Henry K. Taylor, Racine, Wisconsin:
I claim the rake, D, attached to the framing, A, by means of the universal joint, b, in connection with the rod, E, lever, F, pitman, G, crank, H, and the chain K, all being arranged to operate in the manner substantially as and for the purposes herein set forth.

This invention relates to an improved self-raking attachment for harvesters, and it consists in the employment of a vibrating rake operated throu h the medium of a crank and pitman, in connection with a lever, connecting rod and chain, all arranged in such a manner that a reciprocating movement is not only given the rake, but also a rising and falling one, and the rake made to perform its work in a very efficient manner.]

43,532.—Washing Machine.—J. R. Yerbill, Chicago, Illi-

3,532.—Washing Machine.—J. R. Yerbill, Chicago, Illinols:
Iclaim, first, The combination and relative arrangement of the
oothed ring, D, with loops, a a, on it for receiving lever, E, pinion
rheel, D, and the upper bearing, C, for this pinion, as shown and
escribed.
Second, The toothed bevel wheel or ring, D, cast with loops, a a,
n it in combination with the removable lever, E, pinion, D, collar
earing, C, and vertical rubber shaft, carrying a horizontal rubber,
t, all arranged and operating substantially as described.

ti, an arrangeu and operating substantially as described.
43,533.—Blind and Shutter Fastening.—Daniel E. True:
Leominster, Mass.:
I claim the combination and arrangement of the toothed sector, G, and rack, F, with the slotted plate, D, of the blind with the stud, c, of the arm, E, combined withan operating leveror arm, H, as specified.

fied.

And in combination with the arm, H, and its arm, E, applied to the blind, I claim the two sectors, I L, the locking crank and the whole hung to operate as specified.

43,534.—Treating Feldspar to obtain Useful Products.—
George E. Vanderburgh, Mamaronec, N. Y.:
I claim a new and useful composition of matterproduced by submitting felspar to substantially the treatment herein described.

43,535.—Amalgamator.—Thomas Varney, San Francis-

43,535.—Amalgamator.—Thomas Varney, San Francisco, Cal.:
I claim, first. The method of fastening the shoes to the upper muler by casting the rivets into the shoes, as shown.
Second, The use of the flanges on the lower edges of the curved places, in the manner and for the purposes set forth.
Third, The employment of the space for the quicksilver about the purplery of the cuallers, with no openings therefrom in the lower nutler, by which the quicksilver is prevented from being ground, and at the same time is so situated that it is brought into constant and effective contact with the pulp.
Fifth, The use of the slots in the lower muller filled with wood or its equivalent, for the purposes set forth.
Fifth, The mode of suspending and driving the upper muller by the arms, u, and ring, h, and flange, v, with its projections.

43,536.—Inhalator.—Maurice Vergnes, New York City.
Patented in England, and France May 10, 1864:
I claim the use and construction of a box to contain medicated powder for respiration, with a revolving fan for mixing them wit the air to be breathed, in the mauner substantially as above de scribed-

48,537.—Apple-parer.—John Voak, Penn Yan, N. Y.:
I claim the sliding bar, C, with the circular projection, a, or its
equivalent, when made and actuated substantially as specified and
used for the purpose set forth. 48,537.—

43,538.—Folding Table,—Joseph W. Wayne and Joseph R. Miller, Cincinnati, Ohio:
Weclaim the double folding table, constructing and operating in

the manner herein represented and described, andfor the purposes

43,539.—Cartridge Boxes.—Horace S. Weston, Akron,

Ohio:
Iclaim, first. The herein-described construction of cartridge boxes provided wite a series of smooth or serrated cutters, as arranged that the folded end to be torn preparatory to charging the gun are first unfolded and thrust through, or between, or under, the edge of the knife, A, and secured firmly in place by the slider, C, and springs, D, D, as herein set forth.

Second, I claim the slide, C, in combination with a series of knives A, and springs, D D, when arranged and operating as and for the purpose described.

43.540.—Whip Socket.—A. M. Whipple, North Adams, Mass.:
I claim tue employment or use for the purpose of fastening whip sockets, of a bolt, a, in combination with the bevelled block, C, ap plied and operating substantially as and for the purpose set forth.

[This invention relates to a new and superior method of attaching whip sockets to the dash-board or other parts of carriages or other

vehicles.1 43,541.—Pulley Block.—N. C. Whitcomb and Wm. Paddock, Oak Hill, N. Y.:

I claim the pulley block, constructed as herein represented and described.

13,542.—Farm Fence.—E. W. Woodruff. Washington, D.

C: 1 I claim, first, So forming the upper ends of the posts, by mea of a dovetail shape, and a corresponding angularity of the rai hat when the wires forming the body of the fence are drawn heir required tension, the said rails are held firmly in place. Second, I claim attaching the wires to the posts, and support he same on intervening posts, in the manner described, in comination with the method of giving tension to the wires, substantial as specified.

43,543.—Field Fence.—Wm. J. Young, Le Roy, N. Y.: I claim the combination of a double row of fixed posts, in alternating series with interlocking panels arranged to the posts, substantially in the manner and for operation as herein set forth.

stantially in the manner and for operation as herein set forth.

43,544.—Joint Clip and Spoke Socket for Wheel Vehicles.—Henry Bailey, assignor to G. D. Brown, Pittsford, N. Y.:

I claim the combined joint-clip and spoke socket, when the cylindrical tenon, B, of the spoke is made to reach through the felloe, and the shoulder, to rest upon the edge of the projecting collar or sooket, r, all being constructed and arranged in the manner and for the purposes set forth.

43,545.—Arithmetical Frame.—H. K. Bugbee, assignor to American School Apparatus Company, New York City. Antedated July 7th, 1864:
I claim a frame containing a series of horizontal slats, revolving vertically, and provided with figures on one or both sides so arranged as to form columns of figures, the whole being constructed substantially as and for the purposes herein set forth, and forming a new article of manufacture.

46.—Attaching Reels to Fishing Rods.—Thomas W. Cummings (assignor to J. Littledale), New York City:
I claim the attaching of rests to fishing rods or poles, by means of bolt and a look or its equivalent, substantially as herein shown not described.

[The object of this invention is to obtain a means whereby reels may

e attached to and detached from fishing rods or poles, with greater facility than by the band fastening now employed.

facility than by the band fastening now employed.]

43,547.—Mode of treating Wool for removal of Burrs, etc.—James Fuller (assignor to Margaret V. Fuller), Yonkers, N. Y.:

I claim the treating of the wool with the two acid solutions, of different densities, substantially as hereinbefore specified, preparatory to its being subjected to the compound solution of soda, ash, and Irish moss.

I also claim the employment of the picker, at the final stage of the process, or after the wool, with the burrs in it, may have been otherwise treated, as hereinbefore explained.

43,548.—Fire-proof Composition for Crucibles, etc.— L. Held (assignor to Geo. P. Schifflin), New York

L. Held (assignor to Geo. F. Schman, L. Held (assignor to Geo. F. Held (assignor to Geo.

the manner and for the purpose herein set forth.

43,549.—Improvement in Cart.—Barton Bicketson, of New Bedford, Pa., and A. B., Smith, of Clinton, Pa. assignors to said Barton Ricketson:

We claim the combination and arrangement of the bentaxle, B, tet thills, D and D, attached to the verticir portions of said axle, and the cast body, C. turning on the low portion of the axle within the thills, substantially as and for the purposes herein specified.

We also claim controlling the tail-board, so as to open and close the same automatically, by connecting its fastenings with the benta xle, so as to be operated thereby, in the act of dumping the cart substantially as herein specified.

Third, In combination with the self-acting tail-board, as set forth, we also claim the removeable portion, L, and securing cord, u u, as

we also claim the removeable portion, L, and securing cord, u u, as described.

43,550.—Machine for filling Cartridges.—J. G. Stowe and E. F. Allen (assignors to Burnside Rifle Company), Providence, R. I.:

We claim, first, A charger having cut off and delivery slides, k k, controlling a series of charging chambers, operated in the manner substantially as described for the purposes specified.

Scoond, The mode of operation substantially as specified, by means of which the delivery slide of the charging apparatus is alternately locked and tripped to rthe purposes specified.

Third, The mode of operation, substantially as specified, by means of which the movement of the carriage, B, and of the cut off and delivery slide of the charger, K, is arrested at any determined point in the progress of the carriage for the purposes set forth.

Fourth, The combination of the stops, so, with the spring catches, q, substantially as described for the purposes specified.

q. a. substantially as described orthe purposes specified.

43,551.—Driving Mechanism for Sewing Machines, etc.—
Turner Williams (assignor to himself and David Heaton), Providence, R. I.:

I claim the arrangement of the auxilary pins, h. b, the rocking lever, k, and crank pin d, as described in combination with a pair of curvedconnectingrods or their equivalent, and a treadle constructed in two parts, as described, the whole operating substantially as specified.

18ed. 43,552,—Composition for lining Oil Barrels.—W. Williamson, assignor to himself and Geo. W. N. Yost, Goldsborough, Pa.:
I claim the use of prepared petroleum tar, coal tar, or pine tar, for lining crude petroleum oil barrels or vessels to prevent them from leaking.

from leaking.

43,553.—Breech-loading Ordnance.—L. W. Broadwell,
London, England, assignor to W. I. Townsend, New
York City:

I calm the construction of the expanding ring, n, with the projection, p, and flange, r, in combination with the under-cut bearing, k, substantially as and for the purposes herein specified.

I also claim the combination of a perioration, B, in the skiding block, A, of an opening in the breech of the gun, or their equivalents, for admitting, and an aperture, s, in a line with the bore, for driving in the cartridge, substantially as herein described.

43,554.—Heating Sad-irons.—Auguste Francois Dusantoy, Neuilly (Seine), France, assignor to Moritz Pinner, New York City. Patented in France, April 13, 1864:

claim the construction of a smoothing-iron, which is heated hin the iron itself by a combined jet of lighting or heating gas

and air, or its equivalent, and acting in the manner of a blow-pipe, substantially as herein set forth and described.

43,455.—Process of treating Maize, Barley and other Cereals for the Manufacture of Alcohol, etc.—Alois Fleischman, Olmutz, Movaria, Austria. Patented in Austria, June 14, 1862:

I claim the use of sulphurous acid gas water, in the process herein-before described, for oreparing indian corn, rye, wheat, barley, and other cereals, for the manufacture of alcohol and other spiritous liquors by distillation.

spiritous liquors by distillation.

43,456.—Devices for supplying Weft to the Shuttles in Looms.—Thomas Ingraham, Bradford, England:

I claim, first, The combination of the lever, D, with the weft fork, E, and the tappet, F, substantially as and for the purpose set forth. Second, The combination of the lever, L, with the weft fork, E, and the shaft, M, substantially as and for the purpose set forth. Third, The combination of the lever. N, with the shaft, M, and the pin, n, substantially as and for the purpose set forth. Fourth, The combination of the lever, I, with the propeller, I, the pin, n, and the spring, K, substantially as and for the purpose set forth.

pin, n, and the spring, K, substantially as an extended pin, n, and the spring, K, substantially as and forther. Fifth, The combination of the clamps, H, with the hopper, G, with propeller, I, and the shuttle-boxes of the lay or batten, O, substantially as and for the purpose set forth. Sixth, The combination of the tongue, P, with the pin, n, the lever, N, and the lever, J, substantially as and for the purpose set

lever, N, and the lever, J, substantially as and for the purpose set forth. Seventh, The combination of the lever, S, with the tumbler, R, and the shuttle-boxes of the batten, O, substantially as and for the set forth

43,557.—Mode of coating and bronzing Metals.—Fred. Well, Paris, France. Patented in France. Dec. 11,

1863:
I claim the process herein described for metal-coating bronzing and coloring metallic articles by immersing them in an alkaline solution, containing a salt of the metal which is to form the coat, and containing turtaric acid, or any organic matter preventing the precipitation of oxyde of said metal, when such solution is used with or without the introduction of zinc, and with or without the addition of cyanide of sodium, or their equivalents.

RE-ISSUES.

RE-ISSUES.

1,724.—Artificial Leg.—Douglas Bly, Rochester, N. Y. Patented May 17, 1850 (No.24,002):

1 claim curving or deflecting the jointed extremities of the bars, J. as to bring their axis of motion tack of their line of di retton, substantially as and for the purposes set forth.

1 claim the cord, 7 and spring, 6 acting upon the parts, D and L., I claim the cord, 7 and spring, 6 acting upon the parts, D and L., I claim the combination of the india-rubber spring, E with a tendon or cord, in such a manner that the required effects derived from the compression and expansion of the material, and not from its elongations and contractions, substantially as set forth.

I also claim placing the spring of caoutchoue, or equivalent material, which acts from the compression of its mass, in a chamber or cavity, which has such a size or diameter in relation to that of the springs as to regulate and check the compression of the spring, at the required limit of the motion of the limb, and protects the spring from overaction.

I claim the axial boits or transverse axis, B C, as and for the purpose herein set iorth.

I claim providing the ends of cords, F, with the enlargements and with the conical socket fastenings, G, to receive the same, substantially as described, in order to apply adjusting screws, for the purposes herein specified.

I claim the manner of constructing the bearing portions of the knee-joint, consisting of the upper and lower bearing blocks, N, each of w.ich forms a segment of a cylinder more or less corresponding with the axial bolt, the one being fixed in position and the ocher adjustable by means of the screws, S, to admit of adjusting the parts together, to prevent looseness and noise, and to reduce and regulate the friction, substantially as and for the purpose herein section.

forth.

1,725.—Lock.—Martin Briggs, Rochester, N. Y.. assignee of H. W. Covert. Patented Sept. 15th, 1857:

I claim the plane or corrugated center, h. as described, in combination with the ring or rim, g. the whole arranged in the manner and operating as herein specified.

In combination with a set of permutation wheels, H H. I also claim the stationary washers, n n, operating substantially in the manner and for the purpose herein specified.

In combination with a set of permutation wheels, H H, and stationary intermediate washers, n n, I also claim the inclosing box, I, substantially as described.

tionary intermediate washers, n n, I also claim the inclosing box, I, substantially as described.

1,726.—Drawing Regulator for Spinning Machines.—E. D. & George Draper, Milford, Mass., assignees by mesne-assignments of Newell Wyllys. Patented Jan. 28, 1851:

We claim the combination of the escapement mechanism or its mechanical equivalent, with the trumpet, M. the counter-weight, W, or its equivalent and mechanism, substantially as described, for revolving the screw, e, of the belt-shipper and of the mechanism by which the sets of drawing rollers are revolved, the said escapement mechanism being connected with the trumpet and applied to the gear, S, and consisting of the disk, t, the pawls, a b, the lever, y, and its operative mechanism, substantially as herein-before explained. And we also claim as the invention of the said Wyllys, the arrangement of the trumpet-arm, E, as herein described, in connection with the system of weighted levers, the escapement, the belt-shifting mechanism, the reversed cone pulleys and the mechanism operated by them, whereby the force required to move the trumpet is made to vary under different circumstances to a sufficient extent to prevent over-sensitiveness in the mechanism which changes the relative speed of the drawing rolls to inequalities in the silvers, while, at the same time but little force is required to effect such changes, thus proortioning the draw more nearly than heretofore to the quantity of her in the silver, and thereby rendering the latter of more uniform diameter and density.

1,727.—Spoon and Fork.—Florian Grosjean, New York

unameter and density.

1,727.—Spoon and Fork.—Florian Grosjean, New York
City. Patented Jan. 28, 1862:

I claim stamping or swaging spoons or forks from pieces of sheet
metal, with middle longtudinal cornigations or ridges extending
along the narrow or weaker part of the handle and prolonged into
the bowl thereof, so as to give proper strength and finish to the junction of the handle and bowl, either leaving the fat around the corruposes herein specified.

1,729.—Apparatus for cutting Button-holes.—Frederick
C. Leypoldt, Philadelphia, Pa. Patented December
18, 1860:
1 child an instrument for cutting button-holes wherein the

18, 1800:

I claim an instrument for cutting button-holes, wherein the
is actuate 1 by the described combination of lever, A and C
see levers are jointed and otherwise arranged, substantially
the purpose set forth.

DESIGNS.

1,968.—Stove.—Garrettson, Smith and Henry Brown, Philadelphia, Pa., assignor to J. H. Haywood, D. L. Bartlett, and H. W. Robbins.

9.— Trade-mark.— Henry Damon, Boston, Mass Antedated June 7, 1864.

1,970.-Doors of a Stove.-Giles F. Filley, St. Louis, Mo.

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ast ex-Commissioners of Patents:—

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Very respectfully, your obedient servant.

da ability, and uncompromising account and engagements.

Very respectfully, your obedient servant,

J. Holt.

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Son application for extension of Patent.

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