50,644.—Sirup Boiler and Evaporator.—Lloyd Thomas, New Philadelphia, Ill.:

I claim the hollow grate bars on which the fire and fuel are placed, through which any liquids may pass. for the purpose of heating said liquids and for the preservation of the grate bars and the chambers which form part of the heating furnace, and boiling any liquids thatmay pass through them; also a skimmer that is placed at the top of chamber 2.

top of chamber 2.

50,645.—Churn.—James Thompson, Vevay, Ind.:

1 claim the dasher, L1 P. P. formed and operating as set forth.

Second. The arrangement of pouch, I i, and drip-way, J.

Third, The pouch, I i, and drip-way, J, when combined with the notch, N, and key, O.

50,646.—Grinding Mill.—Charles T. Weston, Scranton,

50,646.—Grinding Mill.—Charles T. Weston, Scranton, Pa.:

I claim, First, The universal joint. F F, constructed and arranged substantially as herein described, for supporting the bed stone, B, so as to make it self-adjusting.

Second, The combined bail and driver arranged on the spindle, in connection with the screw collar, to operate in the manner substantially as and for the purpose set forth.

Third, The tubular rod fitted into the upper end of the spindle and attached to a frame which extends over the runner, for the purpose of keeping said end of the spindle in a proper lubricated state, substantially as described.

Fourth, The innermediate plate, G', between the two plates, D G, of the universal joint, provided with pins, a' a', to fit into notches, b' b', in the plate, D, and having slots, c' c', made in it, to receive pins, d', on the plate, G, substantially as and for the purpose speciled.

[This invention relates to a new and improved manner of h and arranging millstones, whereby the parallelism of the two stone will always be preserved, the pressure of the upper stone or runner on the grain being ground, regulated as desired, and the spindle kept perfectly lubricated at all times without any trouble or diffi whatever.]

50,647.—File-cutting Machine.—Milton D. Whipple, Boston, Mass.:
I claim, First, The combination of the lever, f, and elliptic spring, m, elongated journal boxes and rod, l, operating as described, and for the purpose specified.
Second, The combination and arrangement of the arm, n', cam, l', and spring, k', with the rod, l, for the purpose specified.

50,648.—Carriage-axle Box.—Frederick Wood, Bridge-port, Conn.:

port, Conn.:

I claim the forming of one or more partitions across the oil cham ber recess, in the manner described, or in any other manner sub stantially the same.

50,649.—Applying Solutions to the Interior and Exterior of Oil Barrels, Etc.—James O. Woodruff, Auburn, N. Y.:

I claim the applying of solutions simultaneously to the interior and exterior surfaces of easks, barrels, etc., by placing the cask or barrel, in a suitable warm state, within a vessel, and forcing the solution into and around the cask or barrel, and ejecting the unapplied solution therefrom, by means of steam, substantially as herein shown and described.

[This invention relates to a new and improved process for apply-Ingsolutions simultaneously to the interior and exterior of casks barrels, etc., in order to render them air and gas tight, and effect-ually prevent loss of the fluid they may contain by the evaporation of the same. The invention is more especially designed for coal-oil barrels, but may be advantageously used in all cases where it is ecessary to line or cover barrels with a substance that will preven evaporation or a permeation of the fluid through the wood of th barrel.]

barrel 1

50,650.—Combination Rack for Printers' Use.—Richard
Yeomans, Chicago, Ill.:

I claim the making and applying the notches orgrooves in the
manner and for the purpose substantially as described, in combination with the cross bars, having their ends provided with projecting transverse obtuse edges, or their equivalent round points or pins,
for the purposes substantially as described, or any other arrangement embodying the same idea.

ment embodying the same 1 dea.

50,651.—Hydraulic Engine and Meter.—John S. Barden
(assignorto the New England But Company), Providence, R. I.:

I claim as my invention the improved engine, substantially as described, the same consisting of the four cylinders, A A'B B', the two pairs of connected pistons, D D D, and the eduction chamber, C, arranged as explained, in combination with the main shaft, H, or its equivalent, the valve chest, F, valves, G G, ports, b b b b. and mechanism to operate such valves by the piston, substantially in manner as specified.

manner as specified.

50,652.—Letter or Invoice File.—Reinhold Bocklen, Brooklyn, N. Y., assignor to Henry T. Sisson, Providence, R. I.:

I claim, First, The employment of a spring which is disconnected from the cam, crank or eccentric of the axial rod of the binding flap, and applied to a letter file so as to operate in the manner substantially as herein described.

Second, The construction of the binding flap with a shoulder, and from said shoulder to its front edge with a curved form, substantially as described, and for the purpose set forth.

50,653.—Lantern Guard.—Thomas Brown In and

50,653.—Lantern Guard.—Thomas Brown, Jr., and Joseph L. Lowry (assignor to said Brown and James McLain, Pittsburgh), Pa.: We claim the combination of the ribs, e, hooked or looped at their upper end to the cap piece and at their lower end to the bottom piece of the lantern, with the detached cut ring, f, when so arranged inside of the ribs as to force them outward, and thus tighten the ribs and draw the cap and bottom pieces of the lantern toward each other, with the glass between them, substantially as herein before described.

described.

50,654.—Construction of Privies.—Elizur E. Clarke (assignor to Franklin N. Clarke), New Haven, Conn. Antedated Oct. 13, 1865:

First, I claim the combination of the chamber or reservoir, C, whether attached to the superstructure of the privy or not, with the vault, F, when they are so constructed and combined as to produce by the use of muck the decorization of the night soil, etc., substantially as herein described.

Second, I claim the combination of the two bars or boards, a and b, with the toothed or spurred shaft, c, when they are so constructed and arranged as to support, pulverize and deposit the muck, etc., substantially as herein described.

Third, I claim the combination of the two bars or boards, a deposit the muck, etc., substantially as herein described and set forth.

50,655.—Wheel for Ayles.—C. J. Crane (assignor to J.

fitted for use substantially as herein described and se tforth.

50,655.—Wheel for Axles.—C. J. Crane (assignor to J. F. Crane), Burr Oak, Mich.:

I claim the construction of the spoke cap, a. and screw rod, b. with the thimble, t, fange, e, and nut, d, arranged and operating as and for the purpose described.

50,656.—Car-brake Shoe.—Samuel D. Danfield (assignor to himself and Henry Wood), Philadelphia, Pa.:

I claim the metal sole, C, with its arms, c c, arrange; to embrace the wooden shoe, A, and having holes to receive pins or boits which pass through the said, block, all substantially as set forth.

Da niel S. Perkins), Amherst, N. H.:

I claim the combination of the spinale, e. handle, d, the rods, g, c, the stud, h, and the arm, b, applied to the charger and the lid, whereby both charger and lid may be operated simultaneously by turning the handle as specified.

I also claim the arrangement and combination of the auxiliary mouth or hopper w, with the handle as described, and for the purpose set forth.

50.658. TransBarent Composition for Tablets. Hanny

50,658.—Transparent Composition for Tablets.—Henry J. Griswold (assignor to himself and Henry A. Clark), Boston Mass: I claim the within described waterproof composition for tablets

or other articles upon which a lead pencil is used, consisting of the ingredients in the proportions substantially as specified.

559.—Toilet Mirrors.—John Johnson, Saco, Me., assignor to himself and Howard Tilden, Boston, Mass.: 50.659.—Toilet

mass.:

I claim the flexible and adjustable holder, carrying a mirror at each end, combined and arranged substantially as herein described and or the purpose specified.

for the purpose specified.

50,660.—Low-water Detectors for Steam Generators.—

Daniel C. Mead and Charles Maggi (assignors to Charles Maggi), Pittsburgh, Pa.:

pansion bar, rod or tube, inclosed in a case or tube, one end of which is closed, which enables us to protect said expansion bar from any direct contact with steam or water, substantially upon the principle and in the manner as herein set forth.

50,661.—Piston Packing.—James Myers (assignor himself and Samuel N. Lightner, Alleghany C

Pa::

Pa::

I claim the combination of two or more metallic packing rings, d d',
I claim the caps, c c, with the piston ring, a, having passages, e g e',
connecting the groove or space back of one ring with the groove or
space back of the other ring or rings, so that the steam entering
from either side of the piston head back of one packing ring shall
have free access to the space or groove back of the other packing
ring or rings, substantially as hereinbefore described.

50,662.—Tanning.—James Price (assignor to John W.
Tompkins and Stephen S. Tompkins, executors of
James Tompkins, deceased, and John W. Tompkins). Edgefield District, S. C.:

I claim the use of the pine leaf in the form of a watery extract or
decoction in the process of tanning either separately or combined
with the bark or other tanning material, in the manner described,
and for the purpose specified.

50,663.—Paper Collar.—Samuel C. Shaw (assignor to

50,663.—Paper Collar.—Samuel C. Shaw (assignor to himself, F. O. Kendall and F. A. Marshall), Marl-boro, Mass.:

OUTO, MASS.:

I claim as an improved manufacture a paper collar made with the imitation of a cravat printed or formed on it, substantially as specified, or with the same and the two parts of the bow thereof projecting from the opposite ends of the collar, and provided with the locking slits, as set forth.

the locking sitts, as set forth.

50,664.—Folding Table.—George G. Small (assignor to himself and Charles H. Drummond), New York City:

1 claim so constructing and arranging a table top for tables that it can be increased or decreased in size by folding its central portion below the same, substantially as herein described.

This invention consists in certain new improvements in the con struction of tables, whereby its top can be readily made smaller or larger without detaching any portion of the same therefrom, the folding leaves being so arranged with regard to the table top that when desired to decrease the size of the table they can be folder ogether below its surface into a very compact shape.]

50,665.—Cider Press.—Charles H. Thomas (assignor to himself and Hermon Thomas), Milton, N. Y.:

I claim, First, A cider press, consisting of the platform, A, mounted of wheels, and provided with the stationary serew, B, and nut, C, arranged and operating as and for the purpose set forth.

Second, In combination with a press constructed as described, I claim the use of the sacking, as and for the purpose set forth.

otam the use of the sacting, as and of the purpose set form.

50,666.—Rotary Engine.—J. T. Warren, Stafford, N. Y., assignor to himself and Robert A. Chesebrough:

I claim the partition plate or valve, D, combined and arranged with reference to the steam port, C, the exhaust port, F, and the piston, B, substantially upon the principle and in the manner herein set forth.

set forth.

50,667.—Hand Saw.—Daniel Welch and William W.

Armington (assignors to George E. Mitchell),

Lowell, Mass.:

We claim the combination and arrangement of the collar, c, the
recesses, a b, and the pins, e f, with the socket, c, of the handle, A,
and with the shank, d, of the saw blade or tool, B, the whole being
substantially as and for the purpose as hereinbefore described.

substantially as and for the purpose as hereinbefore described.

50,668.—Apparatus for Rectifying Alcohol.—Anastasie
A. Foubert, St. Helier, England, and Jean Gustave
Bequet, Paris, France:
We claim, First, The plate or diaphragm, A. Fig. 1, sheet, 2, allowing the direction of the alcoholic vapors to be changed whenever
required, and at the beginning and end of each charge operated
upon substantially as described, and for the purposes set forth.
Second. The slide valve, V. and clack valve, S. on one valve rod,
T, Fig. 11, sheet, 2, by which the ports of the diaphragm, A, are
opened, and the pipe, H, is shut, or vice versa, at one operation, for
the purposes set forth.

Third, The primary condensers, P' and O. Fig. 2, sheet, 2 and sheet

T, Fig. 11, sneet, z, uy winds the property of the purposes set forth.

Third, The primary condensers, P' and O, Fig. 2, sheet 2 and sheet 1, substantially as described.

Fourth, The self-acting regulator, sheet 3, for controlling the feed of steam to the retort. In combination with the chamber or recipient, A2, in which hot water is made to circulate, in order to prevent the alcoholic vapors from condensing, substantially as described, and for the purposes set forth.

Fifth, The indicator, G, sheet 1, which takes its supply of steam at the first beli plate of the column, B, below the diaphragm, A, by means of a cock, g, substantially as set forth.

Sixth, The cooling condenser, E E, Fig. 3, sheet 2, the worm of said condenser bing divided in two portions at the fifth coil, for the purposes set forth and in the manner herein described.

50.669.—Εσσ Boiler.—Prosper Malapert, Poiters,

50,669.—Egg Boiler.—Prosper Malapert, Poitiers, France, and Edward A. Des Courtis, New York

City:

We claim the application of a thermometer to an egg boiler for the purpose of indicating the temperature of the water, as herein specified.

50,670.—Breech-loading Fire-arm.—Johann von der Poppenburg, Birmingham, England. Patented in England Feb. 14, 1865:
I claim, First, The construction of the spring hinge of the movable charge chamber hereinbefore described, and illustrated in the accompanying drawings.
Second, The arrangement and combination of the parts described and represented for boiting down the charge chamber during the discharge-of the gun.
Third, The construction of the snap bolt described and represented for boiling the charge chamber in its place when shut down, as well as for assisting in bolting down the charge chamber for discharge; also the arrangement of parts for working the said snap bolt.

REISSUES.

2,095.—Composition for Slate-surface Blacking, Etc.—
Isaac Newton Peirce, Philadelphia, Pa. Patented
Feb. 10, 1863:
I claim the use of benzine or petroleum spirits and ground feldspar, or emery, or quartz, or other silica, in forming a real stone
surface, making use of varnish to make it easier in application and
render it more adhesive, and lampblack or other coloring matter
for a coloring, substantially as set forth, constituting the surface,
and its application in the manner and for the purpose specified.

and its application in the manner and for the purpose specified.

2,096.—Curing Provisions.—Daniel E. Somes, Washington, D. C., assignee by mesne assignment of himself. Patented Nov. 13, 1860:

First, I claim constructing packing houses and other similar buildings and structures for the purpose of salting, curing, preserving and storing articles of food, hides and other substances, substantially in the manner herein set forth and described. Second, Salting, curing and preserving ford hides, etc., in shafts and vaults excavated in the earth to a depth sufficient practically to attain the lowest invariable temperature of the earth at the place where they are sunk, as set forth, and for the purpose specified. Third, Cooling such excavations and shafts by artificial means, in the manner and for the purpose set forth.

2,097.—Shirt-bosom Folder.—John Stevens, New York City. Patented Nov. 9, 1858:
I claim the tins or metal strips aforesaid, when arranged with an adjusting mechanism to admit of wide and narrow plat or plaits, varying in width, being formed with one and the same set of tins or strips, substantially as described, for the purpose specified,

DESIGNS.

-Emblematic Picture.-James F. Bodtker, Madi-

2,209.—Ornamenting Paper Collars and Cuffs.—B. W. Burnet, Madison, N. J., assignor to Henry R. Burnett. Morrisania. N. Y.

MATENTS

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[See Judge Holt's letter on another page.]

[See Judge Holt's letter on another page.]

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CAVEATS.

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essential advantages in Austine canaly.

ness of first cost and cost of repairs; in economy of fuel, facility of cleaning, and transportation, etc., not possessed by any other boiler now in use.

This Boiler is formed of a combination of cast-iron hollow spheres—each sphere eight inches external diameter, and three-eighths of an inchthick. These are held together by wrought-fron boils with caps at the cads.

The form is the strongest possible; its strength to resist pressure very great—unweakened by punching or riveting, which lessens the strength of wrought-fron boiler plates about forty per cent. Every boiler is tessed by hydraulic pressure at 500 punchs to the square inch. It cannot be Burst Under Any Practicable Pressure.

It is not affected by corrosion, which so so this cause that any other into boiler. More explosions are traced to this cause that any other it has economy in itsel qualit to the very best boilers now in use, arising from the large extent and nearness of its heating surface exposed to the direct act on of the first stransported and is not liable to priming or familiar.

It is not discussed the product of the extent and with little fuel. It produces very dry superheated steam, and is not liable to priming or familiar.

It is easily transported, can be erected by ordinary workmen, and is more readily kept clean, inside and out. It requires no special function in the management markanes, it is kept free from permanent exposit by merely blowing the water can rely out once a week.

Induced ordinary between the strength and the ordinary backers weight, and takes much less ground area than the ordinary backers weight, and takes much less ground area than the ordinary backers weight, and takes much less ground area than the ordinary backers weight, and takes much less ground area than the ordinary backers weight, and takes much less ground area than the ordinary backers weight, and takes much less ground area than the ordinary backers weight, and takes much less ground area than the ordinary backe

TEAM GAGES—BATES'S PATENT—GOVERNMENT and City Standard.—The Cheapest and Best Steam Gage ever offered in this market. Also Water Gages. Marine Clocks, Registers, Etc. Call and examine, or send for Citcular before purchasing elsewhere.

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Georgetown, Brown Co.

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Georgetown, Brown Co.
Ohio.

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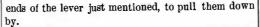
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Improved Horse-power.

In many places it is inexpedient to use steam power on account of the danger from fire, and the expense of keeping costly machinery for only occasional service. Farmers and others are always requiring power for different purposes, either for sawing wood, thrashing grain, or cutting hay. For such purposes, or for small manufacturers, the machine here shown will be found useful.

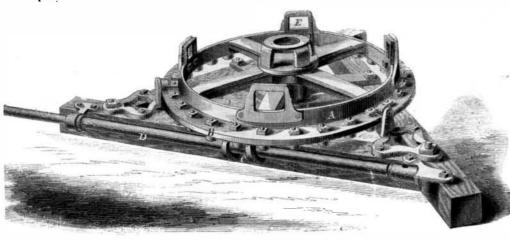
It consists in detail of a wheel, A, armed with pins, B, on which are friction rollers. These pins work against a helix, C, on the shaft, D, and, by pressing on the sides thereof, cause the shaft to rotate most rapidly.



When the gate is to be opened, the line, H, is pulled down, which raises the slide and the gate. latter then runs back on the lever, D, and is prevented from running off by the inclined plane at the end.

When the operator has passed through, the gate shuts itself, or if it should fail to do so can be started by elevating the opposite lever slightly, which will depress the slide so as to allow it to run down to the closing point.

This gate was patented through the Scientific American Patent Agency by S. Grenell, G. Bez, and H. C. Stoll, of Mokena, Illinois, on Sept. 5, 1865.



SWEETLAND'S HORSE-POWER.

In the rim of the wheel, A. there are sockets E. For further information address Geo. Bez. Mokena cast, which carry levers not shown, and to these the horse is attached; any number can thus be accomedated by increasing the levers. The present machine is for four horses.

The frame of the machine is triangular, and shafts can be applied on three sides, so that work of different kinds can go on at the same time It is claimed to be one of the most efficient horse-powers in use, and capable of exerting the most force for its weight and size.

The construction of the machine is very simple and easily understood from the engraving without further comment.

For additional information apply to J. B. Sweetland, Pontiac, Mich. by whom it was patented through the Scientific American Patent Agency on July 4, 1865.

Improved Gate.

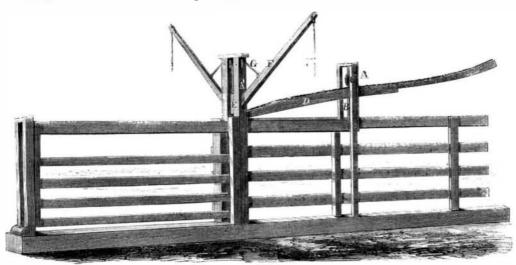
This gate is one of that class which can be opened by a person on horseback or from a wagon. By this petitors will place their engines. A large boiler or

Illinois.

Expansion of Ice.

In Silliman's Journal of Science is a report of experiments made by Rev. Frederic Gardiner on the ice of the Kennebec river. By inserting a line of stakes in the ice across the river in the early part of February, he found, in the middle of March, that there had been an expansion of the ice of over twelve feet in a breadth of five hundred feet. As during this time the temperature of the water was nearly equal, the expansion must have been due to the sun's rays, which was proved by the fact that there was the least expansion on the eastern side, where the ice was partially shielded irom the sun by a high bank.

A Proposition.—The Boston Daily Advertiser says:-"Efforts are in progress to have a congress of steam-engine builders, with a view of ascertaining the relative value of new steam engines. It is proposed to fit up a large room, in which the com-



GRENELL, BEZ & STOLL'S GATE,

tion is also much easier than in gates that have to be lifted bodily before they can be swung round.

In construction this gate is hung between uprights, A and A', and has a vertical arm, B, which is fitted with a roller, C. This roller runs on a lever, D. Between the upright, A', is a slide, E, to which the gate is hung and to which the levers, F, are attached by means of cords, G; a line, H, depends from the Try compressed molasses.—Eds.

plan the trouble of alighting is avoided. The opera- | tank will be provided, which will be filled with air at a given pressure. Each engine, in turn, will be connected with the tank, and the compressed air turned on, and the revolutions of the engine noted. The engine which makes the greatest number will be judged the best."

This sounds something like the school-boy's test of merit—" Whoever eats the most is the best feller."

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