

Claim.—The combination with a bottle or jar having its neck provided on its outer side with shoulders *a* inclined on their lower sides, of a cover or cap *B* enclosing the neck or upper portion of the bottle or jar, and provided with lugs *b*, a threaded hole *c*, screw *D* and washers *e*, *f*, substantially as set forth.

No. 17,584. Refractory Lining for Furnaces, stoves, etc. (*Doublure réfractaire pour fournaies, poêles, etc.*)

George Duryee, New York, N. Y., U. S., 4th September, 1883; 5 years.

Claim.—1st. The refractory composition described, consisting of molasses as a binding material and source of carbon, plumbago, fire clay and burnt clay, substantially in about the proportion specified. 2nd. The method of putting in a continuous lining and applying a protective glaze to a refractory carbon lining before the operation of firing the same, as for the purpose set forth.

No. 17,585. Fire, Water and Weather Resisting Paint Compounds. (*Peinture à l'épreuve du feu, de l'eau et du temps.*)

Lorenzo D. Mott, Lake City, Minn., U. S., 1st September, 1883; 5 years.

Claim.—A fire, water and weather resisting paint for coating wood and metal, consisting of coal tar resin, brown mineral earth, yellow ochre, sulphur and salt compounded as described, in about the proportions stated.

No. 17,586. Sewing Machine. (*Moulin à coudre.*)

James Authors, Toronto, Ont., 5th September, 1883; 5 years.

Claim.—1st. In a sewing machine the combination of a disk *F*, a shaft secured to said disk revolving in a different line from the main shaft, the needle-bar *E* having a slot to allow the passage of the disk the crank *H* secured to said disk shaft on the opposite side of the needle bar, the crank pin *C* and the links *D* *H*, substantially as and for the purpose specified. 2nd. On the face of a sewing machine, a horizontal spring riveted thereto and arranged in combination with a slotted guideway cut in the face plate and passing across the spring for the purpose of taking up the slack thread produced by the movement of the take-up, substantially as specified. 3rd. In a sewing machine having a circular bobbin fitting in a recess in a revolving hook, the combination of a cap or cover having its shank loosely fitted and pivoted in its hanger, whereby it is free to oscillate on its pivot to permit the thread to pass freely between it and the bobbin, substantially as set forth. 4th. In combination with the needle of a sewing machine, a rotating hook provided with a projection situated opposite to its sewing point so that it approaches the needle simultaneously with the hook pressing it towards the sewing-point of the hook, substantially as and for the purpose specified.

No. 17,587. Vacuum Exhaust Pipe.

(*Tuyau d'évacuation au vide.*)

Dennis Harrigan, Somerville, Mass., U. S., 5th September, 1883; 5 years.

Claim.—1st. A vacuum exhaust for creating a vacuum in the pipe not then exhausting consisting of two exhaust pipes provided with steam spaces and annular chambers surrounding the exhaust pipes and with suitable ports connecting the exhaust pipes with the steam spaces and with passages connecting the chambers and the spaces, substantially as above described. 2nd. In combination, the plate *k*, the exhaust pipes, the annular chambers and steam spaces provided with suitable ports and connecting passages and the tips, substantially as above described.

No. 17,588. Fire Box. (*Foyer.*)

James Whelan, Montreal, Que., 5th September, 1883; 5 years.

Claim.—1st. In combination with a cooking stove, and in place of the grate and brick lining, a detached fire-box of which the depth is greater than the sectional area, as and for the purposes set forth. 2nd. In a cooking stove, a fire box made separate from same composed of front *A*, back *B*, sides *C* *D* and dumping gate *E* with air passage round the back and sides of same, all as set forth. 3rd. In a cooking stove, a fire box or chamber with grate made to dump and also toward to-and-fro to clear itself, substantially as described. 4th. In a stove, the combination with the fire box or chamber and grate made to dump, of a rest or support *F* introduced through one side of fire box carried in the other and supporting the live and unconsumed coal during the discharge of ashes, etc., all substantially as set forth.

No. 17,589. Glass Roof. (*Toiture en ver.*)

William Ward, Cleveland, Ohio, U. S., 5th September, 1883; 5 years.

Claim.—A glass roof consisting of glass panes secured at their edges to the sash in combination with metallic strips formed with flat narrow ledges or flanges that rest against the ends of two adjacent panes, substantially as set forth.

No. 17,590. Process of Making Whisky.

(*Procédé de fabrication d'eau-de-vie.*)

Marshall J. Allen, New York, N. Y., U. S., and William E. Bradley, Frankfort, Ky., U. S., 5th September, 1883; 15 years.

Claim.—1st. In the manufacture of whisky the process described, consisting in rapidly cooling spent beer and then mixing the slop with fresh material for subsequent fermentation, substantially as set forth. 2nd. In the manufacture of whisky the process of saving the sugar starch and yeast contained in spent beer which consists in facing such spent beer before permitting it to cool by mechanical means such as sieving of the bran chaff and other coarse waste particles, rapidly cooling the thin slop and then adding the same to and mixing

it with fresh material for subsequent fermentation, substantially as set forth. 3rd. In the manufacture of whisky the process of saving the sugar starch and yeast contained in spent beer and utilizing the same which consists in freeing the spent beer of the bran chaff and other coarse particles, rapidly cooling the slop and then mixing the thin slop thus obtained with fresh mash, substantially as described. 4th. In the manufacture of whisky the mode of saving the sugar and yeast contained in a spent beer and in using the same which consists in freeing the spent beer of coarse particles by mechanical means such as a sieve, of rapidly cooling this thin slop by causing such an agitation of the slop as will hold the particles of sugar, starch and yeast in suspension and then mixing the thin slop so treated with fresh grain, substantially as set forth.

No. 17,591. Waggon. (*Chariot.*)

Joseph Moses, Lapeer, Mich., U. S., 5th September, 1883; 5 years.

Claim.—1st. The axle *A* attached to the diagonally braced side-bearing frames *F* which are connected together by the arched bearing-plate *G* in combination with the arched bearing plate *H* fastened to the bottom *B* of the waggon, a king-bolt *a* arranged, substantially as and for the purpose specified. 2nd. The rear axle *B*, in combination with a bolt rigidly fastened to the bearing-bars or braces *D*, which extend obliquely from the axle to the rear of the waggon-bottom *E* on the one side and from the other side of the axle towards the centre of the waggon-bottom to which it is rigidly bolted, forming a substantial brace and support to the said bottom, substantially as and for the purpose specified. 3rd. A waggon-bottom *E* provided with rear axle *B* braced and supported by the bearing-bars *D*, as specified, in combination with the front axle *A*, side-bearing frames *F*, arched bearing-plates *G* and *H*, waggon-bottom *E* and king-bolt *a*.

No. 17,592. Mill Stone Dressing Machine.

(*Machine à piquer les meules de moulins.*)

Cornelius S. Hoover, Lancaster, Pa., U. S., 5th September, 1883; 5 years.

Claim.—1st. In a millstone-dressing machine, a slide and its automatic feeding devices, in combination with a tool-holder carried by said slide and a bar or bars adapted to be inclined and to operate on said holder to govern the longitudinal and lateral inclination of the furrows, substantially as set forth. 2nd. In a millstone-dressing machine a slide and its automatic feeding devices, in combination with a diamond-holder carried by said slide, a lever arranged to force said diamond-holder towards the stone and an inclined bar arranged to be in contact with said lever while said slide moves back and forward, substantially as and for the purpose set forth. 3rd. In a millstone-dressing machine, a tool-holder, a spring which constantly forces it from the stone, a slide which carries said holder, a lever which operates to force said holder towards the stone, and an inclined bar which acts on said lever to cause it to gradually increase its pressure on the tool-holder during the motion of the slide in one direction, substantially as set forth. 5th. In a millstone-dressing machine, a tool holder, a lever arranged to force said tool-holder towards the stone, a slide which carries said holder and lever, a spring which opposes the action of said lever and a pattern-bar which by its contact with an attachment of said lever as the slide is fed from side to side governs the dress of the stone face or furrows, substantially as set forth. 5th. In a millstone-dressing machine, a tool-holder movable towards and from the stone, in combination with a slide which carries said holder, a lever and bar which act on said holder to prevent the diamond from leaving the stone and a screw between said lever and bar whereby the position of the holder with respect to the stone may be adjusted, substantially as set forth. 6th. In a millstone-dressing machine, a tool-holder movable toward and from the stone, a spring which tends to raise it therefrom, a lever and inclined bar which holds the tool against the stone, a slide carrying said holder and moving in a line parallel to said bar and a device for adjusting the inclination of said bar, substantially as set forth. 7th. In a millstone-dressing machine, a tool-holder constantly against the stone, a transversely moving slide carrying said holder, a longitudinally moving carriage for the slide, an inclined bar parallel to the line of motion of said carriage and adjustable vertically independently thereof and the necessary intervening devices whereby said bar causes the tool to cut more deeply as the carriage moves toward the upper end thereof. 8th. In a millstone-dressing machine, a tool-holder held constantly against the stone, a transversely moving slide carrying said holder, a longitudinally moving carriage for the slide, an inclined bar parallel to the line of motion of said carriage and vertically adjustable independently thereof, the necessary intervening devices whereby said bar causes the tool to cut more deeply as the carriage moves toward the upper end thereof, and an adjusting screw for regulating the inclination of said bar, substantially as set forth. 9th. In combination with the tool-holder slide, opposing spring and lever, and carriage moving at right angles to the line of motion of the slide, two inclined planes, one parallel to the line of motion of the slide and the other to that of the carriage and both combining to control the dress of the millstones as said slide and carriage are slowly fed, substantially as set forth. 10th. In combination with a bed plate or frame, a carriage and a transversely moving slide, all immovable in a vertical direction, a diamond holder and its operating lever both carried by said slide, a transverse bar of variable inclination, a longitudinal bar on which one of said transverse bar rests and a device for adjusting the inclination of said longitudinal bar, substantially as and for the purpose set forth.

No. 17,593. Mode and Apparatus for Desulphurizing Ores. (*Mode et appareil à désouffrer les minerais.*)

William F. Browne, New York, N. Y., U. S., 5th September, 1883; 5 years.

Claim.—1st. In a desulphurizing apparatus, the process of desulphurizing ores and volatilizing base metals contained therein, consisting in impelling and drawing pulverized ore through a heated conduit wherein the ore is desulphurized and other base properties volatilized and discharging the product into a suitable place or places. 2nd.