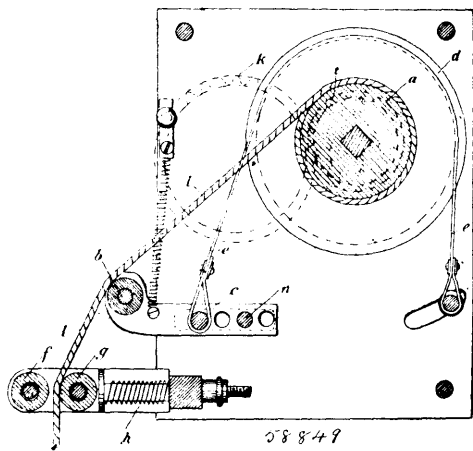


vale 3 and the outlet valve 12, the piston 5 provided with the valve 6, and the piston rod 8 having its upper end terminating in the rack-bar 19, in combination with the bracket 18, the segmental gear-wheel 23 journaled in said bracket and in operative connection with said rack, and provided with the handle 25 and the friction sleeve 21 eccentrically mounted in said bracket to form an adjustable bearing for the rack-bar, whereby the wear on the gear and rack may be taken up, as and for the purpose set forth.

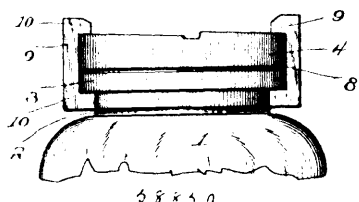
No. 58,849. Brake. (Frein.)



Richard Petrick, Rixdorf, and Carl Wohlfahrt, Berlin, both of Germany, 1st February, 1898; 6 years. (Filed 15th January, 1898.)

Claim.—1st. A rope brake, having a guide-roller *b* carried by two levers *c*, over which the rope runs from the drum *a* in such a manner that the roller is pressed downward by the action of the suspended load and thereby tightens the brake-band *l*, constructed and arranged substantially as hereinbefore described. 2nd. A brake, such as claimed in claim 1, in which the rope *l* runs off the roller *b* at an angle and only assumes a vertical position after passing over a second roller *g*, held in position by yielding supports, which, upon an increase of the load, alters its position so that the angle formed by the rope in passing over the roller *b* is diminished, constructed and arranged, substantially as hereinbefore described.

No. 58,850. Closure for Jars. (Fermeture de jarres.)



William Blair McCrosky, Eureka Springs, Arkansas, U.S.A., 1st February, 1898; 6 years. (Filed 17th January, 1898.)

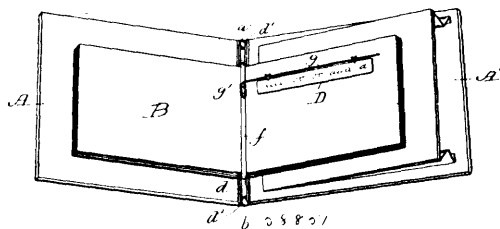
Claim.—In a closure for jars, the combination with the neck, of a flange extending therefrom adjoining its upper end and having a downwardly bevelled upper edge, the neck being undercut above the flange, a cap or cover having a depending flange adapted to bear upon a gasket on the flange of the neck, said cap or cover having inclined flanges on its top at the outer edge thereof, said flanges being bevelled inward, together with solid locking-bars having inwardly projecting end portions to engage the inclined flanges of the top and external flange of the neck, the projecting portion which engages the top being bevelled or undercut, substantially as shown and for the purpose set forth.

No. 58,851. Writing-Book Cover. (Couvert de livres.)

Clarence James Ainsworth, West Gardner, Massachusetts, U.S.A., 1st February, 1898; 6 years. (Filed 11th October, 1897.)

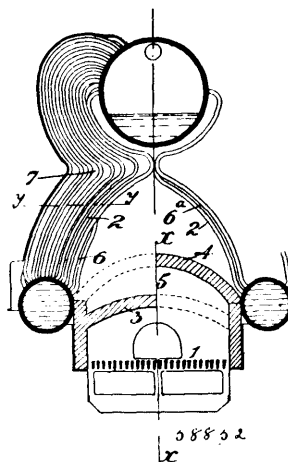
Claim.—1st. The book-cover *A*, in combination with the writing-book and copy-holder device *C*, the latter consisting of the back-strip *d* attached to the flexible back between the leaves of said book-cover, and having the curved and preferably eye-shaped ends *d*¹, *d*², with the end *d*² terminating in a pointed or hook-end *d*³, the swinging arm *f* pivoted at *e* to one end of said back-strip *d*, and adapted at its opposite end to be attached to the hooked end *d*³, the slide *g*¹ fitted on arm *f*, and the arm *g* pivoted at one end to

said slide *g*¹, substantially as and for the purpose set forth. 2nd. In a writing-book cover, the combination of the book-cover *A*, with



the back-strip *d* having the eye-shaped loops *d*¹, *d*² formed on the ends thereof, means for fastening said back-piece to the book-cover, and swinging arm *f* pivoted at one end to one end of the back-strip, and adapted to be detachably fastened at the other end, substantially as and for the purpose set forth. 3rd. In a writing-book cover, the combination of the back-strip *d*, attached to said book-cover, with the arm *f* pivoted to said back-strip *d* and the arm *g* adjustably pivoted to said arm *f*, so as to slide and swing thereon substantially as and for the purpose set forth.

No. 58,852. Water Tube Steam Boiler. (Chaudière à vapeur.)



John Isaac Thornycroft, Chiswick, Middlesex, England, 1st February, 1898; 6 years. (Filed 9th November, 1897.)

Claim. 1st. In a water tube boiler of the kind hereinbefore referred to, the arrangement in combination, of water tubes and a furnace or furnaces so constructed that the gases from the fuel on various parts of the firegrate are compelled to all so pass through an opening or openings, or passage or passages, of comparatively limited cross sectional area that the said gases will become more or less intimately mixed and averaged in combustible quality before coming into contact with the tubes, or the main portions thereof, in which circulates the water to be heated and converted into steam, as set forth. 2nd. In a water tube boiler of the kind hereinbefore referred to, the combination with the furnace, or each furnace, and the water tubes above the same, of an interposed furnace roof formed at or near about the middle portion of its length, with one or more openings or passages of comparatively limited cross sectional area through which all the gases from the fuel on various parts of the fire-grate are compelled to pass before coming into contact with the tubes or the portions thereof above said roof, substantially as herein described for the purpose specified. 3rd. A water tube boiler, in which there are provided between the fire-grate and the water tubes above it two or more partitions of suitable refractory material, so arranged that an opening or openings, or passage or passages of comparatively limited cross sectional area is, or are, formed between them, through which all the gases from the fuel on the grate have to pass on their way to the tubes to be heated, substantially as described. 4th. A water tube boiler, having a furnace provided with close roof walls or partitions arranged at different levels over the forward and rearward portions respectively of the fire-grate, so as to form between their adjacent ends an opening or passage through which all the flame and hot gases from the fuel on various parts of the fire-grate have to pass before coming in contact with the water tubes above said roof walls or partitions, substantially as described. 5th. A water tube boiler of the kind referred to in the preceding claims, in which portions of the boiler tubes, or some of them, extend down below the partitions, or one of them, so that the fire gases will come in contact with some portions of the tube heating surface before passing through the opening or openings