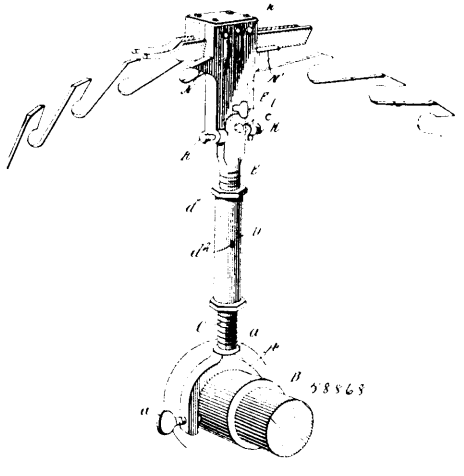
4th. A boiler furnace having an upper and a lower series of tubular water grates, the upper series being of smaller diameter than the lower series, and with wider space between their peripheries than the lower series, substantially as set forth. 5th. A boiler furnace having an upper and a lower series of tubular water grates, the intervals between the axes of the upper grate tubes being the same as the intervals between the axes of the lower grate tubes, and the diameter of the upper grates being less than the diameter of the lower grate tubes, substantially as set forth. 6th. A boiler furnace having an upper water grate composed of a series of tubes connected at their rear ends with the water space of the boiler by independent connections for the respective tubes, a water box or manifold with which the front ends of said grate tubes are connected, a lower water grate composed of a series of tubes connected at their front ends with the said manifold, a series of upright connections whereby the rear ends of the said lower grate tubes are connected with the boiler connections of the upper grate tubes, and supply pipes connecting said water box or manifold with the water space of the boiler, the intervals between the axes of the upper grate being the same as the intervals between the axes of the lower grate tubes, and the diameter of the upper grate tubes being less than the diameter of the lower grate tubes, substantially as set forth.

No. 58,868. Saw Shaping and Sharpening Device.

(*Machine à affuter les scies.*)

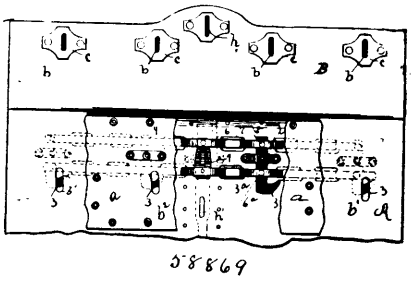


W. Asher Wilcox, Rich Hill, Missouri, U.S.A., 2nd February, 1898; 6 years. (Filed 17th January, 1898.)

Claim.—1st. In a device for shaping, sharpening, rounding and side filing saws, a head portion having a file way or ways, and means for supporting said head portion upon the saw, substantially as shown and described. 2nd. In a device for shaping, sharpening, rounding and side filing saws, a head portion having file ways, and the guide or gauge projections or shoulders, and means for supporting said head portion, substantially as shown and described. 3rd. In a device for shaping, sharpening, rounding and side filing saws, a head portion having inclined file ways, and means for supporting said head portion upon the saw, substantially as shown and described. 4th. In a device for shaping, sharpening, rounding and side filing saws, a head portion having inclined file ways, and the guide or gauge extensions or shoulders, and means for supporting said head portion, substantially as shown and described. 5th. In a device for shaping, sharpening, rounding and side filing saws, a head portion comprising the side and central blocks, said central block being adjustable, and the file ways formed between said side and central blocks, and means for supporting the head portion upon the saw, substantially as shown and described. 6th. In a saw shaping, sharpening, rounding and side filing device, a head portion comprising the side and central pieces, said central pieces being wedge shape and adjustable, the inclined file ways between the side and central pieces, the guide or guage extendings or shoulders, and means for supporting said head portion upon the saw, substantially as shown and described. 7th. In a saw shaping, sharpening, rounding and side filing device, a head portion comprising the side blocks having inclined recessed in their inner faces, the central block having the wedge shaped lower end, said block being adjustably arranged between the side blocks, and means for supporting said head portion upon the saw, substantially as shown and described. 8th In a saw shaping, sharpening, rounding and side filing device, a head portion comprising the side and central blocks, one of the side blocks having the guide and gauge shoulders or extensions, means for supporting said head portions and the clamping screws for binding the said head portion and saw, substantially as shown and described. 9th. In a device of the kind described, the head portion constructed as described, a supporting rod pivotally connected with said head portion, and the adjusting screws carried by the head portion and adapted to bear upon the supporting rod, substantially as shown and described. 10th. In a device of the kind described, the combination with the head portion, of the supporting rod, the adjustable connection between said head portion and rod, and the adjustable sleeve portion to which said rod is attached, substantially as shown and described. 11th. In a device of the kind described, the combination with the yoke, of the rods secured thereto, the tubular member attached to the rod, a second rod carried by said tubular member, and the head portion pivotally attached to the second rod, the adjusting means, and the clamping screws carried by the said head portion, substantially as shown and described. 12th. The combination with the head portion, comprising the side and central blocks providing the inclined file ways, the clamping screws, the adjusting screws, the supporting rod and adjustable connection, and the yoke adapted to be clamped to the mandril collar, all arranged, substantially as shown and described.

No. 58,869. Mail Bag Fastener.

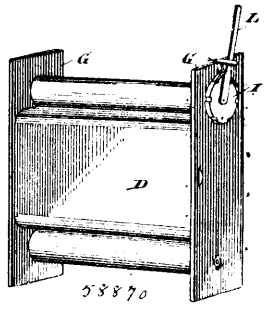
(*Fermeture de sacs à lettres.*)



William W. Henry and Adelbert E. Darrow, both of Little Valley, New York, U.S.A., 2nd February, 1898; 6 years. (Filed 18th October, 1897.)

Claim.—1st. In a mail-bag fastener, the combinaton with a series of pivoted hooks, of a plurality of flexible non-extensible connections, said connections attached to each of said hooks on opposite sides of their pivotal points, substantially as and for the purposes specified. 2nd. In a mail-bag fastener, the combination with a pivoted hasp, of a series of pivoted hooks, and a plurality of flexible non-extensible connections which connect the hasp and each of the hooks of said series on opposite sides of their pivotal points, substantially as and for the purposes specified. 3rd. In a mail-bag fastener, the combination of a series of pivoted hooks, and a plurality of non-extensible chain connections therefor, said connections having plate-links with which each hook of the series is connected on opposite sides of the pivotal point of the hook, substantially as and for the purposes specified. 4th. In a mail-bag fastener, the combination of a series of pivoted hooks, and a plurality of non-extensible chain connections therefor, each of said chain connections consisting of plate and rod links, the shanks of each hook of the series being connected with a plate-link of each of the chain connections on opposite sides of the pivotal point of the hook, substantially as and for the purposes specified.

No. 58,870. Station Indicator. (*Indicateur de station.*)



Orrie W. Allen, Butte, Montana, U.S.A., 2nd February, 1898; years. (Filed 17th January, 1898.)

Claim.—1st. In a station indicator, the combination with the supporting frame of the winding rolls and ribbon, the operating lever and pawl, the toothed disc, and the reversible stop device, substantially as shown and described. 2nd. In a station indicator, the combination with the supporting frame of the winding rolls and ribbon, the operating lever and disc, the pawls carried by the lever, the reversible stop carried by the lever and the set screw for attaching said stop to the lever, substantially as shown and described. 3rd. In a station indicator, the combination with the supporting