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W. H. KOBER

2,155,494

WRINGING DEVICE

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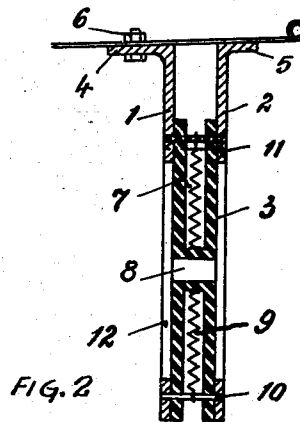
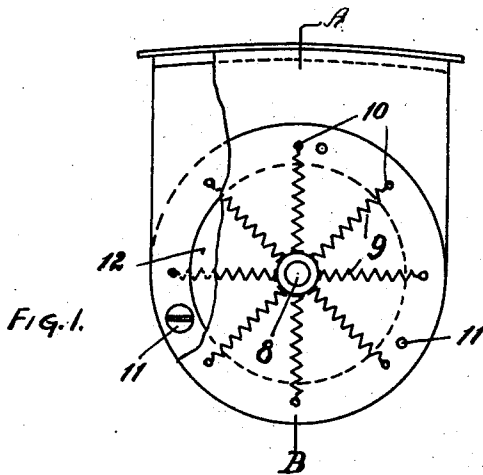


Fig. 3.

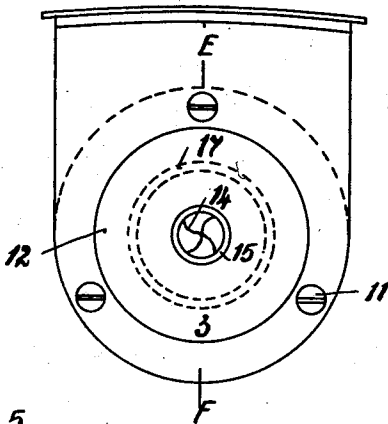


Fig. 4.

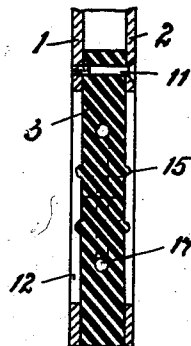


Fig. 5.

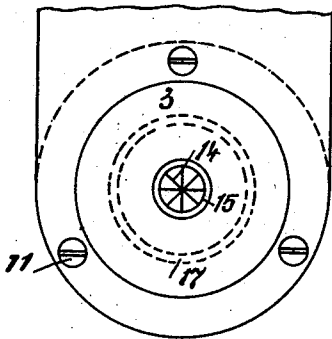
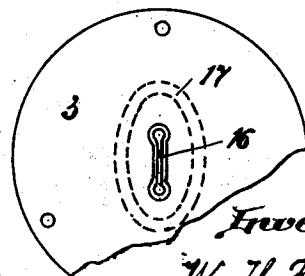


Fig. 6.



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UNITED STATES PATENT OFFICE

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WRINGING DEVICE

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4 Claims. (Cl. 15-260)

This invention relates to a device for wringing wet cloth-like materials, such as dusters, mops, etc.

A device according to the present invention consists of a frame with a resilient wringer member properly mounted therein, said wringer member consisting of soft or a combination of soft and hard substance, of soft substance rubber being the most preferable, and of hard substance springy metal wire, such as brass-, copper- or steel wire being the most suitable.

Several embodiments of the invention are illustrated in the accompanying drawing, in which Figure 1 is a top view of a wringer device, partly in section; Fig. 2, a longitudinal section on the line A-B, of Fig. 1; Fig. 3, a top view of another embodiment of the invention; Fig. 4, a longitudinal section on the line E-F, of Fig. 3; Fig. 5, a top view of another embodiment of the invention; Fig. 6, a top view of an additional plate forming part of the wringing means.

Referring to the drawing, the construction shown in Figs. 1 and 2 comprises two plates 1 and 2 made of metal, aluminum, etc. Corresponding to the shape of the wringer plate 3, the front end of both plates 1 and 2 is rounded off in a semicircle and the rear end thereof provided, respectively, with a flange 4 and 5. The lower flange has holes for the reception of the screws 6 for securing the device to buckets, tubs, etc. The actual wringer plate 3 of circular form consists of rubber and is provided with a hollow space 7 and a central opening 8. The hollow space 7 is open at the circumferential sides of the plate 3 and closed towards the hole 8 so as to form a wall around the latter. Within the space 7 spiral springs 9 are radially arranged, one end of which is secured to the frame of the device by means of the pin 10 and the other end abuts against the wall of the opening 8. The location and disposition of said springs within the opening being thus so as to exert pressure upon the surrounding wall of the opening 8, thus tending to close the said opening, whilst on an article being drawn through the said opening said springs offer resistance to ready expansion of the opening. The wringer plate 3 is secured within the frame by the grub screws 11. Both plates 1 and 2 have a central round opening 12 whose diameter is larger than that of the objects to be wrung out by being passed through the apertured wringer plate 3.

While an article is wrung out by being drawn through the apertured wringer plate 3 the spiral

springs 9 press against the wall of the central aperture and thus increase the pressure.

Referring to Figs. 3 to 5, a modification of the wringer member is shown in which the fabric receiving aperture, similar to that in Figs. 1 and 2, is substantially closed by prongs or fingers produced by cutting the rubber in spiral or straight cuts 14, allowing a cloth to be drawn through. In order to prevent ready tearing of the material of the wringer member 3 at the ends of said cuts on a cloth being drawn through the aperture, these cuts may be limited by a reinforcing annular bead 15. Instead of a round and open aperture, as represented in Figs. 1 and 2, or instead of an aperture substantially closed by prongs or fingers as shown in Figs. 3 to 5, a narrow slot-like aperture 16, as shown by way of example in Fig. 6, may be provided in the wringer member 3, the edge of which slot-like aperture may also be reinforced by an annular bead to prevent ready tearing of the wringer member material on a cloth being drawn through said aperture.

At a convenient distance from the edge of the aperture, and according to the shape thereof, i. e. round as shown in Figs. 1, 3 and 5, or slot-like as shown in Fig. 6, a circular or oval spring 17 is secured to the wringer member by vulcanizing or other suitable means, said spring serving the purpose to prevent ready expansion of the aperture and thus increasing the pressure upon a cloth drawn through said aperture.

I claim:

1. A device for wringing wet fabrics consisting of a frame with an apertured wringer member of resilient material mounted therein, said wringer member comprising a disc with a fabric receiving aperture therein and auxiliary means disposed about the fabric receiving aperture for augmenting the pressure of said resilient wringer member upon the article to be wrung out during the wringing operation due to the expansion of said aperture in use and means for supporting said frame.

2. A device for wringing wet fabrics consisting of a frame with an apertured wringer member of resilient material mounted therein, said apertured wringer member comprising a disc with a fabric receiving aperture therein and having a hollow space open on the peripheral sides of said disc and closed towards the aperture to form a wall around the latter, auxiliary spring means disposed about the fabric receiving aperture for augmenting the pressure upon the article to be wrung out and located in said hollow space, said spring means being secured onto the frame and

adapted to exert pressure in radial direction against the wall of the aperture, and means for supporting said frame.

3. A device for wringing wet fabrics consisting of a frame with an apertured wringer member of resilient material mounted therein comprising a disc with a fabric receiving aperture therein, auxiliary spring means surrounding the aperture for augmenting the pressure upon the article to be wrung out, said auxiliary spring means being embedded in said disc, and secured in position by vulcanizing, in the material around the aperture of the wringer member, thus tending to prevent ready expansion of the central wringer member portion encircled by said spring means, and means for supporting said frame.

4. A device for wringing wet fabrics consisting of a frame with an apertured wringer member of resilient material mounted therein, the aperture of said wringer member being substantially closed by prongs produced by cuts emanating from the centre of the aperture of the wringer member towards the periphery and of the length of the radius of said aperture, auxiliary spring means for augmenting the pressure of said wringer member upon the article to be wrung out, said auxiliary spring means comprising a spiral spring arranged about said aperture, and means for supporting the frame.

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