May 11, 1954 J. F. HAINES ET AL 2,677,951

PORTABLE WRINGER

Filed July 21, 1950

2 Sheets-Sheet 1

Fig-1

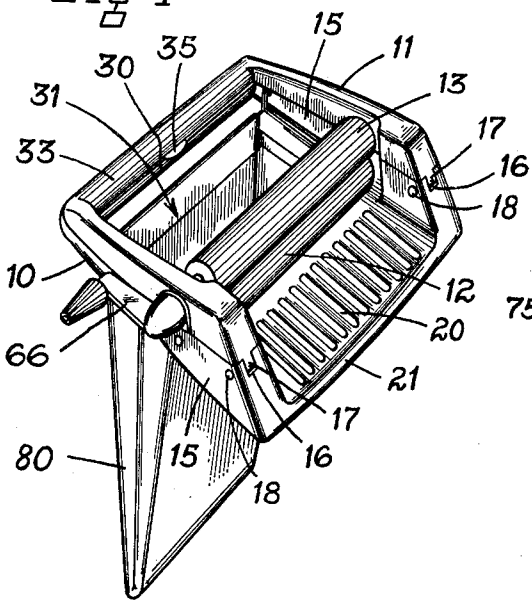


Fig-2

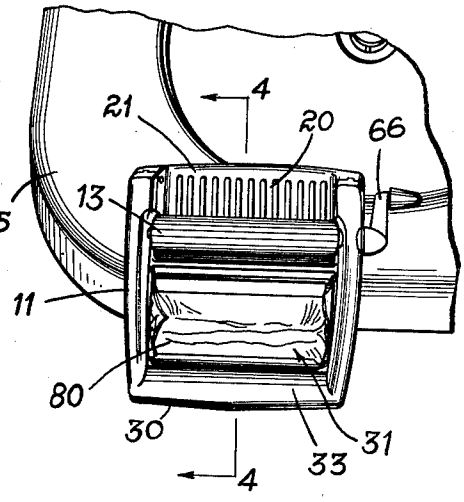


Fig-3

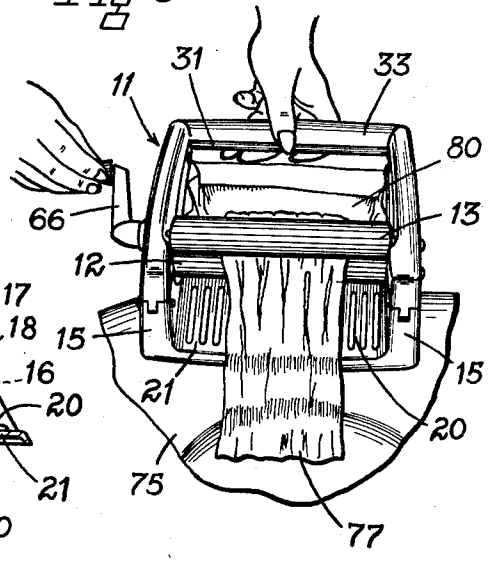
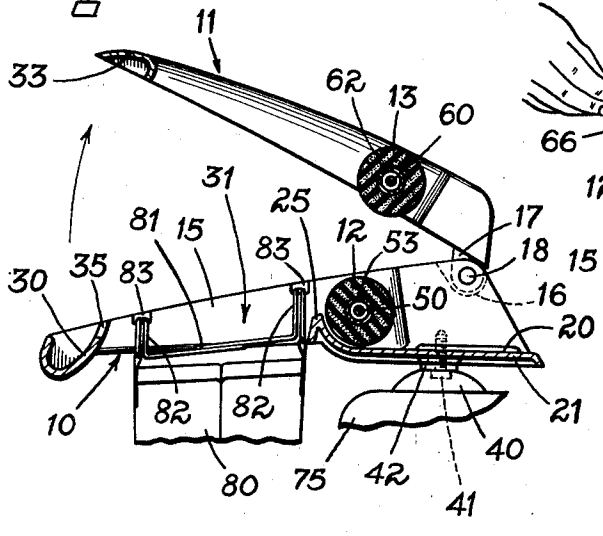


Fig-4



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2 Sheets-Sheet 2

Fig-5

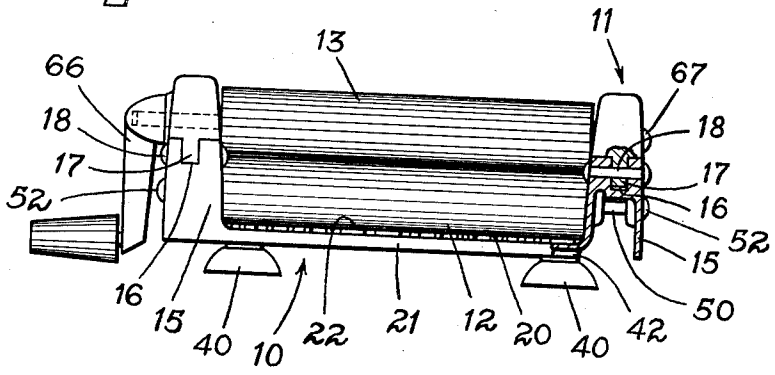


Fig-6

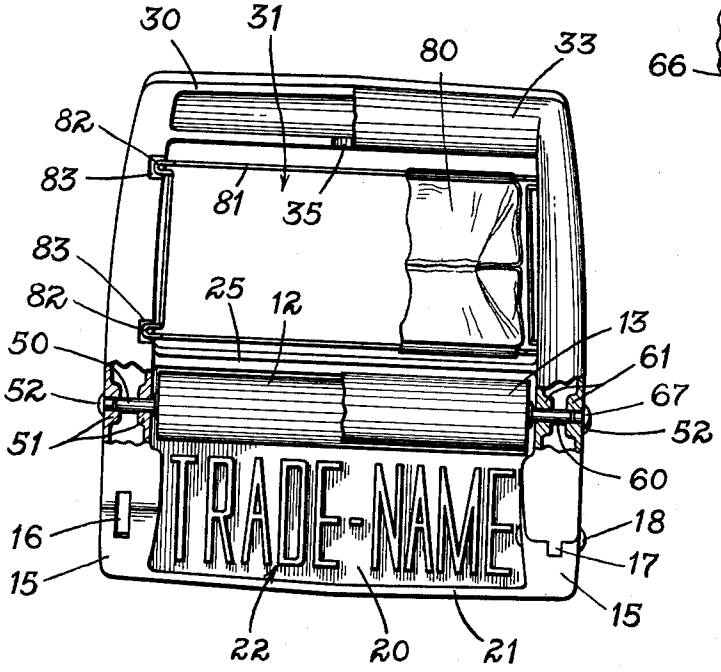
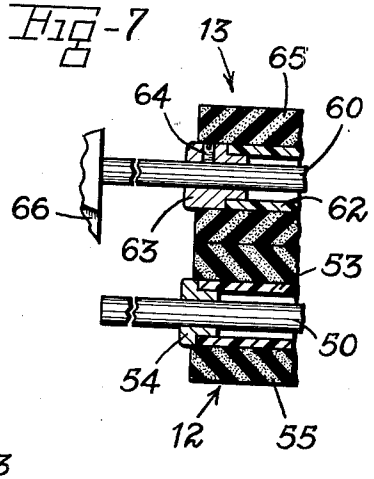


Fig-7



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PORTABLE WRINGER

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3 Claims. (Cl. 68—245)

1

This invention relates to clothes wringers and has particular application to a portable wringer adapted for temporary mounting such as on a wash basin or sink for wringing clothing and other articles washed by hand. For example, the wringer of the invention is of such simple, compact and lightweight construction that it may be carried in a suitcase or other luggage during travel for use in a hotel bathroom to wash hose, underwear and the like, and it is also especially useful for persons living in apartments and the like, particularly for use in washing a relatively small quantity of clothing not sufficiently large to warrant the use of a washing machine or laundry.

The wringer of the invention is so constructed that it may be readily formed economically of lightweight material, such as by molding from a suitable plastic, and it can accordingly be mounted on a sink such as a wash stand or basin by means such as suction cups without damaging or marring the finish of the supporting surface and without requiring special mounting attachments. The device is accordingly quickly and easily mounted for use and removed for storage after using, and it requires little storage space. Also the device is constructed to include a roughened surface portion adapted to serve as a wash board for use in washing articles prior to wringing.

Special provision is made for the protection of the user and also of the articles being wrung against pinching or crushing in use. The wringer rolls are carried by two hingedly connected frame members which include handle portions by which the pressure between the rolls may be manually regulated and maintained in use. In addition, the rolls themselves are covered with a soft material having a roughened but water impervious outer surface which thus provides adequate gripping force for wringing while at the same time minimizing the tendency of the articles to stick to the roll surfaces when wet and also permitting ready displacement by buttons or hooks to avoid crushing the same. Use of the device is also facilitated by constructing the main frame of the device to receive a bag or like receptacle in the path of the wrung articles passing between the rolls.

It is accordingly one of the principal objects of the present invention to provide a simple and lightweight clothes wringer having the above operational characteristics and advantages, and which in addition may be economically produced in a small but effective size for portable use and

2

which is attractive in appearance as well as compact for simplified storage and handling.

Other objects and advantages of the invention will be apparent from the following description, the accompanying drawings and the appended claims.

In the drawings—

Fig. 1 is a perspective view showing a wringer constructed in accordance with the invention as viewed from the side and rear;

Fig. 2 is a perspective view looking down upon the wringer from the front and showing it in attached position on a wash stand ready for use;

Fig. 3 is a perspective view similar to Fig. 2 but looking in the opposite direction;

Fig. 4 is an enlarged section taken approximately on the line 4—4 of Fig. 2 and showing the wringer in open position;

Fig. 5 is an end view of the wringer taken from the back and with a portion broken away to illustrate details of internal construction;

Fig. 6 is a plan view of the wringer with portions broken away to illustrate structural details; and

Fig. 7 is an enlarged fragmentary section through the wringer rolls.

Referring to the drawings, which illustrate a preferred embodiment of the invention, the wringer comprises two main frame portions, a lower frame 10 and an upper frame 11. These two frames carry the respective lower and upper wringer rolls 12 and 13, and they are hinged together for relative pivotal movement. As best seen in Figs. 4 and 5, the lower frame 10 is generally channel shaped to include side walls 15, and each of these side walls is provided with a groove 16 at its upper and rearward corner which receives a tongue 17 at the lower rearward corner of the upper frame 11, with rivets 18 securing these tongues within the grooves 16 to form the pivots for the resulting hinge structure.

The lower frame 10 is formed with a ribbed or otherwise roughened surface 20 between its rearward end 21 and the lower roll 12 which is adapted to serve as a wash board or scrubbing surface. Thus as shown in Fig. 1, this surface 20 may be formed with elongated ribs, or a similar scrubbing surface may be provided by means of raised letters as indicated at 22 in Fig. 6. For example, these letters may spell out a directional statement such as "Scrub Here," or the appropriate letters may be used to show a trade-name for the device. This surface 20 also serves as a drainboard during wringing, to direct water from the rolls back to the sink or other container for the

washed goods, and the lower frame 10 is also formed with a raised wall portion 25 just forward of the lower roll which cooperates with the side walls 15 to direct water back towards the drainboard end 21.

The lower frame 10 includes a handle portion 30 at its front end which extends across between the side walls 15, and a large and generally rectangular opening 31 is provided between the handle portion 30 and the wall 25 for receiving the article passed between the wringer rolls. The upper frame 11 has a similar handle portion 33 extending across its front end and adapted to meet the lower handle 30 as shown in Figs. 1 to 3. These two handles are thus readily held by one hand of the user as indicated in Fig. 3 to hold the two rolls in the desired pressure contact for wringing, and the lower handle 30 is provided with a notch 35 for receiving a finger of the user to facilitate opening of the wringer to its open position shown in Fig. 4.

Highly satisfactory results in mounting the wringer for use have been obtained by providing the lower frame 10 with a plurality of rubber suction cups 40 for attaching the wringer to a wash stand, sink or other supporting surface. As shown in Figs. 4 and 5, each of these suction cups is provided with a screw or bolt 41 adapted to be threaded into a suitable boss 42 on the underside of the lower frame 10 to secure the suction cup in position. Since both frames are designed to be readily formed by molding from a suitable plastic or other light material, the load on the suction cups is not particularly great in use, and in addition with the wringer rolls and suction cups located in relatively close relation as shown especially in Fig. 4, the weight of the articles being wrung tends to hold the suction cups in position rather than to exert such stress thereon as to tend to dislodge them. At the same time, it will be readily seen that screw clamps or the like may be employed in place of the suction cups if it is desired to mount the wringer on a nonflat surface, such for example as the rim of a portable washing machine or other container for articles to be wrung.

The wringer roll units are shown in detail in Figs. 4 and 7. The lower roll 12 is carried by a shaft 50 journaled in bosses 51 in the side walls 15 of the lower frame 10, with this shaft being held in place at its ends by means of plugs 52. A sleeve 53 of plastic or like relatively hard material having end hubs 54 forms a core for receiving a tube 55 of soft material such as cellular rubber, which is frictionally secured on the core 53. Desirable results have been obtained with this rubber portion formed with a nonabsorbent and relatively rough outer surface to eliminate the tendency of wet cloth to stick to the roll surface in use.

The upper wringer roll indicated generally at 13 is of similar construction to the lower roll and is carried by a shaft 60 journaled in bosses 61 on upper frame 11. The upper roll includes core 62, hubs 63 having a set screw 64, and a rubber cover 65. A crank handle 66 is pinned or otherwise secured to one end of the shaft 60, and the other end of the shaft is held in place in the upper frame by an end plug 67 as shown in Fig. 6. The upper wringer roll is so proportioned, as shown in Fig. 4, that it extends below the bottom plane of the upper frame 11, so that when the two frame members are held in contact, the two roll surfaces will be pressed together with sufficient force for effective wringing.

In use, the device is readily mounted by means of the suction cups 40 on a supporting surface such as the rim of a sink, indicated fragmentarily at 75, containing the clothes to be wrung. The lower frame 10 is so proportioned as shown that when the device is thus mounted in position, the drainboard portion 20 will sufficiently overhang the inner part of the sink for effective draining of the water from the articles being wrung, one such article being indicated at 77 in Fig. 3. During wringing, the handle portions 30 and 33 of the two frames are held together by one hand of the user to maintain the desired pressure of the rolls, and it will be seen that it is thus easy for the user to counterbalance with this hand whatever tendency there may be for the device to tip too far back towards the sink under the load of the article being wrung. To start each article through the wringer, it is merely necessary to slip the leading end thereof between the rolls, usually by first partly opening the device as shown in Fig. 4, and thus with both hands required to hold the device during actual wringing, the possibility of pinching or crushing the fingers is effectively eliminated.

The articles which have been wrung pass over the wall 25 to the opening 31 in the lower frame, and provision is made for supporting a bag 80 or like receptacle in line with this opening to receive the wrung articles. The upper end of this bag 80 is supported within the opening 31 by a wire frame member 81, which is formed from a single length of suitable rust proof wire into a generally rectangular frame of the proper shape to fit within the opening 31. The four corners of this frame 81 are bent to form hook like portions 82, and notches 83 are provided in each of the side walls 15 of the lower frame 10 for receiving these hook portions to support the frame and bag in place. This bag is preferably formed of a water impervious material such as a suitable plastic, and after it has been filled with the washed and wrung articles, it may be readily lifted free of the wringer through the opening 31 for transporting the articles to a drying rack or the like.

It will accordingly be seen that the present invention provides a portable clothes wringer which is not only of simple, compact and lightweight construction, but which is also attractive in appearance and quickly and easily mounted for use or detached for storage. At the same time, it provides in a single unit a scrubbing surface for convenient use during washing, wringer rolls for wringing the articles which have been washed, and a portable laundry bag for containing the wrung articles prior to hanging. It can be readily hung on a hook or stored in a small space on a shelf or the like, and also its compact construction facilitates packing it in a suitcase or other luggage for use during travel. Also, since the use of suction cups as described makes it possible to mount the device for use on a supporting surface without danger of marring the surface, it is thus highly adaptable for use in a wide variety of locations.

While the form of apparatus herein described constitutes a preferred embodiment of the invention, it is to be understood that the invention is not limited to this precise form of apparatus, and that changes may be made therein without departing from the scope of the invention which is defined in the appended claims.

What is claimed is:

1. A portable clothes wringer comprising a lower frame adapted to be supported for use in generally horizontal position and including a pair of laterally spaced side walls and a generally horizontal plate portion connecting said side walls at the rearward end of said frame and forming a drainboard, a handle connecting said side walls at the forward end of said frame and spaced forwardly from said drainboard to provide an opening of substantial area therebetween, an upper frame including arms hinged to said side walls adjacent the rearward end thereof, a pair of upper and lower wringer rolls carried in cooperating relation by said frames at a position adjacent the forward end of said drainboard, a handle connecting said upper frame arms at the forward end thereof and spaced from said upper wringer roll to provide an opening therebetween overlying and of substantially the same area as said lower frame opening, said upper frame handle overlying said lower frame handle for gripping together by one hand of the user to press said rolls together, a crank on one of said rolls for operation by the other hand of the user to wring articles forwardly across said drainboard for discharge downwardly through said openings, said side walls extending above the level of said lower roll to channel water rearwardly across said drainboard, and means forming an upwardly extending wall on said drainboard forwardly of said lower roll for blocking forward passage of water to said openings from said drainboard.

2. A portable clothes wringer comprising a lower frame adapted to be supported for use in generally horizontal position and including a pair of laterally spaced side walls and a generally horizontal plate portion connecting said side walls at the rearward end of said frame and forming a drainboard, a handle connecting said side walls at the forward end of said frame and spaced forwardly from said drainboard to provide an opening of substantial area therebetween, an upper frame including arms hinged to said side walls adjacent the rearward end thereof, a pair of upper and lower wringer rolls carried in cooperating relation by said frames at a position adjacent the forward end of said drainboard, a handle connecting said upper frame arms at the forward end thereof and spaced from said upper wringer roll to provide an opening therebetween overlying and of substantially the same area as said lower frame opening, said upper frame handle overlying said lower frame handle for gripping together by one hand of the user to press said rolls together, a crank on one of said rolls for operation by the other hand of the user to wring articles forwardly across said drainboard for discharge downwardly through said openings, a receptacle for receiving said articles, cooperating means on said receptacle and said lower frame for releasably holding the upper end of said receptacle within said lower frame opening to receive the articles wrung between said rolls, said side walls extending above the level of said lower roll to channel water rearwardly across said drainboard, and said lower frame

having an upwardly extending wall located between said opening therein and said lower roll for blocking forward passage of water from said drainboard to said receptacle.

3. A portable clothes wringer adapted for temporary mounting on the rim of a sink and comprising a lower frame adapted to be supported for use in generally horizontal position and including a pair of laterally spaced side walls and a generally horizontal plate portion connecting said side walls at the rearward end of said frame and forming a drainboard, a handle connecting said side walls at the forward end of said frame and spaced forwardly from said drainboard to provide an opening of substantial area therebetween, an upper frame hinged to said side walls adjacent the rearward end thereof, a lower wringer roll carried by said lower frame between said side walls at a position adjacent the forward end of said drainboard and having its uppermost portion below the level of said side walls, an upper wringer roll carried by said upper frame and projecting downwardly therefrom to form a nip with said lower roll below the top of said side walls, a handle at the forward end of said upper frame overlying said lower frame handle for gripping together by one hand of the user to press said rolls together, a crank on one of said rolls for operation by the other hand of the user to wring articles forwardly across said drainboard for discharge downwardly through said opening, suction cups on the underside of said lower frame for securing said wringer to said rim of a sink, said suction cups being spaced between said rolls and the rearward end of said drainboard to support said wringer on said rim with said drainboard overhanging said sink and with the weight of the articles being wrung tending to hold said cups in gripping position on said rim during wringing, and an upwardly extending wall integral with said drainboard and connecting said side walls forwardly of said lower roll for blocking forward passage of water to said opening from said drainboard.

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