Sept. 23, 1958 K. M. JOHNSON 2,852,925

DIAPER WRINGERS

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Fig. 1

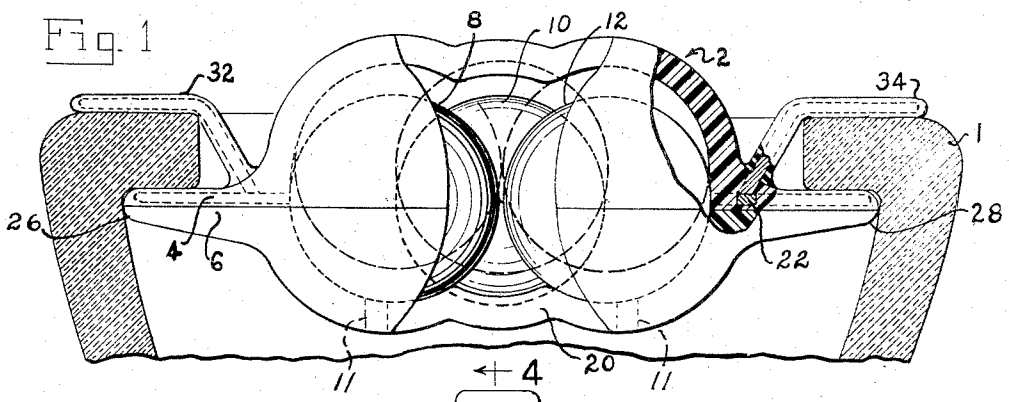


Fig. 2

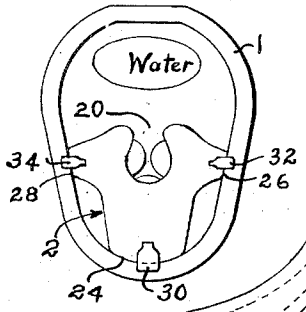
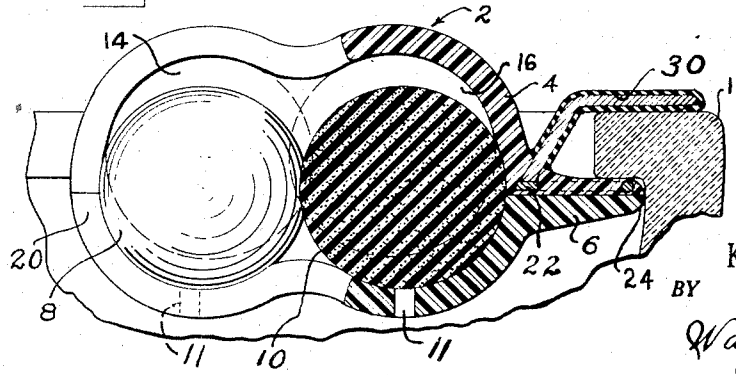


Fig. 3

Fig. 4



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Fig. 5

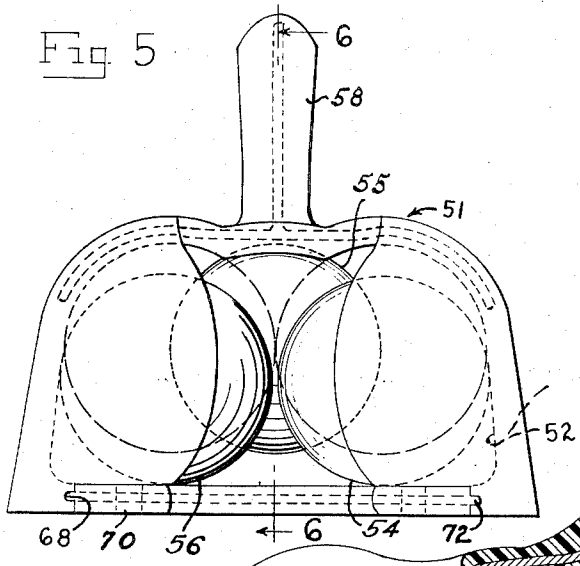


Fig. 6

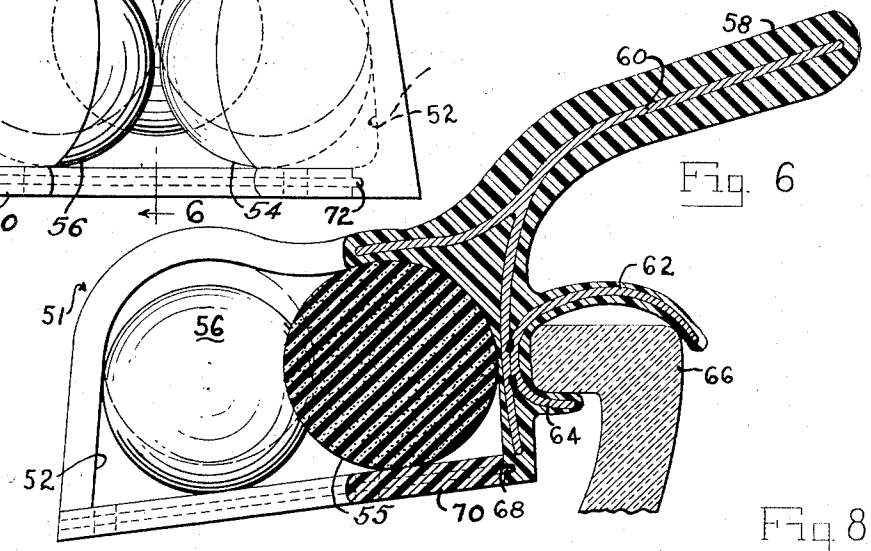


Fig. 7

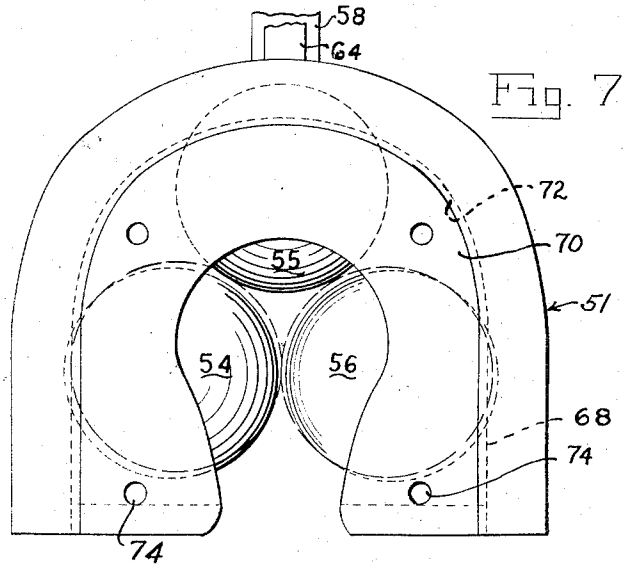
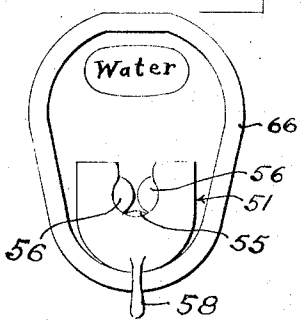


Fig. 8



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DIAPER WRINGERS

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7 Claims. (Cl. 68—244)

This invention relates to improvements in wringers and more particularly to wringers for removing excess moisture from diapers that have been initially washed in a commode or the like, and eliminates the necessity of wringing the diapers or the like by hand.

Heretofore the initial washing and wringing of diapers has been a highly unpleasant task which usually necessitated the dipping of the diapers into the bowl of a commode, and wringing them by hand to free them of excess water.

The present invention is so designed, that it may be quickly fitted on the inturned ledge of the commode bowl, and when one or more diapers are initially washed in the commode bowl they may be drawn up through the wringer, thereby removing the excess water therefrom. If the diapers are held by a corner and dipped up and down in the commode bowl to free them of foreign matter, then drawn up through the wringer, the whole operation can be accomplished without the hands coming into contact with the soiled portion of the diapers.

An object of this invention is to provide a diaper wringer which may be quickly fitted onto the inner ledge of a commode in such a manner as to give free access to the portion of the bowl containing water, so that the diapers may be dipped thereinto for initial cleaning, then the diapers may be moved transversely forward and passed upward through the wringer to free the water therefrom, and when not in use, the wringer may be readily removed from the commode.

Another object of the invention is to provide a diaper wringer which may be readily attached to or detached from a toilet bowl, so the toilet bowl may be used for washing and wringing diapers as well as for its normal purpose.

Still another object of the invention is to provide a diaper wringer which is simple and sturdy in construction, easy to assemble and easy and effective to use, and which is easy to keep clean and sanitary.

With these objects in mind and others which will become manifest as the description proceeds, reference is to be had to the accompanying drawings in which like reference characters designate like parts in the several views thereof, in which:

Fig. 1 is a vertical sectional view, partly in elevation, through a toilet bowl having a diaper wringer installed thereon, which is shown in wringing position;

Fig. 2 is a top plan view of a toilet bowl, showing the diaper wringer fitted thereon;

Fig. 3 is an enlarged top plan view of the diaper wringer removed from the toilet bowl, with parts broken

away and with other parts shown in section, and showing the normal position of the balls in full outline, and showing the wringing position thereof in dash outline;

Fig. 4 is a longitudinal sectional view taken on the line 4—4 of Fig. 3, looking in the direction indicated by the arrows;

Fig. 5 is an elevational view of a modified form of the device;

Fig. 6 is a sectional view thereof taken on the line 6—6 of Fig. 5, looking in the direction indicated by the arrows;

Fig. 7 is a bottom plan view of the modified form of the invention, showing the balls in open position in full outline, and in squeezing position in dashed outline; and

Fig. 8 is a top plan view of a commode showing the modified form of the invention installed thereon.

With more detailed reference to the drawing, the numeral **1** designates generally a toilet bowl, onto which a diaper wringer, generally designated at **2**, is fitted, which diaper wringer is preferably made of complementary half sections **4** and **6**, the device being divided along a horizontal plane as will best be seen in Figs. 1 and 4. By having the body of the device divided into complementary halves, in the manner shown, the assembly thereof is greatly facilitated, and while the body portion may be made of any suitable material, such as plastic, hard rubber, metal or the like, the present device is shown to be made of plastic, and to have recesses **14**, **16** and **18** formed in the complementary sections thereof. The wringer balls **8**, **10** and **12** are placed in the respective recesses formed in the complementary half sections, so, when the half sections **4** and **6** are securely fastened together in complementary relation, the balls cannot readily be removed.

The balls **8**, **10** and **12** are preferably made of a material such as sponge rubber, so that they will yield and conform to the size and shape of the mass of wet diaper passing therethrough. However, the recesses **14**, **16** and **18** have each outer wall thereof tapering outwardly and downwardly so as to urge the balls into wedging engagement with each other as the diaper is drawn upward therebetween.

A throat **20** is formed in the rear of the complementary halves **4** and **6**, which throat becomes increasingly larger toward the opening formed by balls **8**, **10** and **12**. It is preferable to have the upper half of the body, if made of plastic or rubber, to have a steel reinforcing frame **22**, therein.

The body portion **2** has a slightly rounded portion **24** for engagement with the front of the toilet bowl, as will best be seen in Fig. 4, with side members **26** and **28** in position to engage, or nearly so, the sides of the toilet bowl, as will best be seen in Fig. 1. An outstanding ear **30** is provided above the rounded portion **24**, which ear has a metal reinforcement therein, which is secured to frame **22**, as by welding. The distance between the ear **30** and the rounded portion **24** is such as to bindingly engage the inturned ledge of a toilet bowl, and should it be desired to fit the device onto a toilet bowl having a thicker or a thinner inturned edge, it is necessary only to manually bend the steel frame, within the plastic ear, upward or downward, to cause the ear to conform to the thickness of the toilet bowl ledge.

Ears **32** and **34** are provided above side portion **26** and **28**, and likewise a metal reinforcing frame is contained within the respective ears **32** and **34**, with a plastic or rubber covering thereof to prevent marring the toilet bowl and to prevent the device from slipping. The ears **32** and **34** may also be made to conform to the toilet bowl on which the device is used, as is the ear **30**.

As will best be seen in Figs. 1 and 4, the recesses **14**, **16** and **18** have the outer walls thereof converging inwardly and upwardly to that, upon drawing the diaper upward therethrough the balls will roll along the upwardly inclined outer wall, so as to converge into close fitting relation, as indicated in dash outline in Figs. 1, 3 and 4, which will thoroughly squeeze the water from the diaper and direct it back into the toilet bowl.

The complementary halves **4** and **6** may be secured together by heat treatment or by cementing. While the invention has been described in some particularity as utilizing plastic or hard rubber half members **4** and **6**, it is to be understood that it is within the scope of the present invention to form these complementary half members of pressed or cast metal, and to secure these together in any conventional manner, as by rivets or the like.

It is preferable to have perforations **11** formed in the bottom of the body member so that water will drain freely therefrom, so that when the device is removed from the commode, no accumulated water will be spilled in the process.

Modified form of invention

Referring now to the modified form of the invention, the numeral **51** designates generally a housing which is preferably made of plastic, hard rubber or the like, which housing is hollow, and has upwardly and inwardly converging walls **52** on the sides and front, so as to encase three balls **54**, **55**, and **56**. The balls are preferably made of elastomer, sponge rubber-like material, which will yield and compress within the elastic limits thereof so when a diaper or other article to be wrung is drawn upwardly between the balls, the balls will yield sufficiently to permit an enlarged mass of material to pass therethrough.

The ball **55** is somewhat fixed against vertical movement, yet it is free to rotate within the socket which it occupies. The balls **54** and **56** are in rolling contact with the inner sloping wall **52**, and when not being used, the balls will fall, by gravity, into the position as shown in full outline in Figs. 5 and 6, which will allow a diaper to be easily inserted between the balls, and upon upward movement of the diaper, the balls will roll into the position as shown in dashed outline in Figs. 5, 6, and 7, to squeeze the water from the diaper or other article being wrung.

The body **51** is provided with a handle **58**, which handle has a reinforcing member **60** therein, which reinforcing member extends downward and branches outward, as indicated in Figs. 5 and 6, so as to strengthen body **51**. The reinforcing member **60** has a pair of outwardly projecting reinforcing members **62** and **64** secured below handle **58**, which projections, as is the handle **58**, are covered with plastic, hard rubber or other resilient material. The projection **62** is preferably curved, and is of a length to engage the upper edge of a commode bowl **66** at the forward end thereof. The projection **64** is positioned to engage the lower edge of the inturned ledge of the commode bowl, so the device may be readily applied to a commode bowl for use, or it may readily be removed therefrom without any special equipment or tools.

The housing **51** is bifurcated at the side opposite the handle **58** for a space more than half the length of the body, so as to enable the insertion of the diaper which is to be wrung. The body **51** has a groove **68** around the lower portion thereof, as will best be seen in Figs. 5, 6, and 7, which is adapted to complementarily receive a sliding bottom portion **70**, which has a tongue **72** thereon. It is preferable to have the bottom **70** relatively flat, so it may be readily removed or inserted to enable the disassembly and cleaning of the device. The bottom **70** preferably has a series of holes **74** formed therein, so as to enable water to drain therefrom.

Operation

To use the device for wringing water from diapers and the like, it is placed on a vessel, such as a commode, in which there is a supply of water. After the diaper has been dipped into the water, it is passed laterally between balls **54** and **56** and drawn upward with one hand, while the handle **58** is held with the other hand. Thus the water is quickly and easily removed from the diaper, without the distasteful task having to be done by hand. As the diaper moves upward the balls **54** and **56** roll along the inclined surface **52**, so as to tightly squeeze the diaper between the balls **54**, **55** and **56**. However, if there should be a lump or "wad" of cloth in the articles being rinsed, the sponge rubber balls will readily compress to allow the mass to pass upward.

It will be appreciated that the bottom **70** may be readily removed, which will enable the balls **54**, **55**, and **56** to be removed and cleaned as necessary.

While the invention has been described and illustrated in the two embodiments thereof, it is to be understood that changes may be made in the minor details of construction and adaptations made to different installations, without departing from the spirit of the invention or the scope of the appended claims. It is further to be understood that, while the invention is particularly adapted to the initial washing and wringing of diapers, it may be used for wringing any article for which its construction is adapted.

Having thus clearly shown and described the invention what is claimed as new and desired to secure by Letters Patent is:

1. In a diaper wringer for wringing diapers, a hollow, rigid, body having a transversely arranged open throat formed in one side thereof, the hollow portion of said body having upwardly and inwardly converging interior wall surfaces, at least two balls loosely fitted within said hollow portion of said body and being complementarily arranged with respect to said open throat, so that a fabric article to be processed between said balls may pass transversely through said open throat and between said balls, so upon upward movement of said fabric article said balls will move upwardly in contact relation with said interior wall surfaces into converging engagement.

2. The device as set forth in claim 1, wherein said balls are formed of a resilient, elastomer material.

3. The wringer as defined in claim 1, wherein three balls of resilient, elastomer material are positioned within said hollow portion of said body.

4. The wringer as defined in claim 1, wherein said hollow rigid body is divided along a horizontal plane to divide said body into substantially complementary top and bottom half members, with said transversely arranged open throat passing through said body perpendicularly to the dividing line between said complementary top and bottom half members.

5. The wringer as defined in claim 1, wherein said hollow body has outwardly projecting members thereon, said projecting members being horizontally bifurcated so as to receive the inturned ledge of a toilet bowl therebetween.

6. The wringer as defined in claim 4, including reinforcing members in at least the top half member, projecting members extending horizontally from said top half member, said projecting members each being bifurcated, and reinforcing members extending into each of said projecting members and being integrally connected with said reinforcing members in said top half member.

7. In a diaper wringer for use with a commode, a hollow, rigid body, the walls defining said hollow within said body converging upwardly and inwardly at a wedging angle, balls fitted within said hollow body, so said balls will roll upwardly and inwardly along said walls into wedging engagement when diapers are drawn upward between said balls, there being a transversely arranged, open throat formed in a side of said body in communication with said hollow for passing said diapers through said throat into said hollow and between said balls, gripping means for securing said hollow body to said commode, and handle means on said body for stabilizing said body on said commode.

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