Aug. 19, 1958 W. S. MISIURA 2,848,203

AERATOR FOR BATH OR WASHING EQUIPMENT

Filed April 12, 1955

Fig. 1

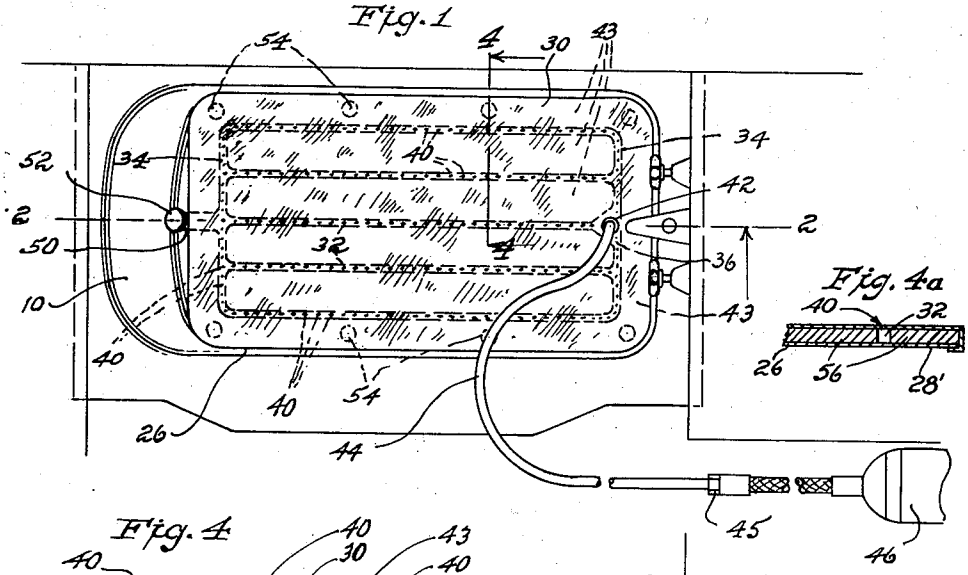


Fig. 4a

Fig. 4

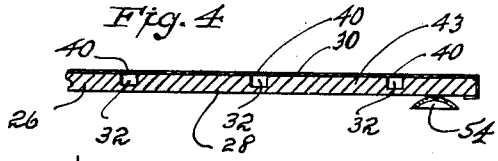
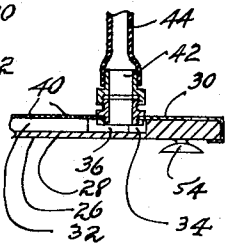


Fig. 5



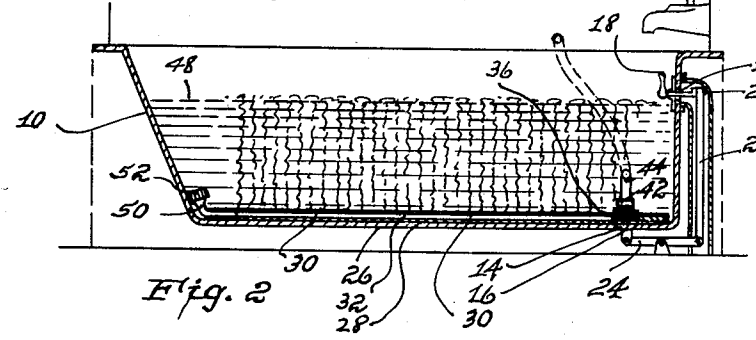


Fig. 2

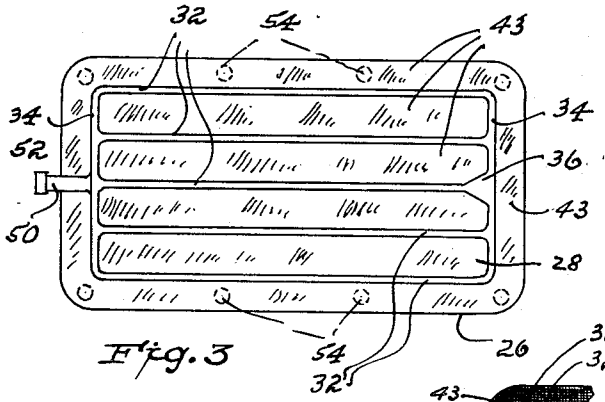
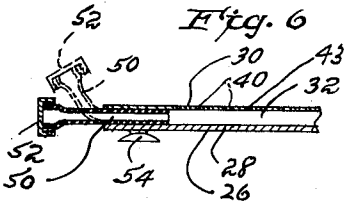


Fig. 3

Fig. 6



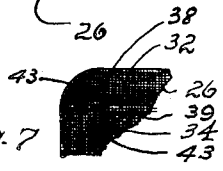


Fig. 7

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United States Patent Office 2,848,203 Patented Aug. 19, 1958

2,848,203

AERATOR FOR BATH OR WASHING EQUIPMENT

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Application April 12, 1955, Serial No. 500,762

1 Claim. (Cl. 261—124)

This invention relates to bath or washing equipment and more particularly to equipment for discharging air under pressure through water or other cleansing liquid in a bath tub or other receptacle to create an agitation in the liquid about a human or other body supported in the receptacle.

The present invention is an improvement of the equipment disclosed in copending application Serial No. 483,503, filed January 24, 1955, now abandoned, and is restricted primarily to the support for a body in a receptacle and the means associated therewith for discharging compressed air through liquid in the receptacle.

One of the principal objects of the present invention is to provide a foldable support for a body in a bath tub or other receptacle, which support can be rolled up for convenient storage, and which support is provided with an interior space and intercommunicating channels therein connected to a suitable source of air pressure and also with perforations leading from said channels for discharge of air through liquid in the receptacle.

Another object of this invention is to provide a foldable support of the character mentioned having a drain opening at its rear end normally closed by suitable means so that the air inlet connection can be coupled to a source of water pressure and the interior space in the support flushed out to keep the support in a clean and sanitary condition.

Further objects and advantages of my improved support will be apparent from the following specification taken in connection with the accompanying drawings in which:

Fig. 1 is a plan view of a conventional bath tub showing one form of my invention applied thereto;

Fig. 2 is a section taken on the line 2—2 of Fig. 1;

Fig. 3 is a top plan view of the bottom portion of the body support with the top wall portion removed;

Fig. 4 is an enlarged detail section taken on the line 4—4 of Fig. 1;

Fig. 4*a* is a similar section showing a modified form of construction;

Fig. 5 is a detail section taken through the air inlet connection;

Fig. 6 is a detail section taken through the outlet connection for flushing the interior space of the support;

Fig. 7 is a detail plan view of a modification of the support.

Referring to the drawings in which like numerals designate like parts or elements in the several views, **10** is a conventional bath tub provided with the usual overflow outlet **12** and drain outlet **14** controlled by a valve **16** operated by a handle **18**, which projects into the tub, through a crank **20** and linkage connections **22** and **24**.

In the bottom portion of the tub **10** is a rectangular foldable support designated generally by the numeral **26** but being formed by a bottom portion **28**, which may be formed of rubber fabric or any other suitable flexible material and a top wall portion **30** which may also be made of any suitable foldable material.

The bottom portion is provided with upwardly opening longitudinal channels **32** and transverse channels **34** communicating at the front end of the support with an intermediately located compressed air chamber **36**. The top portion **30** is sealed over the bottom portion **28**. This may be an imperforate foldable sheet provided with perforations **40** in alignment with the channels **34** or it may be a woven fabric **38** sealed over the partition portions **43**, with cement, or the like, as shown in Fig. 7, leaving the meshes **39** over the channels open, so that compressed air in said channels will be discharged upwardly from these channels.

A hose coupling **42** is connected to the top cover portion **30** of the support at its front end in communication with the chamber **36**. A hose **44** is connected at one end to the coupling **42** and at its other end by means of a coupling **45** to a source of air pressure, such, for example, as a reversible vacuum cleaner **46**, or to any suitable fluid pressure pump, which may be built into the walls adjacent the tub. When compressed air, or other fluid under pressure, is flowing into the channels **32** and **34** it will be discharged upwardly through the perforations **40** into the liquid **48** in the container **10**. As already mentioned, the discharge of air or other fluid pressure through water or other cleansing liquid will create an agitation of the liquid, this being similar to that of a boiling effect. This will not only cause a washing action of a body in the liquid, but will also quickly cause soap or other detergent to go into solution, thus constantly washing the body in soapy water. An auxiliary hose with spray head for discharging fluid pressure into the fluid in the receptacle may, if desired, be installed in the top portion **30**.

At the rear end of the support **26** a flexible drain nipple **50** is connected into the internal channel **34**, and may be closed by a cap **52**, or other suitable means. When the cap is removed the air coupling **45** can be connected to a source of water supply and the channels **32** and **34** flushed out for cleansing.

For the purpose of firmly, but removably, attaching the support **26** to the bottom of the tub **10** it may be provided with a plurality of suction cups **54**, of conventional design for contact with the bottom of the tub.

The partition portions **43** may be formed integrally with the bottom portion **28**, with the channels **32** molded therein, as illustrated in Fig. 4, or the partition portions **43** may be in the form of separate strips **56** cemented to the bottom portion **28'**, as indicated in Fig. 4*a*. In either construction the relatively wide, flat portions **43** or **56** provide a comfortable support for a human body. It will be obvious that in the modified construction illustrated in Fig. 4*a* one of the strips **56** will necessarily be in the form of a continuous rectangular and foldable ring forming the border portion of the support **26** in the same general manner as the corresponding ring portion shown in Fig. 3; and that after all the foldable longitudinal strips have been cemented or otherwise sealed to the bottom portion **28'** a perforated foldable sheet **40**, which may be a woven fabric having open meshes or a sheet provided with rows of perforations, will be sealed to the strips **56** in the same general manner as indicated in connection with the form of my invention shown in Figs. 1 and 4.

Obviously, various changes in the details of construction of my improved support may be made without departing from the spirit of my invention. Therefore, it should be understood that the embodiments of the invention shown and described are intended to be illustrative, only, and not restricted to such specific construction.

I claim:

A flat rectangular body support formed to fit within a bath tub, said support being constructed entirely of fold-

able sheet material comprising a bottom sheet of thin material, a flat strip of thicker material in the form of a rectangular ring cemented to the inner edge portion of said bottom sheet, a plurality of strips of substantially the same width and thickness as the width and thickness of said ring cemented to said bottom sheet inside said ring and in longitudinal relation thereto, said strips being transversely spaced from one another and longitudinally spaced from the respective ends of the ring thereby forming a plurality of relatively narrow longitudinal channels and like intersecting transverse channels at the ends of the ring, said channels being provided with a source of fluid pressure; and a sheet of open mesh fabric cemented to the tops of said ring and other strips over said channels, said meshes providing apertures for the discharge therethrough of fluid pressure from all of said channels.

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