Aug. 9, 1966 C. J. KLINKNER 3,264,657

SCRUB-FACILITATING LINER FOR BATH TUBS

Filed Nov. 13, 1963

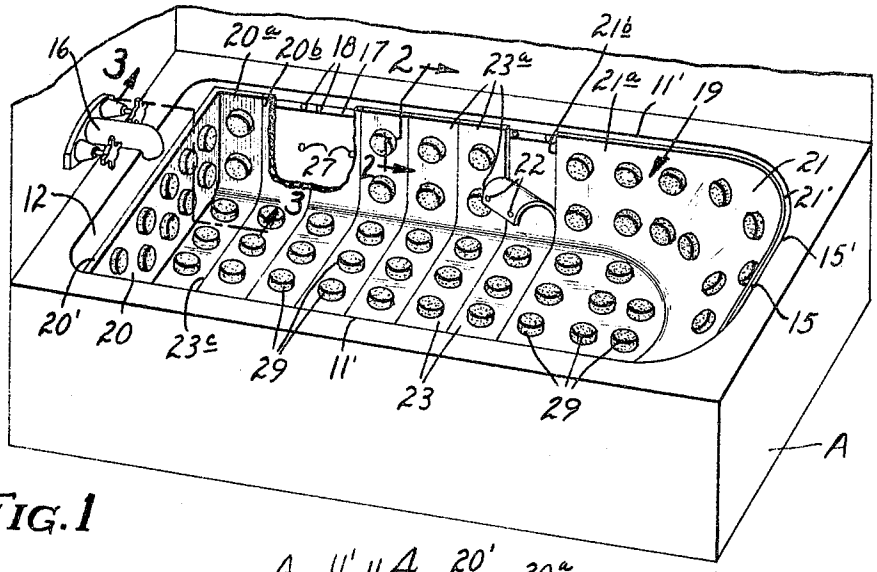


FIG. 1

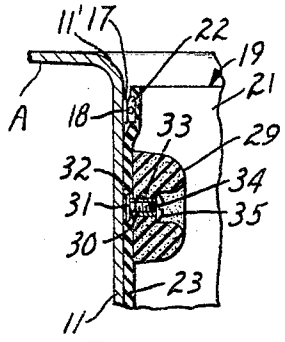


FIG. 2

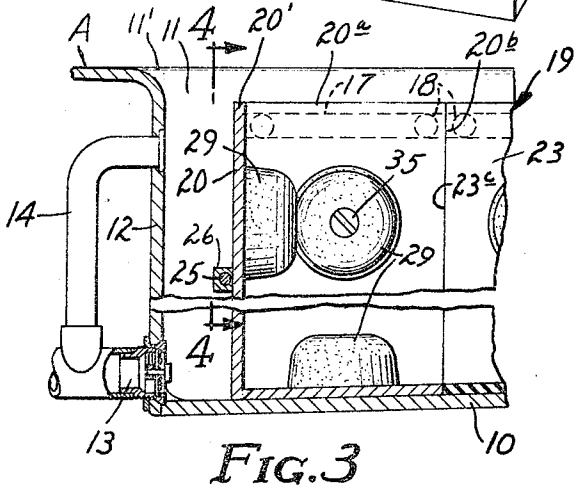


FIG. 3

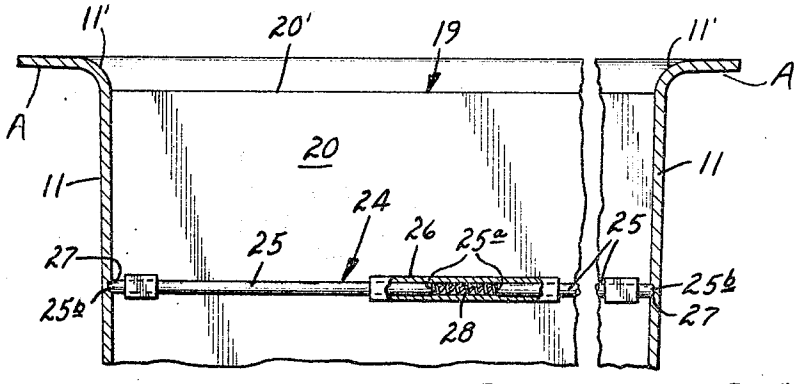


FIG. 4

INVENTOR.
CHARLES J. KLINKNER
BY
Merchant, Merchant & Gould
ATTORNEYS

United States Patent Office 3,264,657 Patented August 9, 1966

3,264,657

SCRUB-FACILITATING LINER FOR BATH TUBS

Charles J. Klinkner, 324 7th St. N., Fargo, N. Dak.

Filed Nov. 13, 1963, Ser. No. 323,319
4 Claims. (Cl. 4—184)

My invention relates generally to scrubbing attachments for bath tubs, and has for its primary object the provision of a multi-section scrub-facilitating liner which is longitudinally adjustable whereby same can be made not only to accommodate bath tubs of varying length, but also may be made extended retracted within a given tub, whereby to make same utilizable by users of varying lengths.

A further object of my invention is the provision of a device of the class above described wherein the several liner sections are provided with spaced readily-replaceable brush elements.

A further object of my invention is the provision of a liner which may be placed into and removed from its operative position in a tub, in a minimum of time and with a minimum of skill and practice.

A further object of my invention is the provision of a device of the class above described which is highly efficient and sanitary in its operation.

The above and still further objects of my invention will become apparent from the following detailed specifications, appended claims, and attached drawings.

Referring to the drawings wherein like characters indicate like parts throughout the several views:

FIG. 1 is a view in perspective of a conventional bath tub having my novel liner installed therein, portions thereof being broken away and shown in section;

FIG. 2 is an enlarged fragmentary sectional view as seen from the line 2—2 of FIG. 1;

FIG. 3 is a view in vertical section as seen from the line 3—3 of FIG. 1, on an enlarged scale;

FIG. 4 is a view in vertical section as seen from the line 4—4 of FIG. 3, some parts being broken away.

Referring with greater particularity to the drawings, the letter A indicates a conventional bath tub having a bottom wall **10**, opposite side walls **11**, a generally vertical end wall **12** (having a conventional drain outlet **13** and an overflow **14** associated therewith), and a generally upwardly and longitudinally outwardly inclined end wall **15** in opposition to the vertical end wall **12**. In conventional manner the outlet **13** of the tub A is provided with a valve-equipped water spigot **16**.

Suitably secured to the opposed side walls **11** and the inclined end wall **15** of the tub A in closely spaced relation to their respective upper edges **11'**, **15'** is an elongated strip **17** having male snap elements **18** fast thereon and projecting inwardly therefrom.

My novel liner, identified in its entirety by **19**, comprises a pair of opposed end wall liner sections **20**, **21**, respectively, the former of which is of a contour corresponding approximately to the vertically disposed end wall **12** of the tub A, and the latter of which overlies and has a contour corresponding approximately to the inclined end wall **15**, and the adjacent portions of the side walls **11**. End wall section **21** is formed from any suitable flexible sheet material such as rubberized fabric, whereas end section **20** is formed from any suitable more rigid material, and are provided adjacent their upper edges **20'**, **21'**, respectively, with conventional female snap fastener elements **22**, which are adapted to cooperate with the male elements **18** carried by the strip **17** to detachably secure the end wall sections **20**, **21** in operative position.

It will be noted that each of the end wall sections **20**, **21** is provided with a generally U-shaped flange portion **20*a***, **21*a***, respectively, which have opposed parallel side edges **20*b***, **21*b***, respectively.

Adapted to be interposed between the opposite end sections **20**, **21** are a plurality of strip-like intermediate liner sections **23**, which are of a uniform, relatively narrow dimension measured longitudinally of the tub A, for a purpose which will hereinafter become apparent, and which are likewise formed from flexible sheet material. Adjacent their opposite ends **23*a***, the intermediate liner sections **23** are likewise provided with female snap fastener elements **22**.

With respect to the end wall liner section **20**, it is important to note that the female snap fastener elements **22** are located only upon the U-shaped flange portion **20*a***. Consqeuently, when it is desired to extend or retract the effective length of the liner **19** (to accommodate a tub of a given size, or alternatively, to adjust the length to compensate for the height of a given person), one or more of the intermediate liner sections **23** may be removed or added. In any case, the end wall section **20** is thereby placed and snap-fastened in operative position with its side edge **20*b*** in engagement with the longitudinal edge **23*c*** of the adjacent intermediate liner section **23**.

To support the otherwise unsupported vertically disposed portion of end wall section **20**, it will be noted that a horizontally disposed extensible and retractable rod **24**, suitably secured thereto, is provided. Preferably and as shown, the rod **24** is provided with a pair of laterally spaced rod sections **25**, the opposed ends **25*a*** of which are slidably received within a sleeve **26** and are yieldingly biased apart, whereby to cause their free ends **25*b*** to be received in opposed recesses **27** in the side walls **11** of the tub A, by means of a coil compression spring **28**. Obviously, the longitudinal spacing between the opposed recesses **27** corresponds to the dimensions of the intermediate liner sections **23**, measured longitudinally of the tub A, so as to assure a complete and unbroken liner **19**, irrespective of the number of intermediate liner sections **23** utilized.

It will be noted that each of the liner sections **20**, **21**, **23** has detachably secured to their exposed faces a plurality of spaced brush or scrubber elements **29** which cooperate to define a substantially unbroken scrubber surface when all said liner sections are in their operative abutting positions. As shown, each of the brush or scrubber elements **29** is identical in nature, and preferably are formed from compressible sponge rubber or the like. To detachably secure same in their operative positions, a screw-threaded female member **30**, having an enlarged head **31** in engagement with the outer surface **32** of the liner sections, projects through its respective liner section **20**, **21**, **23**, and is received in an aperture **33** formed centrally in its respective brush or scrubber element **29**. A screwthreaded bolt **34** is threadably received within the female member **30** and has an enlarged head **35** which becomes imbedded in the brush or scrubber element **29** when the bolt **34** is fully received in its respective female member **30**. This arrangement protects the user from any accidental injury due to engagement with the head portion **35** of the bolt **34** and securely but detachably anchors the scrubber elements **29** to their respective sections **20**, **21**, **23**.

My invention has been thoroughly tested and found to be completely satisfactory for the accomplishment of the above objects; and while I have disclosed a preferred embodiment thereof, same may well be capable of modification without departure from the scope and spirit of the appended claims.

What is claimed is:

1. A liner for a bath tub having a bottom wall, vertically disposed side walls and opposed end walls, one of said end walls being generally vertically disposed and the other inclining upwardly and outwardly, said linear comprising

(a) opposed end sections conforming generally to the contours of said opposed tub end walls,

(b) each of said end wall liner sections having generally U-shaped flange portions which terminate in opposed parallel side edges,

(c) a plurality of relatively narrow U-shaped strip-like intermediate liner sections,

(d) means for detachably securing said intermediate liner sections in side-by-side relationship between said end wall sections,

(e) and means for imparting longitudinal adjustments to one of said end wall sections toward and away from the other of said end wall sections to the extent equal to the dimensions of said intermediate sections measured longitudinally of said tub, whereby to vary the effective length of said liner.

2. The structure defined in claim **1** in which

(a) said end liner section adjacent said vertically disposed tub end wall is the adjustable one of said end wall sections,

(b) and in which said means for imparting longitudinal adjustments thereto comprises a longitudinally extensible and retractable supporting rod carried thereby and extending between the side walls of said tub,

(c) opposite ends of said supporting rod being selectively received under yielding bias in longitudinally spaced opposed recesses in the side walls of said tub,

(d) said recesses being spaced apart a distance equal to the dimensions of said intermediate liner sections measured longitudinally of said tube.

3. The structure defined in claim **2** in which

(a) said other of said end wall liner sections and said intermediate liner sections are provided with spaced compressible brush elements,

(b) and in further combination with means for detachably securing each of said brush elements to their respective liner sections.

4. The structure defined in claim **2** in which

(a) all of said liner sections are provided with spaced compressible brush elements,

(b) and in further combination with means for detachably securing each of said brush elements to their respective liner sections,

(c) said last mentioned means comprising cooperating male and female screw elements, one carried by its respective liner section and the other extending centrally through the respective compressible brush element and imbedded therein.

References Cited by the Examiner

UNITED STATES PATENTS

237,196	2/1881	Martinez et al.	4—173
351,103	10/1886	French	4—173
1,510,647	10/1924	Bomar.	
2,726,404	12/1955	Hansen	4—68

LAVERNE D. GEIGER, *Primary Examiner.*

H. GROSS, *Examiner.*