May 26, 1959 E. S. McLEAN 2,888,210

SHOWER HEAD

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FIG. 1.

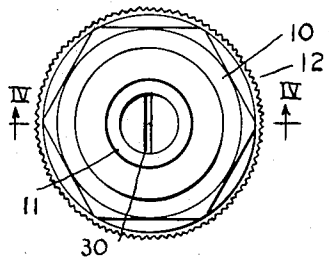


FIG. 2.

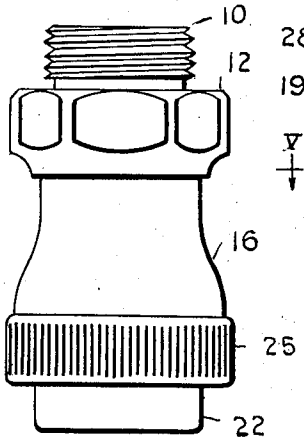


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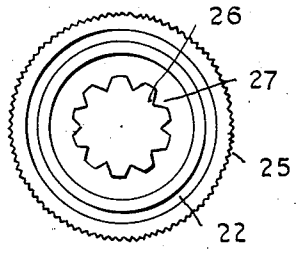


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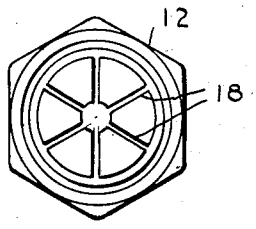


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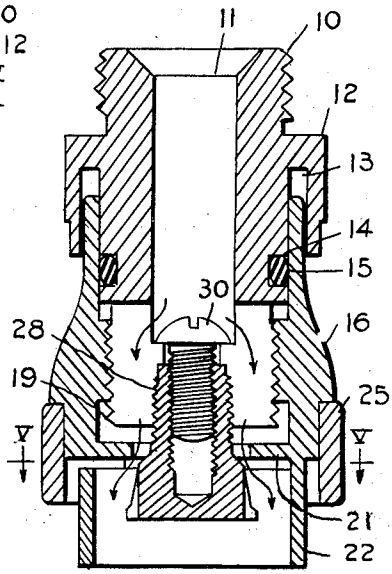


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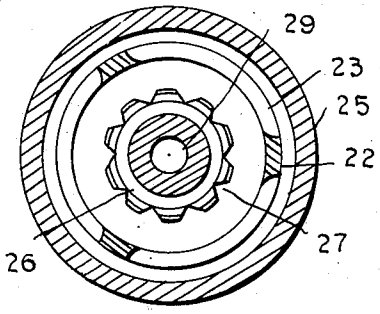


FIG. 7.

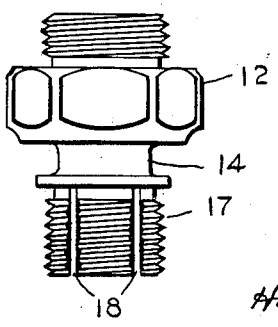


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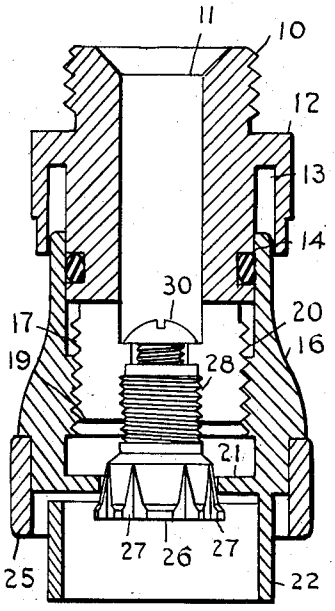


FIG. 9.

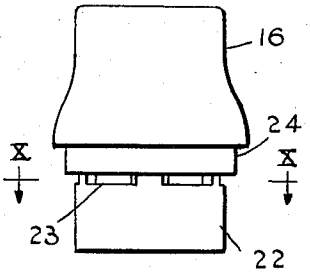
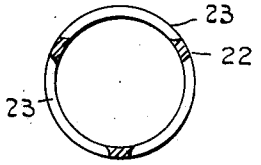


FIG. 10.



INVENTOR.
EDWARD S. McLEAN

BY

Holcombe, Wetherill & Brisebois

ATTORNEYS

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FIG. 11.

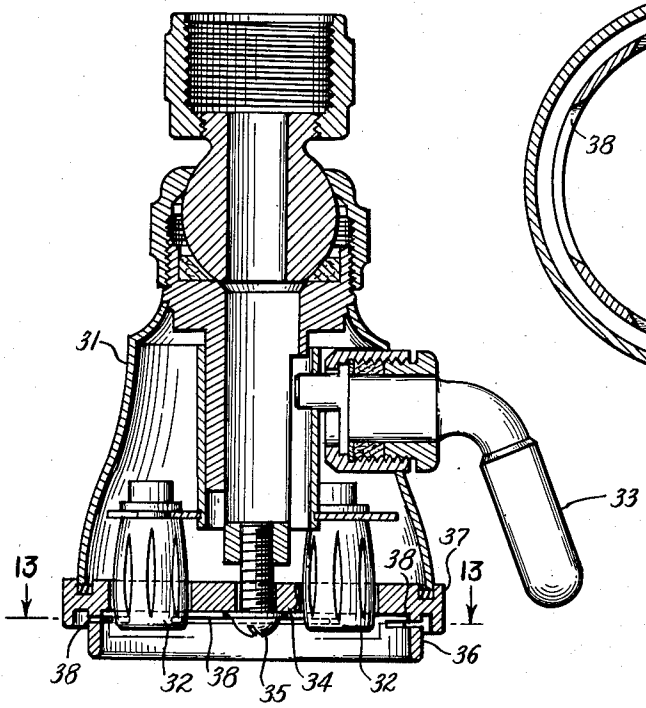


FIG. 13.

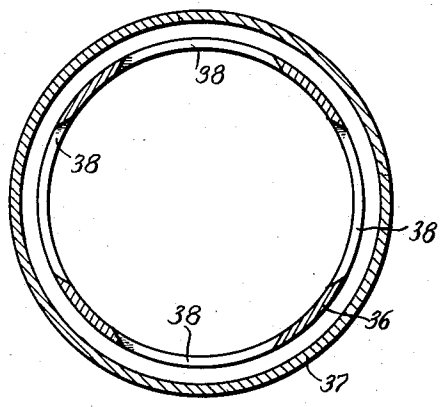
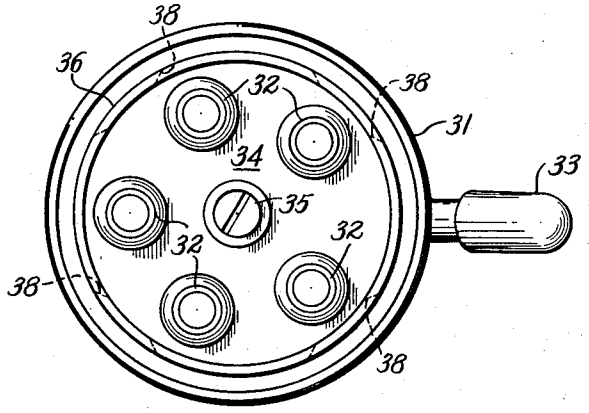


FIG. 12.



INVENTOR.
EDWARD S. McLEAN
BY
Holcombe, Wetherill & Brisebois
ATTORNEYS

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2,888,210

SHOWER HEAD

Edward S. McLean, Wilmington, Del., assignor to Speakman Company

Application July 17, 1958, Serial No. 750,066

3 Claims. (Cl. 239—439)

This invention relates to shower heads, and more in particular to shower heads designed for shower bath use.

Heretofore shower heads for shower bath use have had a plurality of spray producing parts which have lead to the consumption of a large volume of water, which is rapidly becoming unavailable in many sections of the United States.

It has also been found heretofore that where a series of showers are mounted in the same room for the use of teen-age children, that there has been a tendency for the users to deflect the water from one shower on to the occupant of the adjacent shower. This has caused many accidents.

It is an object of the present invention to produce a shower using the minimum amount of water.

It is a further object of this invention to produce a shower head where the water may not be deflected by the hand.

It is a still further object of this invention to produce a shower head having an auxiliary vent to release the water if the main vent is closed.

It is still another object of this invention to produce a shower head that is adjustable so as to control the volume of water that comes through the shower head without using the mixing valve that controls the water flow to the shower head.

The various features of novelty which characterize this invention are pointed out with particularity in the claims annexed and forming part of this application. For a better understanding of the invention, however, and the advantages possessed by it, reference should be had to the accompanying drawings and descriptive matter in which has been illustrated and described a preferred embodiment of the invention.

In the drawings:

Fig. 1 is a top plan view of the device.

Fig. 2 is a side view of the device.

Fig. 3 is a bottom view of the device.

Fig. 4 is a sectional view on line **4**—**4** of Fig. 1, showing the plunger in open position.

Fig. 5 is a sectional view on line **5**—**5** of Fig. 4.

Fig. 6 is a sectional view, similar to Fig. 4, except that it shows the plunger in a retracted position.

Fig. 7 is a side elevational view of the shower head body.

Fig. 8 is a bottom plan view of the shower head body, shown in Fig. 7.

Fig. 9 is a side view of the shower head body without the ring showing the inner skirt.

Fig. 10 is a sectional view on line **10**—**10** of Fig. 9.

Fig. 11 is a sectional view of a second modification of this invention.

Fig. 12 is a plan view of the second modification.

Fig. 13 is a sectional view on line **13**—**13** of Fig. 11.

In the drawings similar legend numerals refer to similar parts.

The shower head body **10**, shown in Figs. 1 and 2, has a central water passage **11** therein. This is threaded on its upper end to allow attachment to a source of water (not shown). The body **10** has a flattened nut **12** attached thereto. This nut is under-cut, as shown in Fig. 4, to allow a space **13** thereunder. A groove **14** is cut in the outer circumference of the shower head body to take an O-ring **15**, which contacts the upper part of the shower head shank **16**, and produces a water-tight seal between the body and the shank, the upper part of the shower head shank occupying the space **13** beneath the nut **12**. The lower part **17** of the shower head body **10** has the threads on the surface thereof to engage the threads in the shank and has slots **18**, **18**, shown in Figs. 7 and 8 cut therein to allow the water to flow from the water conduit **11** into the water passage **19** in the shank, as shown in Fig. 4. The shank **16**, as shown in Figs. 4 and 6, has external threads **20** to engage the threaded portion, **17**, of the body. Across the lower part of the shank **16** is the baffle **21**, shown in Figs. 4 and 6. This baffle has a skirt **22** defining a primary opening attached thereto, as shown in Fig. 9, with the secondary openings **23**, **23** between the skirt and the baffle **21**. This is shown in the sectional view in Fig. 10, where the openings **23**, **23**, between the skirt and the baffle are shown.

A shoulder **24**, shown in Fig. 9, is cut on the outer circumference of the shank to take a ring **25**, shown in Figs. 2, 4 and 6. This ring is knurled on the outer surface for ease in rotating the shank **16** and is so constructed that a forced fit is obtained, and then sweated on to make it a part, as shown in Fig. 6.

A plunger **26** is shown in Figs. 4 and 6 and has grooves **27**, **27**, cut into the circumference thereof. This plunger has its upper portion **28** threaded to engage the threads on the interior surface of the body portion and has a threaded central portion in the center thereof to engage the screw **30**.

In assembling this device the body portion **10** has the O-ring forced in place in the groove **14**. The shank portion **16** is then screwed into the position shown in Fig. 4. The plunger **26** is then screwed into the position shown in Fig. 4 and the screw **30** is inserted, locking it in place. The shank portion is then adjusted as shown in Fig. 6 by screwing it downwardly so that the flange **21** cooperates with the grooves **27**, **27** in the plunger to admit the desired quantity of water, producing a shower spray of the desired density. The maximum amount of water is admitted at the position shown in Fig. 4 and the minimum amount at the position shown in Fig. 6. The plunger is not adjustable after it has once been assembled, because it is locked by means of the screw **30** and may not be removed therefrom because the screw threads **28** are left handed while the screw threads on the screw **30** are right-handed. The shank portion may not be removed from the shower head assembly while the plunger is in position because the flange **21** will not pass the plunger head.

If the central opening formed by the skirt **22** is closed by means of the hand or otherwise, as is usually the case, to force the shower stream sidewise, the water can escape through the openings **23**, **23** at the base of the skirt and come out between the ring **25** and the skirt **22**.

A second modification of this invention is shown in Figs. 11 to 13 inclusive and comprises a body portion **31**, having a series of plungers **32**, **32**, manually adjustable by means of the lever **33** so as to regulate the flow of the water through the disc **34**, which is held in place by means of the screw **35**. Depending from this disc is a skirt **36**. Around the outside portion of the disc is a ring **37** overlying the base portion of the skirt **36**. The openings **38** are at the base of the skirt portion **36** and allow a flow of water through these openings when the central opening of the skirt is restricted.

This modification has a series of plungers and operates in the same manner as the modification shown in Figs. 1 to 10 inclusive.

It is impossible to force the water sidewise on to an occupant of an adjoining shower. This produces a tamper proof shower head that may not be misused by the casual user.

The shower head of this invention also has the advantage of permitting adjustment so as to use the minimum amount of water by restricting the opening between the baffle **21** and the plunger **26**.

Whereas, in the above embodiment of this invention a skirt is supplied between the source of the spray and the baffle **21**, and is illustrated with a single spray source, a similar application of this invention to a shower head having a plurality of spray sources may also be used with a baffle vented at its base to prevent the deflection of water forced therefrom.

This application is a continuation-in-part of application Serial No. 594,128, filed June 27, 1956, now abandoned.

While in accordance with the provisions of the statute there has been illustrated and described the best form of embodiment of this invention now known, it will be apparent to those skilled in the art that changes may be made in the form of the apparatus disclosed without departing from the spirit of this invention as set forth in the appended claims, and that in some cases certain features of this invention may be used to advantage without a corresponding use of other features.

What is claimed is:

1. A shower head comprising a shank portion having a baffle, spray producing means extending through said baffle, a ring surrounding said baffle and attached to said shank portion, a skirt attached to this baffle and depending therefrom within said ring, said skirt having a primary central opening and defining secondary openings between the base of the skirt and said baffle.

2. A shower head comprising a body portion, a shank portion adjustably attached thereto, said shank portion having a water inlet conduit therein restricted by a baffle in the lower end thereof, a ring surrounding said baffle and attached to said shank portion, at least one plunger protruding through the baffle of the shank portion and adjustably held by the body portion, a dependent skirt attached to the baffle with a primary central opening, secondary openings at the base of the skirt adjacent to the baffle to allow the flow of water between the baffle and the skirt if the primary central opening is restricted.

3. A shower head comprising a body portion, an adjustable shank portion attached thereto, said shank portion having a water inlet conduit therein restricted by a baffle in the lower end thereof, a ring surrounding said baffle and attached to said shank portion, a plunger protruding through the baffle of the shank portion and adjustably held by the body portion, a dependent skirt attached to the baffle with a primary central opening, secondary openings at the base of the skirt adjacent to the baffle to allow the flow of water between the baffle and the skirt if the primary central opening is restricted.

No references cited.