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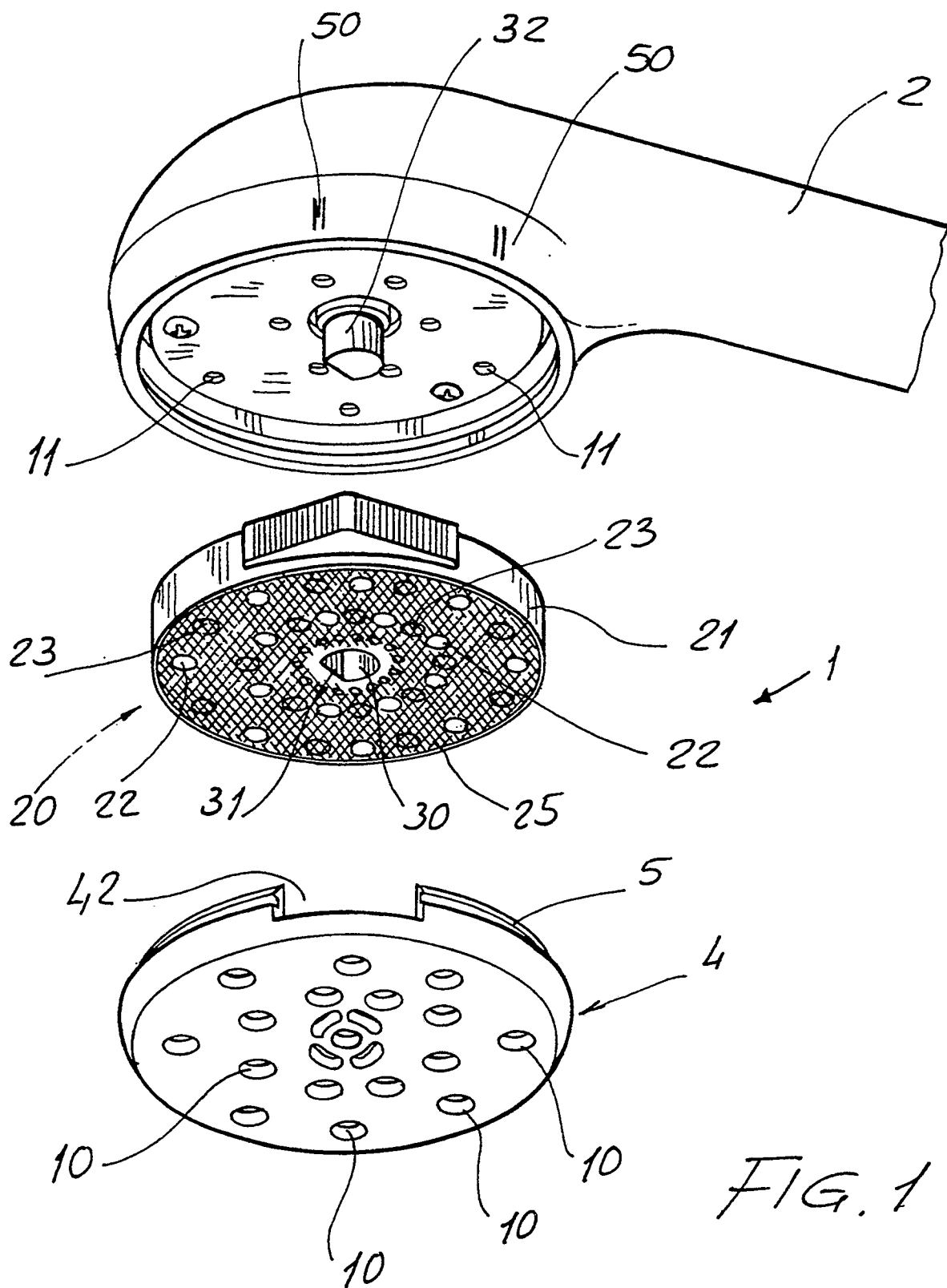
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**Shower head including selecting means for controlling the delivery of either a small or a great water jet.**

There is disclosed a shower head including selecting means for controlling the delivery of either a small or a great water jet, comprising a handle body which can be coupled to a water supply system and including a water delivery head, water flow rate selecting means arranged inside the body for varying the cross-section of water delivery ducts, in order to selectively provide either a great or a small water jet, a driving element being moreover provided for driving the selecting means, and including a push-button element which can be accessed from a side of the shower head.



## BACKGROUND OF THE INVENTION

The present invention relates to a shower head including selecting means for controlling the delivery of either a small or a great water jet from said shower head.

There are already known shower heads, both of the so-called phone type and of the so-called wall type, which afford the user with the possibility of easily adjusting the delivered water jet, so as to provide a "soft" jet including a comparatively reduced amount of water, supplied with a comparatively reduced pressure.

Prior shower heads of the above mentioned type, however, are very complex construction-wise, since they usually include a lot of complex inner gears which are susceptible to failures.

Another main drawback of these prior shower heads is that, in order to select the water jet type, an user is compelled to operate on the outer portion of the shower head by using the two hands, one for holding the shower head and the other for turning a ring-nut element conventionally provided at the water delivery mouth.

Yet another drawback is that these prior shower heads do not provide the user with the possibility of detecting the water jet type ejected from the shower head.

## SUMMARY OF THE INVENTION

Accordingly, the aim of the present invention is to overcome the above mentioned drawbacks, by providing a shower head, including selecting means for controlling the delivery of either a small or soft water jet or a great or strong water jet, which can be easily operated by a single hand and, in particular, by using a single finger.

Within the scope of the above mentioned aim, a main object of the present invention is to provide such a shower head which comprises a very reduced number of component elements.

Yet another object of the present invention is to provide a shower head which can be easily and quickly operated.

A further object of the present invention is to provide such a shower head which can be made at a very competitive cost starting from easily available elements and materials.

According to one aspect of the present invention, the above mentioned aim and objects, as well as yet other objects, which will become more apparent hereinafter, are achieved by a shower head including selecting means for controlling the delivery of either a soft or a strong water jet, comprising a handle body which can be coupled to a water supply system, and including a water delivery head, selecting means arranged inside said body for varying the cross-section

tion of water delivery ducts in order to selectively provide either a strong or a soft water jet, characterized in that said shower head further comprises a driving element for driving said selecting means, said driving element including a push-button element which can be accessed from a side of said shower head.

## BRIEF DESCRIPTION OF THE DRAWINGS

Further characteristics and advantages of the present invention will become more apparent hereinafter from the following detailed disclosure of a shower head including selecting means for controlling the delivery of either a soft or a strong water jet, which is illustrated, by way of an indicative but not limitative example, in the figures of the accompanying drawings, where:

Figure 1 is a schematic perspective view showing the shower head according to the present invention;

Figure 2 is a plan top view of the shower head according to the present invention, in a condition thereof adjusted for supplying a strong or great water jet or spray;

Figure 3 is another top plan view of the shower head according to the present invention, in a condition thereof for providing a soft or small water jet;

Figure 4 is a cross-sectional view of the subject shower head supplying a strong water jet or spray; and

Figure 5 is a further cross-section view of the subject shower head supplying a soft water jet.

## DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the figures of the accompanying drawings, the shower head according to the present invention, which is generally indicated at the reference number 1, comprises a handle body, indicated overall at the reference number 2 which, at one end thereof, can be coupled to a water supply system and, at the other end thereof, is provided with a water delivery head, generally indicated at the reference number 3.

The water delivery head 3, as shown, substantially comprises a perforated plate 4 which, on a surface thereof, is provided with a tooth element 5 for snap engaging with said body 2 and being provided with a plurality of openings or ports 10 correspondingly arranged with respect to water delivery holes 11 which are formed through the head element 3 of the handle body 2.

Between the perforated plate 4 and the water delivery hole there is arranged a selecting element, generally indicated at the reference number 20, which is

provided with a disc-like body 21 including a plurality of holes 22 and 23 which define corresponding water delivery ducts which are correspondingly arranged and angularly offset with respect to the water delivery holes 11.

The holes 22 and 23 have different water delivery cross-sections, which is obtained by a bottom mesh screen 25 and a top mesh screen 26, which latter is cut-off at the first plurality of holes 22 so as to not obstruct this holes, and extends through the second plurality of holes 23, so as to reduce the cross-sectional area of the latter.

As shown, the disc 21 is axially provided with a throughgoing hole 30, including a cut-off portion 31 engaging with a pin 32, so as to rotate with said pin, this pin 32 being coupled to a switching element 35 arranged at the water inlet port 36 toward the water delivery holes 11 to vary the water jet distribution.

More specifically, as the user desires to provide a strong water jet, the switching element 35 will be arranged in the front of the port 36 so as to increase the water flow rate, or speed, whereas, if a soft water jet is to be provided, said switching element does not obstruct the mentioned holes so as not to increase the water delivery speed or flow rate.

A main feature of the present invention is that from the disc 21 a lug 40 extends which passes through a perimetrical slot 42 of the perforated plate 40 which also operates as an end of stroke element for the turning movement.

As shown, the lug 40 is coupled to a driving element, comprising a push-button 41, which can be accessed from a side of the water delivery head and can be simply operated by a single hand, that is that same hand which engages the shower head.

In this connection it should be pointed out that identifying marks 50 are provided for displaying the type of water jet being supplied.

In order to provide a strong water jet, the water supply or delivery holes 11 are aligned with the first plurality of water delivery ducts 22, not affected by the mesh screen.

Under these conditions, the water will be ejected with a comparatively high speed and pressure, since it will impinge on a passage cross-section of a comparatively large area.

As the selecting element 10 is turned by operating the push-button 21, the holes 11 will be arranged in alignment with the holes, the cross-section of which will be reduced by the provision of the mesh screens 25 and 26.

Thus, the water flow rate will be reduced so as to provide the soft water jet.

The switching from a position to the other, that is from a strong to a soft water jet and vice-versa can be simply performed by operating the push-button 41.

From the above disclosure it should be apparent that the invention fully achieves the intended aim and

objects.

In particular, the fact is to be pointed out that a shower head has been provided which comprises a driving push-button arranged on a side of the water delivery head proper and which can be operated by a single finger of the hand engaging the shower head.

Moreover, the driving operations can be quickly and simply carried out, owing to the fact that corresponding end of stroke elements are also provided.

While the invention has been disclosed and illustrated with reference to a preferred embodiment thereof, it should be apparent that the disclosed embodiment is susceptible to several modifications and variations all of which will come within their spirit and scope of the appended claims.

## Claims

1. A shower head including selecting means for controlling the delivery of either a soft or a strong water jet, comprising a handle body which can be coupled to a water supply system, and including a water delivery head, selecting means arranged inside said body for varying the cross-section of water delivery ducts in order to selectively provide either a strong or a soft water jet, characterized in that said shower head further comprises a driving element for driving said selecting means.
2. A shower head, according to Claim 1, characterized in that said selecting means comprise a selecting disc arranged in said shower head near a perforated plate snap engaged with said body and provided with a plurality of openings adjoining a plurality of water delivery holes formed through said body.
3. A shower head, according to Claims 1 and 2, characterized in that said disc is provided with a first plurality of water delivery ducts and a second plurality of water delivery ducts, arranged at said water delivery holes and angularly offset therefrom.
4. A shower head, according to one or more of the preceding claims, characterized in that said shower head further comprises, in the second plurality of said water supply ducts, means for reducing the cross-section areas of said ducts.
5. A shower head, according to one or more of the preceding claims, characterized in that said selecting disc is coupled to a pin associated with a switching element adapted to cooperate with a water inlet port in order to increase the water flow-rate so as to provide a strong water jet.

6. A shower head, according to one or more of the preceding claims, characterized in that said push-button element is coupled, through a radially extending lug, to a peripheral portion of said selecting disc, said lug passing through a slot which is perimetrically formed through said perforated plate and is adapted to operate as an end of stroke element for the turning movement of said selecting disc. 5
7. A shower head, according to one or more of the preceding claims, characterized in that said push-button element has an arrow shape. 10
8. A shower head, according to one or more of the preceding claims, characterized in that said shower head further comprises indicating marks on said body which can be brought in alignment with said push-button element in order to indicate a selected type of water jet. 15 20

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