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SHOWER HEAD

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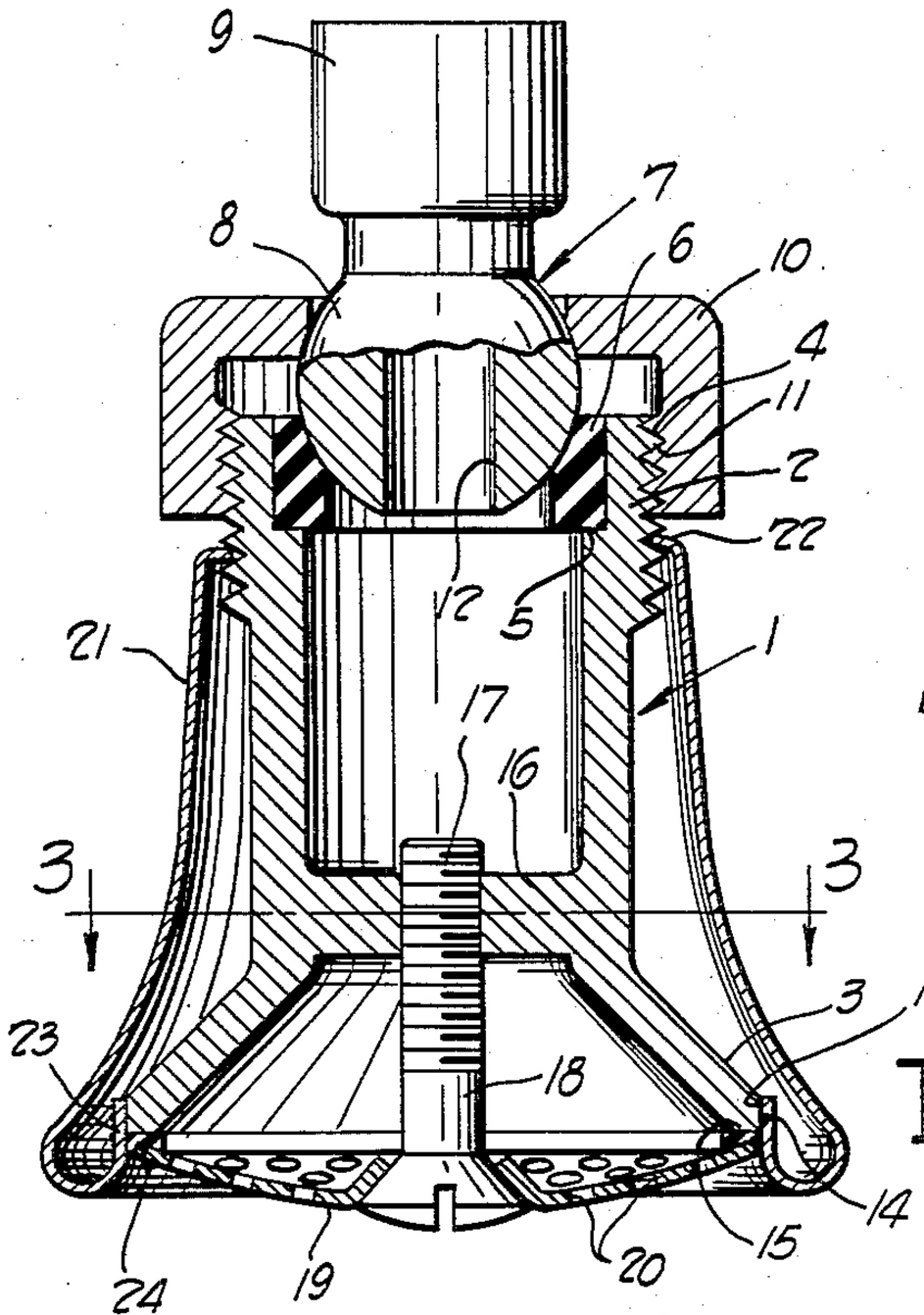


FIG. 1

FIG. 2

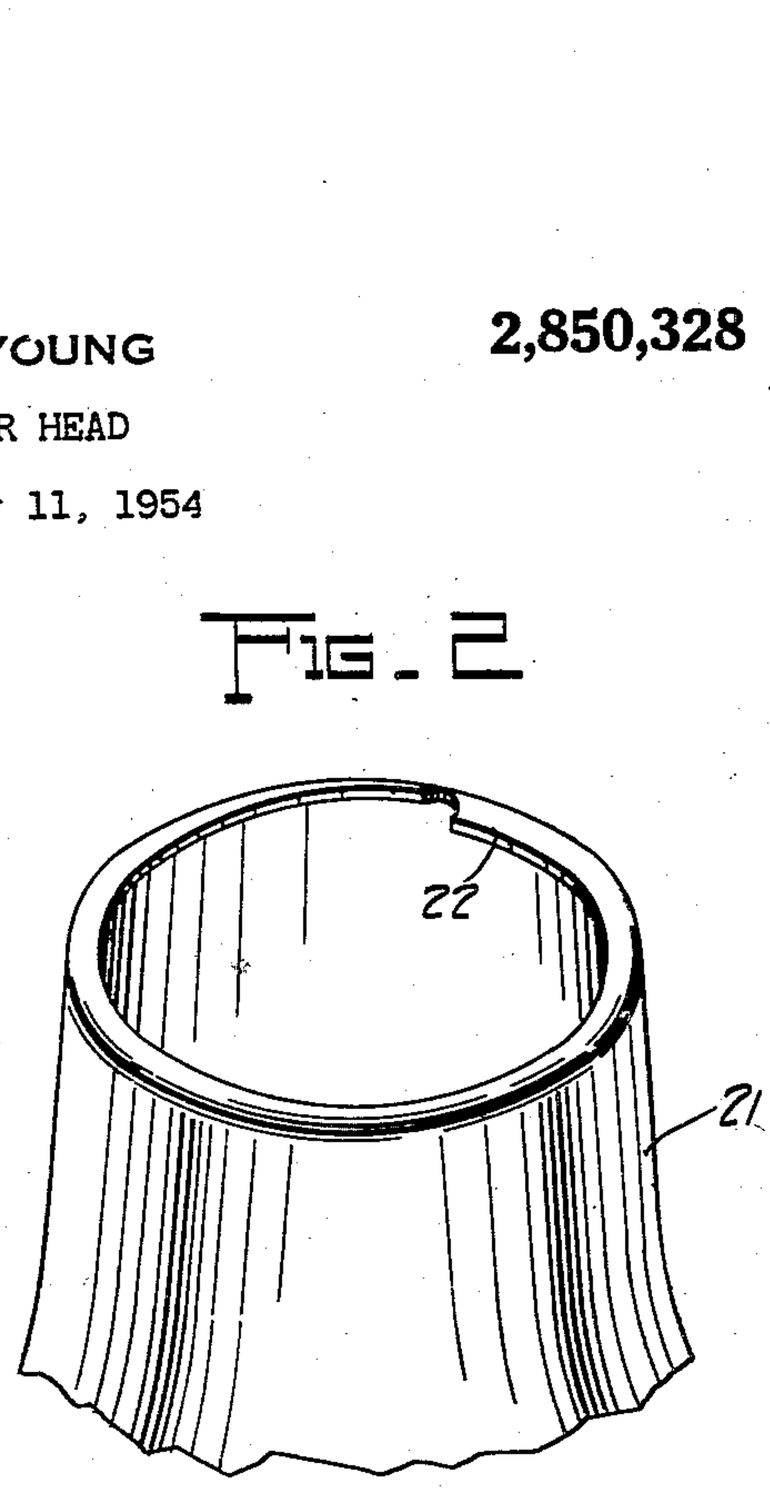


FIG. 4

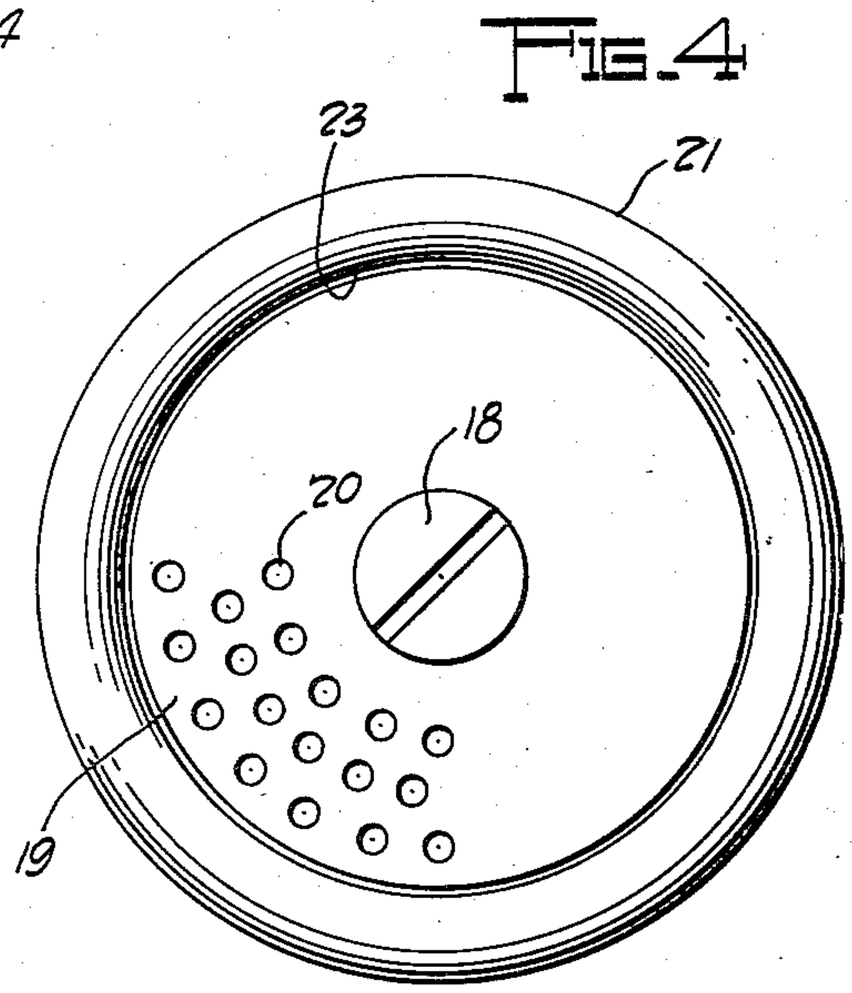
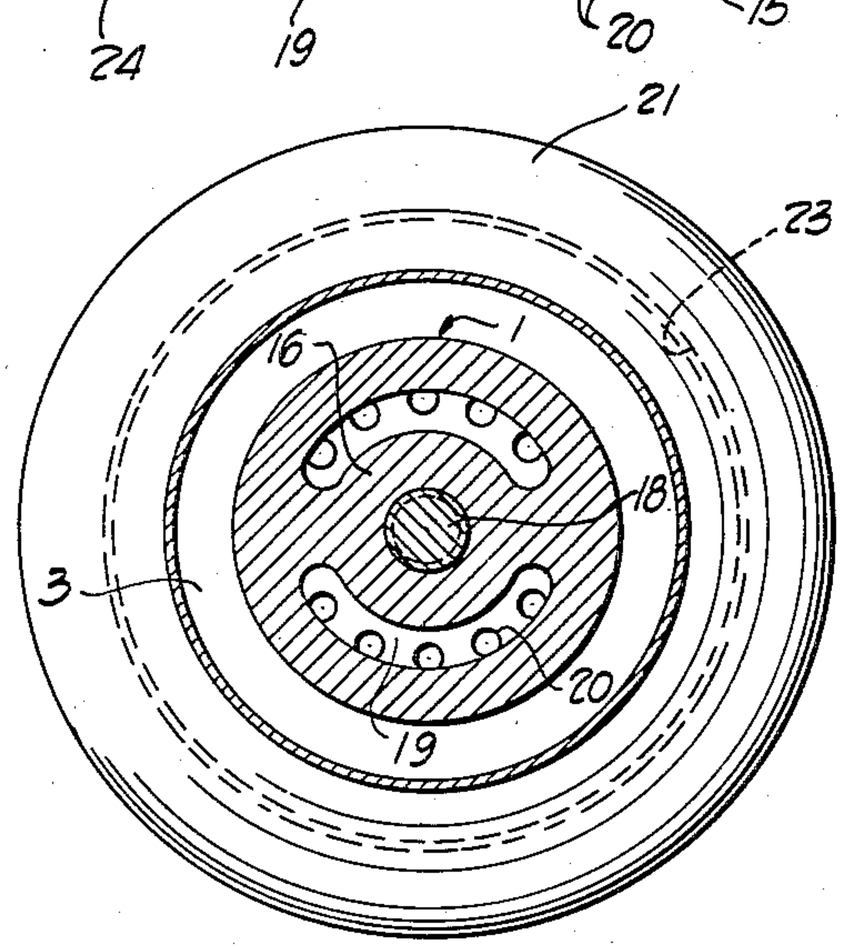


FIG. 3



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SHOWER HEAD

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This invention relates to shower heads and more particularly to certain novel constructions thereof, which enable the provision of a shower head formed of a composite nature.

In presently constructed shower heads, the same are usually formed with a body and ball joint, together with a face plate, for directing the spray from the shower head in the usual manner. However, the individual parts of the shower head, are usually formed of castings or equal material, and thus raise problems as to cost in view of the finishing of castings and in addition to actual size of the casting is a factor.

Heretofore when shower heads have been furnished, and in view of their use in water of various chemical properties, it has been necessary to use a material such as brass which is resistant to corrosion and the general effects of impurities in water. Further, when brass or the like material is used, when it comes to putting a finish on the same which is preferred such as the usual chromium plating, it is also inherent that expensive operational procedures must be carried out such as the usual polishing, buffing, and other subsequent handling to complete the finishing operation.

In the present invention, a composite shower head of simple construction is provided, making possible the use of metal such as brass for carrying water and at the same time enclosing the water carrying part of the shower head in a less expensively finished and furnished casing, so that in the final analysis the product resembles in all respects the usual shower heads but is much more easily formed and with considerably less cost during the manufacture.

It is therefore a principal object of this invention, to provide a shower head of composite nature having a body formed of suitable water impurity resisting material, and to enclose the same in a casing which is easily finished, and yet makes possible the use of a face plate through which the water is distributed, all of the same being combined in a manner to serve the purpose of a shower head and at substantially less cost than is presently the case.

A more specific object of the invention, is to provide a shower head wherein the body as above set forth is provided, and to encase the same in a suitably finishable casing, with novel means of connecting the respective parts together and maintaining the same in their connected relation.

Another object of the invention is to provide a shower head wherein the manner of connection of the casing with the body may be effected by availing of threads which not only are usable for attaching the usual ball joints thereto, but also to assist in maintaining the casing in place surrounding the body. In this latter construction, the added feature of positioning the casing on the body by the provision of a suitable formation of the casing so as to complete the enclosure by the same with respect to the body is also a feature.

Another object of the invention, is to provide a shower head of a composite nature, wherein the body of the same is enclosed in a casing, and to additionally provide for maintaining the casing in place upon the body by reason of the deformation of a gasket so as to cause the said gasket to engage both the body and the casing in a novel manner whereby displacement of the casing from its position is prevented.

A further object of the invention is to so arrange the respective parts, including the casing and body together with the gasket availed of, whereby the gasket may be caused to effect its positioning action by reason of the manner of attachment of the face plate to the shower head and its adjustment with respect thereto.

Other and further objects of the invention will be understood from a consideration of the specification appended hereto and shown in the drawing wherein:

Figure 1 is an enlarged vertical sectional view of a shower head showing the relationship of the various parts thereof.

Figure 2 is a fragmentary perspective view showing the formation of a portion of the casing availed of.

Figure 3 is a sectional view taken about on the line 3—3 of Figure 1 further illustrating the form of the invention.

Figure 4 is a bottom view showing the configuration of the casing the relationship of the face plate and its mounting screw with respect thereto.

Referring now to Figure 1 in the drawing, it will be seen that a body member generally designated **1** is provided, the same being of substantially cylindrical nature and having an inlet section at **2** and an outlet section at **3**. The inlet section **2** is furnished on its outer surface with suitable threads **4**, and interially thereof with a suitable shoulder **5** for receiving and supporting a gasket **6**. The gasket **6** is furnished in order to provide a leak-proof connection with a ball joint **7**, the ball joint **7** including the ball section **8** and a portion **9** which includes threads not shown but which facilitate the attachment of the shower head as a whole to a source of supply of water.

The ball joint **7** at the ball portion **8** thereof is maintained in position with respect to the body **1** by means of the usual ball joint nut **10**, the same having threads **11** therein for cooperation with the threads **4** previously referred to. Of course the ball joint **7** is provided with a passage **12** therein through which the water flows into the interior of the body **1**.

The outlet end **3** of the body **1**, the same is flared as shown, and includes a shoulder generally designated **13**, having a cylindrical face **14** thereon and a flat face **15** at substantially right angles to the face **14**, the same being preferably substantially a seat.

Suitably integrally formed with the body **1** is a cross piece **16**, the same being equipped at its central portion with threads to receive the threaded section **17** of a face plate screw **18**. The face plate screw **18** is intended to maintain the face plate **19** in place with respect to the body **1** as will be understood, the face plate **19** being equipped with the usual perforations **20** therein suitably spaced and adapted to direct the spray formed thereby in a suitable pattern. The face plate **19** is shown in this instance as being of convex configuration although not necessarily limited thereto.

It should be pointed not that the body **1** in this invention, is formed preferably of a brass casting or other suitable corrosion resistant material, and is intended to be entirely hidden or substantially so by means of a suitable casing generally designated **21**. The casing **21** may be of any preferred form and in this instance is tapered from the upper end toward the outer end, the

upper end being equipped with a threaded section **22**, more particularly shown in Figure 2, the threaded section **22** being of such form as to engage and cooperate with the threads **4** formed on the body **1** at the inlet end **2** thereof.

The other end of the casing **21** is formed at its periphery with an inwardly rolled section **23**, which section **23** is formed so as to lie closely adjacent the portion **14** of the shoulder **13**. By this construction, the positioning of the body **1** within the casing **21** is further established as will be apparent.

Seated on the surface **15** of the shoulder **13**, is a suitable gasket **24**, the same being preferably of rubber or the like resilient material, and of a size to fit closely within the inwardly rolled portion **23** of the casing **21**. The gasket **24** is likewise engaged by the periphery of the face plate **19**, and when the screw **18** of the said face plate is drawn inwardly, the gasket **24** is forced against the face **15** of the shoulder **13** and also outwardly against the inwardly rolled portion **23** of the casing **21**. This serves the purpose of preventing rotation of the casing **21** on the threads **22**, and thus additionally positions the said casing in place. Further there is no leakage permitted at the edge of the face plate **19** and between the portion **23** and the face **14** of the shoulder **13**, compelling all of the water delivered into the interior of the body **1** to be delivered as desired through the perforations **20** in the usual manner.

In assembling the article above generally and specifically described, it will be understood that the body **1** is inserted into the interior of the casing **21** through the end at which the rolled portion **23** is formed, and thereafter manipulated in a manner to cause the threaded section **22** of the casing to engage and move along the threads **4** of the inlet section **2** of the body **1**. When the casing **21** has been positioned so as to be in the location substantially as shown in Figure 1, thereafter the gasket **24** may be positioned and subsequently the face plate **19** placed in contact therewith. Afterwards the screw **18** is suitably manipulated so as to cause the deformation of the gasket **24** and its locating and sealing operation to take place. With the parts as above generally outlined in place, subsequently the ball joint **7** may be positioned and the nut **10** suitably engaged with the threads in the usual manner.

It should be pointed out that the provision of a composite shower unit of this type is desirable since it is possible to use a casing **21** of a material which is not so difficult to finish and does not necessarily have to be as water resistant as the portion **1**, all of the same being provided so as to make for ready assembly and simple and inexpensive manufacture.

I claim:

1. In a shower head of the class described, in combination, a body, an inlet and an outlet end for said body, a separate casing surrounding said body, means at said ends for positioning the casing on the body, said means including a face plate, a gasket intermediate the face plate and body and instrumentalities for deforming the gasket, causing the same to frictionally engage the body, casing and face plate.

2. In a shower head of the class described, in combination, a body adapted to receive and direct fluid therethrough, an outlet section for said body, a casing surrounding and substantially enclosing said body, said casing having a portion positioned closely adjacent the outlet section, and means for maintaining said casing and body in connected relation including a gasket at said outlet section and a part for causing said gasket to engage said section and casing.

3. The combination as claimed in claim 2, wherein the part comprises a face plate, the outlet section is formed with a shoulder, the gasket is seated on said shoulder and means are provided to cause said face plate to force the gasket against the shoulder and casing.

4. The combination as claimed in claim 3, wherein the casing is provided with a flange portion lying closely adjacent the shoulder, the gasket is engaged by the periphery of the face plate, and a screw member is mounted in the body and adjustable to force the gasket into engagement with the shoulder of the body and flange portion of the casing.

5. The combination as claimed in claim 2, wherein the casing is formed with an inwardly rolled peripheral portion positioned closely adjacent a shoulder on the outlet section of the body, the gasket is seated on said shoulder, a face plate engages said gasket, and an adjustable member is provided to maintain the face plate in place and cause the gasket to engage the shoulder and rolled peripheral portion of the casing.

6. In a shower head of the class described, in combination, a body having inlet and outlet ends, said body providing for passage of fluid therethrough, a separate casing surrounding said body, means at the inlet end of said body engaging a corresponding section of the casing to position the same thereon, means at the outlet end of the body for positionnig the casing with respect thereto, both of said means lying outside of the flow of fluid through the body, and means engaging the casing to prevent displacement of the same from the body, said last named means including a face plate, a gasket intermediate the face plate and the body, and a member for fastening the face plate to the body, said member likewise effecting pressure on said gasket to cause the same to engage both the body and casing.

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