April 17, 1962 T. SLATER, JR 3,030,029

DRINKING FOUNTAIN ATTACHMENT FOR FAUCETS

Filed June 6, 1960

Fig. 1

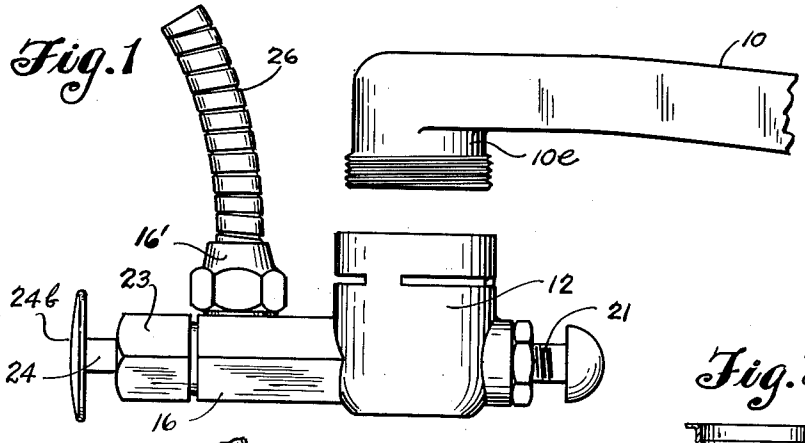


Fig. 2

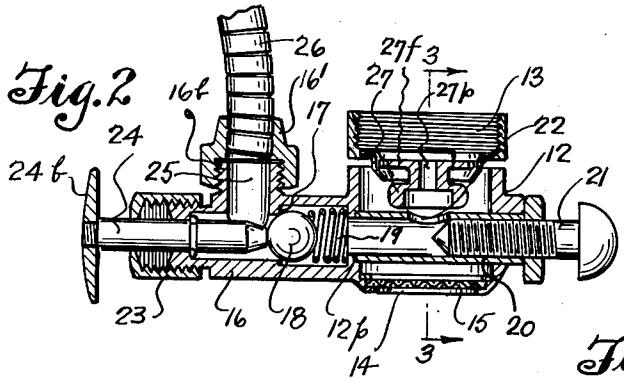


Fig. 3

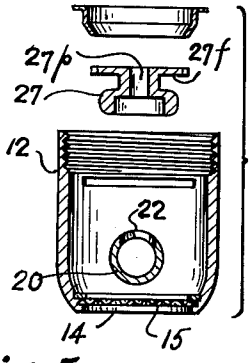


Fig. 4

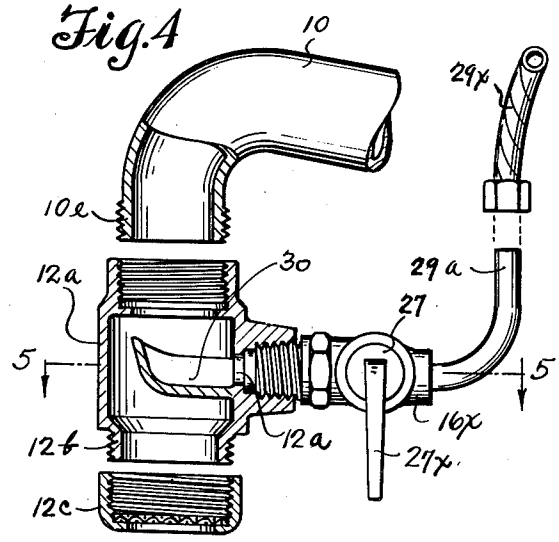


Fig. 5

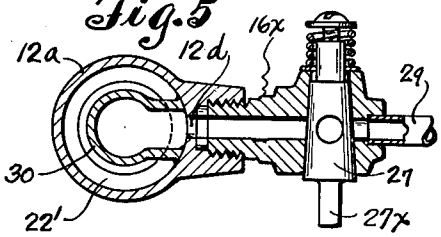
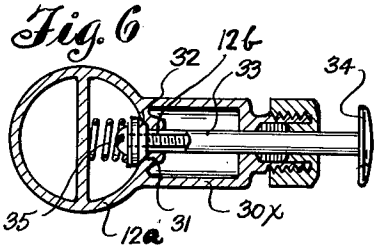


Fig. 6



INVENTOR.
THOMAS SLATER JR

BY
Robinson & Berry
ATTORNEYS

United States Patent Office 3,030,029
Patented Apr. 17, 1962

3,030,029
DRINKING FOUNTAIN ATTACHMENT FOR FAUCETS

Thomas Slater, Jr., 14057 32nd Ave. NE., Seattle, Wash.

Filed June 6, 1960, Ser. No. 34,193
3 Claims. (Cl. 239—25)

This invention relates to drinking fountain attachments for faucets, and it has reference more particularly to attachments that require no alteration in construction of the faucet for the application of the attachment thereto or change in its mode of use when equipped with the attachment.

More specifically stated, the present invention resides in the provision of a drinking fountain attachment that is adapted to be threaded onto the discharge end of the usual faucet spout and which embodies, as a part thereof, a tubular valve chamber from which water can be discharged when the faucet valve is open, under valve control, for easy drinking as from a "bubble up" type of fountain.

It is the principal object of this invention to provide drinking attachments of various bubble up types that can be readily applied to and utilized with most present day types of home faucets; which are relatively inexpensive; which can be easily used by children without excessive waste of water and which includes a valve that automatically closes when released.

Further objects and advantages of the invention reside in the details of construction of the various parts thereof and in their assembly and mode of use.

In accomplishing the above mentioned and other objects of the invention, I have provided the improved details of construction, the preferred forms of which are illustrated in the accompanying drawings, wherein:

FIG. 1 is a side view of a drinking fountain attachment of the present invention, shown in position for application to the end portion of the spout of a typical present day home faucet.

FIG. 2 is a vertical section, taken lengthwise of the attachment.

FIG. 3 is a cross-sectional view taken on line 3—3 in FIG. 2, but showing some parts separated from the housing for better understanding of their construction.

FIG. 4 is a vertical sectional view of an attachment device of an alternative form embodied by this invention.

FIG. 5 is a horizontal section taken on line 5—5 in FIG. 4.

FIG. 6 is a horizontal cross-sectional view through an attachment device similar to that of FIG. 5 but utilizing a control valve of different kind.

Referring more in detail to the drawings:

In FIGS. 1 and 4 of the drawings, 10 designates the outer end portion of the water discharge spout of a typical home faucet such as that used in connection with a supply line for delivery of water under pressure to a sink. This spout has a downturned, exteriorly threaded end portion 10*e* onto which the present drinking fountain attachments of FIGS. 1 and 4 are adapted to be threaded.

In the device of FIG. 1, the fountain attachment comprises a short tubular body 12 that is interiorly threaded at its upper end, as shown at 13 in FIG. 2, for its ready threaded attachment to the faucet spout. At its lower end, this housing has a discharge opening 14 within which a screen or strainer 15 is fitted. When the body 12 has been threaded onto the faucet spout, water may be discharged from the faucet through the tubular body 12 and opening 14 in the usual way by opening the faucet valve. Usually such faucets are placed over a sink or suitable drain.

The feature of the present invention resides in the provision of a drinking fountain attachment that is applied to or may be made integral with the tubular body 12 and does not require, in any way, the alteration of the faucet in its use or structure.

It has been well shown in FIGS. 1 and 2 that the hollow body 12, which may be or corresponds to the usual type of aerator presently used on faucet spouts, is provided at one side with an integrally formed horizontally extending tubular valve housing 16. Formed in this valve housing 16, intermediate its ends is an inwardly facing valve seat 17 against which a ball valve 18 is yieldingly held seated by a coil spring 19 that is positioned within the inner end portion of the housing 16, as best shown in FIG. 2. At its inner end, this tubular housing 16 registers with a sidewall port 12*p* of housing 12 and opens into the end of a tube 20 of smaller diameter, that extends through and beyond the opposite sidewall of housing 12 and, within that end portion, has a flow control screw 21 adjustably threaded thereinto. Formed in the top side of tube 20, in the axial center line of housing 12, is a water receiving hole 22 through which water may enter the tube 20 from the housing 12 for outflow to the drinking tube of the attachment device, presently to be described.

Threaded onto the outer end of the tubular valve housing 16 is a packing gland enclosing cap 23 and slidably fitted for movement through said cap and gland, and extending coaxially into the tube 16, is a valve stem 24 which, at its inner end, is engaged with the ball valve 18 for unseating it upon pushing the stem 24 inwardly. For this purpose, the stem is equipped at its outer end with a button 24*b*. When the valve 18 is unseated by inward pushing of the stem, water can flow outwardly through the housing 16 to a discharge port 25 formed in its top side and opening upwardly through a boss 16*b* to which a short flexible drinking tube 26 is attached by a nipple 16′ that is threaded onto the boss.

It is to be understood that, when the valve of the faucet, not herein shown, is opened, water can flow from spout 10 into the chamber of the aerator housing 12 and from it will pass over and about the tube 20 to flow out through the aerator in the usual way. With the water thus flowing, the drinking attachment may be used by pressing inwardly on button 24*b*, thus to unseat ball valve 18. Water will then flow past the valve seat to the drinking tube 26 through outlet port 25. The amount of water flow to the drinking tube may be regulated by and is in accordance with adjustment of screw 21 to cover to more or less extent the area of outlet 22 as formed in tube 20.

To better direct water under a certain amount of pressure into the tube 20 for discharge to the drinking outlet, I have placed a nozzle member 27 in the upper end portion of the housing 12, as shown in FIG. 2. This nozzle member has a central discharge passage 27*p* directed therethrough toward hole 22 in tube 20, so that a jet of water entering the housing 12 will be caused to be more or less forcibly delivered into the tube 20. The supporting flange 27*f* of this nozzle is notched about its periphery as shown in FIG. 3 so that water can also enter the chamber of the housing 12 through these peripheral notches. When inward pressure on valve stem 24, which unseats the ball valve, is released, the coil spring 19 closes the valve passage to the drinking tube and yieldingly retains it closed.

A modification of the drinking attachment of FIG. 1 is shown in FIGS. 4 and 5 wherein the cylindrical aerator body 12*a* is adapted to be threaded at one end onto a faucet spout 10*e*. This body has a threaded neck 12*b* at its lower end for application thereto of a screen cap 12*c*. A scoop 30 is formed in the chamber of housing 12*a*

in position to divert a part of the water from the spout to a sidewall outlet 12*d* of the housing 12*a*, into which outlet a valve housing 16*x* is threaded. Outflow of water through valve housing 16*x* is under control of a rotatable valve plug 27 fitted therein; this plug being equipped with a handle 27*x*. Outflow from the valve housing is through a tubular stem 29 which has an upturned end that connects with a flexible tubular extension 29*x*. Use of this attachment is as in the device of FIG. 1. Flow of water is under control of valve plug 27.

Another modification of this attachment has been illustrated in FIG. 6. However, in this modification, a hollow, closed cylindrical chamber 30*x* has been applied horizontally to the tubular body 12*a* at the location of and enclosing a sidewall outlet port 12*b*. The outlet port in this instance is formed with a tapered valve seat 31 against which a valve head 32 may be seated to prevent water outflow. The valve head 32 is here shown to be mounted at the inner end of a valve stem 33 which extends through the hollow receptacle 30*x* and at its outer end is equipped with a push button 34. A coil spring 35 is held under compression in the water scoop 30, as shown, and this acts against the valve head to yieldingly urge the valve to closed position.

The attachment devices herein shown may be easily and readily applied to present day faucets as used over kitchen sinks, or basins. No material alteration of the faucets, in construction or mode of use is required; the devices are simple in construction, relatively inexpensive and provide easily used and convenient means for drinking. Each can be manually opened but is automatically closed to avoid water waste.

What I claim as new is:

1. A drinking fountain attachment for a water faucet to which water is delivered under pressure; said attachment comprising a tubular housing adapted for threaded connection at its upper end to the faucet spout and having a discharge opening at its lower end, and providing a water chamber therein, a tubular member extending diametrically through said tubular housing and from its opposite sidewalls and formed between its ends with a sidewall port for reception of water under pressure from said chamber of said tubular housing, a valve housing joined at its inner end with said tubular housing, in registration with one end of said tubular member, said valve housing having a discharge port for an outflow of water for drinking, a manually opened control valve contained within said tubular housing for controlling the outflow of water therefrom for drinking and a flow regulating screw threaded into the opposite end of said tubular member for adjustment across said sidewall port of the tubular member to establish the inflow of water through its sidewall port.

2. The device of claim 1 wherein a nozzle forming member is mounted in the threaded end portion of the tubular housing and is operable to deliver a jet of water from the faucet spout directly into the sidewall opening of said tubular member.

3. A device as in claim 1 wherein said valve housing includes a valve seat, a ball valve in the valve housing and a spring means yieldingly holding said ball valve against said valve seat and a stem slidably mounted in the outer end portion of the valve housing and said stem being operable to unseat the ball from its seat.

References Cited in the file of this patent

UNITED STATES PATENTS

2,747,930	Hyde	May 29, 1956
2,899,137	Martin	Aug. 11, 1959