July 29, 1947. G. W. OAKES 2,424,896

FOUNTAIN PEN FILLING DEVICE

Filed April 19, 1944

Fig.1.

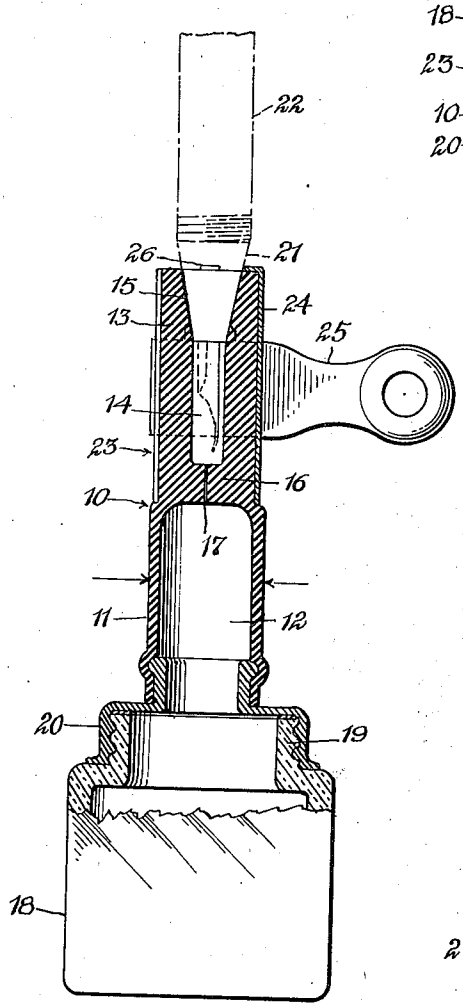



Fig.2.

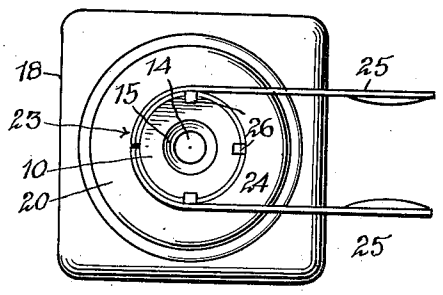



Fig.3.

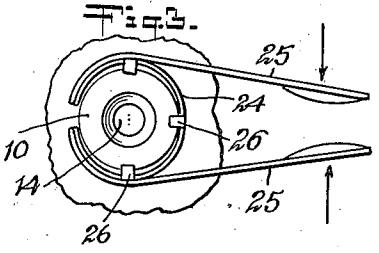
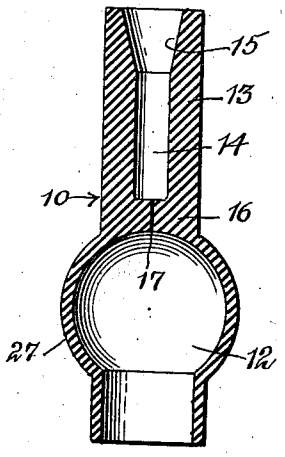



Fig.4.




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# UNITED STATES PATENT OFFICE

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## FOUNTAIN PEN FILLING DEVICE

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Application April 19, 1944, Serial No. 531,733

2 Claims. (Cl. 226—63)

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This invention relates to a device which is designed and adapted to be used in conjunction with a font for filling an article with suitable fluid or liquid.

The principal object of the invention is the provision of a device of the indicated character which may be applied advantageously to a commercial ink bottle and receive the writing end of a fountain pen so that by applying pressure to the device the pen may be filled with ink.

A further object is the provision of a device of the stated character having the following advantages. It prevents the spilling or evaporation of the ink and enables the filling of a pen fully without soiling the fingers with ink. It accommodates pens of various sizes. The device is simple and practical and may remain attached to an ink container or bottle resting on a desk or the like requiring a minimum of space and having a neat appearance.

The nature of the invention and its distinguishing features and advantages will appear when the following specification is read in connection with the accompanying drawing, in which—

Fig. 1 is a view showing the device of the present invention applied to an ink bottle and a fountain pen in position preparatory to the filling operation, the device being shown fully in section, the bottle being partly in section, and the pen being shown in dot and dash lines with a portion of the barrel of the pen broken away.

Fig. 2 is a top plan view of the device applied to the bottle.

Fig. 3 is a top plan view showing the gripper released, and portions of the bottle being broken away.

Fig. 4 is a sectional view of a modification of the device.

Referring now more particularly to Fig. 1 of the drawing it will be apparent the device of the present invention includes a body 10 made wholly of resilient material, preferably rubber. The body 10 is constructed to provide compressible and expansible means at one end adapted to be engaged with an outlet neck of a fluid or liquid container to receive a quantity thereof and to discharge it therefrom. Said means consists of a cylindrical open ended wall 11 forming a similar shaped chamber 12. The other end of the body 10 has means adapted to receive a portion of an article to be filled with fluid or liquid and regardless of the size of such portion within certain limits. Said means is in the nature of an expansible and contractible socket or nipple consisting of a cylindrical wall 13 forming a cavity

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14 having a flared entranec end portion 15. The wall 13 is in continuation of the wall 11 and is approximately of the same diameter. The body 10 is of one piece in the present instance. A throat 16 provides a restricted passage 17 to control the flow of fluid or liquid from the chamber 12 to the cavity 14 subject to the intermittent pressure applied to the compressible and expansible wall 11.

In Fig. 1 there is shown a container 18 in the form of a bottle containing ink, since as shown in the present instance, the device may be used advantageously for filling fountain pens. The wall 11 is connected with the outlet neck 19 of the container 18 by the use of an adaptor 20 in the present instance. It is to be understood, however, that the body 10 may be applied directly to the neck of the container if the neck is of a suitable size.

As shown, the writing end 21 of a conventional fountain pen 22 is inserted into the cavity 14. In order to securely retain the pen in filling position in a fluid tight manner in connection with the wall 13, there is provided a self-closing spring clamp 23. Any suitable clamp or gripper may be used and in the present instance it consists of a longitudinally split tubiform member 24 having actuators 25 formed integral therewith or secured thereto so as to open or expand the member 24 when pressure is applied by the thumb and finger to said actuators. When the member 24 is open it may be slipped on the body around the wall 13 and while open the writing end of the pen may be readily inserted into the cavity 14. When pressure on the actuators 25 is withdrawn the member 24 closes about the wall 13 to tightly clamp it in contact with the end section of the pen barrel to make a fluid tight connection. The clamp 23 remains with the body 10. The member 24 has projection 26 to bring the member 24 at one end flush with the entrance end of the wall 13.

To operate the device pinch the actuators 25 with the thumb and finger of one hand which permits the wall 13 of the body to expand. Then insert the writing end of the pen 22 as far as it will go, with mild pressure into the cavity 14. Then release the actuators 25 and the member closes by spring action around the wall 13 and clamps the pen fast. This makes a fluid tight seal. The bottle 18 is then grasped and held in an inverted position to cause a quantity of ink to enter the chamber 12. The wall 11 of the body 10 is squeezed with the thumb and fingers of the other hand one or more times which dis-

places the ink from the chamber 12 and forces it through the passage 17 into the cavity 14 and finally into the sack or ink chamber of the pen filling the same. The bottle is then returned to the upright position after which the clamp 23 may be manipulated to release the pen which is removed.

In Fig. 4 is shown a modification of the construction of the body 10. In lieu of the cylindrical wall 11, use is made of bulbous shape wall 27. In other respects the body 10 is similar to that shown in Figs. 1 to 3 and similar reference numerals are applied to corresponding features.

I claim:

1. The combination with an ink container having an outlet neck, of a filling device applied to said neck, said device having resilient means to accommodate the writing end of a fountain pen so as to convey ink into the pen, and means to receive ink from said container through said neck, said last means communicating with the first means by a restricted passage and being manipulatable to discharge the ink therefrom through said first means into the pen.



2. A device adapted to be used for filling an article with fluid from a fluid container, said device consisting of a body made of resilient material and constructed to provide an expansible and contractible socket on one end to receive an inlet portion of an article to be filled, a compressible and expansible means to receive fluid and operable to displace the fluid therefrom, and a throat communicating with the interior of the socket and said means to control the flow of fluid subject to the action of said means to cause the fluid to flow into said socket.

GEORGE W. OAKES.


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