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FOUNTAIN PEN FILLING DEVICE

Filed July 7, 1930

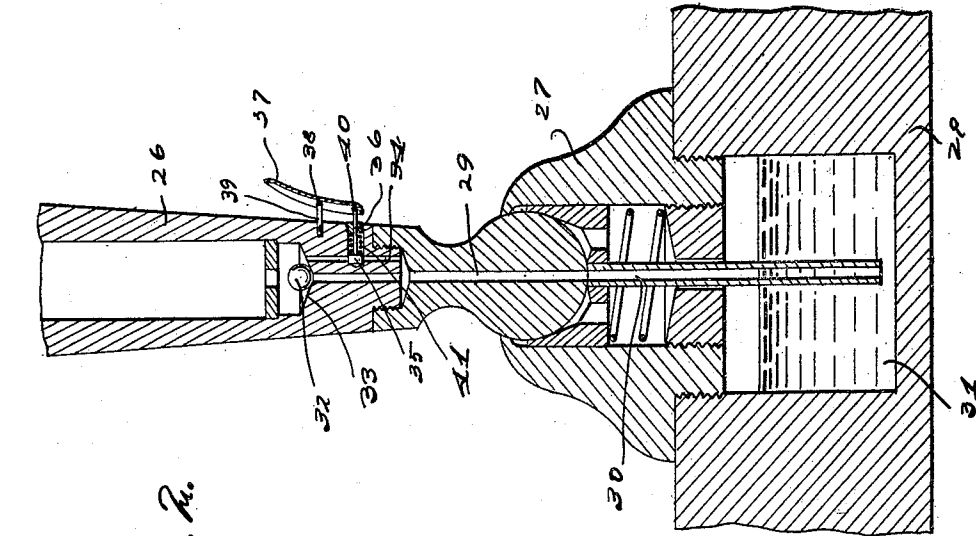


Fig. 2.

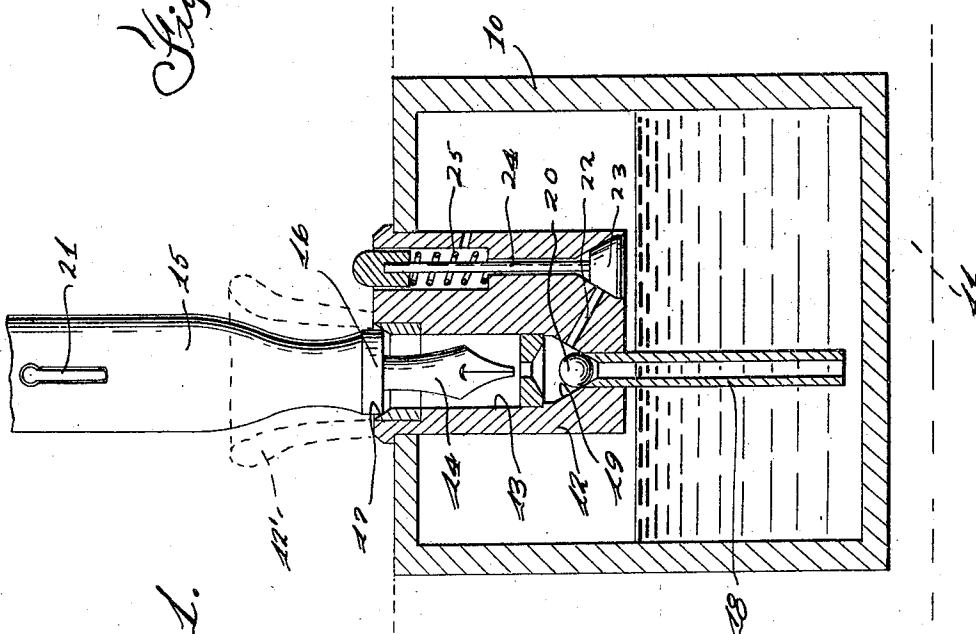


Fig. 1.

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FOUNTAIN PEN FILLING DEVICE

Application filed July 7, 1930. Serial No. 466,215.

This invention relates to fountain pen filling devices for use in connection with writing fluid containers and the like and also for use in connection with fountain pen desk sets.

5 The herein described structures constitute modifications of the general type of filling device illustrated and described in my copending application, Serial No. 329,835 filed January 2, 1929.

10 In accordance with the present invention, the filling device comprises, as in my prior mentioned application, a pen receiving or supporting receptacle having a check valve controlled passageway connected with a writing fluid containing well. Upon operation of the filling device, the writing fluid or ink is drawn upwardly from the well past the check valve and into that portion of the receptacle around the pen point, the check
15 valve preventing the drainage of the writing fluid back into the well. After the fountain pen has been filled, means must be provided for returning or draining the ink remaining in the receptacle back into the well and in
20 accordance with the present invention, I propose providing a valve controlled by-pass operable to permit this drainage back into the well.

25 The invention also has as its object to simplify, render more efficient and improve generally devices of this character and to this end consists in the novel construction, combination and arrangement of parts, all of which will be made more apparent as this description proceeds, especially when considered in connection with the accompanying drawings, wherein

30 Figure 1 is a vertical sectional view through a fountain pen filling device constructed in accordance with this invention in which the pen receiving receptacle is fixed, and

35 Figure 2 is a similar view of a slightly modified form of construction in which the pen supporting receptacle is connected to a base or the like for relative angular movement with respect thereto.

40 Referring now more particularly to the drawings and more especially to Figure 1, it will be noted that there is illustrated a well or fluid container 10 which may be used alone

or may be associated with a base of larger proportions indicated generally by dotted lines and reference character 11. The well 10 is adapted to contain a writing fluid such as ink, and arranged above the well 10 and extending down therein is a pen supporting or receiving member indicated by the reference character 12. The pen receiving member 12 is provided with a recess or receptacle portion 13 into which the penpoint 14 of the fountain pen 15 is adapted to extend. The end 16 of the pen barrel is adapted to rest upon a tapered seat 17 formed adjacent the upper open end of the receptacle 12 and when the fountain pen is thus positioned the receptacle 12 is sealed from the atmosphere as will be apparent. If the fountain pen is to be more adequately supported, the pen receiving member 12 may be provided with an upwardly extending sleeve-like portion 12' which will embrace a portion of the pen barrel so that the device may be conveniently used as a pen support.

45 The receptacle portion 13 has connected thereto a tube 18 which extends down below the level of the ink in the well 10 and the lower wall of the receptacle portion 13 is inclined to form a valve seat 19 for a check valve 20, which normally closes communication between the receptacle 13 and the well to prevent the drainage of ink back into the well.

50 As thus far described the operation of the device will be obvious. The fountain pen 15 is positioned with the barrel end 16 upon the seat 17 and the fountain pen filling lever 21 is actuated several times to draw ink upwardly from the well through the tube 18 and past the ball check valve 20 into the receptacle 13. When sufficient ink has been drawn into the receptacle 13, the fountain pen may be filled in the customary manner it being understood that the ball check valve prevents the drainage of the ink back into the well.

55 In order to provide means for draining the ink back into the well after the completion of the fountain pen filling operation, I provide a by-pass 22 controlled by a valve 23 operable by a plunger 24 accessible from the

outside of the well. A spring 25 normally retains the valve in closed position.

In the modified form of construction illustrated in Figure 2, the pen supporting receptacle 26 is connected by a joint indicated generally by the reference character 27 to a base or the like 28 for relative angular movement with respect thereto. The receptacle 26 has a passageway 29 which communicates with a tube 30 leading into the well 31 formed in the base 28. A ball check valve 32 normally resting on a valve seat 33 prevents ink drawn up into the pen supporting receptacle from draining back into the fluid well 31. The ink is drawn up into the pen supporting receptacle in the same manner as previously described in connection with the former construction illustrated in Figure 1.

After the completion of the fountain pen filling operation, the ink may be drained back into the well by means of a by-pass 34 controlled by a valve 35 operable by plunger 36 through the medium of a lever 37 arranged exteriorly of the receptacle 26. The lever 37 is pivotally mounted as at 38 on a stud 39 projecting from the receptacle, this lever having a pivotal connection as at 40 with the outwardly projecting end of the plunger 36. A spring 41 normally maintains the valve 35 in closed position.

The operation of both forms of construction described herein is substantially identical. The lower portion of the pen receiving or supporting receptacle is first sealed by the introduction of the pen therein and thereafter by operation of the pen filling lever, ink is drawn upwardly past the check valve into the lower portion of the receptacle where the fountain pen may be filled in the usual manner. In each instance, after the fountain pen has been filled, the surplus ink may be readily drained back into the fluid well by the operation of a valve controlled by-pass.

While two forms of the invention have been described herein, it will be apparent to those skilled in this art that various modifications and rearrangement of the several parts may be made without departing from the spirit and scope of this invention, and to this end reservation is made to make such changes as may come within the purview of the accompanying claims.

What I claim as my invention is:

1. In a fountain pen desk set, a base formed with a well, a pen receiving receptacle, a check valve controlled passageway connecting said receptacle to said well and a valve controlled by-pass operable to permit drainage of ink from said receptacle back into said well.

2. In a fountain pen desk set, a base formed with a well, a receptacle above said well forming a pen support and sealed thereby by the pen when the latter is thus supported, a check valve controlled passageway connecting said

receptacle to said well through which ink may be drawn by the suction means of the pen and a valve controlled by-pass operable to permit the drainage of the ink back into the well.

3. In a device of the class described, a fluid well, a pen receiving receptacle associated with said well, a passageway connecting said receptacle to said well, a ball check valve controlling said passageway, a by-pass connecting said receptacle to said well and a normally closed valve for controlling said by-pass.

4. In a device of the class described, a base formed with a well, a receptacle above said well adapted to receive the pen end of a fountain pen and to be sealed thereby, a valve controlled passageway connecting said receptacle to said well through which ink may be drawn by the suction means of a fountain pen and a valve controlled by-pass operable to permit the drainage of the ink from said receptacle back into said well.

5. In a fountain pen desk set, a base formed with a well forming a pen support and sealed by the pen when the latter is thus supported, a pen supporting receptacle above said well, a valve controlled passageway connecting said receptacle to said well through which ink may be drawn by the suction means of the pen, and a valve controlled by-pass operable to permit drainage of the ink back into the well.

In testimony whereof I affix my signature, GERALD L. BASSETT.

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