June 23, 1931. J. P. CLARY 1,811,745

READY DIP INKWELL

Filed March 31, 1930 3 Sheets-Sheet 1

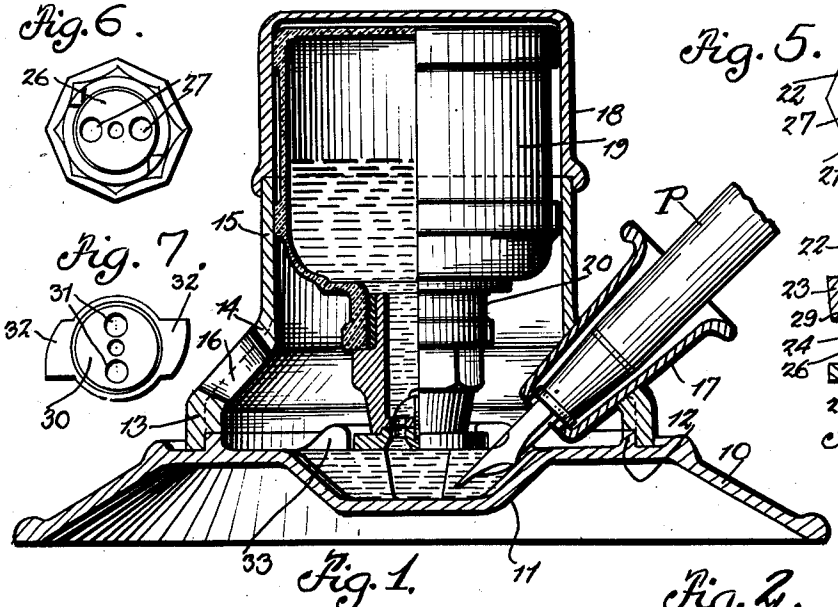
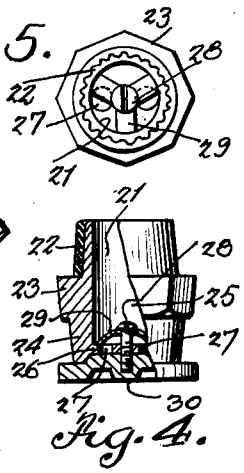
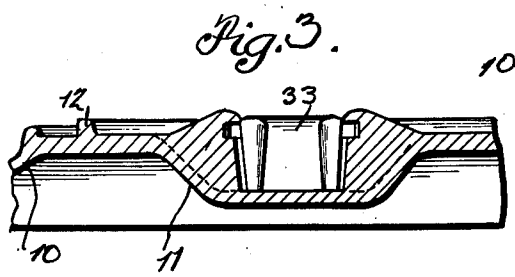
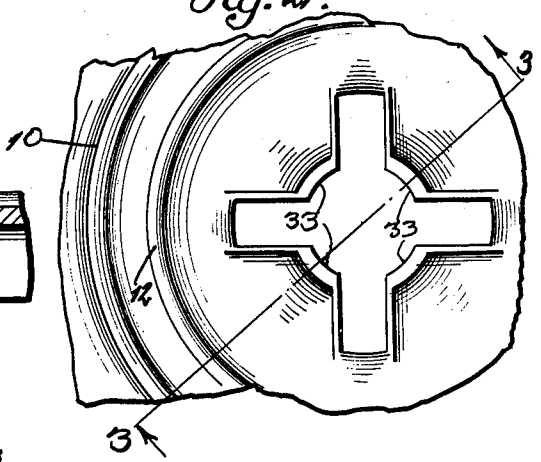
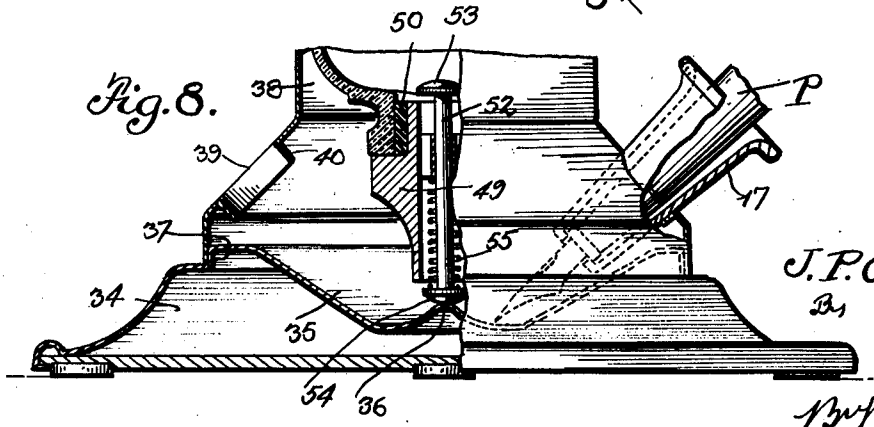


Fig. 1.









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Filed March 31, 1930 3 Sheets-Sheet 2

Fig. 9.

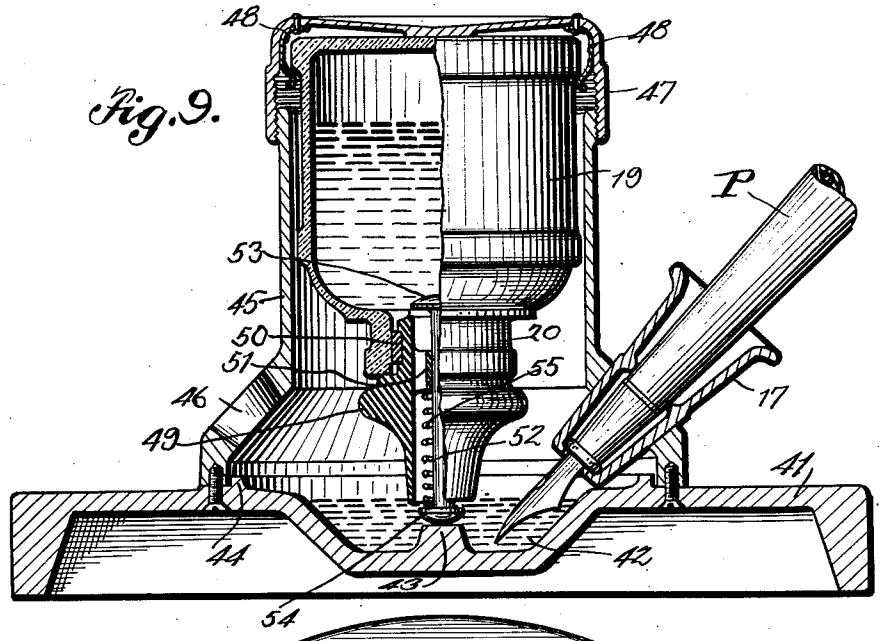
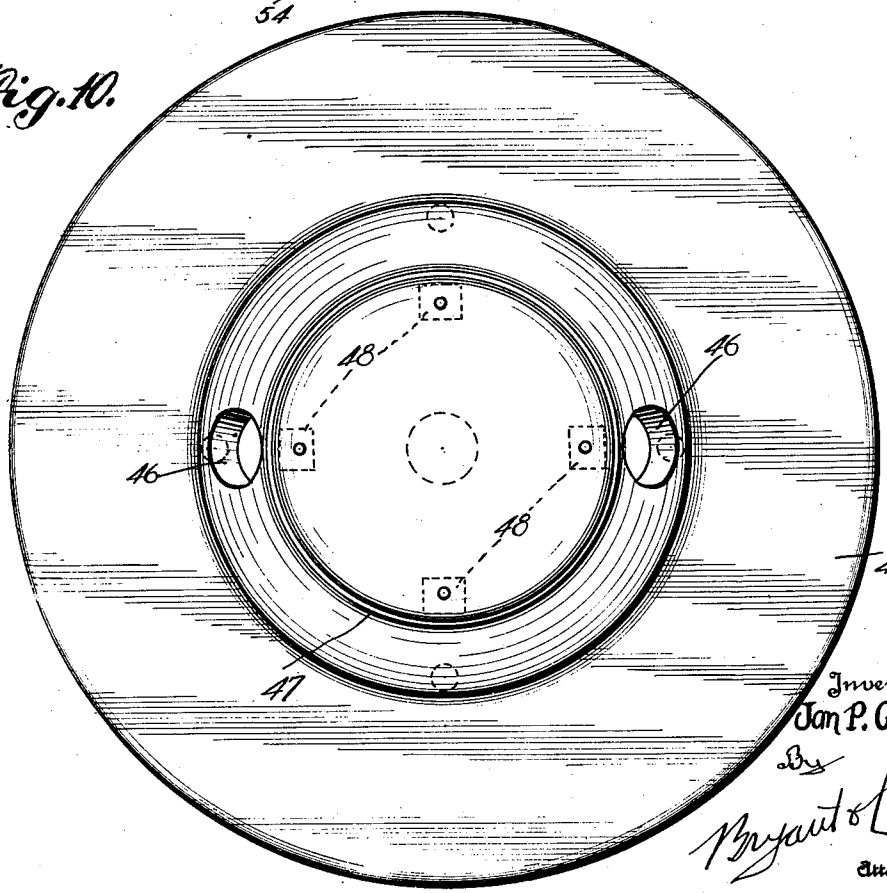


Fig. 10.



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June 23, 1931. J. P. CLARY 1,811,745

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Filed March 31, 1930 3 Sheets-Sheet 3

Fig. 12.

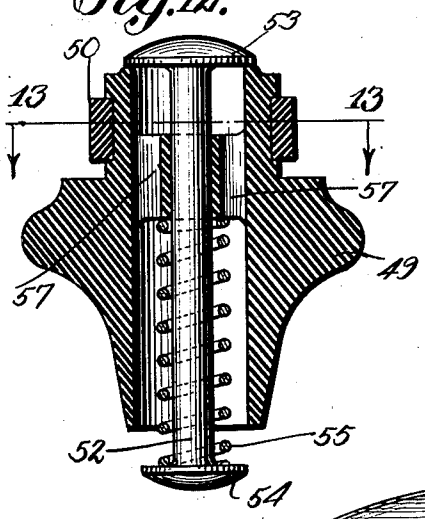


Fig. 13.

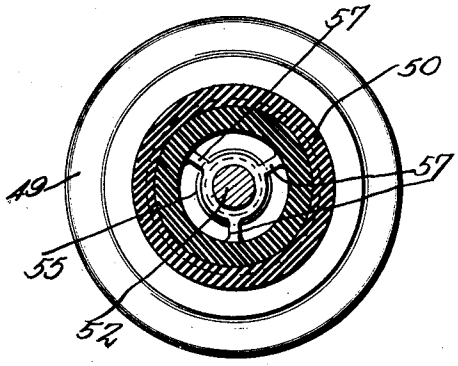
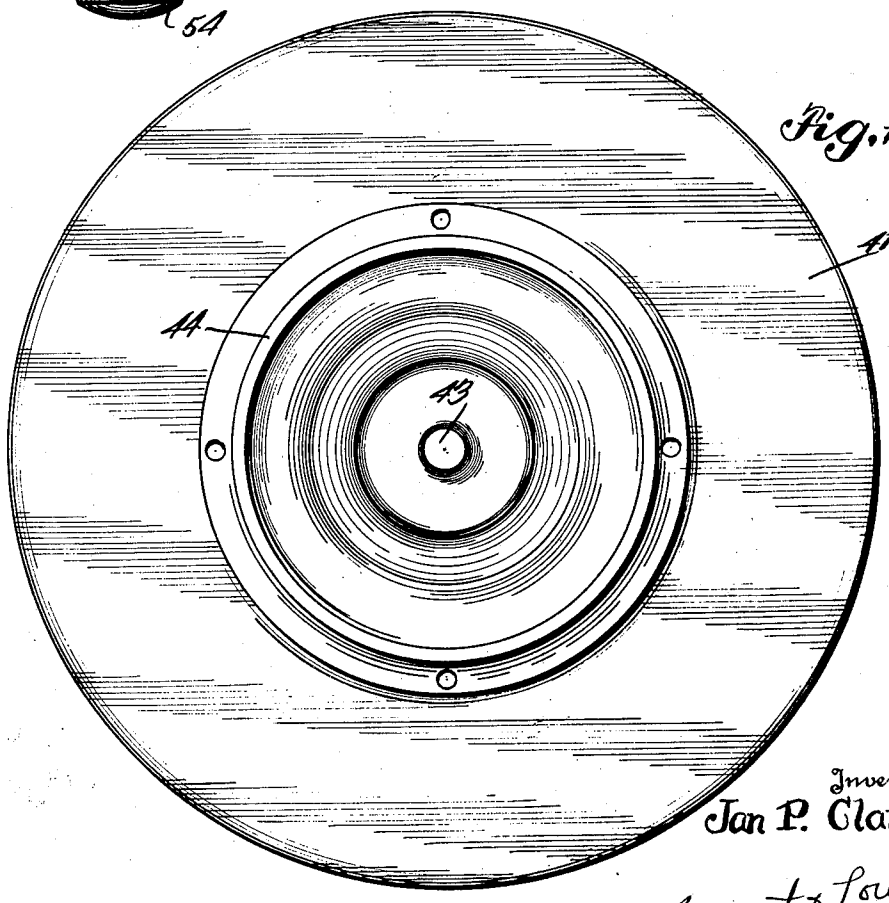


Fig. 11.



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UNITED STATES PATENT OFFICE

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READY DIP INKWELL

Application filed March 31, 1930. Serial No. 440,437.

This invention relates to ink-wells and has special reference to the type of ink wells known as fountain ink wells.

One important object of the invention is to provide an improved general construction for such ink wells.

A second important object of the invention is to provide a novel form of fountain ink well wherein the reservoir is formed by an ordinary commercial bottle of ink.

A third important object of the invention is to provide novel stopper arrangements for such wells.

With the above and other objects in view, the invention consists in general of certain novel details of construction and combinations of parts hereinafter more fully described, illustrated in the accompanying drawings and specifically claimed.

In the accompanying drawings like characters of reference indicate like parts in the several views, and:

Figure 1 is a vertical median section through one form of ink well constructed in accordance with this invention;

Figure 2 is a partial plan view of the base in this form;

Figure 3 is a partial section on the line 3—3 of Figure 2;

Figure 4 is a side elevation, partly in section of the bottle stopper used herewith;

Figure 5 is a plan view of the stopper shown in Figure 4;

Figure 6 is a bottom plan view of the stopper as shown in Figure 4 with a certain shutter valve removed;

Figure 7 is a view of the shutter valve in plan;

Figure 8 is a side elevation, partly in section of a modified form of ink well;

Figure 9 is a vertical median section through a second modification of the well;

Figure 10 is a plan view of the second modification;

Figure 11 is a plan view of the base of this second modification;

Figure 12 is a diametric section to enlarged scale of the type of stopper used in the modified forms of the well;

Figure 13 is a section on the line 13—13 of Figure 12.

In the preferred form of the invention shown in Figures 1 to 7 inclusive there is provided a base 10 of any suitable material such as metal, bakelite, glass or the like and this base has a central well 11 of inverted frusto-conical form. An annular rib 12 projects up from the top of the base and surrounds the well 11 in spaced concentric relation thereto. There is also provided a bottle casing having a cylindrical lower portion 13 rabbeted on its inner bottom edge to fit on the rib 12. Above this portion 13 the casing is inclined inwardly in frusto-conical form as at 14 and then extends upwardly in cylindrical form as shown at 15. In the frusto-conical portion of the casing, there is provided a series of tapered openings 16 and in one or more of these openings may be fitted a tapered tubular pen rest 17 so that a pen P may be left in the well. On top of the casing is fitted a cylindrical cap or cover 18 closed at its upper end. The casing portion 15 and cover 18 are of proper diameter to fit snugly around an inverted ink bottle having a body 19 and neck 20, the bottle being of the ordinary round commercial type.

In the neck of this bottle is fitted the reduced end 21 of a stopper, this end being surrounded by a sleeve 22 of rubber or other elastic material so that the stopper will fit tightly in the bottle neck. The middle or body portion 23 of this stopper is preferably of polygonal contour so as to enable the stopper to be twisted in forcing it firmly into the bottle neck. The remaining end 24 of the stopper is likewise reduced in reference to the body and through the stopper extends a cylindrical bore or passage 25 having an internal diaphragm 26 adjacent the extremity of the reduced end 24. Openings 27 extend through this diaphragm and it is provided with a central opening for a screw 28 having its head within the stopper and carrying a leaf spring 29, the ends of which rest on the diaphragm 26. The extremity of the portion 24 is bevelled internally to provide a seat for a shutter valve 30 carried by the screw 28 and held securely in its seat by the spring 29.

This valve is provided with openings 31 which, by rotation of the valve, are moved into and out of registry with the openings 27. Lugs 32 project from the sides of the valve and on the base are provided coacting lugs 33.

In operation the stopper is inserted in the neck of a bottle of ink from which the usual stopper has been removed and care is taken that the valve is closed. The bottle is then inserted in inverted position in the casing and the lugs 32 brought into position between the lugs 33. A quarter turn is then given the bottle whereupon ink will run out into the well and rise till the openings 31 are closed against the admission of air. The cover 15 is now put on and the well is ready for use.

In the form of the invention shown in Figure 8, the base 34 is stamped from sheet metal to provide a central well 35 having an upwardly projecting central cusp 36. A shoulder 37 is likewise struck up on the upper surface of the base so that the stamped metal bottle casing 38 may properly fit on the base. Openings 39 are formed in the casing as before, the metal surrounding these openings being struck inwardly to form flanges 40. The rests 17 are used in these openings as in the first form.

In the form of the invention shown in Figures 9 to 13, inclusive, there is provided a base 41 of the cast or molded type and this base has a central well 42 provided with a central upstanding cusp 43. The base also has a rib 44, to provide for proper positioning of the casing 45 which, in its general form, is like the casing of the first form and is similarly provided with openings 46 and rests 17. The cover or top 47 is shown in this form as having a screw connection with the casing and is provided with springs 48 to grip and hold the bottle body 19 with its neck 20 downward as before.

In both the second and third forms, the stopper 49 is of tubular construction and is provided with an end to fit in the bottle neck and having an elastic sleeve 50 thereon. In this stopper is a spider 51 wherethrough slides a rod 52 having on one end a valve 53 which normally closes the passage through the stopper. At its other end the rod is provided with a button 54 between which and the spider 51 is a coil spring 55 which holds the valve closed.

In these forms, the usual stopper of a bottle of ink is removed and the stopper just described substituted. Then the bottle is inverted and placed in the casing so that the button 54 engages the cusp of the well and thus opens the valve.

There has thus been provided a simple and efficient device of the kind described and for the purpose specified.

It is obvious that changes may be made in the form and construction of the invention without departing from the principles thereof. It is not, therefore, desired to confine the invention to the exact form herein shown and described but it is desired to include all such as come within the scope claimed.

Having thus described the invention, what is claimed is:—

1. In an ink well, a base having a central well portion, a casing having pen openings and mounted on said base and adapted to contain an inverted ink bottle, the lower edge of the casing being spaced from the central well, an ink bottle, and a normally closed valve in the neck of said bottle arranged to open upon proper positioning of the bottle in the casing with the lower end of the bottle terminating at the upper end of the well and spaced from the sides of the well whereby a pen inserted in the pen opening may enter the well beneath the bottle.

2. In an ink well, a base having a central well portion, a casing having pen openings and mounted on said base and adapted to contain an inverted ink bottle, the lower edge of the casing being spaced from the central well, an ink bottle, a normally closed valve in the neck of said bottle arranged to open upon proper positioning of the bottle in the casing with the lower end of the bottle terminating at the upper end of the well and spaced from the sides of the well whereby a pen inserted in the pen opening may enter the well beneath the bottle, and a cover for said casing to hold the bottle in place.

3. In an ink well, a base having a central well portion, a casing having pen openings and mounted on said base and adapted to contain an inverted ink bottle, an ink bottle, a normally closed valve in the neck of said bottle arranged to open upon proper positioning of the bottle in the casing, a cover for said casing to hold the bottle in place, and spring clips carried by the cover internally thereof to grip and hold the bottle.

4. In an ink well, a base having a central well portion, a turret-like casing having circumferentially spaced pen openings and mounted on said base and adapted to contain an inverted ink bottle, an ink bottle disposed above the well, a normally closed valve in the neck of said bottle arranged to open upon proper positioning of the bottle in the casing, and tubular pen rests fitted in said openings and positioned to direct a pen point into the well beneath the bottle.

5. In an ink well, a base having a central well portion, a turret-like casing having circumferentially spaced pen openings and mounted on said base and adapted to contain an inverted ink bottle, an ink bottle disposed above the well, a normally closed valve in the neck of said bottle arranged to open upon proper positioning of the bottle in the casing, a cover for said casing to hold the bottle in place, and tubular pen rests fitted in said open-

ings and positioned to direct a pen point into the well beneath the bottle.

6. In an ink well, a base having a central well portion, a turret-like casing having circumferentially spaced pen openings and mounted on said base and adapted to contain an inverted ink bottle, an ink bottle disposed above the well, a normally closed valve in the neck of said bottle arranged to open upon proper positioning of the bottle in the casing, a cover for said casing to hold the bottle in place, spring clips carried by the cover internally thereof to grip and hold the bottle, and tubular pen rests fitted in said openings and positioned to direct a pen point into the well beneath the bottle.

7. In an ink well, a base having a central well portion, a casing having pen openings and mounted on said base and adapted to contain an inverted ink bottle, an ink bottle, a stopper for said bottle having a valve seat at its exterior end and provided with ports leading to said valve seat, a rotary valve held on said stopper in said seat and provided with ports movable into and out of registry with the first ports, lugs on said valve, and coacting lugs on the base adapted to engage the valve lugs upon rotation of the bottle whereby to cause relative rotation of the stopper and valve.

8. In an ink well, a base having a well, a casing mounted on the base and having pen openings in a plane at an angle to the base, tubular pen rests mounted in the openings for directing a pen point into the well, and an ink bottle invertibly supported on the base above the well.

9. In an ink well, a base having a well, a casing mounted on the base and having pen openings therein, an ink bottle, and a normally closed valve device in the neck of the bottle cooperating with the base to be opened upon rotation of the bottle during mounting thereof on the base within the casing.

In testimony whereof I affix my signature.

JAN P. CLARY.