May 8, 1962 B. D. CLEVELAND ETAL 3,033,112

DISPENSING HANDLE

Filed Jan. 8, 1960 2 Sheets-Sheet 1

Fig. 1

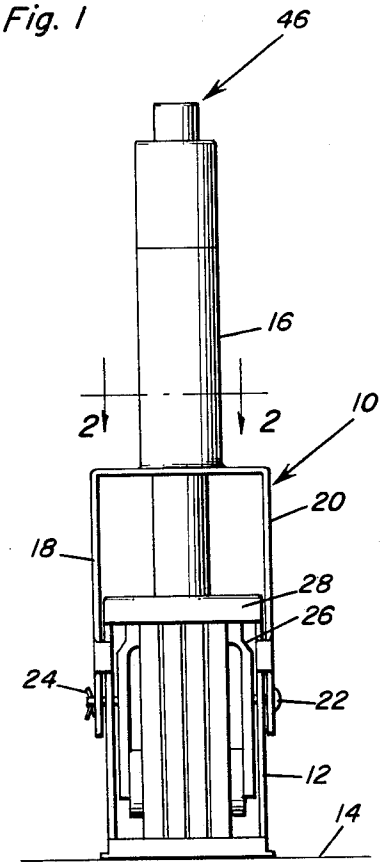


Fig. 3

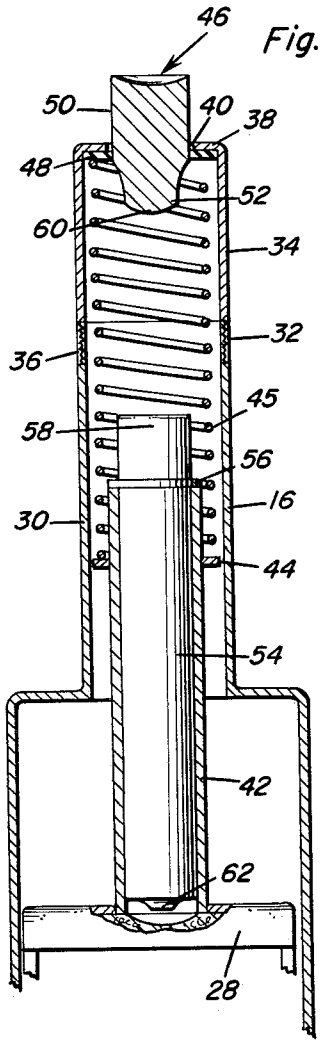
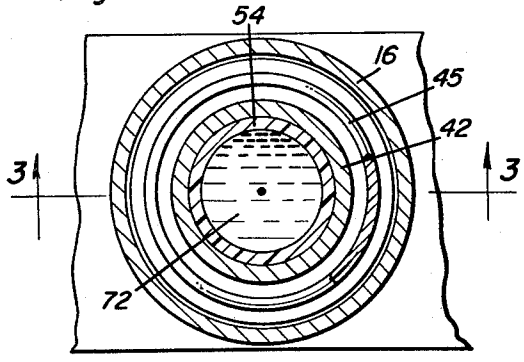


Fig. 2



Bill D. Cleveland
Wiley K. Grubbs
INVENTORS

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

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Filed Jan. 8, 1960 2 Sheets-Sheet 2

Fig. 4

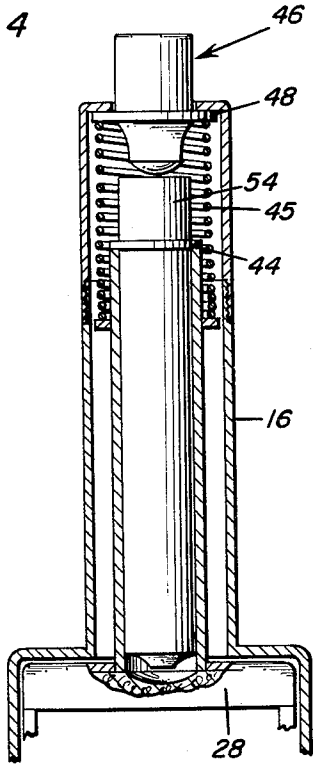


Fig. 5

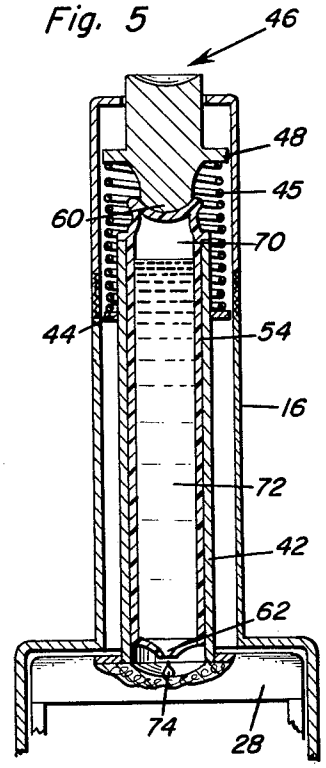


Fig. 6

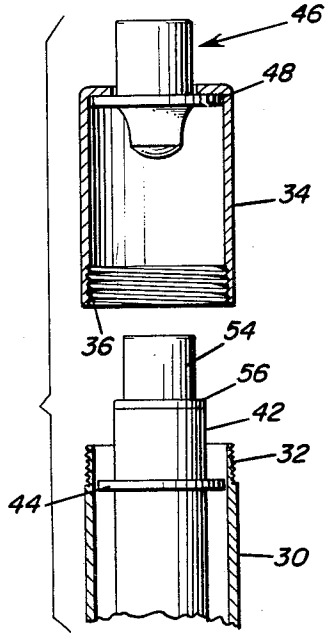
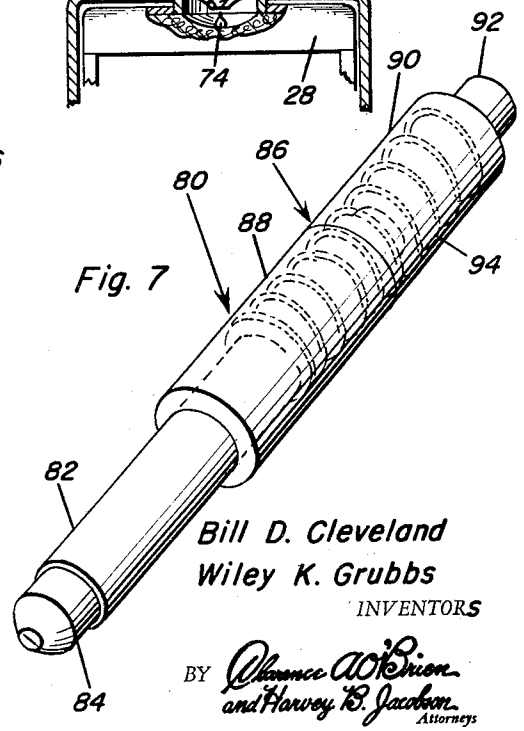


Fig. 7



Bill D. Cleveland
Wiley K. Grubbs
INVENTORS

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

United States Patent Office

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DISPENSING HANDLE

Bill D. Cleveland, P.O. Box 34, McGehee, Ark., and Wiley K. Grubbs, P.O. Box 665, Eudora, Ark.

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7 Claims. (Cl. 101—334)

This invention relates generally to dispensing equipment and more particularly to a handle specifically designed for storing and selectively dispensing fluid therefrom, as ink or liquid adhesive.

Generally, hand stamping devices are provided with an ink pad which absorbs applied liquid ink and which continually moistens the stamp with ink each time the stamping device or machine is actuated. Although stamping devices of this sort have proved to be extremely satisfactory, they are deficient in the sense that they must often be refilled due to the evaporation of the ink from the pad. In view of this, it is the principal object of this invention to provide a novel handle for storing and selectively dispensing fluid therefrom.

It is a further object of this invention to provide novel hand stamping apparatus which is adapted to store an extensive supply of ink which may be selectively dispensed to the provided ink pad.

It is a still further object of this invention to provide a novel dispensing handle which carries a flexible and resilient container having fluid therein. The container has a small opening therein which is sufficiently small so as to normally prevent flow of fluid from the container. However, when the container is deformed it acts somewhat as a pump to dispense the fluid through the opening.

It is a still further object of this invention to provide a novel dispensing member which may be utilized in a number of applications for storing and dispensing any of several fluids.

More particularly, it is an object of this invention to provide a novel dispensing handle construction which is relatively inexpensive to manufacture and due to its simplicity in construction, is reliable and relatively trouble free.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a front elevational view of a conventional manual stamping device utilizing the dispensing handle comprising this invention as a portion thereof;

FIGURE 2 is an enlarged horizontal sectional view taken substantially along the plane 2—2 of FIGURE 1;

FIGURE 3 is an enlarged fragmentary sectional view taken substantially along the plane 3—3 of FIGURE 2;

FIGURE 4 is an enlarged sectional view similar to that of FIGURE 3, but however illustrating the tubular handle casing depressed to the position assumed when the stamp of the stamping device is engaged with the stamping surface;

FIGURE 5 is an enlarged sectional view similar to that of FIGURES 3 and 4 but however, illustrates how the flexible and resilient container may be deformed to dispense fluid therefrom through the opening therein;

FIGURE 6 is a sectional disassembled view illustrating the two portions of the tubular handle casing; and

FIGURE 7 is a perspective view of a liquid adhesive dispenser incorporating the teachings of the invention for use in devices other than stamping devices.

With continuing reference to the drawings, numeral 10 generally represents a substantially conventional manual stamping device including a frame 12 which rests on a

stamping surface 14. A tubular handle casing 16 has a bifurcated lower portion including elements 18 and 20 which have a pin 22 secured therebetween as by a cotter pin 24. Carried on the pin 22 is a stamp 26 normally engaged with ink pad 28. The pin 22 further extends through a curved trackway formed in frame 12 which causes the stamp mechanism 26 to invert when the tubular handle casing is depressed to engage the surface of the stamp 26 which is normally engaged with the pad 28, with the stamping surface 14.

The tubular handle casing 16 includes a lower portion 30 which is externally threaded at 32 and receives thereon an upper portion 34 which is internally threaded at 36 and engages the threaded portion 32. The upper portion 34 has a top surface 38 apertured at 40.

Extending upwardly from the pad 28 is a sleeve 42 having a flange 44 formed thereon. A coil spring 45 rests on the flange 44 and extends toward the top surface 38 of the upper casing portion 34. A push button 46 is also provided with a flange 48. The portion of the push button 46 above the flange 48 is indicated by numeral 50 and projects through the aperture 40 in the upper casing portion 34. The portion of the push button 46 below the flange 48 is designated by the numeral 52. The spring 45 is engaged with the flange 48 as illustrated in FIGURES 3 through 5 and accordingly tends to urge apart the casing 16 and sleeve 42. However, as noted above, when it is desired to stamp the surface 14, depression of the casing 16 will carry the stamp 26 into engagement with the surface 14 against the spring urging of spring 45.

In accordance with the teachings of the invention, a flexible and resilient container 54 is provided with the container 54 having a flange 56 thereon. The container 54 is received within the sleeve 42 with the flange 56 abutting the sleeve 42 as illustrated in FIGURES 3 through 6. A slight depression 58 is formed in the container 54 for accommodating the rounded bottom surface 60 of the button 46. A small opening or orifice 62 is defined by the container 54. It is to be noted that the opening 62 is sufficiently small so as to normally prevent flow of fluid contained within the container therethrough.

In order to appreciate the operation of the device, attention is particularly called to FIGURES 3 through 5. In the normal utilization of the stamping apparatus 10, it is merely necessary to move the casing 16 downwardly relative to the frame 12 so that the pin 22 carries the stamp 26 into engagement with the surface 14. FIGURE 4 illustrates the casing 16 in the depressed position with the spring 45 compressed. It is to be noted in FIGURE 4 that although the casing 16 is depressed to its limit, the push button 46 remains spaced from the container 54. When it is found that the ink supply in pad 28 is insufficient, the push button 46 is depressed as indicated in FIGURE 5 with the casing 16 in the depressed position. By depressing the push button 46, the flange 48 further compresses the spring 45 and the rounded bottom 60 of the push button 46 engages the container 54 so as to deform the container to cause the air 70 therein to force the fluid 72 through the opening or orifice 62 so as to discharge or dispense a droplet 74 on to the pad 28. It will be appreciated that by depressing the push button against the container 54, a pump-like action is initiated to force the fluid 72 through the opening 62.

In order to replace the container 54 when the fluid therein is exhausted, it is merely necessary to separate the casing portions 30 and 34 from each other as indicated in FIGURE 6 by unthreading the engaged threads 32 and 36. The container 54 may then be merely lifted from the sleeve 42.

Attention is now called to FIGURE 7 wherein the teachings of the invention are utilized in another applica-

tion. Herein, a dispensing device 80 is illustrated which may be utilized for the purpose of dispensing liquid adhesive. Again, a sleeve 82 is provided with the container 84 being received therein. A casing 86 including detachable portions 88 and 90 are provided. A push button 92 projects through the upper casing portion 90 in a manner identical to the push button 46 projecting through upper casing portion 34. A coil spring 94 is then received between flanges provided on the sleeve 82 and push button 92. Of course, the operation of this embodiment should be well understood. In order to dispense fluid from the container 84, it is merely necessary to depress the casing 86 relative to the sleeve 82 and then to depress the push button 92 so as to deform the container 84 to pump fluid therefrom.

From the foregoing it will be appreciated that several different types of fluid dispensing devices may be developed without departing from the scope of the invention. The particular structural materials utilized for the various elements are of course not critical so long as they possess the requisite qualities.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A handle construction for storing and selectively dispensing fluid therefrom comprising a frame, a flexible and resilient container supported from said frame, an opening formed in said container, said opening being sufficiently small so as to normally prevent flow of fluid from said container, a casing, said container received in said casing, manual means carried by a portion of said casing and mounted for movement between two limit positions toward and away from a portion of said container for engagement therewith and to deform said container so as to force said fluid through said opening, means mounting said casing on said frame for movement of said portion of said casing toward and away from said portion of said container, means resiliently urging said casing toward a position with said portion thereof and said manual means spaced a distance away from said portion of said container sufficient to prevent maximum movement of said manual means relative to said casing toward said portion of said container being sufficient for said manual means to engage and deform said portion of said container.

2. A handle construction for storing and selectively dispensing fluid therefrom particularly adapted for use in a manual stamping device having an ink pad comprising a frame, a flexible and resilient container supported from said frame, an opening formed in said container, said opening being sufficiently small so as to normally prevent flow of fluid from said container, a casing, said container received in said casing, manual means carried by a portion of said casing and mounted for movement between two limit positions toward and away from a portion of said container for engagement therewith and to deform said container so as to force said fluid through said opening, means mounting said casing on said frame for movement of said portion of said casing toward and away from said portion of said container, means resiliently urging said casing toward a position with said portion thereof and said manual means spaced a distance away from said portion of said container sufficient to prevent maximum movement of said manual means relative to said casing toward said portion of said container being sufficient for said manual means to engage and deform said portion of said container, said container positioned proximate said pad whereby fluid forced from said container will contact said pad.

3. The combination of claim 2 including a sleeve disposed in said casing, said container held in said sleeve, said manual means including a push button extending through said portion of said casing.

4. The combination of claim 3 including opposing flanges formed on said sleeve and said push button, said urging means including a spring extending between said flanges whereby said push button is normally urged away from said container.

5. The combination of claim 4 wherein said casing includes a pair of separable sections.

6. A handle construction for normally retaining and selectively dispensing fluid therefrom comprising a frame, a tubular casing, a flexible and resilient container concentrically supported within said casing, an opening formed in said container, manual means carried by a portion of said casing and mounted for movement between two limit positions toward and away from a portion of said container for engagement therewith and to deform said container so as to force said fluid through said opening, means mounting said casing on said frame for movement of said portion of said casing toward and away from said portion of said container, means resiliently urging said casing toward a position with said portion thereof and said manual means spaced a distance away from said portion of said container sufficient to prevent maximum movement of said manual means relative to said casing toward said portion of said container being sufficient for said manual means to engage and deform said portion of said container.

7. A manual stamping device comprising a frame fixedly supporting an ink pad, a tubular handle casing movably carried by said frame, a sleeve carried by said pad and extending upwardly therefrom projecting into said tubular casing, a flexible and resilient container concentrically supported within said casing, an opening formed in said container proximate said pad, manual means carried by a portion of said casing and mounted for movement between two limit positions toward and away from a portion of said container for engagement therewith and to deform said container so as to force liquid through said opening, means mounting said casing on said frame for movement of said portion of said casing toward and away from said portion of said container, means resiliently urging said casing toward a position with said portion thereof and said manual means spaced a distance away from said portion of said container sufficient to prevent maximum movement of said manual means relative to said casing toward said portion of said container being sufficient for said manual means to engage and deform said portion of said container, a flange formed on said sleeve, a spring supported between said flange and said casing urging them apart comprising said urging means.

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