

[54] **CARDED NOZZLE PACKAGE**
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[58] Field of Search **206/80 R, 78 R**

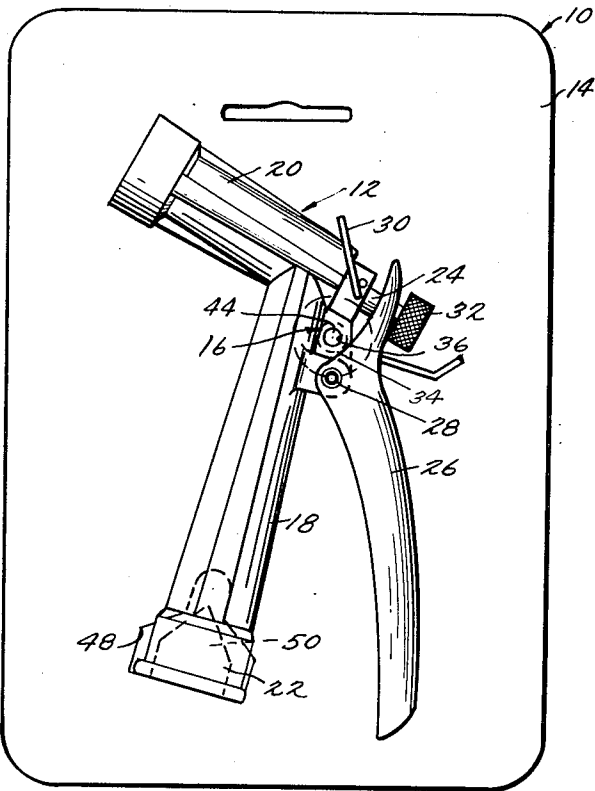
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Primary Examiner—Leonard Summer
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[57] **ABSTRACT**
A package which comprises a hose nozzle including a handle portion and a barrel portion having an apertured web portion formed integrally therewith adjacent the juncture of the handle portion with the barrel portion, a card receiving the nozzle on one surface thereof, a fastener of nylon or the like extending through the card and through the apertured web portion with a press fit, the fastener including an enlarged head engaging the opposite side of the card and a tab formed in the card engaged within the socket formed in the free end of the handle portion.

5 Claims, 4 Drawing Figures



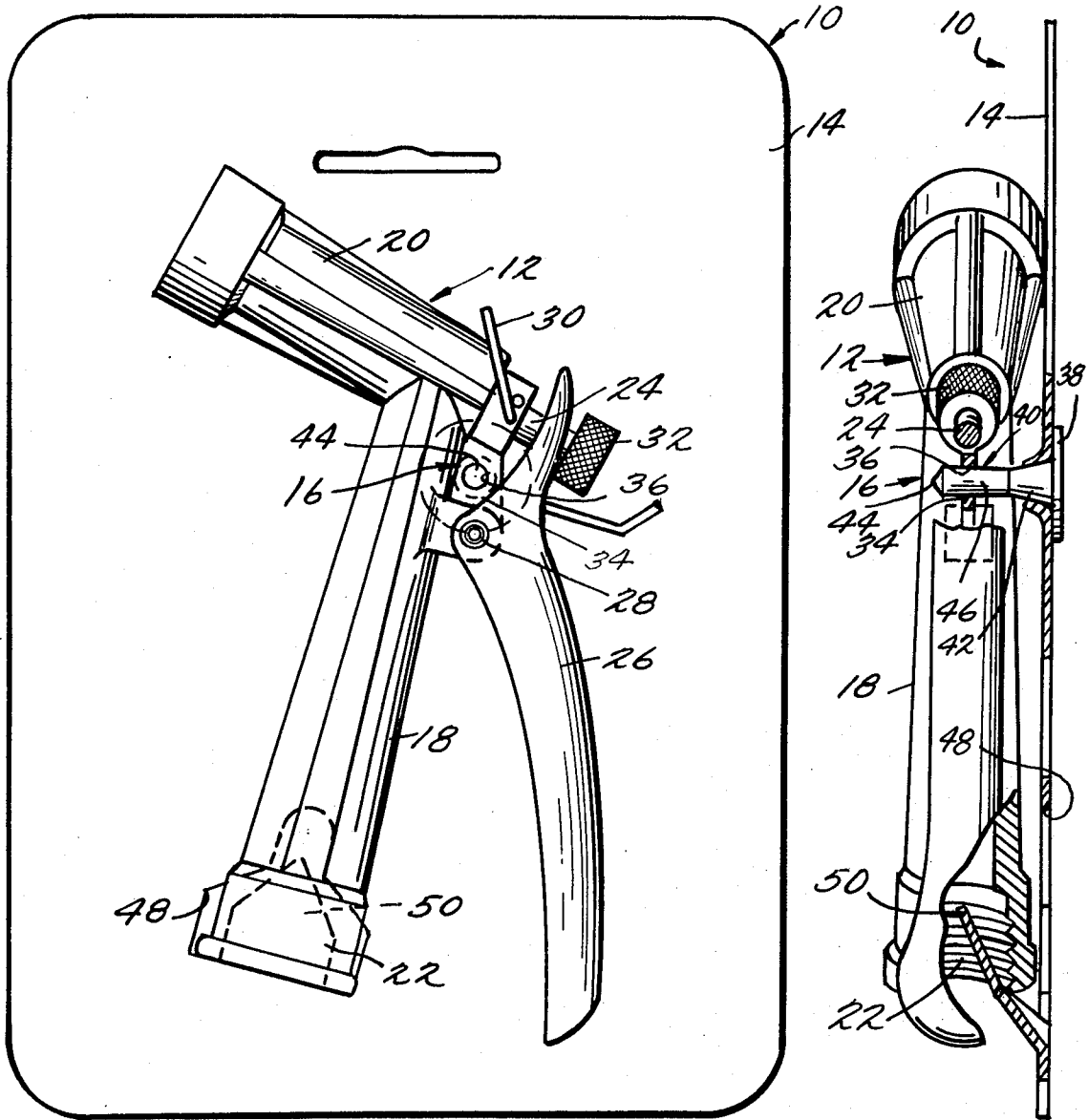


Fig. 1.

Fig. 2.

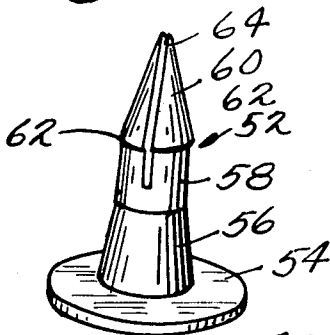


Fig. 4.

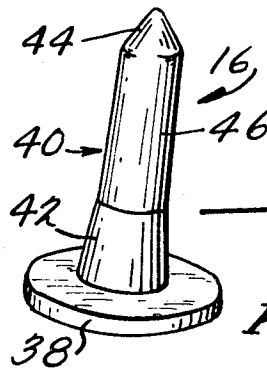


Fig. 3.

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CARDED NOZZLE PACKAGE

This invention relates to packages and more particularly to packages comprising a hose nozzle or like article and a card having improved means for effecting the securement of the card and hose nozzle together.

It is desirable to form individual packages of hardware articles, such as hose nozzles and the like, by securing such articles to a card. The card package permits the article to be conveniently shipped in cartons and to be displayed for sale either within the shipping carton or on display peg racks. Various arrangements have been utilized for effecting the securement between hardware articles and the card as, for example, a plastic bubble or a shrinkable plastic film, as well as plastic tape. The securement of a hose nozzle to a card presents particular difficulties because of the shape and weight of the article.

An object of the present invention is the provision of a carded package of the type described having improved means for securing the hose nozzle to the card which insures that the package is maintained in assembled relation even when subjected to severe handling.

Another object of the present invention is the provision of a carded package of the type described having improved means for securing the hose nozzle and card together which is simple but effective in operation and economical to manufacture.

These and other objects of the present invention will become more apparent during the course of the following detailed description and appended claims.

The invention may best be understood with reference to the accompanying drawings wherein illustrative embodiments are shown.

In the drawings:

FIG. 1 is a front elevational view of a package embodying the principles of the present invention;

FIG. 2 is a side elevational view of the package shown in FIG. 1 with parts broken away for purposes of clearer illustration;

FIG. 3 is a perspective view of a preferred form of fastener utilized in the package of the present invention; and

FIG. 4 is a view similar to FIG. 3 illustrating a modified form of fastener.

Referring now more particularly to the drawings, there is shown in FIGS. 1 and 2 thereof a package, generally indicated at 10, embodying the principles of the present invention. The package 10 comprises, in general, a hose nozzle, generally indicated at 12, a card, generally indicated at 14, and a fastening means, generally indicated at 16, for securing the nozzle and card together.

The nozzle 12 includes a main body casting having an elongated handle portion 18 and a barrel portion 20. The elongated handle portion is hollow and is formed at its lower end with a socket portion 22 which is interiorly threaded to receive a male hose fitting. The opposite end of the handle portion communicates with one end of the barrel portion. A spray adjusting stem 24 is slidably mounted within the barrel portion for movement into different positions of longitudinal adjustment to vary the pattern of the spray issuing from the outlet nozzle in the free end of the barrel portion. In accordance with conventional practice, the stem 24 extends outwardly of the rear end of the barrel portion and is connected with one end of an actuating lever 26. The actuating lever is pivotally attached to the handle portion, as at 28, so that when the handle portion and actuating lever are gripped in the hand of a user the spray can be adjusted by a squeezing action in which the lower portion 18 and the upper portion of the actuating lever moves the stem longitudinally outwardly of the barrel portion. A spring (not shown) within the barrel portion serves to resiliently urge the stem longitudinally forwardly into a limiting position closing off flow through the outlet nozzle. A pivoted bale 30 is provided for retaining the actuating lever in a depressed condition corresponding to the desired spray, the desired spray being determined by adjustment of a knurled nut 32 threadably engaged on the outer end of the stem 24. The

above components of the nozzle and the mode of operation are generally conventional. In accordance with the principles of the present invention, the nozzle is provided with a web portion 34 which is formed as part of the main casting and is located at the juncture between the handle portion 18 and barrel portion 22 on the side of the barrel portion adjacent the actuating lever pivot 28. Formed in the web portion 34 is a transversely extending circular aperture 36 of a size to receive the fastener 16.

As best shown in FIGS. 2 and 3, the fastener 16 is preferably molded of nylon and includes an enlarged circular relatively flat head 38 and a shank structure, generally indicated at 40, extending centrally from one surface of the head. Preferably the shank structure 40 includes a frustoconical portion 42 adjacent the head 38, a generally conical tip portion 44 at the free end thereof, and a generally cylindrical aperture engaging central portion 46.

It will be understood that the nozzle, card and fastener may be assembled manually or by use of appropriate assembly machinery. The assembly is accomplished by positioning the nozzle on one surface of the card so that it is generally centrally located thereon and simply driving the fastener with its conical tip end foremost through the opposite surface of the card until the tip portion enters the aperture 36 within the web portion 34 and finally the cylindrical portion 46 of the shank structure snugly engages within the aperture.

It will be noted that the card is preferably formed with a cut-out 48 so as to define a hinged tab 50. The cut-out serves to receive the socket portion 22 of the nozzle and when the tab is engaged within the socket this structure not only aids in initially locating the nozzle on the card, but effectively prevents the nozzle from any rotary movement with respect to the card about the fastener as a pivot.

The snug fit engagement of the cylindrical portion 46 of the fastener within the aperture 36 of the web portion 34, the engagement of the relatively large head 38 of the fastener with the opposite surface of the card, serves to provide an exceptionally effective connection between the nozzle and the card which will withstand disassembly even under severe handling conditions. The package can be readily disassembled, however, by utilizing any elongated rigid element, such as a screwdriver or the like and prying the fastener out of its engagement within the aperture 36. The securement is particularly effective because the fastener engages a rigid portion of the main casting of the nozzle at a position which is located generally near the center of gravity of the nozzle. This securement insures interconnection of the card and nozzle in assembled relation by a single fastener and in conjunction with the utilization of the tab 50 relative pivotal movement of the nozzle about the axis of the fastener is effectively prevented.

While the fastener 16 constructed in accordance with the description set forth above is preferred, fasteners of varying construction may be utilized. For example, FIG. 4 discloses one such variation generally designated by the reference numeral 52. The fastener 52 includes a circular head 54 similar to the head 38, a frustoconical shank portion 56 extending centrally from one surface of the head, a relatively short cylindrical central portion 58 extending from the frustoconical portion 56 and an elongated generally conical tip portion 60 extending from the central cylindrical portion 58. At the juncture between the portions 58 and 60, the conical portion extends slightly outwardly of the cylindrical portion at diametrically opposed positions to form a pair of shoulders 62 and a longitudinally extending slot 64 is formed in the fastener throughout the tip portion 60 and inwardly through a substantial portion of the central cylindrical portion 58. It will be understood that when the fastener 52 is used the shoulders 62 will extend through the aperture 36 into engagement with the adjacent surface of the web portion 34. The slot 64 permits a slight radially inward movement of the shoulders facilitating removal of the fastener under a prying action.

It thus will be seen that the objects of this invention have been fully and effectively accomplished. It will be realized,

however, that the foregoing preferred specific embodiment has been shown and described for the purpose of illustrating the functional and structural principles of this invention and is subject to change without departure from such principles. Therefore, this invention includes all modifications encompassed within the spirit and scope of the following claims.

I claim:

1. A package comprising a hose nozzle including an elongated handle portion having a socket at one end for connection with a hose end fitting, a barrel portion extending from the opposite end thereof, a pivoted actuating lever, and an integral web portion adjacent the juncture between said body and barrel portion and adjacent the pivotal axis of said actuating lever, said web portion having an aperture extending transversely therethrough, a card of an area greater than the outline configuration of said nozzle receiving said nozzle on one surface thereof and having a cut-out tab formed therein engaged within the socket of said body portion, and a fastener securing said nozzle to said card including a shank engaged

through said card and within the aperture formed in said web portion and an enlarged generally flat integral head engaging the opposite surface of said card.

2. A package as defined in claim 1 wherein said fastener is molded of nylon.

3. A package as defined in claim 1 wherein the shank of said fastener includes a frustoconical portion adjacent said head, a conical point portion and a cylindrical aperture engaging portion therebetween.

4. A package as defined in claim 3 wherein said shank is solid and the maximum diameter of said conical point portion is equal to the diameter of said cylindrical portion.

5. A package as defined in claim 3 wherein said conical point portion has a maximum dimension greater than said cylindrical portion at the juncture therewith forming shoulder means, said point portion and said cylindrical portion having a longitudinal slot formed therein.

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