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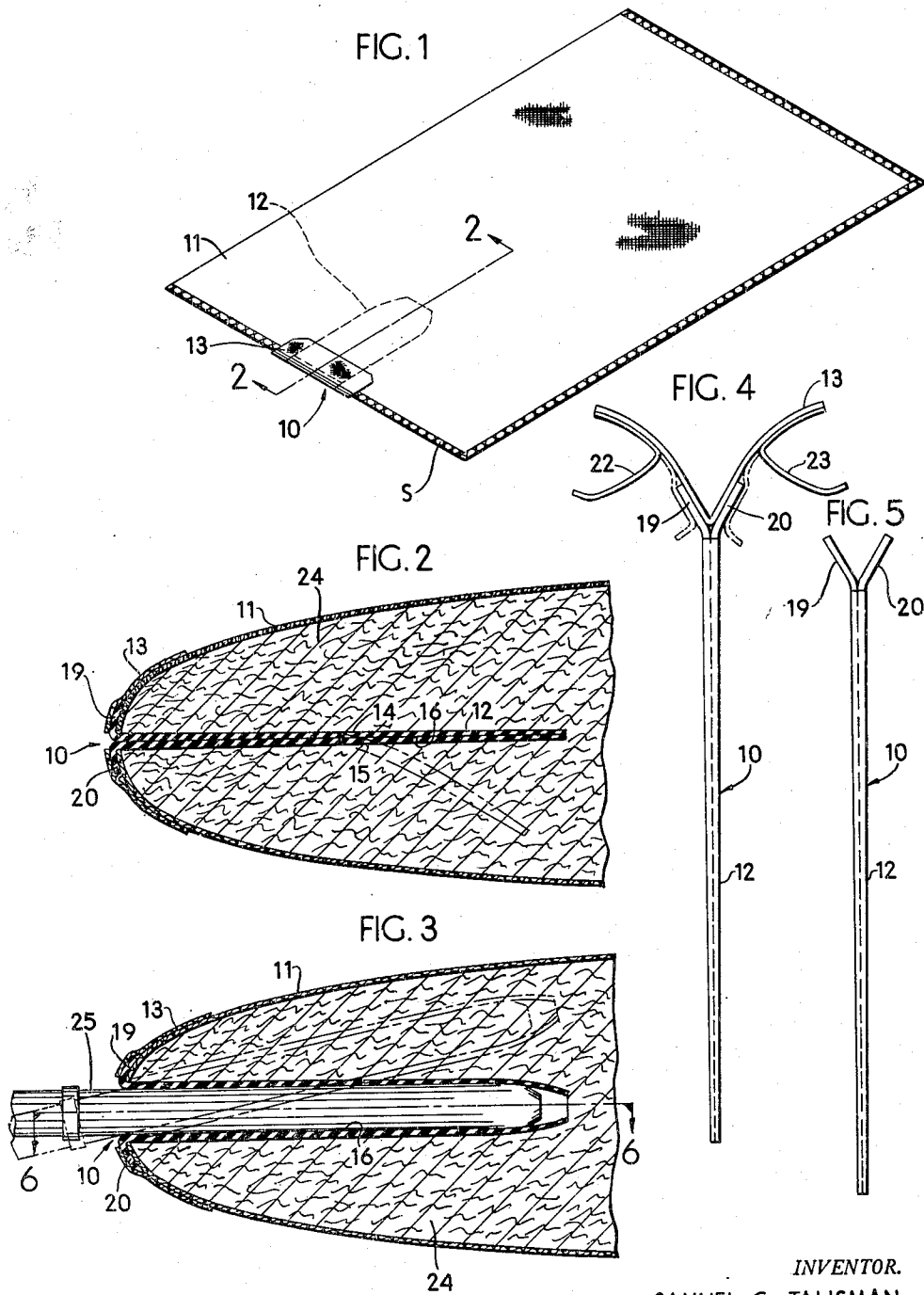
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2,700,165

TREATING VALVE FOR PILLOWS OR THE LIKE

Filed Jan. 22, 1949

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

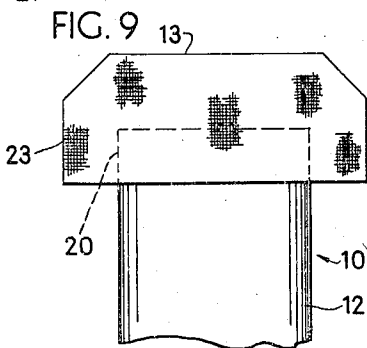
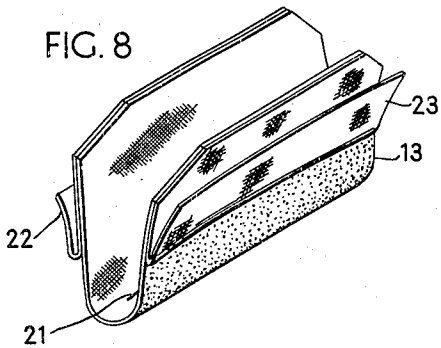
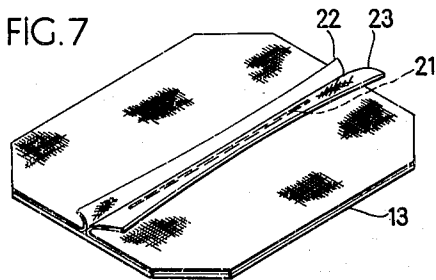
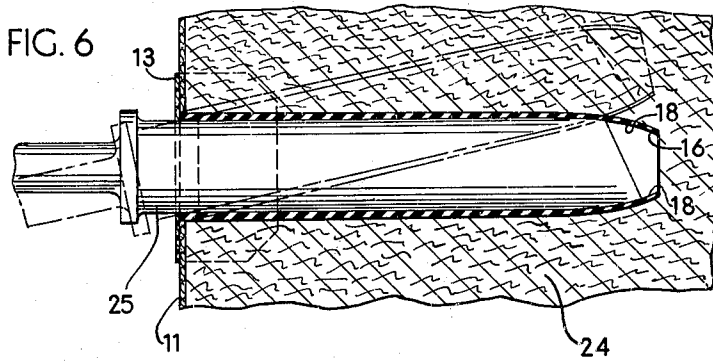


FIG. 10

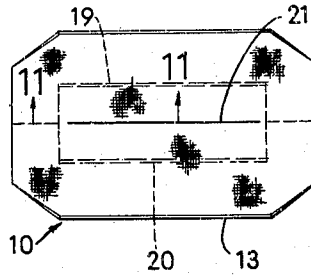
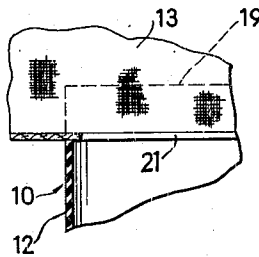


FIG. 11



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TREATING VALVE FOR PILLOWS OR THE LIKE

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6 Claims. (Cl. 5—337)

This invention relates to a pillow valve, and particularly to a pillow valve for attachment to stuffed pillows for use in inserting a treating tool to communicate with the interior of the pillow.

One object of the invention is to provide a self-closing valve attachment for pillows, by which an elongated tubular nozzle of a vacuum sweeper or like device is insertable into the interior of the pillow for the purpose of treating the usual pillow stuffing, as by aerating or for renovating, purifying or changing the stuffing.

Another object of the invention is to provide a valve of the character described which is permanent part of the pillow but which will have no outwardly projecting parts or parts which would otherwise interfere with normal use of the pillow.

Another object of the invention is to provide a pillow valve attachment of the character described which is easy to secure to the usual pillow casing of fabric material without sewing the same or without requiring the use of special tools.

Another object of the invention is to provide a pillow valve attachment of the character described having improved self-closing or self-sealing features, including a flexible tube of rubber or like material which will not spread open when flexed or bent while in a pillow in normal use.

Another object of the invention is to provide a pillow valve attachment of the character described, including improved stop means for preventing projection of a vacuum nozzle or similar tool beyond the inner end of a flexible valve tube, and which is also effective to prevent back flow of pillow stuffing through the valve tube past the inner end of said nozzle.

This and other objects of the invention will be manifest from the following brief description and the accompanying drawings.

Of the accompanying drawings:

Figure 1 is a top perspective view of an unfilled pillow casing having one of the completed valve attachments incorporated therein.

Figure 2 is a fragmentary cross-section taken substantially on the line 2—2 of Figure 1, but illustrating the pillow casing having stuffing material therein.

Figure 3 is a view similar to Figure 2, but illustrating the valve with a vacuum cleaner nozzle received in the valve tube.

Figure 4 is an edge view of a valve attachment embodying the features of the invention before application of the same to a pillow casing.

Figure 5 is a view similar to Figure 4 illustrating a valve attachment with the valve patch removed, therefrom, or before attachment of the valve patch to the same.

Figure 6 is a fragmentary cross-section taken substantially on the line 6—6 of Figure 3, similarly illustrating the insertion of the vacuum nozzle into the valve attachment.

Figure 7 is a top perspective view of a valve patch which is a part of a completed valve attachment.

Figure 8 is a perspective view of a valve patch of Figure 7, bent and in position for attachment to the valve tube of Figure 5.

Figure 9 is a front elevational view partly broken away of a valve attachment including the tubular part and the valve patch attached thereto.

Figure 10 is a top plan view of a completed valve attachment as shown in Figure 9.

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Figure 11 is a fragmentary cross-section taken substantially on the line 11—11 of Figure 10.

Referring particularly to Figures 1, 2, 3 and 6, there is shown a pillow valve 10 embodying the features of the invention, the same being incorporated into a pillow casing 11 of fabric or similar flexible material.

As best shown in Figures 4, 5, 7, 9, 10 and 11, the valve 10 may include a flat tube part 12 of vulcanized rubber or like resilient material (Figure 5), and a patch or base part 13 of strong, waterproof fabric or similar flexible material (see Fig. 7).

The rubber tube, in vulcanized form thereof, has opposite walls 14 and 15 normally flatly yieldingly engaging each other to seal the opening 16 therethrough, and the walls are tapered in thickness from the base or outer end to the opposite or inner end, the thickness at said inner end being approximately one-half the thickness at the outer end. The tapering of the walls 14 and 15 assures effective sealing of the opening 16 in all conditions of the tubes, whether straight, bent or curved. The inner end of tube 12 is rounded or reduced in width to reduce the size of the opening 16 and to provide stop portions 18, 18 (see Figure 6), for purposes to be described later. The patch 13 is attached to the short tabs 19 and 20 which are integral, free extensions of the walls 14 and 15 and of substantially the same width as the tube.

Referring now to Figures 4, 5 and 7 to 11, the tube 12 and patch 13 may be simply and economically assembled in the following manner. The patch, which may be rectangular in shape, is provided centrally thereof with a slit 21 of substantially the size of or slightly shorter than the tube opening 16 at the inner end thereof, and has a coating of initially tacky, waterproof adhesive on one side adapted to adhere the patch tenaciously to the fabric material of the pillow. Two pieces 22 and 23 of Holland linen or other protective material are furnished on the coated side of the patch to protect the adhesive, these pieces having abutting folded edge portions coincident with the line of the slit 21 (see Fig. 7). After peeling parts of the two pieces of linen 22 and 23 away from the patch of Figure 7, adjacent the slit 21, the patch is folded or bent upon itself along the line of the slit, as shown in Figure 8, and is then applied between the tabs 19 and 20 to adhere the same to the exposed adhesively coated portions of the patch, the slit being aligned with the outer end of the tube opening 16. Until the valve is subsequently applied to a pillow casing the adhesive coated portions of the patch outwardly of the tabs 19 and 20 may be covered by pressing the out-turned parts of the protective pieces back onto the patch, as shown in Figure 9, or in chain-dotted lines in Figure 4.

Referring particularly to Figures 1 and 2, the improved valve is applied to a pillow casing 11 by inserting the tube 12 through a slit 21 provided in the seam of the casing, as by opening a length of the stitching S, this being done after removing the Holland linen pieces 22 and 23 adhering the adhesively coated side of the patch 13 to the outer surface of the pillow casing. As the slit 21 of the patch 13 is shorter than the width of opening 16 and as the patch is large enough to provide a continuous adhesively coated marginal edge portion of the same completely around the slit, a perfect seal is provided completely around the slit in the pillow casing (see Figures 1, 2, 3, 6, 9, 10 and 11).

In the use of the valve 10 in a pillow casing 11 for treating the usual stuffing 24 a flat, elongated tubular nozzle 25, of proper size and attached to a conduit of a vacuum sweeper (not shown), is inserted into the opening 16 of the tube 12, until the end of the nozzle engages the reduced end portions 18 (see Fig. 6). In this position of the nozzle the tube 12 will be expanded open to communicate the end opening of the nozzle with the interior of the pillow. Accordingly, by means of the nozzle air may be blown into the pillow casing to aerate the stuffing 24, for example. A similar nozzle or tool may be used for removing or replacing the stuffing, or for injecting chemicals or other treating materials.

Engagement of the end of the nozzle with the inner end portions 18 of the rubber tube assures that the tube

will be opened at its inner end, and at the same time serves as stop means to prevent the nozzle from being projected beyond said inner end of the tube, which might result in stuffing material being blown outwardly between the tube and the nozzle. Because of the flexibility of tube 12, it may be turned with the nozzle to various angles with respect to the patch or base 13, as shown in chain-dotted lines in Figures 3 and 6, during treating operations as desired.

As soon as the nozzle is withdrawn the tube 12 will contract to close the opening 16 therethrough, by reason of the inherent tendency of the tube to resume normal vulcanized shape. This is true whether the tube is straight, as shown in Figure 2, or bent or curved, because of the previously described tapered wall construction of the tube. Moreover, when the pillow is used, as for a head rest for instance, there are no hard parts on the valve, or outwardly projecting parts thereon, to cause discomfort to the user.

Thus, the improved valve is readily attachable to a fabric pillow or like article, without necessarily requiring sewing, and without requiring any substantial amount of skill. The adhesive material used on the patch preferably is of known type which will in time substantially permanently bond the patch to the pillow casing.

Modifications of the invention may be resorted to without departing from the spirit thereof or the scope of the appended claims.

What is claimed is:

1. A valve for attachment to a pillow or like casing of the type containing stuffing material, comprising an elongated tube having outer and inner ends with respect to a said casing interior, and means at an outer end of said tube for attaching said valve to said casing with said tube extending into the interior of a said casing through a slit therein, said tube being of molded, flexible elastic material and flattened with opposite flattened walls thereof held in contact with each other by the inherent tendency of the tube to resume normal molded shape and thereby normally maintaining the opening through the tube in closed condition, said opening being of substantially uniform width along a substantial proportion of the length of the tube from the outer end of the same, said tube being adapted yieldingly to receive a treating tool through said opening thereof to communicate with the interior of said casing for purposes of treating the stuffing of the casing by means of the tool, said attaching means comprising integral extensions of said flat walls at said outer ends of the tube providing flaps disposed at opposite sides of the corresponding end of the tube opening, and a patch of flexible material having a slit therein of length substantially the same as the width of the tube opening at said outer end thereof, said flaps being adhesively secured to said patch at opposite sides of said slit of the patch, the inner side of the patch having adhesive attaching material on a substantial area thereof for adhesion of the patch to the outer surface portions of said casing around a said slit of the same.

2. A valve as set forth in claim 1, the width of said tube being abruptly tapered widthwise at said inner end thereof to reduce the width of the tube opening correspondingly at said inner end and to provide a stop engageable by said tool.

3. A valve for attachment to a pillow or like casing of the type containing stuffing material, comprising an elongated tube having outer and inner ends with respect to a said casing interior, and means at an outer end of said tube for attaching said valve to said casing with said tube extending into the interior of a said casing through a slit therein, said tube being of molded, flexible elastic

material and flattened with opposite flattened walls thereof held in contact with each other by the inherent tendency of the tube to resume normal molded shape and thereby normally maintaining the opening through the tube in closed condition, said tube being adapted yieldingly to receive a treating tool through said opening thereof to communicate with the interior of said casing for purposes of treating the stuffing of the casing by means of the tool, said attaching means comprising integral extensions of said flat walls at said outer ends of the tube providing flaps disposed at opposite sides of the corresponding end of the tube opening, and a patch of flexible material having a slit therein, said flaps being adhesively secured to said patch at opposite sides of said slit of the patch, the inner side of the patch having adhesive attaching material on a substantial area thereof for adhesion of the patch to the outer surface portions of said casing around a said slit of the same, said flaps extending to at least the full width of said tube, and said slit in said patch being shorter than said width of the tube.

4. A valve for attachment to a pillow or like casing containing loose stuffing material, comprising an elongated flat tube which is thin and flexible, means for attaching said valve to a said casing with said tube extending into the interior of the casing, said tube being of molded, flexible elastic material and having opposite flat walls thereof normally held in air sealing contact with each other along the entire length thereof by the inherent tendency of the tube to resume normal molded shape and thereby defining a slit-like, normally closed opening through the tube, said opening being of substantially uniform width along a substantial proportion of the length of the tube from the outer end of the same, said tube thereby being adapted to be yieldingly expanded along its entire length by a hollow tool insertable inwardly through said opening thereof to communicate with the interior of said casing for purposes of treating the stuffing of said casing by means of the tool.

5. A valve as set forth in claim 4, said opposite flat walls being relatively thin and diminishing in thickness from the outer to the inner ends thereof.

6. A valve as set forth in claim 4, the width of said tube being abruptly tapered widthwise at said inner end thereof to reduce the width of the tube opening correspondingly at said inner end and to provide a stop engageable by said tool, said opposite flat walls diminishing in thickness from the outer to the inner ends thereof.

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