R. A. GALLY.

PNEUMATIC DIAPHRAGM FOLLOWER.

APPLICATION FILED NOV. 5, 1917.

1,265,319. Patented May 7, 1918.

Fig. 1.

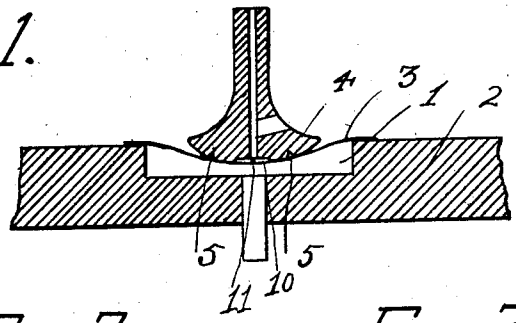


Fig. 2.

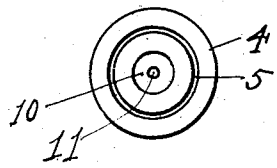


Fig. 2a.

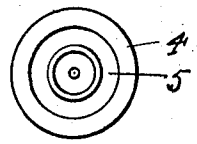


Fig. 3.

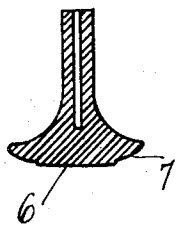
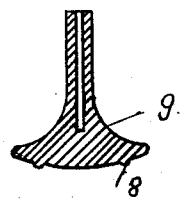


Fig. 4.



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PNEUMATIC-DIAPHRAGM FOLLOWER.

1,265,319. Specification of Letters Patent. Patented May 7, 1918.

Application filed November 5, 1917. Serial No. 200,385.

To all whom it may concern:

Be it known that I, ROBERT A. GALLY, a citizen of the United States, and residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Pneumatic-Diaphragm Followers, of which the following is a specification.

In prior art use of pneumatic actions for various purposes, having diaphragm or pouch pneumatic, it has been found best to attach the button or follower to the diaphragm at its central part only of the button as in applicant's prior Patent #1,153,056 drawings and page 1, lines 109, 110 page, 2, lines 1 and 2 thus allowing the thin leather or fabric of the diaphragm to have the greatest possible amount of its extent free to yield to the varying curves taken by it in its motion of inflating and deflating. As it is difficult to be certain to apply just the right amount of glue or other adhesive to such central part as will not be squeezed too far from the center as the follower button is applied to the diaphragm, an annular groove is now provided in that face of the follower button that is joined to the diaphragm, thus limiting the spreading of the adhesive to the exact desired extent of the central part of the follower button.

In the drawings, Figure 1, is a sectional view of a diaphragm pneumatic complete with its socket, and Fig. 2 is a plan view from below the follower button, before the diaphragm is applied; Fig. 2^a is with a modified wider groove, Fig. 3 a raised central part; and Fig. 4 an annular ridge or mold modification of the general idea herein disclosed.

The usual circular socket 1 in a board 2 has a flexible diaphragm 3 attached around the edge of the socket 1 and extended freely across the socket and a follower button 4 is attached at the central part only of the button face to the diaphragm 3 by any suitable adhesive, as glue, an annular groove 5 in the said face of the follower being the limit or boundary of the said adhesive attachment, such attachment being entirely inside of the inner edge of the said groove and preferably extending to the entire line of the said inner edge of the groove 5. The groove 5 may be narrow as in Figs. 1 and 2, or wide as in Fig. 2^a.

Instead of the groove 5 a central portion of the face of a follower as 6 may be made higher than the outer part 7 as in sectional view Fig. 3, or the limiting of the adhesive area may be determined by an annular ridge or bead 8 as on the follower 9 of Fig. 4, and in this or any other modification be subject to the broader claims hereof, although the annular groove 5 is as simple and efficient as any form.

A disk 10 having a vent or bleed aperture 11 is shown set in a recess in the follower 4, the diaphragm being laid over and sealing the edges of the disk as set forth in applicant's prior Patent #1,153,056, although the present invention may be applied to follower buttons not having such a disk, as now shown in the followers 7 and 9 of Figs. 3 and 4 herewith.

What I claim as my invention is:

A diaphragm pneumatic having a follower attached to the said diaphragm at a central part only of a face of the said follower, and a single annular groove in the said face of the said follower and circumscribing the said attached part of the said follower, and a plain bearing part of the said face of the said follower outside the said groove and of greater area than said groove.

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