

No. 684,085.

Patented Oct. 8, 1901.

D. H. MURPHY.  
SUPPOSITORY.

(Application filed May 10, 1900. Renewed Mar. 20, 1901.)

(No Model.)

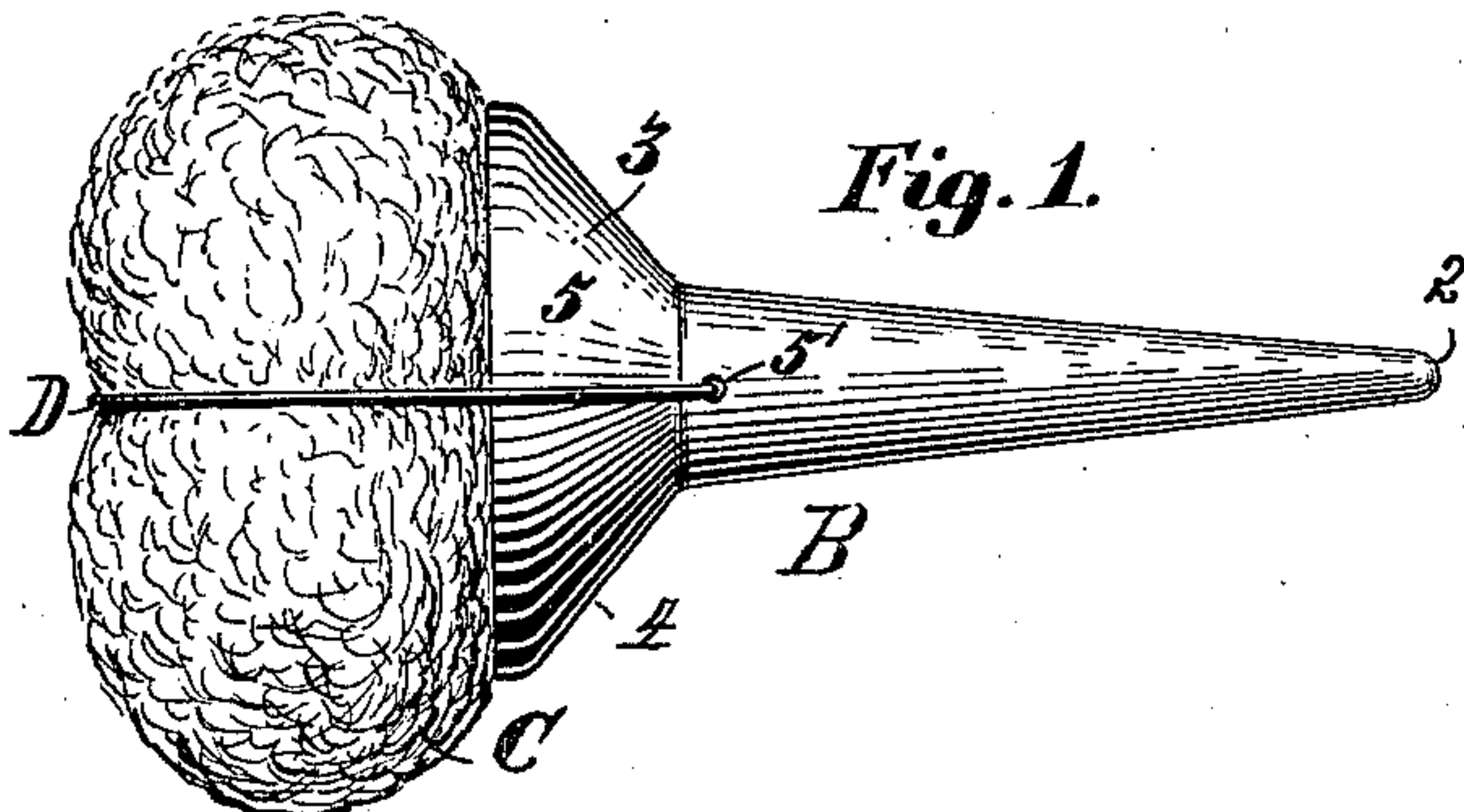


Fig. 1.

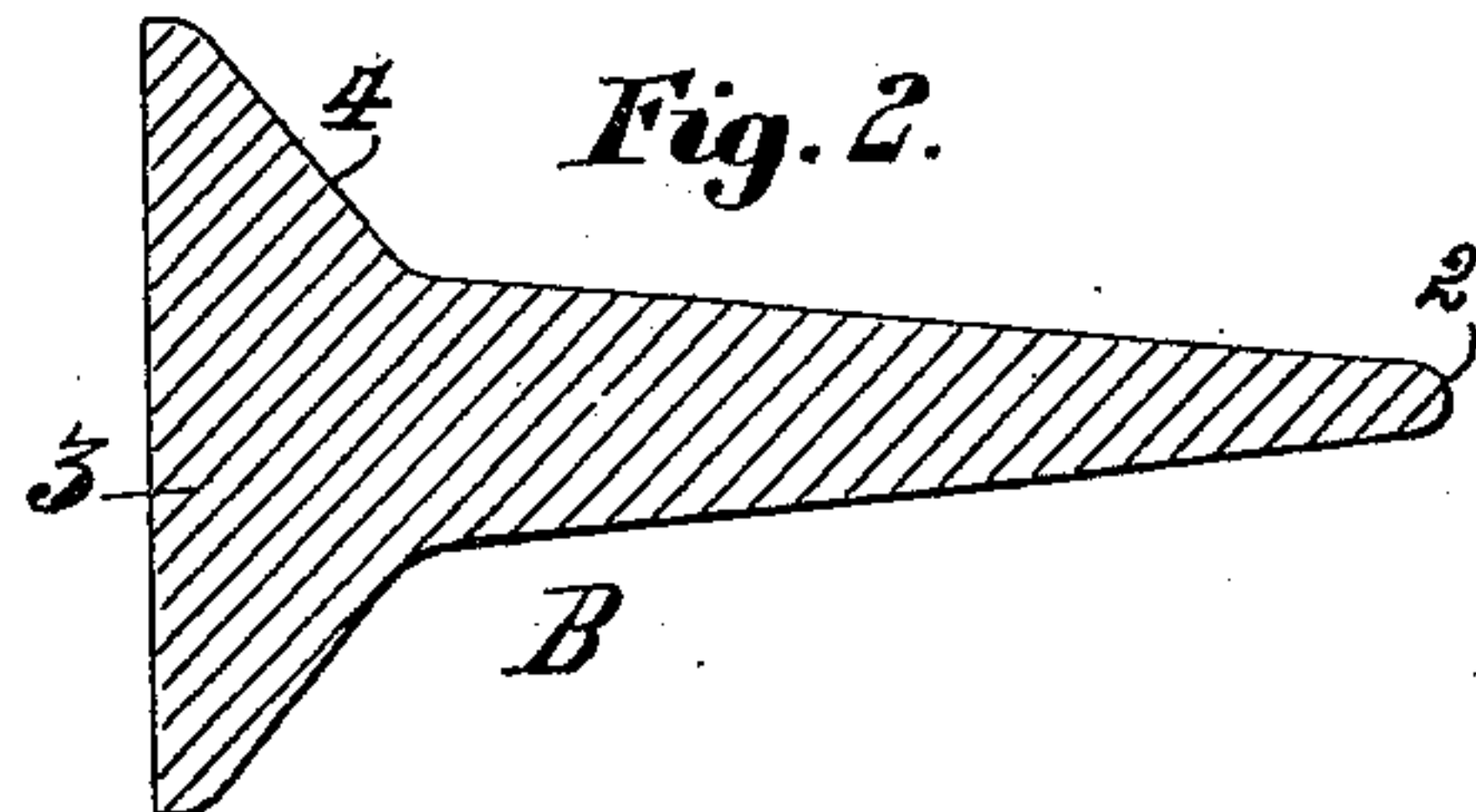


Fig. 2.

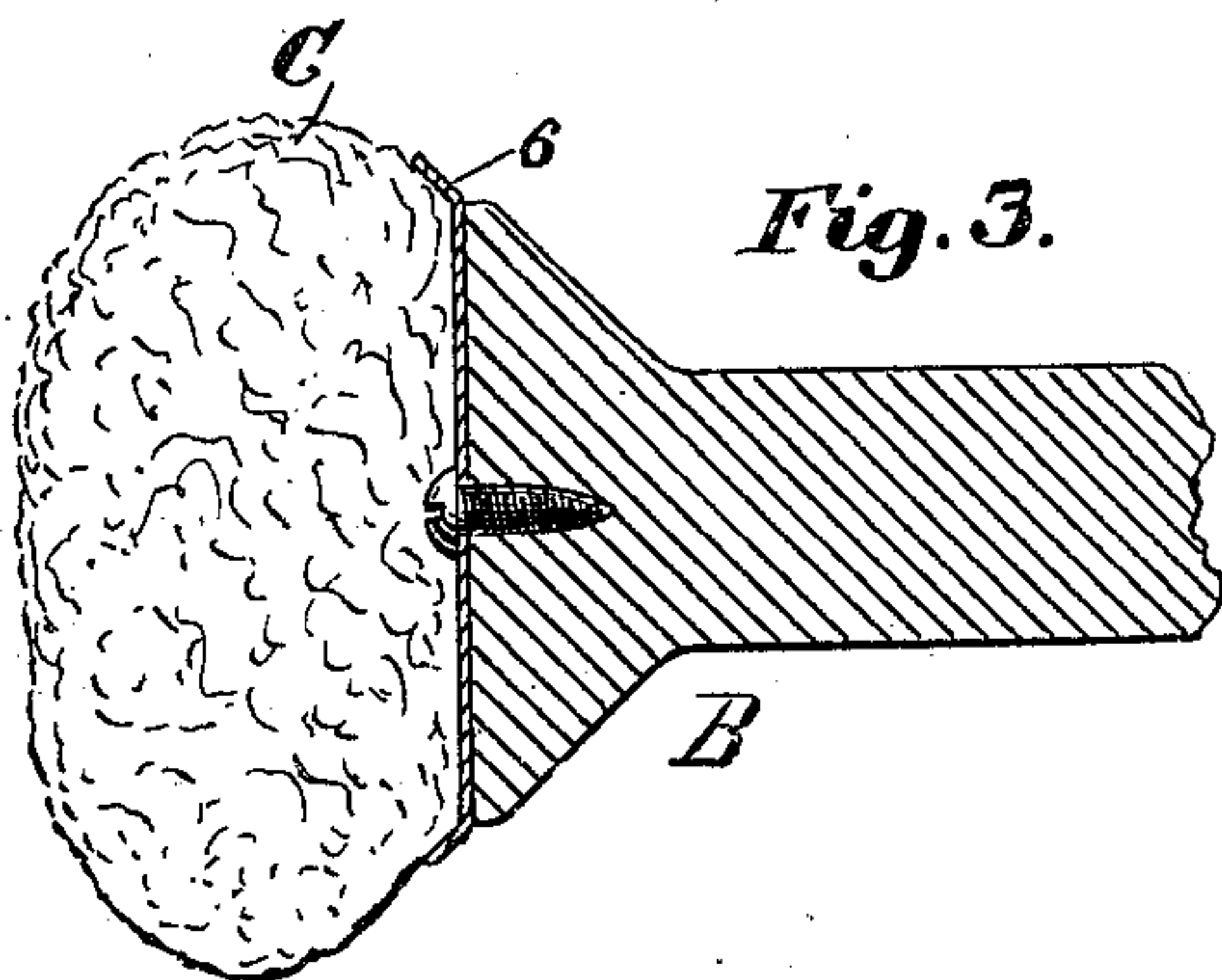


Fig. 3.

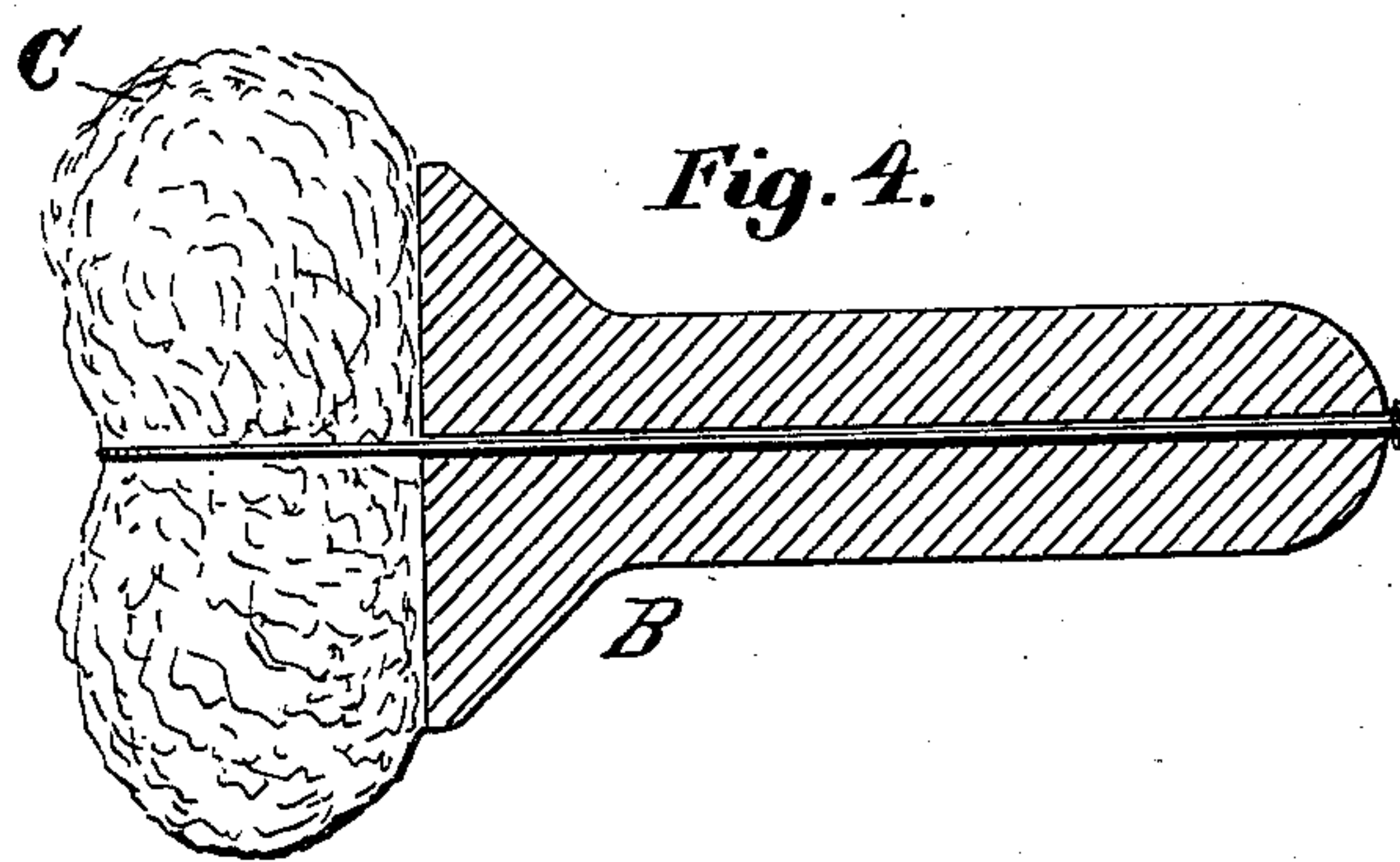


Fig. 4.

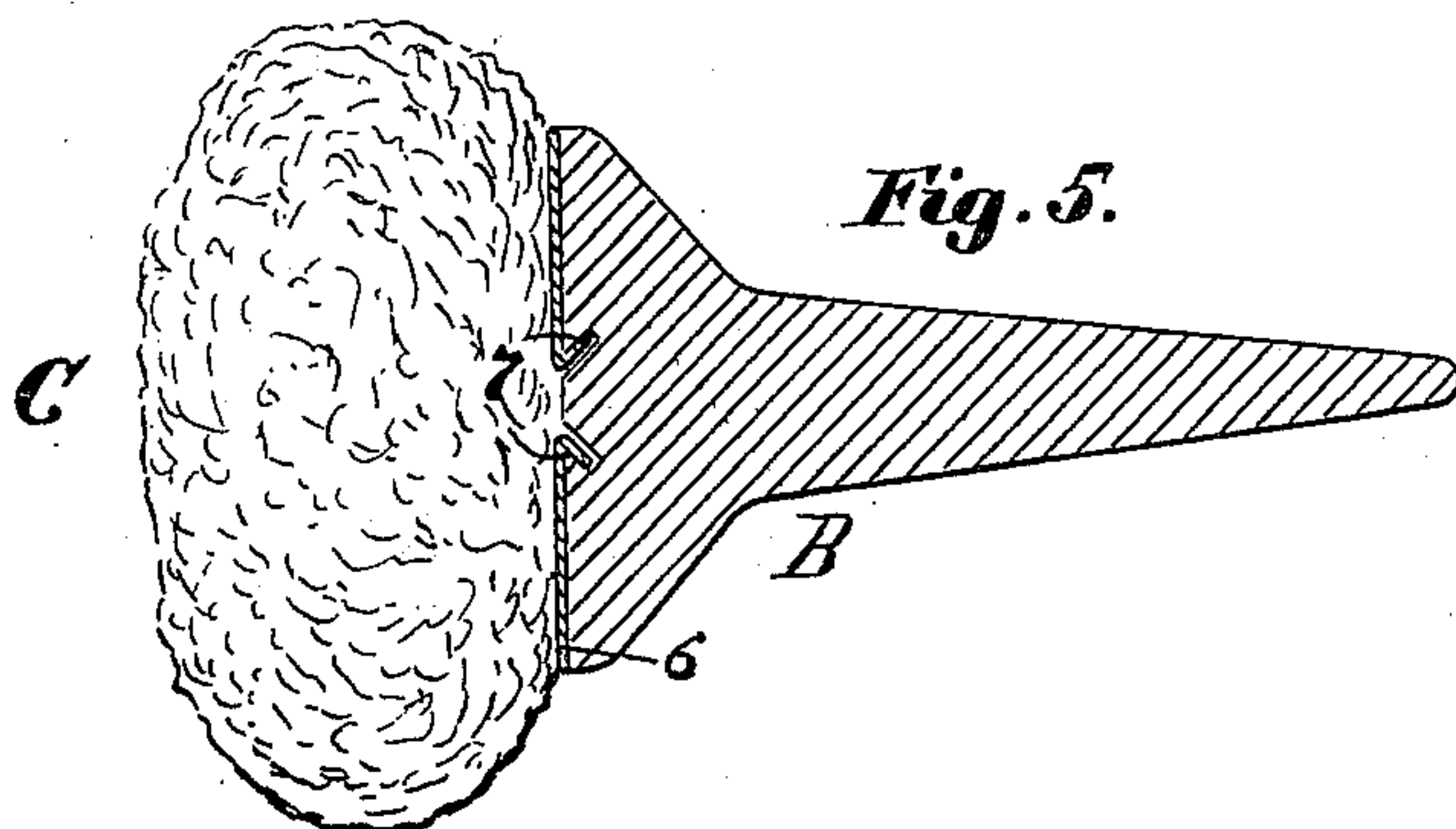


Fig. 5.

Witnesses:

Walter C. Lombard.  
Leslie C. Wood.

Inventor:  
Daniel H. Murphy  
by *[Signature]* Atty.



# UNITED STATES PATENT OFFICE.

DANIEL H. MURPHY, OF HARTFORD, CONNECTICUT.

## SUPPOSITORY.

**SPECIFICATION** forming part of Letters Patent No. 684,085, dated October 8, 1901.

Application filed May 10, 1900. Renewed March 20, 1901. Serial No. 52,083. (No specimens.)

*To all whom it may concern:*

Be it known that I, DANIEL H. MURPHY, a citizen of the United States of America, and a resident of the city and county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Suppositories, of which the following is a specification.

This invention relates to suppositories of that class particularly adapted for palliative treatment of hemorrhoids, inflammation of the passages of the body, and other diseases associated with the mucous membranes.

In the successful treatment of hemorrhoids, inflamed or diseased passages of the body, &c., by the application of medicament in suppository form it is imperative that the suppository be retained in close relation with the afflicted parts until fully dissolved; that it should be of such character as to obviate the possibility of parts thereof being broken off and drawn into or expelled from the passage under treatment, due generally to the spasmodic actions of the muscular tissues; that means be provided for preventing the exclusion or rejection of dissolved medicament from the passage before the parts have derived the maximum benefit therefrom, and also that the dissolution of the suppository be uniform throughout its effective length, so that all of the successive afflicted parts will be subjected, substantially, to a uniform amount of medicament; and it is the chief object of the present invention to provide an improved soluble or medicated suppository embodying these requisite characteristics.

A further object of this invention is to produce, as an improved article of manufacture, a suppository consisting of a soluble or medicated oblong body portion having at one end thereof an annular circumferential flange or head of the same soluble material of greater diameter than the greatest diameter of the body portion and a fluffy non-soluble anchor contiguous to and of greater normal diameter than the soluble flange or head of the suppository, and which anchor is adapted for preventing displacement of the suppository after application to the part or passage under treatment, and also to prevent the exclusion or ejection of the dissolved medicament or constituents of the soluble portion of the

suppository, and thereby obviate the disagreeable staining of the wearing-apparel.

A further object of this invention is to provide in a suppository an oblong soluble body portion of suitable medicament having at one end thereof a circumferential integral anchor flange or head of the same material as and of greater diameter than the greatest diameter of said body portion.

With these objects in view the invention consists in certain details of construction and in the combination and arrangement of the parts of the suppository, substantially as hereinafter described, and more particularly pointed out in the claims.

In the drawings accompanying and forming part of this specification, Figure 1 is a side view of one form of suppository embodying the present invention, said figure showing the non-soluble ball-like anchor or puff secured to the soluble portion of the suppository by a string extending through a transverse opening in proximity to the head of said soluble portion. Fig. 2 is a central longitudinal section of the soluble body portion of the suppository shown in Fig. 1, the transverse perforation being omitted; and Figs. 3, 4, and 5 are similar sectional views of slightly-modified forms of suppositories embodying this invention.

Similar characters refer to like parts in all the figures of the drawings.

My improved suppository in the preferred embodiment of this invention comprises a soluble element B or oblong body portion, having at one end thereof a circumferential soluble flange or head 3, of greater diameter than the greatest diameter of said body portion, a ball-like anchor element C, of fluffy, non-soluble, and preferably absorbent material, secured contiguously to the end face of said flange and being of a normal diameter greater than the diameter of said flange, and fastening means (designated in a general way by D) for securing the anchor to the soluble portion of the suppository.

It is desired to state in the above connection that the invention is not limited to any particular construction of the soluble body portion of the suppository when a non-soluble anchor, such as hereinafter more particularly described, forms a constituent part of



said suppository and is contiguous to one end of the body portion thereof. Furthermore, it is distinctly to be understood that the invention is not limited to the employment of  
5 a non-soluble anchor in connection with any specific form of soluble suppository element.

In the drawings I have for convenience shown the body portion B of the suppository in several slightly-modified forms to illustrate  
10 different ways in which the non-soluble anchor may be applied to the soluble element of the suppository.

The soluble element or suppository *per se* illustrated in Fig. 2 has the body portion B  
15 thereof tapered on divergent straight lines from the forward end 2 to the opposite end thereof, where it is flared outward or flanged circumferentially to form the head 3, which is of considerably greater diameter than the  
20 greatest diameter of the body portion and preferably has its inner face 4 tapered on lines intersecting the axis of said body portion, the shape of the soluble suppository illustrated in Fig. 2 being in a general way similar to an ordi-  
25 nary screw minus the threads and slot, the body portion being an oblong cone and the flange or head 3 also being in the nature of a frustum of a cone. This element B or body portion and the flange or head 3, constituting  
30 an integral part thereof, will be made of any suitable soluble or fatty material—such as cocoa-butter, gelatin, and analogous solvents—embodying a medicament suitable for the disease or inflammation which it is desired  
35 to alleviate or cure.

It is extremely important, as practical experiments have demonstrated, that the outer face of that portion of the soluble element which is to be inserted in the anus or other  
40 diseased passage shall be symmetrical from end to end—that is, have its diametrically-opposite outer portions disposed in parallel or tapered straight lines and without indentations intermediate its ends, so that the dissolution of successive portions from the forward end thereof backward will be uniform  
45 and no portion thereof will be apt to be broken off and displaced by the spasmodic actions of the muscular tissues, as is the case with some suppositories of known construction and to obviate which some suppositories have been provided with a wicking extending the entire length through the center thereof to prevent separation of the parts, which wicking in the  
50 present instance is not required.

The soluble annular anchor-flange 3 has its peripheral edge extended considerably beyond the outer face of the largest part of the main oblong body portion B, and not only constitutes an anchor for preventing the indrawing of the soluble element which might otherwise accrue from the contractile action of the muscular tissues and resultant vacuum, but also on account of its flaring construction  
65 bears against the outer edges of the passage, closes said passage against the loss of medi-

cament due to the outflowing thereof, and allows its component medicament to act upon the diseased outer edge portions of the passage, which is a matter of extreme importance,  
70 especially in the treatment of external fistula or piles or other cases where it is necessary to apply medicament not only to the interior but to the circumjacent external face portions of the diseased passage, and no known  
75 suppository, so far as I am aware, embodies any means equivalent to the soluble flange 3 for accomplishing this end.

For the purpose of anchoring the soluble portion of the suppository against ejection  
80 and also for the purpose of absorbing any excretions or ejected solutions, whereby not only to prevent the staining of the apparel, but to retain the ejected dissolved medicament in close relation with the afflicted parts,  
85 I have provided in direct engagement or connection with one end of the soluble element a non-soluble absorbent anchor C, which in practice will preferably be constructed of fluffy, elastic, and tenacious material, such  
90 as absorbent cotton, said anchor being somewhat in the form of a puffball the normal diameter of which is greater than the greatest diameter of the soluble element and being secured contiguously to the end of the soluble  
95 element by attaching means D, which may be of any suitable kind. The attaching or fastening device for the anchor is shown in Fig. 1 as a thread or string 5, extending around the anchor and through a transverse opening  
100 5' in the soluble element, in proximity to the head 3 thereof. This fluffy elastic anchor may be secured contiguously to the end of the soluble element in many ways. For instance, it may be secured by adhesive material to an  
105 antiseptic disk 6, which may be of medicated paper, secured to the end of the soluble element D by a pin, as shown in Fig. 3, or said disk may have ears 7, fitting divergent grooves in the face of the end of said soluble element, as  
110 shown in Fig. 5, or the soluble element may have an axial opening extending from end to end thereof, as shown in Fig. 4, and the fluffy anchor be secured to one end of said element by a string 8, passing around the an-  
115 chor and into or through said axial opening.

It will be obvious that the oblong soluble element B, having the integral flange at one end thereof, may be advantageously used in some cases without the fluffy non-soluble anchor attached. Therefore it will be understood that the invention is not limited to the specific construction shown in Figs. 1, 3, 4, and 5, which includes the soluble element B and the non-soluble element C.  
125

I claim—

1. A suppository having a soluble body portion containing a fatty substance, and having at one end thereof an integral circumferential anchor-flange of the same material whose  
130 peripheral edge extends considerably beyond the outer face of the largest part of the body



portion, the diametrically opposite face portions of said body being disposed in straight unbroken lines.

2. A suppository having a soluble body portion tapered symmetrically from end to end, and having at the larger end thereof an integral circumferential anchor-flange of the same material and whose peripheral edge extends considerably beyond the periphery of the largest part of said body portion.

3. A suppository having a soluble body portion of gradually-increasing diameter from one extreme end toward the other end and whose outer faces are in straight lines; and an integral circumferential soluble anchor-flange at the larger end thereof the diameter of which is greater than the greatest diameter of said body portion and the inner face of which is tapered on lines intersecting the longitudinal axis of said body portion.

4. A suppository consisting of a body portion of soluble medicament and having at one end thereof an annular circumferential flange of greater diameter than the greatest diameter of said body portion; and a ball-like anchor of non-soluble material fixed contiguously to the outer or end face of said flange and of greater normal diameter than the diameter of said flange.

5. A suppository consisting of a body portion of medicated soluble material having a soluble annular circumferentially-disposed flange at one extreme end thereof; a ball-like anchor of elastic, fluffy, non-soluble, absorbent material; and means securing said anchor contiguously to the outer face of said flange.

6. The combination in a suppository, of a soluble body portion having an opening; a fluffy non-soluble anchor bearing against the face and extending beyond the periphery of one end of said body portion; and fastening means extending into the opening of the body portion and engaging said anchor and holding the same in place.

7. A suppository comprising a body portion of medicated soluble material having an enlarged head; a non-soluble absorbent ball-like anchor of greater normal diameter than the head of the body portion; and fastening means between the anchor and head.

Signed by me at Hartford, Connecticut, this 9th day of May, 1900.

DANIEL H. MURPHY.

Witnesses:

LESLIE C. WOOD,  
E. C. WHITNEY.