

No. 771,345.

PATENTED OCT. 4, 1904.

E. M. WILCOX.  
STOPPER PULLER.

APPLICATION FILED NOV. 28, 1903.

NO MODEL.

Fig. 1.

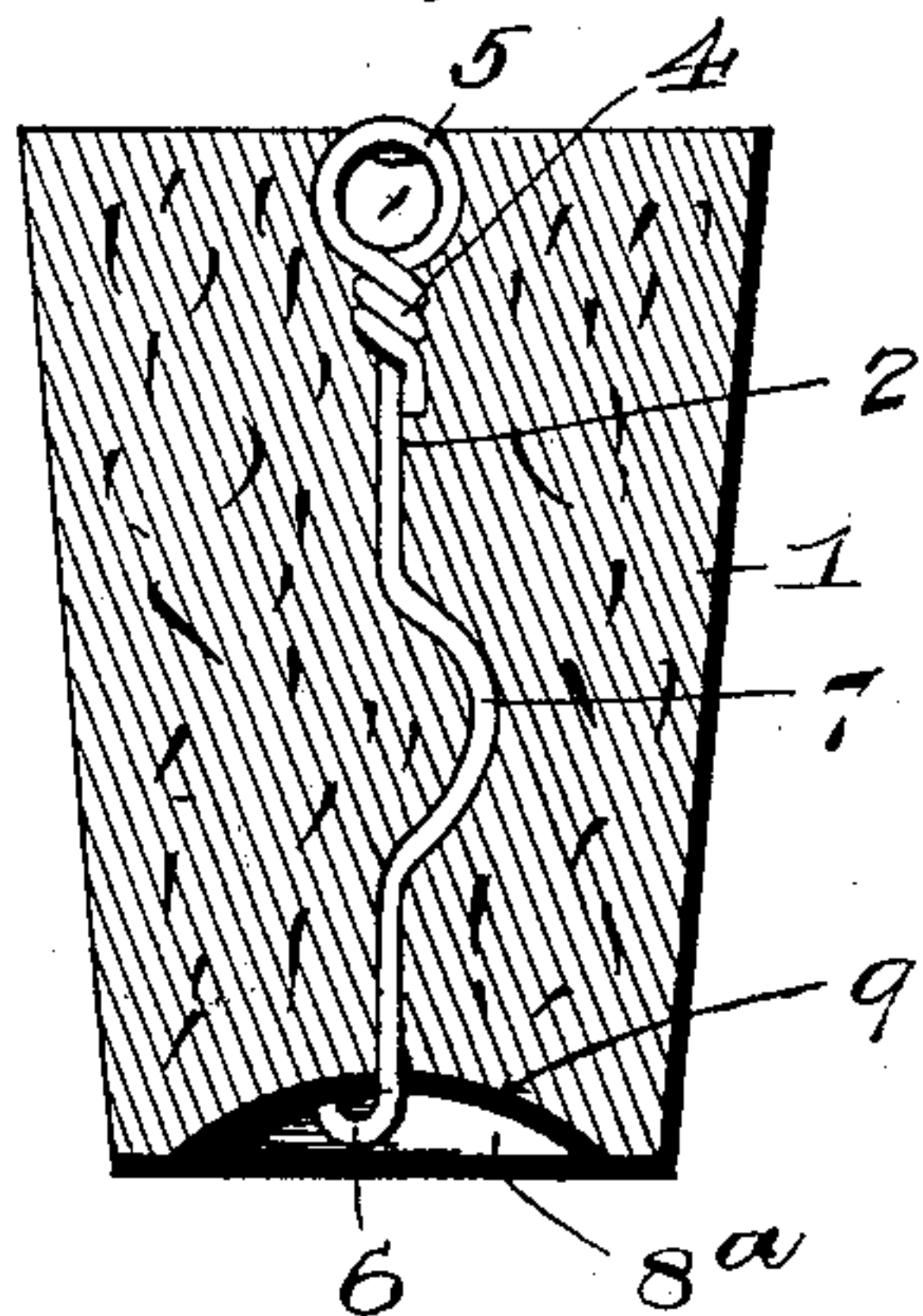


Fig. 2.

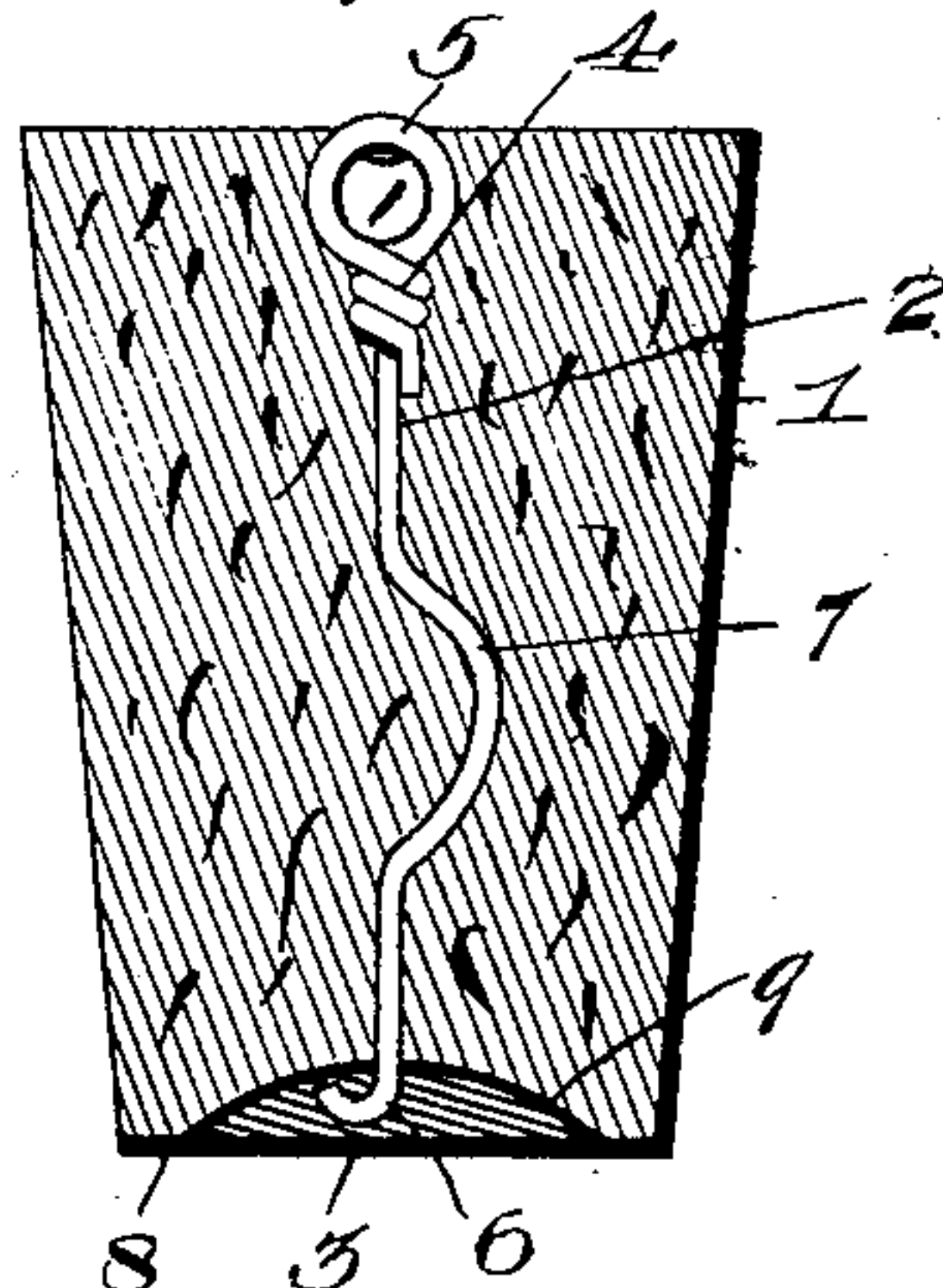


Fig. 3.

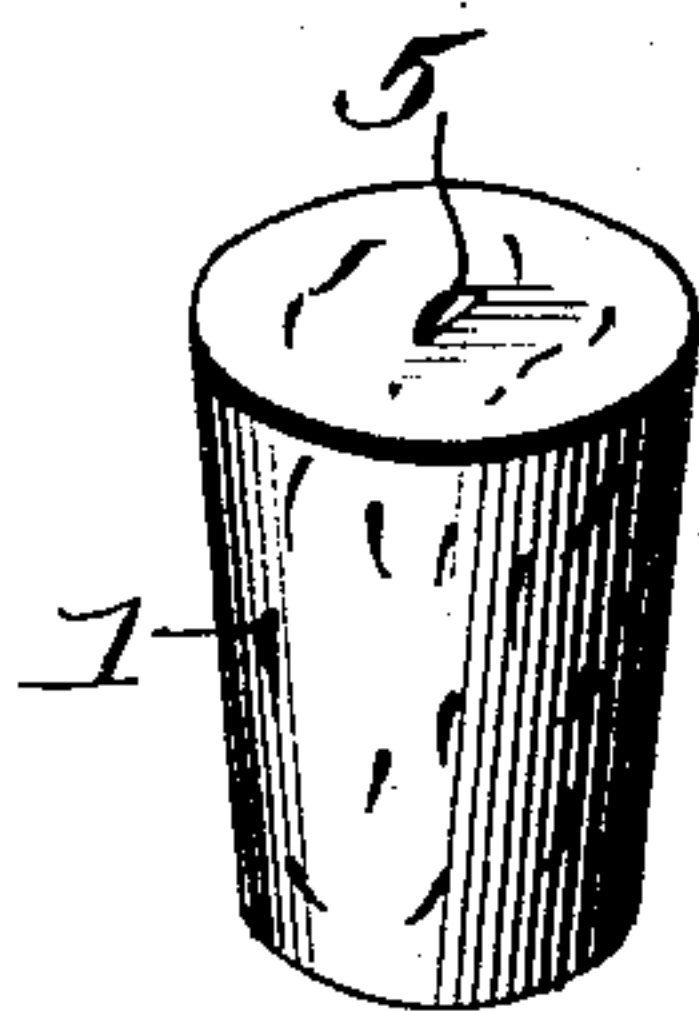


Fig. 4.

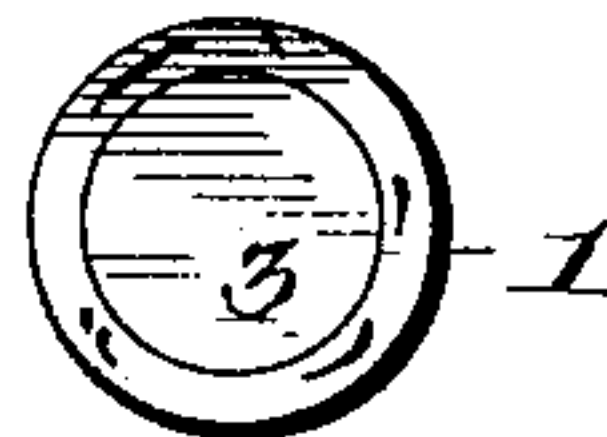


Fig. 6.

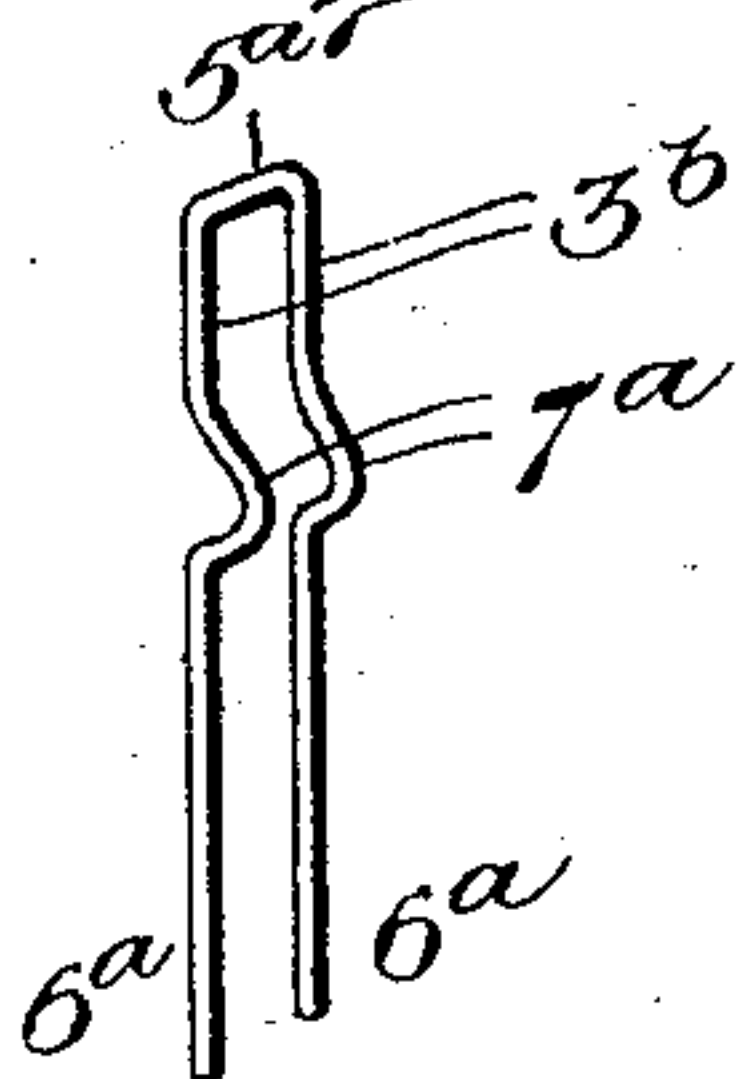


Fig. 5.

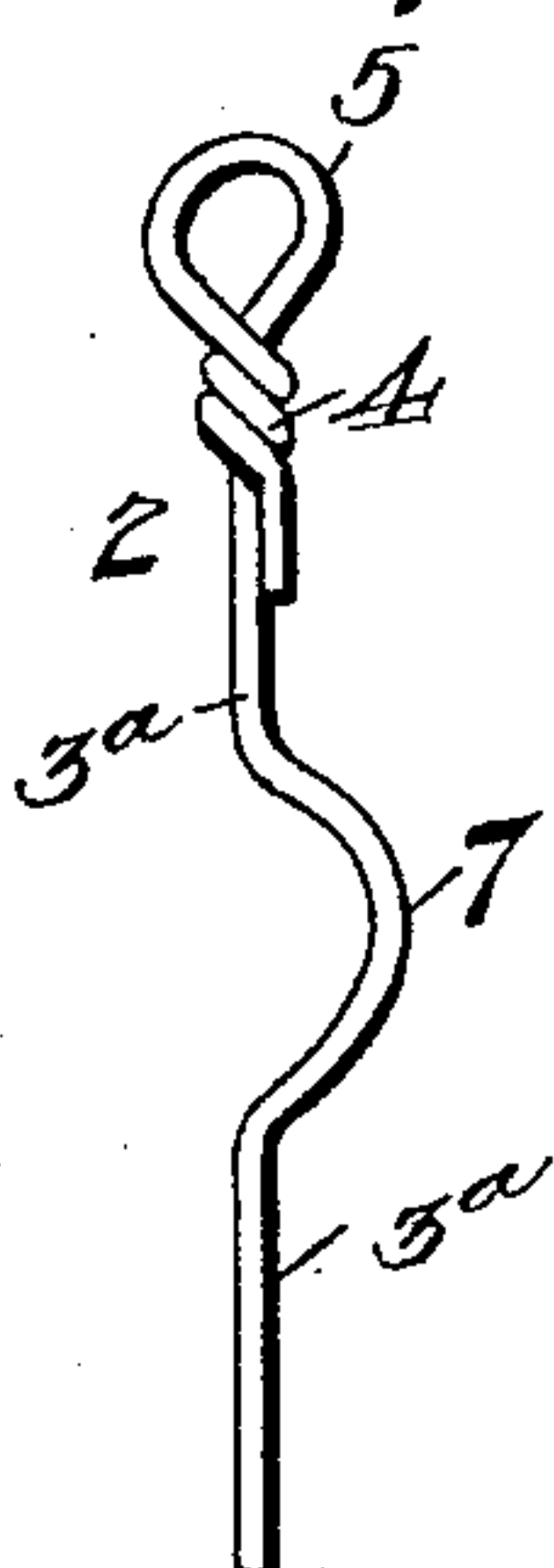
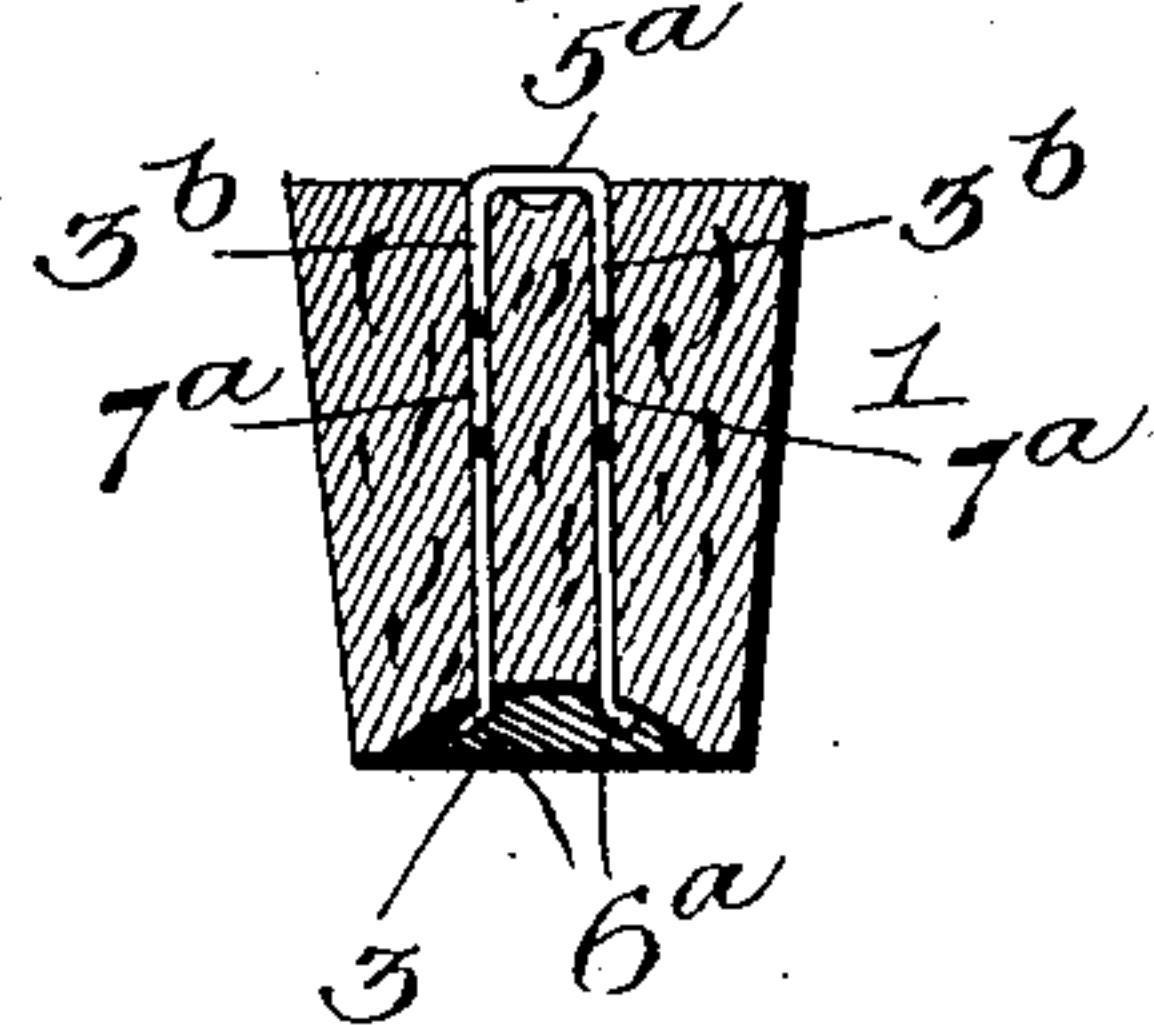


Fig. 7.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## STOPPER-PULLER.

SPECIFICATION forming part of Letters Patent No. 771,345, dated October 4, 1904.

Application filed November 28, 1903. Serial No. 182,959. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD M. WILCOX, a citizen of the United States, residing at Tiffin, in the county of Seneca and State of Ohio, have  
5 invented certain new and useful Improvements in Stopper-Pullers, of which the following is a specification.

This invention relates to that type of stopper-pullers employed as a permanent attachment for the ordinary kinds of stoppers or  
10 corks.

To this end the invention has in view a simple and practical form of stopper-puller embodying means whereby a cork or stopper may  
15 be readily extracted from a bottle or jar by the employment of any convenient pointed instrument—such as a nail, fork, or like device—without injury to the cork or stopper.

As a general object the invention contemplates the provision of a cork with its own extracting or pulling attachment to obviate the necessity of providing an extra cork for sealing the receptacle after the original cork has  
20 been extracted, thereby preserving a cork or equivalent stopper for indefinite use. While accomplishing this object, the invention has for a special object the improved feature of providing an extracting member which embodies means for compensating for the end-  
25 wise or longitudinal compression of the cork when forced into the neck of the bottle or other receptacle under strong pressure. This compensating action is intended to preserve the relative positions of the effective elements  
30 of the stopper-puller by preventing displacement or loosening thereof under such endwise compression of the cork.

Another important object is to provide improved fastening or holding means for the extracting member to insure secure fastening to  
40 the cork or stopper body, as well as to positively guard against the tearing of the cork under a pulling or extracting strain.

With these and many other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts, which will

be hereinafter more readily described, illustrated, and claimed.

The essential features of the invention embodied in the means for compensating for the longitudinal or endwise compression of the cork and for fastening the extracting member in position are susceptible of structural modification without departing from the scope of the invention; but a preferred construction is shown in the accompanying drawings, in which—

Figure 1 is a sectional view of a common cork and illustrating the extracting member applied thereto and exposing the recess or cavity for receiving the holding member or head. Fig. 2 is a view similar to Fig. 1, showing the complete stopper-puller applied to the stopper-body or cork. Fig. 3 is a perspective view of a common cork provided with the improved puller attachment. Fig. 4 is a bottom view of the cork, showing the flush seating of the holding-head. Fig. 5 is a detail  
60 view of the extracting-pin in the form in which it is inserted through the body of the cork or stopper. Fig. 6 is a detail in perspective, showing a modified form of the extracting-pin, wherein the same is of a duplex  
65 or doubled type. Fig. 7 is a sectional view of a common cork, showing the duplex form of extracting-pin applied thereto.

Like reference-numerals designate corresponding parts in the several figures of the drawings.

The invention is applicable to any stopper of the compressible type, but possesses special utility as a permanent attachment for a common cork, such as shown in the drawings and  
85 designated by the numeral 1.

The device as applied to the stopper or cork-body 1 essentially comprises two principal members—namely, the extracting member 2 and the holding member 3—which are permanently fastened together to form the complete attachment. The member 2 may be properly termed an “extracting-pin,” as the same consists of a single wire strand having a substantially straight shank portion 3<sup>a</sup>, designed to be pierced longitudinally through  
90 95



the stopper-body and preferably centrally thereof, in order that a uniform pulling or extracting strain may be exerted upon the stopper-body. At its upper end the shank  
 5 portion 3<sup>a</sup> of the pin 2 is looped and twisted about the shank, as at 4, to provide a pull-eye 5, the upper end portion of which is exposed sufficiently at the top of the stopper-body to permit of the insertion through the  
 10 eye of a pointed instrument—such as a nail, fork, or like device—when it is desired to exert a lifting pressure upon the stopper-body for extracting the same.

The lower extremity of the shank portion  
 15 3<sup>a</sup> of the extracting-pin projects through the bottom of the cork and is designed to be bent, turned, or deflected, as at 6, to provide a hook or tongue, which constitutes a fastening element designed to be permanently engaged  
 20 with the holding member or head 3 in the manner and for the purpose to be presently explained. In addition to the upper and lower terminal elements 5 and 6 thereof the shank portion 3 of the extracting-pin is provided  
 25 at an intermediate point between its ends with a lateral offset compensating bend or kink 7, which is deflected from the straight line of the portions of the shank above and below it, and hence permit such straight por-  
 30 tions to draw inward toward each other when endwise or longitudinal compression of the cork or stopper body takes place during the insertion thereof in the neck of the receptacle under pressure. Hence the compression de-  
 35 scribed compensates for endwise compression of the cork or stopper body without loosening or displacing the holding member 3 from its seated position at the bottom of the cork. Also by reason of thus preventing the loosening or displacement of the holding member 3  
 40 the protective wax coating 8, covering the bottom of the cork and the member 3, is preserved intact, whereby the function of such wax coating may be preserved—namely, that  
 45 of protecting the metal parts from the influence of acids in the receptacle.

The holding member 3 may be permanently fastened to the lower end of the extracting-pin in any suitable manner. However, the  
 50 preferable construction is to provide the lower end of the stopper-body with a recess or cavity 8<sup>a</sup>, forming a seat for the holding member and in which the same may be directly formed by employing metal in a molten  
 55 condition. Hence solder or other readily-fusible metal may be poured directly into the seat or cavity 8<sup>a</sup>, as a mold, so that the same will upon cooling or solidifying be cast directly about the fastening element or hook 6  
 60 of the pin, and thus permanently unite or fasten the two parts of the attachment together. In thus casting or molding the member 3 the seat or cavity 8<sup>a</sup> may be protected by a coating of wax or equivalent substance 9.

It will also be observed in this connection 65 that the seat provides for arranging the holding member flush within the bottom of the cork or stopper body, and this member may be properly termed a "head" or "plate."

Various changes in the form, proportion, 70 and minor details of construction may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof—such, for instance, as the modification suggested in Figs. 6 and 7 of the 75 drawings.

Referring particularly to Figs. 6 and 7 of the drawings, it will be observed that this modification simply involves making the ex-  
 80 tracting member or pin of a duplex or doubled type. In this construction a single wire strand is used, but is folded or doubled upon itself to provide the separate leg or shank elements 3<sup>b</sup>, provided at their lower terminals  
 85 with the deflected portions or hooks 6<sup>a</sup> for permanent engagement by the metallic holding member or head 3 and also provided intermediate their ends with the lateral offset compensating bend or kink 7<sup>a</sup>, performing  
 90 the same functions as the corresponding bend or kink in a single shank-pin. In the modification just described the folding or doubling of the wire strand produces the pull-eye 5<sup>a</sup>  
 at the top end of the stopper or cork body.

Having thus described the invention, what 95 is claimed, and desired to be secured by Letters Patent, is—

1. A stopper-puller comprising, in combination with a normally non-compressed stopper-body, a holding member arranged in a 100 fixed position against the body, and an extracting member rigidly connected with the holding member and having means to compensate for endwise compression of the body during insertion without displacement of the 105 holding member.

2. A stopper-puller comprising, in combination with a normally non-compressed stopper-body, a holding member arranged in a 110 fixed position against the body, and an extracting member extending directly through the body and rigidly connected at one end with the holding member; said extracting member having means to compensate for endwise compression of the stopper-body during insertion 115 without displacement of the holding member.

3. A stopper-puller comprising, in combination with a normally non-compressed stopper-body, a holding member arranged in fixed position against the body, and an extracting 120 member rigidly connected with the holding member and provided with a compensating bend or kink to compensate for an endwise compression of the stopper-body during insertion. 125

4. A stopper-puller comprising, in combination with the stopper-body provided at the bottom with a cavity, an extracting member



5 piercing the body and having one end extending into the plane of the cavity, and a holding member consisting of a molded metallic head or button located within said cavity upon and about said end of the extracting member.

10 5. In a stopper-puller, the combination with a stopper-body provided at the bottom with a cavity, of an extracting-pin consisting of a wire strand piercing the stopper-body and provided at its upper end with a pull-eye and at its lower end with a fastening element extending into the plane of the cavity, said pin

being further provided between its ends with a compensating bend or kink, and a holding member consisting of a molded metallic head or button located within said cavity about the fastening element of the pin. 15

In testimony whereof I affix my signature in presence of two witnesses.

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Witnesses:

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J. S. CONRAD.