

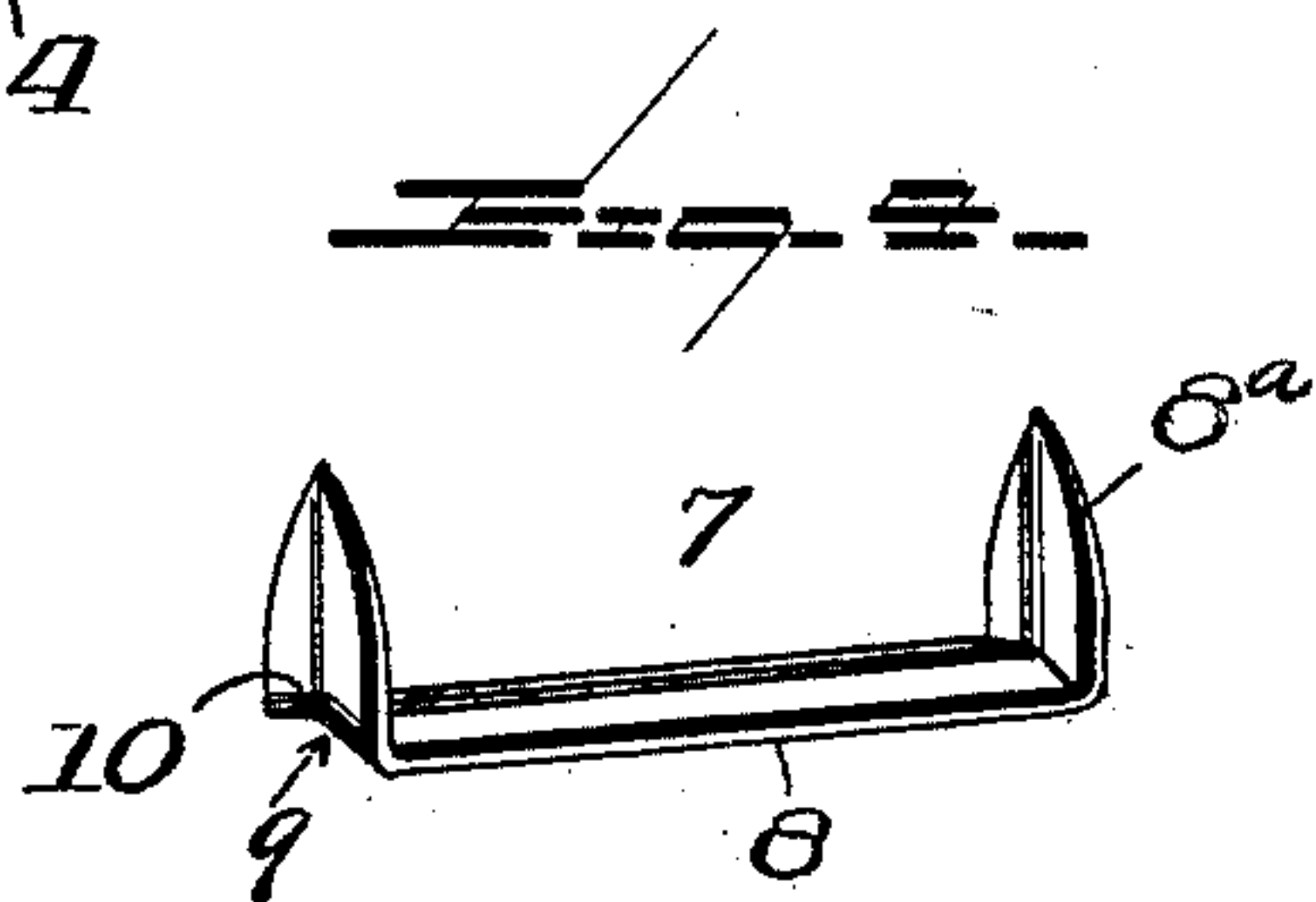
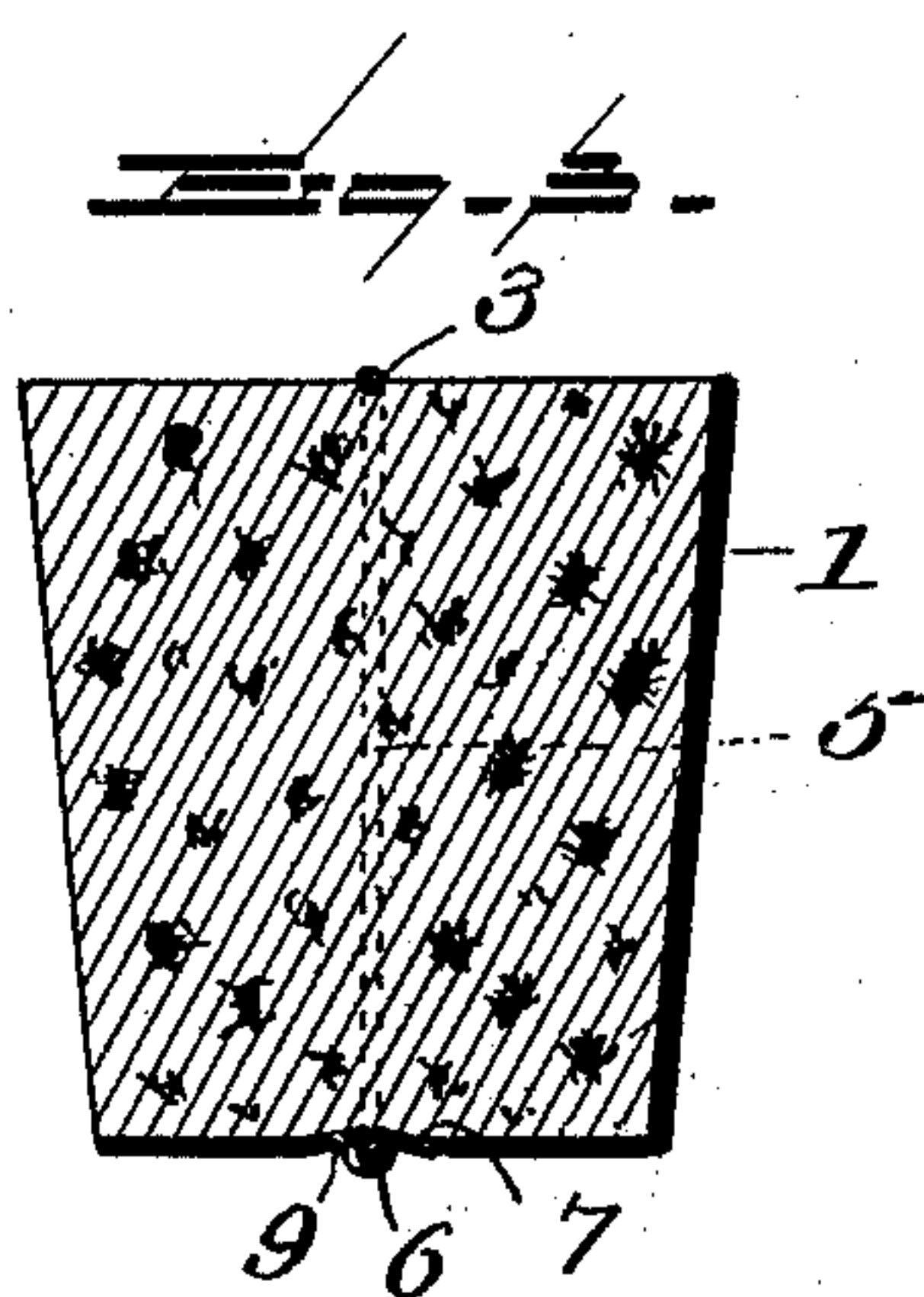
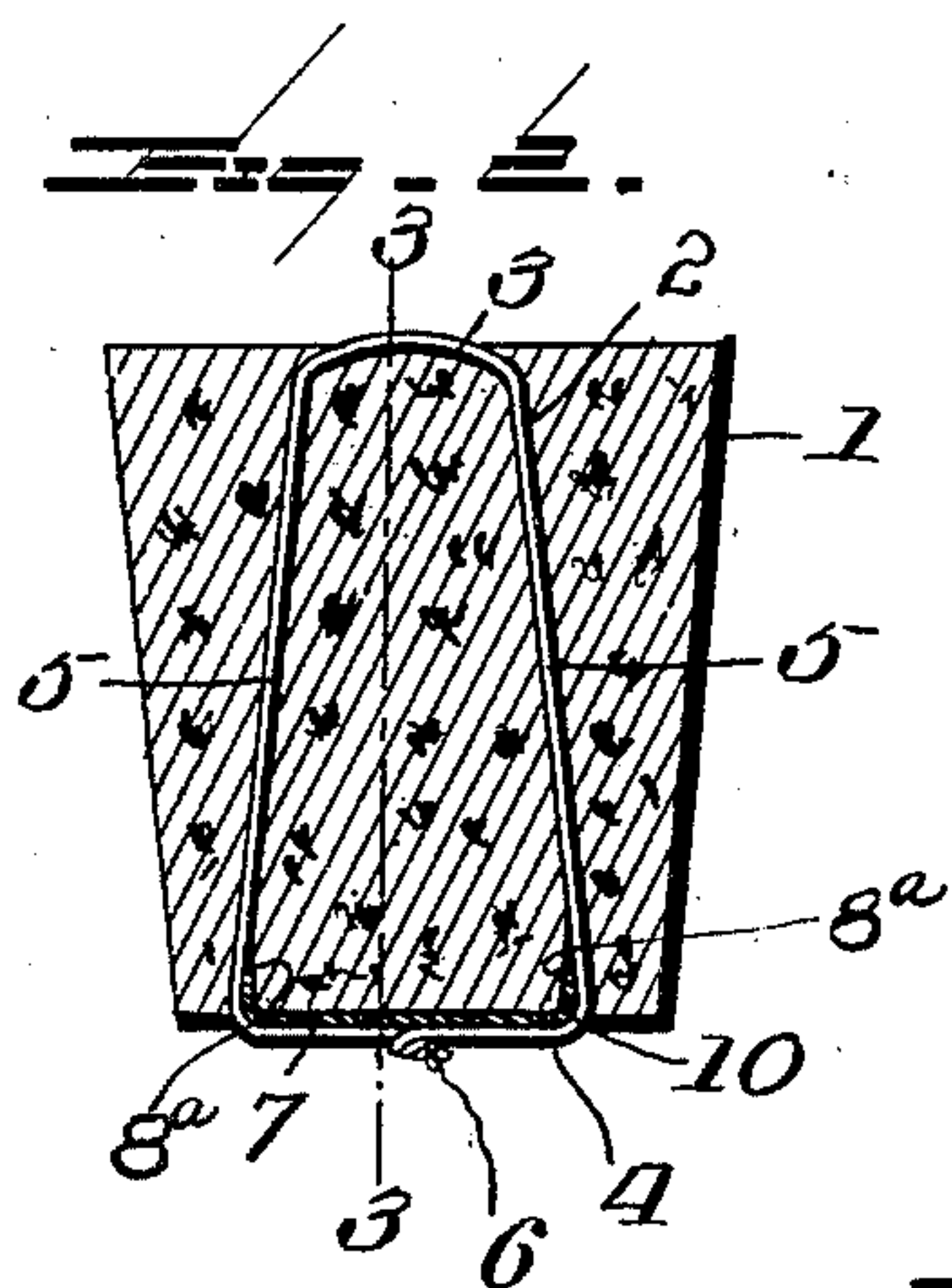
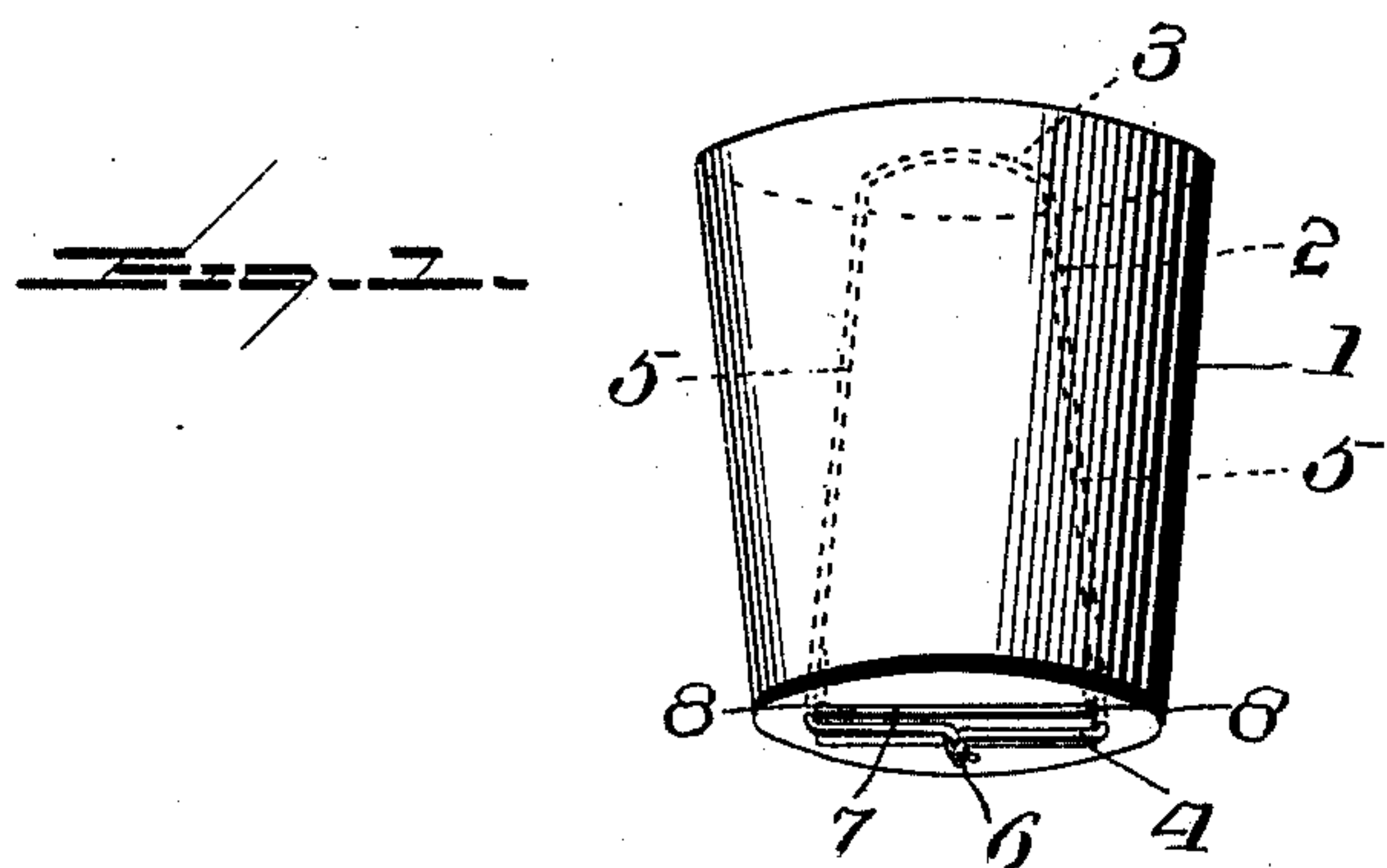
No. 713,930.

Patented Nov. 18, 1902.

E. M. WILCOX.
STOPPER PULLER.

(Application filed Sept. 4, 1902.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

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STOPPER-PULLER.

SPECIFICATION forming part of Letters Patent No. 713,930, dated November 18, 1902.

Application filed September 4, 1902. Serial No. 122,102. (No model.)

To all whom it may concern:

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

This invention relates to an improved stopper-puller designed in the nature of an attachment for ordinary types of stoppers or corks and comprising simple and practical means whereby a stopper may be extracted or drawn from a bottle or jar without the aid of a corkscrew or equivalent device and without injury to the stopper.

The invention relates more particularly to the common cork type of stopper which is universally used as a closure or stopper for all kinds of bottles and jars and the extraction or drawing of which from the neck of the vessel usually requires the aid of a corkscrew or equivalent instrument which passes into or against the body of the cork and frequently either destroys or so injures the same as to render it unfit for further use. It is with a view of preserving a cork or equivalent stopper for indefinite use, while at the same time providing simple and effective means whereby it may be evenly drawn or extracted by the employment of any pointed instrument or device which may be available—such, for instance, as a nail, fork, or equivalent pointed device—that the present invention is designed.

By reason of equipping the cork with its own puller or pulling attachment the necessity of providing an extra cork for sealing the bottle or jar after the original cork has been extracted is obviated, and the present invention further contemplates a novel construction and arrangement of parts wherein an extended bearing is provided for the pulling strand or element at the bottom of the cork and the separate members of the puller attachment are so related as to positively prevent tearing or other injury to the cork, besides providing for maintaining the separate elements of the attachment permanently in operative relation.

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 fully described, illustrated, and claimed.

The essential feature of the invention involved in the novel means provided to secure an extended bearing for the pulling-strand at the bottom of the cork is susceptible to some structural change without affecting the invention; but the preferred construction of the device is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a common cork fitted with a puller attachment, such as contemplated by the present invention. Fig. 2 is a vertical sectional view of the cork with its puller attachment. Fig. 3 is a similar view on the line 3 3 of Fig. 2. Fig. 4 is a detail in perspective of the staple-bearing element constituting the washer member of the attachment and having a fastening engagement with the bottom of the stopper-body or cork.

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

In carrying out the invention it is of course understood that the same may be applied to any stopper of the common cork or compressible type; but inasmuch as the invention possesses special utility as an attachment for a common cork the same is shown in the drawings as applied thereto.

Referring particularly to the drawings, the numeral 1 designates the stopper-body, through which is strung a pulling member 2. This pulling member may consist of a strand of any suitable material adapted for the purpose, but preferably is formed of a single length of wire extending longitudinally throughout the extent of the stopper-body and looped at both ends to provide, respectively, an open pull-loop 3 at the top of the stopper-body and the inner engaging loop 4, extending about the bottom of the stopper-body in the manner to be presently explained.

The open pull-loop 3 of the pulling member or strand 2 is practically flush with the top of the stopper-body, but is exposed sufficiently at such point to permit of the insertion thereunder of a pointed instrument—such as a nail, fork, or like article—when it is desired to exert a lifting or drawing pressure upon the stopper-body or cork for the extraction thereof.

In the preferable form of the invention shown in the drawings the side portions 5 of the pulling strand or member 2 pass through separate portions of the body of the stopper or cork and maintain a spaced relation, whereby the pulling strain on the stopper or cork body is evenly distributed, and also in the form of the invention shown the said side portions of the pulling strand or member are downwardly divergent to provide a well-defined spread for the engaging loop 4, which extends about the bottom portion of the stopper-body. In this connection it will be observed that the said engaging loop is of a greater relative width than the upper pull-loop 3, and hence extends across the major portion of the bottom of the stopper-body.

The terminals of the strand 2, constituting the pulling member, may be secured together in any suitable manner; but a simple expedient consists in fastening the said terminals together by twisting, as indicated at 6, preferably at the bottom of the cork-body and beneath the bearing element 7, with which co-operates the bottom engaging loop 4. In referring further to the pulling strand or member 2 it should be noted that the said strand or member may be inserted through the compressible stopper or cork body 1 in the form of a staple and the ends twisted together, as at 6, providing a simple manner of applying the pulling strand or member to the stopper; but however the strand is applied it is to be understood that the same is placed in the stopper before the latter is compressed in the neck of the vessel. Hence the compression of the stopper or cork body in the neck of the vessel forces the body of the material about the pulling-strand and positively obviates leakage.

The bearing element 7, about which the bottom engaging loop 4 extends, is preferably of a staple form, with the prongs thereof embedded in the body of the stopper and held so embedded by the engagement of the engaging loop 4 therewith. In its preferable construction the said staple-bearing element consists of an elongated sheet-metal bar 8, provided at the opposite extremities thereof with the pointed holding-prongs 8^a, bent from the same side of the bar and adapted to be forced into the bottom portion of the stopper-body. Also a feature of the pronged bar 8, which performs a useful function, resides in providing this bar with a longitudinal channel 9, which may be formed by making the bar

of the concavo-convex shape; but irrespective of how constructed the said channel constitutes a seat for receiving therein the horizontal or transverse portion of the engaging loop 4, thus serving to hold the engaging loop in operative centered relation to the bearing element 7. The staple-bearing element 7 is of a length nearly equaling the diameter of the bottom of the stopper-body, and the engaging loop 4 passes longitudinally over said bar and around the corners 10 thereof, so as to also lie against the outer sides of the holding-prongs 8^a. The said engaging loop thus serves to securely hold the bearing element in fastened engagement with the stopper-body, and, besides, the said bearing element provides a broad and extended bearing for the engaging loop in order to better distribute the pulling strain upon the stopper-body and also preventing any injury whatever to the stopper or cork body from continued use thereof.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described puller attachment will be readily apparent without further description, and it will also be understood that changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof.

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

1. In a stopper-puller, the combination with the stopper-body, of a pronged bearing element engaged with the bottom of the body, and a pulling-strand passed through the body and provided at the top with an exposed pull-loop and at the bottom with an engaging loop extending about the pronged portions of the bearing element.

2. In a stopper-puller, the combination with the stopper-body, of a pronged bearing element engaged with the bottom of said body, and a pulling-strand passed through the body and provided at the top with an exposed pull-loop and at the bottom with an engaging loop arranged longitudinally about the outer side of the bearing element and also extending around the pronged portions thereof.

3. In a stopper-puller, the combination with the stopper-body, of a bearing element having terminal prongs engaged in the bottom portion of the stopper-body, and a looped pulling-strand extending through the stopper-body and provided at the top with an exposed pull-loop and at the bottom with a widened engaging loop passed longitudinally over the bearing element and extending around the corners thereof alongside of the prongs.

4. In a stopper-puller, the combination with the stopper-body, of a staple-bearing element consisting of a longitudinally-channeled sheet-metal bar having terminal holding-

prongs bent from the same side thereof and engaged in the bottom of the stopper-body, and a looped pulling-strand passed through the stopper-body and provided at the top with
5 an exposed pull-loop and at the bottom with a widened engaging loop arranged longitudinally over the bar and extending about the corners and alongside of the prongs.

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

EDWARD M. WILCOX.

Witnesses:

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