

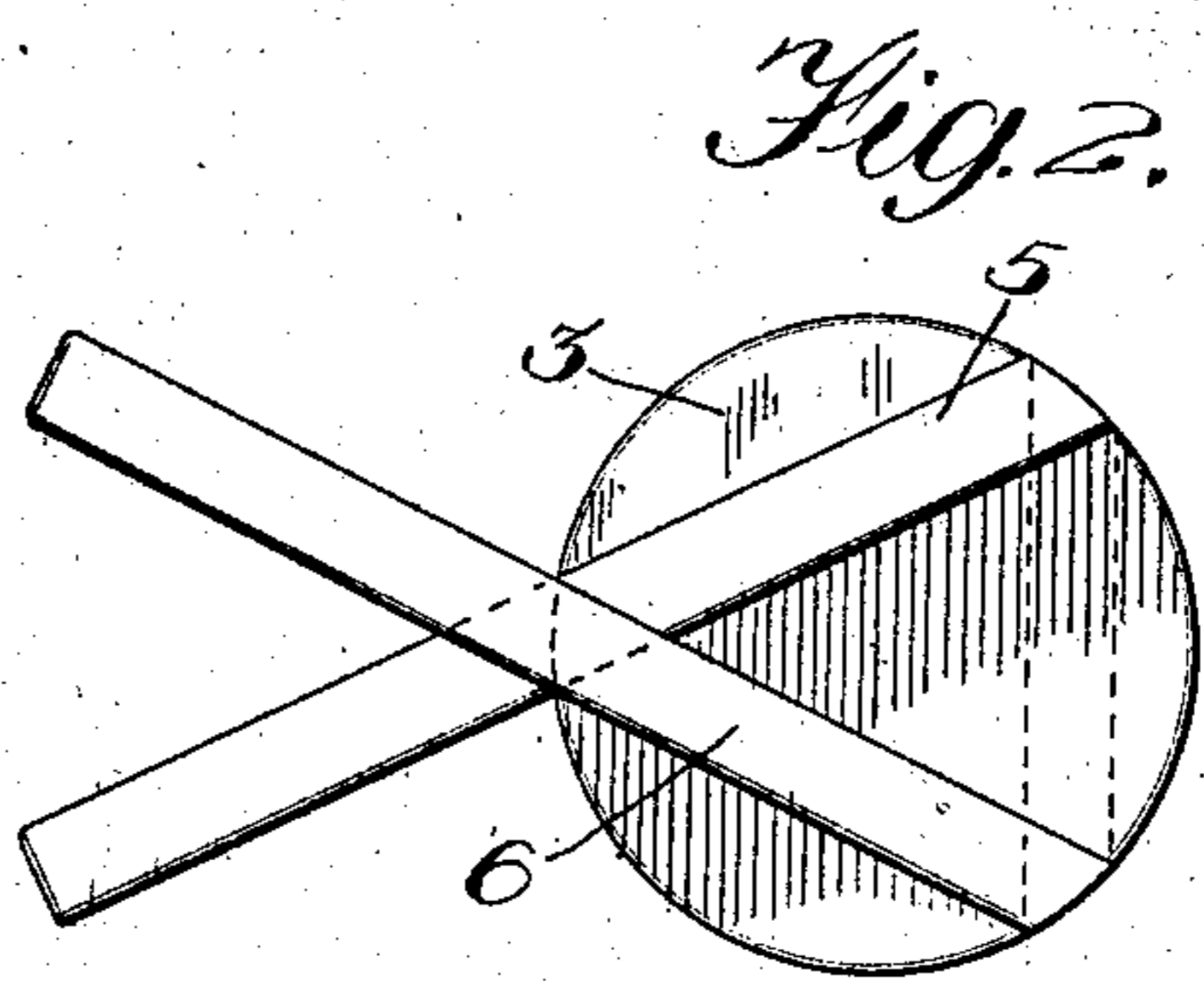
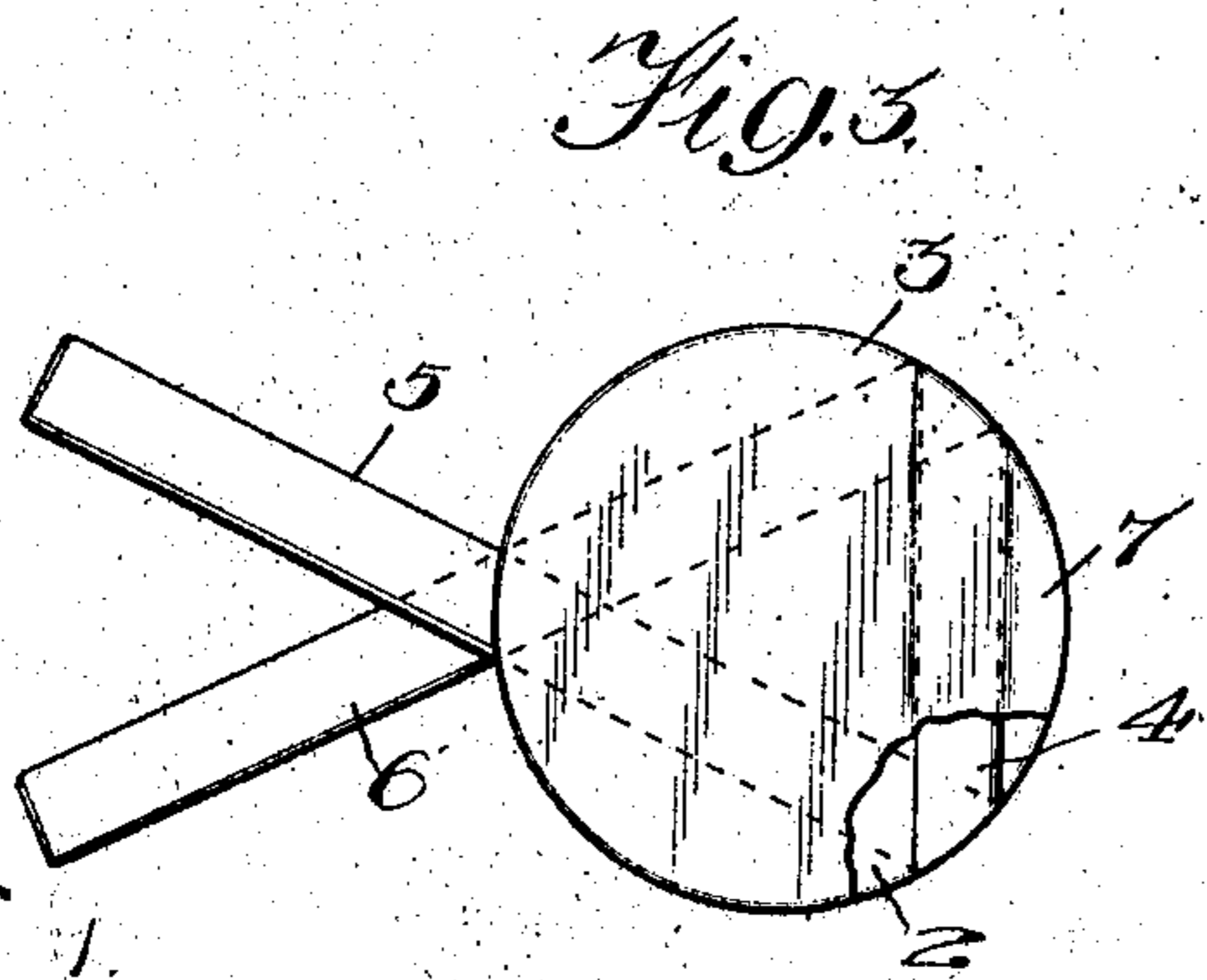
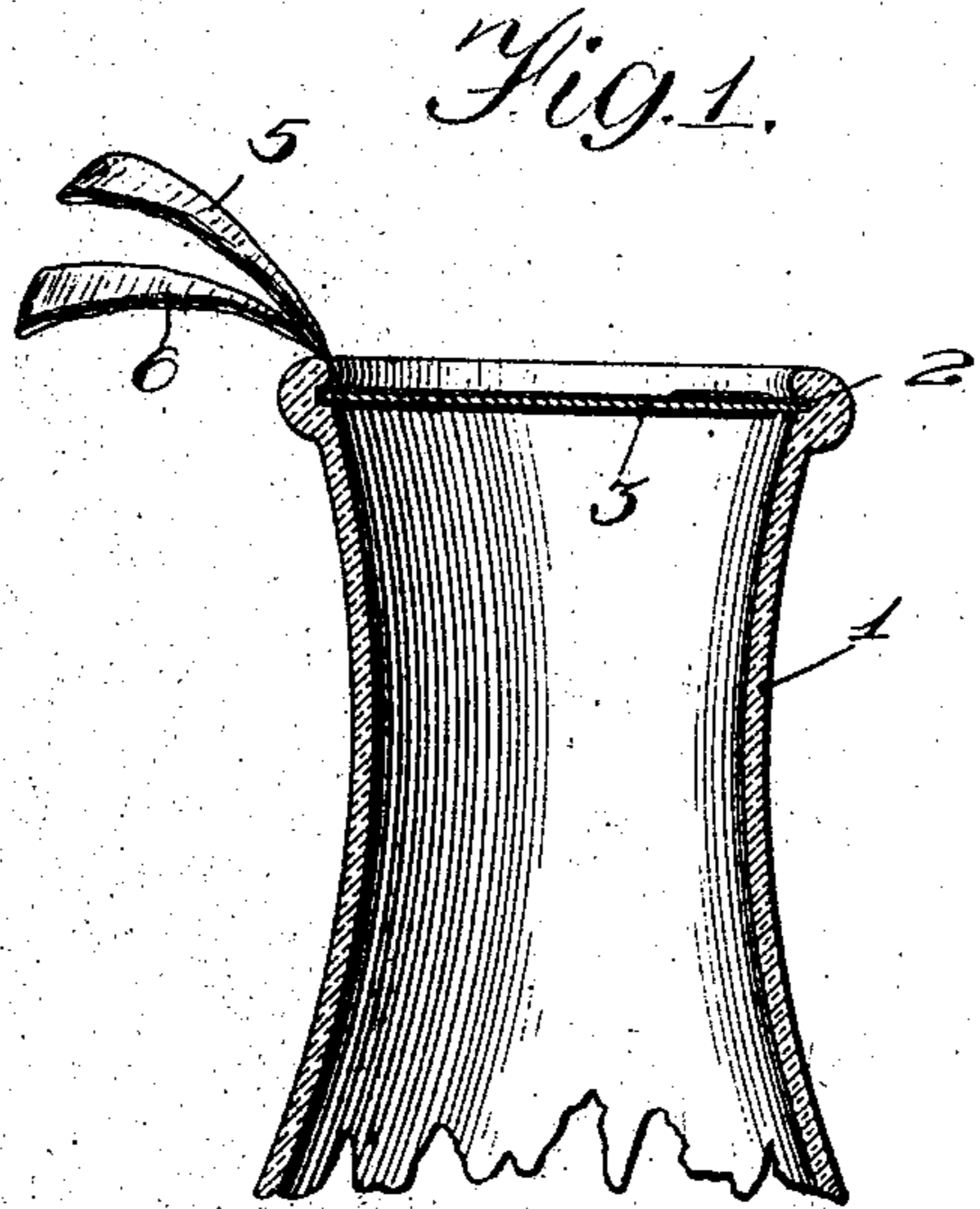
No. 815,940.

PATENTED MAR. 27, 1906.

J. P. CRANE.

STOPPER FOR BOTTLES, &c.

APPLICATION FILED DEC. 17, 1904. RENEWED FEB. 17, 1906.



Witnesses:
G. V. Domarus.
H. H. Plessis

Inventor
James P. Crane
by Elliott & Hopkins
Attys

UNITED STATES PATENT OFFICE.

JAMES P. CRANE, OF CHICAGO, ILLINOIS.

STOPPER FOR BOTTLES, &c.

No. 815,940.

Specification of Letters Patent.

Patented March 27, 1906.

Application filed December 17, 1904. Renewed February 17, 1906. Serial No. 301,635.

To all whom it may concern:

Be it known that I, JAMES P. CRANE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Stoppers for Bottles, &c., of which the following is a full, clear, and exact specification.

My invention relates more particularly to stoppers for milk-bottles, usually composed of a cardboard disk or disk constructed of other suitable material crowded into an annular groove surrounding the inner wall of the mouth of the bottle, and the improvements have more especial reference to the means for the extraction of the stopper.

The object of the invention is to provide an improved, simple, efficient, and inexpensive means whereby a stopper of substantially the described character may be readily removed from the bottle without damaging the same, so that it may be repeatedly used.

With a view to the accomplishment of the described object and certain other objects which will hereinafter appear the invention consists in the features of novelty which will now be described with reference to the accompanying drawings, and more particularly pointed out in the claims.

In the said drawings, Figure 1 is a vertical sectional view of the neck of a bottle and a stopper constructed according to my invention. Fig. 2 is a bottom plan view of the stopper, and Fig. 3 is a top plan thereof partly broken away.

1 is the neck of a bottle having the afore-said usual annular groove 2 surrounding its inner wall at or near the mouth or upper end thereof and into which groove the usual pasteboard or other suitable disk stopper 3 is forced. To this disk or stopper 3 is secured an extracting device in such a manner that when the requisite upward strain or pull is imparted thereto it will crowd one edge of the disk 3 inwardly or toward its center, thus dislodging it at that point from the groove 2 and permitting the stopper to be lifted without damaging it. This extracting device is preferably a permanent part of the stopper, and it preferably consists of a strip or ribbon composed of any suitable flexible material, such as linen or fabric of any kind, and which is passed across the upper side of the stopper,

as shown at 4, so as to extend across the stopper as the chord of a circle, the portion 4 being located considerably to one side of the center. The extremities or ends 5 6 of the ribbon are then passed downwardly under the stopper and carried toward each other and thence upwardly around the edge of the stopper and out of the neck of the bottle, so as to form tabs of sufficient length to be seized by the user, and which tabs, it will be seen, if pulled upwardly will cause the ribbon to grip tightly on the opposite side of the stopper while the side adjacent to the tabs is forced inwardly toward the center; thus releasing the stopper from the groove 2 without damaging it.

If desired, the portion 4 of the ribbon may be placed under the top layer or stratum 7 of the cardboard stopper, or this part 7 may represent the label which is usually pasted on the stopper, thus holding the ribbon permanently in place, while the portions of the ribbon which pass under the stopper may, if desired, be coated with paraffin or other suitable material at the same time the inner or bottom side of the stopper is thus coated or treated to render it waterproof.

Having thus described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. As a new and useful article of manufacture a stopper comprising in combination a disk, and a flexible strip looped upon said disk and with its free ends passing upwardly around one edge thereof.

2. As a new and useful article of manufacture, a stopper comprising in combination a disk and a strip, which strip intermediate its ends is secured to and extends across the disk at a point between the edge and axis of the disk, and passes thence upwardly around the edge of the disk.

3. As a new and useful article of manufacture a stopper comprising in combination a disk, a strip crossing itself on the under side of said disk and passing upwardly around the edge thereof with the free extremities forming an extracting-tab.

4. As a new and useful article of manufacture a stopper comprising in combination a disk, a flexible strip extending across the top of the disk on one side and thence in duplex strips under and across the bottom of the

disk to the opposite edge and thence upwardly around the edge of the disk.

5. As a new and useful article of manufacture a stopper comprising in combination a disk, and a ribbon having its intermediate part extending across the top of the disk at one side of the center thereof, with its ex-

tremities passed under the disk and toward each other and continuing beyond the edge of the disk to form extracting-tabs.

JAMES P. CRANE.

Witnesses:

FRANCIS A. HOPKINS,
M. B. ALLSTADT.