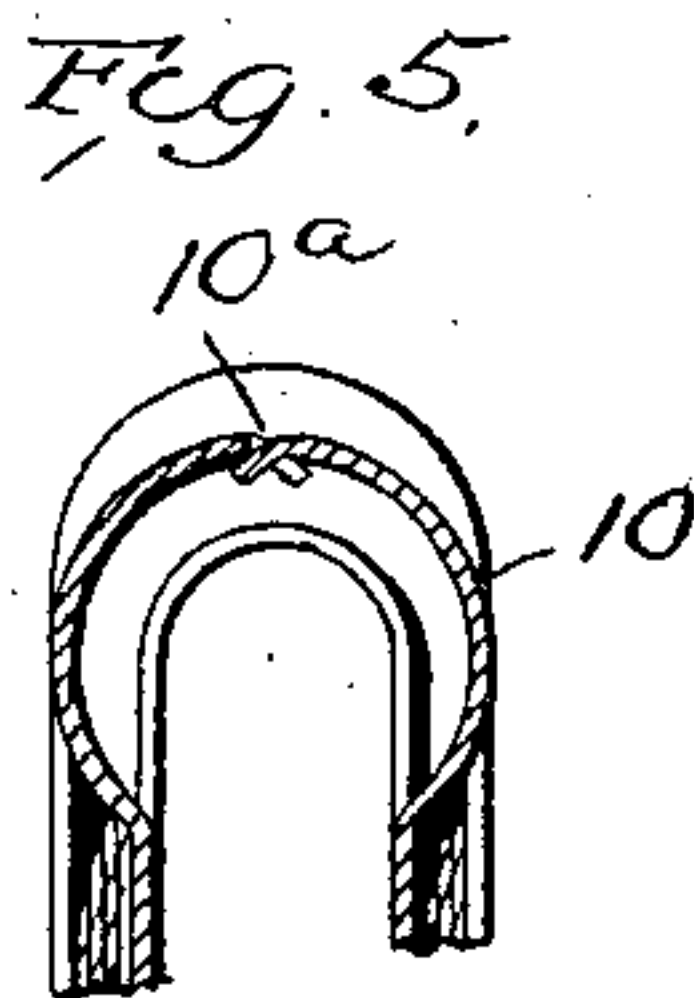
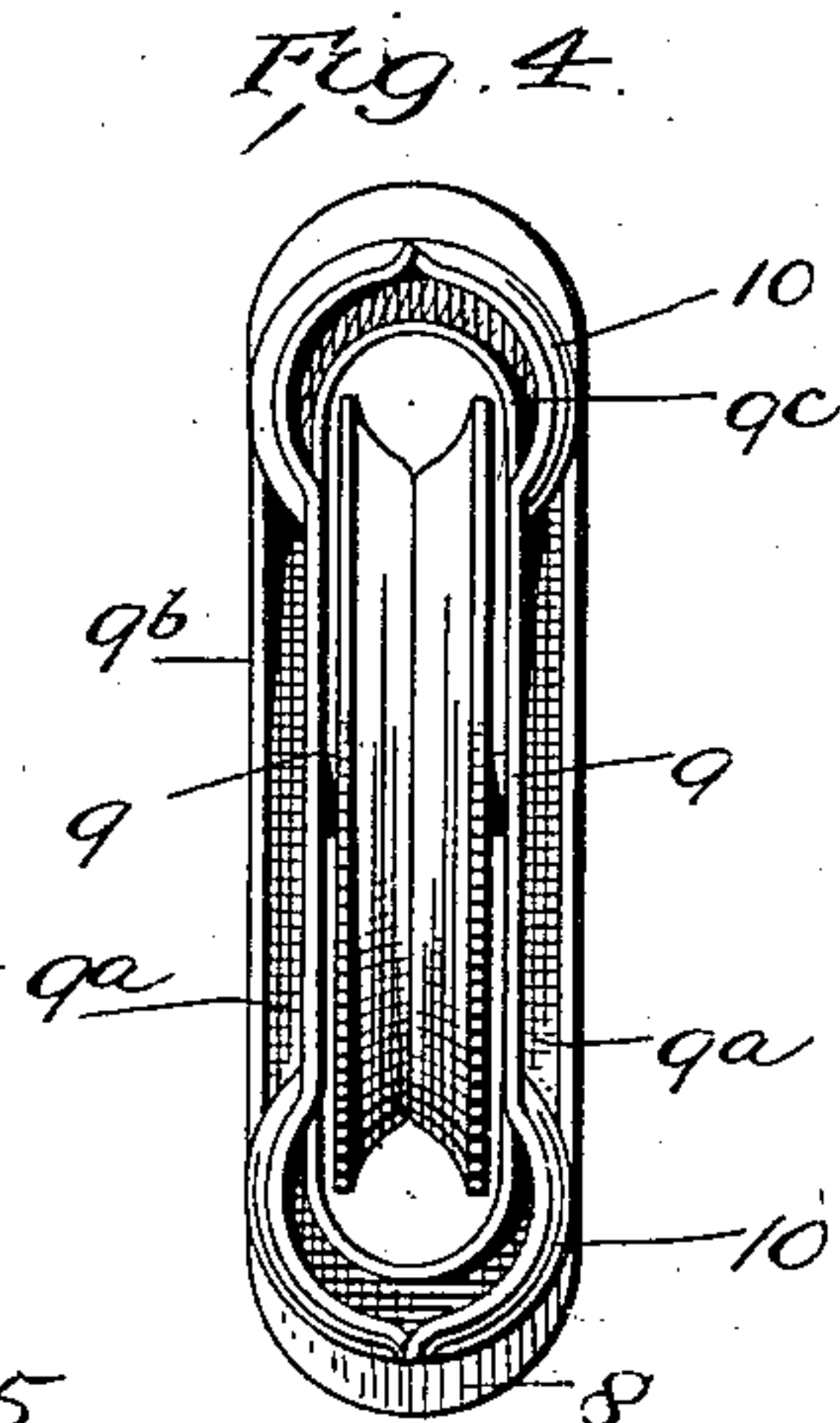
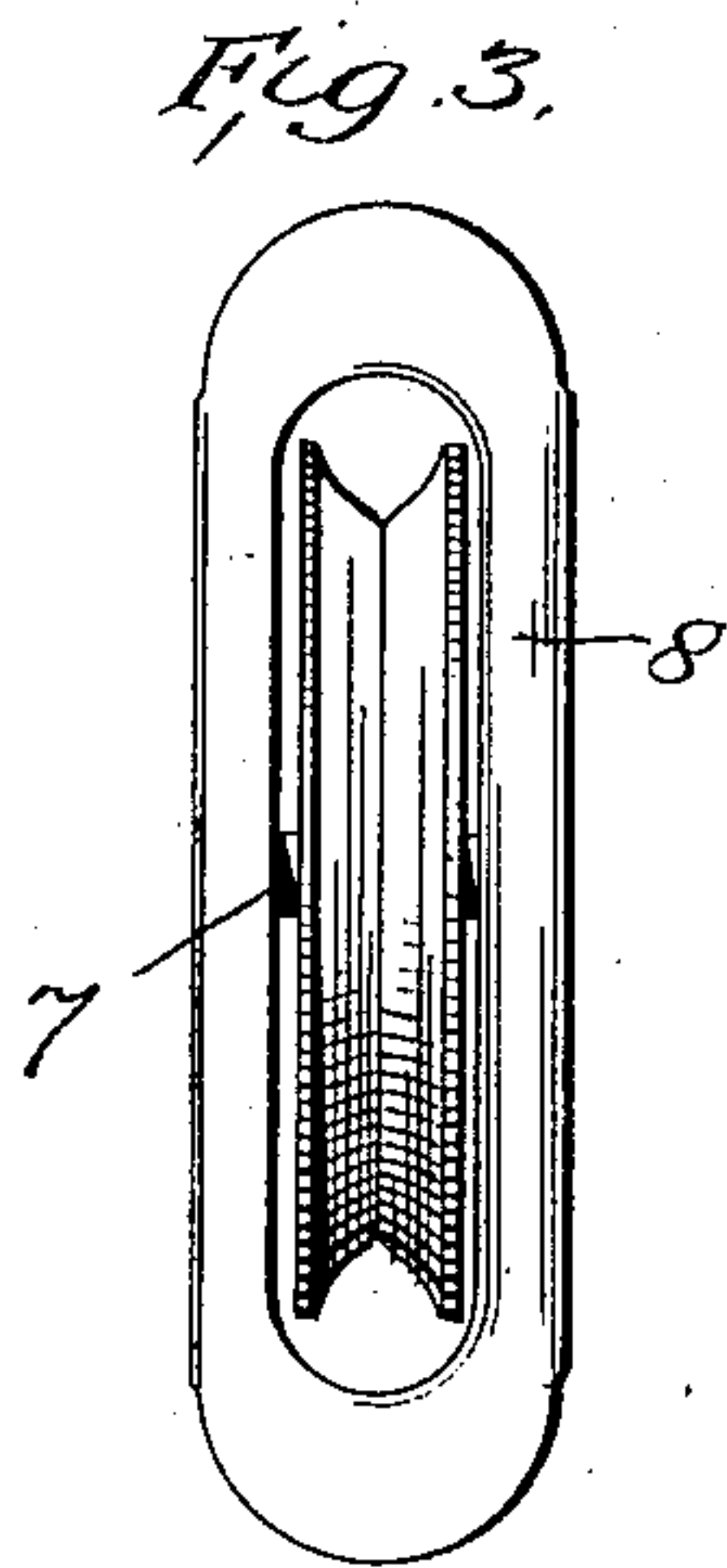
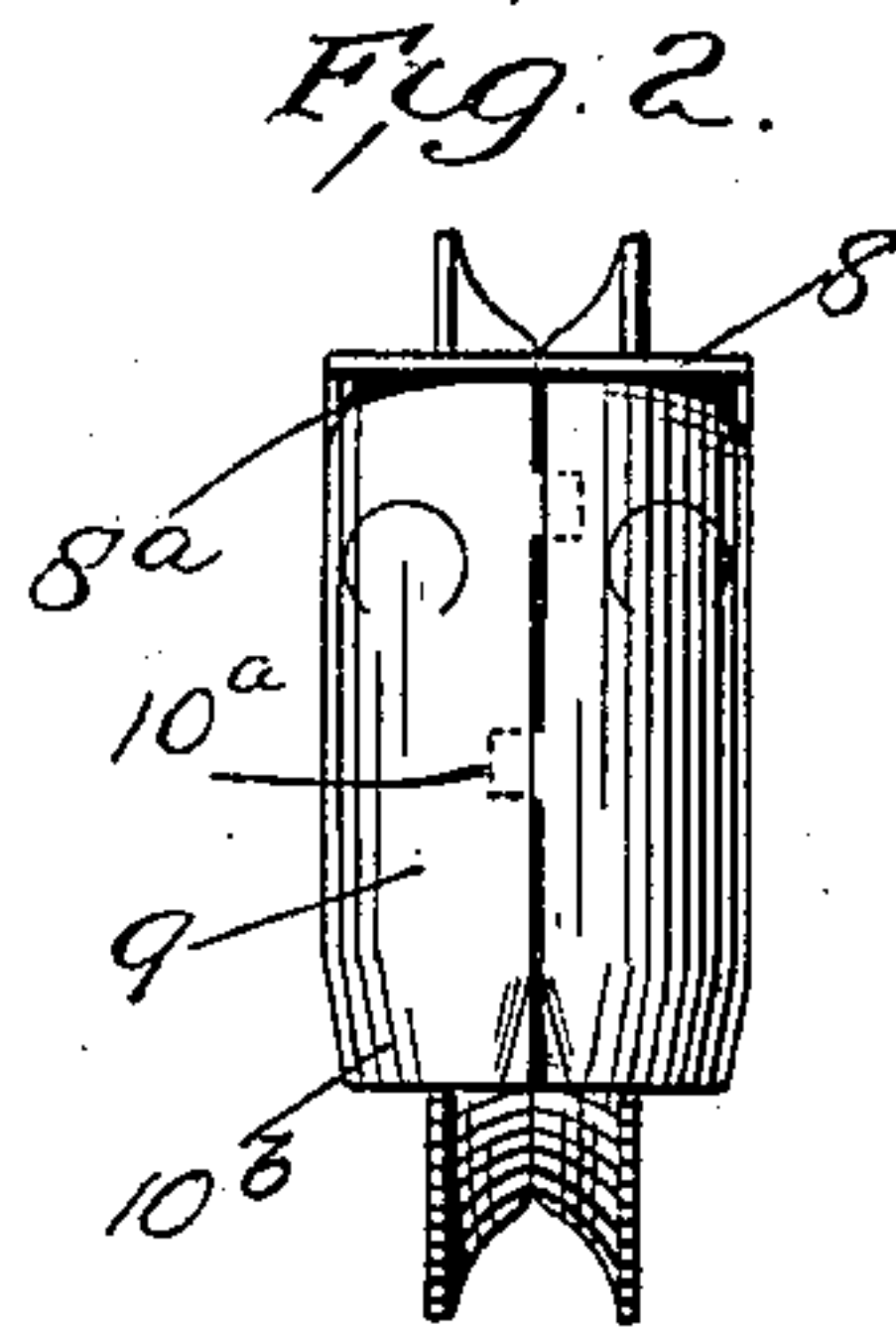
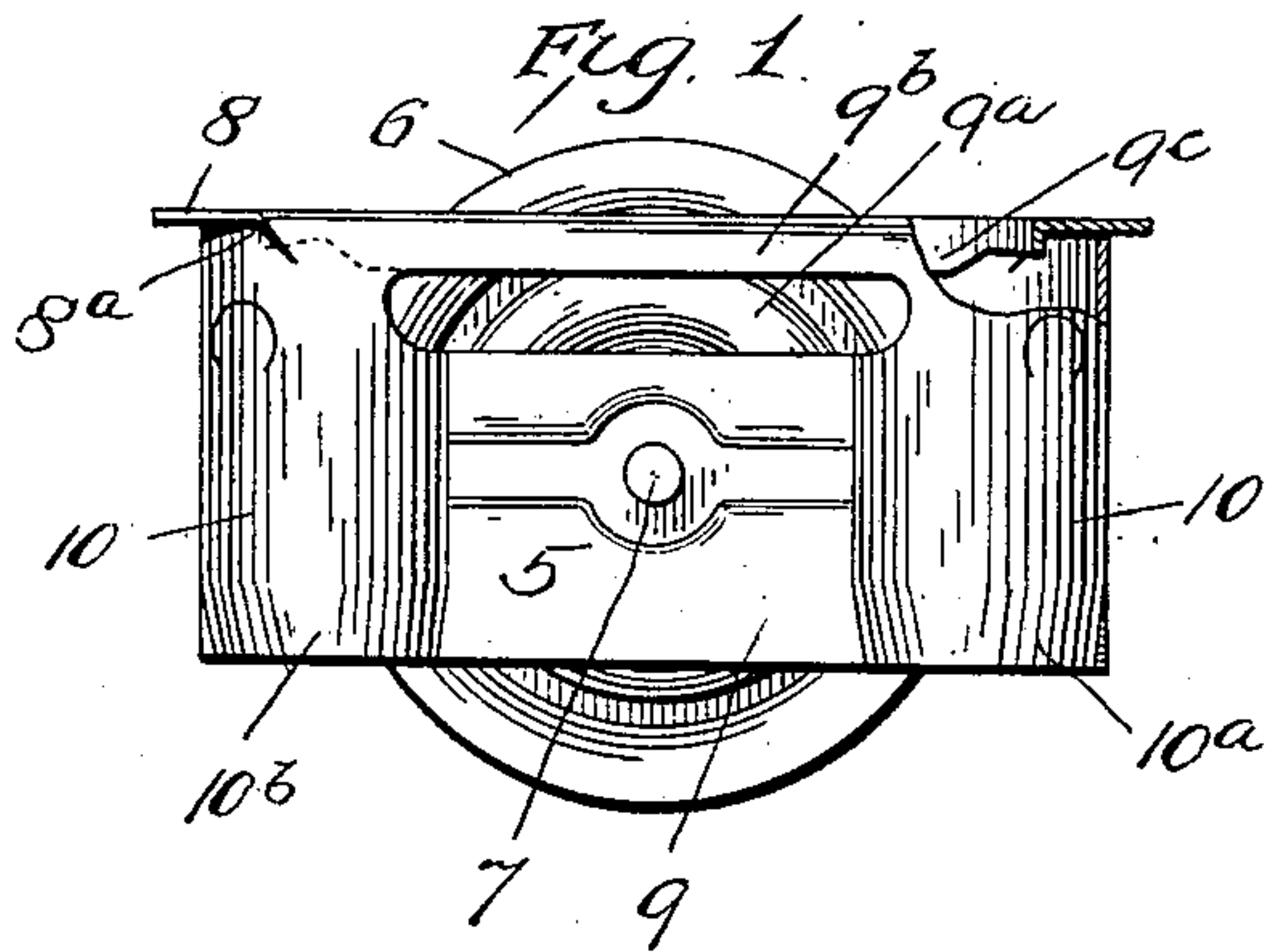


No. 763,474.

PATENTED JUNE 28, 1904.

W. R. FOX.  
SASH CORD GUIDE.  
APPLICATION FILED DEC. 19, 1901.

NO MODEL.



Attest:  
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Inventor:  
William R. Fox.

By Ellis Swan  
Atty.

# UNITED STATES PATENT OFFICE.

WILLIAM R. FOX, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO GRAND RAPIDS HARDWARE COMPANY, OF GRAND RAPIDS, MICHIGAN.

## SASH-CORD GUIDE.

SPECIFICATION forming part of Letters Patent No. 763,474, dated June 28, 1904.

Application filed December 19, 1901. Serial No. 86,577. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM R. FOX, a citizen of the United States, residing at Grand Rapids, Kent county, Michigan, have invented certain new and useful Improvements in Sash-Cord Guides, of which the following is a specification.

My present invention relates to improvements in sash-cord guides constructed of sheet metal.

The object of the invention is to produce a form of shell which will enter the mortise more readily and in which all liability of the sash-cord slipping or jumping from the pulley is reduced to the minimum.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation; Fig. 2, an end view; Fig. 3, a face view; Fig. 4, a rear view, and Fig. 5 is a detail.

In the drawings the numeral 5 indicates the shell, and 6 the pulley journaled therein upon an axis 7 in the shape of a rivet having its ends entering openings in the sides of the shell and upset therein, whereby it braces the sides in the manner well understood by those skilled in the art. As the pulley itself forms no part of the present invention, further description thereof is deemed unnecessary.

The shell is formed of a single piece of sheet metal bent to form a face-plate 8 and sides 9, which are bent inward into contact with each other at each end. In order to prevent the edges from slipping past each other, I provide the abutting edges with tongues 10<sup>a</sup>, projecting from alternately opposite sides and overlapping the adjacent edges. In each side is a slot or opening 9<sup>a</sup>, and the portions of the sides below the slots are bent inwardly into close proximity to the sides of the pulley. This leaves the ends 10 each considerably more than a semicircle in cross-section. The face-plate 8 extends beyond the circular portions 10 at each end, diagonal cuts 8<sup>a</sup> in the metal permitting the curving in of the ends under the face-plate, thus forming a solid support and greatly strengthening the face-plate. The diagonal cuts in addition to strengthening the face-plate enable me to extend the flat portions 9<sup>b</sup> nearer to the ends of the shell.

In order to facilitate the entrance of the shell into the mortise, I contract the rear ends or edges of the circular portion 10, as shown at 10<sup>b</sup>, and this also forms a narrow space or channel for the entrance of the sash-cord, preventing its jumping from the pulley and jamming in between the wall of the shell and the pulley.

Owing to the formation of the slots in the sides parallel to the face of the shell, strengthening-flanges 9<sup>b</sup> are provided on the outside, which provide a better finish and strengthen the shell and enable it to be used either in a rectangular mortise or in an irregular mortise formed by a multiple bit, as the flanges fit snugly against the sides of a rectangular mortise with rounded ends. In addition to these exterior flanges I provide an interior strengthening-flange 9<sup>c</sup>.

In using the diagonal slits, while it is not necessary to have the curved end 10 come in contact with the face-plate 8, yet it is desirable to do so, as it gives a firmer support to the face-plate.

Having thus described my invention, what I claim is—

1. A shell for sash-cord guides having a single opening in each side parallel with the face thereof, and strengthening or protecting flanges formed from the side plates at the edges of said openings, substantially as described.

2. A shell for a sash-cord guide comprising a single piece of sheet metal bent to form a face-plate and sides, each side having a single slot or opening parallel with the face-plate with the side walls of the shell in rear of said slots set inwardly, substantially as described.

3. A shell for a sash-cord guide having a face-plate and sides with rounded ends, said sides being set inward between the rounded ends and the face-plate having side flanges overhanging the inwardly-set portions, substantially as described.

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

WILLIAM R. FOX.

Witnesses:

CHARLES B. HAMILTON,  
EDWARD G. MATTER.