

No. 828,094.

PATENTED AUG. 7, 1906.

G. A. DEMO.

MATCH BOX.

APPLICATION FILED MAR. 24, 1906.

Fig. 1.

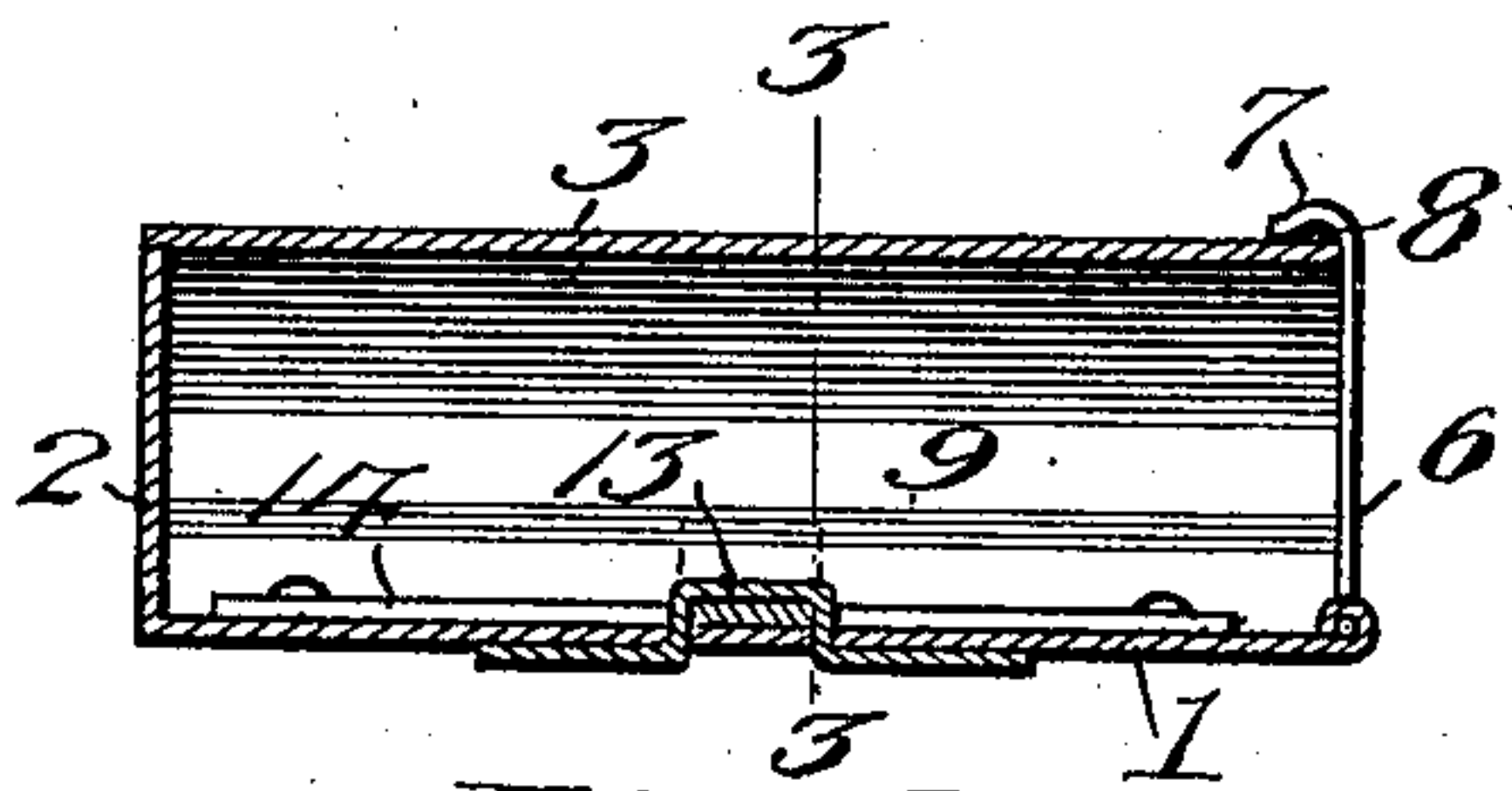


Fig. 2.

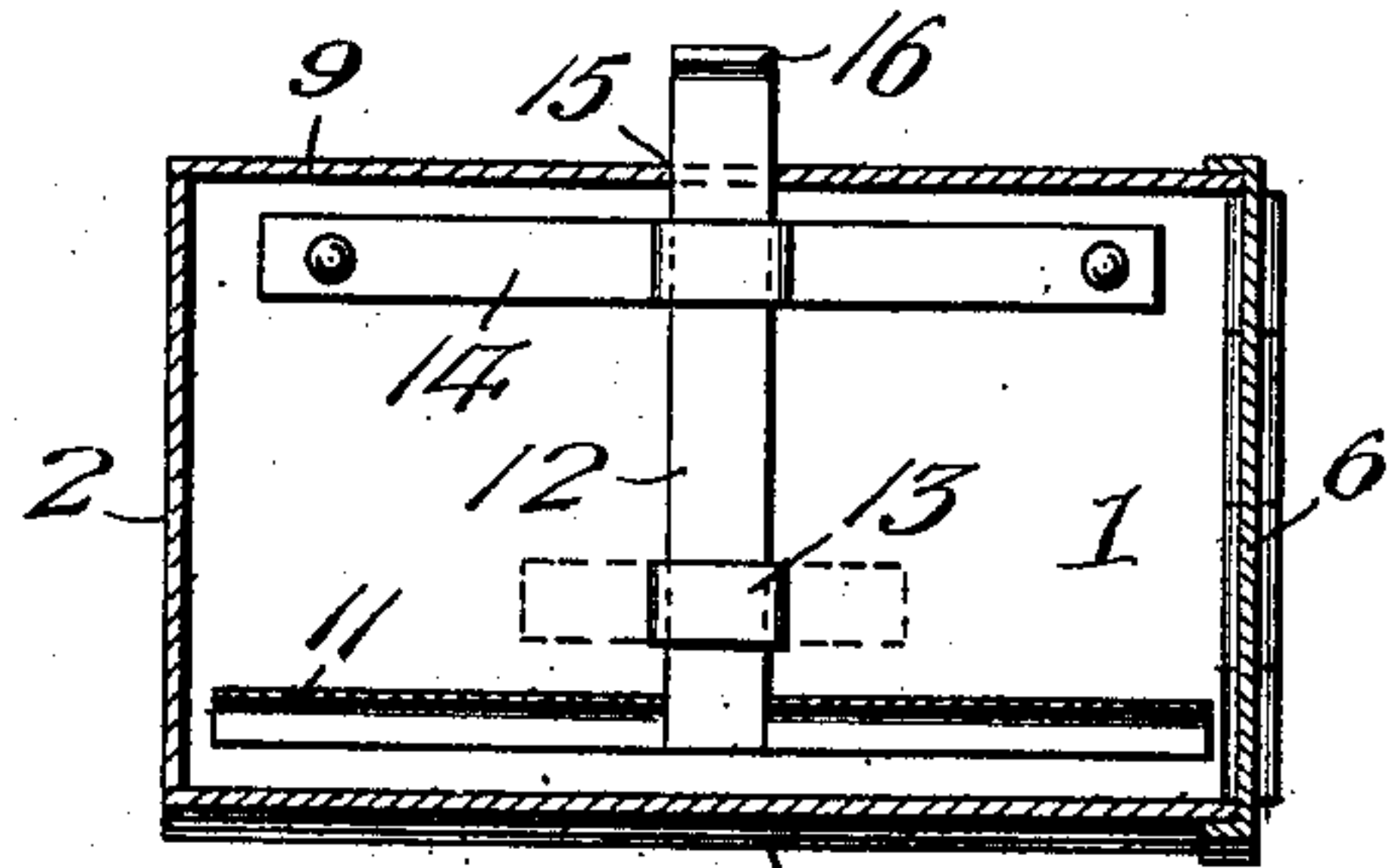


Fig. 3.

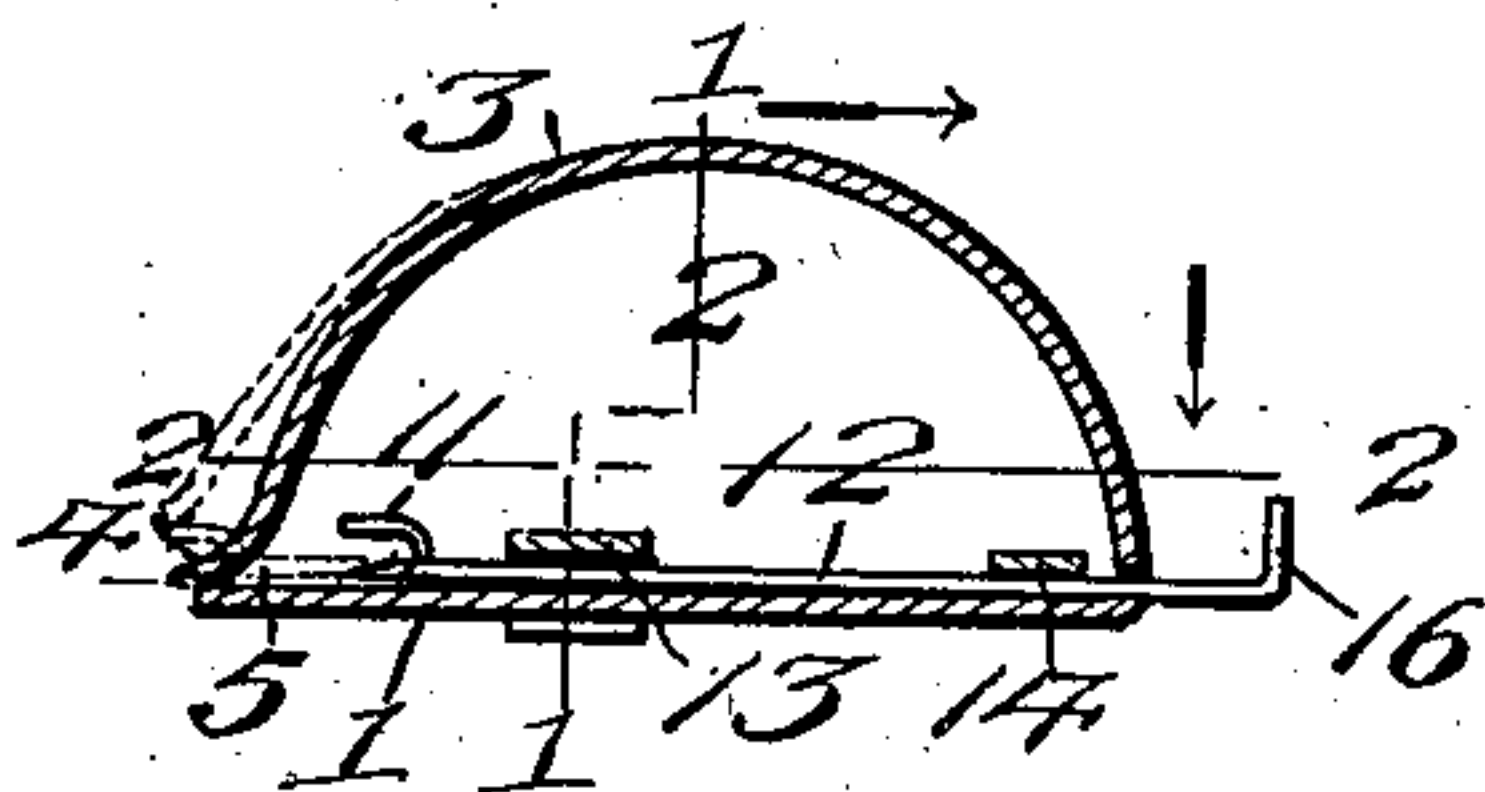


Fig. 4.

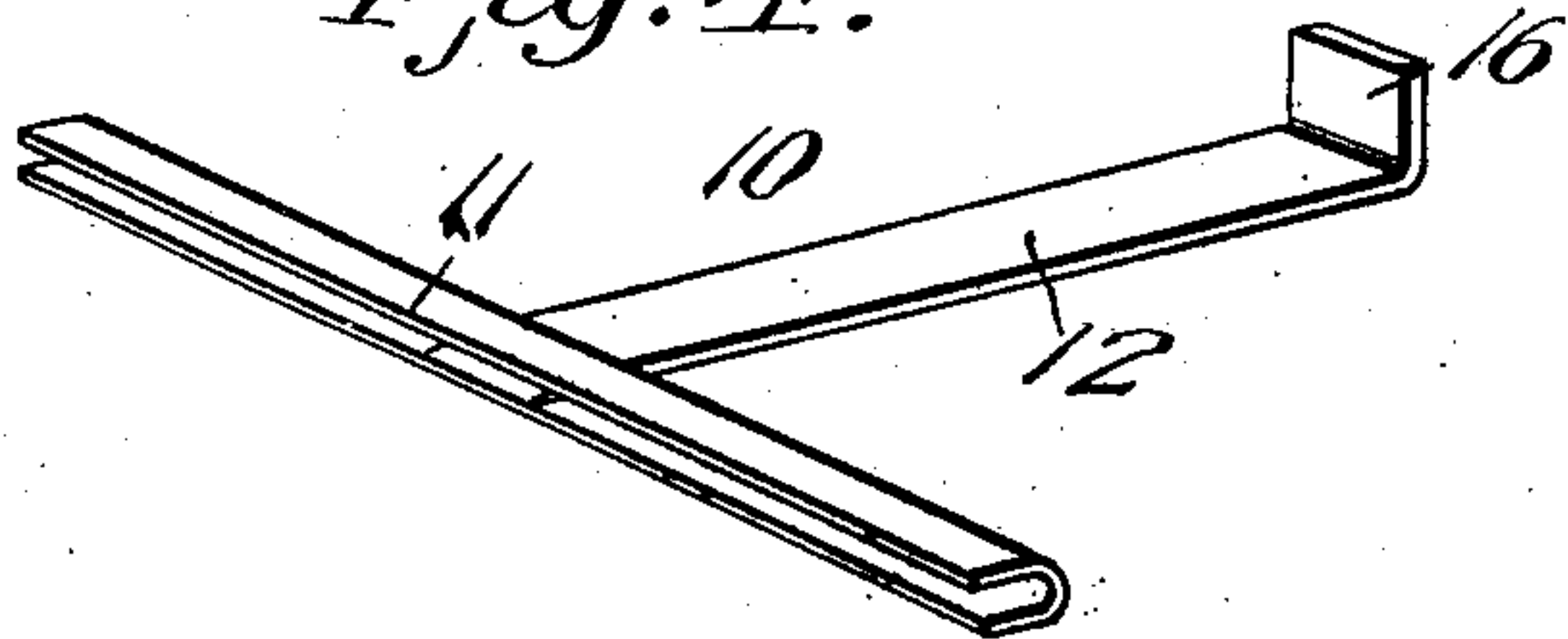


Fig. 5.

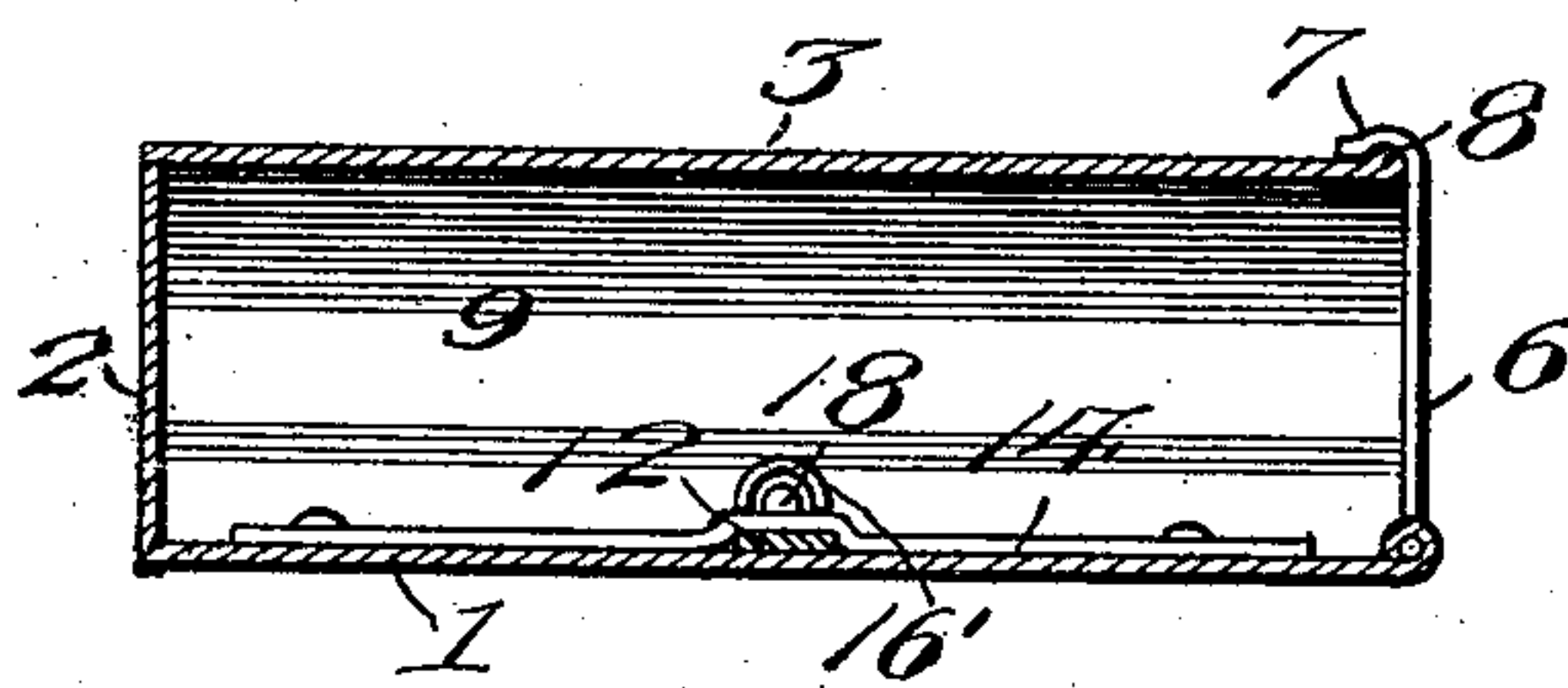


Fig. 6.

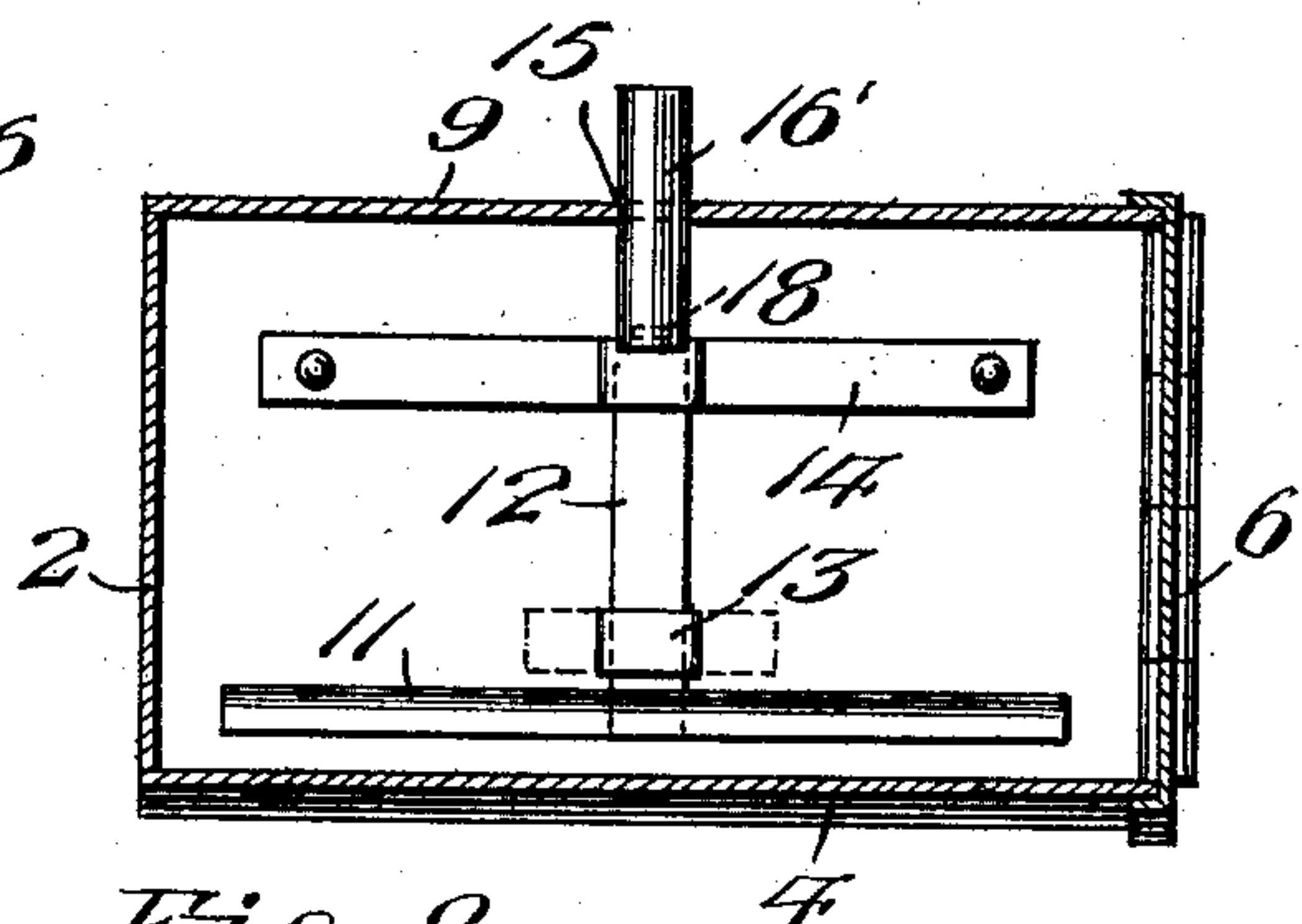


Fig. 7.

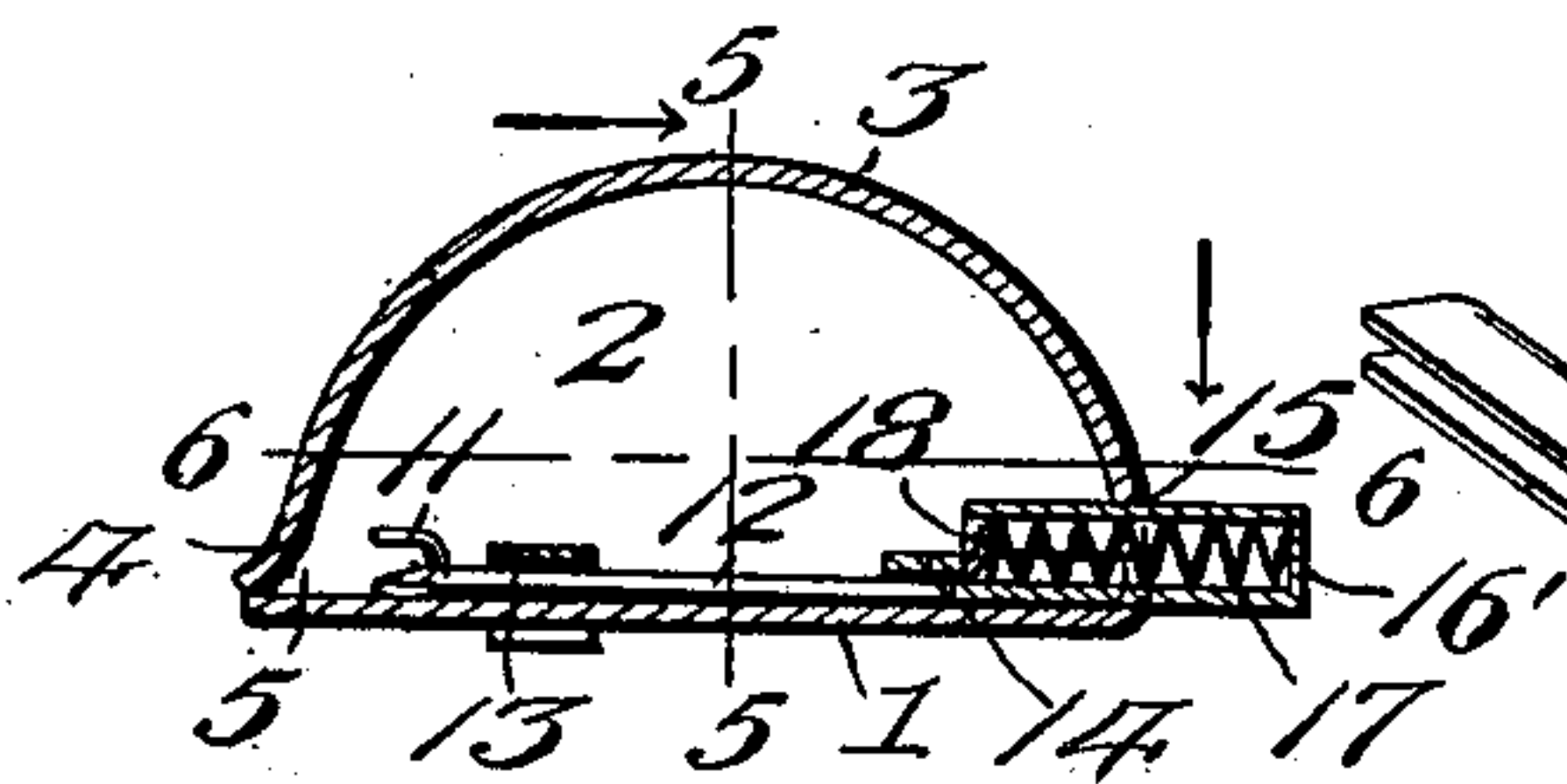
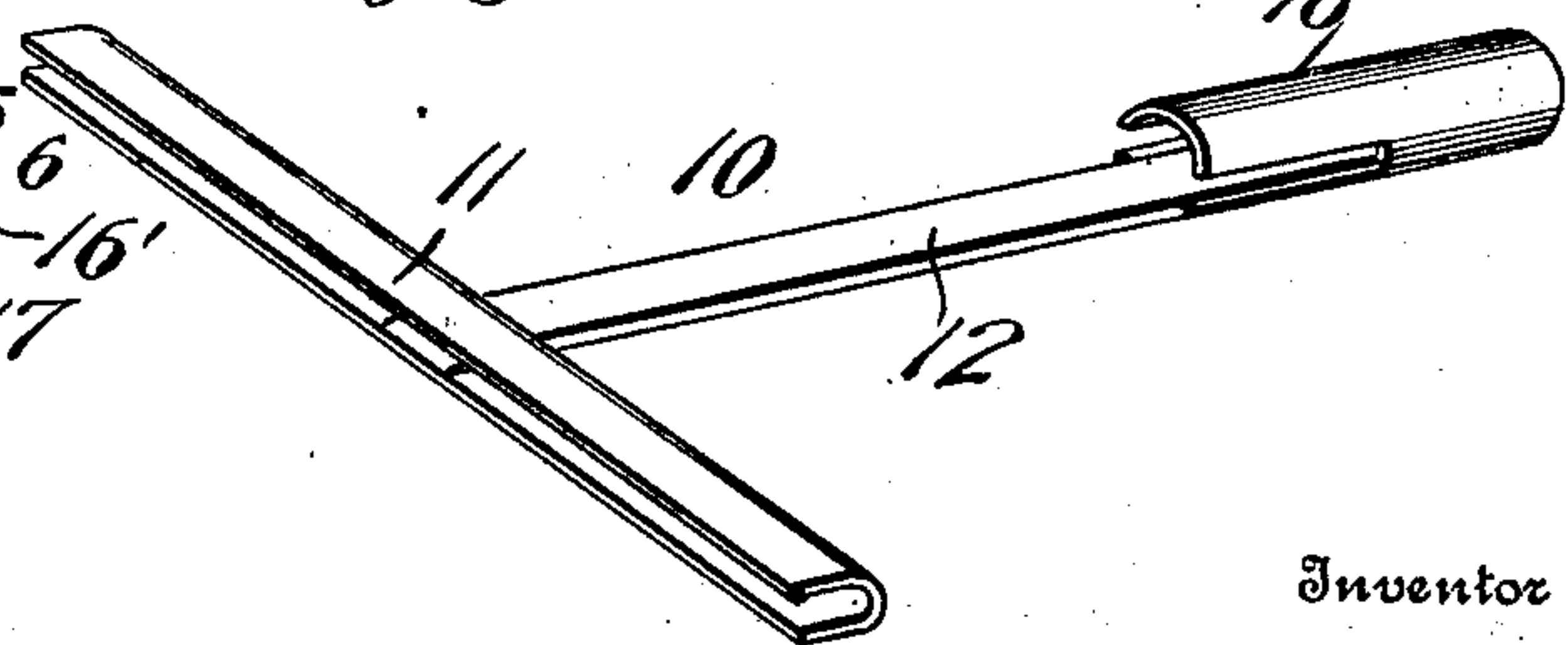


Fig. 8.



Inventor

George A. Demo

Witnesses

Frank B. Hoffman

C. C. Ames

By

Victor J. Evans

Attorney

UNITED STATES PATENT OFFICE.

GEORGE ALBERT DEMO, OF DULUTH, MINNESOTA.

MATCH-BOX.

No. 828,094.

Specification of Letters Patent.

Patented Aug. 7, 1906.

Application filed March 24, 1906. Serial No. 307,890.

To all whom it may concern:

Be it known that I, GEORGE ALBERT DEMO, a citizen of the United States, residing at Duluth, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Match-Boxes, of which the following is a specification.

This invention relates to improvements in match-boxes, and particularly to boxes of that type having ejecting means for delivering a single match at a time, the object of the invention being to provide a box of this character which is simple in construction, durable in use, effective in operation, and adapted to be inexpensively produced.

In the accompanying drawings, Figure 1 is a vertical longitudinal section of a match-box embodying my invention, the section being taken on the line 1 1 of Fig. 3. Fig. 2 is a horizontal section on line 2 2 of Fig. 3. Fig. 3 is a vertical cross-section on line 3 3 of Fig. 1. Fig. 4 is a detail view of the match-ejector. Figs. 5, 6, 7, and 8 are views similar to the preceding views, showing a modified construction.

The body of the box is preferably constructed of a single piece of spring sheet metal formed from a proper blank; but the portions thereof may be separately made and connected in any preferred manner. It comprises a bottom wall 1, an end wall 2, and a top wall 3, the wall 2 being preferably integral with and bent up from one end of the wall 1 and the wall 3 integral with and bent up from one of the side edges of the wall 1. As shown, the top wall 3 is approximately of semicircular form and forms the top and side walls of the box. The rear half of the wall 3 may be suitably connected at one end with the wall 2; but the forward portion of the said wall 3 is left unsecured and is outwardly bent or curved at its free edge, as at 4, to rest upon the adjacent free edge of the wall 1. The part 4 of the wall 3 forms a spring-closure for an ejection-opening 5, formed between the same and the free edge of the wall 1, the said part 4 being adapted to be forced open under pressure for the discharge of a match through the opening 5 and to then return, through its own resiliency, to normal position and close the opening 5. A hinged lid 6 normally closes the open end of the box and is formed with a spring-lip 7 to interlock with the shoulder 8 on the wall 3. The approximately semicircular space formed be-

tween the walls of the body provides a magazine 9, adapted to be filled with matches through the open end of the box closed by the lid 6.

The matches are designed to be singly discharged from the magazine through the medium of a reciprocating ejector 10, comprising a channeled head or strip 11 of proper size to receive a single match, said strip being secured to a plunger or shank 12, arranged to slide in guides 13 and 14 across the wall 1. The free end of the plunger or shank slides in an opening 15, formed in the fixed side of the wall 3, and is provided with an exposed finger-piece 16. The guides 13 and 14 may be of any preferred construction; but, as shown, the guide 13 consists of a looped strip or staple having its arms passed through slits in the wall 1 and clenched against the outer surface thereof, while the guide 14 consists of a strip terminally secured upon the inner surface of said wall and centrally offset to form the guide portion.

The ejector-head 11 normally lies in the position shown in Fig. 3, with sufficient space between the same and the closure 4 to permit of the feed of a single match by gravity through said space to a position in advance of the head. When the finger-piece 16 is forced forwardly, the head 11 engages the match and forces the closure 4 outwardly, thus ejecting the match. Upon retracting the ejector the closure 4 will be released and will automatically close the outlet 5.

In the modification shown in Figs. 5 to 8, inclusive, the finger-piece 16' upon the plunger is in the form of a socket, within which is arranged a coil-spring 17, bearing at one end against the outer end wall of the socket and at its inner end against a shoulder 18, formed upon the guide member 14. This spring is compressed and upon the release of the plunger expands and returns the ejector to normal position.

It will be observed that the box is simple in construction, may be manufactured at a low cost, and will feed but a single match at a time.

Having thus described the invention, what is claimed as new is—

1. A match-box having opposing walls, one of the walls having a free edge forming a closure adapted to normally remain in closed position by the inherent spring action thereof, and an ejector arranged to exert pressure

upon said closure to force it open for the discharge of a match.

2. A match-box comprising a flat base-wall, an end wall, and a semicircular top wall, said top wall being connected at one of its side edges with the base-wall and having its opposite edge free to form a spring-closure, a cover for the other end of the box, and an ejector slidably mounted upon the base-wall and adapted when actuated to force the closure open.

3. A match-box having a flat base-wall and a semicircular top wall, said top wall being connected at one of its side edges with the base-wall and having its opposite edge free to form a spring-closure, closures for the ends of the reservoir formed by said walls, and an

ejector within the reservoir operative to force the spring-closure open.

4. A match-box provided with an education - opening, a spring-closure therefor, guides on the interior of the box, a plunger slidable in said guides and provided with a socket slotted to engage one of the guides, an ejecting-head carried by the plunger, and a coiled spring arranged within said socket and bearing at its opposite ends against said socket and the adjacent guide.

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

GEORGE ALBERT DEMO.

Witnesses:

WM. E. ZUCK,

R. G. MALCOLM.