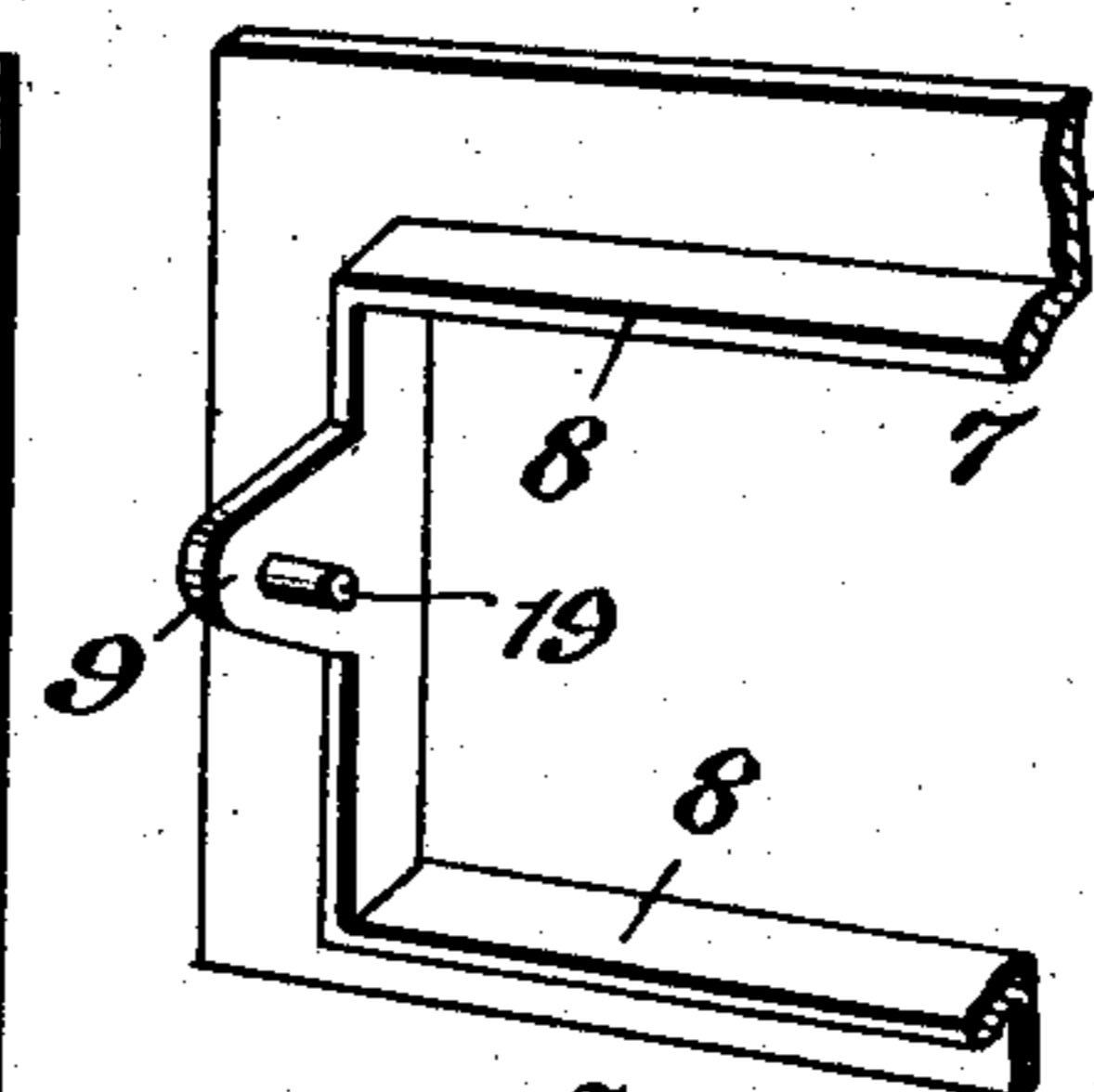
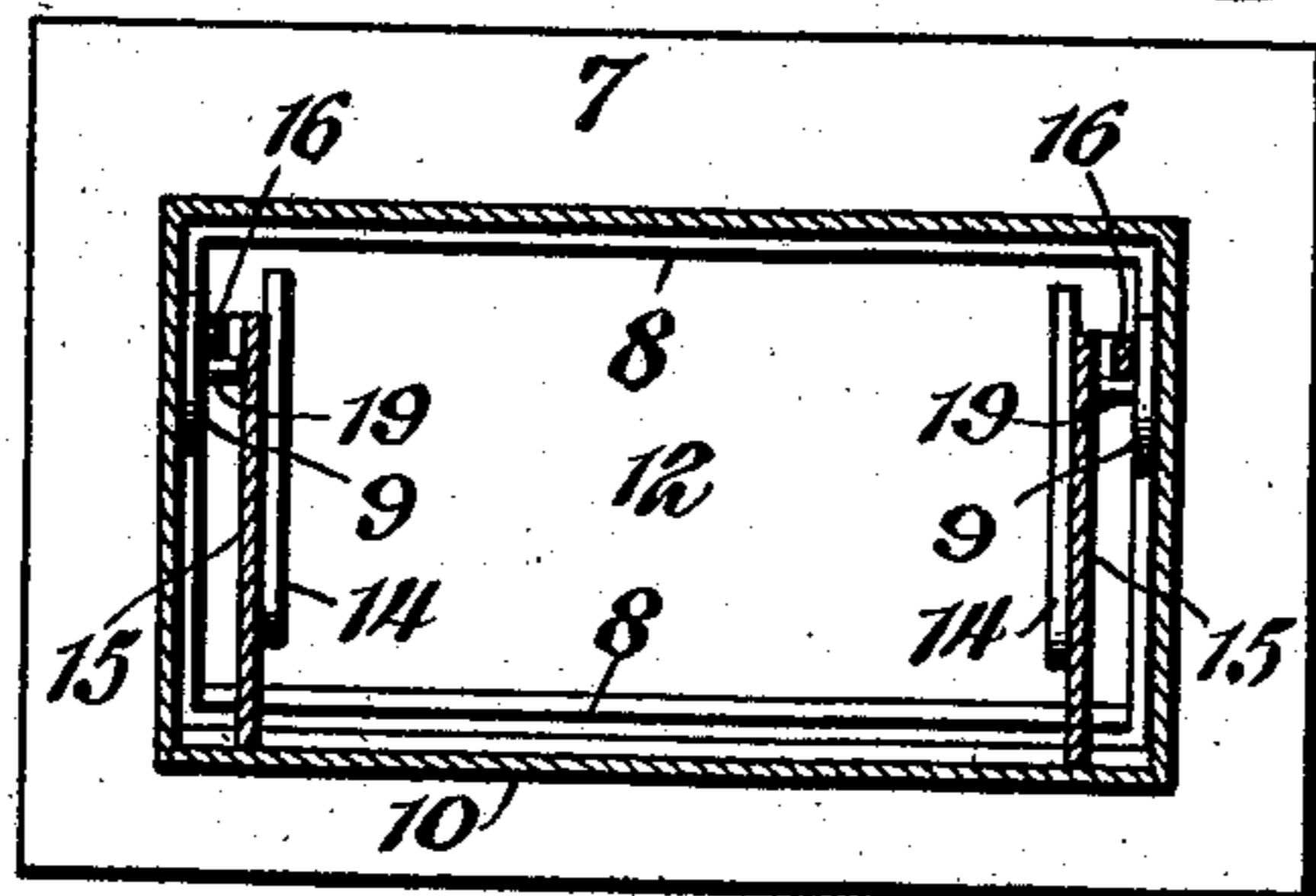
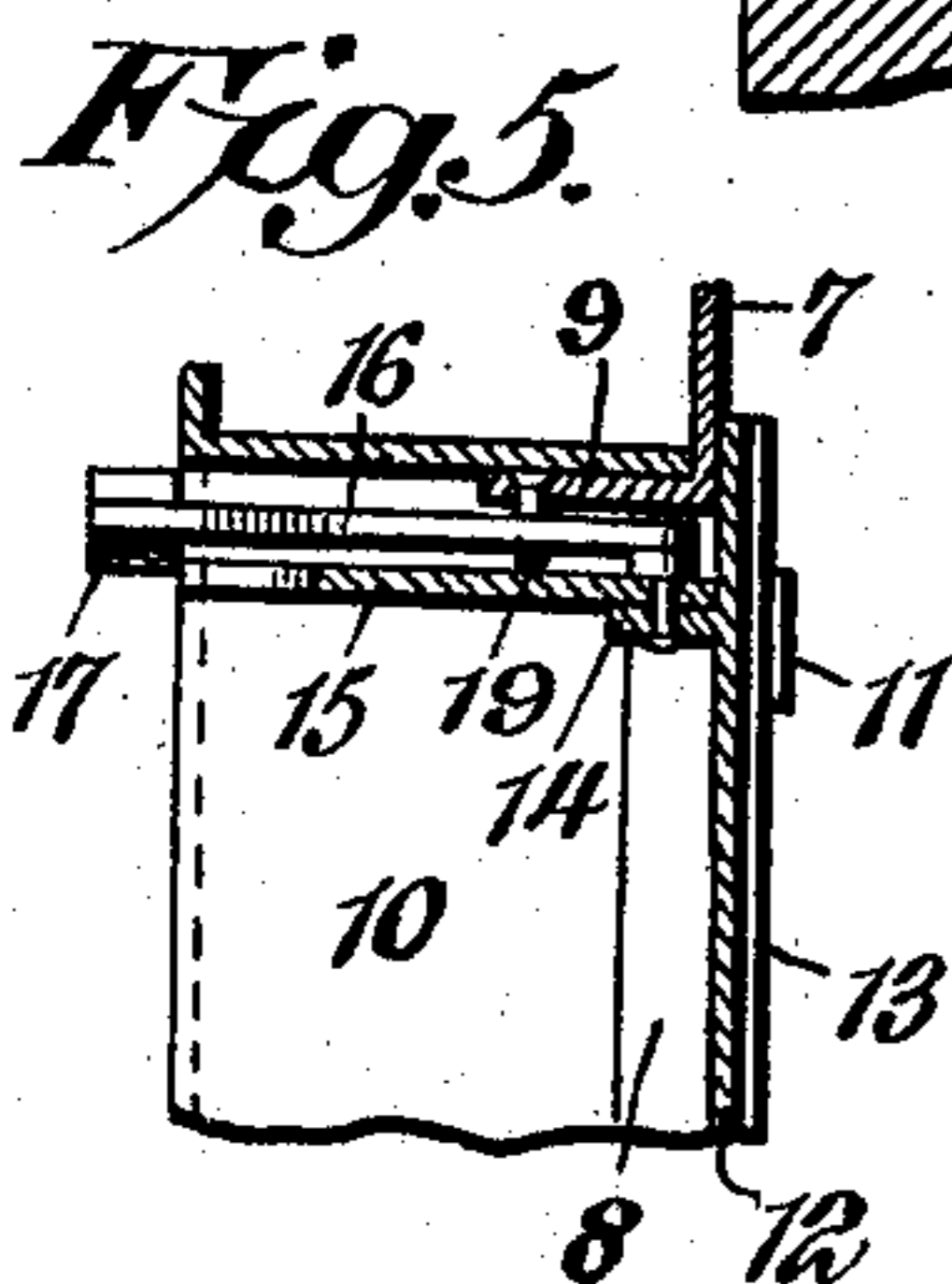
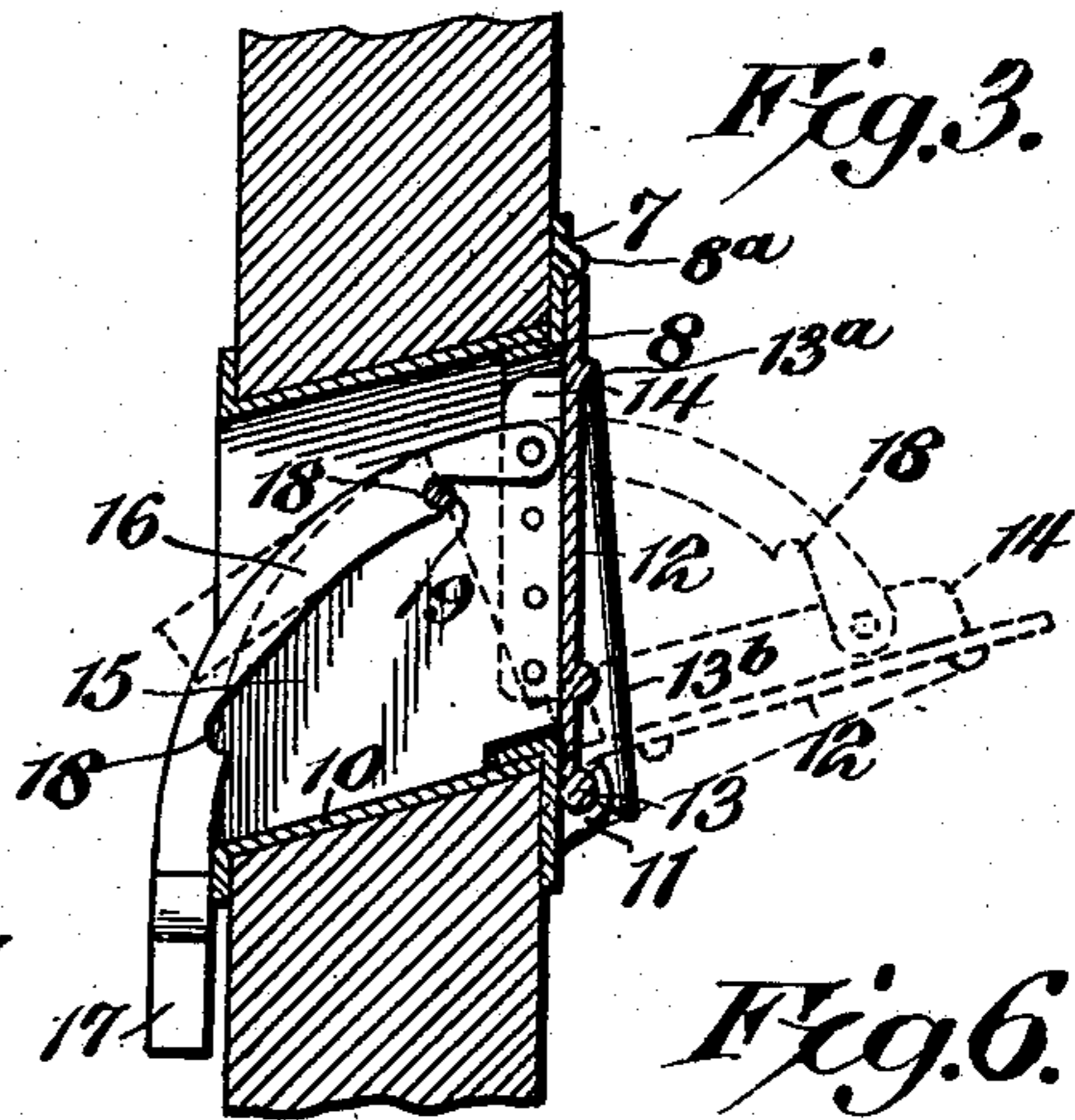
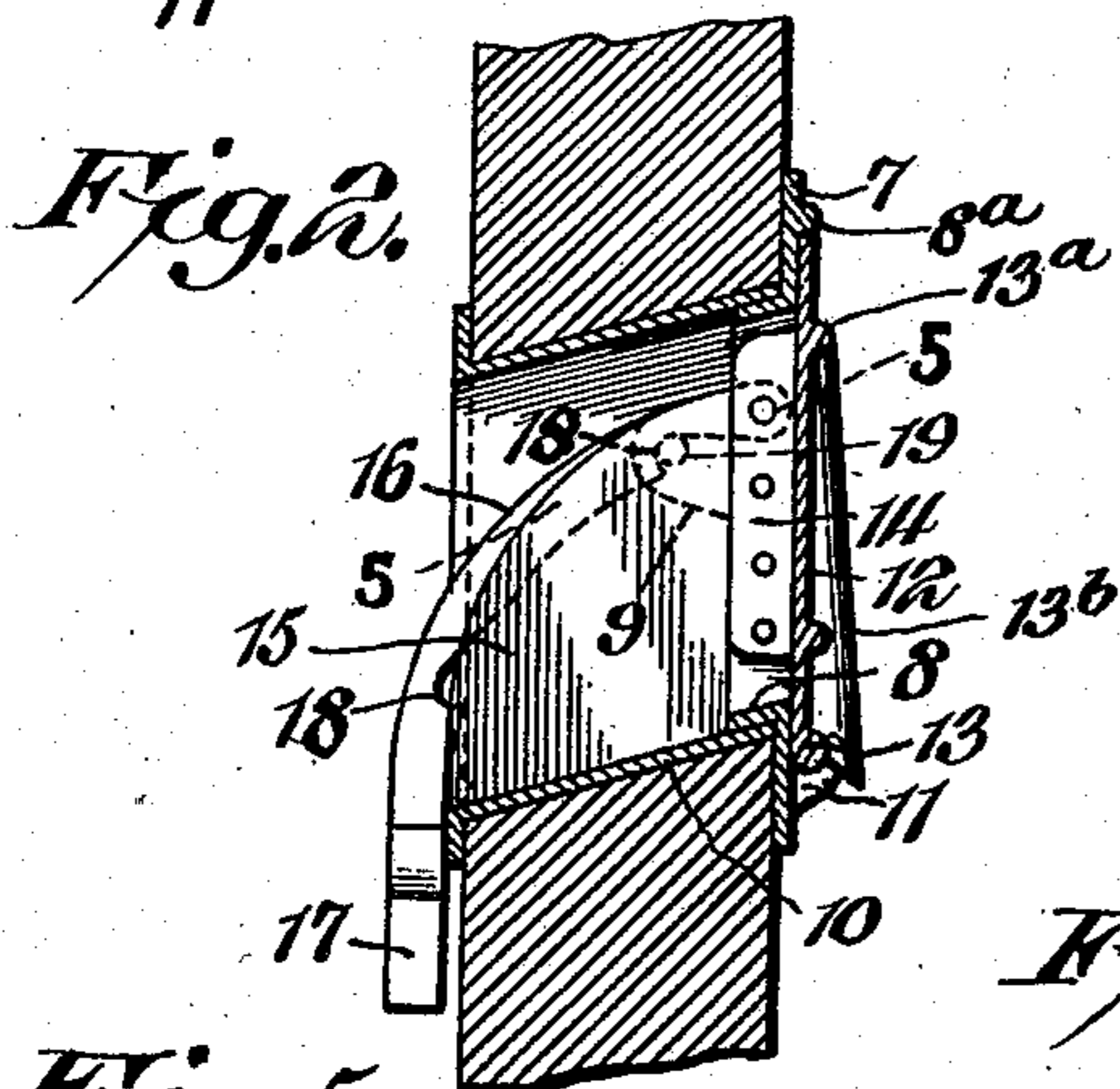
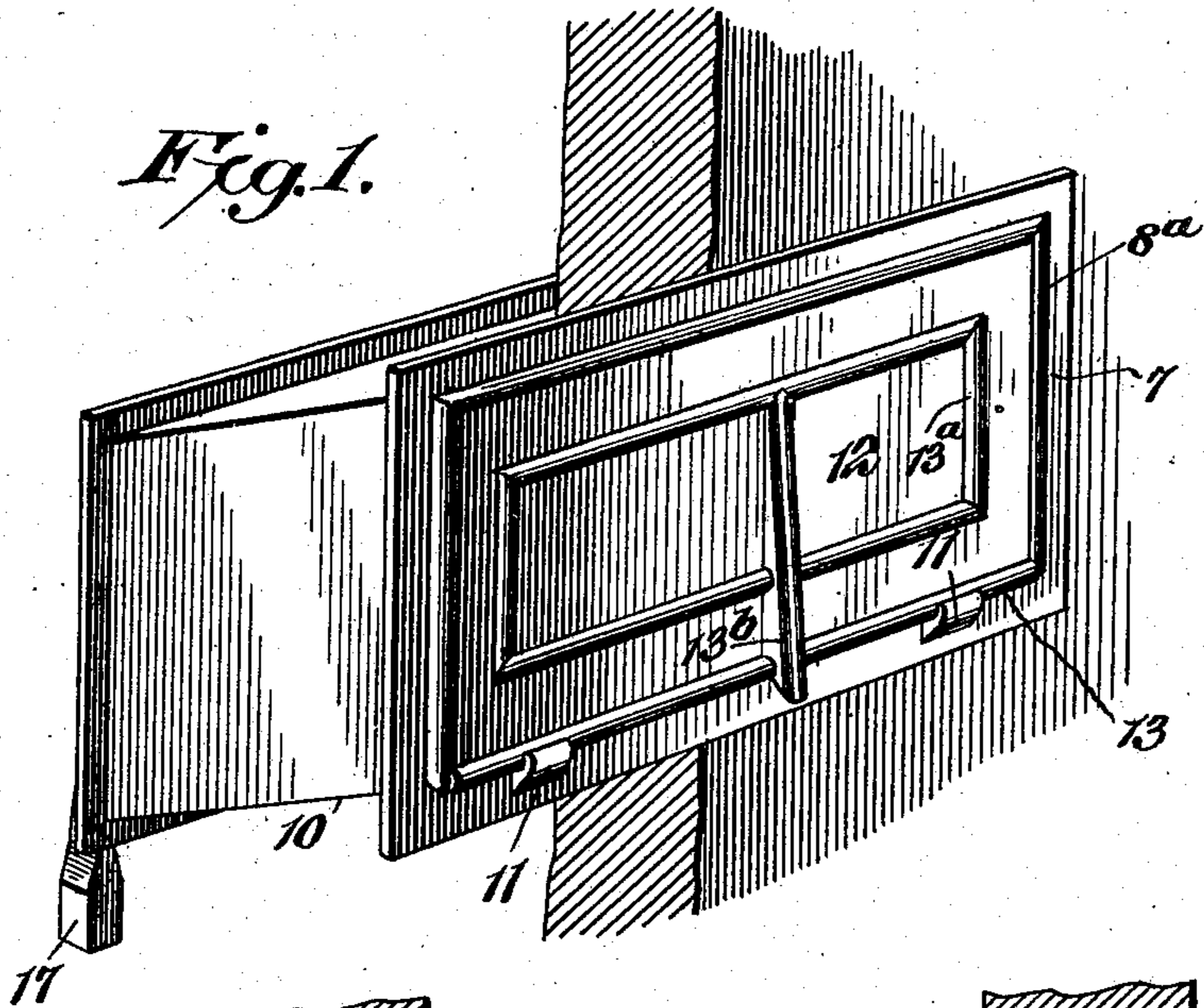


No. 867,165.

PATENTED SEPT. 24, 1907.

C. H. SHULTZ.  
CHUTE.

APPLICATION FILED MAR. 15, 1907.



Witnesses  
Howard D. Orr.  
Bl. J. Orr.

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Attorney

# UNITED STATES PATENT OFFICE.

CHARLES H. SHULTZ, OF ST. JOSEPH, MISSOURI.

## CHUTE.

No. 867,165.

Specification of Letters Patent.

Patented Sept. 24, 1907.

Application filed March 15, 1907. Serial No. 362,501.

*To all whom it may concern:*

Be it known that I, CHARLES H. SHULTZ, a citizen of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented a new and useful Chute, of which the following is a specification.

This invention relates to chutes that are placed in the walls of buildings and the like for directing material therethrough, and more particularly as of the type disclosed in co-pending application, Serial No. 362,500.

The principal object of the present invention is to provide novel locking and actuating means for the closure, said means being readily operable from the inner end of the chute, and being so constructed and arranged that the closure cannot be operated from the outside.

The preferred embodiment of the invention is illustrated in the accompanying drawings, wherein:—

Figure 1 is a perspective view of the chute, showing the same in place in a wall, said wall being partially in section. Fig. 2 is a vertical sectional view therethrough, showing the closure in its closed position. Fig. 3 is also a sectional view with the end wall removed. Fig. 4 is a vertical longitudinal sectional view. Fig. 5 is a detail view on the line 5—5 of Fig. 2. Fig. 6 is a detail view of the outer frame.

Similar reference numerals designate corresponding parts in all the figures of the drawings.

In the embodiment disclosed, an outer frame 7 of cast iron or other suitable material is employed, and is provided with rearwardly extending flanges 8, the end flanges having ears 9. The outer face of the frame has a rib 8<sup>a</sup>. Riveted or otherwise secured to these flanges is a casing 10 of sheet metal that is arranged to be placed within a wall, and is disposed at an inclination with respect to the outer frame.

The outer frame is provided on its outer side and contiguous to its lower edge with upstanding hooks 11, and a closure in the form of a plate 12, has a rib 13 along its lower edge that is detachably journaled in said hooks. The outer face of the closure is also provided with ribs 13<sup>a</sup> and a central tapered brace 13<sup>b</sup>, the lower end of which abuts against the frame 7 when the closure is in opened position, thereby constituting a stop. The closure is provided on its rear side with flanges 14 and to the same are riveted or otherwise secured side walls 15 that operate within the casing and serve to constitute a continuation of the chute when the closure is in its outermost position.

Pivoted to the flanges 14 are curved actuating links 16 that project through the casing, and preferably have their inner ends weighted, as shown at 17. These links are disposed between the walls 15 and the end walls of the casing, and they are provided in their under sides with notches 18. The rearwardly extending ears

9 of the frame 7 are provided with studs 19 that are also disposed between the walls 15 and the end walls of the casing, and said studs are arranged to engage in the notches 18 accordingly as the closure is placed in its inner or outer positions, as shown in Fig. 3. With this structure, it will be evident that when the plate 12 is in its closed position across the outer end of the casing, the studs 19 will be in the outer notches of the links, and consequently the closure will be securely locked. To open the chute, it is only necessary to raise the links slightly, whereupon the pins will be disengaged therefrom, and the closure can be swung to outer position in which position, the studs will engage in the inner notches and maintain the closure in substantial alinement with the bottom of the casing, as indicated in dotted lines in Fig. 3. It will thus be seen that simple means are provided for securing as well as actuating the closure, and this means being disposed outside the side walls of the closure, is entirely out of the way, so that it will not be struck or injured by material passed through the chute.

From the foregoing, it is thought that the construction, operation, and many advantages of the herein described invention will be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

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

1. In a chute of the character described, the combination with a casing, of a swinging closure therefor, an operating device pivoted to the closure and projecting within the casing, and means mounted in the casing and engaging the operating device to hold it against movement and thereby lock the closure.
2. In a chute of the character described, the combination with a casing, of a swinging closure therefor, a locking stud, and an operating device pivoted to the closure and projecting within the casing, said device having a notch that receives the stud and thereby locks the closure.
3. In a chute of the character described, the combination with a casing, of a swinging closure pivoted to the lower portion of the outer end of the casing, a stud projecting within the casing, and a link pivoted to the closure and extending through the casing, said link having notches that receive the stud to maintain the closure in its closed and open positions.
4. In a chute of the character described, the combination with an outer frame having rearwardly extending ears, of a casing secured to the frame, studs carried by the ears and projecting within the casing, a closure for the casing hinged to the frame, and an operating link pivoted to the closure and projecting through the casing, said link having notches that receive the stud.
5. In a chute of the character described, the combination with a casing, of a movable closure therefor having side walls operating in the casing, and actuating and lock-

ing means connected to the closure and disposed between the side and casing walls.

6. In a chute of the character described, the combination with a frame having a casing, of a swinging closure  
5 pivoted thereto and having rearwardly projecting side walls operating within the casing, a stud carried by the frame and interposed between the same and one of the side walls, and a link pivoted to the closure and extending between said side wall and the casing, said link pro-

jecting through the casing and having notches to receive 10 the stud.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

CHARLES H. SHULTZ.

Witnesses:

W. P. GRAHAM,  
HORACE STRINGFELLOW.