

905,064.

Patented Nov. 24, 1908.

Fig. 1.

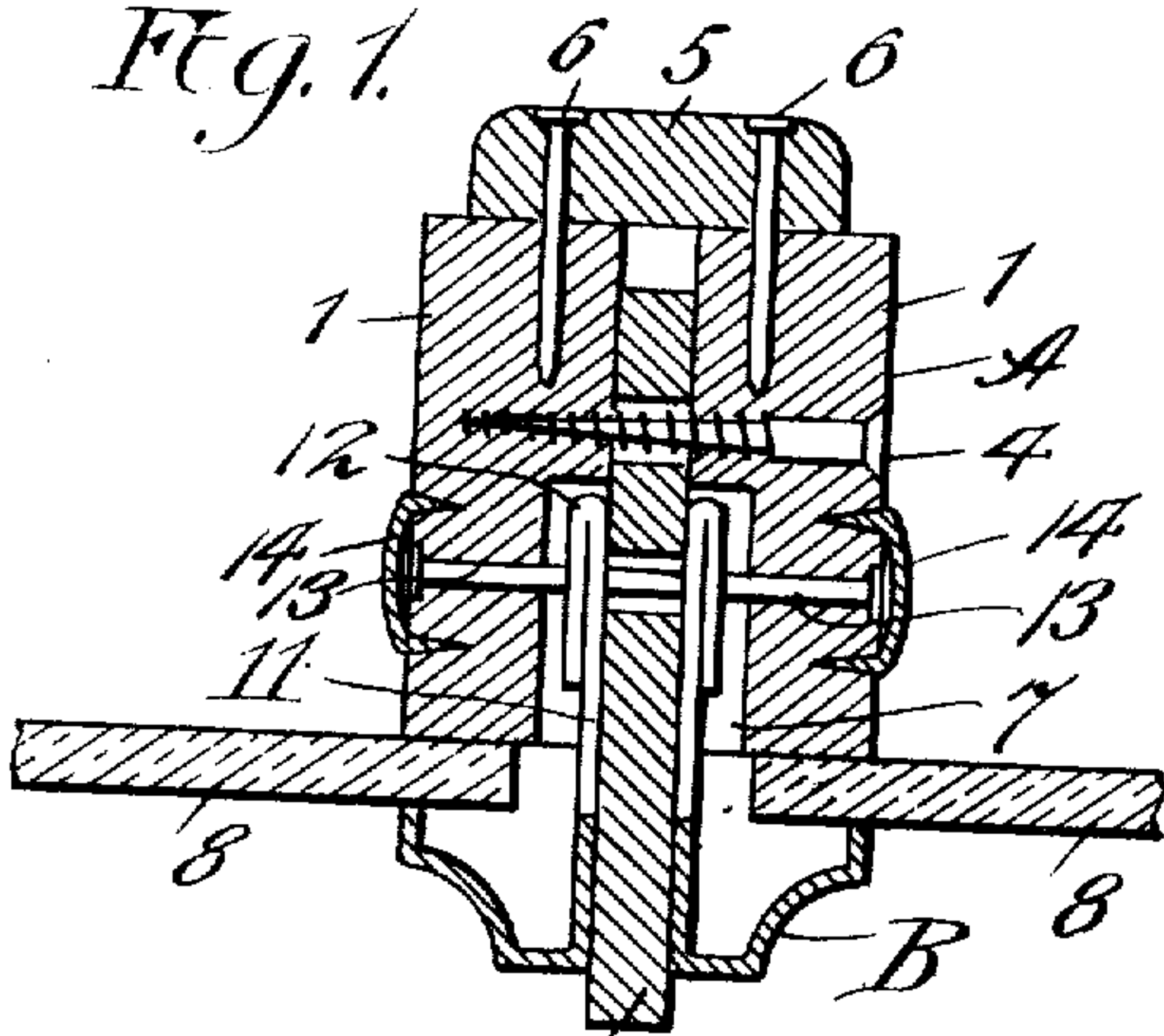


Fig. 2.

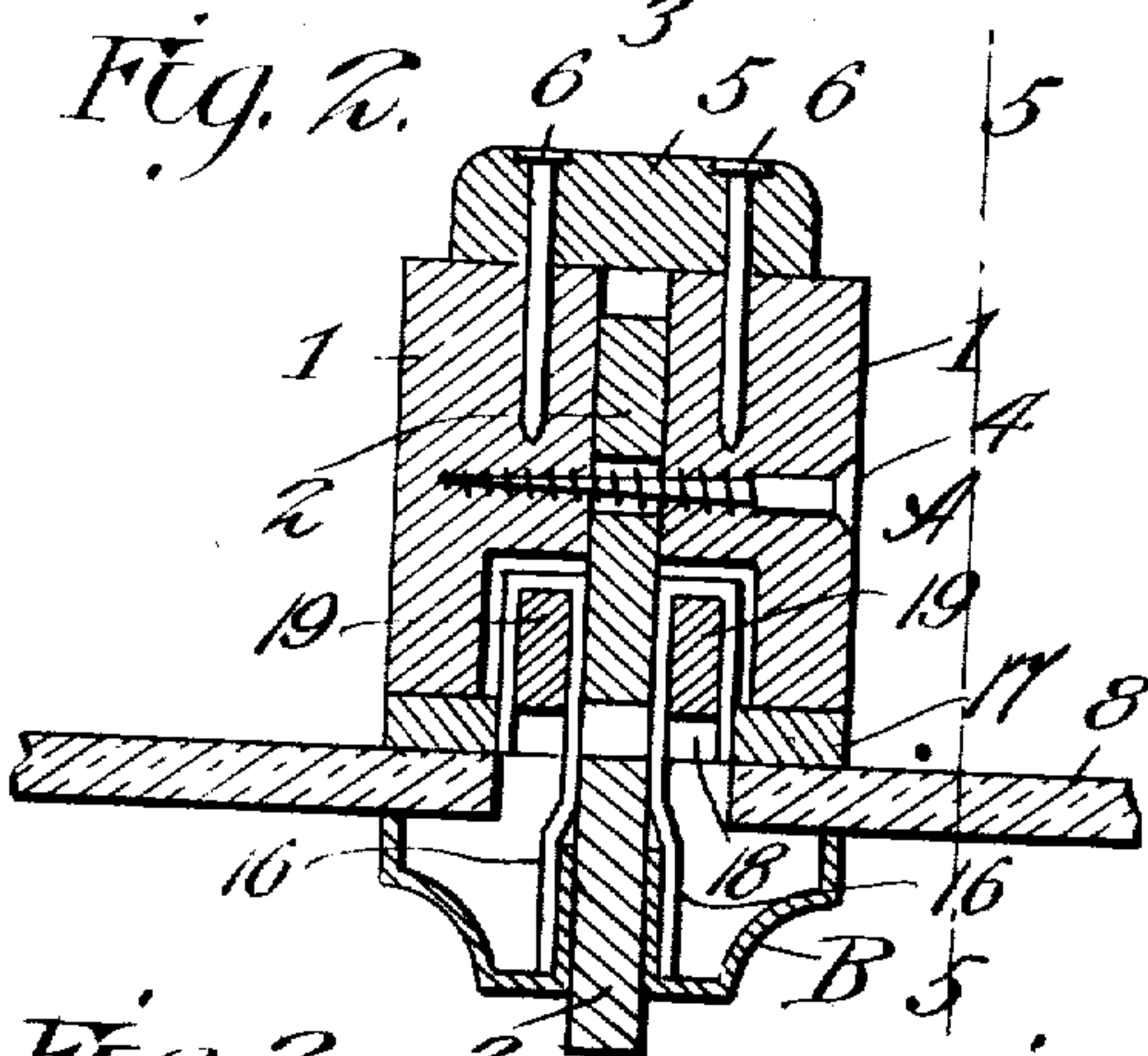


Fig. 3.

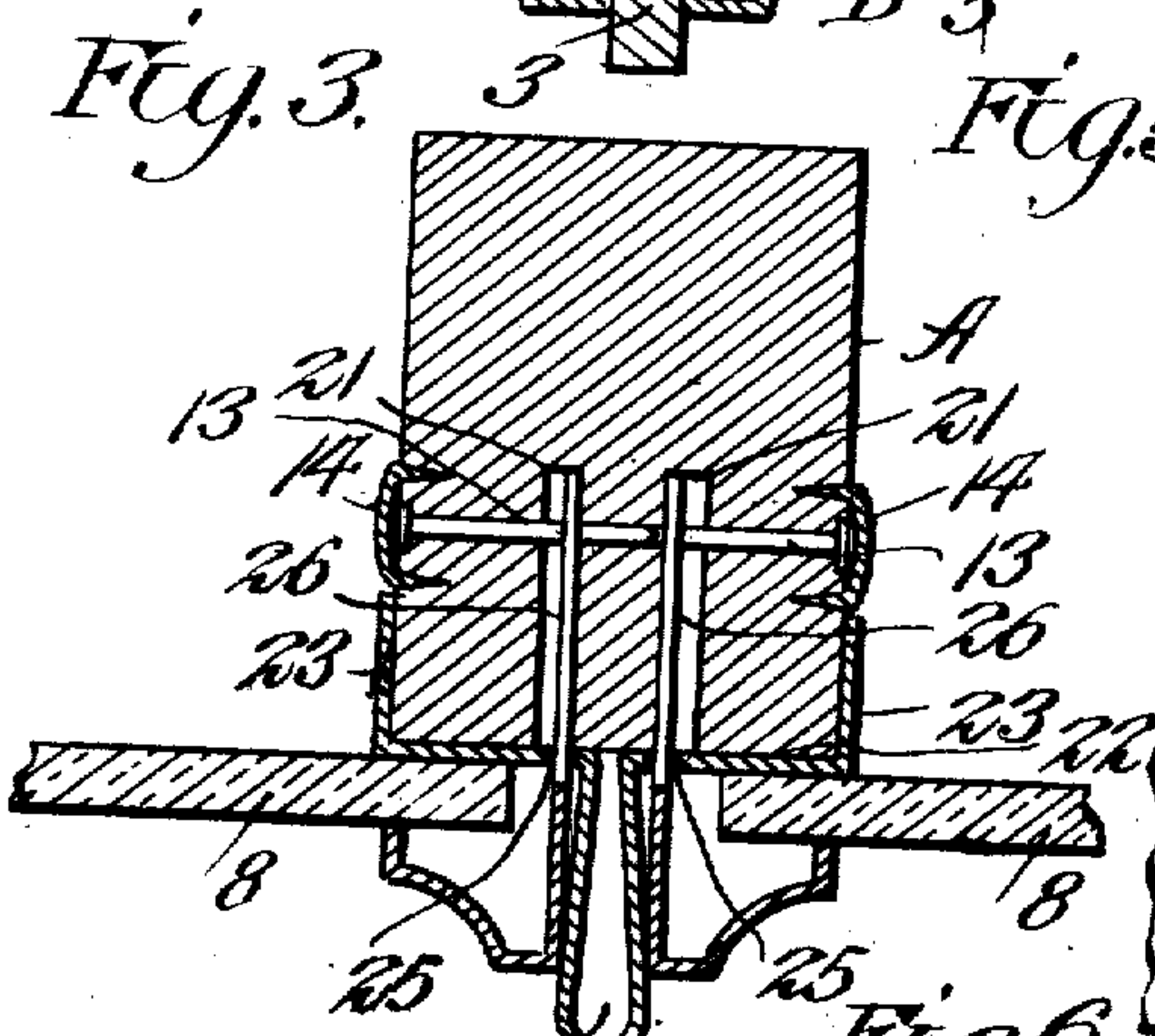


Fig. 5.

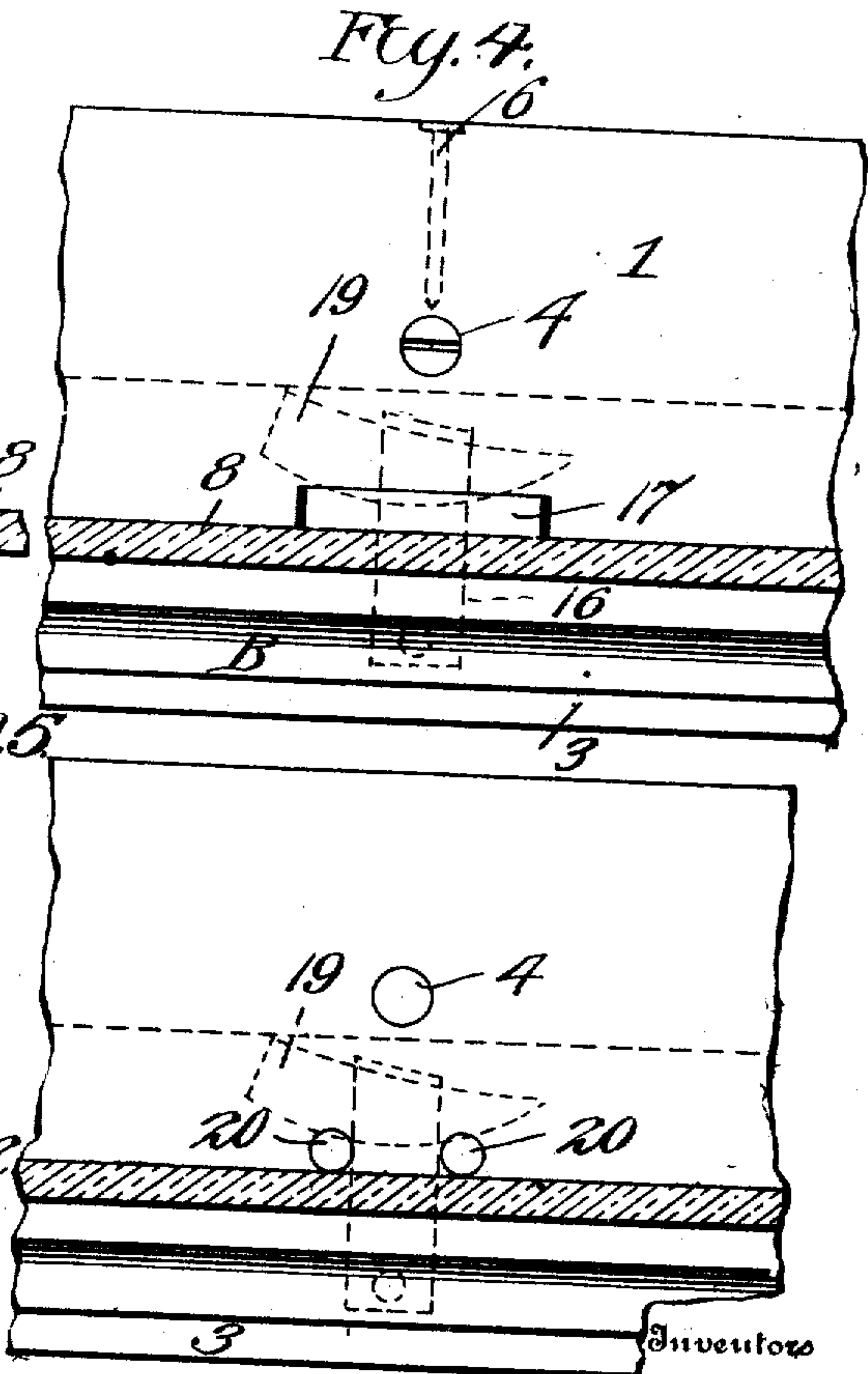
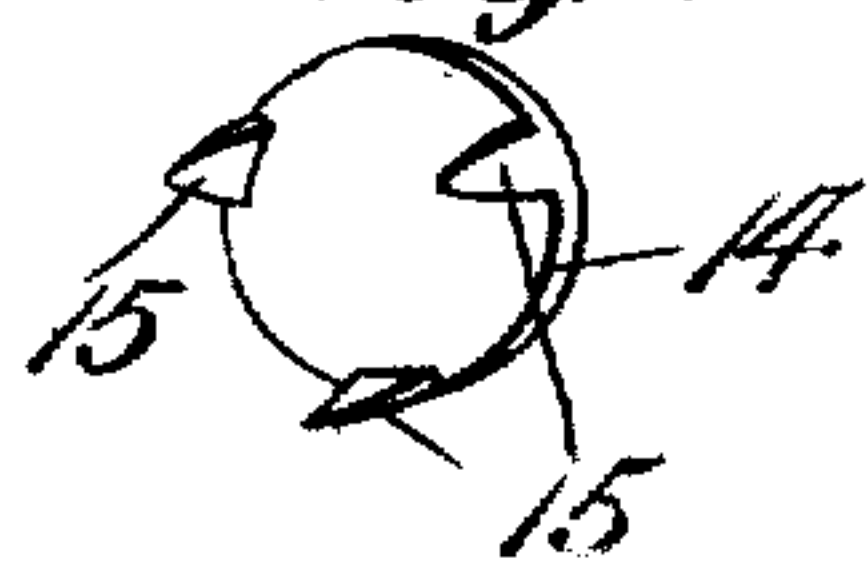


Fig. 6.



Witnesses  
Edmund  
W. Baggett

Robert C. Fingal  
Thomas Fabrin

By Victor J. Evans  
Attorney



# UNITED STATES PATENT OFFICE.

ROBERT C. FINGAL AND THOMAS FABRIN, OF AURORA, ILLINOIS.

## WINDOW-SASH.

No. 905,064.

Specification of Letters Patent.

Patented Nov. 24, 1908.

Application filed February 14, 1907. Serial No. 357,303.

*To all whom it may concern:*

Be it known that we, ROBERT C. FINGAL and THOMAS FABRIN, citizens of the United States, residing at Aurora, in the county of Kane and State of Illinois, have invented new and useful Improvements in Window-Sashes, of which the following is a specification.

This invention relates to an improved device for securing glass in window sashes and in other places where glass is to be mounted; and it has for its object to provide a simple and efficient device of this character by the use of which glass of all descriptions, whether light or heavy, such as plate glass or wire glass, may be secured in a rapid and thoroughly efficient manner, and also in such a way as to permit the glass to be readily removed, when desired, without danger of breakage.

Further objects of the invention are to simplify and improve the construction and operation of this class of devices.

With these and other ends in view, which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will hereinafter fully be described and particularly pointed out in the claims.

In the accompanying drawings there have been illustrated several simple and preferred forms of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawings:—Figure 1 is a transverse sectional view taken through one of the rails or stile of a sash frame, illustrating one form of the invention. Fig. 2 is a similar view illustrating a modified form of the invention. Fig. 3 is a similar view illustrating another modification. Fig. 4 is a sectional view taken on the plane indicated by the line 5—5 in Fig. 2, the section being laid through the glass and the sash frame member being shown in elevation. Fig. 5 is a view similar to Fig. 4 but illustrating a slight modification. Fig. 6 is a detail view in perspective of a nail-protecting cap or covering device, used in connection with the present invention.

Corresponding parts in the several figures are denoted by like characters of reference.

In the several figures of the drawing, A designates a frame bar which may represent a rail or stile of a window sash, or which may be a portion of any frame or structure to which glass is to be applied.

In Figs. 1 and 2 the bar A is composed of two facing strips 1—1 spaced apart by an interposed center strip 2, of metal, which projects at one side so as to form a rib 3; the strips 1—1 are connected by screws or fastening members 4 extending through the center strip; and they are additionally connected by means of a cleat 5 which is fastened upon the facing strips by means of nails 6 or in any other suitable manner; said cleat being obviously secured upon the side of the bar A opposite to the projecting rib 3. The strips 1—1 are rabbeted or provided with recesses 7 adjacent to the rib 3, forming parallel grooves at opposite sides of the center strip and projecting rib.

The glass 8 will be supported directly upon the faces of the strips 1, adjacent to the rib 3, as in Fig. 1. The glass is retained in position by means of moldings, generically designated B, which said moldings are preferably made of metal, such as brass, bronze or the like, although other material may be substituted. In the preferred forms of the invention, however, the said moldings are stamped or pressed from sheet metal, for the reason that by this construction a high degree of efficiency is attained at a moderate expense.

In the construction shown in Fig. 1 the moldings B are provided with anchoring extensions 11, projecting into the grooves or recesses 7 adjacent to the center strip 2, said extensions being preferably bent or doubled, as shown at 12, for the purpose of increasing the strength; the moldings are secured by nails or fastening members 13 driven through the extensions 11. Over the heads of the nails are placed protecting caps 14, shown in detail in Fig. 7 of the drawings. said caps being provided with prongs 15 that may be readily driven into the strips; these caps serve to lessen the liability of the nails or fastening members becoming loose or detached.

Under the construction shown in Fig. 2, the moldings B are provided with hook members 16 secured thereto by rivets or in



any other convenient manner, said hook members extending into the grooves 7. The faces of the strips 1 are provided with notches or recesses for the passage of lugs 17 on the center strip which are apertured, as shown at 18 for the passage of the hook members 16; the latter being secured within the recesses of the facing strips by means of wedges 19 which are preferably of the curved shape, clearly indicated in Figs. 5 and 6 of the drawings, where said wedges appear in dotted lines. These fastening devices may be used at suitable intervals, but they are placed sufficiently close together to insure the parts being securely united or assembled thereby.

The construction shown in Fig. 5 of the drawings entirely resembles that illustrated in Figs. 2 and 4 with the exception that in place of the apertured lug 17 a pair of lugs in the form of pins 20 are provided on the center strip and spaced apart to allow the extensions 11 to pass between them and receive the wedges 19. The lugs 17 and 20 form shoulders on the center strip against which the wedges bear to hold the molding strips in place.

In Fig. 3 of the drawings the frame member A consists of a solid body, the face of which is provided with kerfs or grooves 21; the corners of the rail, adjacent to the glass, are protected by a metallic division strip 22 having flanges 23 and bent or doubled to form an intermediate rib 24. The strip 22 is provided with slots 25 for the passage of the anchoring extensions, here designated 26, of the molding strips, B—B which serve to secure the glass, said extensions being in this instance secured, as in Fig. 1, by transverse fastening members 13, the heads of which are protected by caps 14.

The material of which the molding is constructed being yielding or resilient, it follows that the edges of said molding will bear yieldingly against the glass 8 interposed between said molding and the frame member. The glass will thus be held securely while the danger of breakage is reduced to a minimum.

It will be understood that the frame pieces 1 and cleat 5 are applied after the glass is fastened in place by the wedges 19 and pins 20 or lugs 17.

What is claimed, is:—

1. Means for securing the edge of a glass pane comprising, in combination, a frame bar having a lateral abutment and a rib projecting beyond the abutment, a pane holding strip provided with an extension crossing the plane of the abutment, and fastening means engaging said extension and operat-

ing to draw said strip toward the abutment to hold the pane between the strip and the abutment.

2. Means for securing the edge of glass panes, comprising, in combination, a frame bar having lateral abutments, pane holding strips provided with extensions crossing the planes of the abutments, and fastening means engaging said extensions and adapted to draw said strips toward the abutments to hold the panes between the strips and abutment.

3. Means for securing the edge of a glass pane, comprising, in combination, a frame bar having a lateral abutment and a rib projecting beyond the abutment, a pane holding strip provided with an extension crossing the plane of the abutment, and a wedge engaging said extension and operating to draw said strip toward the abutment to hold the pane between the strip and the abutments.

4. Means for securing the edge of a glass pane comprising, in combination, a frame bar having a lateral abutment and a rib projecting beyond the abutment, a pane holding strip provided with an extension crossing the plane of the abutment and embodying a hook, and fastening means engaging said hook and bearing against the abutment, operating to draw said strip toward the abutment to hold the pane between the strip and abutment.

5. Means for securing the edge of glass panes, comprising, in combination, a frame bar having lateral abutments and a rib projecting beyond the abutments and adapted to lie between the edges of the panes, pane holding strips provided with extensions crossing the plane of the abutments, and fastening means engaging said extensions and operating to draw said strips toward the abutments to hold the panes between the strips and abutments.

6. Means for securing the edges of glass panes, comprising, in combination, a frame bar having lateral abutments and a rib projecting beyond the plane of said abutments and the adjacent edges of the panes which bear against the abutments, pane holding strips having extensions crossing the plane of the abutments, and fasteners which engage said extensions and secure the same to the frame bar to one side of the plane of the panes and in rear of the abutments.

In testimony whereof, we affix our signatures in presence of two witnesses.

ROBERT C. FINGAL.  
THOMAS FABRIN.

Witnesses:

CHAS. A. LOVE,  
D. M. HUMISTON.