

No. 889,483.

PATENTED JUNE 2, 1908.

G. H. PARKER.
WINDOW SWINGING DEVICE.

APPLICATION FILED FEB. 2, 1906.

3 SHEETS—SHEET 1.

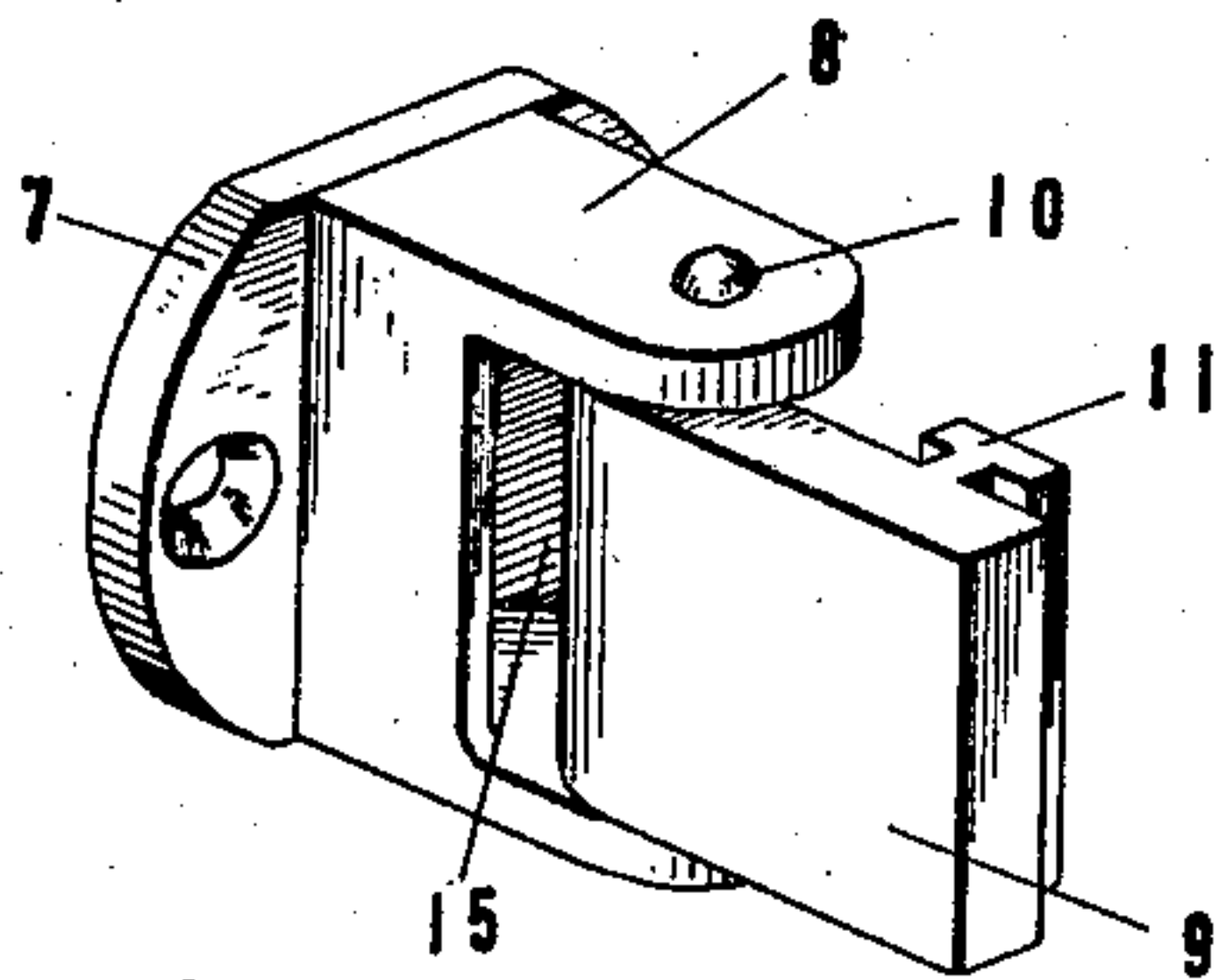


Fig. 1.

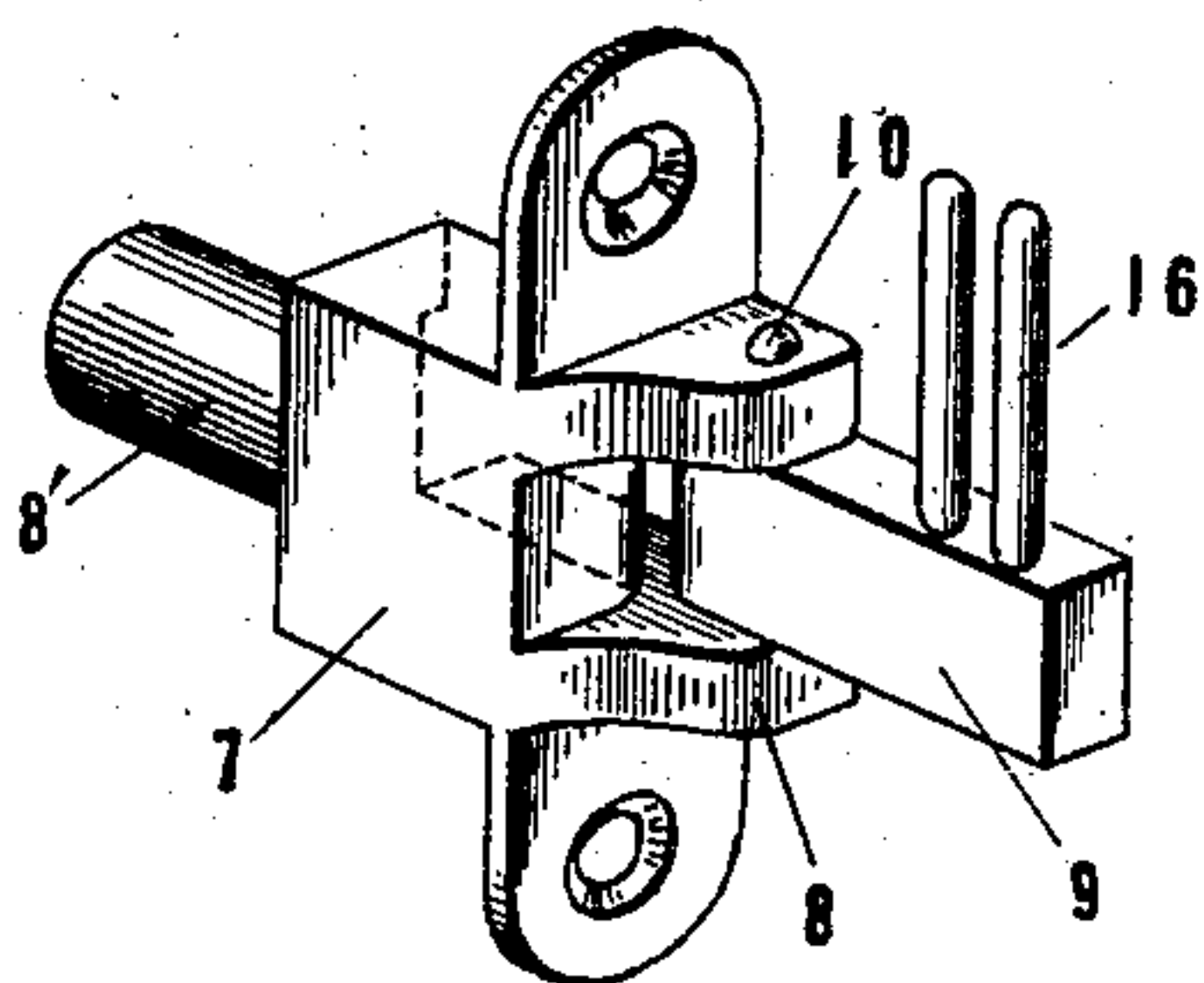


Fig. 3.

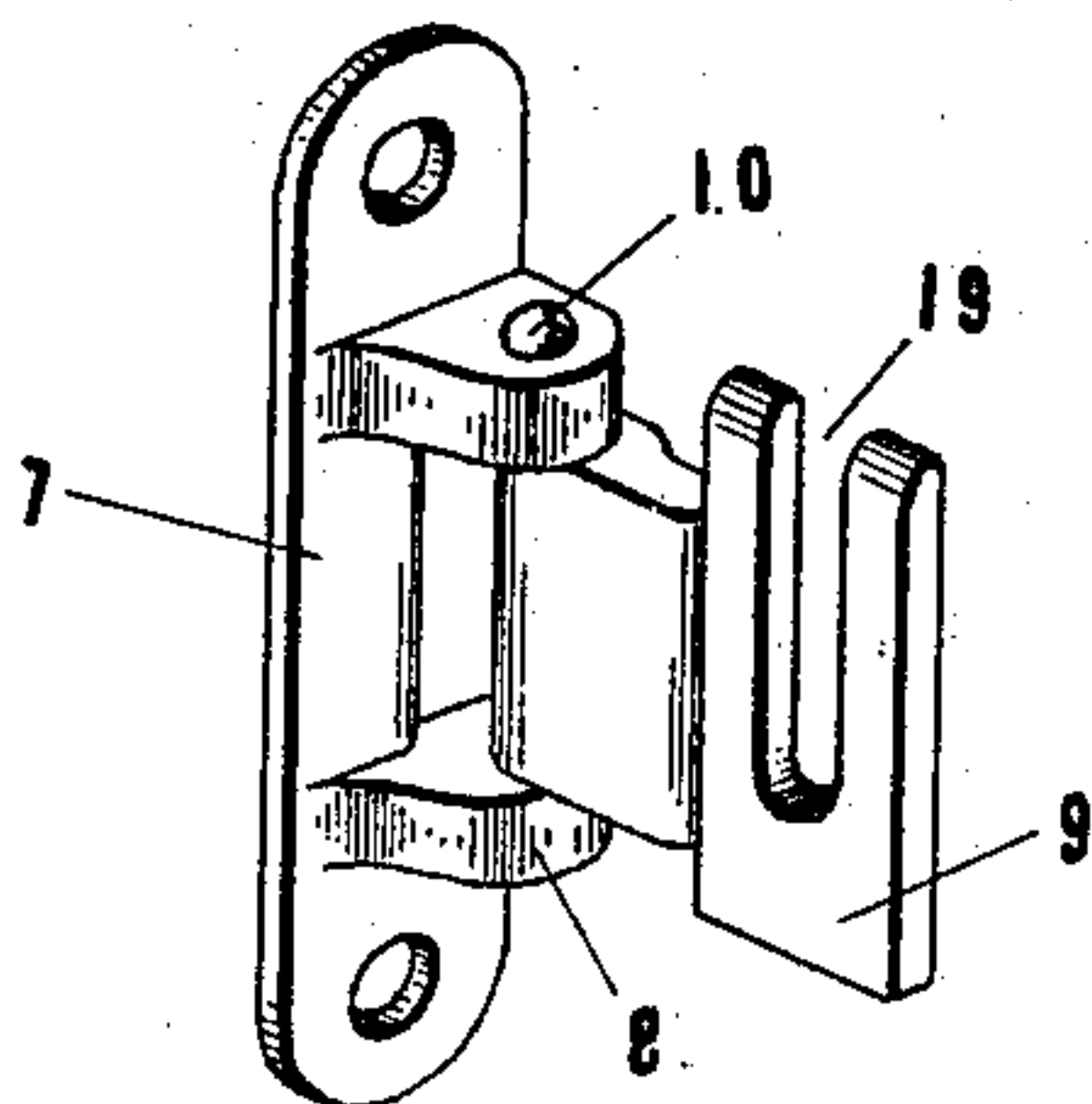


Fig. 5.

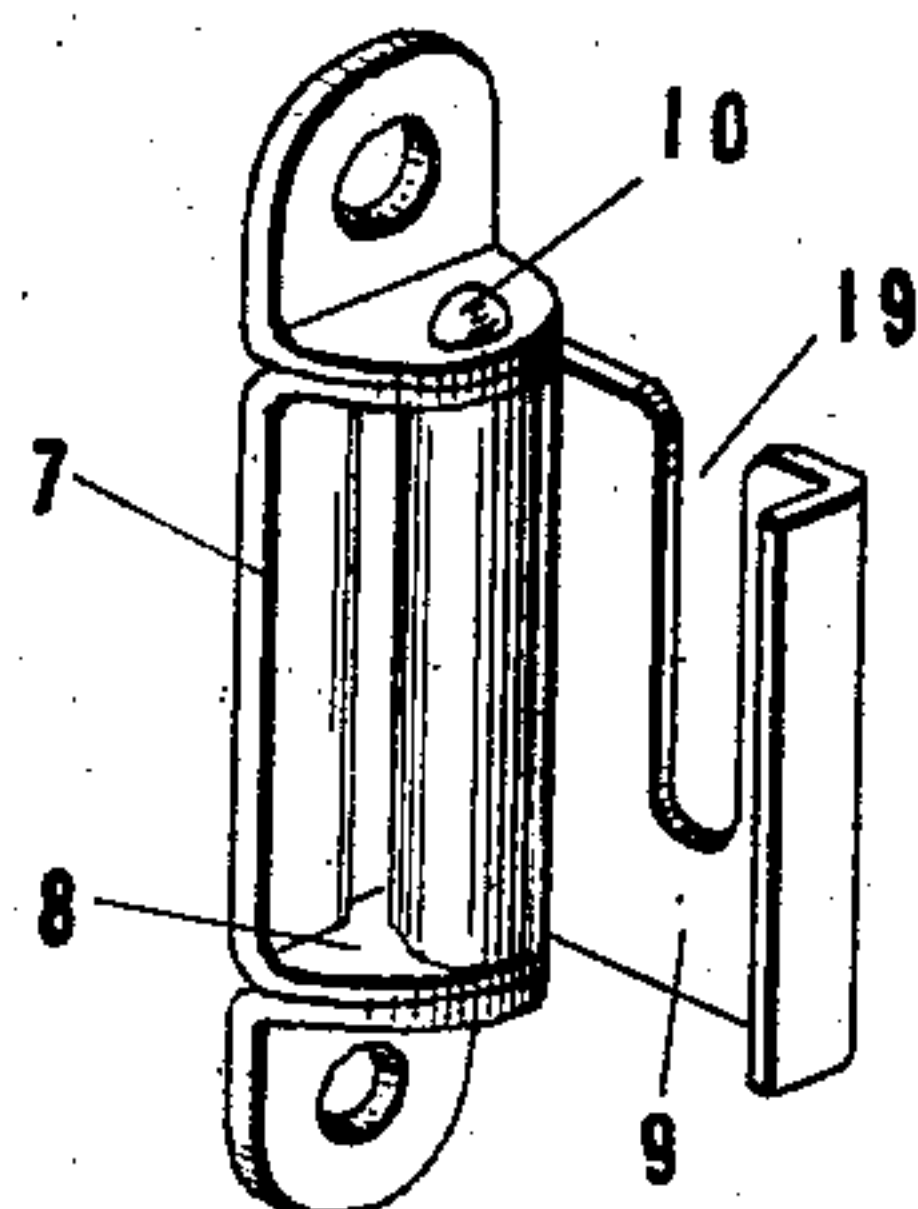


Fig. 6.

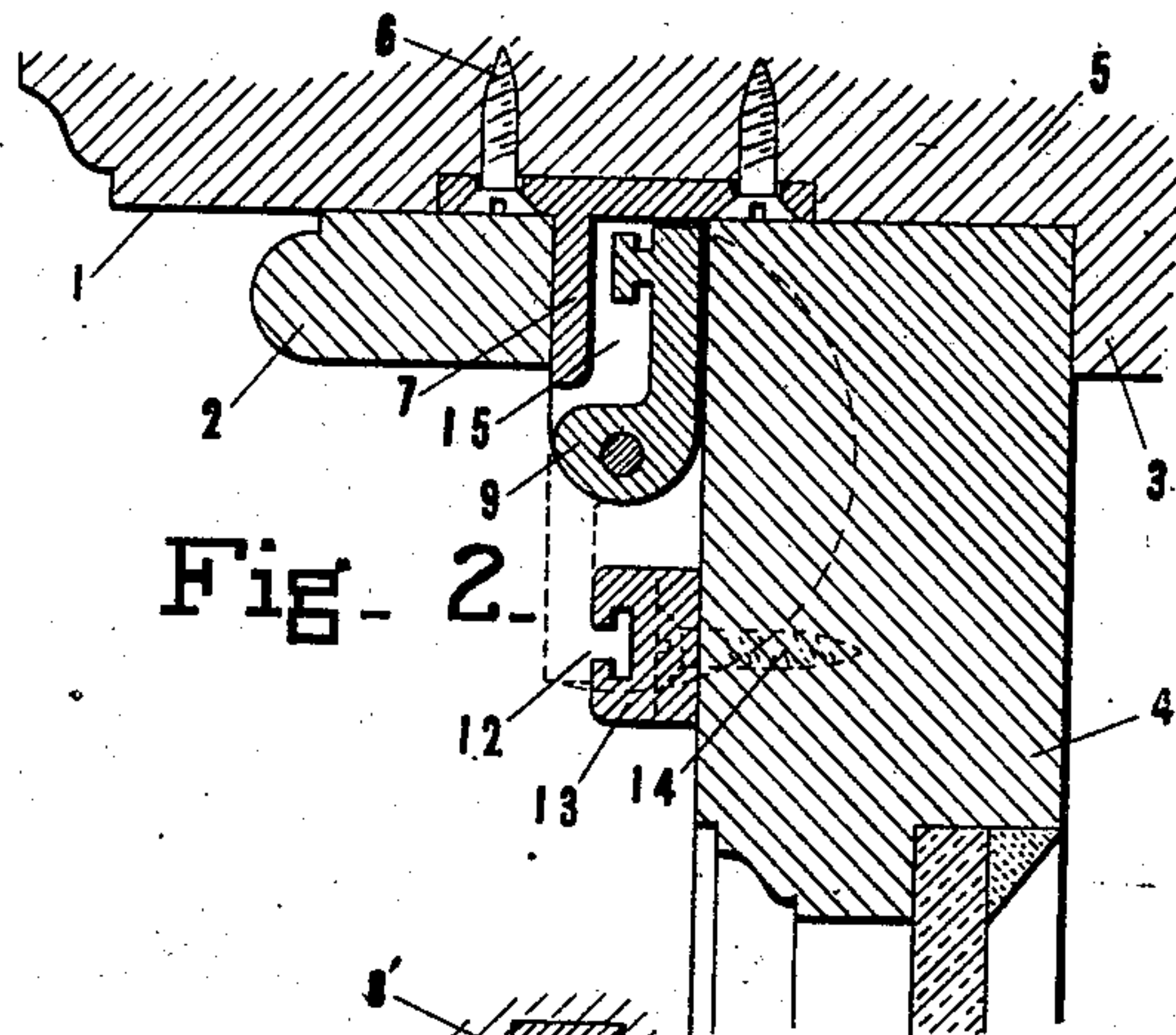


Fig. 2.

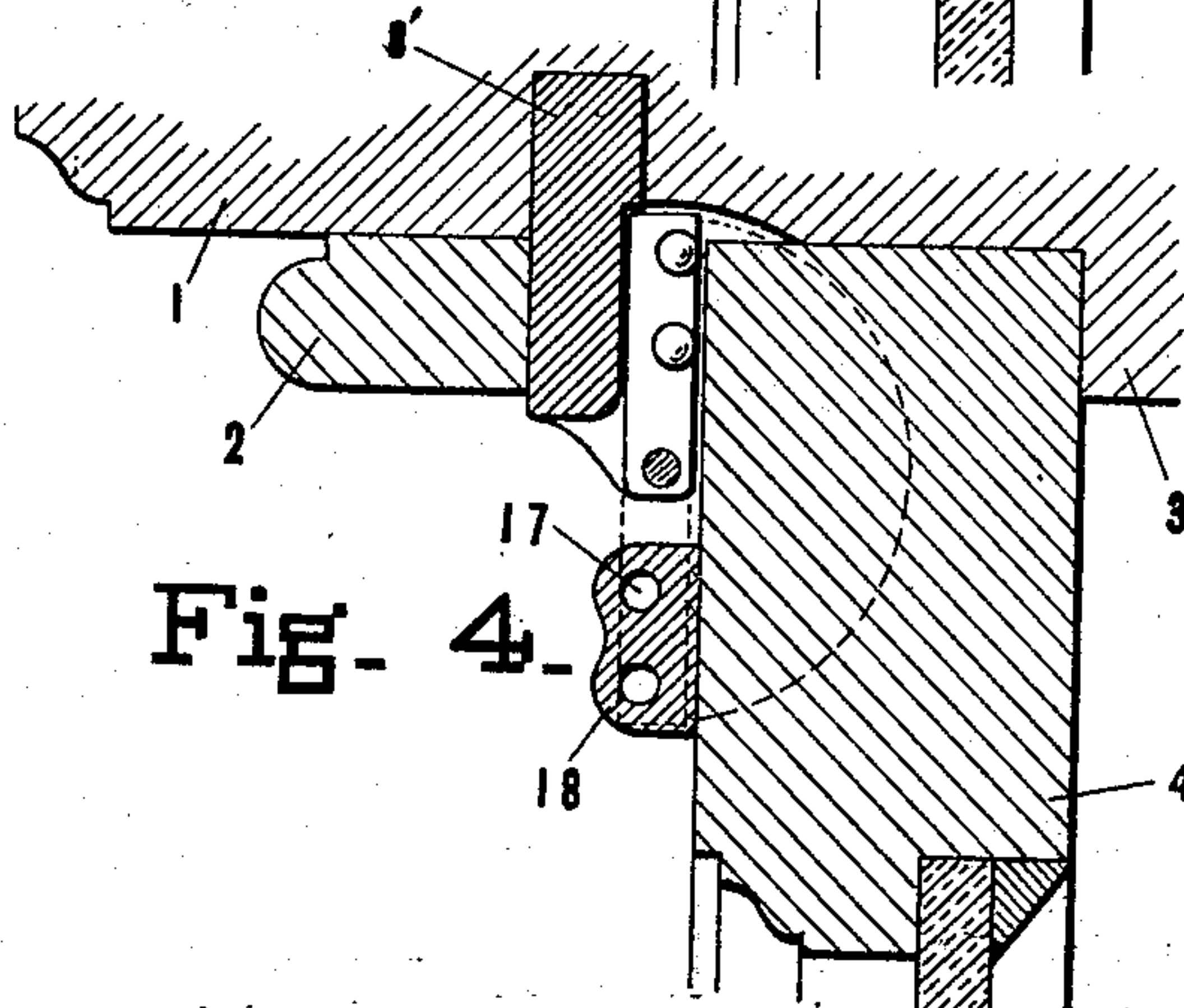


Fig. 4.

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3 SHEETS—SHEET 2.

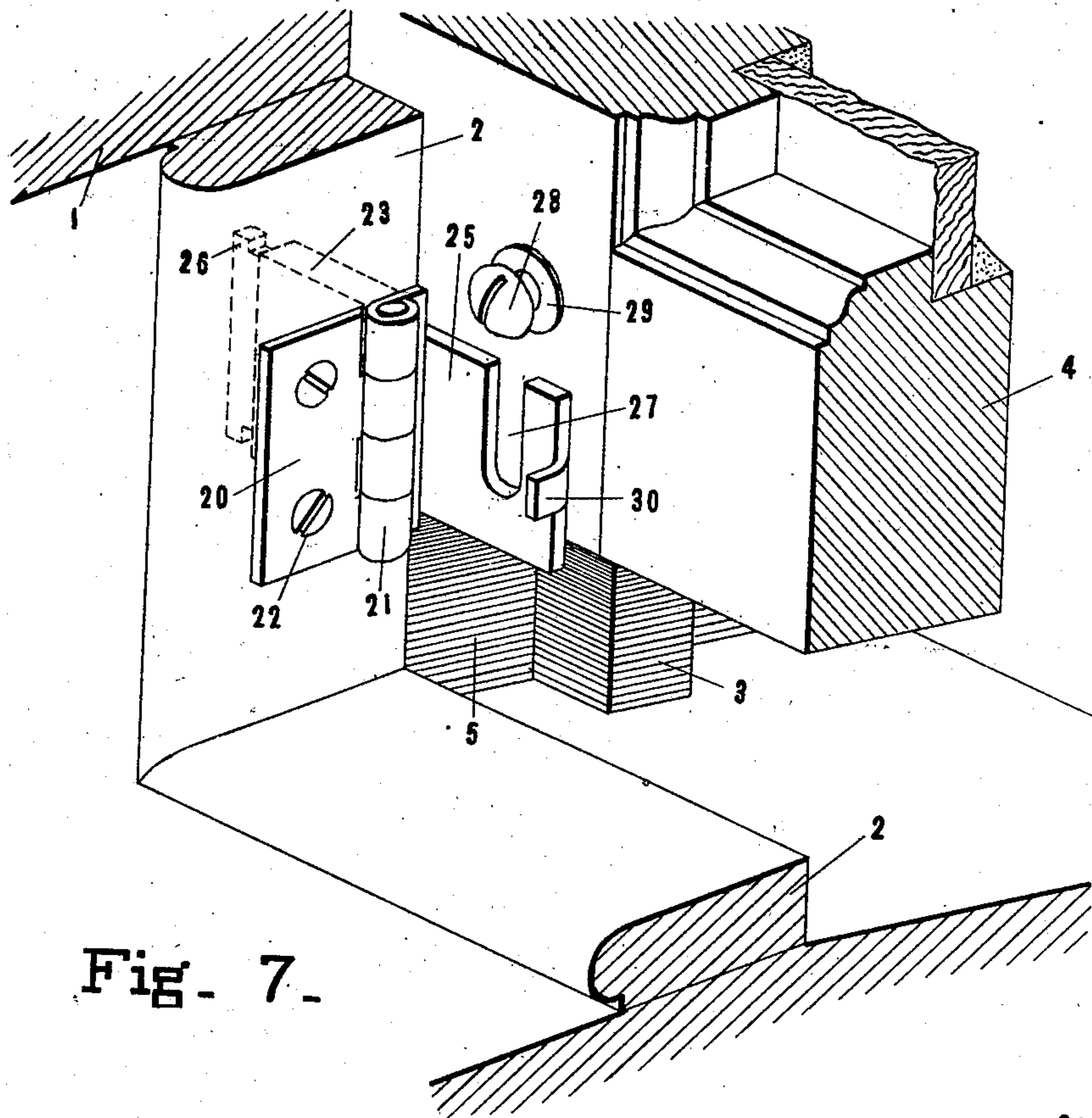


Fig. 7.

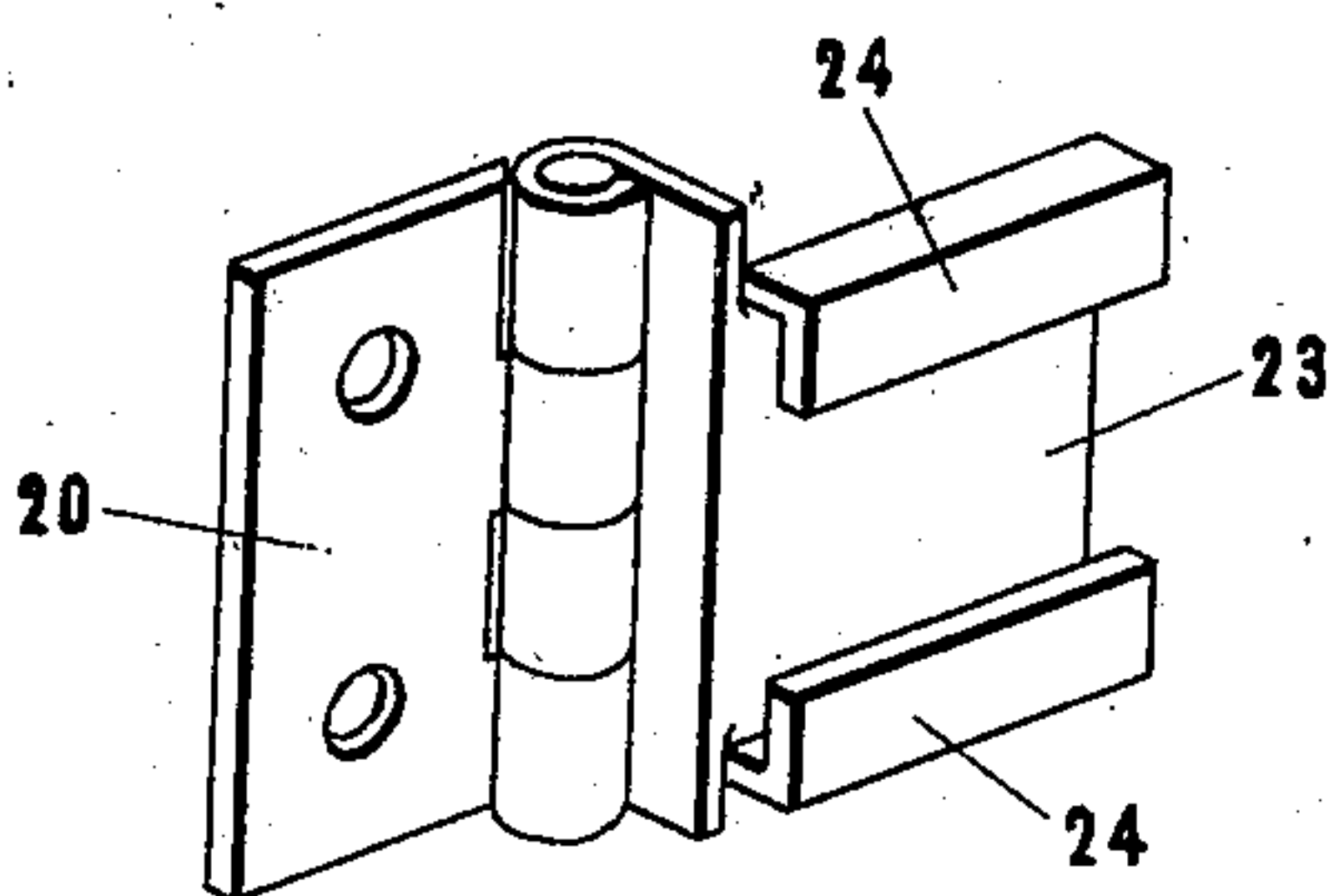


Fig. 8

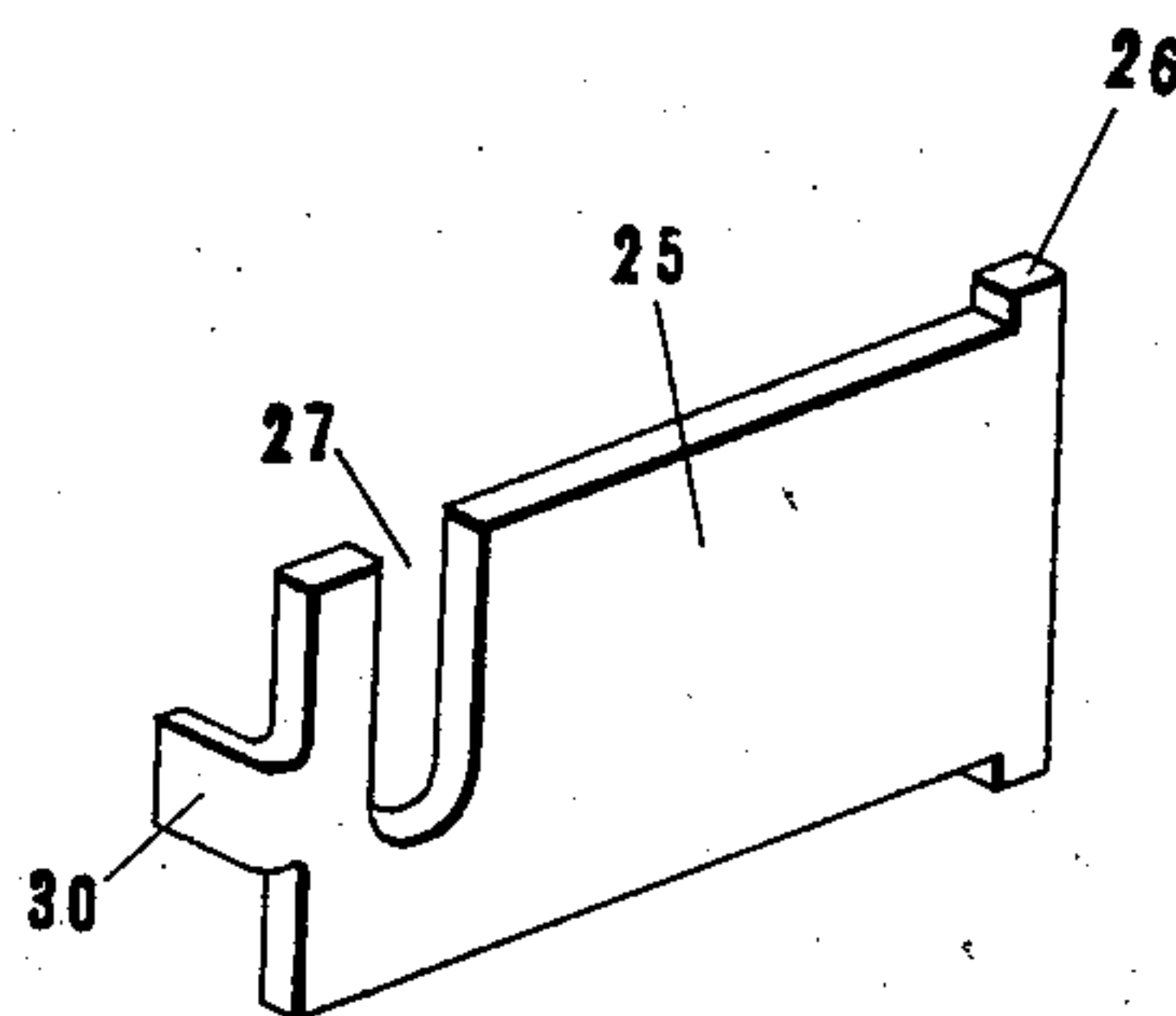


Fig. 9.

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3 SHEETS—SHEET 3.

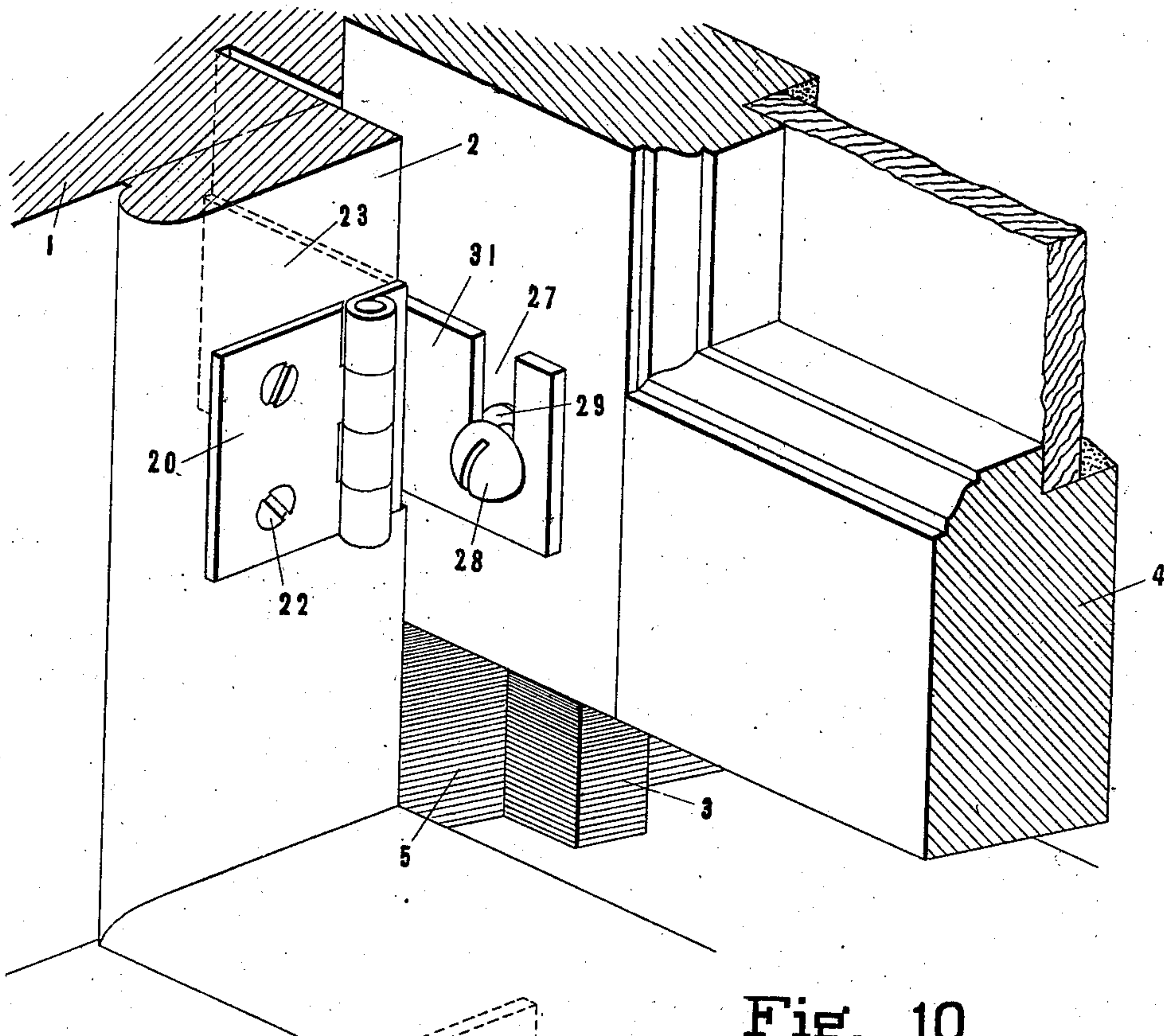


Fig. 10.

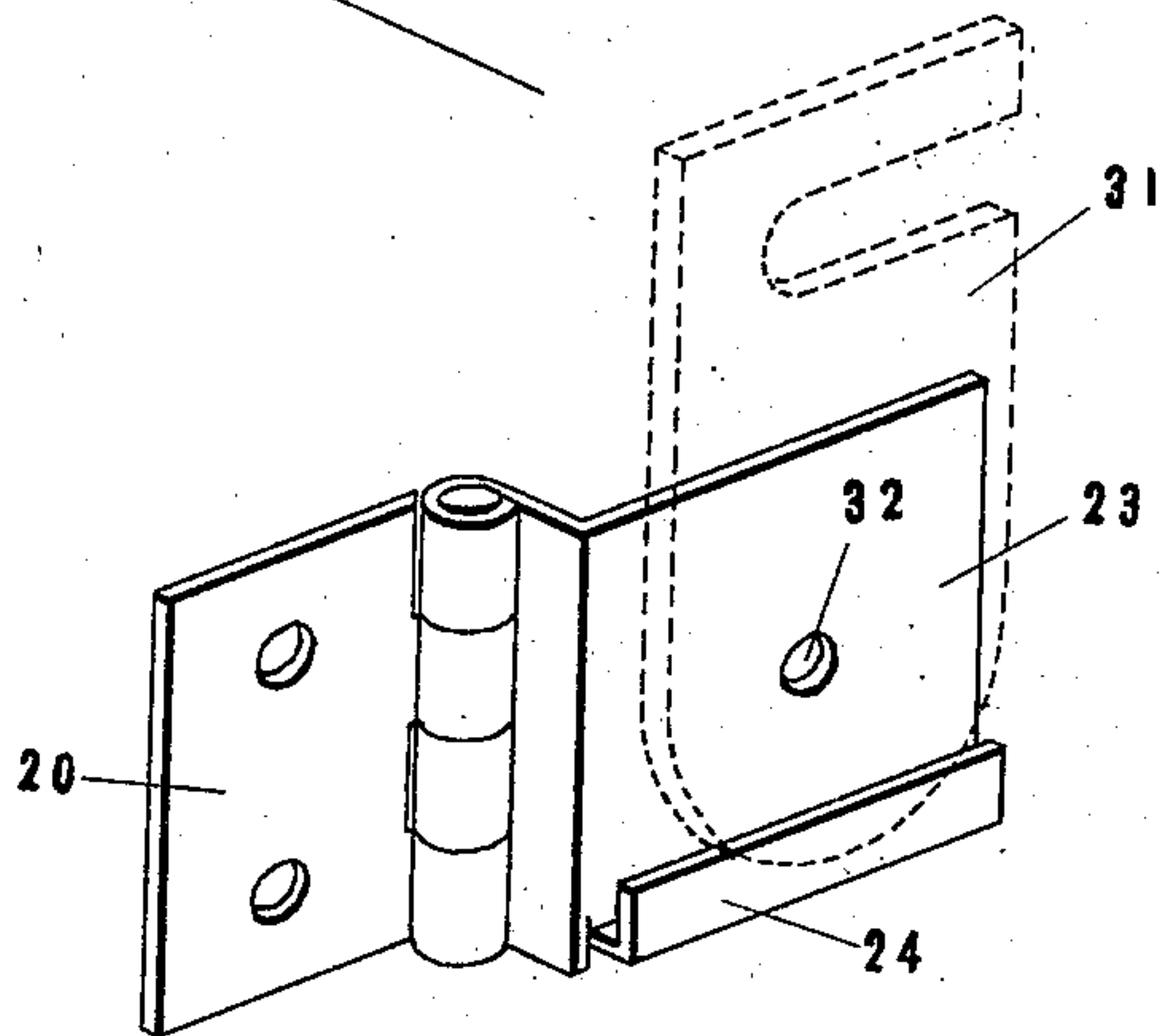


Fig. 11.

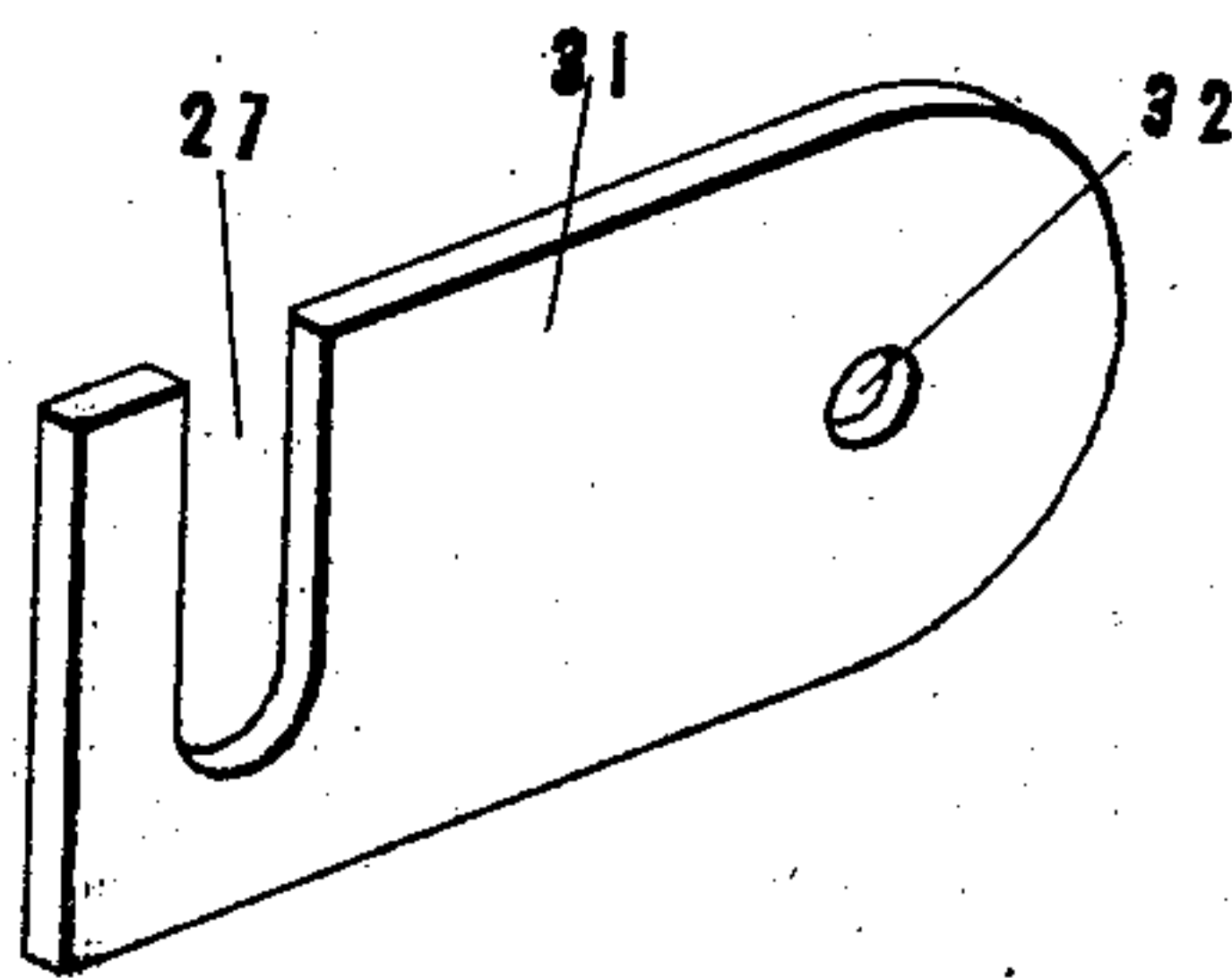


Fig. 12.

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UNITED STATES PATENT OFFICE.

GEORGE HENRY PARKER, OF ARLINGTON, NEW JERSEY, ASSIGNOR TO JOHN WALLACE BAKER, OF STAMFORD, CONNECTICUT.

WINDOW-SWINGING DEVICE.

No. 889,483.

Specification of Letters Patent.

Patented June 2, 1908.

Application filed February 2, 1906. Serial No. 299,106.

To all whom it may concern:

Be it known that I, GEORGE HENRY PARKER, residing at Arlington, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Window-Swinging Devices, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to window construction and more specifically to an improvement in swinging or pivotal supports for window sashes designed to provide a temporary hinged or pivotal connection between the sash and the frame so that the sash may be swung inwardly to permit access to both sides of the sash for cleaning the glass, or for other purposes.

One of the objects hereof is to provide a device of the above type characterized by increased simplicity and efficiency, and one which will not detract from the sightliness of the window structure.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts, which will be exemplified in the device hereinafter described and the scope of the application of which will be indicated in the following claims.

In the accompanying drawings, wherein are illustrated several of the various possible embodiments of my invention, Figure 1 is a view in perspective of one embodiment thereof; Fig. 2 is a transverse sectional view through the lower portion of a window frame and a sliding sash, showing the device secured to the frame, the sash supporting parts being in inoperative position; Fig. 3 is a view in perspective showing another embodiment of my invention; Fig. 4 is a transverse sectional view showing the manner of attaching the device to the window frame; Fig. 5 is a view in perspective of another embodiment of my invention; Fig. 6 is a similar view of another embodiment of my invention; Fig. 7 is a similar view of another embodiment of my invention showing the parts ready to be moved to effect a pivotal or swinging support for a sash; Figs. 8 and 9 are views of details of certain of the parts shown in Fig. 7; Fig. 10 is a view in perspective showing still another embodiment of my

invention with the parts in operative position; Figs. 11 and 12 show in detail certain of the parts illustrated in Fig. 10.

Similar reference characters refer to similar parts throughout the several figures of the drawings.

In attaining the objects of my invention, I propose to secure a hinge permanently to a window frame, but having the greater portion thereof located within the same so as to be substantially concealed from view when in inoperative position, the construction being such that it can be swung to a position where it will be engaged by a suitable device secured to a sliding sash and thus establish a temporary pivotal or swinging support between the sash and the frame. Many of the advantages of this construction will be apparent from the following description of several of the preferred embodiments of my invention.

Referring now to the embodiment illustrated in Figs. 1 and 2, 1 represents a portion of the framework of a window provided with the usual front and back-stops 2 and 3 respectively, between which a sliding sash 4 is held and guided. Secured to the pulley-stile 5, partially beneath front-stop 2, by suitable means, as screws 6, is a hinge member 7 provided with forwardly-extending arms or lugs 8 between which a plate 9 is pivotally mounted by means of pintle 10. Plate 9 is provided upon its inner surface with a longitudinally-extending, undercut portion or lug 11 which is adapted to enter a correspondingly-shaped slot 12 of a socket 13 secured firmly to sash 4 by suitable means, as screws 14. Plate 9, when in inoperative position, is adapted to be folded to lie within the frame between the front-stop and the sash, hinge member 7 being hollowed out, as at 15, to receive the undercut lug 11. Member 7 and plate 9 comprise a permanent hinge, and plate 9, when occupying the position shown in Fig. 2, lies flush with the inner surface of the front-stop and permits the sash to slide freely in the frame.

The embodiment shown in Figs. 3 and 4 is substantially the same as that above described, but is designed to support heavier sashes. In this embodiment, member 7 is provided with a shank 8' which is let into the pulley-stile of the frame so that a more firm support may be provided. For the undercut lug 11 of plate 9 is provided a pair of ver-

tically-disposed posts 16 designed to enter openings 17 in socket 18 attached to the sash.

In the embodiment illustrated in Figs. 5 and 6, I have provided, in plate 9, open-ended, vertically-disposed slots 19 designed to receive headed projections which may be in the form of screws driven into the side rail of the sash. In this embodiment, as well as in the one illustrated in Figs. 3 and 4, the hinge members secured to the sash are cut away so that the outer surfaces of the pivotally-mounted plates may lie flush with the outer surface of said members, thus permitting a free sliding movement of the sashes between the guiding stops.

The manner of using the above embodiments should be obvious from the foregoing description, but it may be briefly described as follows: When it is desired to swing the window inwardly from the sash to afford access to the outer side thereof, the parts being in the position shown in Figs. 2 and 4, sash 4 is first raised so that plates 9 may be swung beneath the lower end thereof to the positions shown in Figs. 1, 3, 5 and 6, in which positions the portions thereof designed to form a connection between hinge members 7 and the sash are located immediately beneath the cooperating sockets or projections upon the sash. Sash 4 is then lowered slightly, when the engaging members of plates 9 will automatically engage with the coacting members upon the sashes. The sashes will thus be hingedly connected to the frame and, when the front-stop of the opposite side of the frame has been removed, the sash may readily be swung inwardly, as will be apparent.

In the embodiment shown in Figs. 7 to 9 inclusive, one of the wings 20 of the hinge 21 is shown secured by screws 22 to the face of the front-stop, the other wing 23 being turned backward and let into the edge of the stop so that the face of the said wing will lie flush with said inner edge. The upper and lower edges of wing 23 are provided with flanges 24 forming guiding ways for a sliding plate 25. Plate 25 is provided at its inner end with shoulders 26, adapted by their engagement with flanges 24 to limit the distance it can be drawn from within wing 23, and in its forward portion has a vertically-disposed, open-ended slot 27 which, when the plate is drawn out, is adapted to receive the headed projection extending from the sliding sash, shown in the present instance as a screw 28, driven therein to such distance that a space is provided between the head of the screw and an encircling washer 29 resting against the face of the sash. A turned-over portion 30 extending outwardly from plate 25 furnishes a means by which it may be grasped when slid in either direction through the way formed by the guiding flanges of wing 23. It will be understood, of course, that the pulley-stile of the window frame will be provided with an

aperture located directly behind plate 25 to allow the same to be slid backward to its inoperative position. In the use of the above embodiment, it is only necessary to draw plate 25 outwardly from wing 23, the sash being raised slightly to allow the plate to clear the support thereon. The sash is then pushed downward to effect the engagement between screw 28 and said plate, thereby establishing the hinged connection and permitting the sash to be swung inwardly from the frame.

In Figs. 10 to 12 inclusive, for the sliding plate 25 illustrated in the embodiment shown in Figs. 7 to 9 inclusive, I have substituted a plate 31 pivotally mounted at 32 to wing 23 of the hinge, the upper flange of wing 23 being omitted to allow plate 31 to be swung upwardly as shown in dotted lines in Fig. 11, this being the position normally assumed by said plate when in an inoperative position. In use, it will be understood that plate 31 has merely to be swung to the position shown in Fig. 10 and the sash, which has previously been slightly raised, pushed downwardly to effect the engagement of screw 28 therewith.

In the embodiments illustrated in Figs. 7 to 12 inclusive, the flanges extending from the lower edges of wings 23 furnish a rigid support for the sliding or pivotal plates when they are interposed in the support of the sash, and racking of said plates is prevented, in one instance, by pivot 32 by which plate 31 is connected to said wing.

In each of the embodiments herein disclosed I have shown each sash provided with but one hinge, but it will be understood, of course, that a similar arrangement is provided near the upper portion of the sashes, the manner of use thereof being substantially the same as above described. By mounting hinges similar to those described upon the parting-strip between the upper and lower sashes of the window, and by providing the upper sashes with supporting members similar to those provided for the lower sashes, this sash, as well as the lower sash, may be swung inwardly from the frame. It should be noted, however, in this connection, that, for convenience, the hinges secured to the parting-strip would preferably be disposed horizontally to those upon the front-stop, permitting both sashes to be swung inwardly in substantially the same plane. It will accordingly be seen that I have provided a construction well adapted to attain the objects and ends of my invention, whereby an effective pivotal or swinging support may be provided for sliding sashes. An important advantage presents itself, in that the frame of each sash has secured thereto a complete set of devices for affording the swinging or pivotal movement of the sash from the frame. As a greater

part of the hinge device is hid or concealed in the framework of the window between the stops and the sashes, their presence does not detract from the sightliness of the structure and, moreover, the hinges, being complete in themselves, are always ready for operation. Also, there are no parts liable to become lost, and this feature enhances the value of the device. Moreover the pivotal plates which constitute the hinge being permanently secured together by the pintle form structures which insure a greater stability for the support of the sash and also provide a more durable construction than would be secured if the slip connection were located at the pintle point of the plates, as in such structure the pintle would soon become loose and rendered ineffective in other respects through wear.

In this specification and in the claim I have used the term "sash" in a broad sense to denote any slidable member adapted to close an opening in a wall; and by the term "hinge", as used herein, is meant a pair of pivotally-connected members designed to provide a swinging or pivotal connection between a fixed object and a movable object.

As many changes could be made in the above construction and many apparently widely different embodiments of my invention could be made without departing from the scope thereof, I intend that all matter

contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

I desire it also to be understood that the language used in the following claim is intended to cover all of the generic and specific features of the invention herein described and all statements of the scope of the invention, which, as a matter of language, might be said to fall therebetween.

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

In a device of the class described, in combination, a frame, a sash, and a hinge permanently secured to the frame which normally lies in an inoperative position between the front stop of the frame and the sash a wing of which is adapted to be moved outwardly to a position to be engaged by means fixed upon the sash when said sash is slid downwardly, thereby effecting a temporary swinging or pivotal connection between the sash and the frame, enabling the sash to be swung inwardly therefrom.

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

GEORGE HENRY PARKER.

Witnesses:

C. H. WILSON,
H. M. SEAMANS.