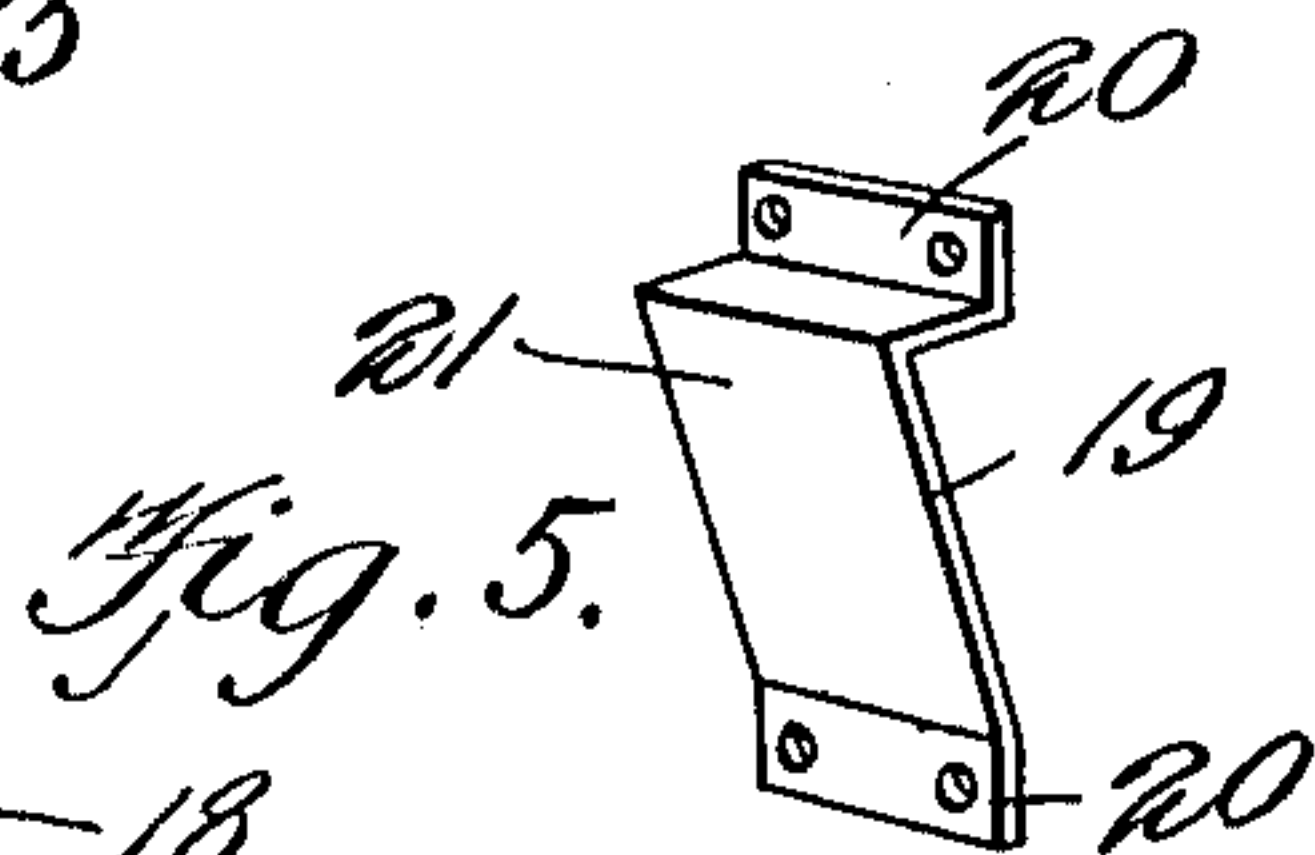
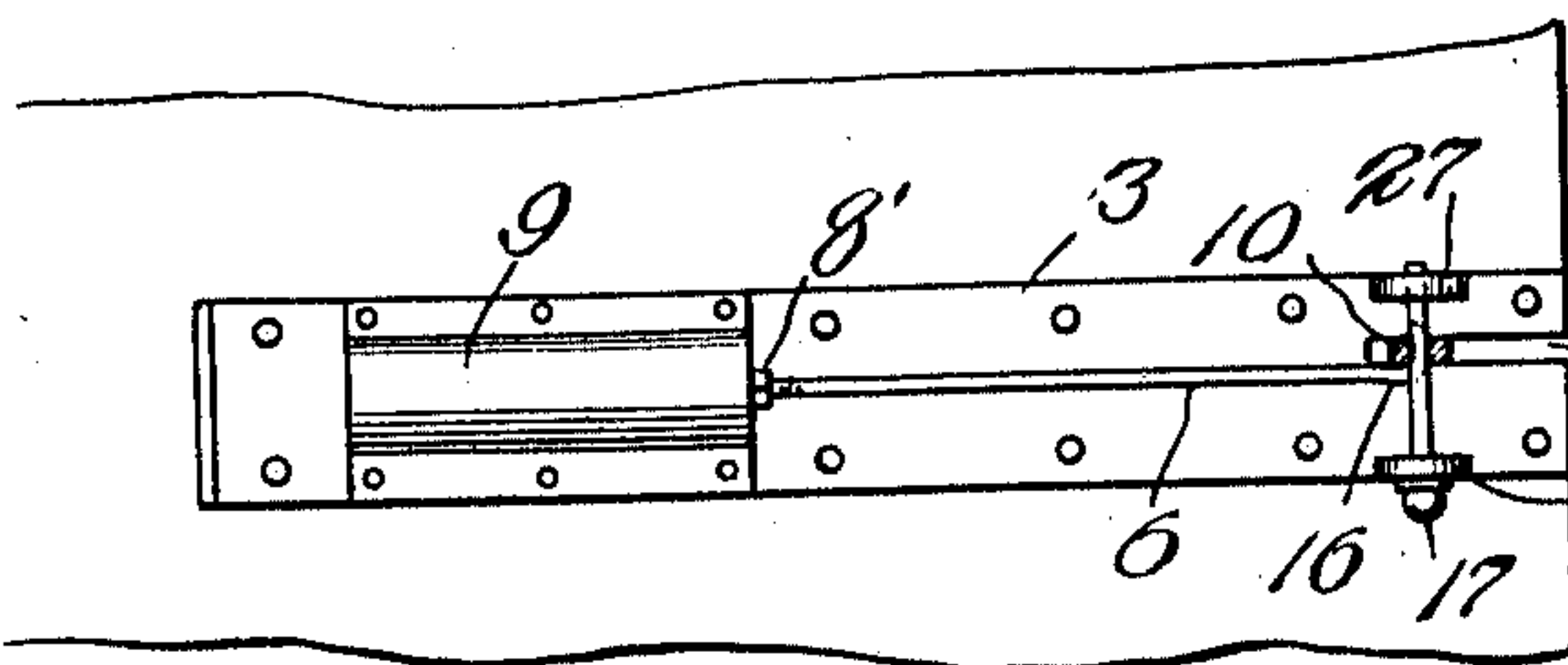
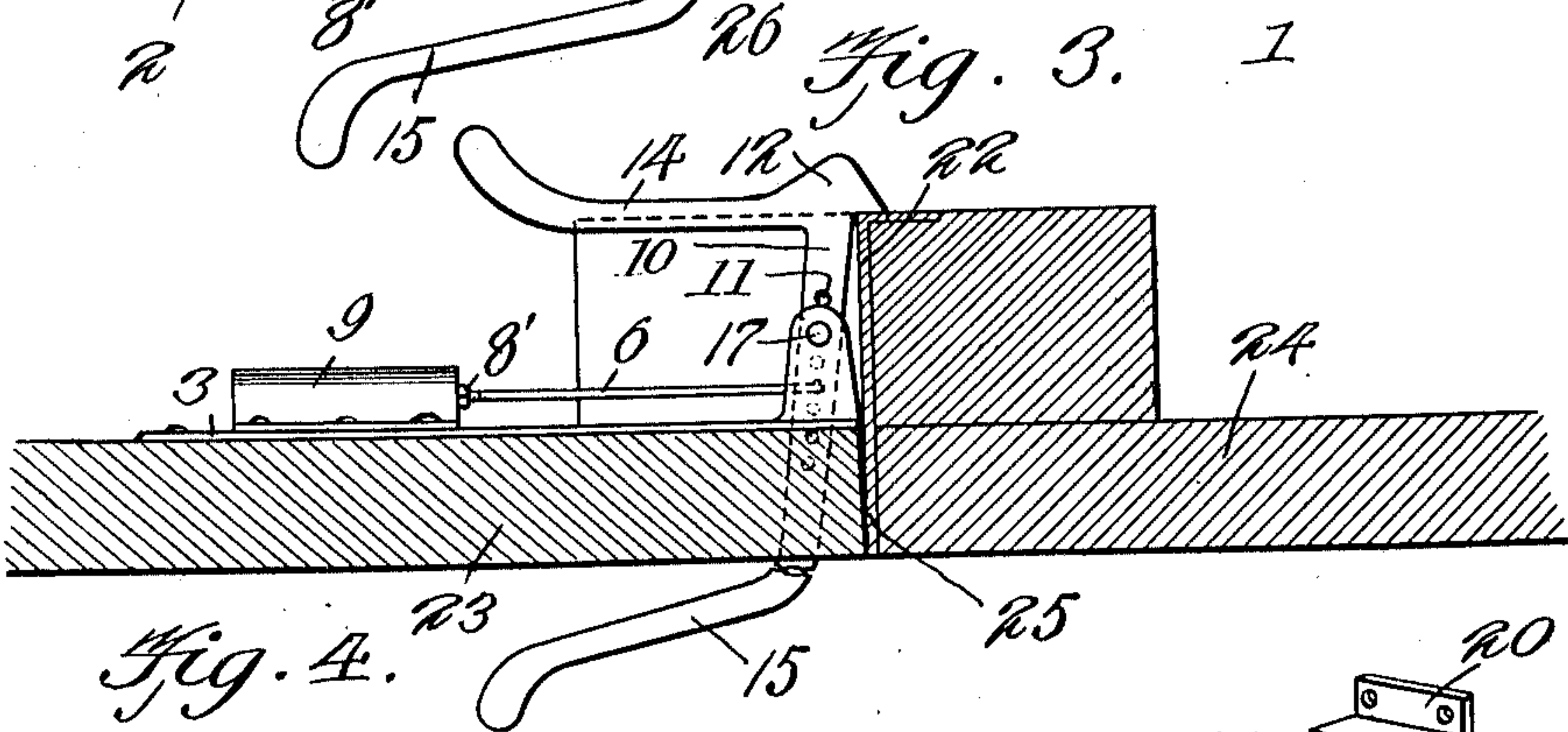
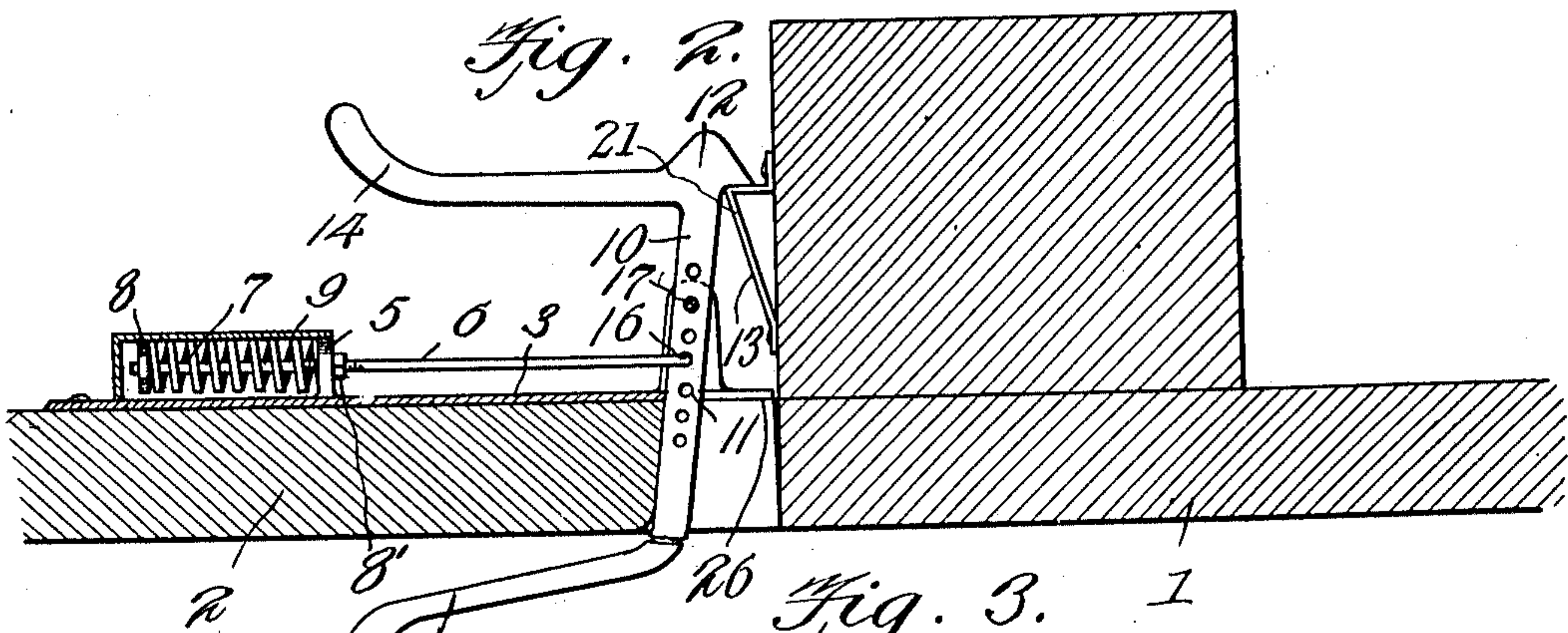
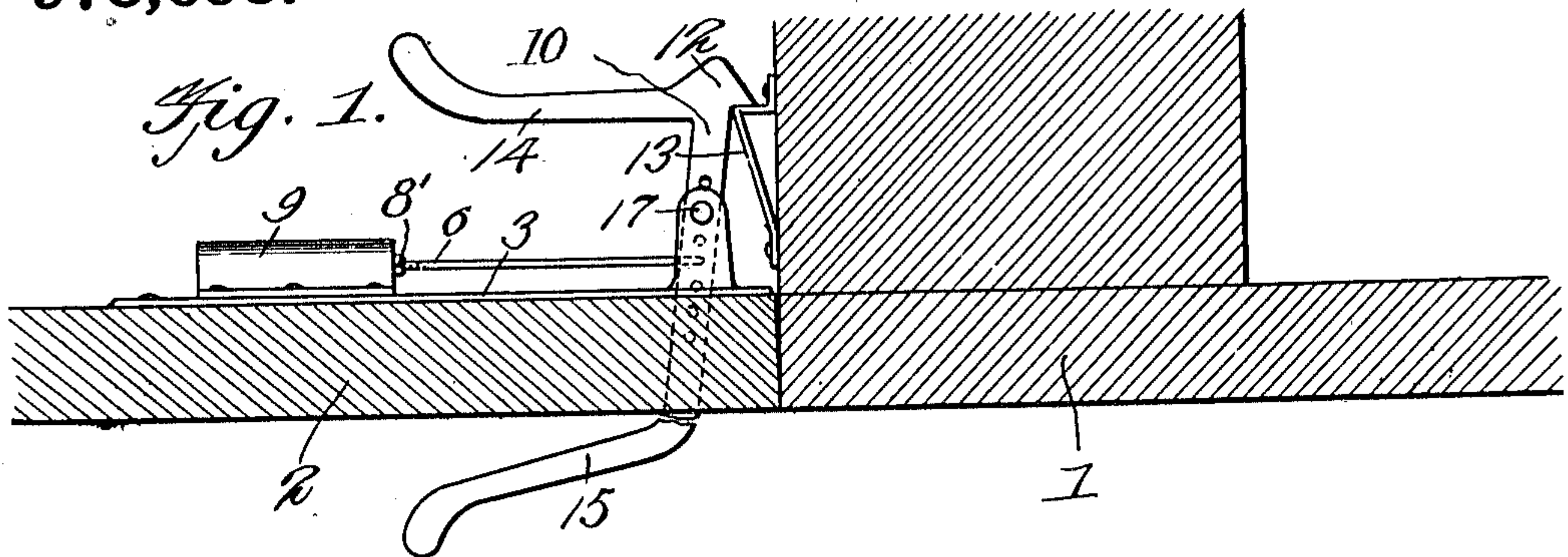


A. SCHNELL.  
BARN DOOR LATCH.  
APPLICATION FILED JAN. 8, 1910.

978,658.

Patented Dec. 13, 1910.



Witnesses

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# UNITED STATES PATENT OFFICE.

ARWIN SCHNELL, OF MANITOWOC, WISCONSIN.

## BARN-DOOR LATCH.

978,658.

Specification of Letters Patent.

Patented Dec. 13, 1910.

Application filed January 8, 1910. Serial No. 537,024.

*To all whom it may concern:*

Be it known that I, ARWIN SCHNELL, a citizen of the United States, residing at Manitowoc, in the county of Manitowoc and State of Wisconsin, have invented new and useful Improvements in Barn-Door Latches, of which the following is a specification.

This invention relates to improvements in latches and particularly to barn door latches.

One object of the invention is to provide a device of this character which is simple, can be manufactured at a low cost and is efficient in operation.

Another object of the present invention is to provide a latch of this kind which is adjustable to differently sized doors, and to single or double doors.

These and other objects, which will develop as the description proceeds, may be obtained by the embodiment of my invention as shown in the accompanying drawing, in which—

Figure 1 is a horizontal sectional view through a single barn door and adjacent wall showing the preferred embodiment of my invention applied thereto. Fig. 2 is a view similar to Fig. 1, the section being taken through the latch. Fig. 3 shows my invention adjusted and applied to double doors. Fig. 4 is a face view of the latch partly in section, and Fig. 5 is a perspective view of the keeper.

Referring more particularly to the drawings, 1 designates the portion of a barn door casing on the latch side, and 2, the door to which my latch is adapted to be applied.

The latch consists of a plate 3 provided with the openings to receive screws by means of which it is attached to the door. Projecting from the face of the plate is a perforated lug 5 through which is adapted to pass the spring retracting rod 6. The retracting rod 6 extends rearward (to the left in the drawing) of the lug 5 and has thereon a coiled spring 7 which is disposed between the lug 5 and the nut 8 on the end of the rod. The cover 9, of substantially U-shape in cross section is disposed over the spring and secured to the face of the plate 3.

A latch bolt comprising a shank 10, provided near one end with a series of perforations 11, and a hooked end 12 adapted to engage the keeper 13 is secured to the door casing 1. The shank 10 extends through a suitable opening 26 in the door. A handle 14 is provided on the hooked end 12 by

means of which the hook is lifted from the keeper 13 from within the barn. The opposite end of the latch bolt is provided with an offset 15 adapted to be used as a handle to manipulate the latch from without.

The spring retracting rod 6, partly described above extends forward of the lug 5 (to the right of the figures) and is provided with a hook 16 which engages in one of the perforations 11, in the latch bolt. Another of the perforations 11 is adapted to receive a pin 17 which passes through the perforated lugs 27 projecting from the face of the plate 3, near one end thereof.

The plate 3 is cut away at 18 to provide an opening into which the latch bolt is inserted to receive the pin 17.

The keeper 13 is secured to the door casing 1, and comprises a strip of metal having its body portion 19 substantially right triangular in shape, and the flanges 20. The flanges 20 are perforated to receive the screws by means of which the keeper is attached. The hooked end 12 of the latch bolt engages and rides up the inclined face 21 of the keeper 13.

The operation may be briefly described as follows:—The latch is secured to the door face 2 from the inner side, and the keeper 13 to the door jamb or casing 1. Upon the door being shut, the hooked end of the latch bolt will ride up the inclined face 21 of the keeper 13, and swinging on the pivot pin 17 pulls the spring retracting rod 6. This causes the spring 7 to be contracted between the lug 5 and the nut 8, when the hooked end of the latch will spring behind the keeper 13.

To open the door either of the handles 14 or 15 may be grasped and moved laterally which will disengage the hooked end of the latch bolt from the keeper.

By means of the pin 17 and openings 11 in the shank of the latch bolt the latch may be adjusted to accommodate doors of different thicknesses and keepers arranged at different distances from the edge of the door.

The pin 17 and perforations 11 serve the double purpose of a pivot for the latch and permitting the latch bolt to be adjusted inwardly or outwardly.

When it is desired to use the device on double doors as 23 and 24 an angle plate 22 is secured to one edge of the door 24 and the latch to the door 23. The latch bolt is adjusted through the plate 3 by the pin 17 and



perforations 11, until the hooked end 12 engages the plate 22 on the door 24, and the hook 16 of the retracting bolt 6 is inserted on one of the openings 11, beyond the pivot 5 of the bolt. In this form the hooked end of the latch bolt engages the member 25 of the plate 22, thus preventing the wearing of the edge of the door 24.

By means of the nuts 8 and 8', the tension 10 of the spring 7 is regulated.

The cover 9 serves to protect the spring 7 and also guides the bolt 6 in its movement.

Numerous modifications may be made in my invention without in any way departing 15 from the scope of the claims.

Having thus described the invention, what is claimed, is:—

1. A door latch comprising an attaching plate having a kerf at one end, perforated 20 lugs on opposite sides of said kerf, a latch bolt adjustably pivoted between said lugs and projecting through the kerfed end of the plate, means for projecting said bolt into operative position and means for re- 25 tracting said bolt.

2. A door latch comprising an attaching plate having a kerfed end, an adjustable latch member mounted on the plate and projecting through the kerfed end thereof,

said latch member having a shank provided 3 with a plurality of perforations, a pivot bolt adjustably engaging said perforations, a rod having a hook at one end adapted to engage one of the perforations below the pivotal bolt, and means for retracting the 3 rod.

3. In combination with a keeper, a door latch comprising an attaching plate having a kerfed end, an adjustable latch member 40 mounted on the kerfed end of the plate and projecting through the kerf thereof, said latch member having a shank provided with a plurality of perforations, a pivotal bolt adjustably engaging said perforations, a rod having a hook at one end adapted to 45 engage one of the perforations, means for retracting the rod and thereby the lower end of the bolt, a latching pawl on the upper end of the bolt adapted to engage the keeper, and manipulating handles car- 50 ried by the bolt.

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

ARWIN SCHNELL.

Witnesses:

ELSE KAEMS,  
EDWARD L. KELLEY.