

P. G. SCHWALEN.  
 WINDOW CLEANER.  
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970,563.

Patented Sept. 20, 1910.

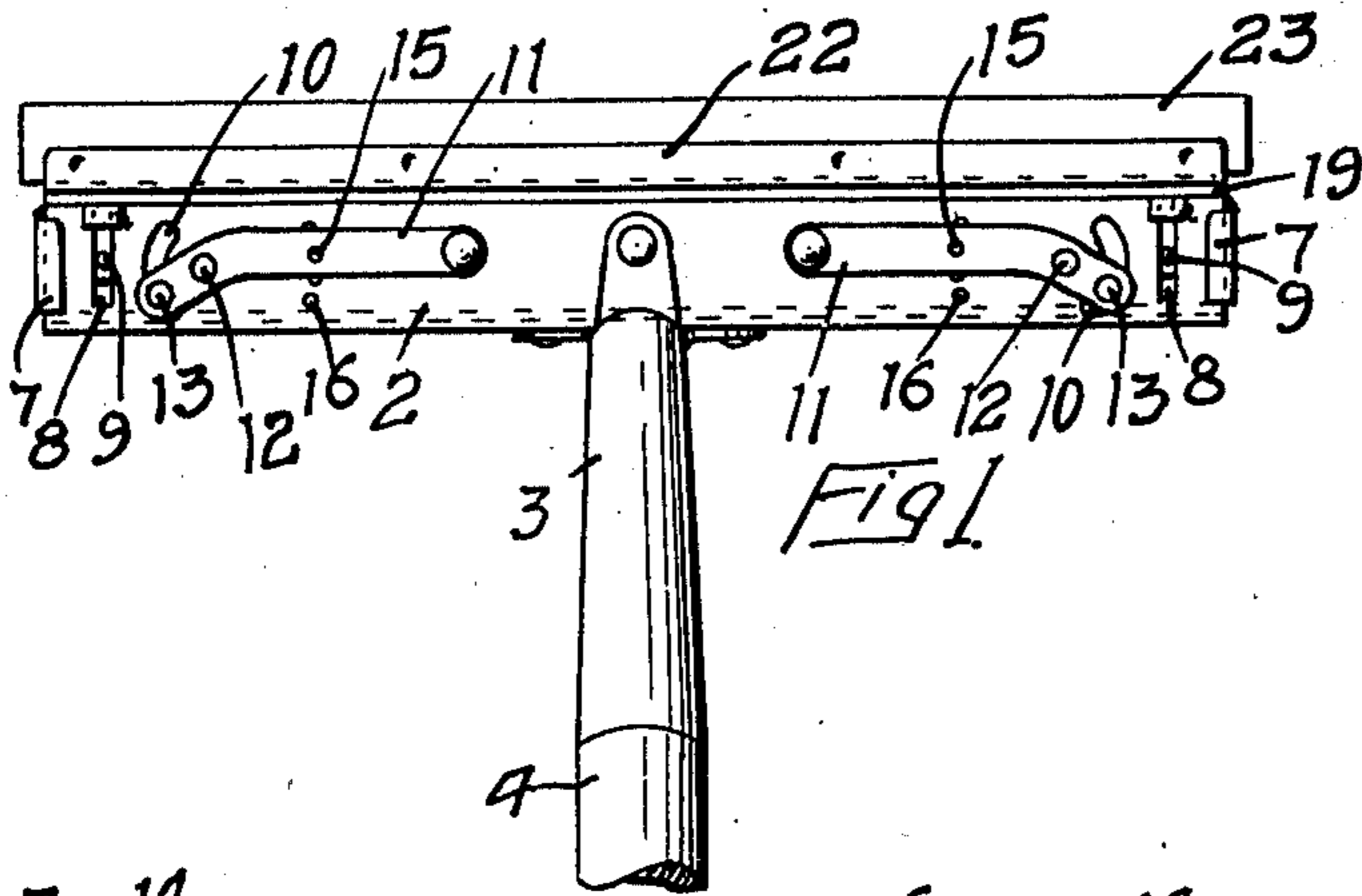


Fig 1

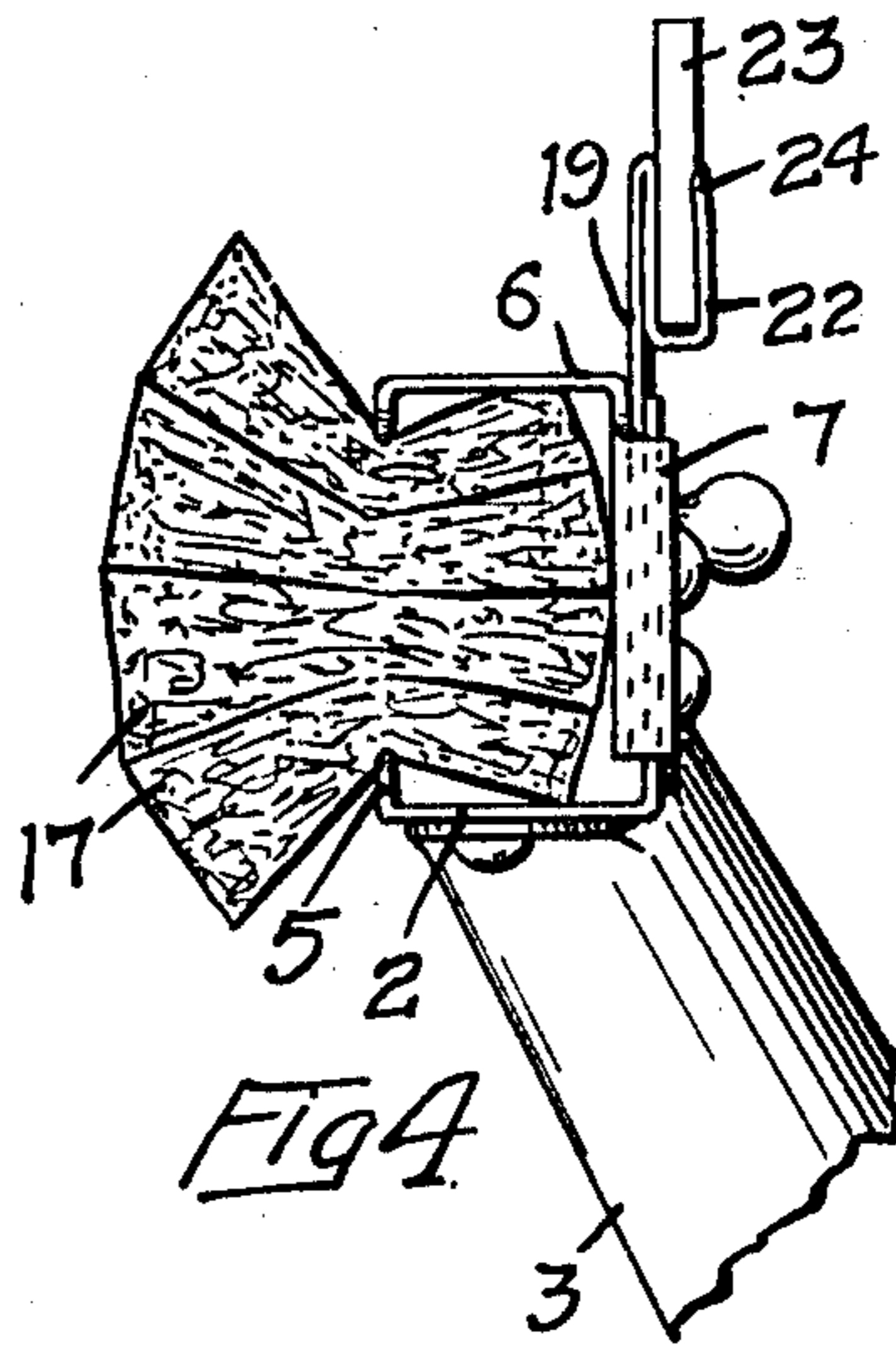


Fig 4

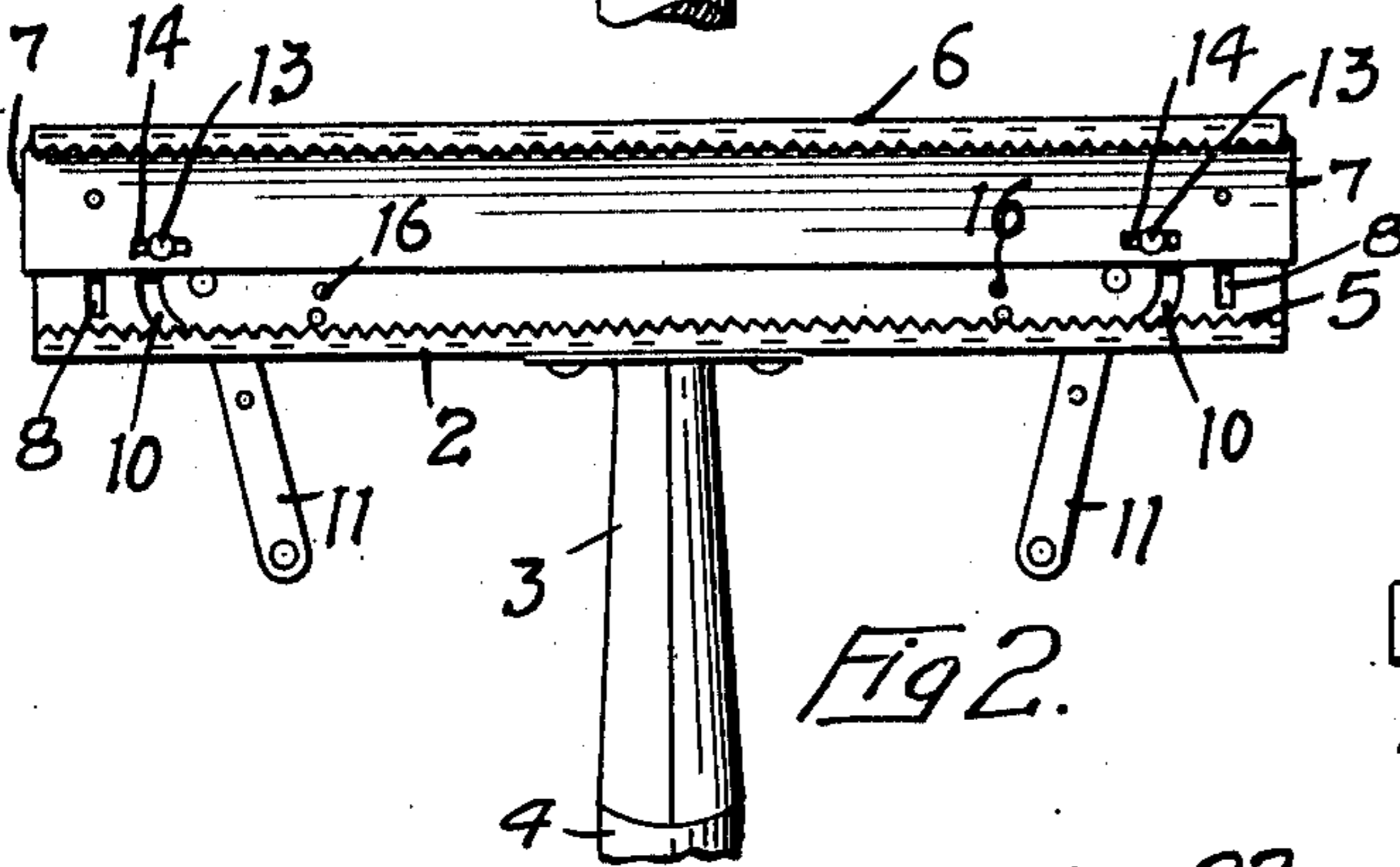


Fig 2.

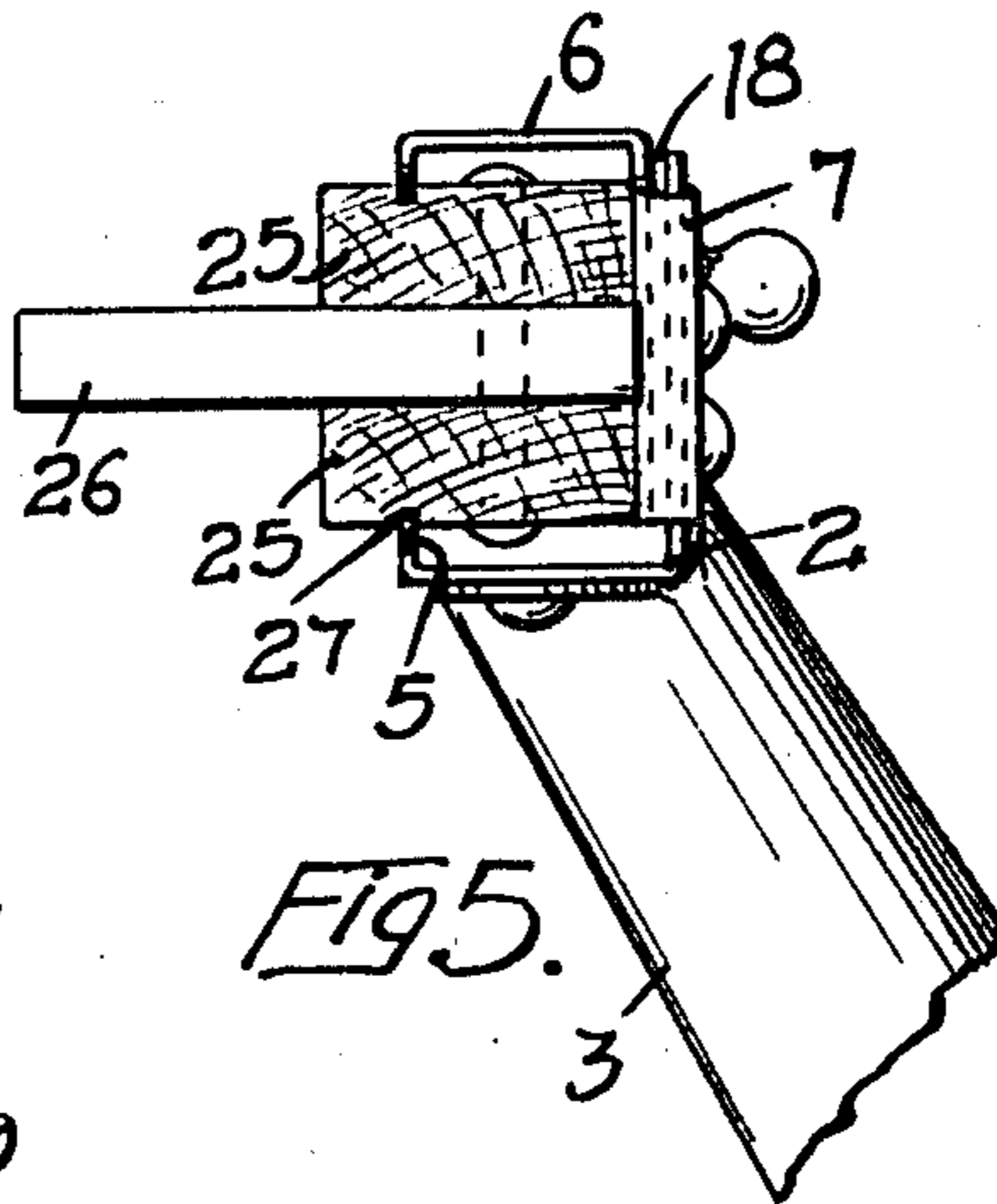


Fig 5.

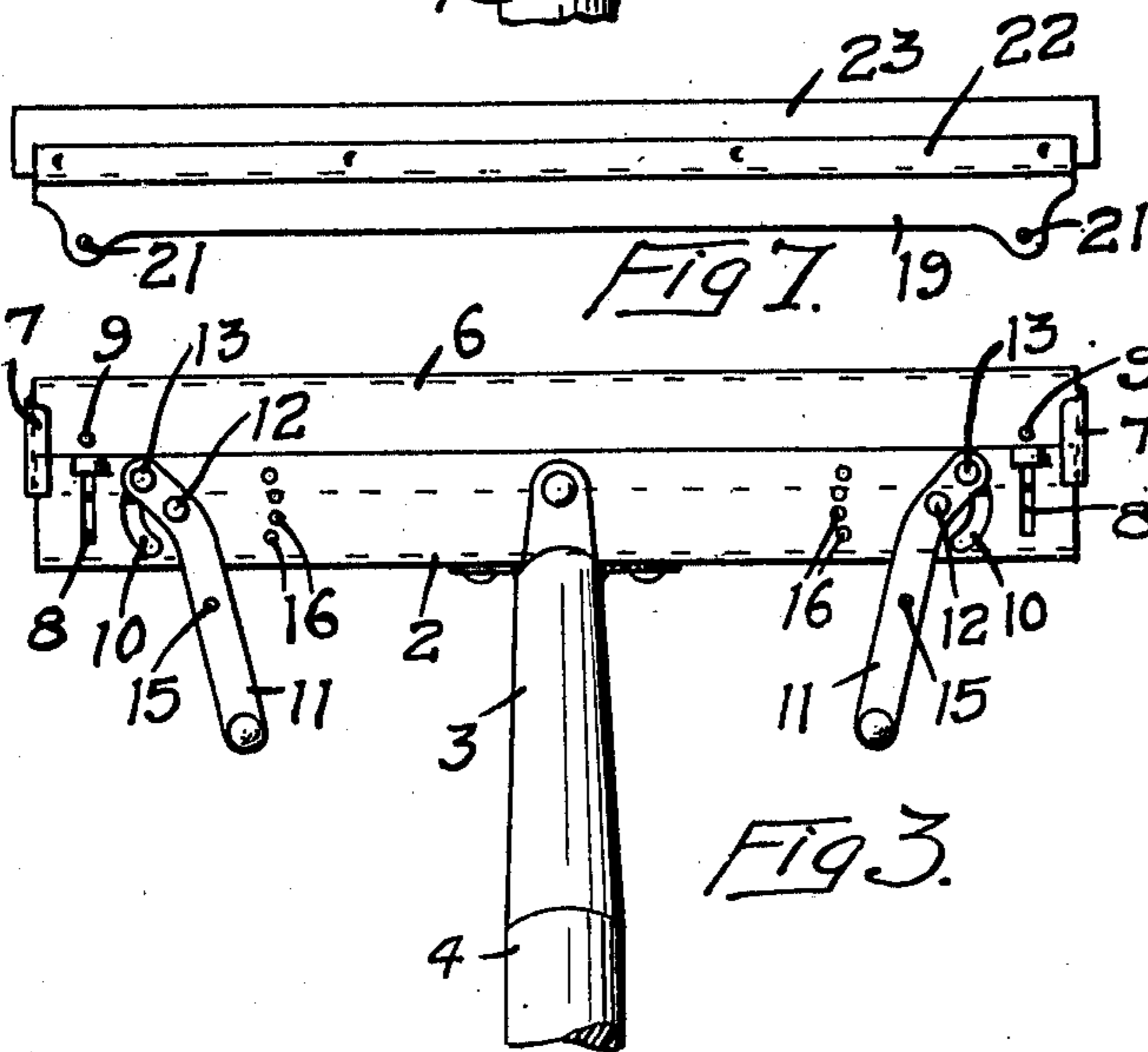


Fig 3.

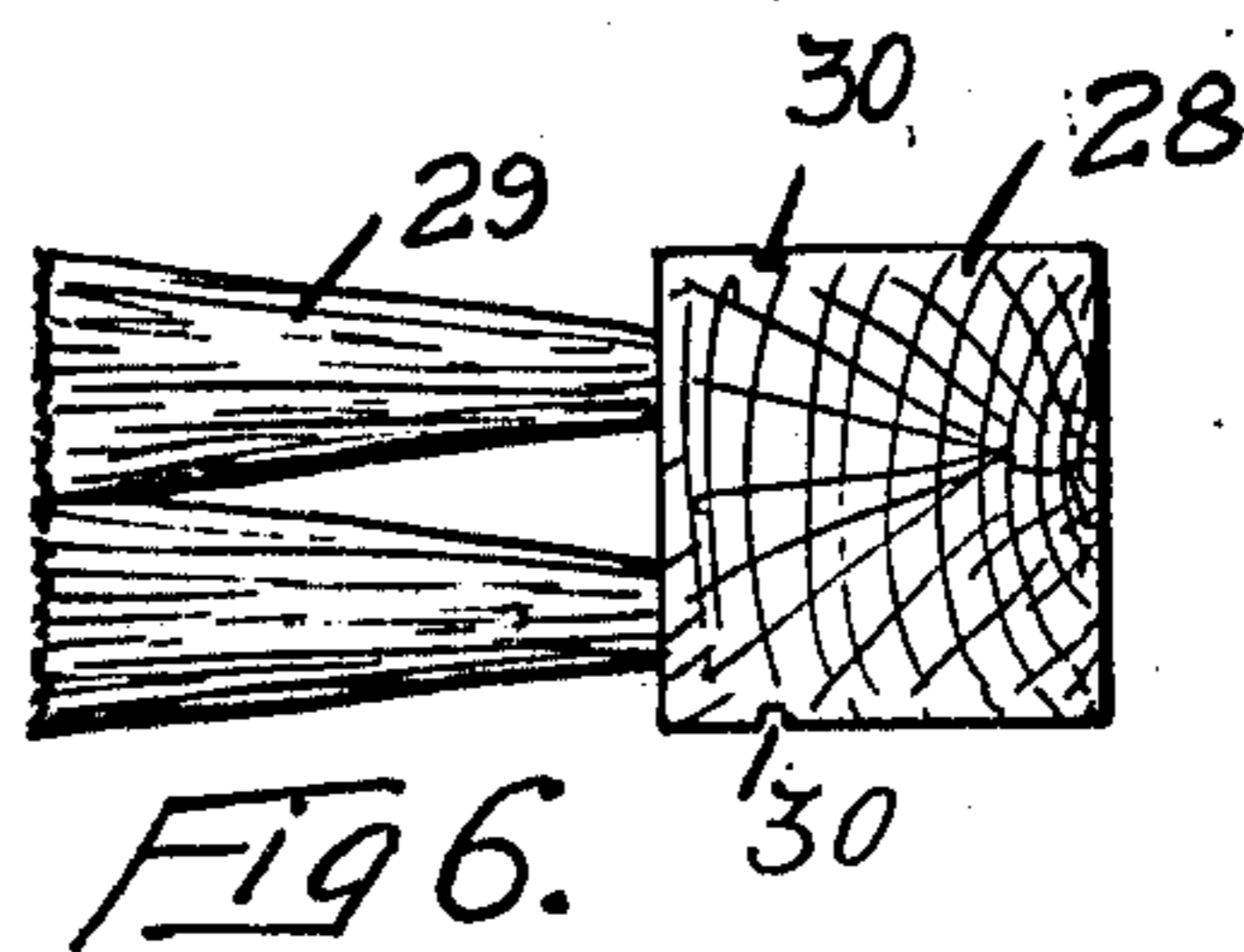


Fig 6.

WITNESSES  
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# UNITED STATES PATENT OFFICE.

PETER C. SCHWALEN, OF MINNEAPOLIS, MINNESOTA.

WINDOW-CLEANER.

970,563.

Specification of Letters Patent. Patented Sept. 20, 1910.

Application filed October 18, 1909. Serial No. 523,357.

*To all whom it may concern:*

Be it known that I, PETER C. SCHWALEN, of Minneapolis, Hennepin county, Minnesota, have invented certain new and useful

5 Improvements in Window - Cleaners, of which the following is a specification.

My invention relates to devices for cleaning and drying windows and is also adapted for use in polishing floors and for other

10 analogous purposes.

The invention consists generally in a holder having a shank adapted to receive a handle and provided with clamping jaws between which the drying or polishing ma-

15 terial is clamped.

Further, the invention consists in improved means for locking the jaws to clamp the material between them.

In the accompanying drawings forming

20 part of this specification, Figure 1 is a view of a holder embodying my invention, Fig. 2 is a view looking toward the open jaws, with the cleaning or polishing material removed therefrom, Fig. 3 is a view similar to Fig. 1,

25 showing the jaws released, Fig. 4 is an end view, Fig. 5 is a similar view, showing the device adapted for use as a floor drier. Fig. 6 is a detail view of the brush which may be secured in the holder, Fig. 7 illus-

30 trates a removable plate, in which a window drying strip, such as rubber, is carried.

In the drawing, 2 represents the fixed member or jaw of the holder, having a shank 3 secured thereon to receive a handle 4.

35 This fixed jaw is provided with an inwardly turned serrated edge 5. 6 is a movable jaw also having a serrated edge corresponding to the one on the fixed jaw and between these edges the material carried by the holder is

40 gripped and held. A flange 7 is provided at each end of the movable jaw and bent around the ends of the stationary jaw, as indicated in Figs. 1 and 4, to form a guide for said movable jaw as it is adjusted toward or

45 from the fixed jaw. The fixed jaw has transverse slots 8 therein in which pins 9 on the movable jaw are slidable. The fixed jaw has curved slots 10 and levers 11 are pivoted at 12 on the fixed jaw and have pins 13

50 which pass through the slots 10 and into the slots 14 in the jaw 6, said pins sliding in the slots 14 to compensate for the curvature of the slots 10. The levers are locked by means of pins 15, which are adapted to

55 enter holes 16 in the fixed jaw. Between the jaws 5 and 6, as shown in Fig. 4, are a series

of strips 17 of felt or similar material suitable for use in cleaning a plate glass window. When this material is placed between the jaws and the levers 11 are swung to

60 their locking position, the movable jaw will be drawn down until the strips 17 are firmly clamped. When this is done the device is ready for use.

Between the movable jaw 6 and the sta-

65 tionary jaw a narrow space 18 is formed in which a plate 19 is adapted to slip, being held therein by the pins 9 which enter holes 21 in the plate 19. This plate 19 has a jaw 22 in which a strip 23 of suitable material,

70 such as rubber, is inserted, being held therein by the inwardly turned edge 24 of the said plate.

In place of the felt strips 17 I may provide wooden blocks 25 to clamp the sheet

75 of rubber, or other suitable material, between them and adapt the device for use as a floor drier. If preferred, grooves 27 may be formed lengthwise in the plates 25 to receive the serrated edges of the jaws.

80 In Fig. 6 I have shown a block 28 having bristles 29 mounted therein, and also provided with longitudinal grooves 30 in which the edges of the jaws are inserted.

It will be noted that the plate 19 is en-

85 tirely removable from the holder and may be used on it or not, as preferred.

The device is preferably made of sheet metal in any suitable size and the jaws can be easily and quickly separated whenever it

90 is desired to replace the material between them or to substitute some other cleaning material or a drying strip.

I claim as my invention—

1. A device of the class described, com-

95 prising a holder including a fixed jaw having a shank adapted to receive a handle, a movable jaw carried by said fixed jaw and capable of adjustment thereon, levers pivoted on said fixed jaw on opposite sides of

100 said shank and operatively connected with said movable jaw.

2. A device of the class described comprising a fixed jaw having a shank adapted to receive a handle, a movable jaw, levers

105 pivotally mounted on said fixed jaw and having sliding pivotal connections through curved slots in said fixed jaw with said movable jaw, substantially as described.

3. A device of the class described com-

110 prising a holder including a fixed jaw having a shank to receive a handle, a movable

jaw slidably mounted on said fixed jaw, said jaws having inwardly turned serrated edges between which the material is clamped and means including pivoted levers mounted on  
 5 said fixed jaw on opposite sides of said shank for adjusting said movable jaw toward or from said fixed jaw and clamping it, substantially as described.

4. A device of the class described comprising  
 10 a holder including a fixed jaw having a shank adapted to receive a handle, a movable jaw having pins fitting within transverse slots in said fixed jaw, said fixed jaw being provided with curved slots extending  
 15 transversely thereof, levers pivoted on said fixed jaw, pins carried by said levers and projecting through said curved slots and slidably within longitudinal slots in said  
 20 movable jaw, whereby when said levers are oscillated said movable jaw will be moved toward or from said fixed jaw, and means for locking said levers.

5. A device of the class described, comprising a holder having a fixed jaw provided  
 25 with a shank, said fixed jaw having transverse guides therein, a movable jaw having pins to enter said guides, and levers mounted on said fixed jaw and operatively connected with said movable jaw, the movement of said  
 30 levers adjusting said movable jaw with respect to said fixed jaw and said jaws having opposing edges between which the cleaning material is clamped.

6. A device of the class described, comprising angular fixed and movable jaws, a  
 35 flange of said movable jaw being slidable on the corresponding flange of said fixed jaw, the other flanges of said jaws being adapted to clamp the cleaning article between them, a plate adapted to fit between  
 40 the first named flanges of said jaws and having means for locking it therein, said plate having a socket and means for clamping the first named flanges of said jaws together.

7. A device of the class described, comprising a fixed jaw having a shank, a movable  
 45 jaw, levers pivoted on said fixed jaw, and means pivotally connecting said levers with said movable jaw, substantially as described.  
 50

8. A device of the class described, comprising a fixed jaw having a shank, a movable  
 55 jaw slidable on said fixed jaw, a plate adapted to fit between said fixed and movable jaws and having holes to receive pins provided on said movable jaw, said plate having a socket and means for moving said  
 60 movable jaw back and forth on said fixed jaw.

In witness whereof I have hereunto set  
 my hand this 13th day of October 1909.

PETER C. SCHWALEN.

Witnesses:

RICHARD PAUL,  
 J. A. BYINGTON.