

R. LINKLETTER & J. H. DE FREITAS.  
WINDOW STRUCTURE.

APPLICATION FILED JAN. 28, 1909.

927,985.

Patented July 13, 1909.

2 SHEETS—SHEET 1.

Fig. 1

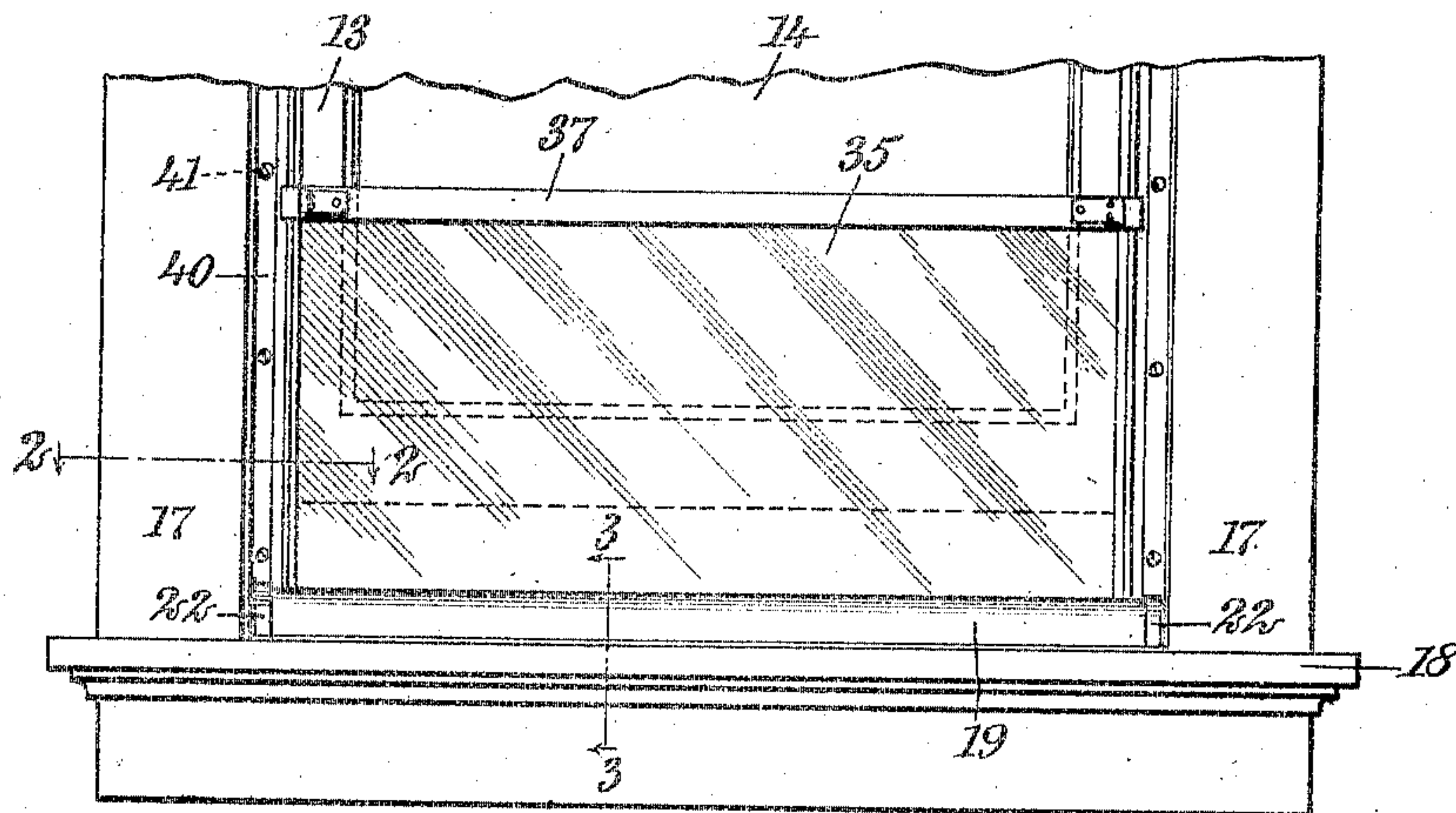


Fig. 2

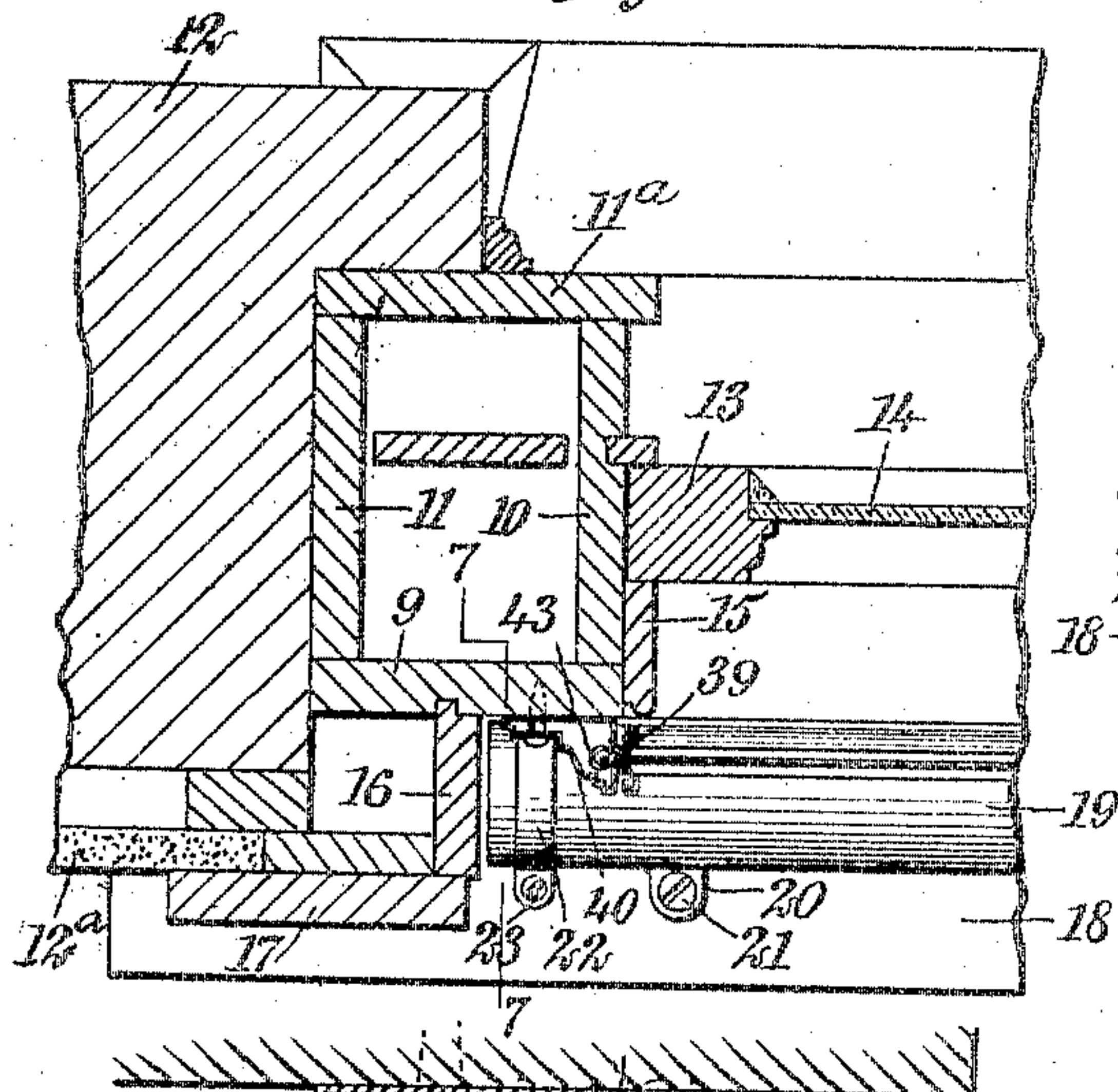


Fig. 3

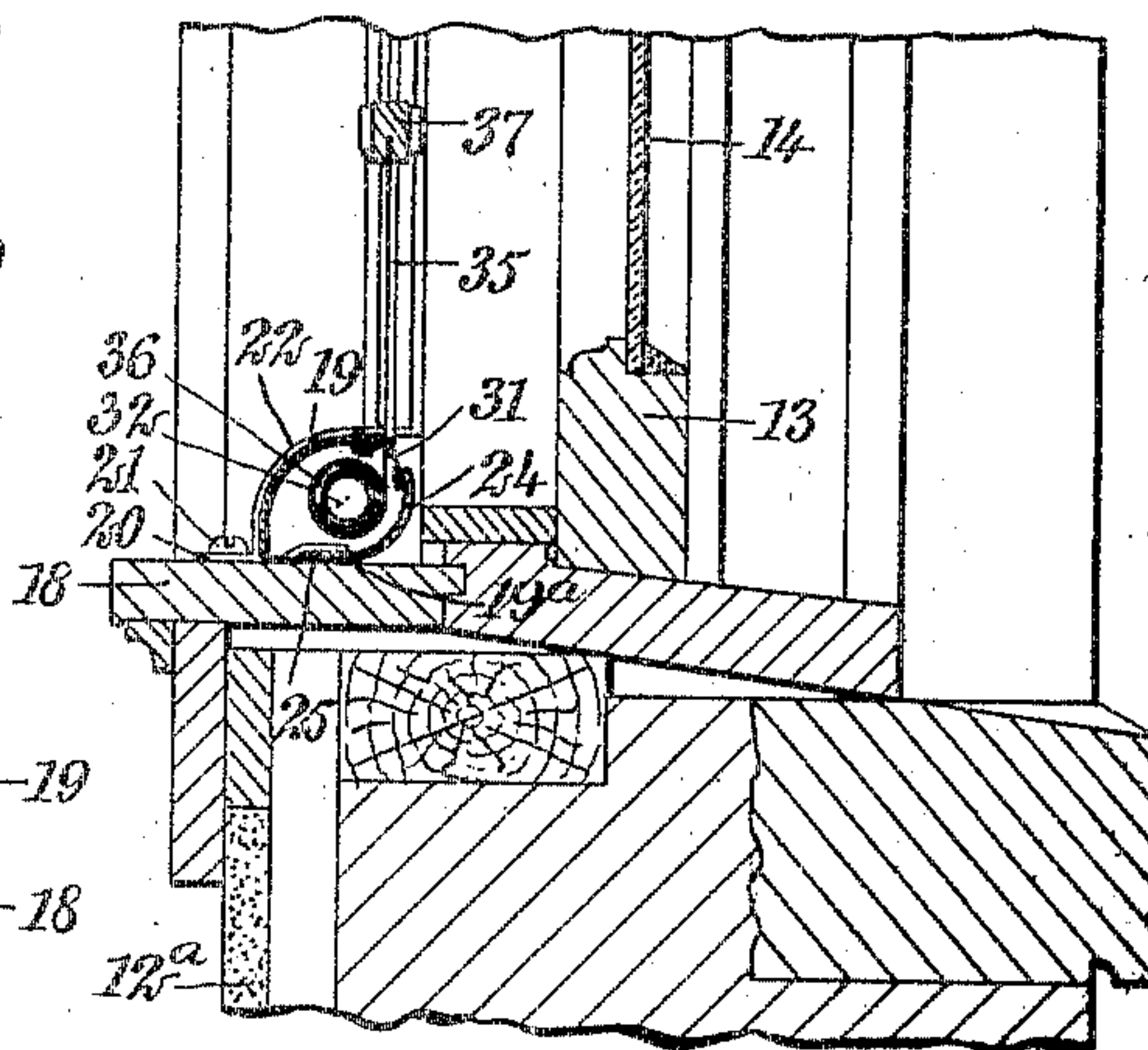
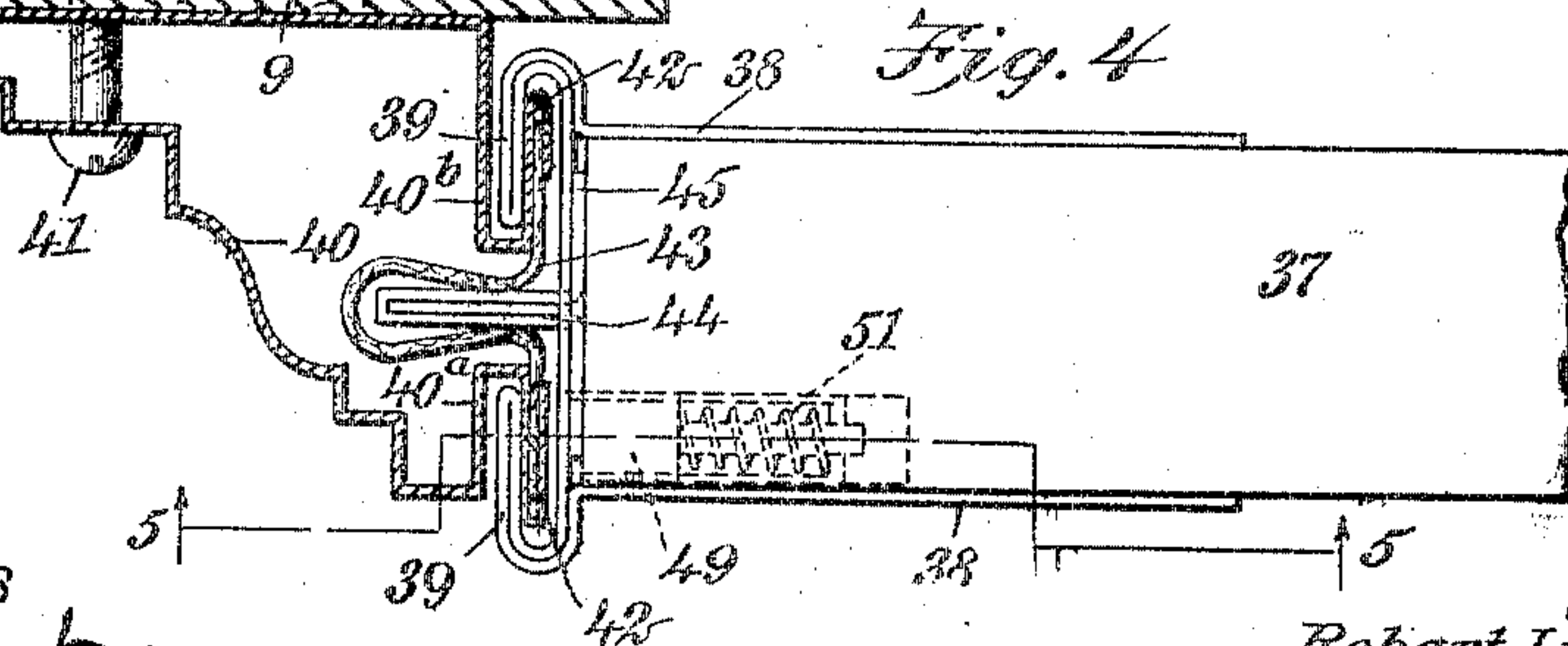


Fig. 4



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2 SHEETS—SHEET 2.

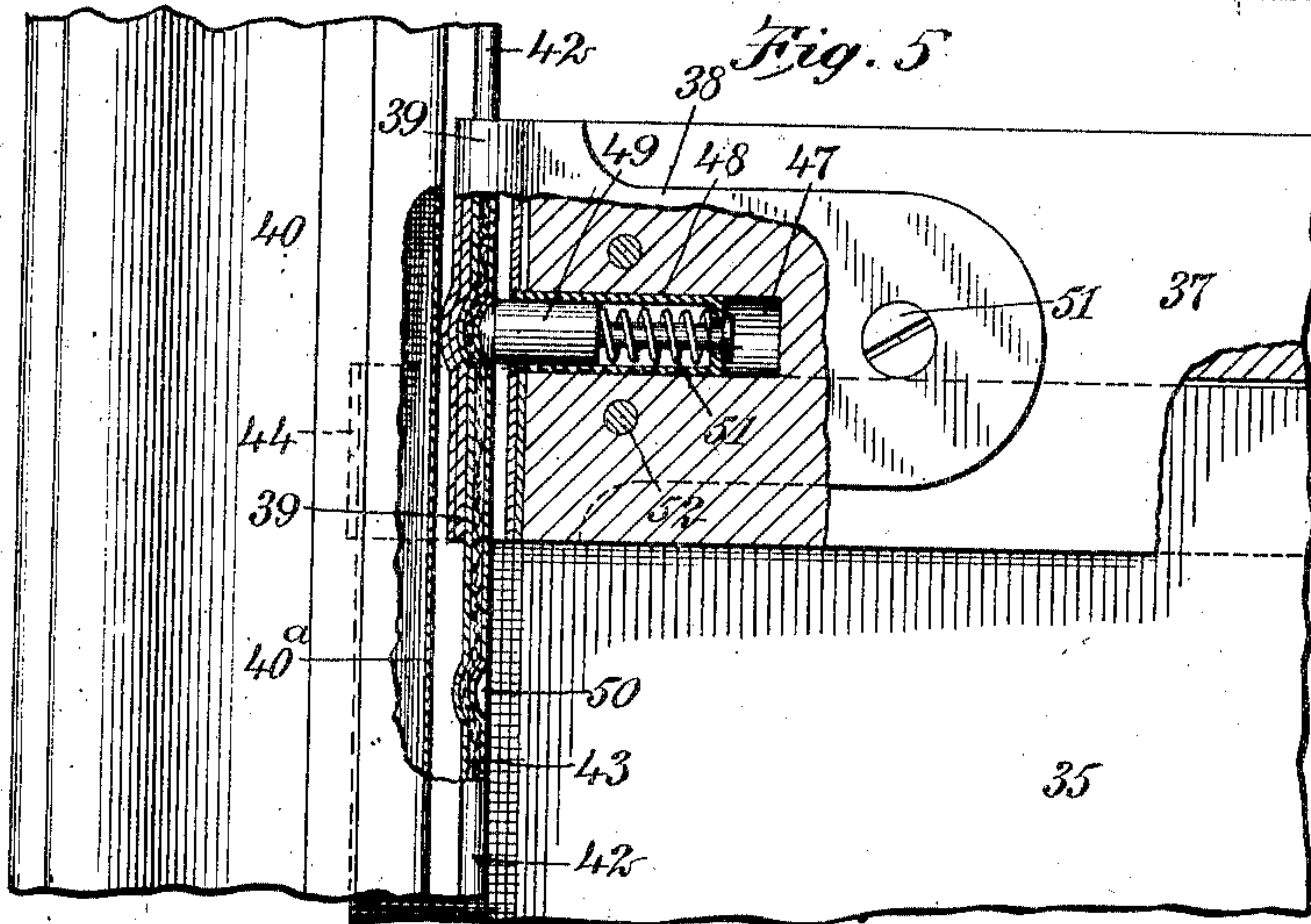


Fig. 6

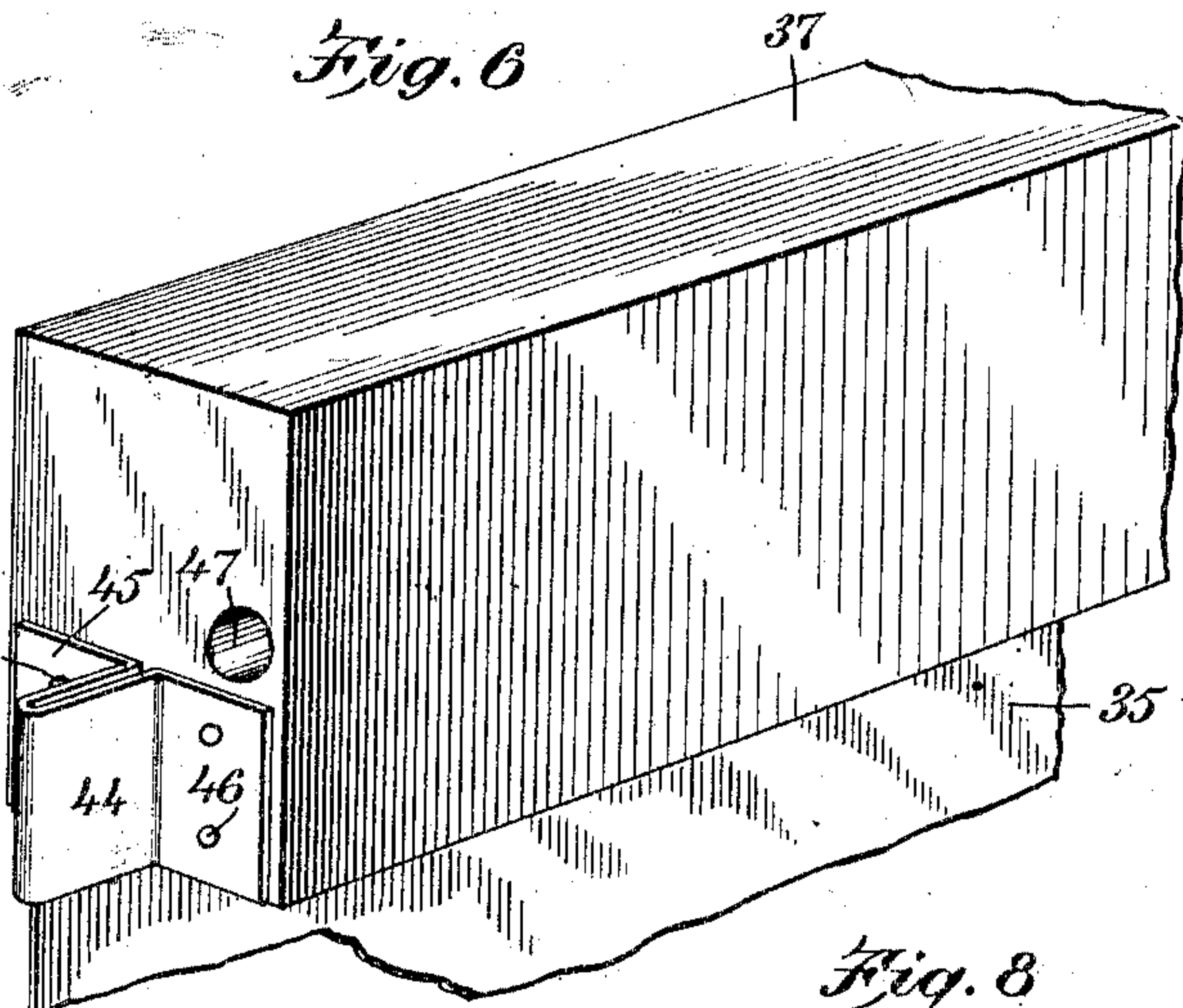


Fig. 7

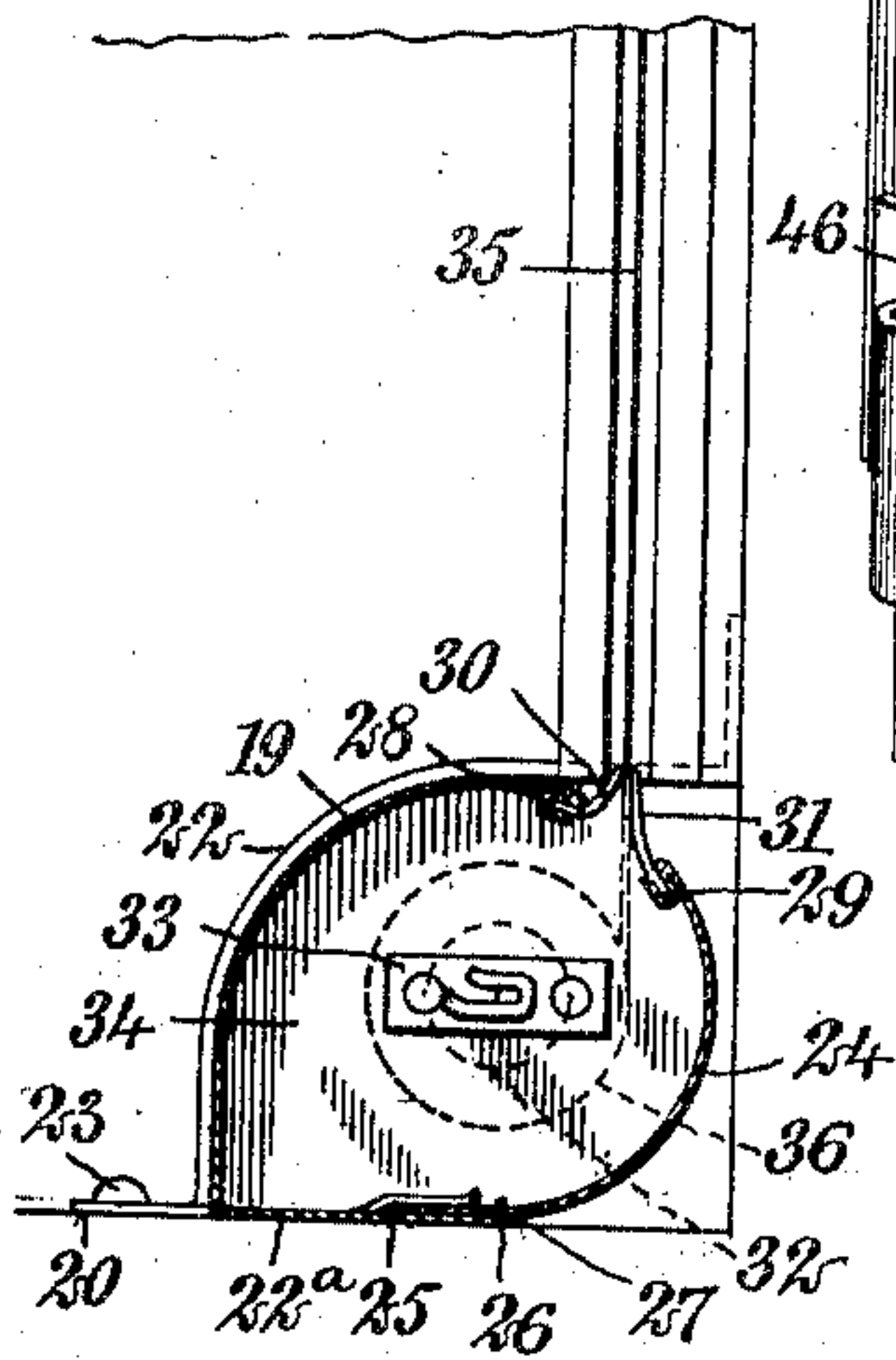
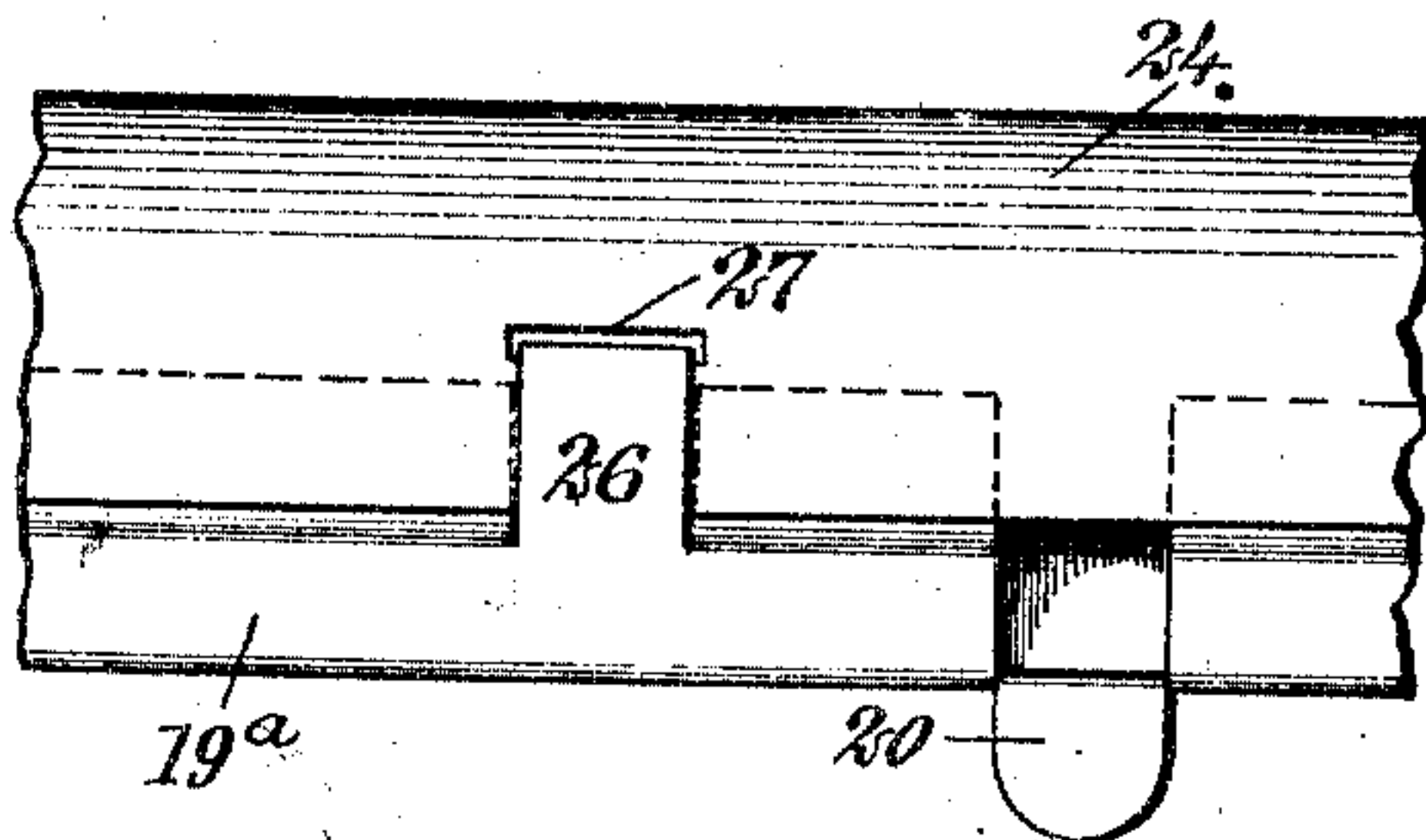


Fig. 8



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# UNITED STATES PATENT OFFICE.

ROBERT LINKLETTER, OF JERSEY CITY, NEW JERSEY, AND JOSEPH H. DE FREITAS, OF NEW YORK, N. Y.

## WINDOW STRUCTURE.

No. 927,985.

Specification of Letters Patent.

Patented July 13, 1909.

Application filed January 28, 1909. Serial No. 474,826.

To all whom it may concern:

Be it known that we, ROBERT LINKLETTER, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, and JOSEPH H. DE FREITAS, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Window Structure, of which the following is a full, clear and exact description.

Our invention relates to window structures; our more particular purpose being to provide a number of improvements for facilitating the lighting and ventilating of a building or portion thereof, in so far as these objects can be accomplished by aid of window structures.

Our invention further relates to various mechanical details of the window structure and parts associated with the same.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a fragmentary elevation showing the lower portion of a window provided with our device; Fig. 2 is an enlarged section, upon the line 2—2 of Fig. 1, looking in the direction of the arrows, and showing one of the jambs with our device connected therewith; Fig. 3 is a vertical section on the line 3—3 of Fig. 1, looking in the direction of the arrows, and showing our flexible transparent screen and the roller upon which it is partially wound; Fig. 4 is an enlarged horizontal section, somewhat similar to Fig. 2, and showing more particularly a part of the means for rendering the window weatherproof; Fig. 5 is a view partly in elevation and partly in section on the line 5—5 of Fig. 4, looking in the direction of the arrows, and showing the locking mechanism; Fig. 6 is a fragmentary perspective showing one corner of the bar carrying the screen, certain parts associated therewith being omitted; Fig. 7 is an enlarged section on the line 7—7 of Fig. 2; and Fig. 8 is a fragmentary inverted plan of the casing for holding the screen roller.

Boards 9, 10, 11, 11<sup>a</sup> together constitute a jamb which is connected rigidly with a wall 12. At 13 is a sash which is provided

with a pane 14 of glass. At 15 is a guiding strip by aid of which the sash is held in position. Connected with the board 9 are facings 16, 17. At 12<sup>a</sup> is the plastering or other inside finish of the room. Mounted upon a base lintel 18 is a shield 19 provided with ears 20 which are secured firmly in position by aid of screws 21. Braces 22 of metal, each having substantially the form of a strap, are secured in position by screws 23 and are employed for the purpose of strengthening the shield 19.

The shield 19 is provided with a portion 19<sup>a</sup> which serves as a bottom for the shield. The ears 20 are stamped or cut out directly from the bottom portion 19<sup>a</sup> of the shield as will be understood from Fig. 8. Another shield 24 also of metal is supported by the base lintel 18. The bottom portion 19<sup>a</sup> of the shield 19 is provided with tongues 25, 26, one edge of the shield 24 entering intermediate the tongues 25 and the bottom 19<sup>a</sup> of the shield 19. Each tongue 26 is bent slightly upward at its free end, as will be understood from Figs. 7, 8, the upturned portion entering a slot 27.

The upper edges of the shields 19, 24 are bent back upon themselves so as to form fastening members 28, 29, and mounted within these fastening members are tongues 30, 31, of flexible material, preferably felt, these tongues serving, to some extent, the purposes of weather strips. A roller 32, of the kind generally employed upon window screens, is journaled upon brackets 33, the latter being mounted upon end pieces 34. These end pieces are engaged directly by the shields 19, 24, the shields and end pieces together constituting a casing. At 35 is a transparent flexible screen serving, to some extent, the purpose of a pane of glass. This screen is made of celluloid or other suitable material, which is transparent and thus admits the light freely, while impervious to the action of moisture and well adapted to exclude currents of air. This flexible screen 35 is partially wound upon the roller 32, as will be seen at 36. The upper edge of the screen 35 is secured to a bar 37. Mounted upon the ends of this bar are brackets 38 each being formed of a single piece of sheet metal bent back upon itself and otherwise shaped so as to form a pair of oppositely disposed bearings 39. Mounted upon the jamb and se-



cured thereto by aid of screws 41 is a column 40 of sheet material, the latter being bent inward at 40<sup>a</sup>, 40<sup>b</sup>, and provided with portions 42 for holding a strip 43 of felt or other material suitable for excluding currents of air. At 44 is a tongue made of sheet material bent back upon itself and provided with portions 45 which are held against the edge of the bar 37 by aid of screws 46. The bar 37 is provided with a hole 47 and mounted within this hole is a tube 48 which extends slightly from the sash. A bolt 49 is slidably mounted within the tube 48 and is disposed in alinement with a row of indentations 50 for receiving it. A spring 51 engages the bolt 49 for the purpose of actuating it. Pins 52 are employed for the purpose of holding the brackets 38 upon the bar 37.

The operation of our device is as follows: The operator grasps the bar 37 and moves it up or down, as desired. The bearings 39 slide in relation to the portions 32 of the bracket 38, the upper edge of the transparent screen 35 being raised or lowered. As the bar 37 is raised, the screen 35 is unwound from the roller 32 which turns for this purpose. The bar 37 being lowered, the roller 32 turns in the opposite direction so as to take up the slack of the screen 35. As this screen moves, the tongues 30, 31 which fit against it prevent the passage of air currents. The bar 37 may be retained at any proximate level by aid of the indentations 50, as will be understood from Fig. 5. The bolt 49 merely slips into one of these indentations and prevents the bar 37 and consequently the screen 35 from further movement, except at the will of the operator. The strip 43 (see Fig. 4) being normally fixed in relation to the column 40 and the tongue 44 projecting into the loop formed by the strip 43, the admission of air through the window is still further prevented.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:

1. In a window structure, the combination of a column provided with an opening, a strip of flexible material mounted upon said column and disposed partially within said opening, a bar movable relatively to said column and provided with bearings engaging portions thereof, a tongue mounted upon said bar and engaging said strip, and a flexible member connected with said bar and adapted to be moved thereby as said bar is moved.

2. The combination of a column provided with an opening, a bar disposed adjacent to said column and movable relatively to the same, a bracket mounted upon said bar and engaging portions of said column, a strip of flexible material connected with said column and bent into the opening thereof, a slidable member provided with portions engaging

said column, and a tongue mounted upon said slidable member and engaging said strip of flexible material.

3. The combination of a pair of shields, tongues of flexible material connected with said shields, a roller disposed intermediate said shields, a screen of flexible material wound partially upon said roller and extending outwardly from said shields, said member being engaged by said tongues, a bar connected with said screen, and means for holding said bar at different levels.

4. In a window structure, the combination of a column provided with an opening, a strip of flexible material disposed partially within said opening, a bar movable relatively to said column, a tongue mounted upon said bar and extending into said strip and into said opening, and a screen member connected with said bar and adapted to move therewith.

5. The combination of a column provided with an opening, and a strip of flexible material extending into said opening, means for securing said strip of flexible material in position upon said column, a bar disposed adjacent to said column and provided with a member extending into said opening and slidably engaging said strip of flexible material.

6. The combination of a column of sheet material provided with portions bent away from each other so as to form an opening, a strip of flexible material extending partly into said opening, said strip of flexible material being connected with said portions of said column bent away from each other, a movable bar, and a member extending therefrom into said opening and slidably engaging said strip of flexible material.

7. The combination of a column of sheet material provided with an opening, and further provided with portions extending in opposite directions from said opening, said portions being bent back upon themselves, a strip of flexible material engaging said portions and held in position thereby at the point where said portions are bent back upon themselves, said strip of flexible material extending into said opening, a bar disposed adjacent to said column of sheet material and movable relatively thereto, and bearings carried by said bar and engaging said portions of said sheet material bent back upon themselves.

8. The combination of a column provided with an opening, a bar movable relatively to said column and provided with a member extending into said opening for the purpose of restricting the flow of air through said opening, a screen of transparent material connected to said bar, and means for winding up a portion of said screen of transparent material.

9. In a window structure, the combination of a stationary member, a bar movable relatively thereto, a screen of flexible material



connected with said bar, means for restricting the free flow of air around the edges of said screen, and a roller connected with said screen for partially supporting the same.

5 10. The combination of a stationary framework, a bar movable in a predetermined plane relatively to said framework, a roller disposed adjacent to said framework, and a flexible screen wound partially upon said  
10 roller and connected with said bar for the purpose of enabling movements of said bar within said plane to wind and unwind said flexible screen.

15 11. The combination of a stationary framework provided with an opening, a bar pro-

vided with a member extending into said opening, a screen of transparent flexible material connected with said bar and with said framework, said screen having an edge extending into said opening, and a roller 20 having wound thereupon a portion of said screen opposite said bar.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ROBERT LINKLETTER.

JOSEPH H. DE FREITAS.

Witnesses:

J. O'BRIEN,

IRVING C. IRISH.