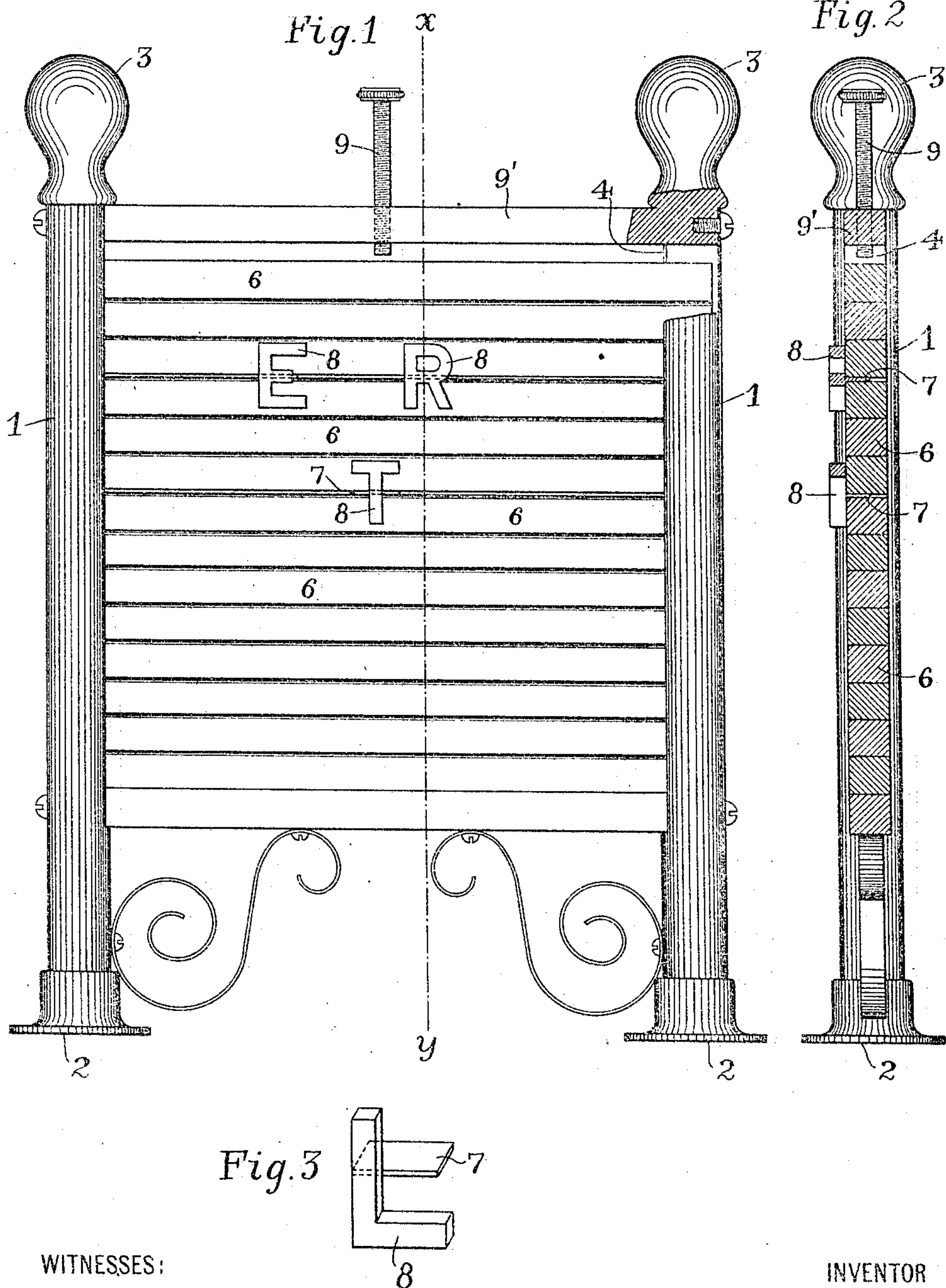


H. WILLSON.
CHANGEABLE SIGN BOARD.
APPLICATION FILED MAR. 13, 1909.

958,054.

Patented May 17, 1910.

3 SHEETS—SHEET 1.



WITNESSES:
David J. Walsh
Alfred R. Anderson

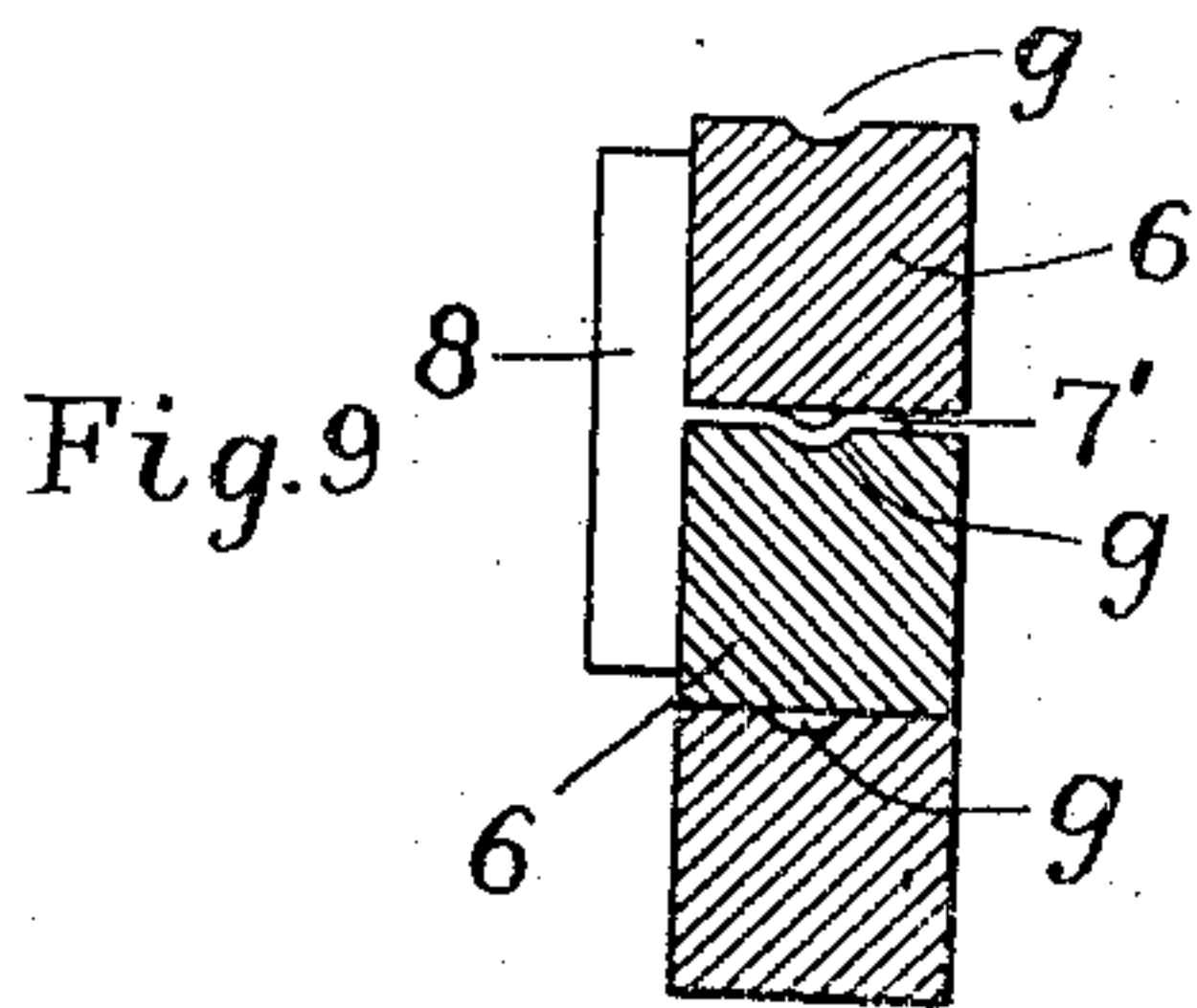
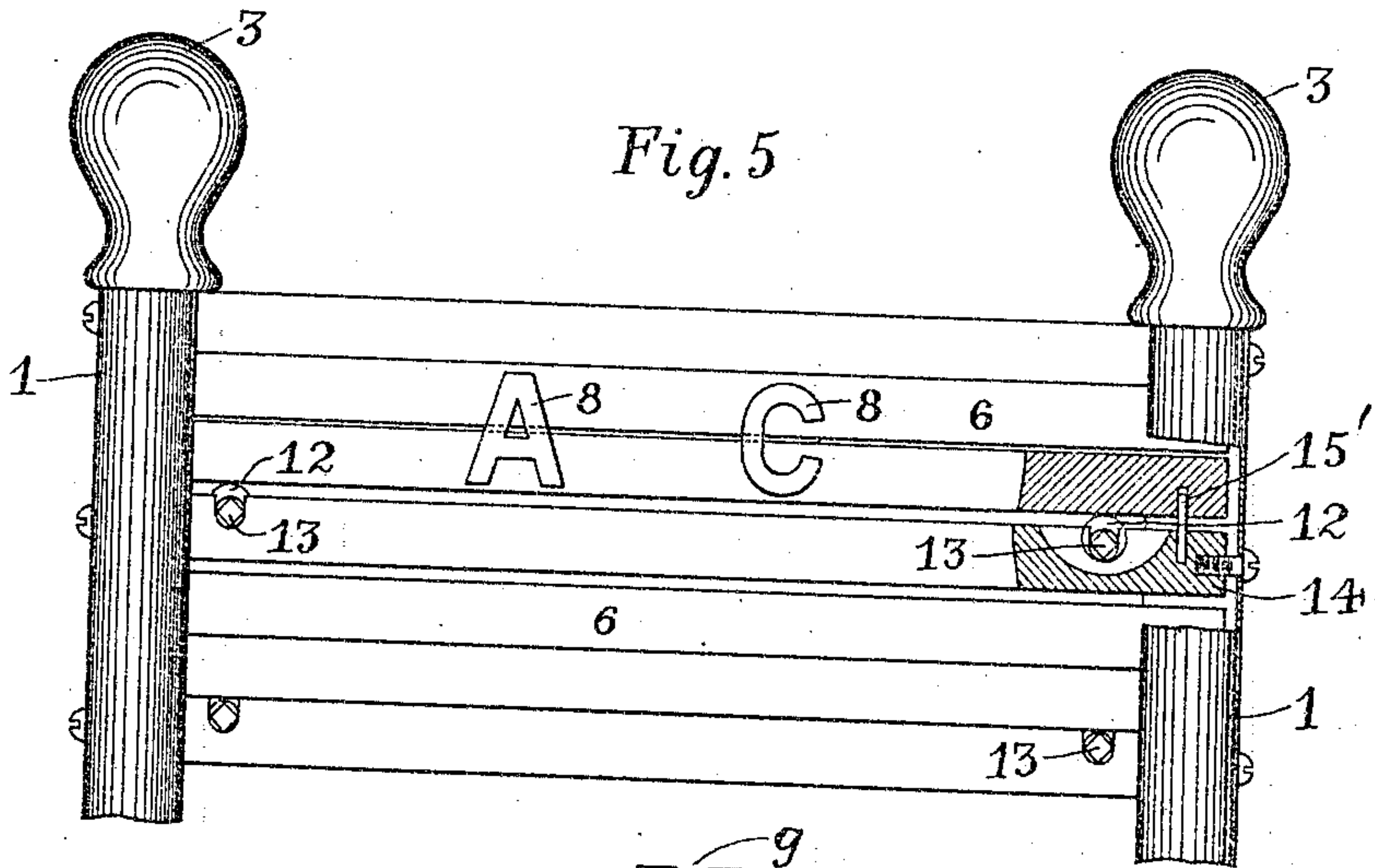
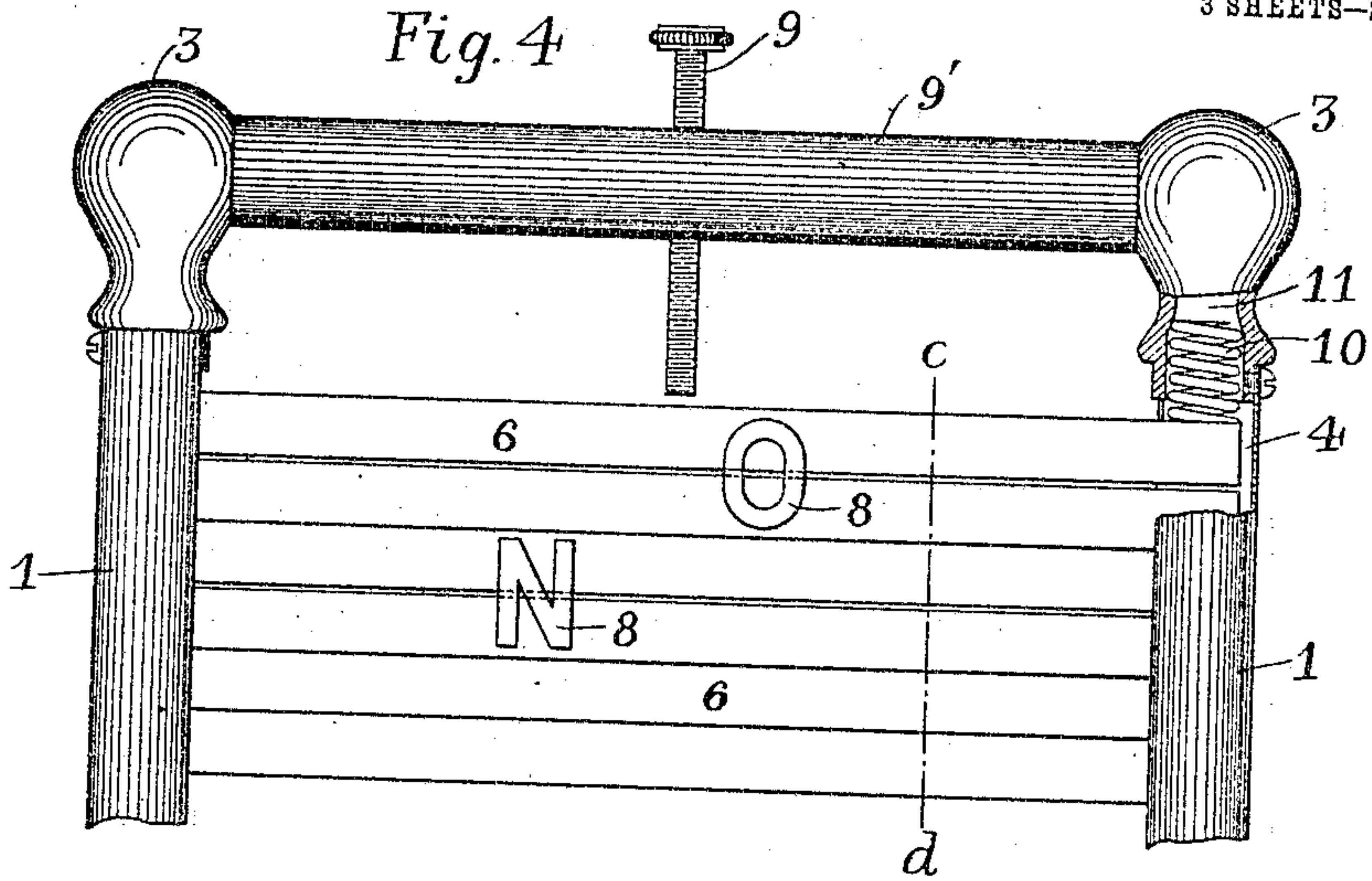
INVENTOR
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3 SHEETS—SHEET 2.



WITNESSES:

David J. Halsh
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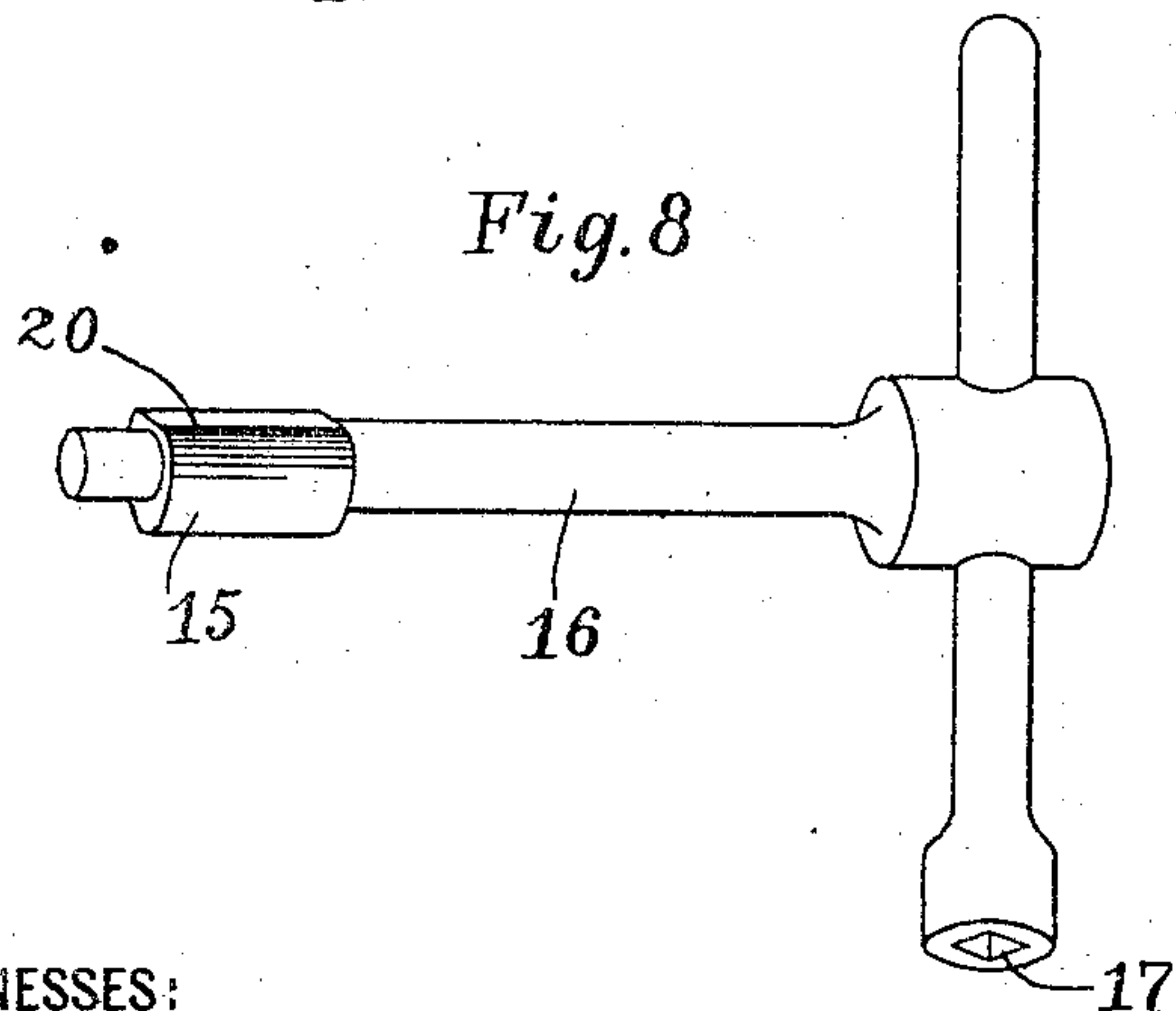
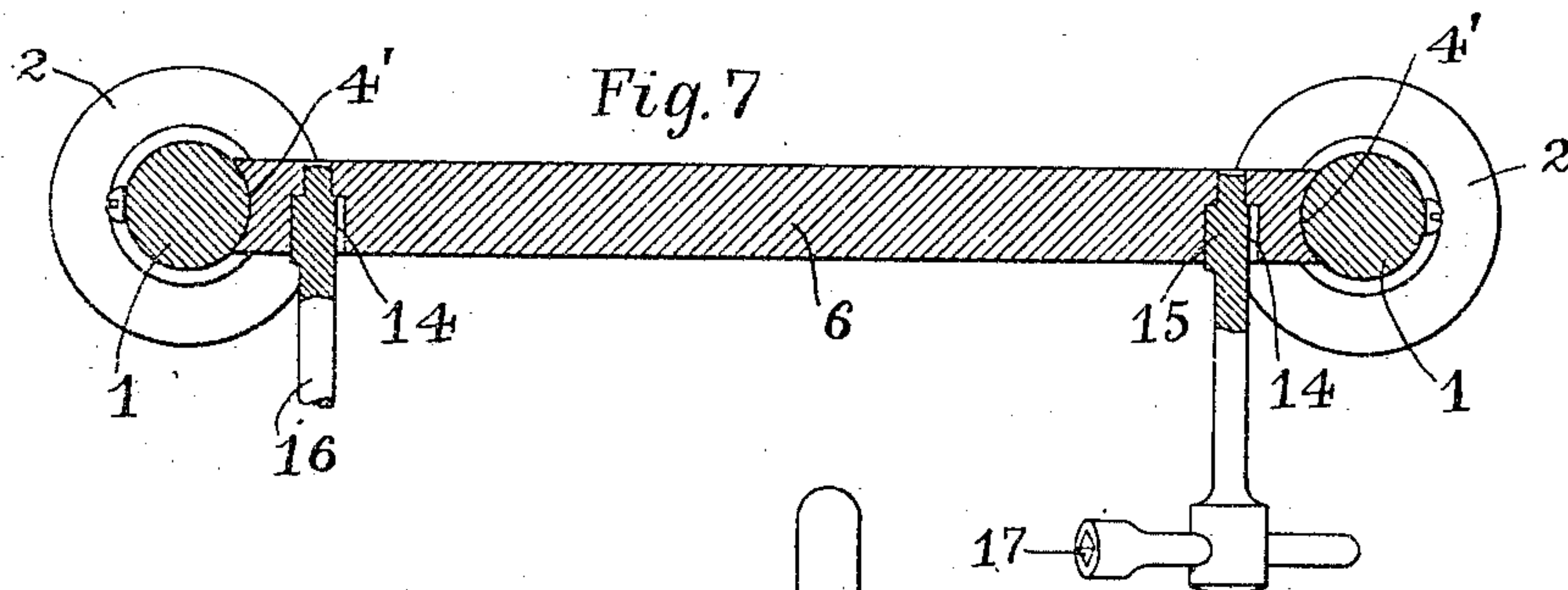
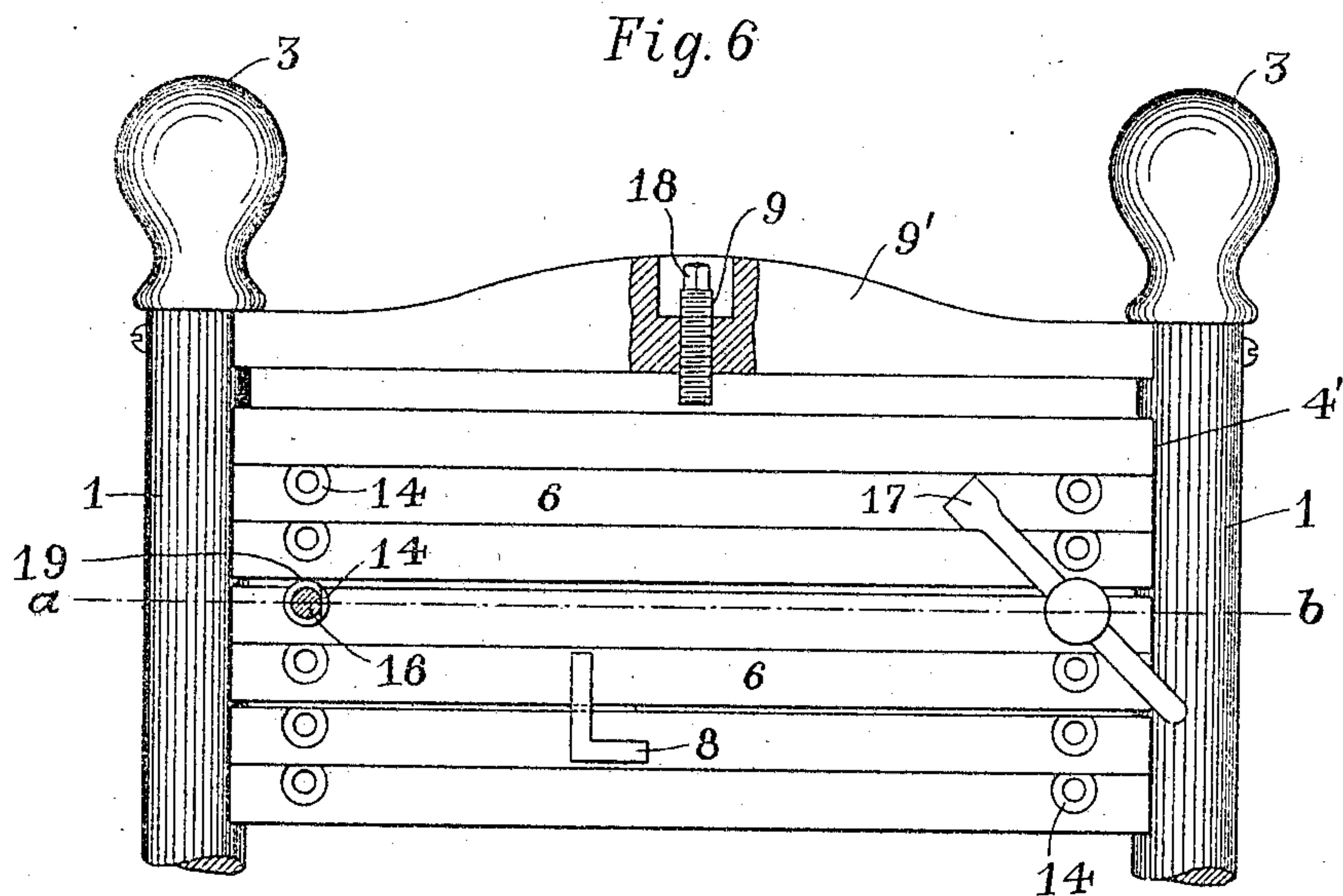
ATTORNEY

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SHEETS—SHEET 3.



WITNESSES:

David J. Walsh
Alfred R. Anderson

INVENTOR

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ATTORNEY

UNITED STATES PATENT OFFICE.

HENRY WILLSON, OF CHICAGO, ILLINOIS.

CHANGEABLE SIGN-BOARD.

958,054.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed March 13, 1909. Serial No. 483,198.

To all whom it may concern:

Be it known that I, HENRY WILLSON, citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented a new and useful Changeable Sign-Board; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to changeable sign-boards, more particularly to the class in which removable letters or characters are employed, to allow of changing at will the announcements carried by said sign-board.

It relates specifically to a sign-board in which letters or characters provided with integral lugs, or arms, are detachably held in place by the weight of parallel bars, retained and guided by vertical standards, between the abutting edges of which bars the lugs or arms are held, this weight being at times further assisted by adjusting screws, or cams, or by the automatic pressure caused by coiled springs.

The object of my invention is to provide a changeable sign-board, easily or automatically adjustable, and which shall be rapidly and conveniently manipulated.

In the accompanying drawings, forming part of this specification: Figure 1 shows a front elevation, partly in section, of the sign-board in which the retaining bars slide in grooves fashioned in the standards; Fig. 2, a vertical section on the line $x-y$, of Fig. 1; Fig. 3 is a view of one of the characters, showing its attached lug; Fig. 4 is a front elevation of the upper portion of the device, partly broken away, and partly in section; Fig. 5 is a view similar to Fig. 4, also partly broken away and partly in section, and showing fixed bars having attached thereto adjusting cams; Fig. 6 shows a modification in which the adjusting screw is sunk into the top cross-bar, the letter sustaining bars being grooved at the ends so as to slide vertically on the outside the standards, and provided with holes for receiving the cam key; Fig. 7 shows a vertical section through one of the letter retaining bars, on the line $a-b$, of Fig. 6, with the cam key, partly in section, inserted in the apertures provided for receiving the same; Fig. 8 shows the segmental cam key by which the letter bars are raised for insertion of characters, or adjustably locked. Fig. 9 is a vertical section taken on the line $c-d$, of Fig. 4, showing a modification of the retaining bars,

and a modification in the shape of the lug to adapt it to fit the groove in the bars.

Referring to the drawings:—1 are the supporting standards, provided with any suitably base 2, and terminating above in any desired top piece, as 3. In order that the bars 6 may move vertically there are either, provided in the standards 1 the grooves 4, or else the bars are hollowed at their ends 4' to correspond with the standards.

7 and 7' are lugs integral with the characters 8.

To assist the weight of the parallel horizontal bars 6 in more firmly holding the characters 8 in place, I may make use, and preferably do, of a screw 9, which works in the cross-bar 9', and is either provided with a head projecting above the cross-bar 9', or, to render unauthorized tampering therewith more difficult, the head may be sunk in the cross-bar, as shown in Fig. 6.

To enable the letters to be held more securely, in a modified construction, shown in Fig. 9, I attach to the letters 8 a spring corrugated lug 7' and I provide the retaining bars 6, on one of their faces with grooves g , adapted to receive the corrugations on the lug 7'. This is, in my opinion, the preferred form of the device, although the other constructions are practically efficient. It is evident that the lugs with the corrugations will be held more securely than the smooth lugs.

10 is a spiral spring housed in the upper portion of the standard 1, for assisting the pressure of the bars upon the lugs of the characters.

12 is a cam controlled by the square head 13, forming a modified arrangement for clamping the lugs of the letters or characters. 14 are holes formed into the parallel bars adapted to receive the cam 15 which, in this instance, is fashioned on one end of the key 16, which also has in its handle the square wrench 17, which fits the square heads 13 of the cams, and also the screw head 18. In order to overcome a tendency of the bars to longitudinal displacement under the action of the cams 12, a vertical guide pin 15' may be inserted between the bars, as shown in Fig. 5.

The operation is as follows:—The parallel bars 6 being arranged between the standards 1, as shown in the various figures, the lugs 7 or 7' of the letters or characters 8 are inserted between any desired pair of bars,

and are normally held therein by the weight of the parallel bars themselves. The bars may be separated, for the reception of the letters, by inserting the cam 15 of the key 16 in the holes 14 of the bars 6, and turning it around into the position 19. To make action of the cam-key easier, one edge, as 20, is slightly rounded. To more securely hold the characters between the bars, the screw 9, threaded in the cross-bar 9', or set in, as in Fig. 6, is employed, either alone, as shown in Fig. 1, or assisted by the spiral spring 10, which may, however, itself supply the necessary pressure. This spring is in many cases preferable, since it is automatic in its action. The bars can also be adjusted to receive and hold the characters by cams, either attached to the bars, as in Fig. 5, or the insertion of characters may be effected by using the segmental cam key 16 to separate the parallel bars. When the cam is attached to the bars, the bar is made stationary in the standards, either by screws, or otherwise, and any desired number of movable bars lying between two fixed bars can by this means be adjusted.

Having thus fully described and illustrated my invention, what I claim is:

1. In an advertising sign, the combination of a supporting frame, a series of parallel bars movable in said frame, a series of characters provided with extending lugs adapted to be clamped between two parallel bars, a bar fixedly attached to the frame and provided with a cam adapted to tightly clamp and hold the parallel bars in close contact with themselves and against the character-supporting lugs, substantially as set forth.

2. In an advertising sign, the combination of a frame, parallel bars movable lengthwise

of said frame, a series of characters provided with lugs adapted to be clamped between said bars, means provided in said bars for insertion of a cam-key, and a cam-key adapted to separate the adjacent bars for the insertion of the characters, substantially as set forth.

3. In a sign-board, a supporting frame, parallel bars vertically movable in said frame, said bars being provided with grooves upon their abutting edges, in combination with a legible character provided with a spring corrugated lug adapted to fit into said groove, and means for adjusting the bars upon the lug, substantially as set forth.

4. In a sign-board, a legible character a pair of parallel bars, one of said bars being flat on the abutting side, the other having a longitudinal groove along the abutting edge, in combination with a spring corrugated lug, adapted to be received and held in said groove, and means for regulating the pressure between the bars.

5. In a sign-board, a pair of parallel bars, one of said bars being provided on its abutting edge with a segmental circular opening, a series of characters provided with lugs adapted to be clamped between said bars, and a segmental cam-key adapted to fit said segmental opening and upon turning either way to separate the adjacent bars for the insertion of the characters, substantially as set forth.

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY WILLSON.

Witnesses:

WM. JULIUS MARTWICK,
ALBERT STETSON.