

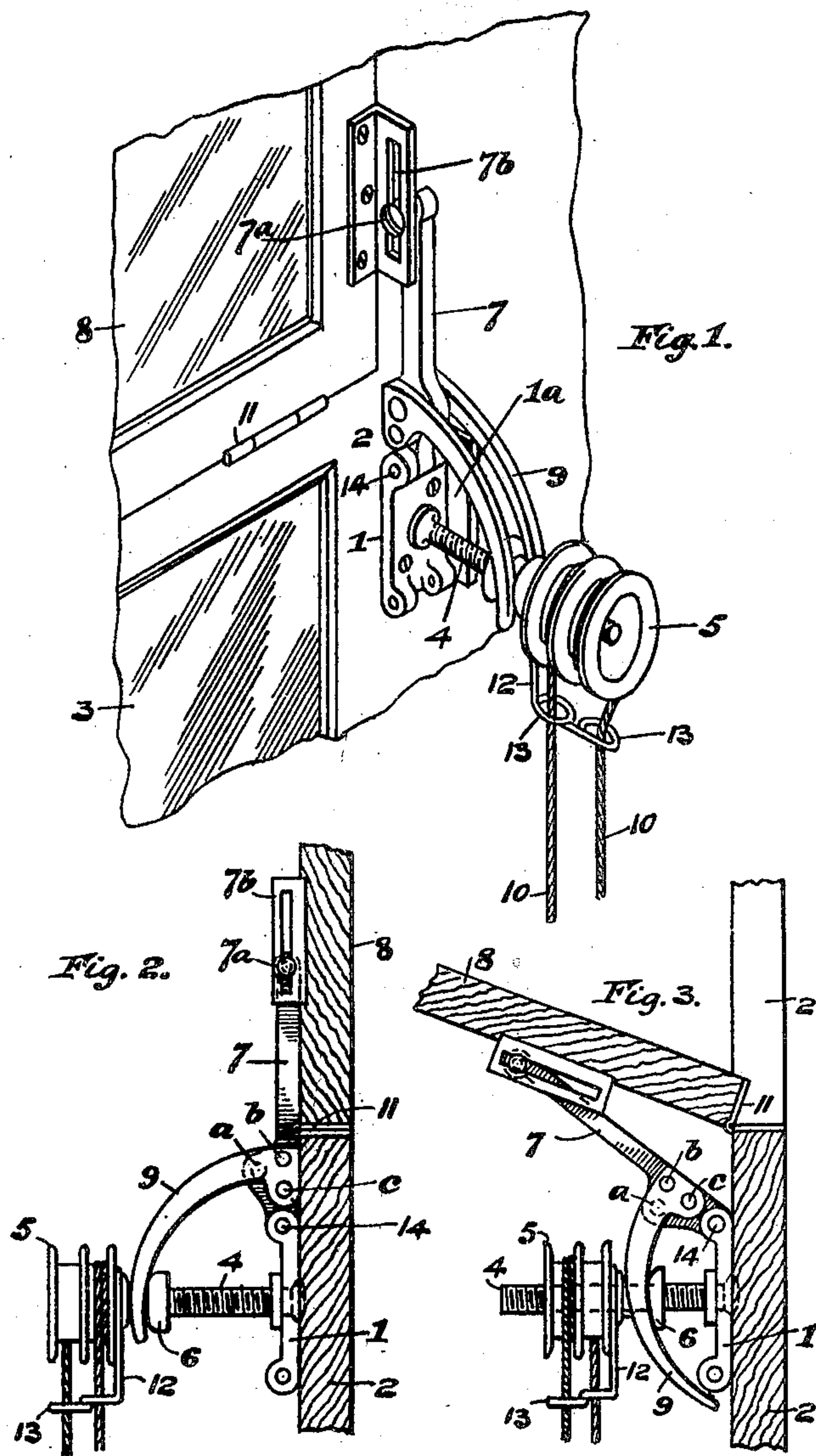
No. 875,322.

PATENTED DEC. 31, 1907.

F. J. CHELL.
TRANSOM LIFTER.

APPLICATION FILED AUG. 19, 1907.

2 SHEETS—SHEET 1.



Witnesses.

A. J. Davis
W. Scott

Inventor.

F. J. Chell

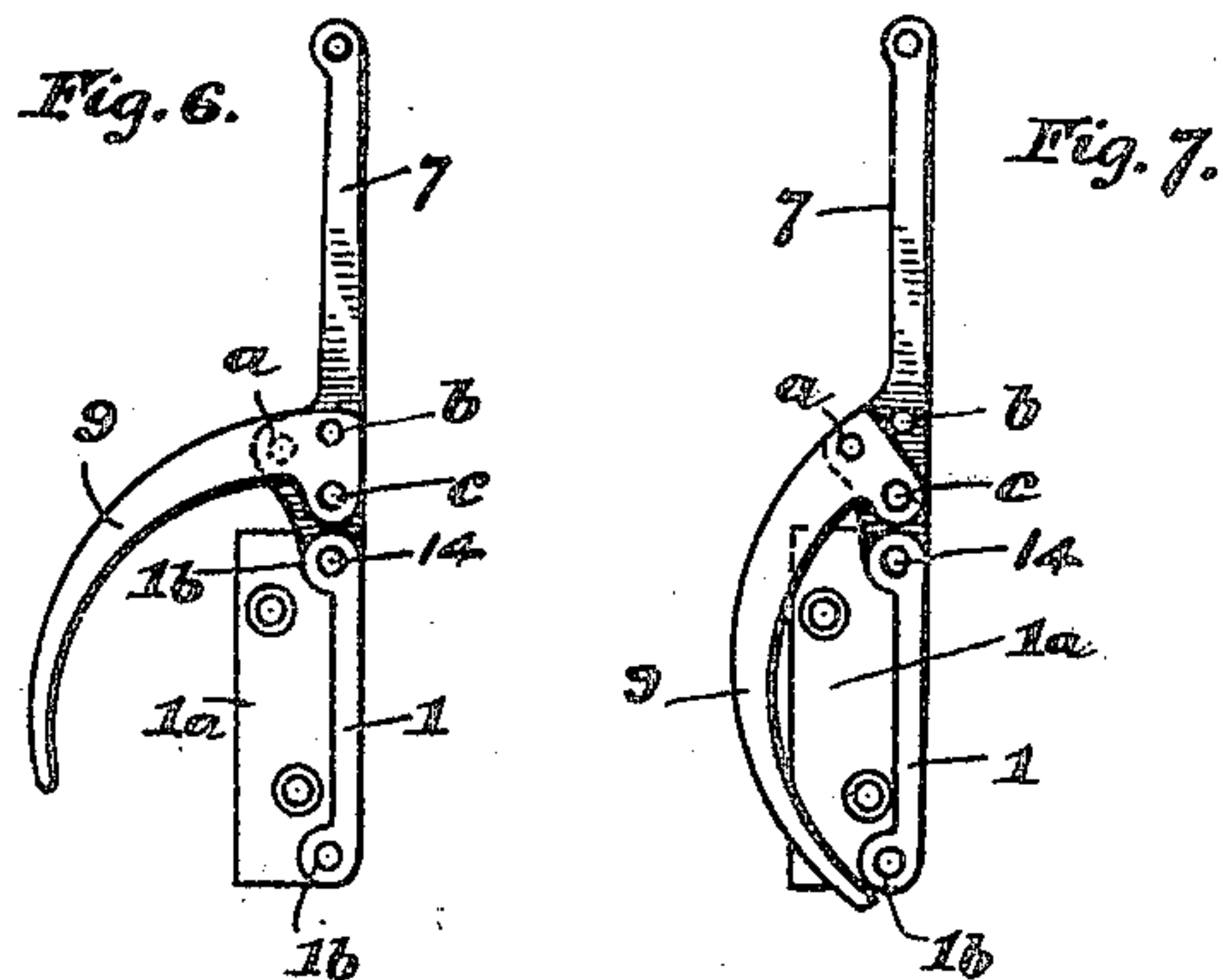
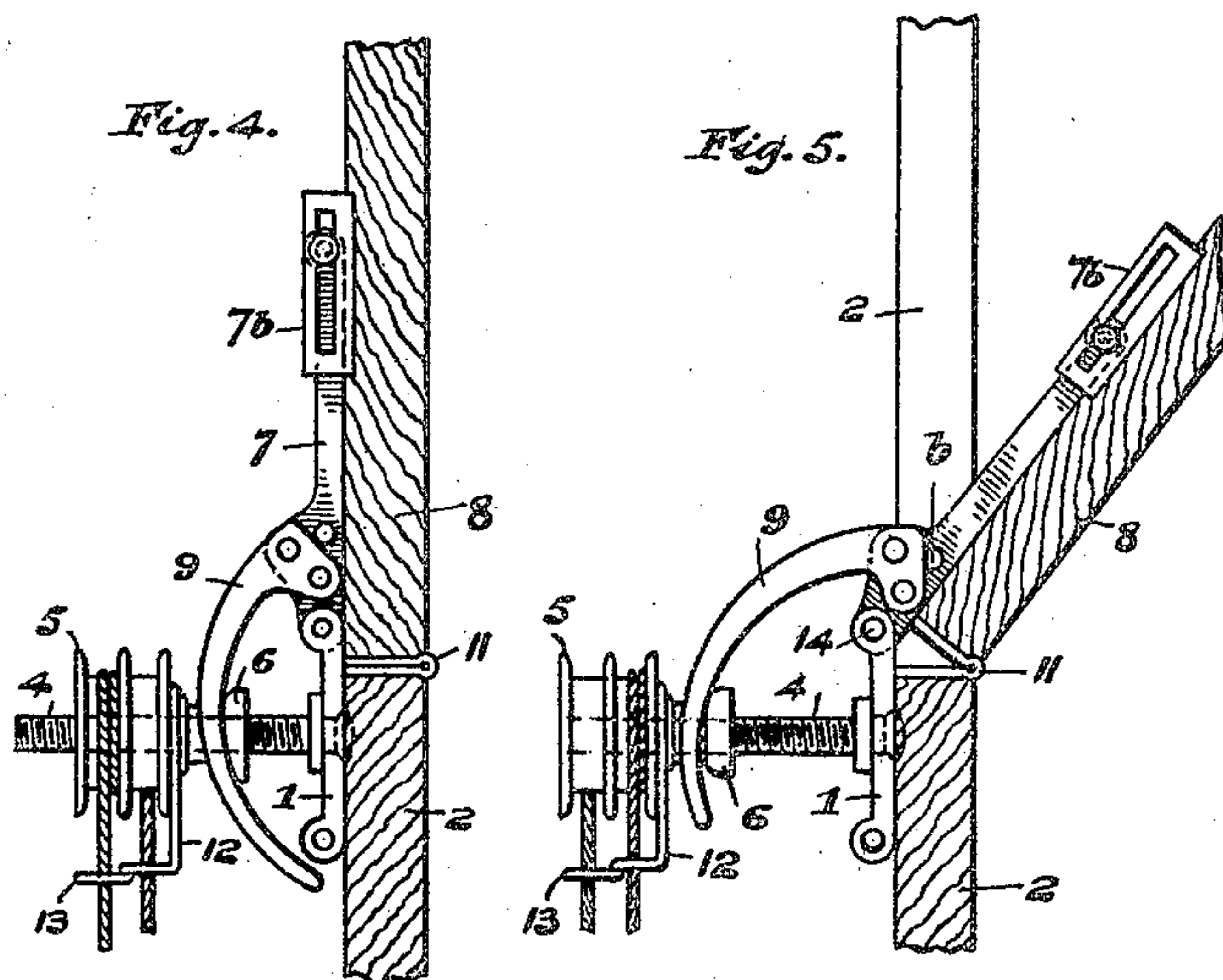
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W Scott

Inventor.

L. C. Bell

UNITED STATES PATENT OFFICE.

FRANCIS JOHN CHELL, OF SEACOMBE, ENGLAND.

TRANSOM-LIFTER.

No. 875,322.

Specification of Letters Patent.

Patented Dec. 31, 1907.

Application filed August 19, 1907. Serial No. 389,225.

To all whom it may concern:

Be it known that I, FRANCIS JOHN CHELL, a subject of Great Britain, residing at Seacombe, in the county of Chester, England, have invented certain new and useful Improvements in Transom-Lifters, of which the following is a specification.

This invention relates to improvements on that type of regulator for ventilators and the like in which an internally threaded pulley operated by a cord engages a screw, and my invention comprises improvements in such apparatus whereby the device may be readily applied to an inwardly or outwardly, or right or left hand, opening ventilator, and in which the component parts shall be few in number, easily constructed, and not liable to get out of order.

A further advantage of the invention lies in the fact that there can be no slip of the actuating cord on the pulley.

The invention is illustrated in the accompanying drawings, in which,

Figure 1. is a perspective view of the regulator attached to an inwardly opening ventilator; Fig. 2. is a side view in section showing an inwardly opening regulator, the ventilator being closed; Fig. 3. is an analogous view, the ventilator being open; Figs. 4. and 5. are similar views showing the regulator adapted for an outwardly opening ventilator; Fig. 6. is a fragmentary detail view showing the position of the arms arranged for an inward type of regulator; Fig. 7. shows the position of the arms for an outward type.

The apparatus consists of a base plate 1, for attaching to the frame 2 of the window or the like 3, to which base plate is fitted a screw 4, preferably of a rather quick thread, a grooved pulley 5 provided with a collar 6 engaging the screw so that rotation of the pulley will cause it to move axially thereon. To one end of the base plate is hinged at 14 a second plate or arm 7, which I will term the ventilator plate, a pin 7^a on the end of which engages a slotted piece 7^b attached to the ventilator 8 or similar hinged structure. This ventilator plate 7 is fitted with a pair of curvilinear arms 9 which engage the collar 6 of the operating pulley 5. Rotation of the pulley in one or other direction by means of the operating cord 10 will cause the curvilinear arms to be drawn in or out and the ventilator to be moved angularly about its hinges 11, as shown in Fig. 3. The ventilator plate 7 may be independent of the base

plate and positively secured to the ventilator, the curvilinear arms engaging the collar of the pulley 5 as before described.

To adapt the apparatus to the respective cases of inwardly or outwardly opening ventilators, the plate 7 is provided with two holes *a* and *b* into either of which fits the set screw which secures the curvilinear arms 9 thereto. The arms are permanently pivoted at *c* to the ventilator plate 7 and by partially rotating them about this pivot *c* until the outer hole in the arms comes over the plate hole *b*, as in Fig. 6., or over the plate hole *a*, as in Fig. 7, and the set screw then inserted to lock them in position, the regulator becomes adapted to the case of an inwardly or outwardly opening ventilator respectively.

Figs. 1, 2, and 3 show the arms set over the hole *b* and adapted for inward regulation, while in Figs. 4, 5, and 7, the arms are set over the hole *a* and adapted for outward regulation. By this alternative method of setting the arms, the normal relative positions of the ventilator plate 7 and the base plate 1 for any given position of the pulley may be varied, and the device adapted for inward or outward regulation. The base plate 1 is also fitted with a side bracket 1^a to adapt it to be secured by this bracket if required, and by providing the plate 1 with lugs 1^b at each end the ventilator plate may be pivoted thereto at either end, and in this way the side bracket 1^a may be caused to assume a right or left handed position and the regulator adapted to suit any possible situation in which it may be required to be fitted. Instead of the endless cord usual in such apparatus, the ends of the cord are positively attached to the pulley, the grooves in which are sufficiently deep to allow the cord to be wound several times round the pulley, one end of the cord being wound on and the other wound off as the pulley rotates. I also find it of advantage to provide a wire or the like fitting 12, encircling one shoulder of the collar 6, through the loops 13 of which the cord is threaded. This guide 12 swings radially about the pulley, and the loops 13 always maintain a proper position with reference to the grooves thereby preventing the cord from slipping over the ridges separating the grooves.

Claims.

1. In a regulator, in combination, a screw rigidly carried by the framework, a thread-

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ed pulley mounted on said screw, and one or more curved arms operatively connected to the ventilator and adapted to engage with and be actuated by said pulley.

5 2. In a regulator, in combination, a screw rigidly carried by the framework, a base plate carrying said screw and provided with hinge lugs at each end and a side bracket, a threaded pulley mounted on said screw, and
10 one or more curved arms pivoted in the hinge lugs and operatively connected to the ventilator and adapted to engage with and be actuated by the said pulley.

15 3. In a regulator, in combination, a screw rigidly carried by the framework, a base plate carrying said screw, a threaded pulley mounted in said screw, one or more curved arms carried from an arm pivoted to the base plate, and a slotted piece attached to the
20 ventilator and engaging the end of the pivot-

ed arm, the curved arms being adapted to engage with and be actuated by the said pulley.

4. In a regulator, in combination, a screw rigidly carried by the framework, a base 25 plate carrying said screw, an arm pivoted to the base plate, one or more curved arms pivoted to the base plate arm, and means for adjusting the curved arms angularly about their pivot on the said base plate arm. 30

5. In a regulator, in combination, an internally threaded pulley having several cord grooves, and a looped cord guide rotatably mounted so as to swing about the pulley axis.

In witness whereof I have hereunto set my 35 hand in presence of two witnesses.

FRANCIS JOHN CHELL.

Witnesses:

W. SCOTT,

A. J. DAVIES.