

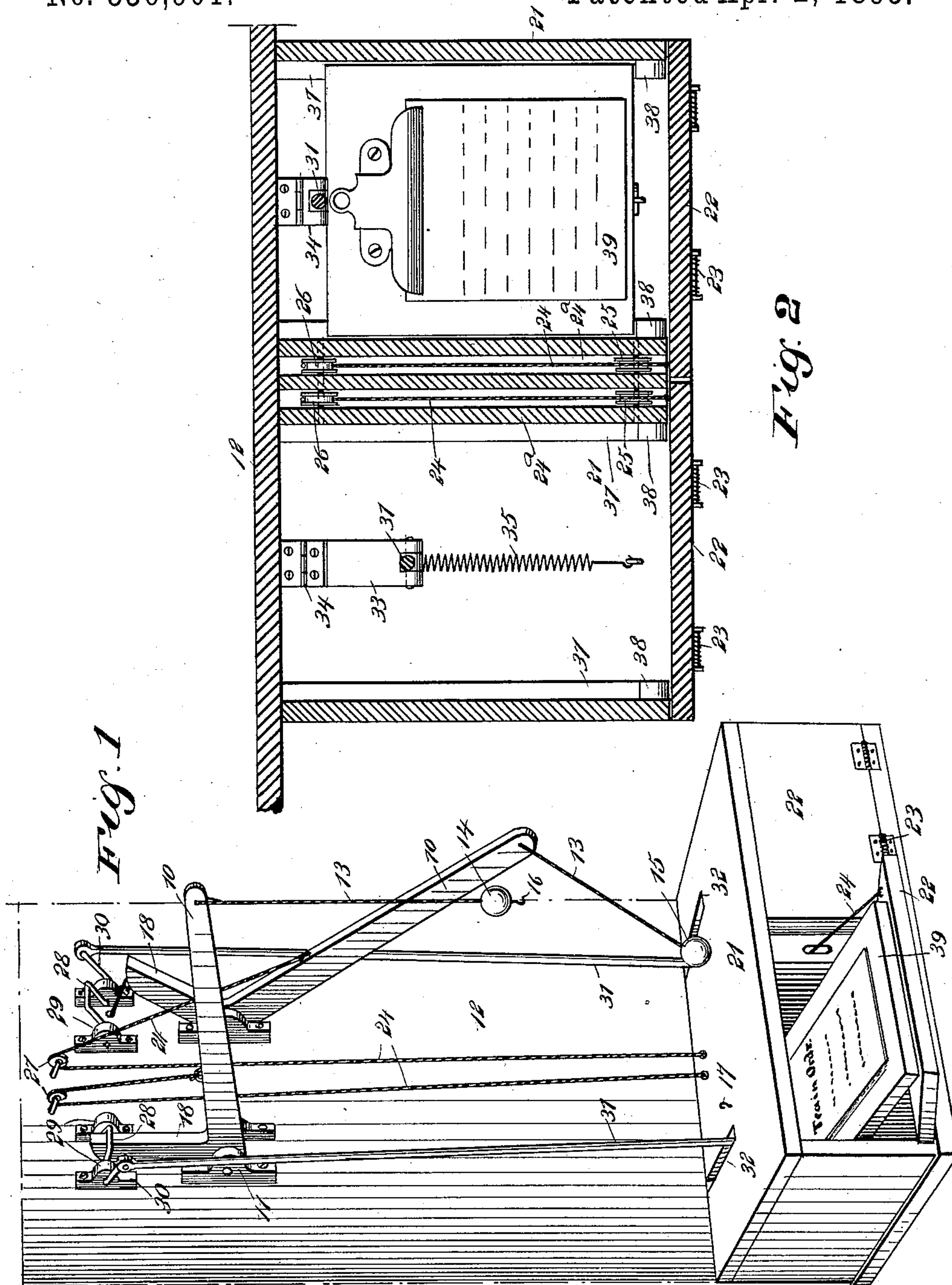
(No Model.)

2 Sheets—Sheet 1.

W. A. TUCKER.
TRAIN ORDER BOX.

No. 536,901.

Patented Apr. 2, 1895.



WITNESSES:

John Bergstrom
H. B. Hutchinson

INVENTOR

W. A. Tucker

BY

Mumford
ATTORNEYS.

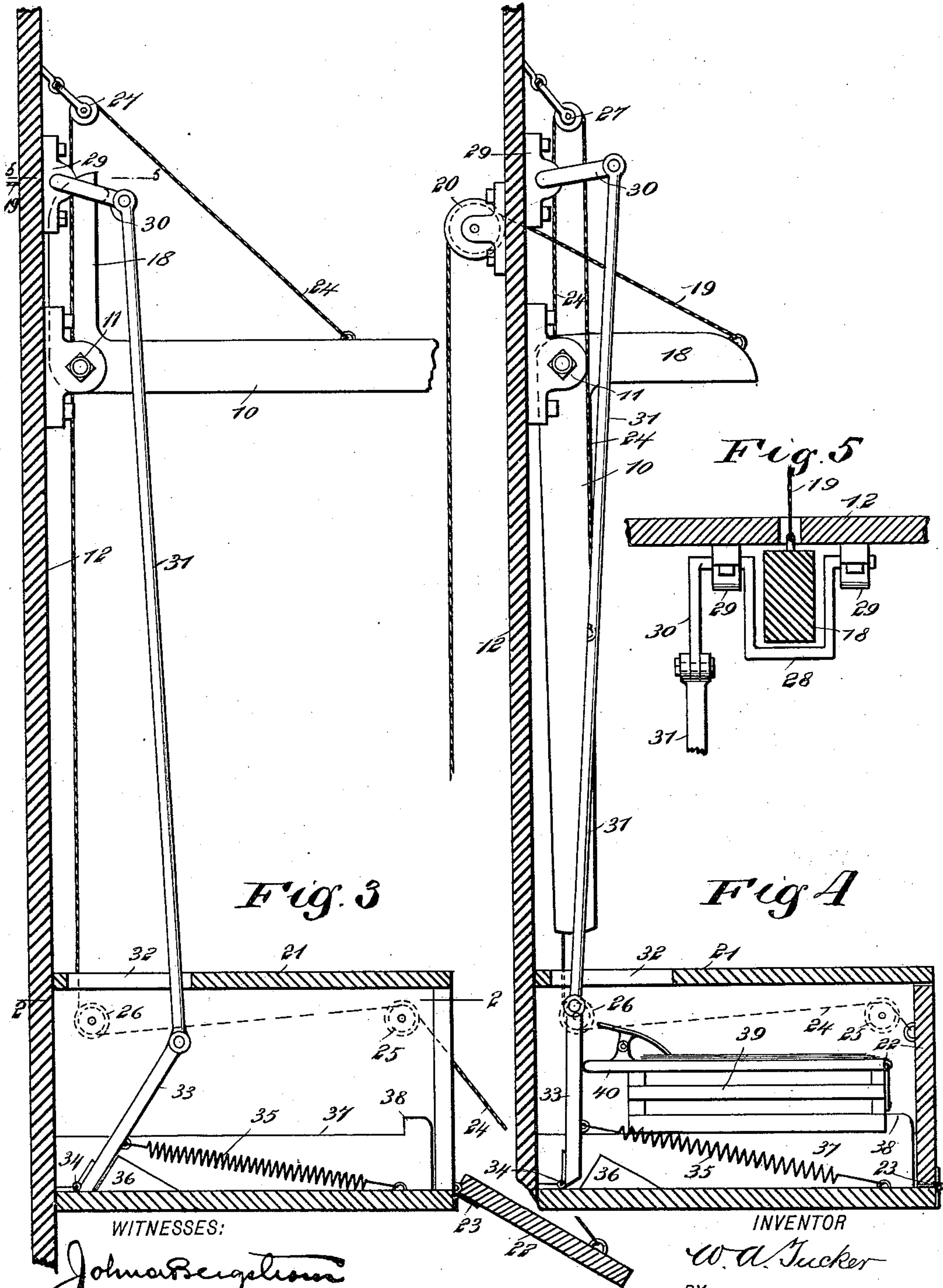
(No Model.)

2 Sheets—Sheet 2.

W. A. TUCKER.
TRAIN ORDER BOX.

No. 536,901.

Patented Apr. 2, 1895.



WITNESSES:

John Bergelson
W. O. Hutchinson

INVENTOR

W. A. Tucker

BY

Wm. A. Tucker

ATTORNEYS.

UNITED STATES PATENT OFFICE.

WILLIAM A. TUCKER, OF DAYTON, ASSIGNOR TO HIMSELF, AND GEORGE P. LINDSLEY AND HAMMOND FOWLER, OF ROCKWOOD, TENNESSEE.

TRAIN-ORDER BOX.

SPECIFICATION forming part of Letters Patent No. 536,901, dated April 2, 1895.

Application filed January 9, 1895. Serial No. 534,298. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. TUCKER, of Dayton, in the county of Rhea and State of Tennessee, have invented a new and Improved Train-Order Box, of which the following is a full, clear, and exact description.

My invention relates to improvements in train order boxes in combination with the levers which are generally used for working semaphores or switches; and the object of my invention is to produce a device which automatically locks the semaphore working lever when the operator takes his order blanks from the box and which automatically unlocks the lever when the order blanks are placed in the box, thus preventing accidents and mistakes, as the semaphore or signal cannot be pulled in until the blanks are replaced in the box or in other words until the train crew has received its orders. When the semaphores are in or clear for trains, the box is closed and the order blanks cannot be reached, and when the order blanks are out of the box the signals must be at danger and cannot be changed until the blanks are put back in the box.

To these ends my invention consists of certain features of construction and combinations of parts, which will be hereinafter described and claimed.

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

Figure 1 is a perspective view of my improved device as applied to the semaphore operating levers. Fig. 2 is a sectional plan of the order box on the line 2—2 of Fig. 3. Fig. 3 is a vertical section of one set of mechanism connected with the semaphore lever, the lever being shown in locked position, and the train order blanks and clip board removed from the box. Fig. 4 is a view similar to Fig. 3, but with the train order clip board in place in the box and with the lever thrown down; and Fig. 5 is a sectional plan on the line 5—5 of Fig. 3.

My improved attachments are shown in connection with levers 10 which are of a well known kind and which are usually arranged in series, there being a lever for each semaphore which is to be operated, and each lever

is an elbow lever and is fulcrumed at its elbow, as shown at 11 on the wall 12 of the building in which the levers are arranged. The lever is provided with a drop cord 13 to which a counterbalancing weight 14 is secured, and the cord has at its lower end a hook 16 which is adapted to engage a hook 17 on a support below, and when the two hooks are engaged the lever is locked in a depressed position, as shown in Fig. 1. The upper arm 18 of the lever is connected to a cable 19 which extends back through the wall and over a guide pulley 20 and thence to the semaphore to be operated. All this construction above described is not claimed as a part of my invention and it may be departed from to any extent without affecting my improvements.

Beneath the levers 10 is a box 21, which is divided into compartments so that there shall be a compartment for each lever, and the box compartments have each a swinging lid 22 in front, which is provided with spring hinges 23 adapted to normally throw the lid open, while the lid is moved in the opposite direction to close it by a cable 24 which runs back through a casing 24^a in the box and beneath guide pulleys 25 and 26, the cable running from thence upward over a guide pulley 27 above the lever 10 and thence down to the lever to which it is secured. The lever is locked when in its raised position by a stirrup 28 which engages the arm 18 of the lever and which is journaled in bearings 29 on the wall 12, the stirrup having a crank 30 which is pivoted to a connecting rod 31 and the latter extends downward through a slot 32 in the top of the box 21 and is pivoted to a lever 33 which is arranged within the box near the back side thereof, as shown best in Fig. 3, and is hinged at the bottom as shown at 34. The lever 33 is normally pulled forward by a spring 35, and the movement of the lever 33 is limited by an abutment 36 on the box bottom. When the lever is pulled forward as specified it pulls down the rod 31 and crank 30 and pulls the stirrup 28 over the arm 18, thus locking it.

In each compartment of the box 21 are guiding supports 37 which have shoulders 38 near their outer ends and which are adapted to hold the ordinary clip board 39 on which

the train orders are fastened in the usual manner. When the clip board is in place on the guides 37 and behind the shoulder 38, as shown in Fig. 4, the top 40 of the clip board strikes the lever 33 and pushes it in against the tension of the spring 35, thus lifting the rod 31 and raising the stirrup 28 from the arm 18 of the lever 10, so that the lever may then be depressed to work the semaphore.

10 When the signals are at danger, the levers cannot be depressed, but when the order blanks are out of the box, the signals must be at danger and cannot be changed until the blanks and the clip board are again put in
15 the box.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

20 1. The combination, with the semaphore lever, of the train order box, a lock for the semaphore lever, and mechanism actuated by the moving of a clip board in and out of the box for working the lever lock, substantially as described.

25 2. The combination, with the semaphore lever, of the stirrup for locking the lever, the train order box, the lever therein, and the con-

necting rod pivoted to the lever and having a crank connection with the stirrup, substantially as described. 30

3. The combination, with the semaphore lever, of the train order box having a swinging lid, and mechanism for opening and closing the lid by the rise and fall of the lever, substantially as described. 35

4. The combination, with the semaphore lever, of the stirrup to engage an arm of the lever, the stirrup having a crank at one end, the train order box, a lever therein, a connecting rod extending from the lever to the crank of the stirrup, and mechanism for opening and closing the box by the rise and fall of the lever, substantially as described. 40

5. The combination, with the semaphore lever, the stirrup for locking it, the crank on the stirrup, the train order box, the clip board guides in the box, the lever pivoted in the box, and the connecting rod extending from the lever to the crank of the stirrup, substantially as described. 45

WILLIAM A. TUCKER.

Witnesses:

W. D. ACUFF,

JAS. A. ERVIN.