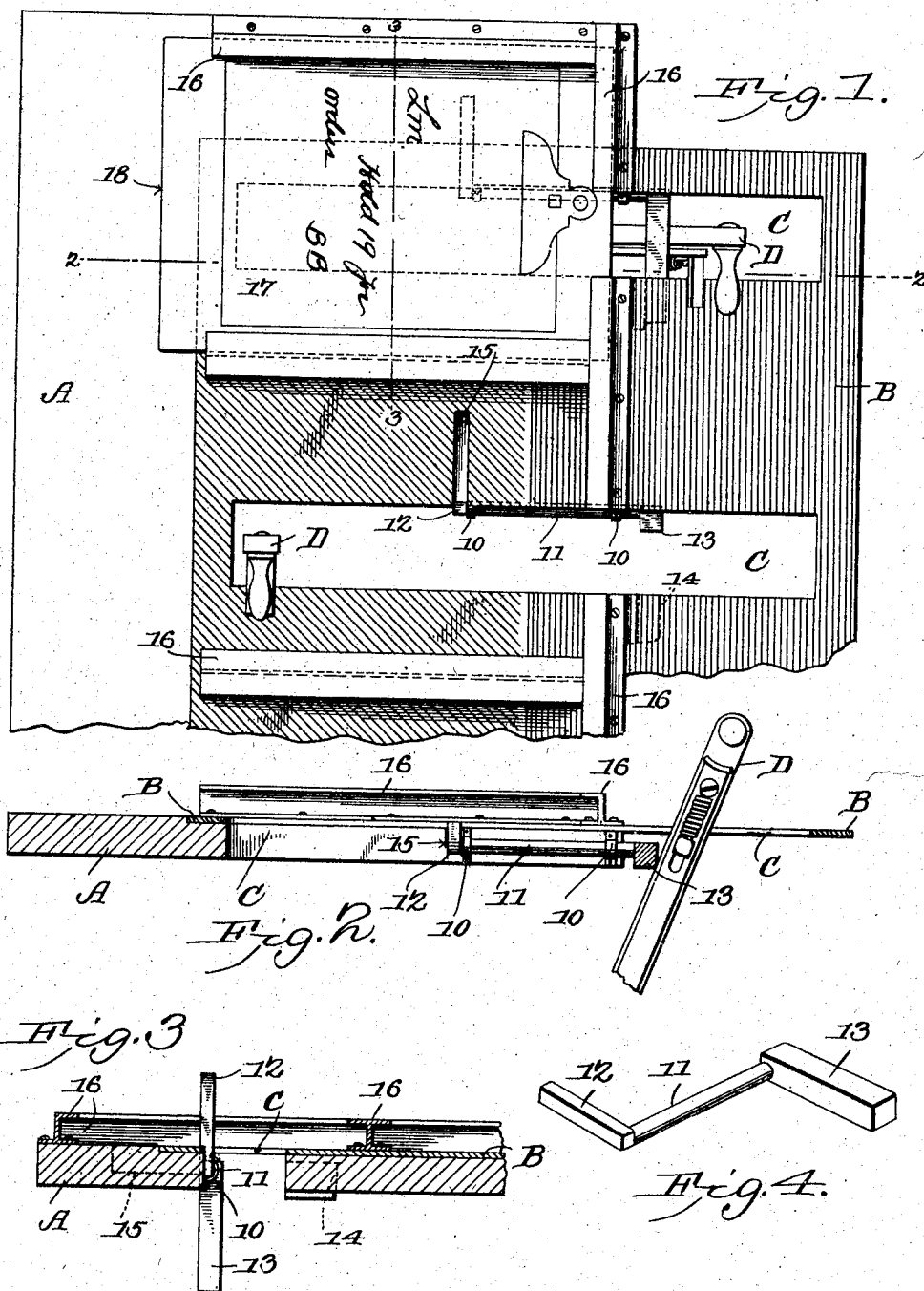


No. 796,173.

PATENTED AUG. 1, 1905.

A. B. APPERSON.  
SEMAPHORE LOCKING DEVICE.

APPLICATION FILED APR. 3, 1905.



### Witnesses

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# UNITED STATES PATENT OFFICE.

ARTHUR BERT APPERSON, OF CHEYENNE, WYOMING.

## SEMAPHORE-LOCKING DEVICE.

No. 796,173.

Specification of Letters Patent.

Patented Aug. 1, 1905.

Application filed April 3, 1905. Serial No. 253,688.

*To all whom it may concern:*

Be it known that I, ARTHUR BERT APPERSON, a citizen of the United States, residing at Cheyenne, in the county of Laramie and State of Wyoming, have invented a new and useful Semaphore-Locking Device, of which the following is a specification.

The principal object of the present invention is to provide a means for locking semaphore-signals in such manner that a station agent or operator cannot move the semaphore-arm from danger to safety position without his attention being called to orders to be delivered to a train crew.

A further object of the invention is to provide means of the most simple construction which may be readily applied to existing semaphore-operating mechanisms, and in which the train orders serve as a means for locking the operating mechanism in danger position, and are so arranged and disposed that it will be impossible for the operator to alter the position of the semaphore without first removing the train orders.

With these and other objects in view, as will more fully hereinafter appear, the invention consists in certain novel features of construction and arrangement of parts herein after fully described, illustrated in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that various changes in the form, proportions, size, and minor details of the structure may be made without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a plan view of a portion of the apparatus at a signaling-station, showing two semaphore-operating levers and the mechanism for locking the same in danger position. Fig. 2 is a sectional elevation of the same on the line 2 2 of Fig. 1. Fig. 3 is a transverse sectional elevation of the mechanism on the line 3 3 of Fig. 1. Fig. 4 is a detail perspective view of the locking device for the operating-lever.

Similar letters and numerals of reference are employed to indicate corresponding parts throughout the several figures of the drawings.

A table A is of the usual type and is provided with a metallic plate B, in which are formed elongated slots C for the passage of semaphore-operating levers D, these being of the usual construction and connected in the usual manner to the semaphore-arms or similar signaling mechanism. These plates are

usually colored, as shown in Fig. 1, one half red and the other half green to indicate that when the lever is in the red field the semaphore-arm is at danger position and when in the green field that the arm is in safety position. In the present case the invention aims to lock the operating-lever in the red or danger field in such manner that the operator cannot move said lever until his attention is called to train orders to be delivered to the crew of an approaching train.

One wall of the slot C is provided with bearings 10 for the reception of a rock-shaft 11, on the opposite ends of which are arms 12 and 13, the arm 13 being much heavier than the arm 12, and if left free the two arms will be moved to a vertical position, as shown in Fig. 3, and the operating-lever D will then be free to move to and fro in the slot for the purpose of altering the position of the semaphore-arm. The arm 13 is of sufficient length to extend across the slot and enter a recess 14, formed in the under side of the table, while the arm 12 is adapted to enter a recess 15, formed in the upper face of the table, so that when turned to the horizontal position its upper face will be flush with or below the top of the table.

On the top of the table are arranged guides or clips 16, formed of sheet metal and arranged to receive train orders, these being shown in the present instance in the form of the usual slip orders 17, mounted on a clip-board 18, and when an order is received it is written on the top of the blank and the board as a whole is moved into the guides or clips 16. This, however, can only be accomplished by first moving the operating-lever D to the danger position, as shown at the upper portion of Fig. 1, and by turning the arm 12 down into the recess 15 to permit the clip-board to be slid inward within the guides.

The table may be of any desired length and has operating-levers of a number corresponding to the number of signals, switches, &c., under the control of the station, and each of said levers is under the control of a separate locking device, the guide 16 between adjacent levers being of the construction best shown in Fig. 3 for the purpose of receiving adjacent clip members 18.

When the station master or operator receives an order from the train-despatcher to be delivered to a certain train, he writes out the order on the usual blank and then places the order or clip-board 18 in the guides ad-

jacent to the semaphore-operating lever, which controls the movement of the train to which the orders are to be delivered. Before this can be done the operating-lever is thrown to the danger position, as shown in the upper portion of Fig. 1, and as the board 18 is slid inward the arm 12 is turned down, so that the board may pass over the same, and thus hold the arms 12 and 13 in horizontal position, arm 13 then forming a fixed stop that will prevent any movement of the operating-lever to safety position until the order-board 18 has been removed, and this cannot fail to attract the attention of the operator to the order for the approaching train.

By the employment of locking devices of this character the work of the operator is greatly simplified, and it is practically impossible to neglect the delivery of orders to the proper trains, for the reason that the operator must grasp and remove the train order before he can shift the position of the semaphore-arm to safety position, and the train cannot leave the station until this is accomplished.

Having thus described the invention, what is claimed is—

1. In apparatus of the class described, a semaphore-operating lever, a locking device for preventing movement of the same to safety position, and a train order disposed in the path of movement of the lever, and controlling the position of the lock.

2. In apparatus of the class described, a slotted table, a semaphore-operating lever, a pivotally-mounted locking-arm movable into the path of the operating-lever, and a train order controlling the position of the arm.

3. In apparatus of the class described, the combination with a slotted table, of a semaphore-operating lever, a rock-shaft, arms carried thereby, one of the arms being movable across the slot, and the other into alinement with the table, and train-order-holding guides adjacent to the slot.

4. In apparatus of the class described, a slotted table having recesses in its upper and lower faces, a semaphore-operating lever movable in the slot, a rock-shaft journaled at one side of the slot and having arms at its opposite ends, one of said arms being movable across the slot into one of the recesses, and the opposite arm being movable into the second recess, guides on the upper face of the table, and a train-order-holding means movable into said guides and serving to maintain the second arm in the horizontal position within its recess.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ARTHUR BERT APPERSON.

Witnesses:

G. F. HORN,  
W. H. STEWART.