No. 628,991. Patented July 18, 1899.

N. H. PRATT.

AUTOMATIC TRAIN ORDER BLANK HOLDER.

Application filed Feb 27, 1899.)

(No Model.)

Fig. 1.

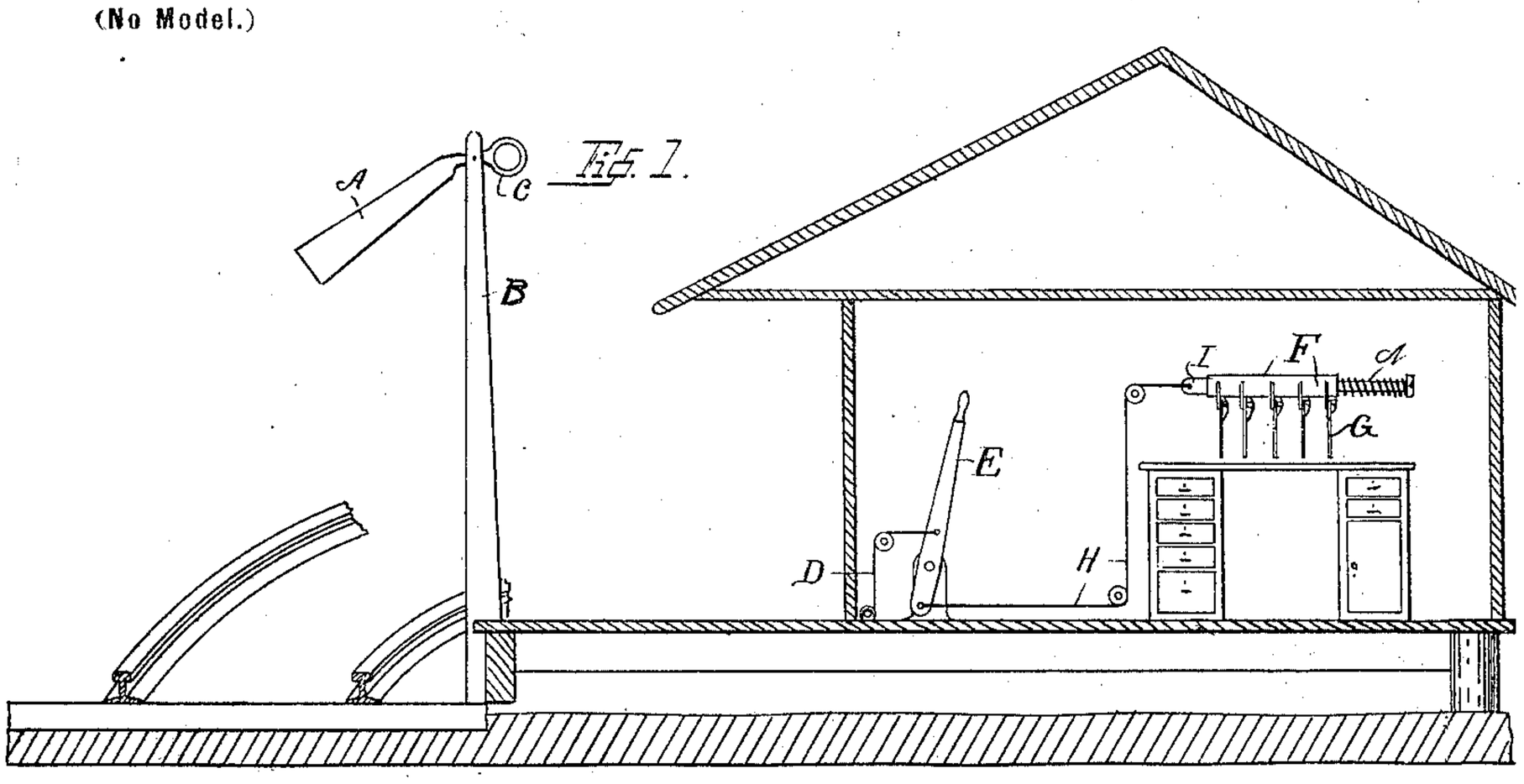


Fig. 2.

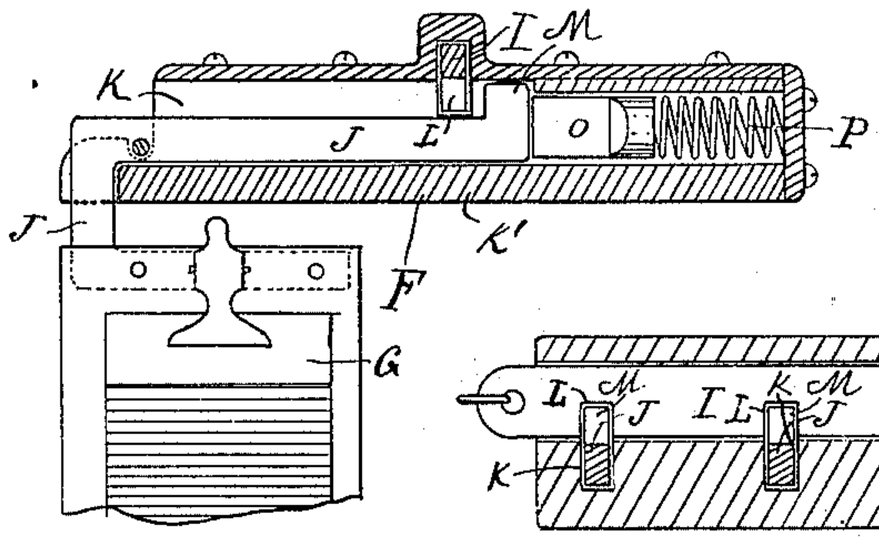


Fig. 3.

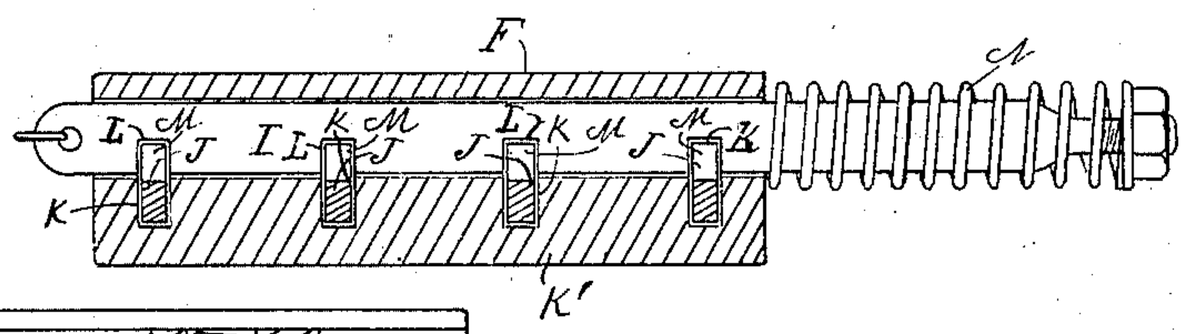
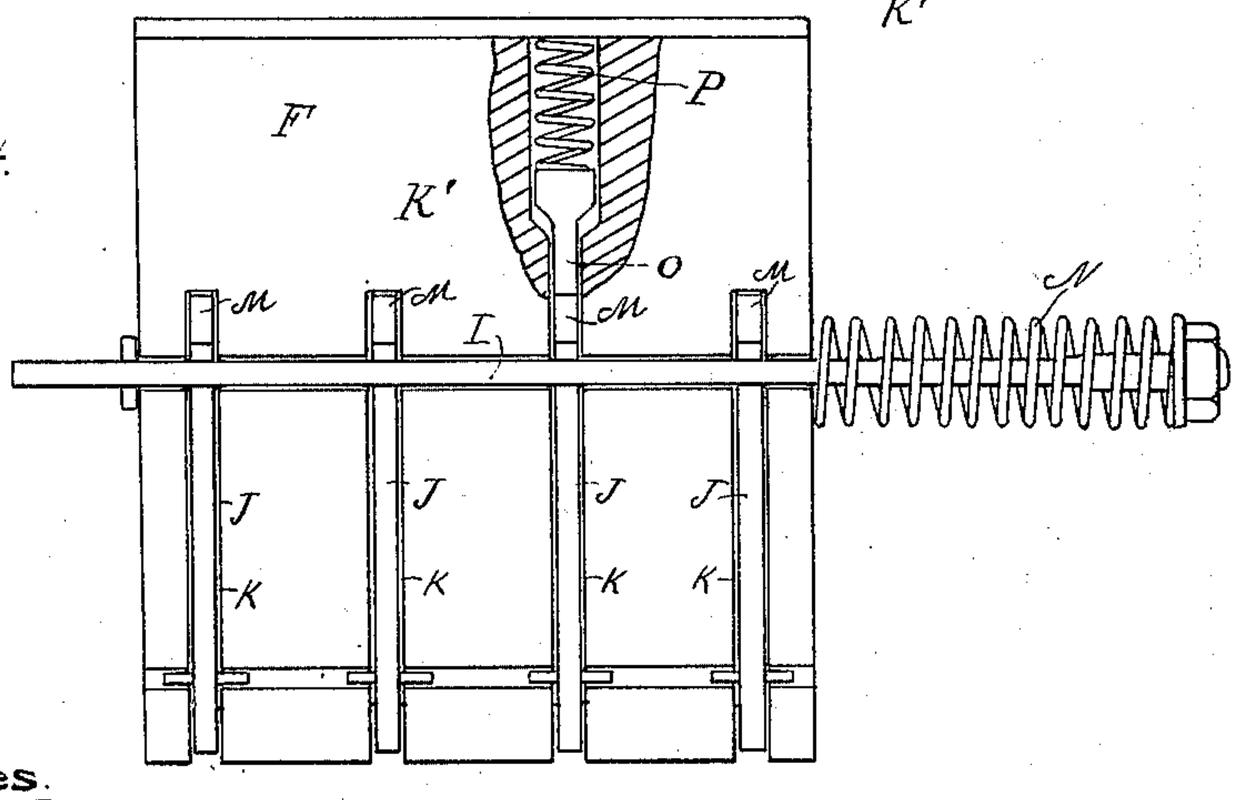


Fig. 4.



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UNITED STATES PATENT OFFICE.

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AUTOMATIC TRAIN-ORDER-BLANK HOLDER.

SPECIFICATION forming part of Letters Patent No. 628,991, dated July 18, 1899.

Application filed February 27, 1899. Serial No. 707,004. (No model.)

To all whom it may concern:

Be it known that I, NORMAN H. PRATT, a citizen of the United States, residing at Duplainville, in the county of Waukesha and State of Wisconsin, have invented new and useful Improvements in Automatic Train-Order-Blank Holders, of which the following is a specification.

The object of my invention is to provide a device for use in connection with the danger-signal of railway-trains by which the liability of the danger-signal being accidentally left down or clear when it ought to be raised or in danger position is obviated.

My invention pertains more especially to the device for automatically locking the signal in the danger position while the train-order blanks or clips are moved from their holder, whereby it becomes necessary to raise the signal to the danger position before the blank train-orders can be taken down or withdrawn from the holder and whereby such danger-signal cannot be lowered or changed until the order is filled out and the blank orders replaced in the holder.

It is understood that it is customary for the railway-station agent to fill out certain blank train-orders for delivery to the conductors of incoming trains prior to their arrival. It will be obvious that by this device the agent will not be able to take down his blanks for the purpose of filling out such orders without first throwing up the signal or placing it in the danger position, and it follows that in performing his usual duties in taking down and filling out the orders he will be compelled to operate the signal, whereby the liability of thoughtlessly neglecting so to do is avoided and the operator is relieved from charging his memory with such duty.

My invention is further explained by reference to the accompanying drawings, in which—

Figure 1 represents a vertical section of a railway-station, showing therein the order-blank holder located in a convenient position above the desk of the operator and connected by a wire cable with the signal-operating lever. Fig. 2 is a detail showing a cross-section of the order-blank holder with a set or block of order-blanks suspended therefrom. Fig. 3 is a longitudinal section of the order-blank holder. Fig. 4 is a top view of the order-blank holder with the cover removed, showing the interior, part in section.

Like parts are referred to by the same reference-letters throughout the several views.

A represents the ordinary danger-signal, which is pivoted to the post B and counterbalanced by a weight C in the ordinary manner, so that when released from the action of the cable D the signal A will be thrown up into the horizontal position by the gravity of the weight C. Motion is communicated to the signal from the operating-lever E through the wire cable D in the ordinary manner.

F represents the order-blank holder, which is shown with a series of five sets of order-blanks G suspended therefrom in a convenient position over the desk of the operator.

The locking mechanism of the order-blank holder is connected with the operating-lever E by the wire cable H, (shown in Fig. 1,) whereby as the lever is drawn toward the right, in the position shown in said figure, the locking-bar I is drawn out. As all of the order-blanks are alike connected in like manner with the holder, the description will be limited to the construction of a single one, as shown in Fig. 2, in which the order-blanks G are affixed to the lower arm of the U-shaped sliding bracket J, while the upper arm of said sliding bracket is supported in a recess K, formed in the block K′, and is retained in place by the locking-bar I. The locking-bar I is provided with as many recesses or notches L as there are order-blank holders, as indicated in Figs. 3 and 4.

It will be obvious that when the bracket J is in the position shown in Fig. 2 it will be impossible to withdraw the order-blank and bracket without first bringing the bar I in the position shown therein, so that the recesses or notches in said bar I will register with the upper edge of the brackets J, whereby the upper projecting lug M of said bracket J can pass out through said notches L as said order-blanks are withdrawn.

It will now be obvious that when desirous to remove an order-blank from the holder it will first be necessary to throw the lever E toward the left, thereby releasing the tension of the

wire cable H, when the locking-bar I will be drawn toward the right by the action of the spiral spring N. When the bar I is thus drawn in by the action of the spiral spring N, the several notches therein will be caused to register, as stated, with the blank-supporting bracket J, whereby the operator will be enabled to withdraw said bracket J with the blanks connected therewith. As the bracket J is thus withdrawn the locking-slide O is thrown forward by the recoil of the spiral spring P into engagement with the locking-bar I, whereby said bar will be locked in its position and the signal retained in the danger position until said locking-slide O is again forced back by contact with the bracket J as said bracket, with the blanks, is again put in place. It will be obvious that when the order-blanks are in place, as shown in Fig. 1, the lever E is free to be thrown in either direction, as desired.

For convenience in illustrating the device I have shown the operating-lever E connected with the danger-signal and the order-blank-locking mechanism by cables operating over pulleys. It is obvious, however, that bell-crank levers may be substituted for the pulleys, if desired. It is also obvious that cables may under some conditions be substituted by rigid metallic bars, in which case the spiral spring N for actuating the locking-bar I in one direction may be dispensed with and said locking-bar I moved by the direct action of said rigid bars in either direction, the spiral spring N being only necessary where a flexible connection is used for actuating said bar I.

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

1. An automatic train-order-blank holder, adapted to be used in connection with a railway danger-signal, consisting in the combination of a supporting-block provided with one or more grooves or recesses for the reception of blank-holding brackets; a transversely-arranged locking-bar provided with one or more grooves or recesses adapted to register with the grooves of said blank-holding brackets; one or more blank-holding brackets, each bracket being connected at one end with a set of order-blanks, and its other end being adapted to be inserted in a groove provided therefor in said supporting-block, when the grooves of said block and bar are in position to register with each other; one or more locking-slides and bar-actuating springs located in the bracket-supporting grooves of said supporting-block, said locking-slide being adapted, as the order-blank bracket is inserted in its grooves, to be forced rearward out of contact with the locking-bar, and when said bracket is withdrawn from its supporting-grooves, to be thrown forward by said actuating-spring, into contact with said locking-bar, whereby said locking-bar is locked in position and prevented from being accidentally moved, while said order-blank bracket is withdrawn, substantially as and for the purpose specified.

2. The combination of an automatic train-order-blank holder, consisting in a supporting-block provided with one or more grooves or recesses for the reception of blank-holding brackets; a transversely-arranged locking-bar provided with one or more grooves or recesses adapted to register with the grooves of said blank-holding brackets; one or more blank-holding brackets, each bracket being connected at one end with a set of order-blanks, and its other end being adapted to be inserted in a groove provided therefor in said supporting-block, when the grooves of said block and bar are in position to register with each other; one or more locking-slides and bar-actuating springs located in the bracket-supporting grooves of said supporting-block; a danger-signal; and a connection communicating from said danger-signal to the locking-bar of said blank-holder, substantially as and for the purpose specified.

3. The combination of an automatic train-order-blank holder, consisting in a supporting-block provided with one or more grooves or recesses for the reception of blank-holding brackets; a transversely-arranged locking-bar provided with one or more grooves or recesses adapted to register with the grooves of said blank-holding brackets; one or more blank-holding brackets, each bracket being connected at one end with a set of order-blanks, and its other end being adapted to be inserted in a groove provided therefor in said supporting-block, when the grooves of said block and bar are in position to register with each other; one or more locking-slides and bar-actuating springs located in the bracket-supporting grooves of said supporting-block; a danger-signal; a lever for operating said danger-signal; a connection communicating between said automatic blank-holder and the operating-lever of said danger-signal; and a connection communicating from said operating-lever to said danger-signal, all substantially as and for the purpose specified.

4. The combination of an automatic train-order-blank holder, consisting in a supporting-block provided with one or more grooves or recesses for the reception of blank-holding brackets; a transversely-arranged locking-bar provided with one or more grooves or recesses adapted to register with the grooves of said blank-holding brackets; one or more blank-holding brackets, each bracket being connected at one end with a set of order-blanks, and its other end being adapted to be inserted in a groove provided therefor in said supporting-block, when the grooves of said block and bar are in position to register with each other; one or more locking-slides and bar-actuating springs located in the bracket-supporting grooves of said supporting-block;

a signal-actuating lever; a flexible connection communicating between said lever and the locking-bar of said order-blank holder, adapted to actuate said locking-lever in one direction; and a spiral spring connected with the opposite end of said locking-lever and adapted, as said metallic connection is released, to move said locking-lever in the opposite direction, all substantially as and for the purpose specified.

In testimony whereof I affix my signature in the presence of two witnesses.

NORMAN H. PRATT.

Witnesses:

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F. A. OTTO.