(No Model.)

M. McCANN.

RAILROAD SWITCH.

No. 376,006. Patented Jan. 3, 1888.

Fig. 1.

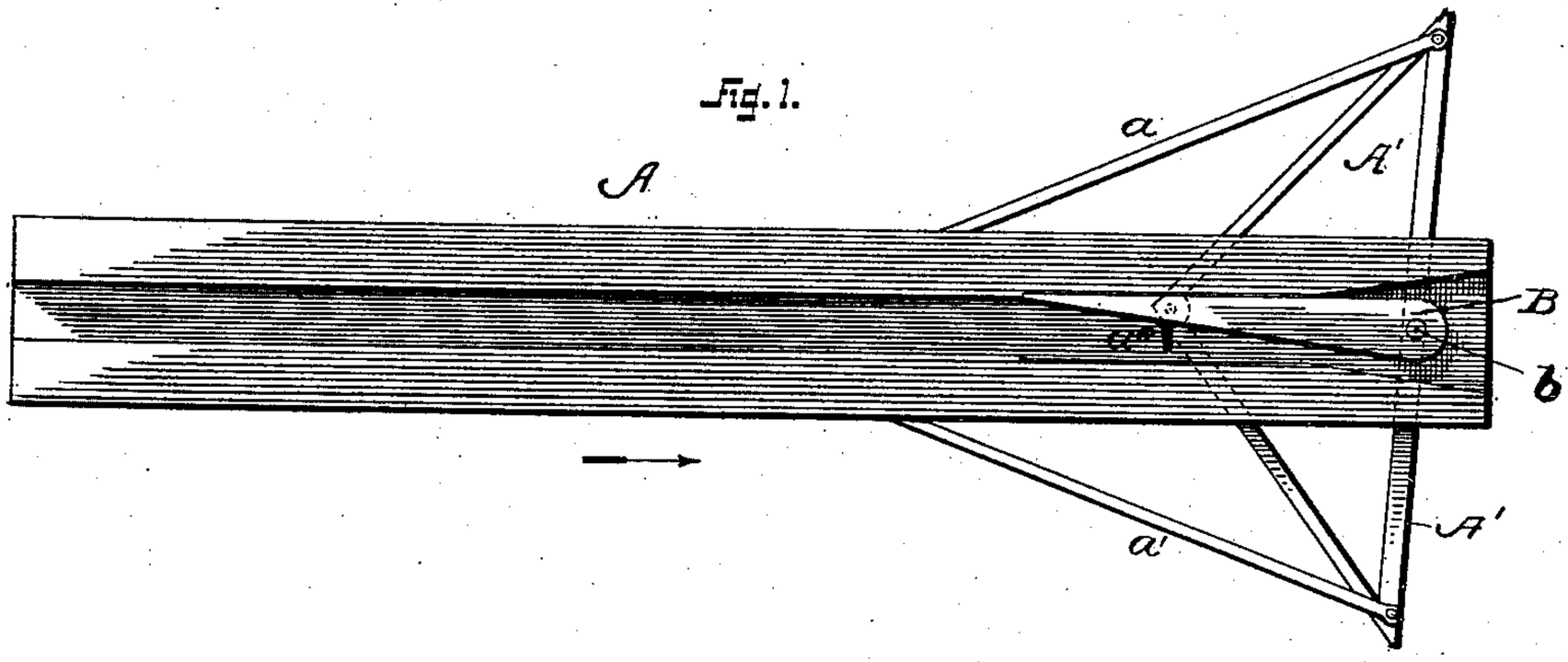


Fig. 2.

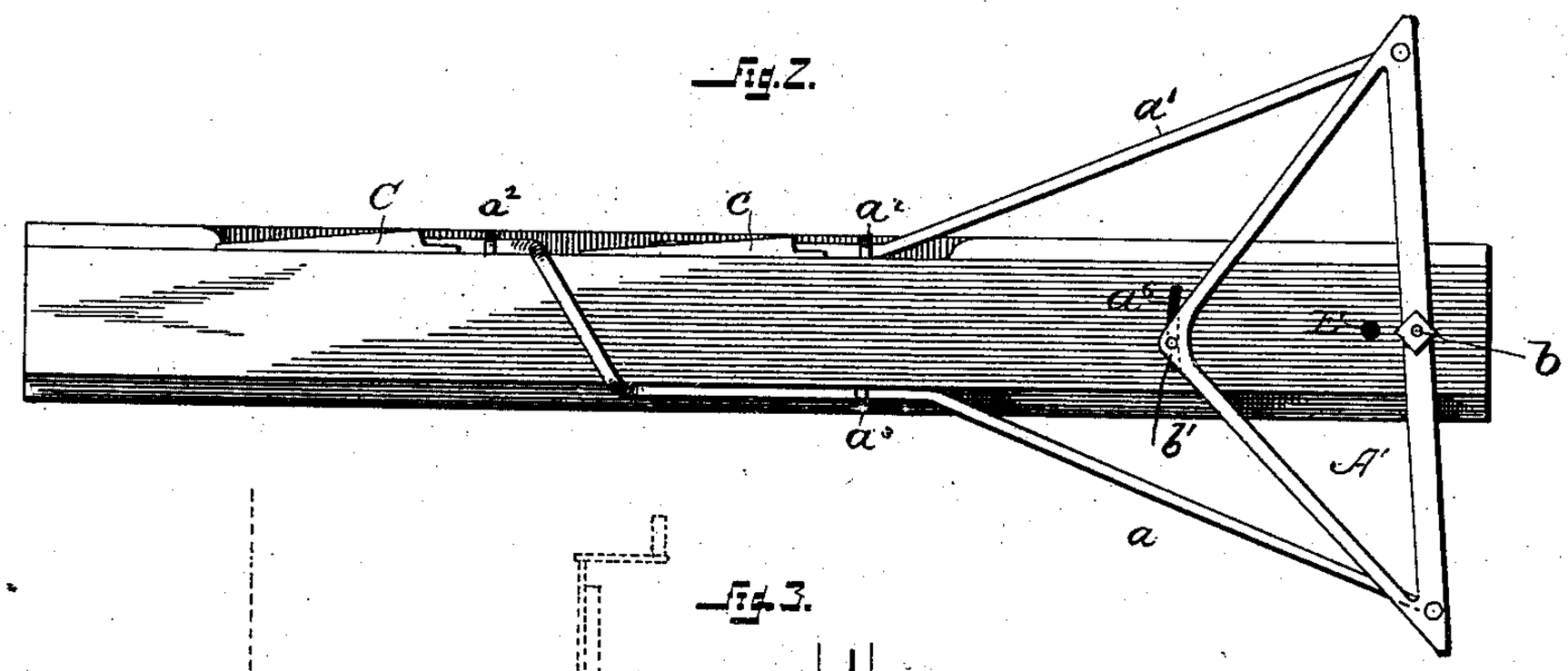
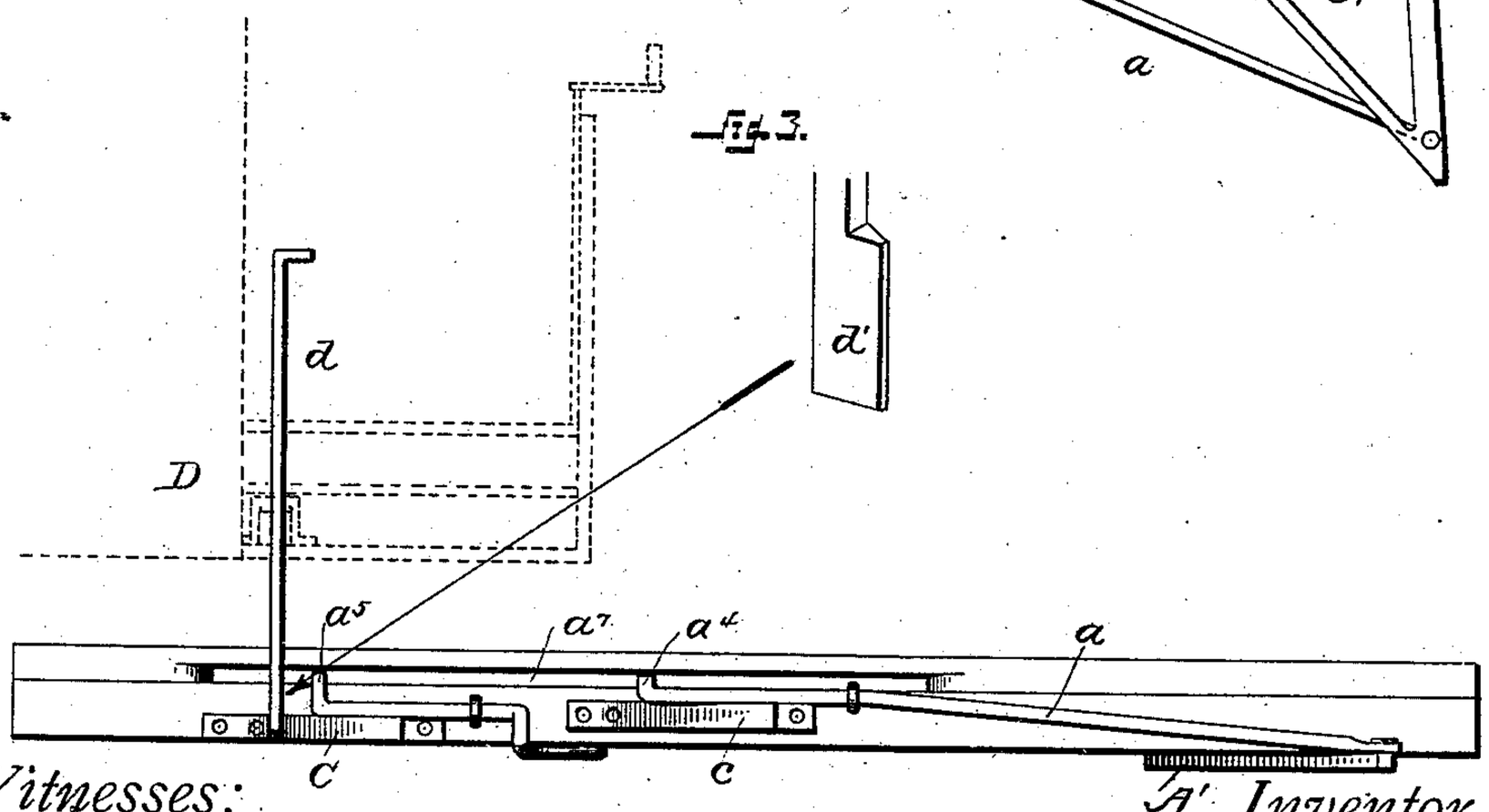


Fig. 3.



Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE.

MICHAEL McCANN, OF JOHNSTOWN, PENNSYLVANIA

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 376,006, dated January 3, 1888.

Application filed August 3, 1887. Serial No. 246,073. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL MCCANN, a citizen of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Railroad-Switches; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to railroad-switches which are designed to be operated automatically by approaching trains.

The object is to produce a railroad-switch which, while constituted of a comparatively small number of parts, shall be so constructed and arranged as to yield promptly to the actuating force either to open or to close.

With these objects in view the invention consists in a triangle-shaped or triangular lever placed on the under side of a frog and pivoted thereto, having bent shifting-rods attached to the ends of the base of the lever and working in guides on the sides of the frog.

Furthermore, the invention consists in a shifting-bar attached to a car and designed to open or close the switch.

Furthermore, the invention consists in inclined shipping-plates attached to the side of the frog and designed to throw the shifting-bar out of position after it has performed its function; and, finally, the invention consists in various other novel details of construction, as hereinafter fully set forth.

In the accompanying drawings, forming part of this specification, and in which like letters of reference indicate corresponding parts, Figure 1 is a top plan view showing the tongue of the frog. Fig. 2 is a bottom plan view showing the triangular-shaped lever and bent shifting-rods. Fig. 3 is a side elevation of the frog and of the side of one end of a car, showing the shifting-bar attached to the side of the platform and in contact with the arms of the shifting-rods.

Referring to the drawings, A represents a section of a frog having attached to its under side a triangular or triangular-shaped lever, A'. At the ends of the bar forming the base of said lever are pivoted two bent shifting-rods, *a* and *a'*, the rod *a* being bent in order to pass under the rail to the side on which the rod *a'* is situated, the said rods being held in position against the side of the rail by guides a^2 and a^3, which are so adjusted as to permit the rods to slide easily therein when pressure is brought to bear upon them. On the upper side of the frog is a tongue, B, which is connected with the triangular lever by means of a bolt, *b*, which passes through the frog and is secured on the under side of said lever by a nut or other suitable contrivance. At a point in the frog, and near the end of said tongue, is an arc-shaped slot, a^6, which extends through the frog and is designed for the reception of a bolt, *b'*, which connects said tongue with the lever.

To the side of the platform of the car D is attached a shifting-bar, *d*, having at its lower end and extending inward a toe, *d'*, which is designed to engage the toes a^4 and a^5 on the shifting-rods, said bar being thrown out of place after having operated the switch by means of the inclined shipping-plates C and *c*, which are secured to the frog below the shifting-rods.

For the shifting-bar to operate the shifting-rods the car must be running in the direction indicated by the arrows. The toe of the bar *d* extends into a recess, a^7, formed on the under side of the frog, and engages one of the toes of the shifting-rods *a* or *a'* and pushes it forward, thus moving the lever A', which in turn moves the tongue B and changes the switch. After having pushed the rods as far as necessary, the toe of the shifting-bar is thrown out of contact with the toe of the shifting-rods by means of one or the other of the inclined shipping-plates C *c*, which are attached to the frog below said shifting-rods. If the car is running in a direction opposite to that indicated by the arrows, the wheels of the engine or car will come in contact with the tongue and push the shifting mechanism back to the position which it first occupied.

Should the weight of the shifting device on the tongue prevent its being easily operated, the lever may be fastened to the bottom of the frog by a bolt secured in the opening E, thus allowing the tongue to be secured by a separate bolt.

The operating mechanism may be inclosed

in a box or casing, in order to prevent the accumulation of dirt, dust, or snow, which would interfere with the perfect working of the device.

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

1. The combination, with a frog, of a triangle-shaped lever located on the under side thereof and pivoted thereto, substantially as described.

2. The combination, with a triangular lever located on the under side of a frog and pivoted thereto, of bent shifting-rods pivoted to the ends of the base of said lever and designed to operate the same by movement forward, substantially as described.

3. The combination, with a triangular shaped lever located on the under side of a frog and pivoted thereto, and bent shifting-rods pivoted to the ends of the base of said lever and designed to operate the same by movement forward, of a shifting-bar attached to the side of the platform of a car and provided with an inward-projecting toe designed to open or close the switch by the said toe coming in contact with arms formed on the ends of the bent shifting-rods, substantially as and for the purpose set forth.

4. The combination, with the bent shifting-rods, of inclined shipping-plates attached to the side of the frog below said rods and designed to throw the toe of the shifting-bar out of contact with the arms of the shifting-rods after the latter have performed their functions, substantially as described.

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

MICHAEL McCANN.

Witnesses:

JOHN J. HORAN,

STEPHEN McCANN.