(No Model.)

P. J. SWAN.

GRAB IRON FOR RAILROAD SWITCHES.

No. 323,230. Patented July 28, 1885.

Fig. 1.

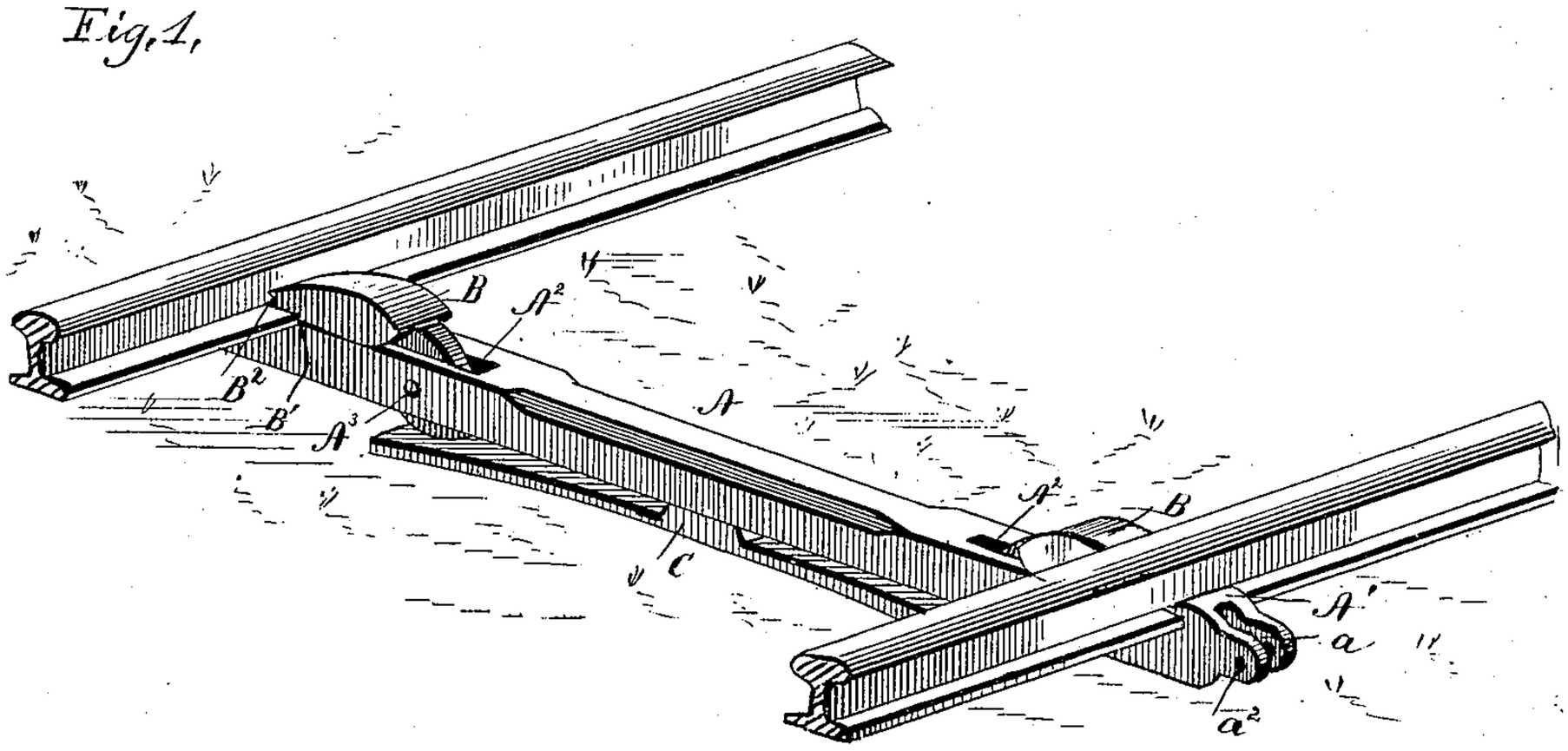


Fig. 2.

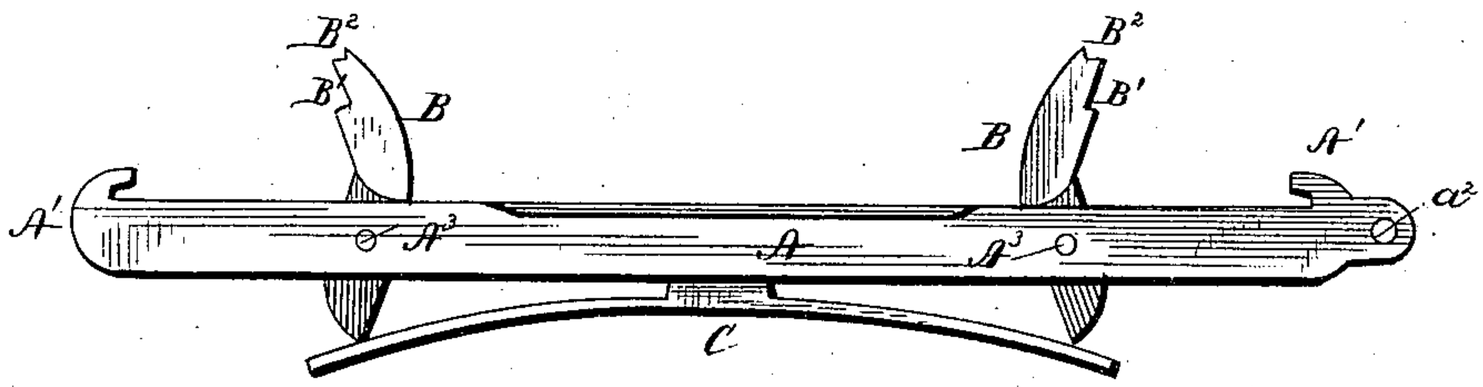
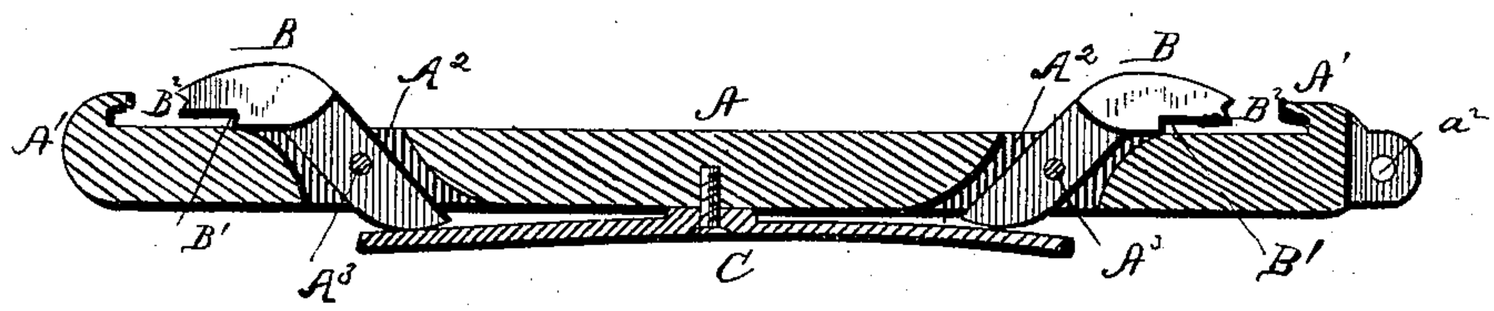


Fig. 3.



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PATRICK JAMES SWAN, OF IRA, IOWA.

GRAB-IRON FOR RAILROAD-SWITCHES.

SPECIFICATION forming part of Letters Patent No. 323,230, dated July 28, 1885.

Application filed June 18, 1885. (No model.)

To all whom it may concern:

Be it known that I, PATRICK J. SWAN, a citizen of the United States, and a resident of Ira, in the county of Jasper and State of Iowa, have invented certain new and useful Improvements in Grab-Irons for Railroad-Switches; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to grab-irons for railroad-switches; and it has for its object the construction of a grab-iron which can be placed in its operative position without taking up the rails, as is necessary with the ordinary form of grab-irons.

To this end my invention consists in the improved construction and combination of parts, which will be hereinafter fully described, and pointed out in the claims.

Referring to the annexed drawings, Figure 1 is a perspective view of my improved grab-iron for railroad-switches, showing the same in its operative position. Fig. 2 is a side view of the grab-iron, and Fig. 3 is a longitudinal vertical sectional view of the same, taken through the center thereof.

The same letters of reference indicate corresponding parts in all the figures.

Referring to the several parts by letter, A represents the grab-iron proper, which is formed on its upper side at each end with the stationary jaws A′, of such a shape as to adapt them to fit over the flange on one side of each rail, as shown, the iron A being further provided, at points suitably near each end, with longitudinal vertical slots A^2, inclined at each end, as shown, and within which are pivoted, by transverse bolts or pivots A^3, the reduced body portions of the movable jaws B B; the said body portions extending for a suitable distance through the grab-iron on its lower side, and being there rounded, as shown, to adapt them to bear against and turn upon the free ends of a strong longitudinal spring, C, secured centrally upon the lower side of the grab-iron.

The operative end of each movable jaw is cut away on its lower forward edge at B′, to adapt it to fit firmly upon and over the inner flange of the rail, while the extreme end of the said jaw, which bears against the web of the rail, is cut to form the binding-edges B^2, which serve to prevent the rail from slipping and hold it firmly in position.

In placing the grab-iron in its operative position it is slipped beneath the two movable switch-rails which it connects, as shown, the pivoted movable jaws B B being raised into a position nearly at right angles to the grab-iron, as shown in Fig. 2, and when in proper position the said jaws are depressed so as to bear firmly upon and against the rails, thereby securing the grab-iron in its operative position without taking up the rails. The spring on the lower side of the grab-iron, bearing against the lower ends of the pivoted body portion of each movable jaw, serves to hold the jaws firmly in their operative positions, while at the same time the spring-actuated jaws will yield sufficiently to the side movement of the switch-rails as the two rails are moved to one side by the grab-iron actuated through the switch-lever to admit of the switch operating properly. One end of the grab-iron is formed with a slot, *a*, and transverse aperture a^2, to adapt it for connection with the lower end of the switch-operating lever.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of my improved grab-iron for railroad-switches will be readily understood without requiring further explanation.

It will be seen that my improved grab-iron is simple in construction, and therefore inexpensive to manufacture, while at the same time it is very efficient in its operation, and dispenses entirely with the necessity for taking up the rails when placing the grab-iron in its operative position, as was heretofore the case.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. As an improvement in grab-irons for railroad-switches, the grab-iron consisting of the bar formed at each end with a stationary jaw and vertical slot, and the spring-actuated movable jaws, arranged as described, substantially as set forth.

2. As an improvement in grab-irons for rail-

road-switches, the grab-iron consisting of the bar formed at each end with the stationary jaw and the vertical slot, the movable jaws provided with the recesses at their operative ends, and the spring, all constructed and arranged to operate in the manner and for the purpose shown and set forth.

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

PATRICK JAMES SWAN.

Witnesses:

JOHN HOWARD,

JOSEPH DUFF.