

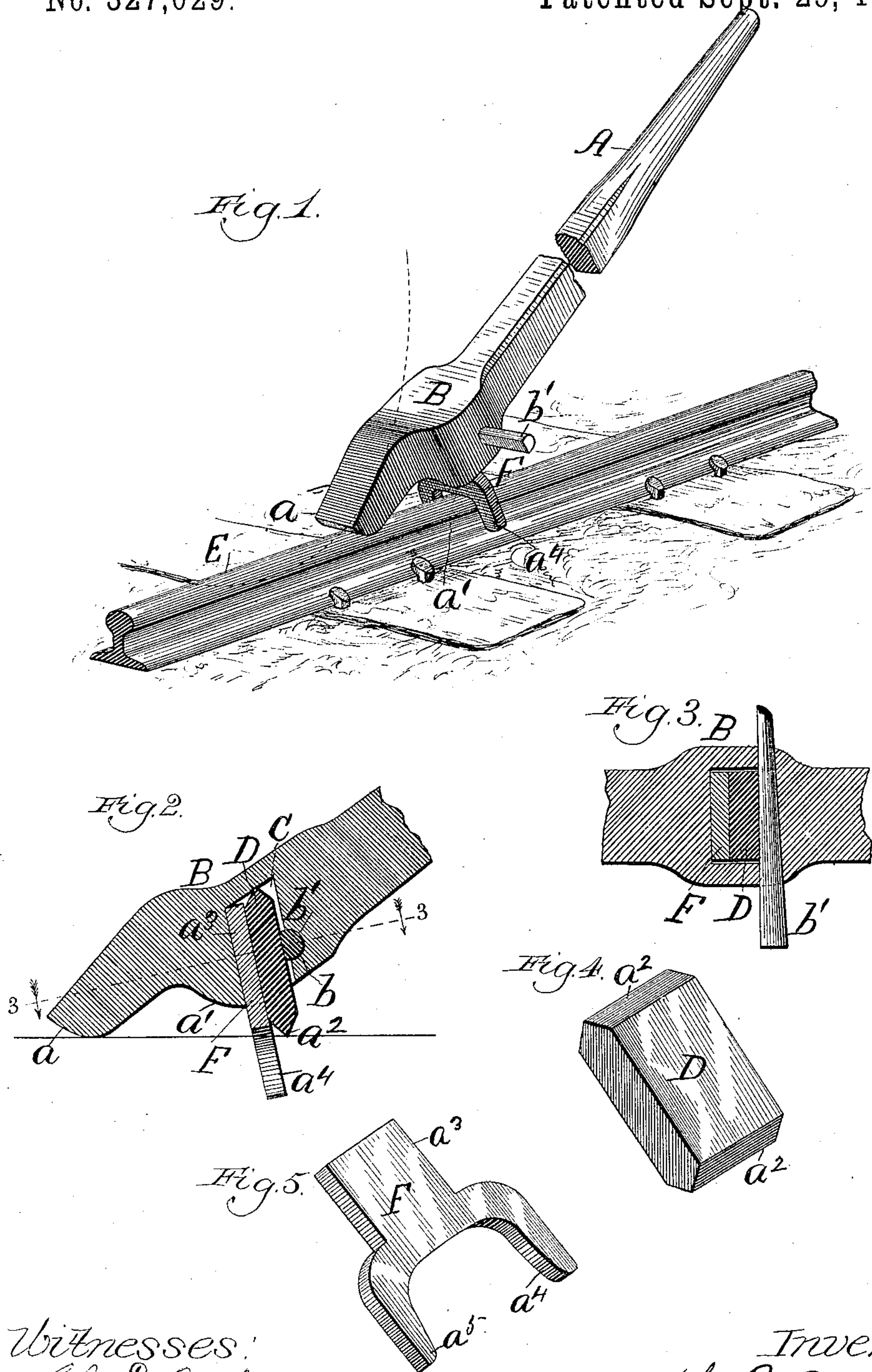
(No Model.)

F. J. SMITH.

PINCH BAR.

No. 327,029.

Patented Sept. 29, 1885.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

FREDRICK J. SMITH, OF CHICAGO, ILLINOIS.

## PINCH-BAR.

SPECIFICATION forming part of Letters Patent No. 327,029, dated September 29, 1885.

Application filed March 3, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, FREDRICK J. SMITH, of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improve-  
5 ments in a Pinch-Bar, of which the following is a full, clear, and exact description that will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

10 This invention relates to that class of pinch-bars more especially intended to be used in moving railway-cars; and the same consists of certain novel features in the construction and combination of parts, as will be hereinafter  
15 more fully set forth.

Figure 1 is a view in perspective, showing a practical application of my device; Fig. 2, a vertical longitudinal section; Fig. 3, a horizontal longitudinal section in the plane 3 3,  
20 Fig. 2; Fig. 4, a view in perspective of a detachable fulcrum-block, and Fig. 5 shows a detachable forked guide or guard.

Referring to the drawings, A represents the handle, and B the head end of the bar, both  
25 being forged in one solid piece. The toe *a* may be of the form or shape shown, or of any other form or outline that will afford a better result. The under side of the head is enlarged with a downward curve to form the heel *a'*,  
30 and at the same time to give the bar the necessary strength required at this point.

The bar is provided with the recess C, which starts in from the under side of the head and passes upward until a sufficient depth is se-  
35 cured, and then stops short in the bar.

The fulcrum-block D is beveled at both ends to provide the sharp biting-edge *a''*, and is adapted to be inserted in the recess C in the  
40 manner illustrated in Fig. 2, one end of the block projecting far enough below the bar to form the fulcrum bearing or bite on the surface of the rail E.

The flattened head *a'''* of the guide or guard F is also adapted to be inserted in the recess  
45 C, and bears against one side of the fulcrum-block, as shown in Fig. 2. The forked ends *a''''* *a'''''* project downward and embrace each side of the rail, and serve to prevent the bar from slipping off from the rail as the car is moved for-  
50 ward and the bar shifted to a new position.

It is generally a well-known fact that it is a very difficult matter to keep a pinch bar on the rail and obtain a bite quickly enough to prevent the car from running back, and thus losing a great part of the labor expended. By  
55 the construction and arrangement shown and described it is impossible for the bar to slip off from the rail, and the wheel of the car is closely followed and blocked against a back move-  
60 ment.

The head of the bar is provided on one side of the recess C with the aperture *b*, which passes entirely through from side to side and opens into the recess. In this aperture is in-  
65 serted the tapering locking pin *b'*. This pin is of a semicircular form in cross-section, and is inserted so as to bring the flat side to bear against the flat surface of the fulcrum-block, and thus wedge the block and guide-fork firmly in place.  
70

When one end of the fulcrum-block has become dulled, it may be turned end for end, and if worn so as to be a little too short to do good service, the same may be lengthened by placing a lining or backing in the bottom of  
75 the recess. A number of these fulcrum-blocks may be provided with each bar, so that a dulled one may be instantly replaced by a serviceable one and no time lost in waiting for a dull one to be dressed.  
80

By this construction it will be observed that there is no strain on the locking-pin, but all strain must be on the bar proper and the fulcrum-point.

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

1. A pinch-bar consisting of a handle and an enlarged head forged in one piece, and provided with a recess starting in from the un-  
90 der side of said bar and stopping short therein, substantially as and for the purpose set forth.

2. A pinch-bar provided in the head end with a recess starting in from the under side and an aperture passing through said head  
95 from side to side and opening on one side into said recess, substantially as and for the purpose set forth.

3. The combination, with a pinch-bar provided with a recess starting in from the under  
100

side and an aperture extending clear through the head of said bar, of a fulcrum-block removably inserted in said recess and a tapering pin having one side flattened and inserted 5 in said aperture, whereby said fulcrum-block is locked in place, substantially as described.

4. The combination, with a pinch-bar provided with a recess and aperture, as described, of a fulcrum-block, and a guide-fork remova- 10 bly inserted in said recess, and a locking-pin inserted in said aperture and bearing on one side against the flat surface of said fulcrum-block, whereby the latter and the guide-fork are firmly secured in place, substantially as 15 and for the purpose set forth.

5. The combination, with a pinch-bar provided with a recess in the heel, of a guide-fork having the flattened head end inserted in said recess, while the forked ends extend down on each side of the rail, and the means de- 20 scribed for removably securing said guide-fork in relation to said bar, substantially as and for the purpose set forth.

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Witnesses:

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