

(No Model.)

A. L. STANFORD.
RAIL BENDER.

No. 536,238.

Patented Mar. 26, 1895.

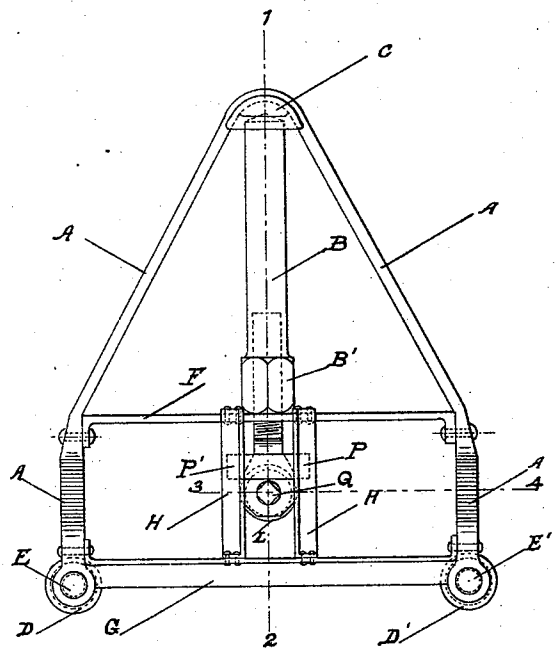


Fig. 1.

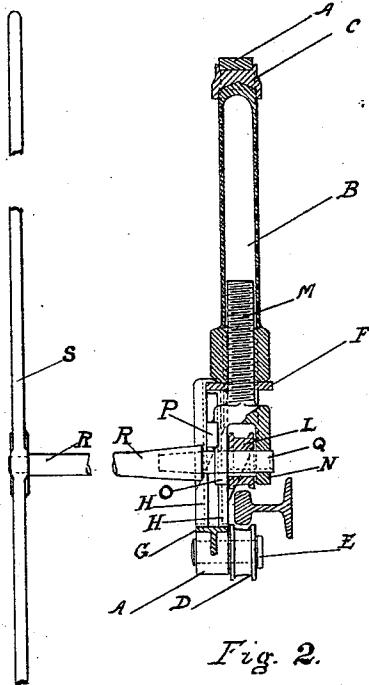


Fig. 2.

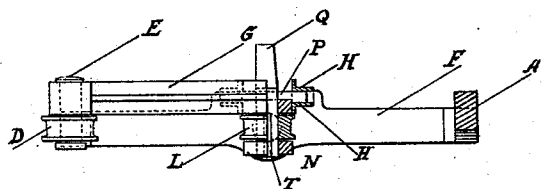


Fig. 3.

WITNESSES:

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ARTHUR L. STANFORD, OF EVANSTON, ILLINOIS.

RAIL-BENDER.

SPECIFICATION forming part of Letters Patent No. 536,238, dated March 26, 1895.

Application filed January 17, 1895. Serial No. 535,269. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR L. STANFORD, a citizen of the United States, residing in Evanston, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Rail-Benders, of which the following is a specification.

The reference marks in the text and drawings correspond.

Figure 1 is a plan view. Fig. 2 is a sectional elevation on line 1—2 of Fig. 1. Fig. 3 is a half sectional elevation on line 3—4 of Fig. 1.

My invention relates to improvements in rail benders; and will be found to contain many features common to the improvement in rail benders shown, described and claimed in my application for Letters Patent of the United States, Serial No. 533,006, filed December 26, 1894, as follows, namely: the yoke A, push bar B B', pivot rest C, screw M, with its divided head forming journal boxes, rollers D D' and L with their journal pins and the socket wrench.

My object in my present invention is to strengthen the appliance and to better adapt the same to the purposes for which it is intended.

Referring to the drawings, A is the yoke carrying at its ends journal pins E E' for the rollers D D'. At the opposite extremity of the yoke A is the pivot rest C. The two halves of the yoke are the tension members of the rail bender.

B B' is the main compression member carrying at its end the screw with its actuating roller L.

N O are journal boxes joined at one side with the screw M. In these journal boxes works the journal or spindle Q, carrying rigidly secured thereto by means of the key T the roller L; and extending upward to receive the socket wrench composed of the parts R and S.

Secured to the yoke A are the cross bars F and G. Said cross bar F receives the screw M, separates the two halves of the yoke A, and secures in its place the compression member B B'.

B is a cylinder closed at one end to form a pivot, enlarged near its other end to receive

a wrench and also at this end open and screw threaded internally to receive the screw M.

The socket wrench shown in Fig. 2 is of the usual T shape and is preferably formed in two parts, R and S.

Journal Q may revolve in its journal boxes, but not in its roller L and socket wrench R.

Journal pins E E' are rigidly secured in the ends of yoke A and their rollers may revolve upon them. Pivot rest C may be formed integral with yoke A if preferred.

The ends of yoke A are rigidly secured together by means of the cross bar G. Part O which forms one of the journal boxes for axle Q (N forms the other journal box) is provided with lugs P P'. Each of these lugs slides between guide bars H H. Said guide bars H H are each secured at each end to cross bars F and G. These guide bars perform a twofold office, viz: First, to resist the manifest tendency of the axle or spindle Q being thrown out of its proper vertical position, as the push bar B and its nut B' integral therewith are turned under great pressure. In my former construction shown in my application above referred to the flanges of the driving roller are relied upon to resist this tendency. The advantage of the present construction is obvious. Second, to form a bearing for the parts N and O which are preferably integral with M, whereby the actuating roller L drives the machine along upon the rail as said roller L is revolved by the T wrench. In my former construction above referred to great bending strain is brought to bear upon the screw M at its bearing point in cross bar F; and M therefore requires to be very heavy. With my present construction this bending strain is obviated and part M may therefore be greatly reduced in weight.

To operate the machine apply it to the rail in the same manner as the old fashioned "jim-crow" or rail bender is applied; that is, as shown in Fig. 2; turn the compression member B B' in its pivot rest C and upon the screw M until the rail is bent sufficiently; then apply the socket wrench R S to the extended portion of journal pin or spindle Q and revolve the roller L thus causing the machine to move along the rail supported by the flanges

of each roller. This gives the rail the uniform curve desired throughout its entire length.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

5 1. In a rail bender substantially as described, a yoke A having cross bars F and G and carrying a push bar B B' which contains screw M; lugs P P' secured to said screw or
10 to a portion of the divided head thereof, and playing between guides H H H H, as and for the purpose set forth.

2. In a rail bender comprising a yoke with cross bars F and G compression member B B'

with its screw M; said screw M held from lateral movement by guide bars secured to said cross bars F and G substantially as described. 15

3. In a rail bender having for its tension member a V or A shaped yoke, and for its compression members push bar B B' with screw M and cross bar F in combination with 20 the cross bar G and guide bars H, substantially as described.

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Witnesses:

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