L. G. MILLER & E. C. LONG.

BRAKE LEVER STRUT.

APPLICATION FILED APR. 27, 1918.

1,278,977.

Patented Sept. 17, 1918.

Fig. 1.

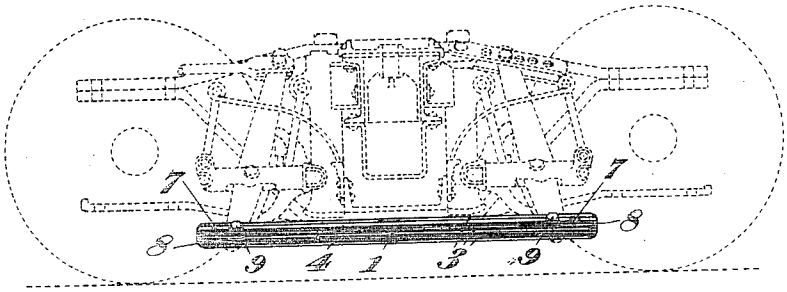


Fig. 2.

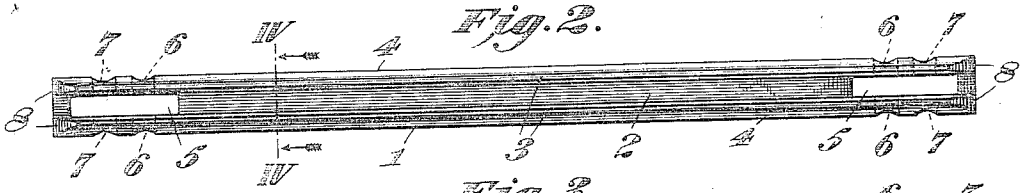


Fig. 3.

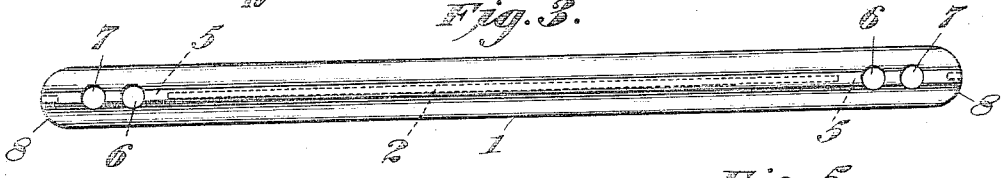


Fig. 4.

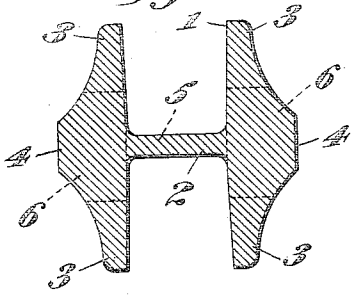


Fig. 5.

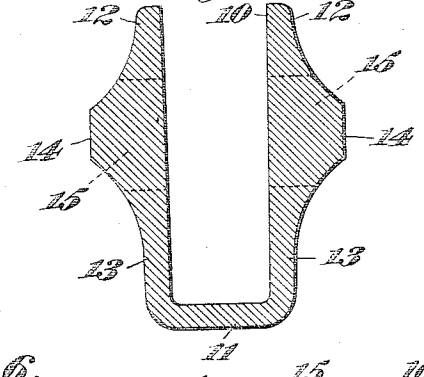
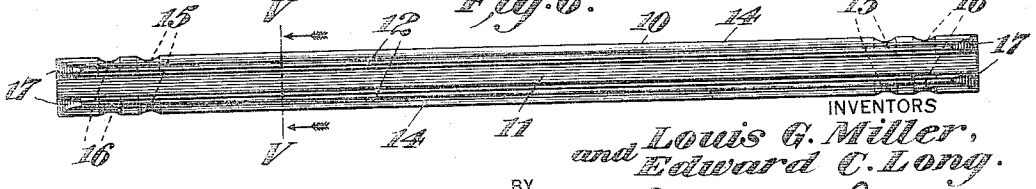


Fig. 6.



INVENTORS

and Louis G. Miller,
Edward C. Long.

BY

Geo. E. Thackray

ATTORNEY

UNITED STATES PATENT OFFICE.

LOUIS G. MILLER AND EDWARD C. LONG, OF WESTMONT BOROUGH, PENNSYLVANIA.

BRAKE-LEVER STRUT.

1,278,977. Specification of Letters Patent. Patented Sept. 17, 1918.

Application filed April 27, 1918. Serial No. 231,211.

To all whom it may concern:

Be it known that we, LOUIS G. MILLER and EDWARD C. LONG, both citizens of the United States, and both residing in Westmont Borough, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Brake-Lever Struts; and we 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.

Our invention relates to improvements in brake lever struts for use on car trucks, these members being adapted to transmit the braking effect from the lever, to which the brake rod pull is given, to the lever operating the brake shoe on the opposite wheel.

Ordinarily, these brake lever struts have been formed of round rods with forked ends welded on, or other more complicated constructions formed of several pieces which are either inefficient or expensive.

Our brake lever strut is composed of a rolled bar, preferably of steel, which is in one piece and has holes punched or drilled in the ends for receiving the pins connecting the same to the brake levers and also has room for the brake levers between the flanges of said member.

We will now, in order to make the matter more clear, refer to the accompanying sheet of drawings in which like characters of reference indicate like parts:

Figure 1 illustrates the application of our improved brake lever strut, portions of the truck and brake connections being shown in dotted lines;

Fig. 2 is a top view of the brake lever strut itself on a larger scale;

Fig. 3 is a side view of the strut;

Fig. 4 is a transverse section of the strut on a larger scale taken on the line IV—IV of Fig. 2;

Fig. 5 is a transverse section of another form of strut taken on the line V—V of Fig. 6, this figure being drawn on the same scale as Fig. 4; and

Fig. 6 is a side elevation of the strut, the section of which is shown in Fig. 5.

Referring now to the characters of reference on the drawings:—

1 indicates our brake lever strut generally, as illustrated in Figs. 1, 2, 3 and 4, the general section of which is an I-beam with thin web and heavy flanges of shape shown, 2 is the web, 3 are the end portions of the flanges, 4 are the enlarged or thickened central portions of the flanges forming ribs thereon, 5 are openings or slots which are formed by cutting or punching portions of the web, as illustrated, these openings being adapted to receive the ends of the brake levers, as illustrated in Fig. 1. 6 are the inner holes through the flanges of the bar, 7 are the outer holes therein, 8 indicates the ends of the bar, which, for the sake of appearance and clearance, are shown as rounded. 9 are the pins which connect the bar with the brake levers, which pins may be inserted in either the outer holes or the inner holes to maintain the proper adjustment, due to the wear of the brake shoes, or for other reasons. A slightly modified form of bar, as illustrated in Figs. 5 and 6, is generally indicated at 10. 11 is the web portion thereof, which is at one side of the section, 12 are the upper end portions of the flanges, 13 are the other end portions of the flanges, which connect integrally with the web 11, as shown, 14 are projections extending outwardly and integrally of the flanges, forming ribs thereon, 15 are the inner holes through the flanges, 16 are the outer holes through the flanges, and 17 are the ends of the bar, preferably indicated as rounded for reasons heretofore stated.

The thickened portions 4 and 14 of our struts, provide ample bearing surfaces for the pins and also strengthen the strut structurally.

Referring now to the form illustrated in Figs. 1 to 4 inclusive, the bar is formed by punching out the openings 5 and by drilling or punching the holes 6 and 7 and by rounding the end if desired, the bar itself having previously been rolled in a rolling mill of the section illustrated in Fig. 5, thus making a one-piece bar of integral form and by reason of the disposition of the material it is very strong for its weight and well adapted to serve as a compression member or strut in transmitting the braking force from one lever to another in use.

Referring now to the form illustrated in Figs. 5 and 6, this somewhat resembles a special channel section of such shape that in finishing it from a rolled steel bar, it is not necessary to punch out the web portion, but the web is situated at one side of the section so that the brake lever can fit in between the flanges, but in other respects it is

substantially the same as the form illustrated in Figs. 1 to 4 inclusive.

Although we have shown and described our improvements in considerable detail, we do not wish to be limited to the exact and specific details shown and described, but may use such substitutions, modifications or equivalents thereof, as are embraced within the scope of our invention, or as pointed out in the claims.

Having thus described our invention, what we claim and desire to secure by Letters Patent is:—

1. A brake lever strut comprising a rolled bar of I-beam section with slots in the web near its ends and holes in the flanges adjacent said slots.

2. A brake lever strut composed of a rolled bar of I-beam section with thin web and comparatively long flanges, provided with integral thickenings near their intermediate portions, the web portions having slots near the ends and provided with openings through the flanges adjacent to said slots.

3. A brake lever strut comprising a rolled section, consisting of a bar with oppositely disposed flanges, provided with external thickenings at their intermediate portions, a web portion connecting said flanges, and openings in said flanges adapted to receive connecting pins.

4. A brake lever strut comprising a rolled metal bar having a pair of oppositely disposed flanges, with integral intermediate ribs projecting outwardly thereof, the inner surfaces of said flanges being substantially parallel and connected by an integral web portion and a plurality of cylindrical openings in and near the ends thereof.

5. A brake lever strut comprising a rolled metal bar provided with a pair of oppositely disposed flanges, having integral intermediate ribs projecting outwardly thereof, the inner surfaces of said flanges being substantially parallel and connected by an integral web portion having slots near the ends thereof, and holes in said flanges adjacent to said slots.

In witness whereof we hereunto affix our signatures.

LOUIS G. MILLER.
EDWARD C. LONG.