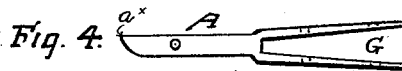
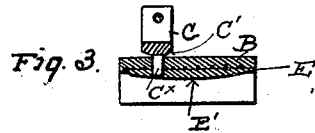
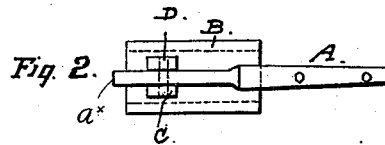
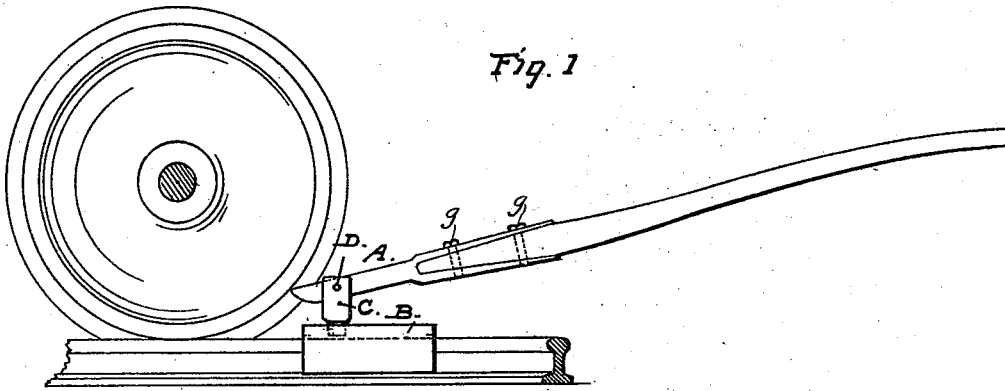


(No Model.)

S. D. COMBS & R. A. FRATES.
PINCH BAR.

No. 491,986.

Patented Feb. 21, 1893.



Witnesses:

M. Rogers

William Franklin

Inventors:

Seth D. Combs, and
Ramond A. Frates,

By Smith & Gibson
Attys.

UNITED STATES PATENT OFFICE.

SETH D. COMBS AND RAMOND A. FRATES, OF IONE, CALIFORNIA.

PINCH-BAR.

SPECIFICATION forming part of Letters Patent No. 491,986, dated February 21, 1893.

Application filed September 12, 1892. Serial No. 445,729. (No model.)

To all whom it may concern:

Be it known that we, SETH D. COMBS and RAMOND A. FRATES, citizens of the United States, residing at Ione, in the county of Amador and State of California, have invented an Improved Pinch-Bar, of which the following is a specification.

Our invention has for its object the production of a simple and efficient pinch-bar at low cost of manufacture, and to such end and purpose it consists in the combination of a shoe or fulcrum-block and a bar or lever of novel construction, as hereinafter set forth.

The accompanying drawings clearly show the construction of these parts and the complete implement, and the same is referred to herein by letters as a part of this specification.

Figure 1 is a side elevation of our improved pinch-bar set in position for work behind a car-wheel; Fig. 2 is a top view; Fig. 3 is a vertical longitudinal section of the shoe; and Fig. 4 is a view of the bar.

A is the bar, and B a block with a deep groove or channel of proper width to take over the head of a T-rail and to slide upon it.

C is a forked piece into which the lower part of the bar is set, and D is a bolt passing through the forked piece and forming a fulcrum on which the bar is fitted to rock freely. The piece C is swiveled in the top of the block and is movable to a limited extent, so that the pinch-bar can be turned laterally and thrown from side to side as well as worked in a vertical plane upon the fulcrum while the block B sets on the rail. This part B which we have termed the shoe has deep depending flanges along both sides that extend down against the sides of the rail to prevent the shoe from slipping laterally, and the bottom of the channel between these flanges is faced with a sole E of lead or other similar soft metal to hold the shoe to the rail. The lower end C^x of the forked piece C extends completely through the top of the block B where it is swiveled therein, and passes also down through the sole E as seen in Fig. 3. By this means not only is the sole E prevented from becoming displaced by rough usage and the strain brought to bear thereon, but also a longer bearing is afforded for the stem C^x of the forked piece C, and hence

the lower end of the body of this piece may be beveled or reduced as at C' to avoid undue friction upon the top of the block and yet the stem will not become loose in its socket by reason of the great lateral strain thereon when the device is in use. The lower face E' of the sole E is made rounding or convex as shown, and the stem C^x of the forked piece C passes down through the sole at a point which is not directly over the center of the rounding face of the sole but a little forward thereof: hence, when the device is in use and pressure or weight is brought to bear upon the forked piece C, the block B will rock slightly forward upon the rail so as to bring the longitudinal axis of the block C and its stem C^x into an oblique position the better to withstand and resist the strain. The toe of the bar is finished with a broad flat point α^x , and when the handle-portion of the bar is made of wood this lower metal-portion is formed with a socket G to receive the end of the wooden bar, and the two parts are secured together by bolts *g g* as shown in Fig. 1.

In most cases we prefer to make the upper portion and body of the bar of wood as we have shown in the drawings, but when it is made of metal it may be in one piece with the lower portion.

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

The herein-described pinch-bar comprising the channeled shoe B, the lead sole E therein having a longitudinally rounded lower face E', the forked piece C having a reduced stem C^x which passes through and is journaled in the top of the block and the body of the sole at a point slightly forward of the center of the rounded face of said sole, the bar A mounted on a transverse pivot in said forked piece, and a handle connected with said bar, as and for the purpose set forth.

In testimony that we claim the foregoing we have hereunto set our hands and seals.

SETH D. COMBS. [L. S.]
RAMOND A. FRATES. [L. S.]

Witnesses:

A. J. DOOLEY,
PHIL KENNEDY.