(No Model.) 2 Sheets—Sheet 1.

D. CHRISTIE.

DETACHABLE CLAW BAR.

No. 305,670. Patented Sept. 23, 1884.

FIG. I.

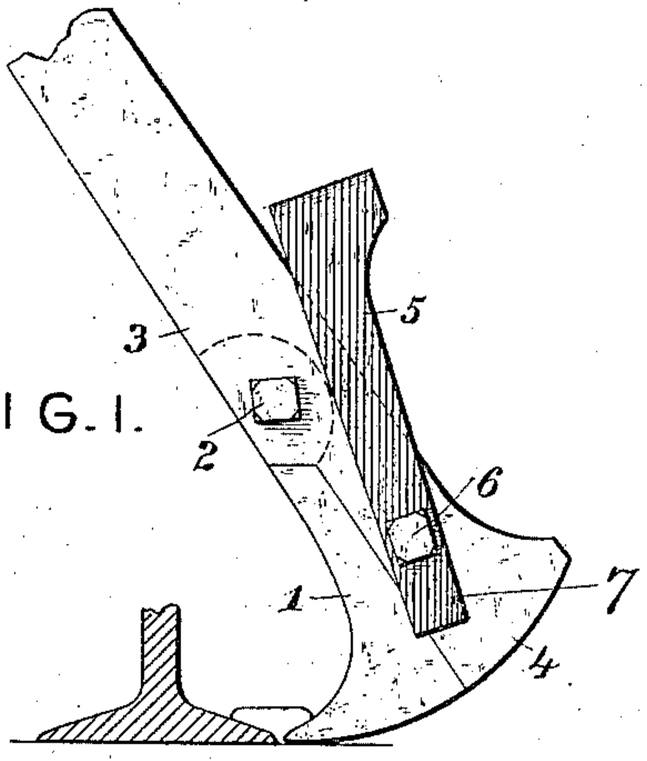


FIG. II.

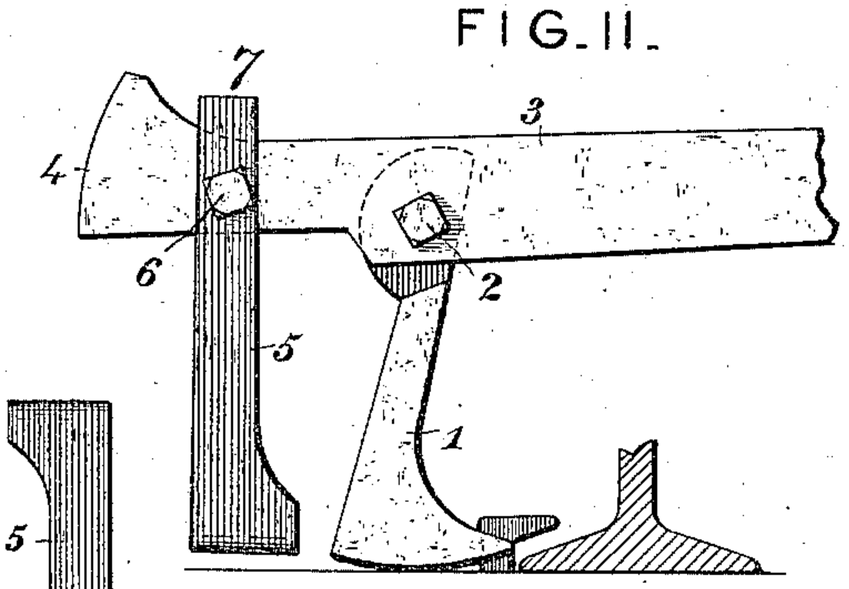


FIG. III[a].

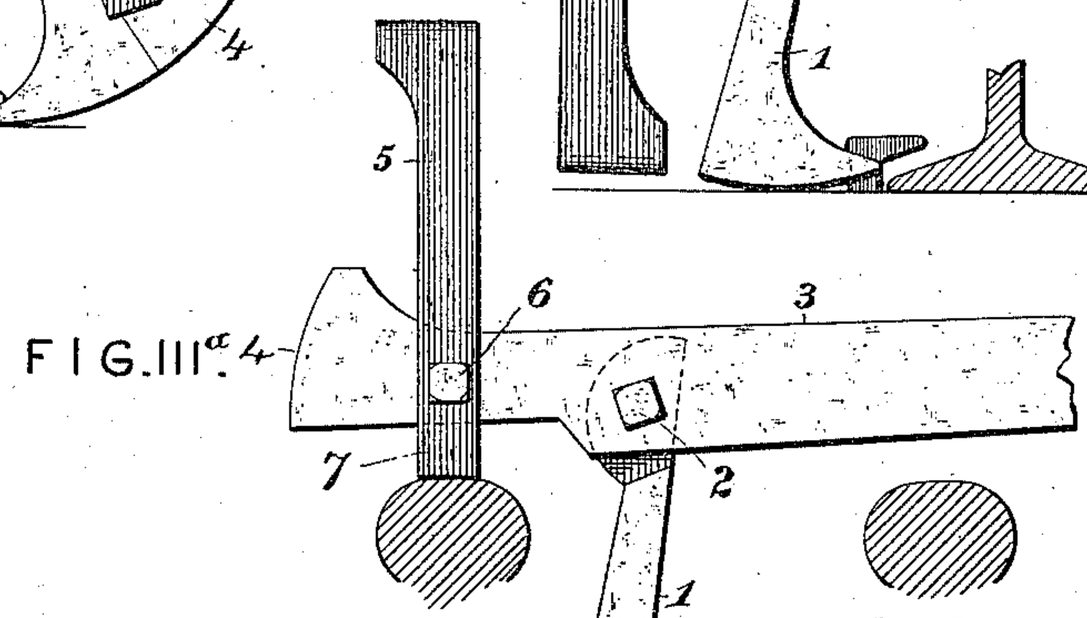


FIG. III.

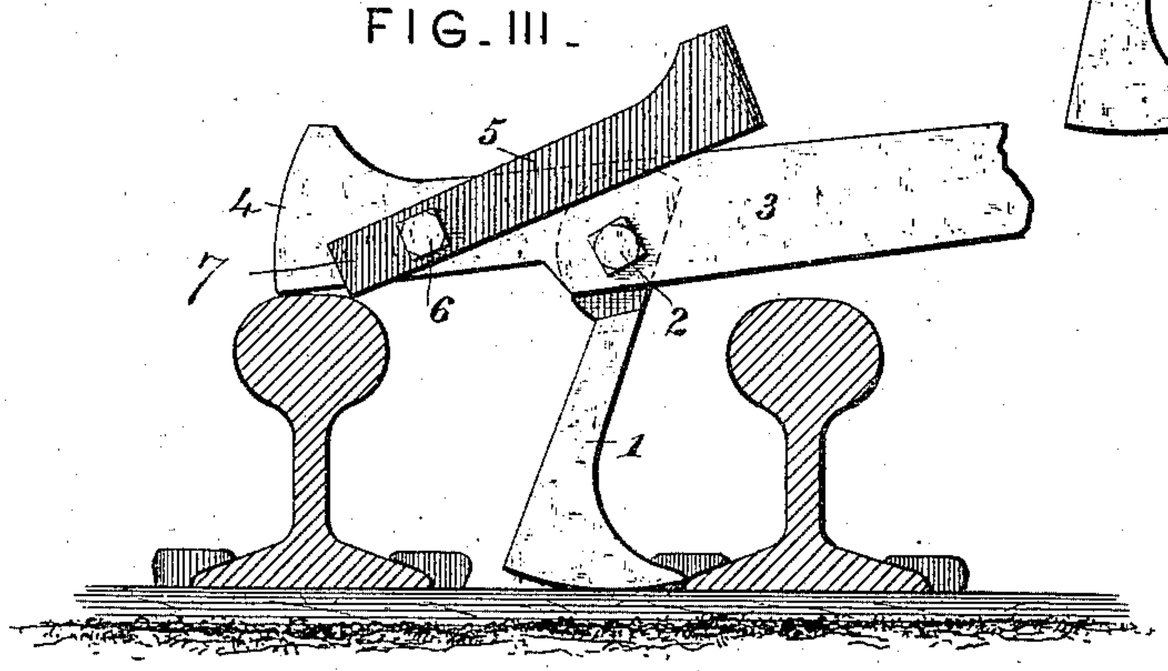
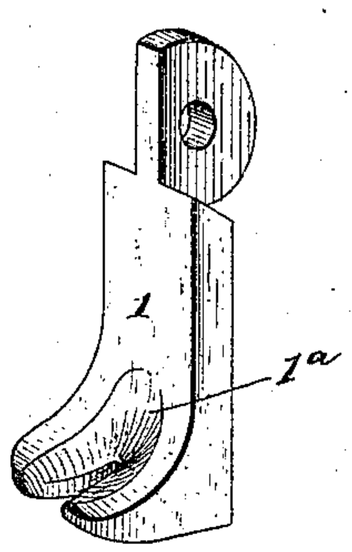


FIG. IV.



Attest.

Geo. P. Smallwood.
Edward Stw.

Inventor.

David Christie.

By Knight Bros
attys

(No Model.)

2 Sheets—Sheet 2.

D. CHRISTIE.

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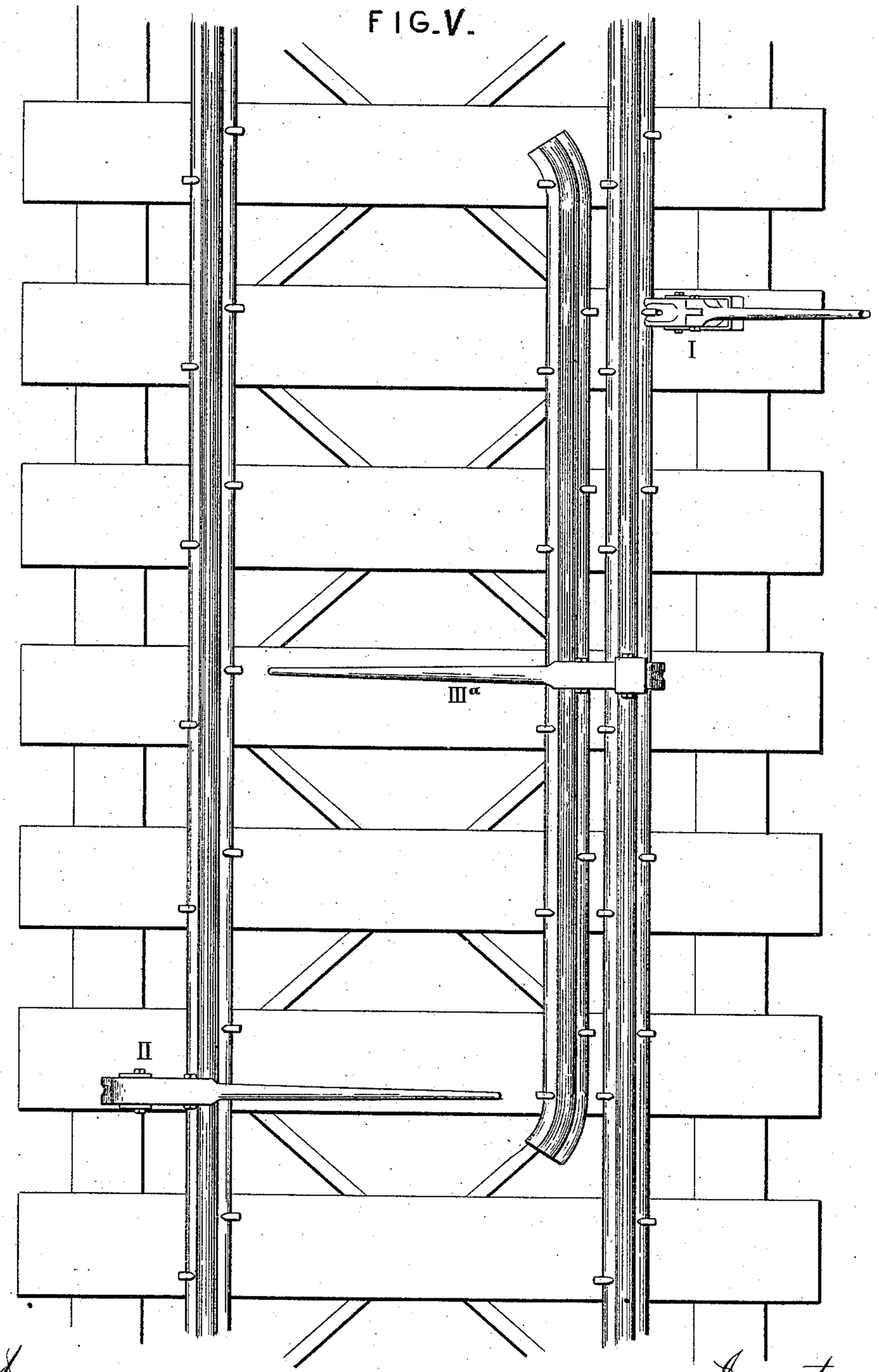
FIG. V.



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UNITED STATES PATENT OFFICE.

DAVID CHRISTIE, OF BUCYRUS, OHIO.

DETACHABLE CLAW-BAR.

SPECIFICATION forming part of Letters Patent No. 305,670, dated September 23, 1884.

Application filed June 21, 1884. (No model.)

To all whom it may concern:

Be it known that I, DAVID CHRISTIE, a citizen of the United States, residing at Bucyrus, in the county of Crawford and State of Ohio, have invented certain new and useful Improvements in Claw-Bars, of which the following is a specification.

The invention consists in a claw-bar constructed with a hinged claw or toe-piece adapted to assume different positions, according to the position of the spike which it is desired to draw, and with a hinged fulcrum, which is employed in drawing spikes in cases where it is dangerous or impossible to get at the spike with the ordinary claw-bar.

In order that my invention may be more fully understood, I will proceed to describe it with reference to the accompanying drawings, in which—

Figure I is a side elevation of my improved claw-bar, the fulcrum-piece being thrown back out of use, and the bar employed in the ordinary way. Fig. II is a similar view with the fulcrum-piece thrown down onto the tie, to serve as a rest in drawing spikes from angle fish-plates or from ties upon a bridge or truss where it is dangerous to use the bar in the ordinary way by standing outside of the track. Figs. III and III^a illustrate different modes of using the improved claw-bar for drawing spikes between the main rail and guard-rail at crossings or frogs. Fig. IV is a detail view of the claw. Fig. V is a diagram illustrating the mode of using the claw-bar in different positions.

The use of the ordinary claw-bar for drawing spikes upon bridges or trusses is exceedingly dangerous by reason of the necessity of standing outside of the rail to obtain a proper hold of the spike. It is also almost impossible to draw spikes from between the rail and a guard-rail. Trouble is also experienced by the breaking of the toe of the claw-bar at a distance from any place where the damage can be repaired. When pulling spikes from fish-plates with the ordinary bar a block has to be placed under the heel, involving additional trouble. To remedy these defects of the ordinary bar, I employ a hinged claw or toe, 1, connected by a pivot-bolt, 2, with the shank 3 of the bar, the axis of the hinge being transverse to the plane in which the handle vibrates in operation, or, in other words, the bolt 2 being transverse to the head. This claw may be made of steel, and may be readily removed and replaced by another when broken. In order to adapt the toe to hold and retain the head of the spike while keeping the toe as strong as possible, I form in its upper surface a depression or basin, 1^a, of oval or circular form, approximately the contour of the under side of a spike-head. The head of the spike being placed in this basin is securely retained therein while being pulled, thus avoiding one fruitful source of danger in drawing these spikes from hard wood or in difficult positions. With a claw having such a form the harder the spike is pulled the more firmly does it become seated in the claw.

The claw-bar has bearing on heel 4 when used, as shown in Fig. I, in the ordinary manner. 5 is a fulcrum-piece hinged by bolt 6 to the head of the bar in such manner that it may be thrown back out of use, as shown in Fig. I; or, when it is desired to draw a spike on the outside of the rail while standing in the center of the track—as, for example, on a bridge or trestle—it may, as shown in Fig. II and at II in Fig. V, be thrown down so as to rest upon the tie. When used in this way, the fulcrum is first thrown back so as to be out of the way, and the claw placed on the spike in the ordinary manner. The bar is then brought over to the center of the track, pivoting around the bolt 2, and the fulcrum 5 being then thrown down the bar is in position for use, and the spike may be withdrawn by raising its outer end. No trouble is experienced in using the bar in this way, and no need is found of stooping to place the claw under the spike before operating it. When using the bar for drawing spikes between the rail and guard-rail, the head of the bar may rest directly upon the rail, as in Fig. III, or it may be provided with a projection for that purpose; or the inner ends of the fulcrum 5 may be extended, as shown at 7, to rest on the rail, as illustrated in Fig. III^a or at III^a in Fig. V, so that the bar will be horizontal at its inner end when putting the claw in position for the spike, and will be vertical, or nearly so, when the spike is pulled out. In either case

the spike is drawn straight out without bending and is ready for reuse.

The bar thus constructed is not only valuable for drawing spikes, but may be used for pulling out bolts on trusses, &c., different claws being employed according to the size of the bolt to be drawn.

The method of hinging the fulcrum enables the ready removal of the fulcrum when it is not desired to use it for some time. It may be laid aside and replaced without trouble at any moment.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The combination, with a bar or handle, of a notched toe or claw having its lower extremity flush with the end thereof, and adapted for use in the ordinary way, and its upper extremity hinged thereto, whereby the extremity of the bar may be used as the fulcrum, while the claw projects from the side thereof, in the manner and for the purpose set forth.

2. The combination, with a bar or handle, of a notched toe or claw connected thereto by a hinged joint, having its axis placed transversely to the head, for the purpose set forth, and its lower extremity flush with the end of said bar, for use in the ordinary way, as explained.

3. The combination, with a bar or handle, of a claw having its upper end hinged thereto, and a fulcrum-piece, also hinged thereto at a point below the hinge of the claw, as and for the purpose set forth.

4. In a claw-bar, the combination of a bar or handle, a claw or toe projecting at its lower extremity to the end of said bar, and hinged thereto at its upper end, and a fulcrum-piece, also hinged to said bar below the hinge of the claw, and provided with heels extending beyond its fulcrum, as and for the purpose set forth.

5. The combination, with the bar 3, having the heel 4, of the claw 1, hinged at 2 and curved at its end, as shown, and the fulcrum-piece 5, hinged at a point below the hinge of the claw 1, as and for the purpose explained.

DAVID CHRISTIE.

Witnesses:
D. W. LOCKE,
J. L. LEONARD.