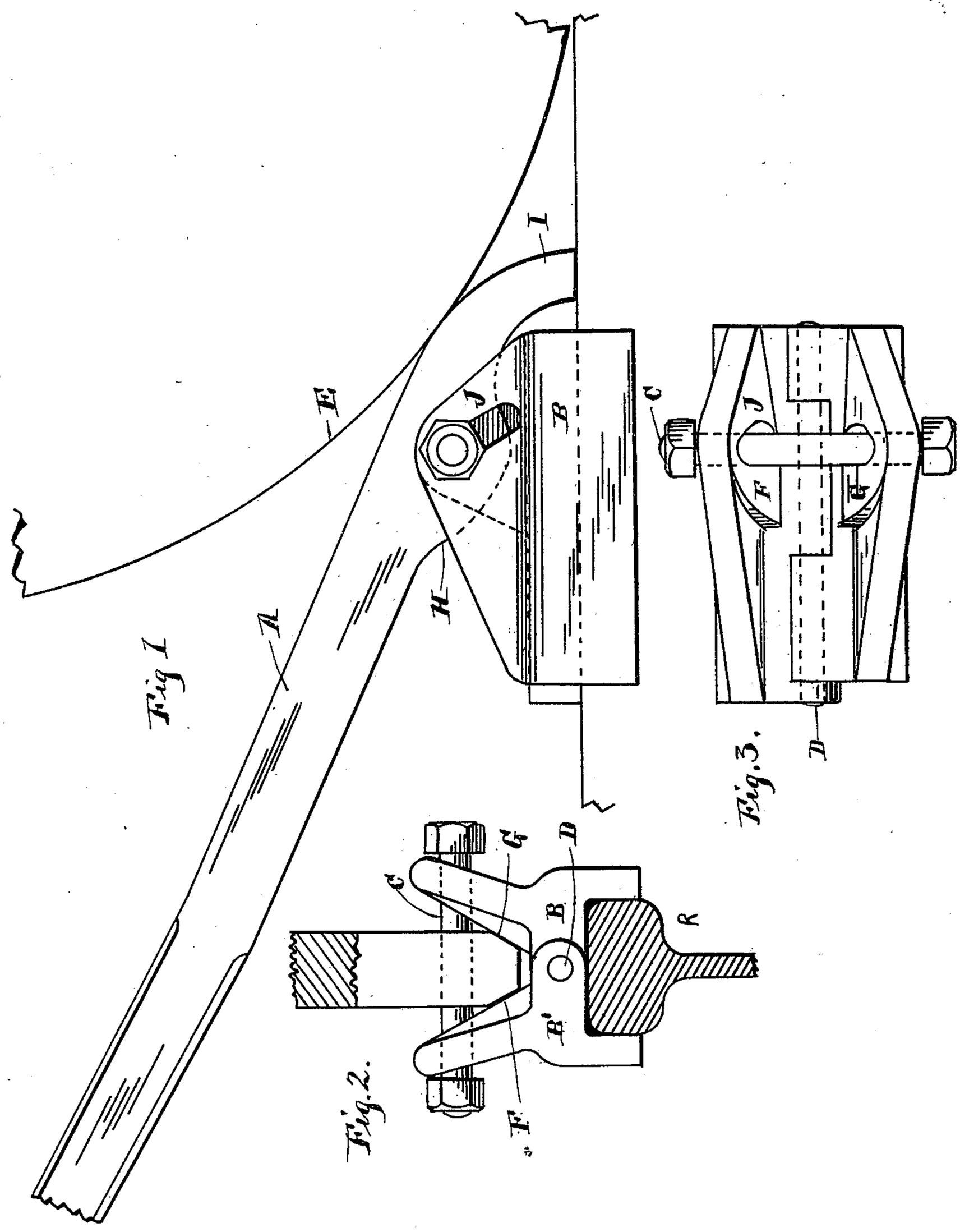
No. 619,986. Patented Feb. 21, 1899.

F. B. NIMS.

CAR STARTER.

(Application filed Nov. 17, 1898.)

(No Model.)



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FRANK B. NIMS, OF LAKE ODESSA, MICHIGAN.

CAR-STARTER.

SPECIFICATION forming part of Letters Patent No. 619,986, dated February 21, 1899.

Application filed November 17, 1898. Serial No. 696,702. (No model.)

To all whom it may concern:

Be it known that I, FRANK B. NIMS, a citizen of the United States, residing at Lake Odessa, in the county of Ionia and State of Michigan, have invented new and useful Improvements in Car-Starters, of which the following is a specification.

This invention relates to that class of devices which is used by railroad employees and others for starting and moving cars on the rails; and it consists in a lever of suitable form mounted on a bolt supported by clamping-jaws, the bolt resting in two inclined slots and adapted, when downward pressure is applied to the longer end of the lever, to clamp the jaws onto the rail and at the same time to move the car to which the device is applied.

The objects of my invention are, first, to produce a device which will not only grip the rail, so as to prevent the slipping of the car-starter upon the rail, but also to furnish a firm support for the lever, the jaws having sufficient length along the rail to prevent any tendency to rock thereon; second, to so mount the lever that it will have a tendency to move forward as the longer end of the lever is lowered, thereby following up the car-wheel after it is moved by the upward pressure of the front end of the lever; third, to form a double bearing for the hinged jaws. These objects I accomplish by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my car-starter placed in position on the rail with the long end of the lever raised. Fig. 2 is a rear elevation of the same, and Fig. 3 is a plan view of the clamping-jaws with the lever removed.

Similar letters refer to similar parts throughout the several views.

The rail upon which the clamping-jaws rest is shown by R, and E shows one of the car-wheels of the car to be moved.

A represents the lever, rounded at the front end, as shown by I in Fig. 1.

B and B′ are the clamping-jaws, hinged together by the longitudinal bolt D. The lever A is rounded, as shown at H, so as to form a suitable bearing upon the inclined sides of the hinged jaws B and B′, and is also provided with a hole through which passes the fulcrum-bolt C. The inclined wings of the clamping-jaws are each provided with an inclined slot J, and the fulcrum-bolt rests in these inclined slots, the slots inclining backward, as shown, from the front of the jaws, so that as the lever is lowered or pressed down it naturally spreads apart the wings of the jaws, thereby clamping the lower part, or jaws proper, upon the rail and also presses the lever forward upon the car-wheel. The jaws are provided with the inclined or wedge-shaped faces F and G, as fully shown in Figs. 2 and 3. The fulcrum is placed near the front end of the jaws, leaving a considerable length of the jaws back of the fulcrum and resting upon and clamping the rail. These jaws are attached together like an ordinary hinge, having a bearing both in front and in the rear of the fulcrum-bolt, as clearly shown in Fig. 3.

The front end of the lever is so formed that when placed under a car-wheel it comes in close proximity to the upper surface of the rail, or it may be even brought in contact with the rail.

The operation of my invention is as follows: The car-starter is placed upon the rail, the longer end of the lever raised, and the front end pressed against the car-wheel, as shown in Fig. 1. The fulcrum-bolt C is now in position at the upper part of the slots J. The longer end of the lever is now pressed downward, which lowers the fulcrum-bolt C, and the lever, pressing against the inclined surfaces F and G, spreads the wings of the clamping-jaws and clamps the jaws firmly upon the rail. The front end of the lever is raised and crowded forward by the movement of the fulcrum-bolt as it is pressed down in the inclined slots, and the car is thus moved forward and away from the clamping-jaws. When the car-wheel has passed beyond the action of the front end of the lever, the longer end of the lever is raised and the front inclined shorter end is brought in contact with the rail, thereby lifting the clamping-jaws and releasing them from the rail. The jaws are then pushed forward and the longer end of the lever raised until the lever and jaws occupy the position shown in Fig. 1, when the operation above described is continued.

Having thus described my invention, what I claim to have invented, and desire to secure by Letters Patent, is—

1. In a car-starter, the combination of a pair of clamping-jaws having inclined slots therein, a fulcrum-bolt extending through said slots, and a lever adapted to operate said jaws, mounted on said bolt, substantially as and for the purpose described.

2. In a car-starter, the combination of a lever, a pair of clamping-jaws hinged by a longitudinal bolt flaring upwardly and outwardly, expanding wings, an inclined slot in each wing, a fulcrum-bolt passing through said slots and lever, inclined or wedge-shaped surfaces on the adjacent sides of the wings, the lever having a bearing on the fulcrum-bolt, and upon said inclined surfaces when the longer end of the lever is pressed downward in use, substantially as described.

3. The combination of the lever, A, provided with the projection, H, the clamping-jaws B and B′ provided with the inclined surfaces, F and G, against which the lever bears the backward-inclining slots J, the bolt, C, passing through the slots and lever, and the horizontal hinge-bolt, D, attaching together the two clamping-jaws at a point in front and in the rear of the fulcrum-bolt, substantially as described.

4. The combination of the lever, A, having a rounded downwardly-extending projection, I, the jaws B and B′ each provided with an inclined slot, a fulcrum-bolt passing through the slots and the lever, said part, I, serving as a fulcrum to lift the jaws from the rail when the longer end of the lever is raised, substantially as described.

5. The combination of the lever, A, having a downward projection, H, the downwardly-extending point, I, the clamping-jaws B and B′, provided with inclined surfaces F and G, and with the inclined slots, J, the front end of the lever adapted to lift and press upon the car-wheel, the downward projection, H, adapted to press down the surfaces F and G and thereby clamp the jaws of the rail when the inclined slots J move the fulcrum-bolt and lever forward upon the car-wheel as the longer end of the lever is lowered, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRANK B. NIMS.

Witnesses:
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M. F. ARMOUR.