

F. D. HARDY.  
Car-Starter.

No. 163,486.

Patented May 18, 1875.

Fig. 1.

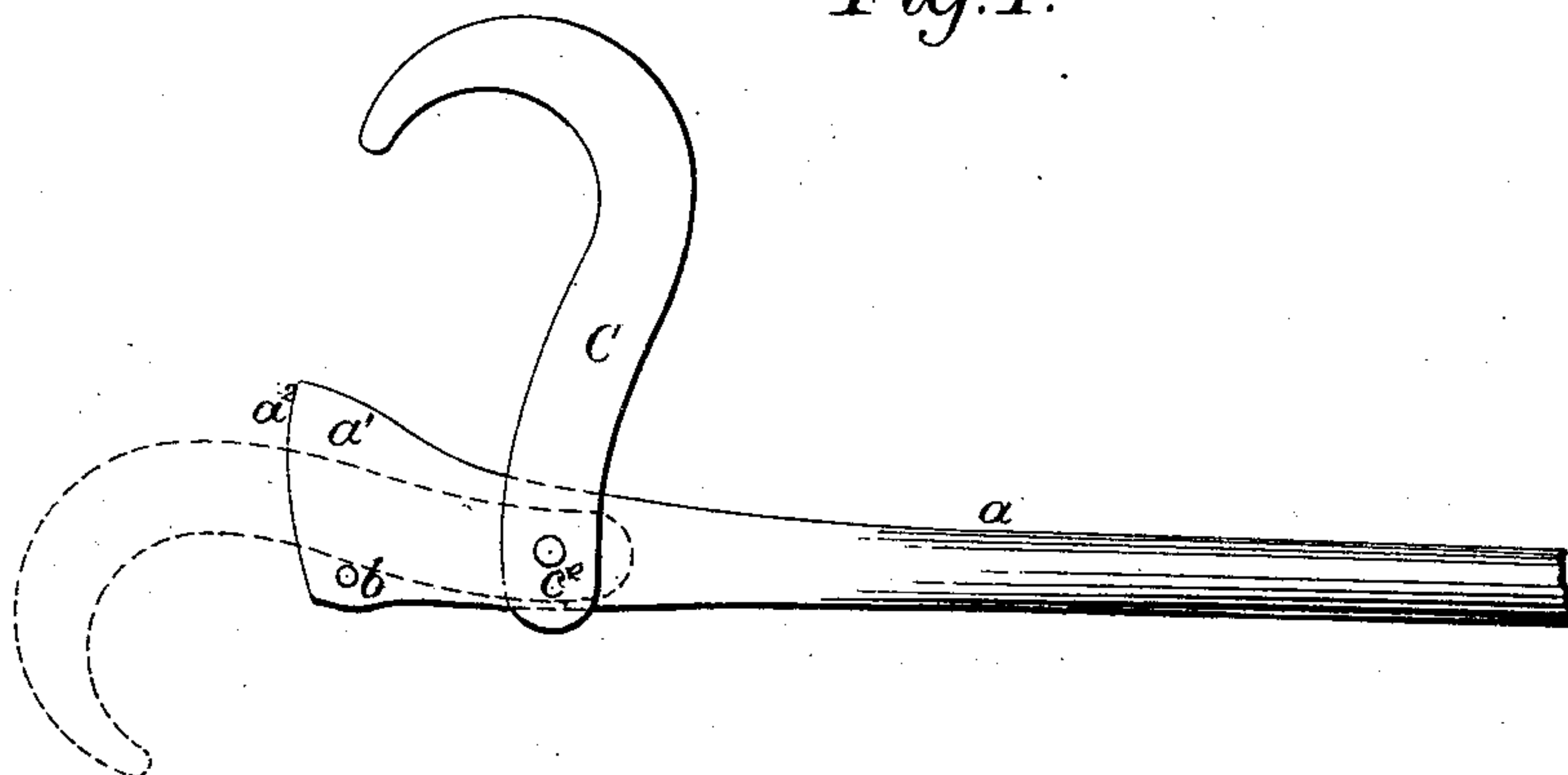
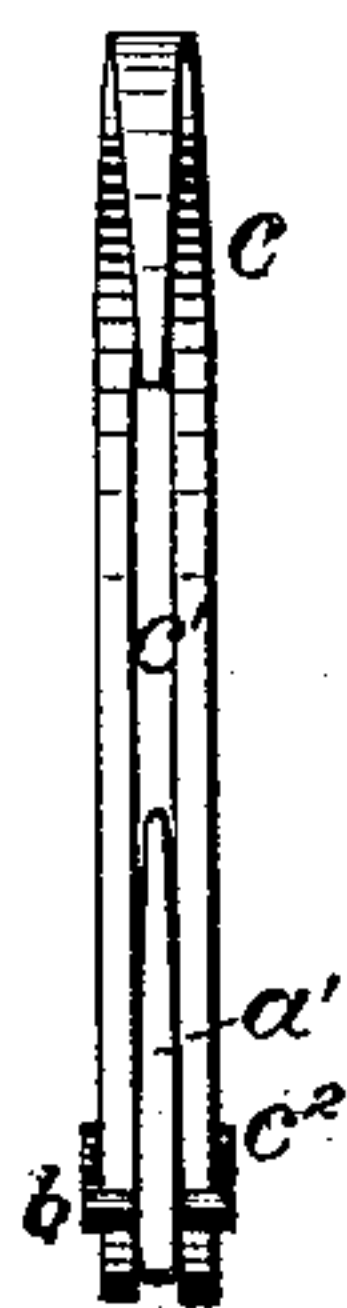


Fig. 2.



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Att'y.s

# UNITED STATES PATENT OFFICE.

FRANKLIN D. HARDY, OF DELAVAN, ILLINOIS, ASSIGNOR TO CHARLES L. BOOTH AND DEXTER D. HARDY, OF SAME PLACE.

## IMPROVEMENT IN CAR-STARTERS.

Specification forming part of Letters Patent No. **163,486**, dated May 18, 1875; application filed March 30, 1875.

*To all whom it may concern:*

Be it known that I, FRANKLIN D. HARDY, of Delavan, in the county of Tazewell and State of Illinois, have invented certain new and useful Improvements in Car-Starters; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in that class of devices for starting railroad-cars wherein is used a single lever with hook attachments for gripping the axle of the rear wheels. It consists in a lever having a flattened end or head formed fan or wing shaped, to which are attached two projections or stops, and in a single hook, slotted and pivoted to the lever, and arranged so as to extend outward sufficiently to hold the car-axle between it and the curved edge of the head, as will be hereinafter fully explained.

In the drawings, Figure 1 is a side view, and Fig. 2 an end view, of my invention.

*a* is the single lever. Its front or outer end is flattened and widened, so as to form the wing or fan-shaped head *a*<sup>1</sup>, with a curved outer edge, *a*<sup>2</sup>, as shown. It is provided with the stud *b*, passed through and secured in a suitable opening in the lower outer angle of the head, which stud projects on either side and forms stops, for purposes hereinafter set forth. *c* is a hook. It is slotted at *c*<sup>1</sup>, so as to fit over the rear part of, and admit of the free play therein of, the flattened head *a*<sup>1</sup>. It is secured to the lever by the bolt or pivot *c*<sup>2</sup>, on which it turns easily. It is prevented from turning below the lever by the stops or extensions of the stud *b*, and it is attached to the

lever *a*, so that when resting on the stud *b* it will extend outward from the head *a*<sup>1</sup> sufficiently to provide a space equal to the diameter of an ordinary car-axle between its inner curved edge and the lower part of the curved edge *a*<sup>2</sup>.

To use the device, the hook is thrown forward, as shown in dotted lines, Fig. 1, so that said hook rests on the stud *b*. In this position the hook can be placed over the axle. The end of the lever in the hands of the operator is drawn upward, when the axle will be gripped with sufficient tightness that the wheels can be turned. By depressing the lever the gripe is released. It can readily and rapidly be adjusted to the axle as the wheels revolve.

To remove the device, raise the lever so as to bring the stud *b* against the lower side of the hook; the latter can then be readily removed.

It will be seen that my device can be easily applied to or removed from the axle, and that the annoyance of cams operated by cords or other complicated parts is avoided.

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

The lever *a*, constructed with the fan-shaped head *a*<sup>1</sup>, having the curved edge *a*<sup>2</sup>, and provided with the studs *b*, and having the hook *c*, slotted at *c*<sup>1</sup>, and pivoted thereto so as to turn on the upper side thereof, and so that the slot *c*<sup>1</sup> will pass over the head *a*<sup>1</sup>, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

FRANKLIN D. HARDY.

Witnesses:

WM. V. MCKINSTRY,

EDWARD A. HAUPTMAN.