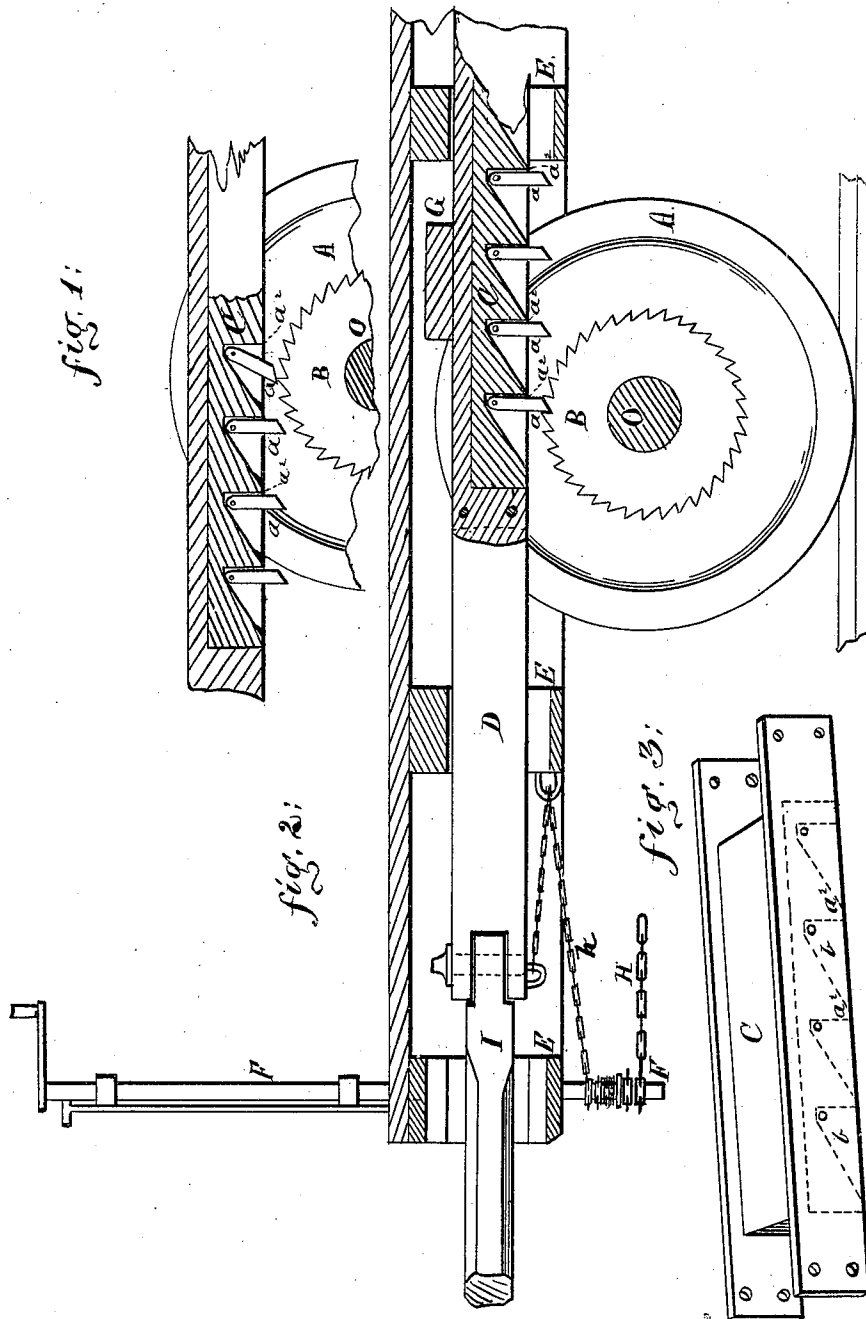


CAR-STARTER.

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No. 170,459.

Patented Nov. 30, 1875.



Witnesses
J. West Wagner,
Chas. F. Luck.

Wm Wagner,
Chas. Luck.

Chas. F. Luck.

Inventor;

Inventor;
Lewis Wolfley

UNITED STATES PATENT OFFICE.

LEWIS WOLFLEY, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN CAR-STARTERS.

Specification forming part of Letters Patent No. **170,459**, dated November 30, 1875; application filed December 17, 1873.

To all whom it may concern:

Be it known that I, LEWIS WOLFLEY, of New Orleans, State of Louisiana, have invented a Car-Starter, of which the following is a specification:

The object of my invention is to relieve the strain on the horses for the first few feet of starting the car; consisting in the combination of a ratchet draw-bar, supplied with flexible teeth, with a ratchet-wheel firmly secured to the axle of the car, as shown in the sectional view, Figure 2, of the accompanying drawing.

H is the usual brake-chain. E E E are the supports and guides to the draw-bar.

Fig. 3 is the casting for the ratchet, attached to the draw-bar, and into which the ratchet-teeth are pivoted. Shoulders $a^2 a^2 a^2$ give support and strength to the teeth. Mortises $b b b$ allow the teeth to swing free of the ratchet-wheel as the bar passes to the rear.

The operation is as follows: The horses are attached to the pole I, which draws forward the ratchet draw-bar D. As the horses move the flexible teeth $a a a$ engage and revolve the ratchet-wheel B as they pass, which causes the car-wheel A to revolve, by means of the axle O, until the head or stop G reaches the guide E, when the entire haul or draft of the car comes upon it. To repeat the operation, the driver holds in his horses, or tightens his brake, either act, by means of the pole I or chain h , forces the draw-bar back to its starting position. The ratchet-teeth $a a a$, being flexible, allow the bar to pass back over the ratchet-wheel B without hinderance or friction, as shown in Fig. 1. The car having stopped, and the brake being thrown off, it is again ready for application.

By having the attachment rope or chain b from the brake of the car to the draw-bar, I insure the return of the ratchet to its starting position. As the car must be stopped either by action of the horses or the use of the brake, my invention is, therefore, equally applicable to horse-cars with or without poles.

I am aware that teeth $a a$, which engage with the spur-wheel B, have been placed upon pivots, in order that they may be thrown out of the way of the spurs when the traction-bar is thrown backward; but the same does not act by gravity. I do not, therefore, claim, broadly, such pivoted teeth; but

I claim as my invention—

1. In combination with ratchet B, upon a car-axle, O, a draw-bar, D, provided with pawls $a a$, which, with a motion of the bar in one direction, ride freely over the ratchets, and drop by gravity into such a position as to engage with the ratchets when the bar is drawn forward, substantially as set forth.

2. The bar O, provided with flexible pawls $a a$, recessed in mortises $b b$, adjusted to permit the pawls to yield in one direction by turning, and to prevent yielding motion in the opposite direction by the shoulders of the mortises against which they bear, substantially as and for the purposes set forth.

3. The combination of the draw-bar D bearing the engaging-pawls $a a$, the chain or cord h , and shaft F, substantially as set forth and shown.

LEWIS WOLFLEY.

Witnesses:

CHAS. S. LUSK,
R. F. HUNTER.