J. MALLON.

CAR-STARTERS.

No. 194,159. Patented Aug. 14, 1877.

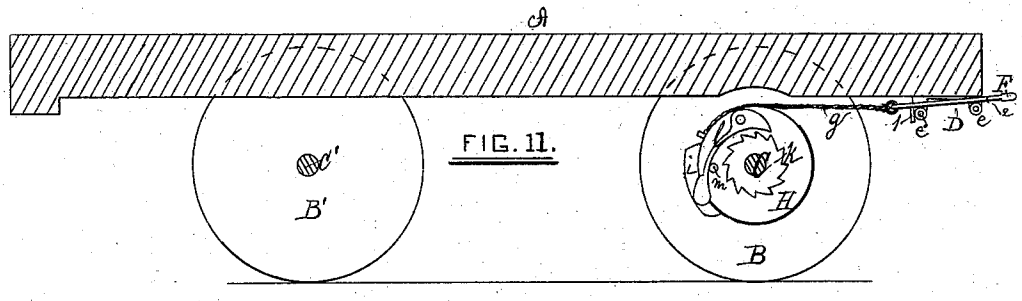

FIG. 11.

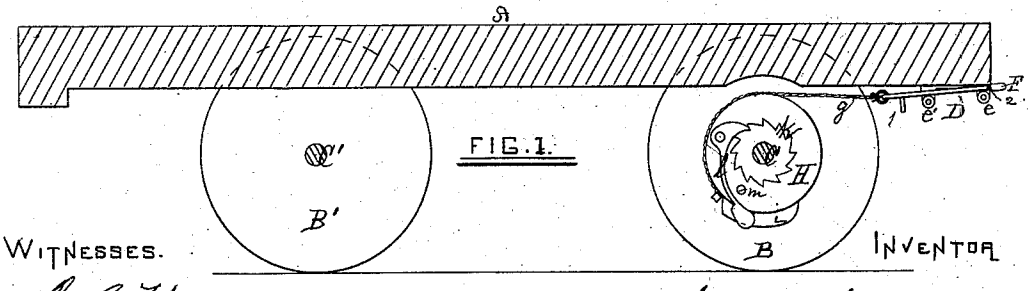

FIG. 1.

WITNESSES.

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UNITED STATES PATENT OFFICE.

JAMES MALLON, OF BATON ROUGE, ASSIGNOR OF ONE-HALF HIS RIGHT TO FRANK VON PHUL, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN CAR-STARTERS.

Specification forming part of Letters Patent No. **194,159**, dated August 14, 1877; application filed May 8, 1877.

To all whom it may concern:

Be it known that I, JAMES MALLON, a resident of the city of Baton Rouge, parish East Baton Rouge, and State of Louisiana, have invented a certain new and useful Improvement in Car-Starters; and I do hereby declare the following to be a full, clear, and correct description of the same, reference being had to the annexed drawing, making a part of this specification.

The object of this invention is to provide a simple and efficient means for the assistance of draft-animals in starting railroad-cars; and it consists of a mechanical arrangement, the nature of which will readily be understood by referring to the accompanying drawing, whereon—

Figure 1 represents a longitudinal section of a car provided with my improved apparatus, the several parts of which are shown in the positions they occupy while the car is being started. Fig. 2 is a similar view of a car with the mechanism out of gear, as when the car is in motion.

Similar letters of reference indicate corresponding parts.

A represents the platform of a car; B B′, the wheels, and C C′ the axles thereof. In the forward end of the platform is a guide-block, D, the sides of which are provided with lugs which form bearings for the ends of shafts, on which are loosely fitted friction-rollers *e e′*, the latter operating a little below the former, in order to support the draft-bar F in an inclined position, as shown, so that the moment the bar is relieved of a forward strain it may, by force of gravity, assume its backward position.

The rear end of the above-mentioned draft-bar is provided with a cord or chain, *g*, for connecting it with grooved pulley H, one side of which is weighted, as shown at *i*, for purposes hereinafter described.

To the same axle with the above pulley, and on one side thereof, is rigidly keyed or otherwise secured a ratchet-wheel, *k*, the teeth of which are engaged, at certain stages of the operation, by a pawl, *l*, which is pivoted to the side of the pulley, so that a forward movement of the draft-bar may throw the pawl into gear, and thereby enable the draft-animal to move the car with the utmost ease.

To the side of the pulley H is attached a pin, *m*, upon which the weighted end of the pawl rests when out of gear, thereby obviating the rattling noise which would otherwise be caused by the teeth of the ratchet-wheel coming in contact therewith.

The draft-bar should be provided, at or near each end, with stops 1 2, in order to prevent its working too far in either direction; and to provide against any jar in the mechanism, it will be best, in constructing the same, to form the pawl, or that portion thereof which is thinnest, of spring-steel.

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

The inclined draft-bar F, supported on the friction-rollers of a guide-block, D, in combination with the grooved wheel H, provided with weight *i*, pin *m*, and pawl *l*, the latter operating a ratchet-wheel, *k*, as described, and for the purpose set forth.

JAMES MALLON.

Witnesses:

FRANK VON PHUL,

WM. A. JORDAN.