

(No Model.)

L. SEEBACH, C. GEORGE & L. BUSH.  
CAR STARTER.

No. 432,908.

Patented July 22, 1890.

Fig. 1.

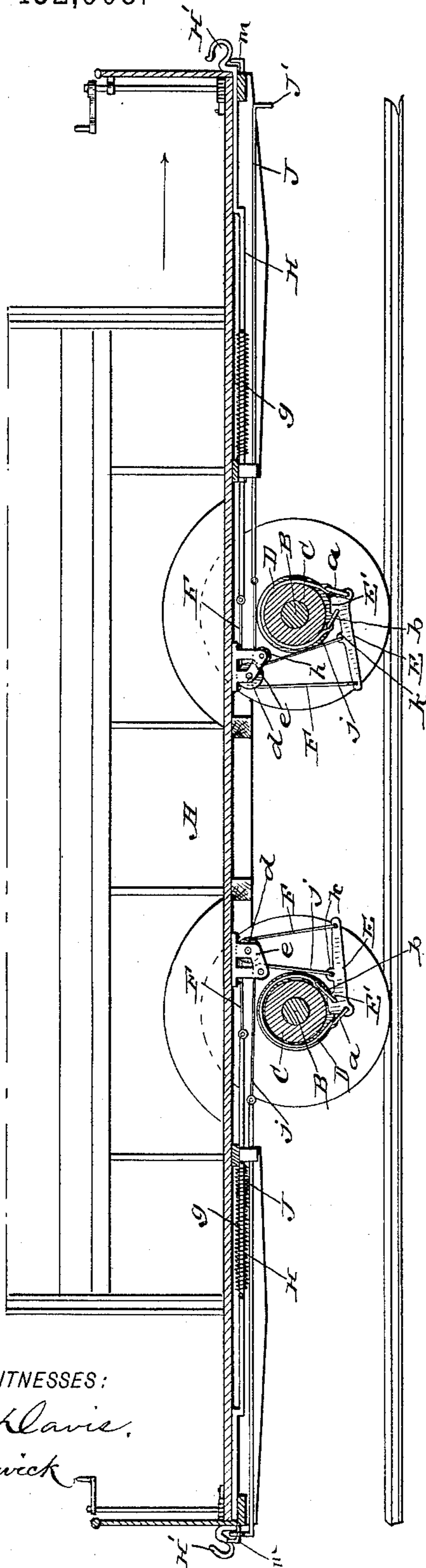
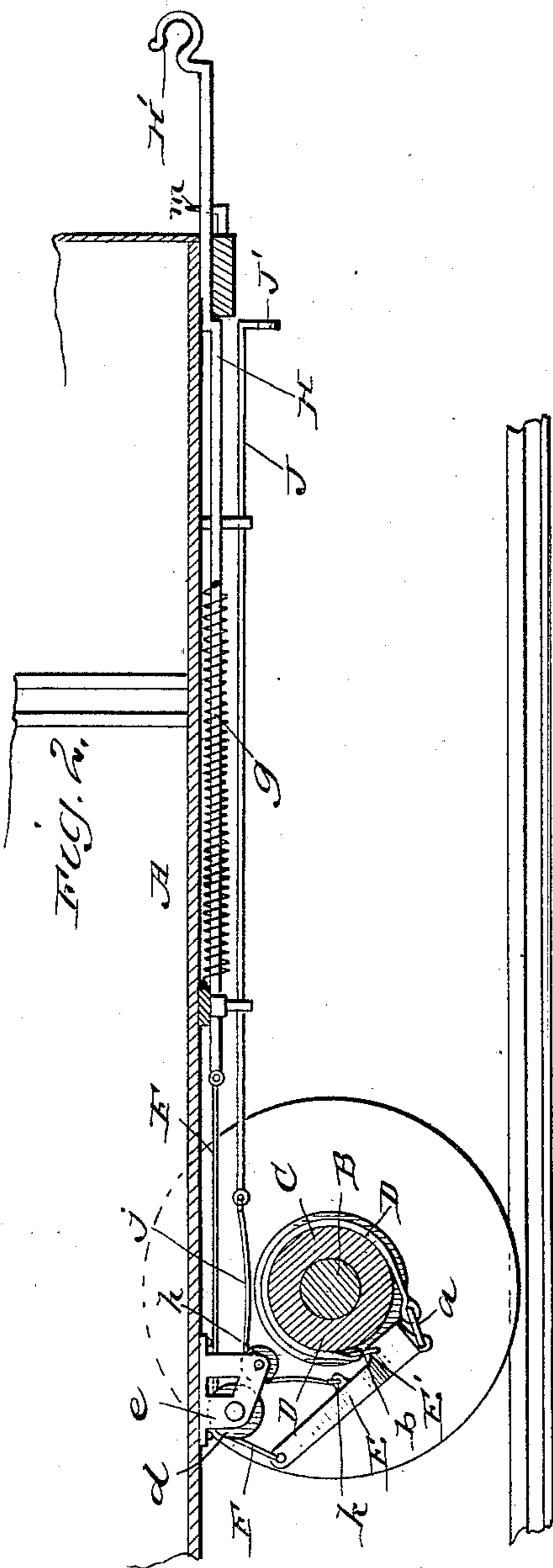


Fig. 2.



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# UNITED STATES PATENT OFFICE.

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## CAR-STARTER.

SPECIFICATION forming part of Letters Patent No. 432,908, dated July 22, 1890.

Application filed May 2, 1890. Serial No. 350,354. (No model.)

*To all whom it may concern:*

Be it known that we, LOUIS SEEBACH, CONRAD GEORGE, and LEWIS BUSH, of Listowel, in the county of Perth, Province of Ontario, and Dominion of Canada, have invented a new and Improved Car-Starter, of which the following is a full, clear, and exact description.

Our invention relates to improvements in car-starters, and the object of our invention is to produce a simple, durable, and efficient car-starter, by which a car may be easily started, thereby relieving the horses from the great strain usually necessary to start a car.

To this end our invention consists in certain features of construction and combinations of parts, which will be hereinafter fully described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a vertical longitudinal section of a car provided with a car-starter embodying our invention, showing the position of the various parts before the car is started; and Fig. 2 a broken longitudinal section showing the position of the parts after the car is started.

Fixed to the axles B of the car A are the drums C, each of which is inclosed loosely by a metal band D, which at one end is connected by link *a* with the end of the weighted lever E, and which at the other end is pivotally attached by a link *b* to the lever, near the shoulder E' thereof. The lever E is thus suspended from the drum C, so as to extend tangentially therefrom.

A chain or cord F is attached to the free end of the lever E and extends over the pulley *d*, which is suspended from the car-floor by the bracket or hanger *e*, and is attached to the rear end of the draw-bar H, which extends longitudinally beneath the car-floor in the usual manner, being longitudinally movable in its supports, and terminates at the end of the car in a suitable coupling-hook H', by which the car is drawn. A spiral spring *g* is coiled around the draw-bar H, one end of the spring being attached to the car-frame above the draw-bar and the other end being

fixed to the draw-bar, so that when the draw-bar is pulled out the spring will be elongated, and when the drawing-pressure is removed the spring will retract the draw-bar.

The bracket *e* is suspended from the car-floor directly above the lever E, and pivoted in the bracket is the pulley *d*, for the chain F, and a pulley *h*, over which runs a cord or chain *j*, one end of which is attached to an eye *k* of the lever E, and the other end is attached to a rod J, which is supported longitudinally beneath the car-floor, being movable lengthwise in its bearings.

The rod J at its forward end is formed into a handle J', by which the rod may be operated, and which may be hooked upon the pin on the end of the car when the rod is pulled forward, thus holding the rod and its connection in position.

The car-starter is applied to both axles and connected with a draw-bar extending from each end of the car as the car is drawn from either end.

The device operates as follows: When the draw-bar H is pulled out, the chain F, being attached thereto, raises the end of the lever E, and the movement of the lever tightens the band D, turns the drum C and axle B, and starts the car. It is obvious that the starter will be used upon but one axle at a time, and when one starter is in use the rod J on the one not in use is pulled out, and this pulls the chain *j* over the pulley H and raises the lever E bodily, thus releasing the drum on the rear axle from the weight of the lever, and removing all friction from the drum.

To hold the rod and lever in this position the handle of the rod is hooked upon the pin *m*.

When the car is stopped on a grade, the weight of the lever E causes the band D to engage the drum C and act as a brake to prevent the car from running back.

It is to be understood that the car is provided with the ordinary form of braking device.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A car-starter consisting, essentially, of a drum fixed to the car-axle, a friction-band loosely encircling said drum, a lever pivotally

attached to said band, so as to project from the face of the drum, and provided with an enlargement near its inner end to form a fulcrum on the drum, and connections between  
5 said lever and the draw-bar, substantially as described.

2. A car-starter consisting, essentially, of a drum fixed to the car-axle, a friction-band loosely encircling the drum, a tangentially-  
10 extending lever pivotally attached to the ends of said band, connections between said lever and the draw-bar, and means for raising said lever bodily, substantially as described.

3. The combination, with the axle B and

drum C, affixed thereto, of the band D, lever 15 E, chain F, pulley d, and spring-actuated draw-bar H, substantially as described.

4. The combination, with the lever E, connected with the draw-bar and axle-drum, as shown, of the chain j, pulley h, and rod J, 20 substantially as described.

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Witnesses:

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