

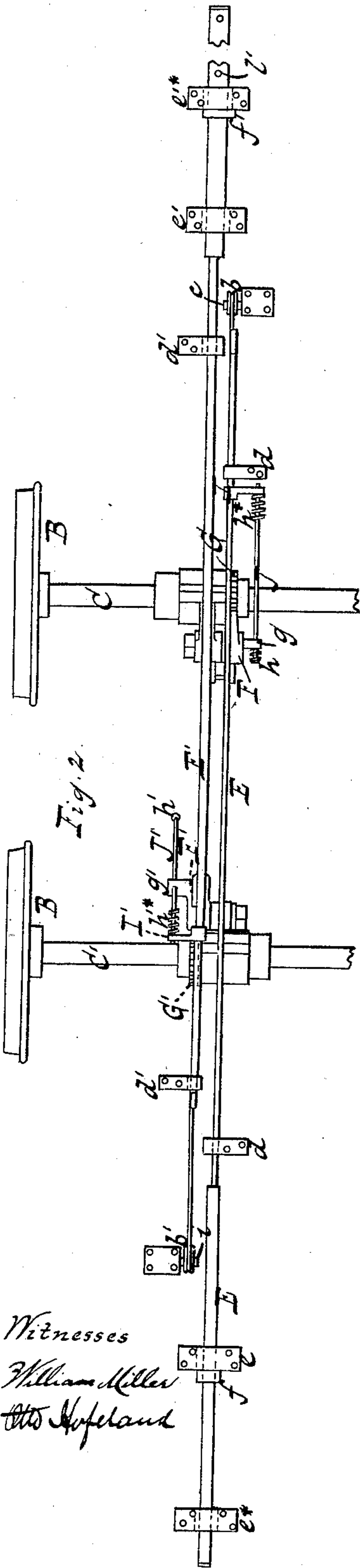
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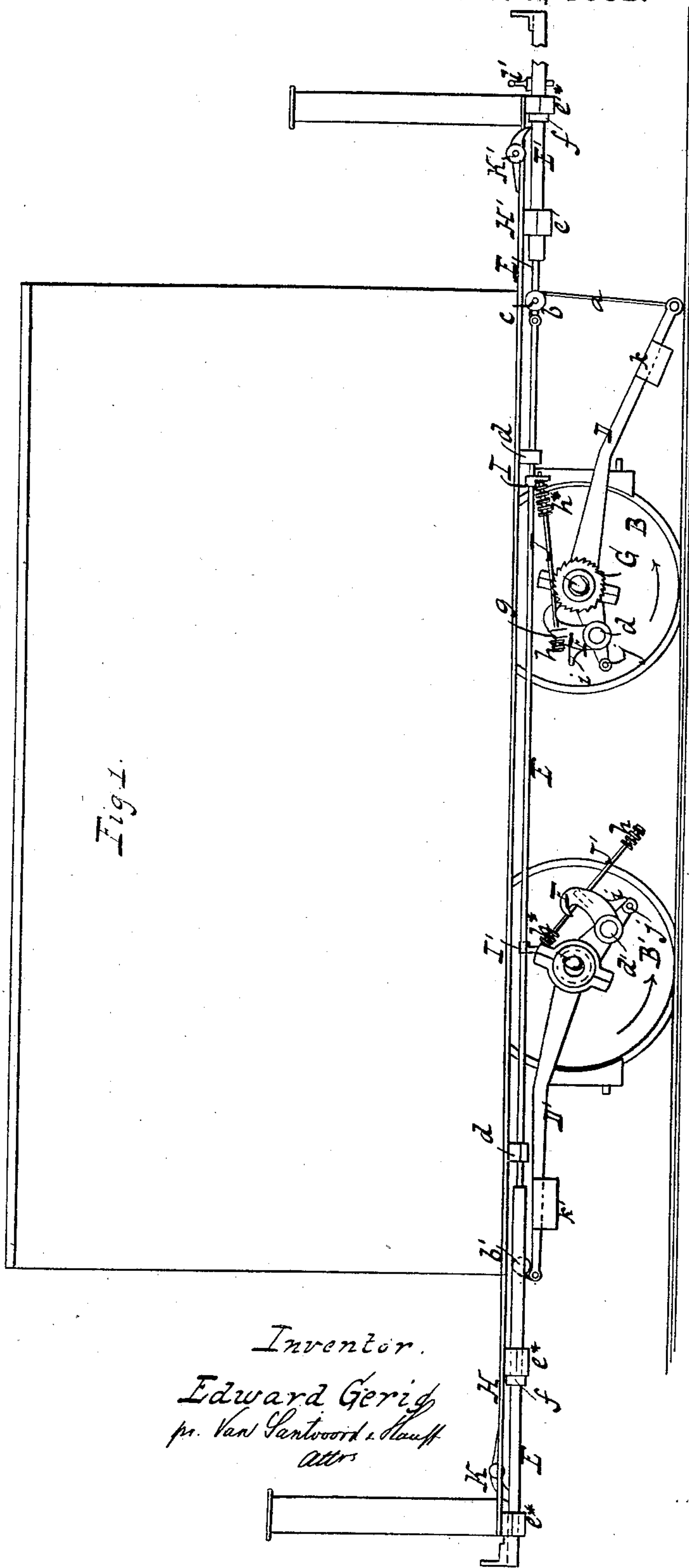
E. GERIG.
CAR STARTER.

No. 267,185.

Patented Nov. 7, 1882.



Witnesses
William Miller
Otto Hofeland



Inventor.
Edward Gerig
per Van Santvoord & Stauff
attys

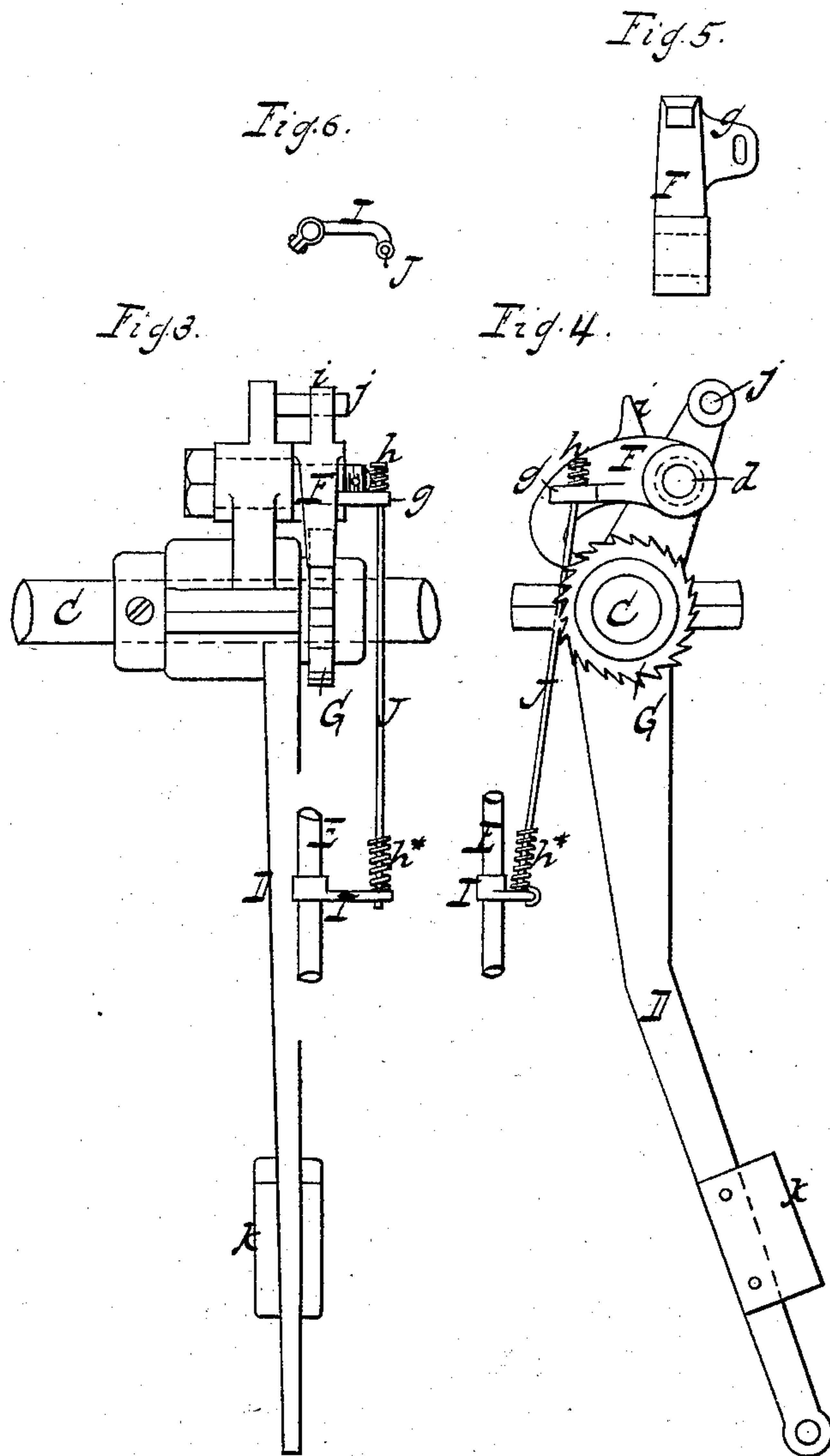
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2 Sheets—Sheet 2.

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WITNESSES:

William Miller
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INVENTOR

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UNITED STATES PATENT OFFICE.

EDUARD GERIG, OF BERLIN, GERMANY.

CAR-STARTER.

SPECIFICATION forming part of Letters Patent No. 267,185, dated November 7, 1882.

Application filed September 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDUARD GERIG, a citizen of the Kingdom of Prussia, in the Empire of Germany, residing at Berlin, in the Kingdom of Prussia, in the Empire of Germany, have invented a new and useful Improvement in Car-Starters, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to a car-starter, the action of which depends upon a lever-pawl which is actuated by the draft-bar, and which acts upon a ratchet-wheel mounted on the car-axle. The peculiar construction of my apparatus, which forms the subject-matter of this present invention, is pointed out in the following specification.

20 This invention is illustrated in the accompanying drawings, in which Figure 1 represents a side elevation of my car-starting mechanism. Fig. 2 is an inverted plan of the same. Fig. 3 is a front view of one of the lever-pawls and the ratchet-wheel on which said lever-pawl acts, on a larger scale than the previous figures. 25 Fig. 4 is a side elevation of the same. Figs. 5 and 6 are details, which will be referred to as the description progresses.

Similar letters indicate corresponding parts.

30 In the drawings, the letter A designates a horse-car of any well-known construction. It is supported by two pairs of wheels, B B', which are mounted on axles C C', respectively. On the axle C is loosely mounted a double-armed lever, D, the long arm of which connects by a rope or chain, a, with the draft-bar E, while the short arm of said lever carries a pawl, F. The rope or chain a passes over a pulley, b, which turns loosely on a stud, c, projecting from a bracket that is firmly secured 40 to the bottom of the car, Fig. 2. The pawl F swings on a pin, d, secured in or projecting from the short arm of the lever D, and it (the pawl) can be thrown in gear with a ratchet-wheel, G, which is firmly mounted on the car-axle C. The draft-bar E slides in brackets d d, 45 secured to the bottom of the car, and in brackets e e*, secured to the under surface of the platform H, and between the last-named brackets is a collar, f, firmly secured to the draft-bar, so that by said collar the motion of 50 the draft-bar is confined within certain limits.

On the draft-bar is firmly secured an arm, I, a detached view of which is shown in Fig. 5. In this arm is firmly secured a rod, J, Figs. 3 and 4, which extends loosely through a lug, g, 55 projecting from the pawl F. On this rod are secured two springs or tappets, h h*, one close to the arm I and the other near its outer end. From the back of the pawl F extends a nose, i, and from the short arm of the lever D projects a pin, j. On the long arm of said lever is secured a weight, k. When the lever is permitted to follow the action of the weight k the draft-bar is drawn in until the collar f strikes the bracket e, and if the team is hitched to the 65 draft-bar and driven forward the draft-bar moves out, the lever D is raised, and the wheels B are turned in the direction of the arrow (marked thereon in Fig. 1) before the collar f on the draft-bar strikes the bracket e*, and consequently the car is started from its state of rest by the action of the lever-pawl, and with comparatively little exertion on the part of the team. As the draft-bar is being drawn out the rod J slides through the lug g of the pawl F, 75 and finally the spring h* strikes said lug, and the pawl F is thrown back out of gear with the ratchet-wheel G just before the collar f strikes the bracket e*. When the pawl is thrown back its nose i strikes the pin j, and 80 the pawl is retained in the proper position to be thrown in gear whenever the lever D is permitted to follow the action of its weight k. At the moment the collar f strikes the bracket e* it is caught by the pawl K, as shown in the 85 right-hand end of Fig. 1, and in order to allow the lever D to follow the action of its weight the tail of the pawl K has to be depressed so that its point releases the collar f.

On horse-cars where the team is to be 90 changed from one end to the other the mechanism hereinbefore described is duplicated, as shown in Fig. 1, so that by the draft-bar E and lever-pawl D the car can be started in one and by the draft-bar E' and lever-pawl D' it 95 can be started in the opposite direction. The pawls K K' may be so arranged that they engage laterally with the collars, and they may be connected to the brake-spindle on either end of the car, so that whenever the 100 driver brakes up the corresponding pawl K or K' is released, and the corresponding lever-

pawl D or D' is permitted to drop and to assume its working position.

5 In order to prevent the draft-bar at one end of the car from sliding back accidentally while the team is hitched to the draft-bar at the opposite end, said draft-bar may be locked by a pin, *l'*, Fig. 1, which is used in addition to the pawl K'.

10 What I claim as new, and desire to secure by Letters Patent, is—

15 1. The combination, substantially as hereinafore described, of the sliding draft-bar, the double-armed lever hung on the axle which carries a ratchet-wheel, said lever having a short arm in rear and a long arm in front of the axle, a pawl pivoted to the rear arm of said lever, the horizontal rod connected with the draft-bar, and means connecting the pawl with the said rod for throwing the pawl into
20 and out of gear with the ratchet-wheel on the axle, as set forth.

2. The combination, substantially as hereinafore described, of the draft-bar E, sliding

in brackets *e e**, the lever-pawl D, having its long arm connected to the draft-bar, and carrying on its short arm the pawl F, the ratchet-wheel G, mounted on the car-axle, the rod J, secured in an arm, I, fastened to the draft-bar, and passing through a lug, *g*, projecting from the pawl, and the tappets *h h** on said rod J. 25 30

3. The combination, substantially as hereinafore described, of the draft-bar E, sliding in brackets *e e**, the collar *f* on said draft-bar, the weighted lever-pawl D, having its long arm connected to the draft-bar, and carrying on its short arm the pawl F, the ratchet-wheel G, mounted on the car-axle, and the pawl K. 35

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses. 40

EDUARD GERIG.

Witnesses:

E. SCHULTZ,

B. ROI.