

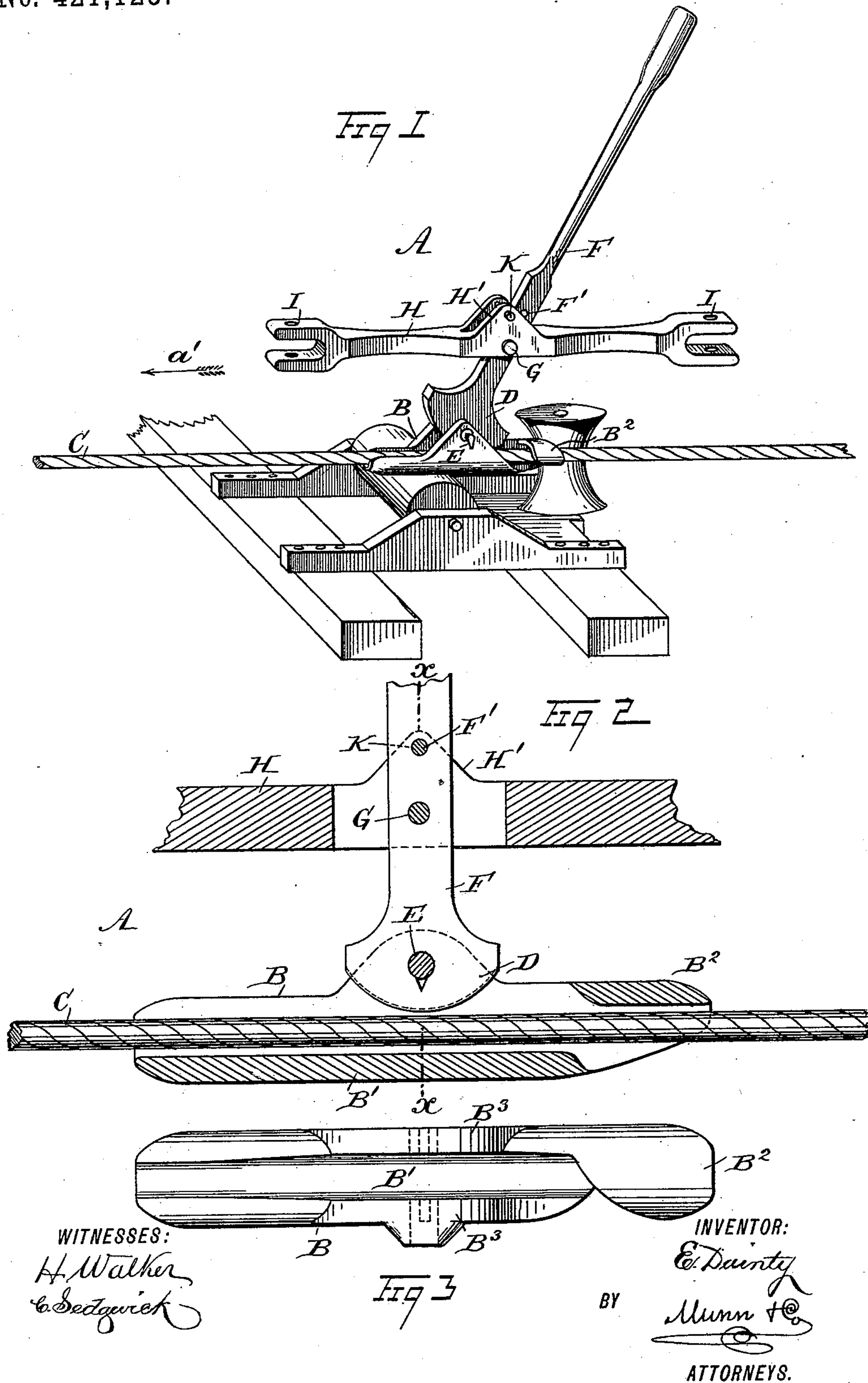
(No Model.)

2 Sheets—Sheet 1.

E. DAINTY.
CABLE GRIP.

No. 421,125.

Patented Feb. 11, 1890.



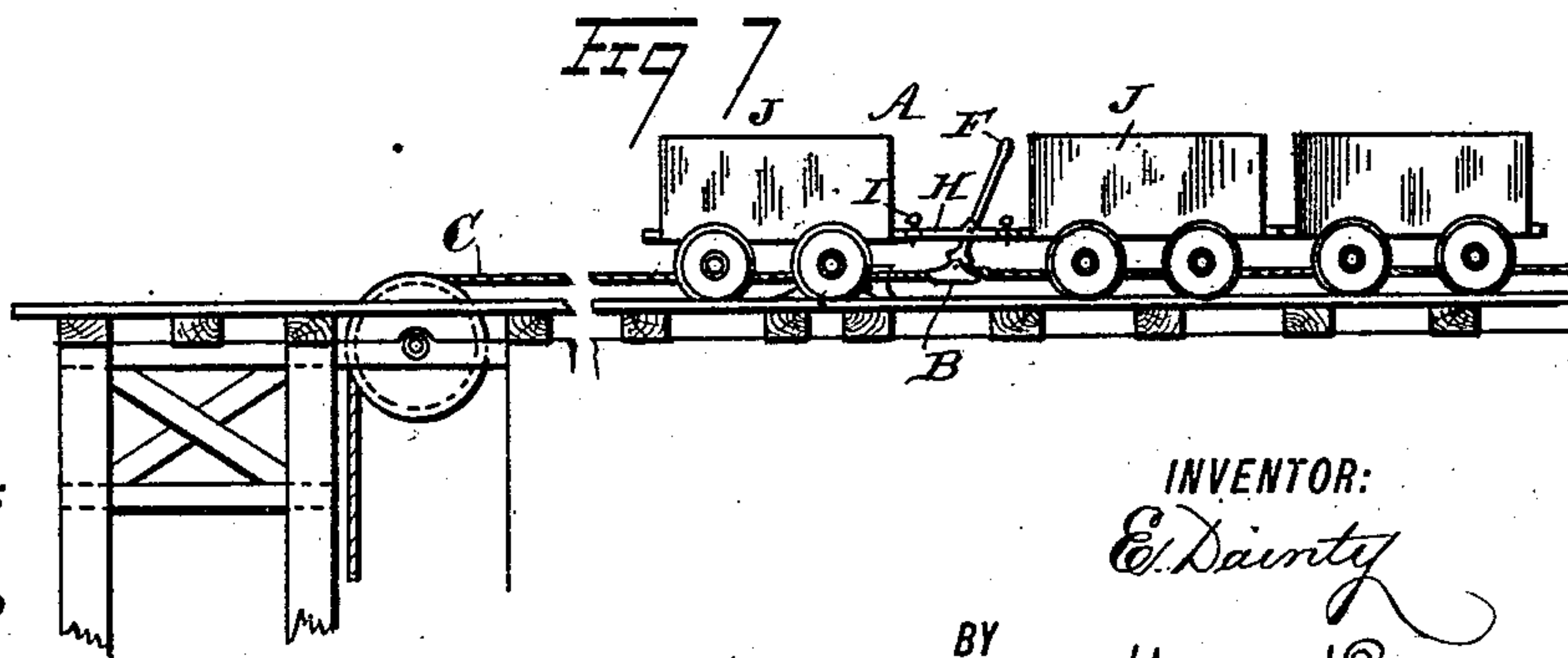
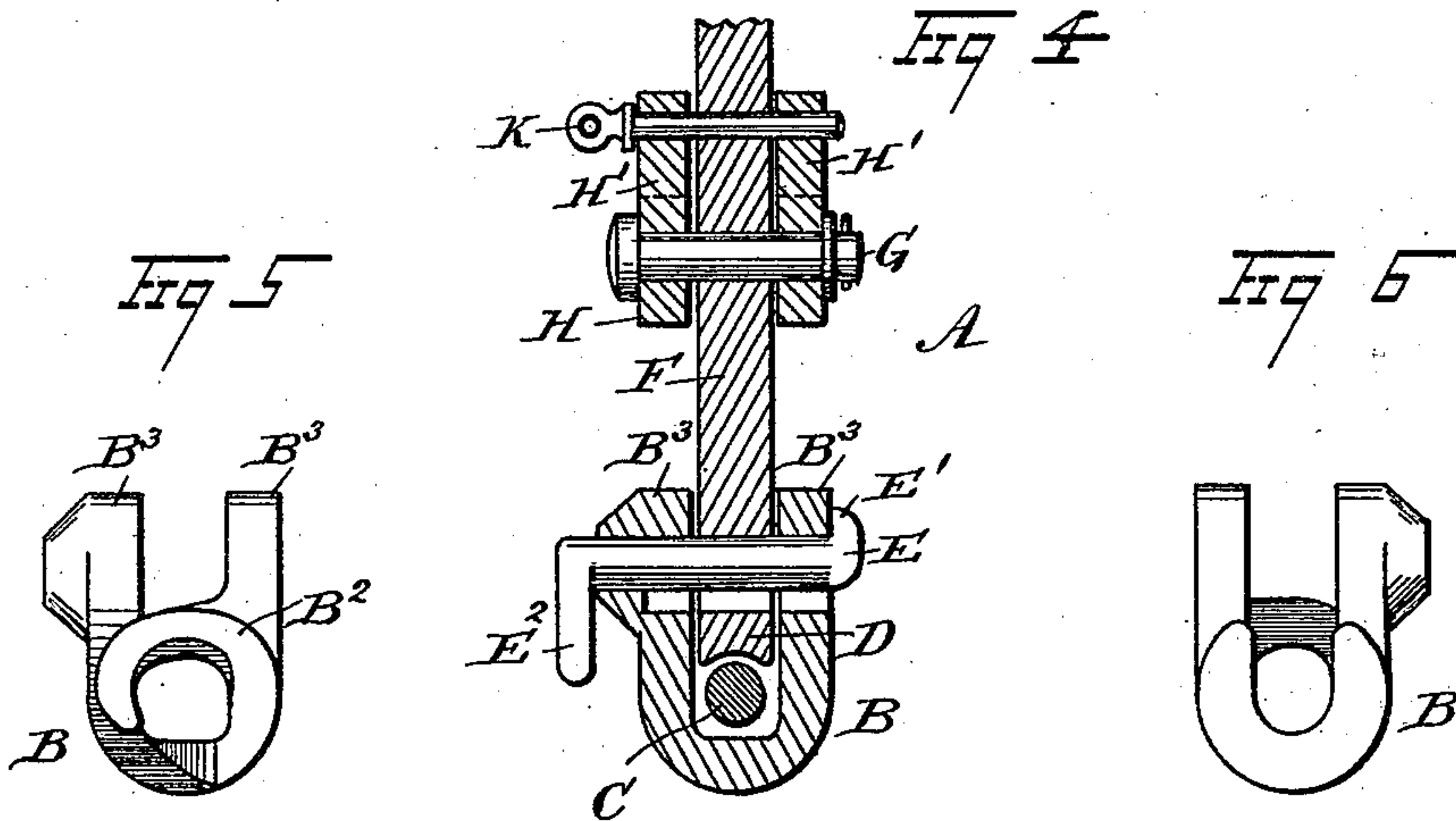
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UNITED STATES PATENT OFFICE.

ELIJAH DAINTY, OF COAL BLUFF, PENNSYLVANIA.

CABLE-GRIP.

SPECIFICATION forming part of Letters Patent No. 421,125, dated February 11, 1890.

Application filed September 26, 1889. Serial No. 325,145. (No model.)

To all whom it may concern:

Be it known that I, ELIJAH DAINTY, of Coal Bluff, in the county of Washington and State of Pennsylvania have invented a new and Improved Cable-Grip, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved cable-grip, which is simple and durable in construction, very effective in operation, permitting of readily connecting the car with the running-cable or disconnecting it from the same, and allowing the cable to remain on the sheaves even on the sharpest curves. To this end my invention consists of the peculiar construction and arrangement of parts, as will be hereinafter fully described, and 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 all the figures.

Figure 1 is a perspective view of the improvement as applied. Fig. 2 is an enlarged sectional side elevation of the improvement. Fig. 3 is a plan view of a shoe. Fig. 4 is a transverse section of the improvement on the line $x x$ of Fig. 2. Fig. 5 is an end elevation of the shoe. Fig. 6 is a like view of the same from the other end. Fig. 7 is a reduced side elevation of the improvement as applied to a train of cars.

The improved cable-grip A is provided with a shoe B, adapted to receive the cable C, clamped in place in the said shoe B by a cam D, pivotally connected in its middle by a pin E with the said shoe B. The cam D is formed on the lower end of a lever F, fulcrumed on a pin G, held in a coupling-link or bracket H, provided at each end with forks I to secure the coupling-link or bracket H between the adjoining ends of two cars J to be moved by the cable C.

The lever F is locked in place, either in a vertical position or in inclined positions, by means of a pin K, adapted to pass through flanges H', formed on the link H, and through an aperture F' in the lever F, or at the sides of the same, as shown in Fig. 1. When the lever F is in a vertical position; the pin K passes through the flanges H' and through the aperture F', and then the cam D is disconnected from the cable C.

When the pin K is removed and the lever F is thrown toward the car, then the cam D directly engages the cable C and clamps the latter in the shoe B. When the lever is in this position, the pin K is inserted in the flanges H', so as to engage one edge of the lever F, as shown in Fig. 1.

The shoe B is provided with a semicircular part B', through the top of which passes the cable C, the under side of the part B' at its ends being rounded off, so as to easily pass over the sheaves supporting the cable. One end of the part B' is open, while the other end is provided with an overhanging curved flange B², which prevents the cable from jumping out of the shoe B. The pin E, connecting the shoe with the cam D, passes through flanges B³, extending upward in the middle of the shoe B, said pin E being provided at one end with an angular offset E', adapted to pass through correspondingly-shaped recesses formed in the openings in the flanges B³ and the cam D. On the other end of the pin E is an arm E², extending in an opposite direction from the offset E', so that when the pin E is in place the arm E² is moved downward, so as to turn the pin E until the offset E' stands in an opposite direction to the recesses, whereby the pin is prevented from falling out of the flanges B³ and the cam D. Other suitable means may be employed to lock the pin E in place.

The operation is as follows: When the link H is secured to two cars J, as shown in Fig. 7, and the cable C passed through the shoe B, if the operator desires to grip the cable he removes the pin K and then moves the lever F toward the car, so that one end of the cam D directly clamps the cable C to the shoe B. The cable, moving in the direction of the arrow a' , carries the shoe and its connections along, thus propelling the cars. When the lever F is in the inclined position, the pin K is inserted in the flanges H', as shown in Fig. 1.

It will be seen that the forward movement of the cable C in dragging the load in the cars J exerts a pressure directly against the cam D, so as to draw the latter into contact with the cable C with more force, thus preventing any disengagement of the cam D from the cable C. It will further be seen that as the shoe B is rounded off at its ends

it easily passes over the sheaves supporting the cable, so that the latter is hardly raised over the sheaves.

When the operator desires to disconnect the cars from the cable C, he removes the pin K and moves the lever F into a vertical position, so that the central part of the cam B is above the cable C, and the latter freely passes through the shoe B. The cam, as well as the link H, is made double, so as to permit of attaching the cable-grip to either end of the car.

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

1. In a cable-grip, the combination, with a shoe provided with a semicircular part adapted to receive the cable, of a cam pivotally connected with the said shoe and adapted to directly grip the cable to the said shoe, and a lever fulcrumed on the car and carrying the said cam, substantially as shown and described.

2. In a cable-grip, the combination, with a shoe adapted to receive the cable, of a cam supporting said shoe and adapted to directly clamp said cable in the said shoe, and a lever carrying the said cam fulcrumed on the car to be propelled and adapted to be thrown in such positions as to move the said cam in

and out of contact with the cable, substantially as shown and described.

3. In a cable-grip, the combination, with a link or bracket supported at each extremity on the end of a car, of a lever fulcrumed on the said link between its ends and provided at one end with a cam, and a shoe pivoted on the said cam and adapted to receive the cable directly between it and the said cam, substantially as shown and described.

4. In a cable-grip, a shoe provided with a semicircular part and an overhanging flange formed on one end, substantially as shown and described.

5. In a cable-grip, the combination, with a shoe provided with a semicircular part and an overhanging flange formed on one end of the said part, of a pin supported on flanges in the middle of the said semicircular part, a cam pivoted on the said pin and adapted to engage the said cable to clamp the latter on the said shoe, a lever carrying the said cam, a link on which said lever is fulcrumed, and a pin for locking said lever in place, substantially as shown and described.

ELIJAH DAINTY.

Witnesses:

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