

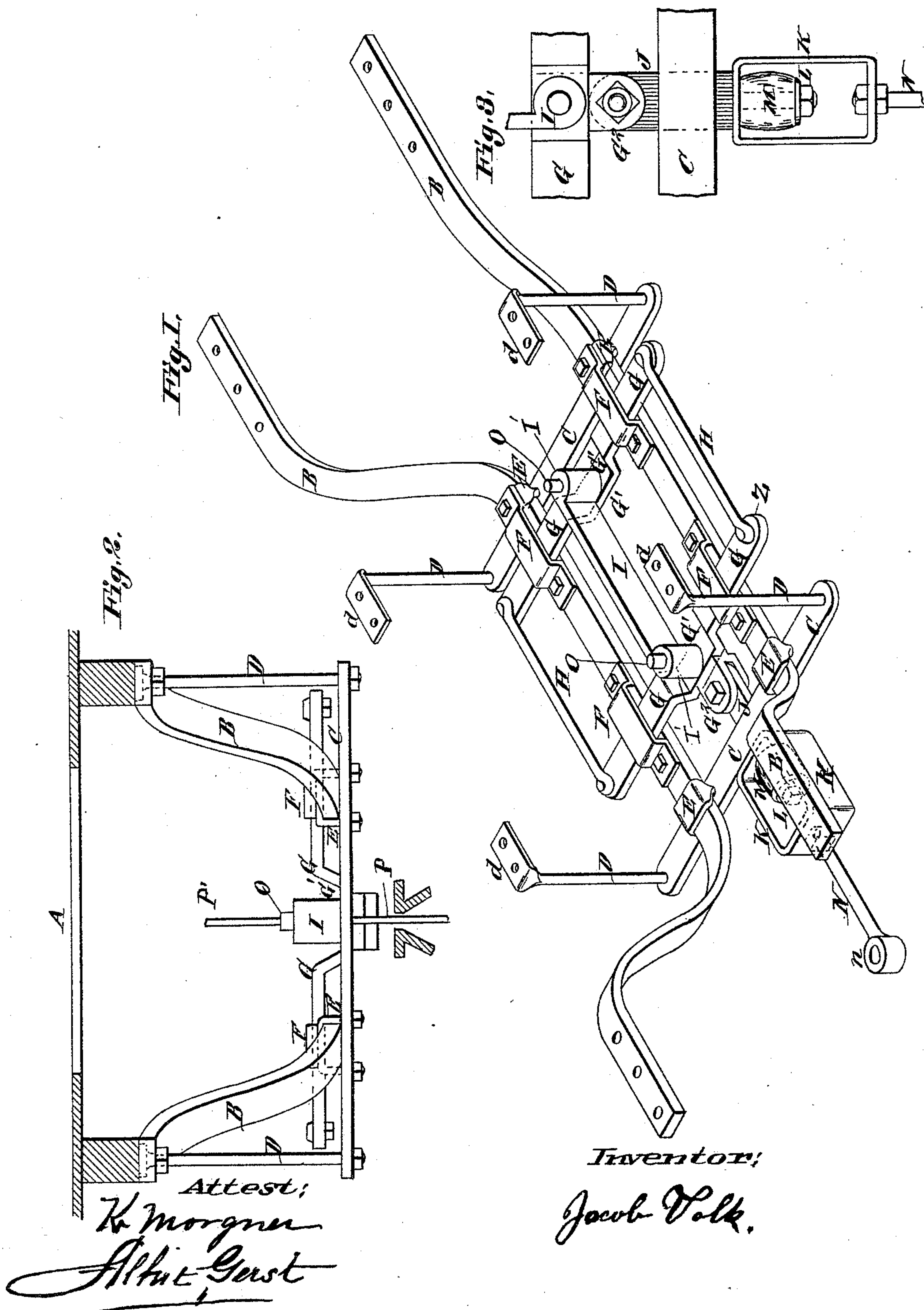
(No Model.)

2 Sheets—Sheet 1.

J. VOLK.  
GRIP CARRIER OR HANGER.

No. 424,521.

Patented Apr. 1, 1890.



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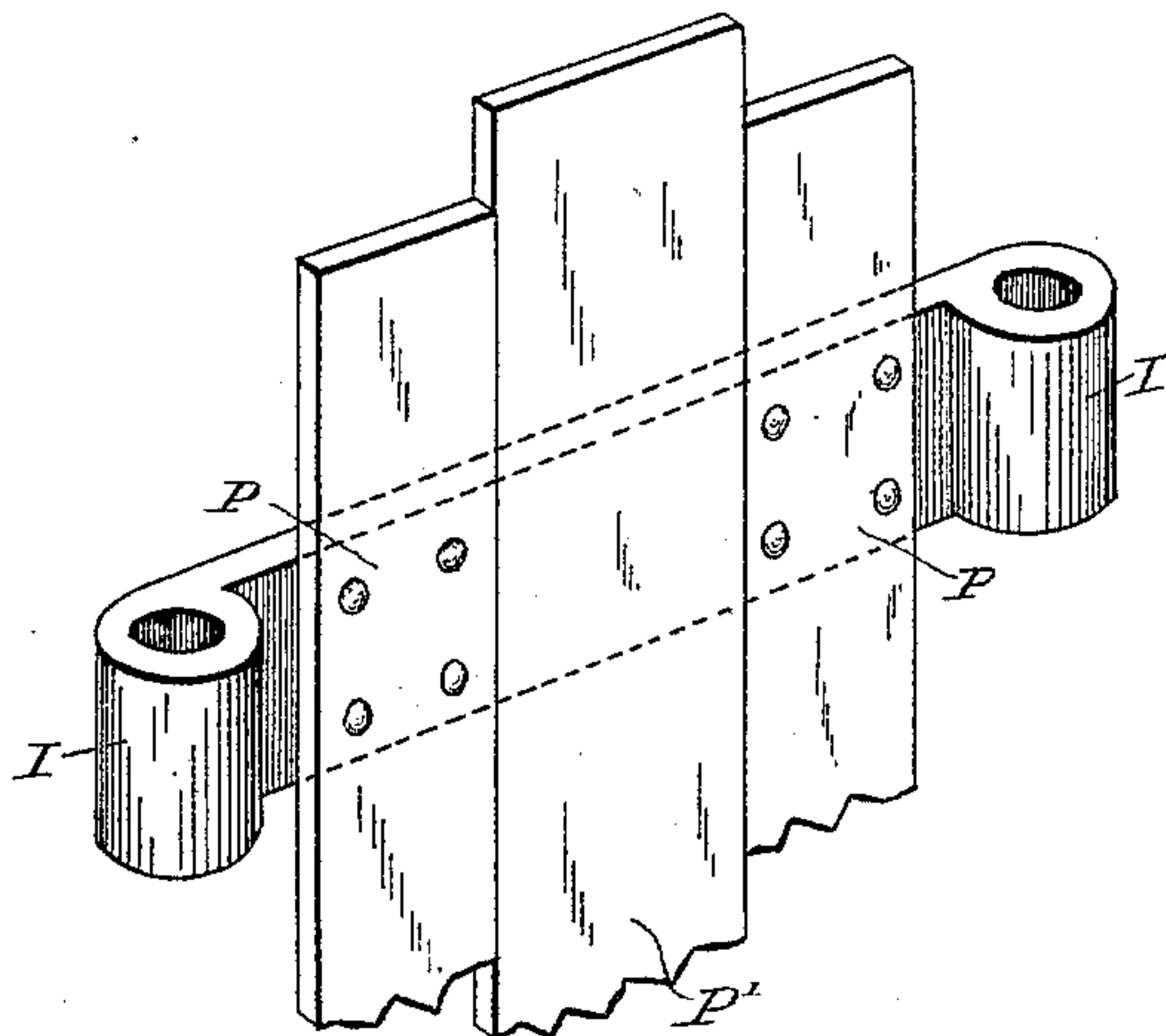
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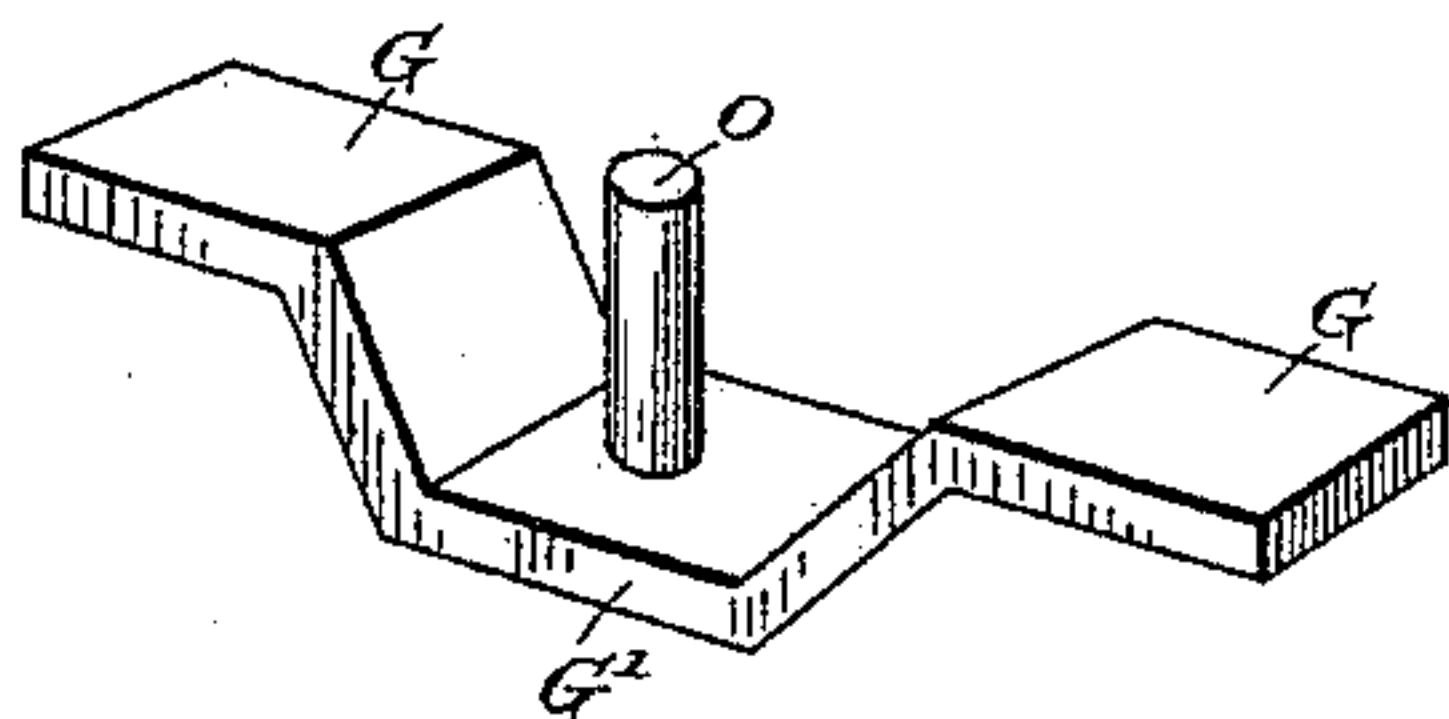
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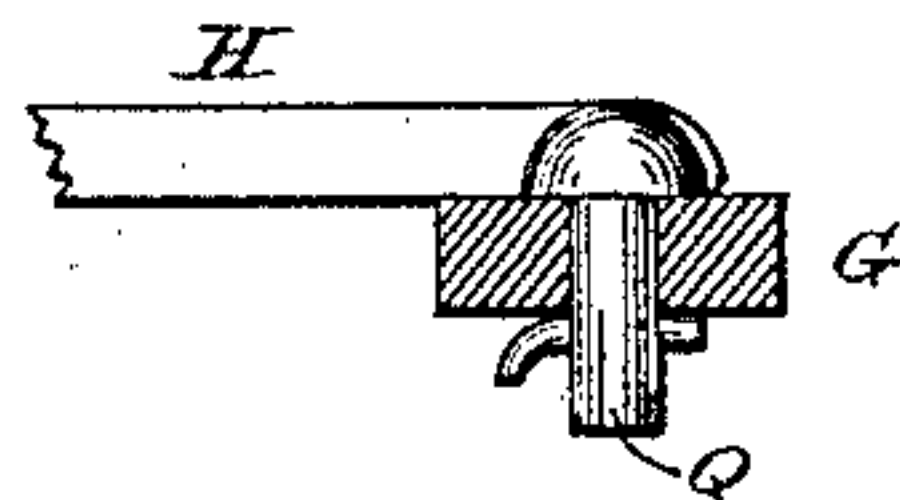
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



WITNESSES

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# UNITED STATES PATENT OFFICE.

JACOB VOLK, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE VOLK CABLE CROSSING, GRIP AND CAR BRAKE COMPANY, OF CHICAGO, ILLINOIS.

## GRIP CARRIER OR HANGER.

SPECIFICATION forming part of Letters Patent No. 424,521, dated April 1, 1890.

Application filed July 27, 1889. Serial No. 318,882. (No model.)

*To all whom it may concern:*

Be it known that I, JACOB VOLK, a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented certain new and useful Improvements in Grip Carriages or Hangers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-  
10 pertains to make and use the same.

The object of this invention is to provide an improved grip-carrying attachment for the cars of cable railroads. This object I effect by the construction and combination of  
15 parts constituting my grip-carriage, hereinafter described.

In the accompanying drawings, Figure 1 represents a perspective view of my grip-carriage. Fig. 2 represents a vertical transverse  
20 section through the same, showing also the car-floor. Fig. 3 represents an enlarged plan view, taken from below, of a part of the said frame and the rearwardly-extending draw-bar, which is fastened to the frame of the  
25 car. Fig. 4 represents an enlarged detail perspective view of the gripper-plates and the movable plate attached to the plunger. Fig. 5 represents a detail view of one of the pins on which the ends of the gripper-supporting  
30 bar are sleeved. Fig. 6 represents a detail view, partly in section, of the connection between one end of one of the longitudinal rods H and one of the cross-bars G, the other connections between rods H and bars G being  
35 counterparts thereof.

A designates the floor of a car, and B the side bars of the grip-carriage, which are bent downward in the middle and have their flat horizontal upper ends bolted to the frame of  
40 said floor. Cross-bars C are attached to said side bars by straps E, passing over said cross-bars, and said cross-bars extend laterally beyond the said side bars. Standards D arise from the ends of these cross-bars, and are provided at their tops with flat horizontal plates  
45 d, which are also bolted to said floor-frame. Straps F, similar to straps E, but longer and running longitudinally, arch over the transverse end bars G of a movable frame Z, allowing it backward and forward as well as

sidewise play. Said frame, in addition to these end bars, comprises two strong rods H, connecting the ends of said bars, and a massive grip-hanger bar I, extending from the middle of one bar G to the middle of the other.  
55 These parts H and I have a loose or pivotal attachment at their ends, allowing some freedom of play to every portion of the frame. This is effected by studs or pins Q, which extend downward from said rods H through bars  
60 G. The rear bar G is provided with a clip G<sup>2</sup>, within which is pivoted the rear end of a bar J, the rear end of which extends within a rectangular yoke K, and is provided with a terminal washer or collar L and a spring-cush-  
65 ion M, interposed between said collar and the forward part of said frame K to take up the jar of any sudden pull. From the rear end of said yoke a bar N extends in the same direction, ending in an eye n, through which a  
70 bolt is to be passed, securing it to the frame of the car. The parts J K L M N together constitute a draw-bar, connecting the movable frame Z to the car-frame and acting after the manner of an elastic buffer to take up the  
75 shock of starting or in swinging obliquely forward when the car goes round a curve.

The construction of the frame Z and its loose attachment to the side bars B allow it to yield as the car swings in passing curves, the  
80 grip retaining its proper position without undue strain on it or its connections.

The bar I is provided at its ends with cylindrical eyes or sleeves I', which fit over upright pins O, rigid with depressed central parts G'  
85 of end bars G. Downwardly-extending gripper-plates P are riveted or otherwise fixed to said bar I, and a vertically-reciprocating plunger plate or bar P' operates between them. I have not deemed it necessary to illustrate the  
90 grip and its attachments further than is above indicated, as its construction and operation form no part of this invention.

Having thus described my invention, what I claim as new, and desire to secure by Let-  
95 ters Patent, is—

1. In combination with bent metallic bars B, directly fixed to the body of a car, a grip-carriage supported by said bars and movable thereon horizontally in every direction and a  
100



grip-supporting bar pivoted at each end on the end bars of said carriage, substantially as set forth.

2. In combination with a rectangular metallic frame fixed directly to the body of a car, a grip-carriage consisting of a rectangular jointed frame supported thereon and movable horizontally in every direction and a grip-supporting bar pivoted at its ends on the end bars of said carriage, substantially as set forth.

3. In combination with a bent rectangular metallic frame fixed directly to the body of a car, a grip-carriage supported by said frame and yielding in any horizontal direction and a draw-bar extending horizontally from said grip-carriage in the same horizontal plane therewith and connected at its end to the car, said draw-bar being extensible and contractible in the direction of its length and provided with a spring which resists such extension to prevent shocks and strains, as set forth.

4. In combination with a frame rigidly attached to a car-frame and consisting of side

bars and end bars fastened independently, a yielding frame consisting of transverse end bars, bars running lengthwise with pivotal terminal attachment to said end bars, long straps confining said end bars to the side bars of the rigid frame, but allowing to them forward and backward as well as sidewise motion, and a draw-bar connecting the said yielding frame to the car-frame, substantially as set forth.

5. A yielding grip-carriage consisting of transverse end bars and lengthwise bars having pivotal terminal attachment to said end bars, a rigid frame attached to the body of a car, and straps confining the grip-carriage to the frame, but allowing it backward and forward as well as sidewise motion, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JACOB VOLK.

Witnesses:

ALBERT GERST,  
K. MORGNER.