

No. 754,688.

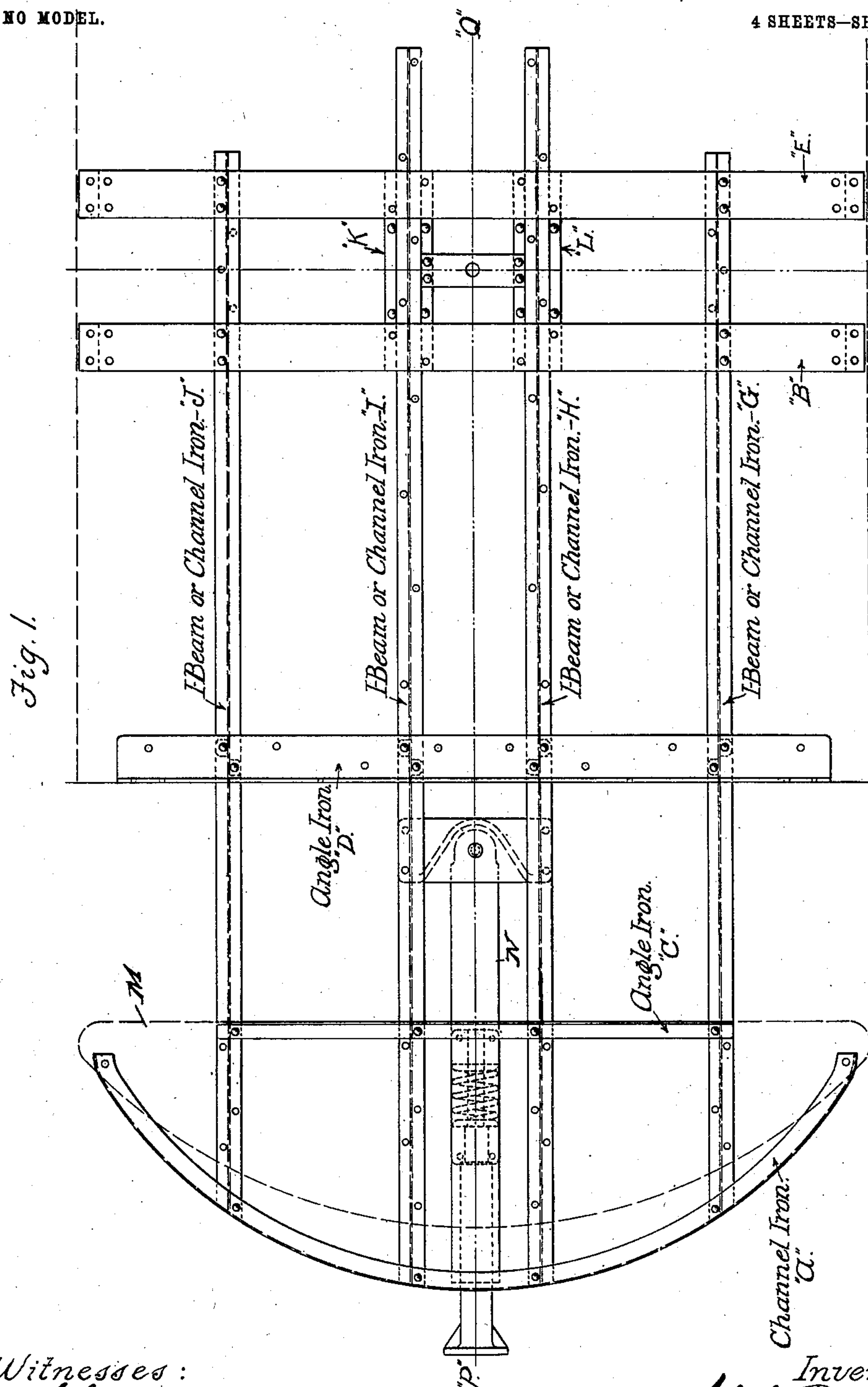
PATENTED MAR. 15, 1904.

N. PAULSON.
CAR PLATFORM.

APPLICATION FILED OCT. 30, 1902. RENEWED OCT. 26, 1903.

NO MODEL.

4 SHEETS—SHEET 1.



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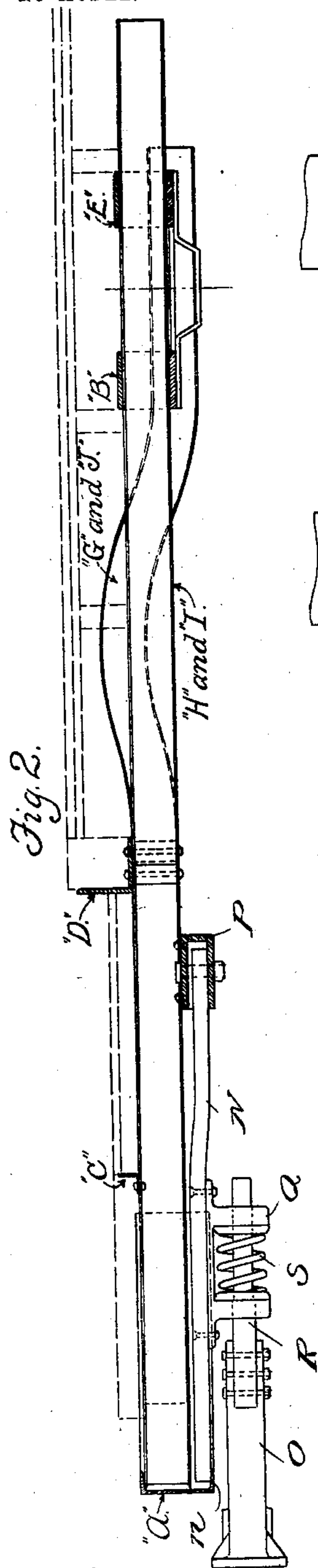


Fig. 2.

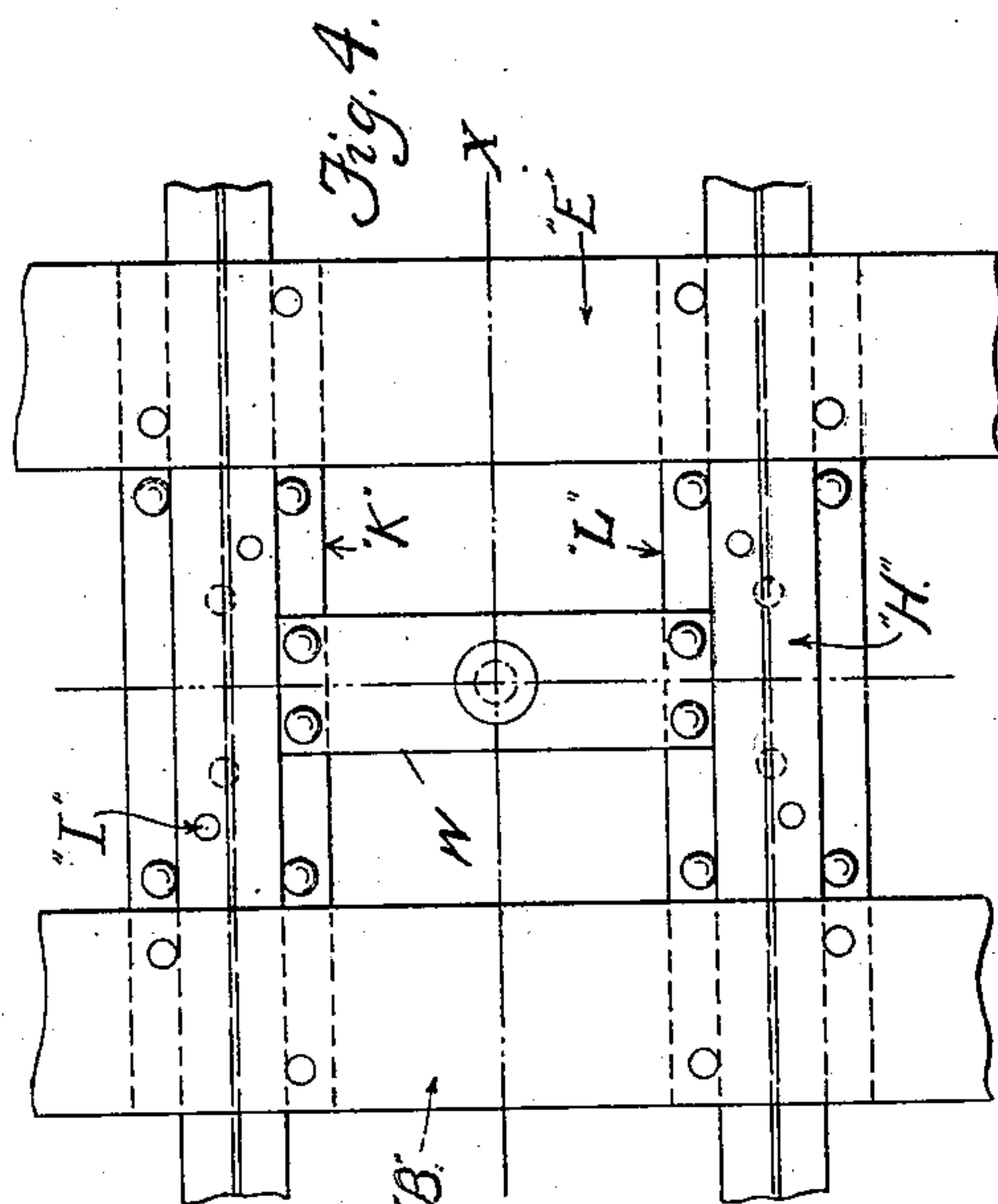


Fig. 4.

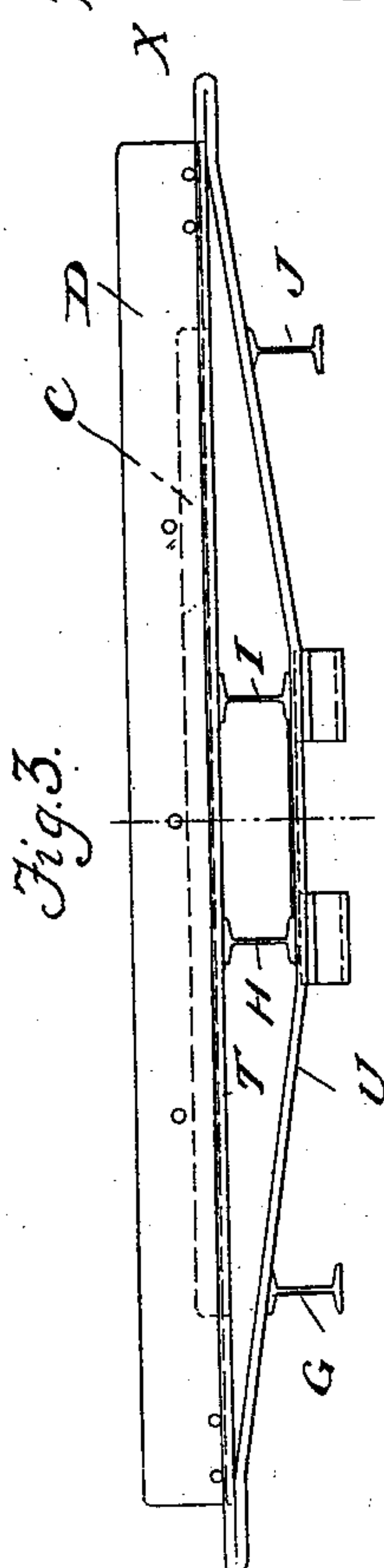


Fig. 3.

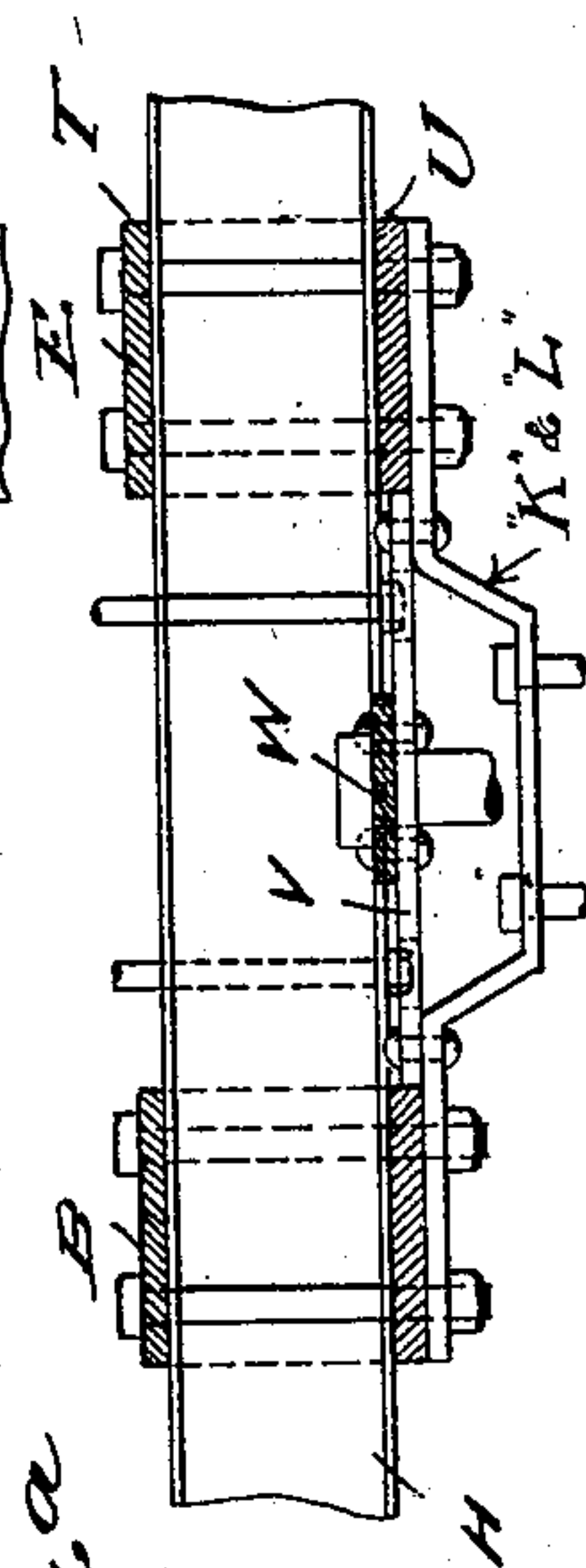


Fig. 4a.

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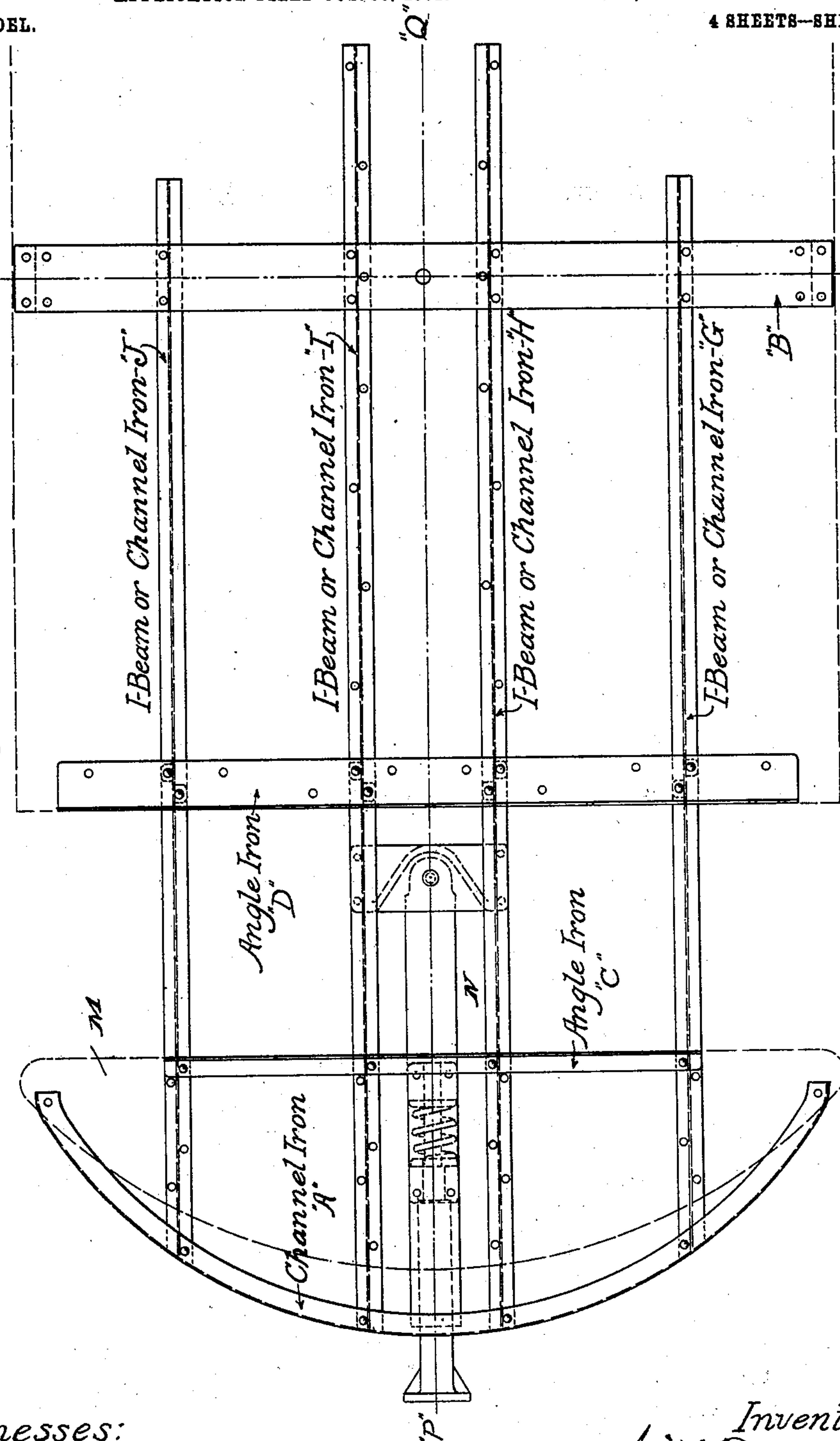
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4 SHEETS—SHEET 3.

Fig. 5



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4 SHEETS—SHEET 4.

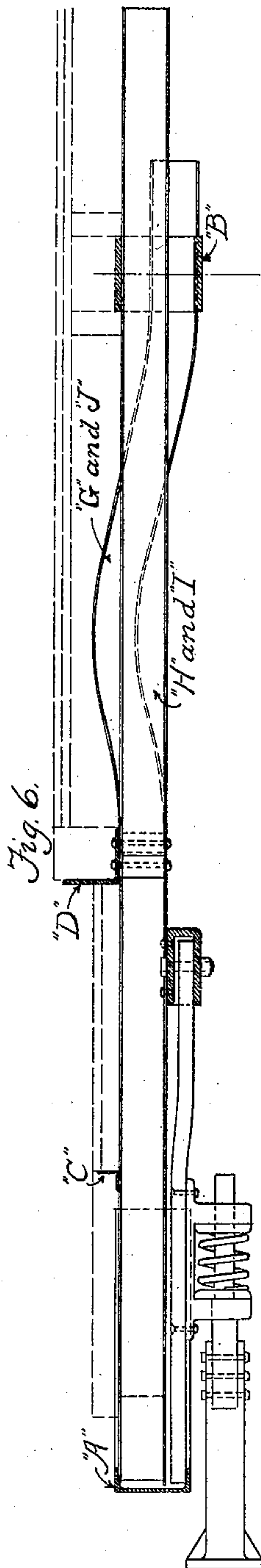


Fig. 6.

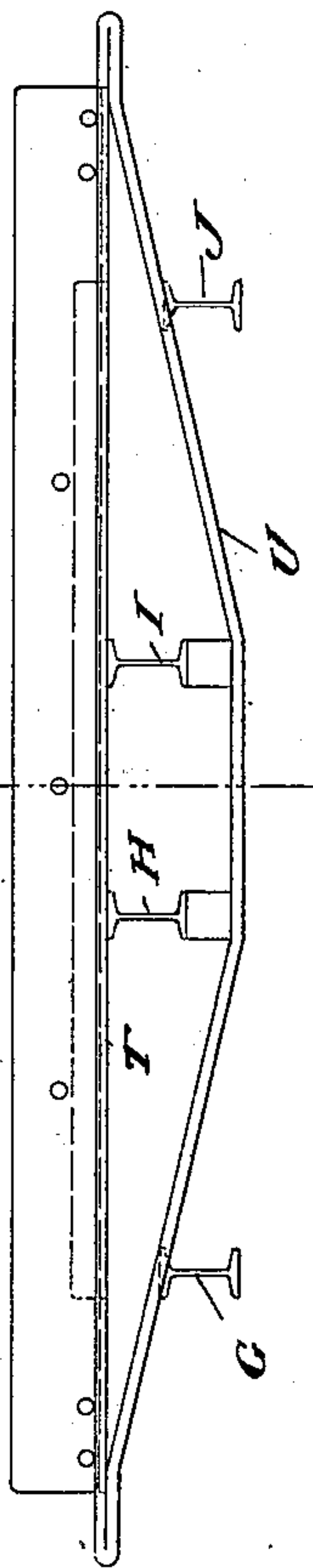


Fig. 7.

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UNITED STATES PATENT OFFICE.

NIEL PAULSON, OF NEWARK, OHIO, ASSIGNOR OF ONE-HALF TO ALBERT H. SISSON, OF NEWARK, OHIO.

CAR-PLATFORM.

SPECIFICATION forming part of Letters Patent No. 754,688, dated March 15, 1904.

Application filed October 30, 1902. Renewed October 26, 1903. Serial No. 178,639. (No model.)

To all whom it may concern:

Be it known that I, NIEL PAULSON, a citizen of the United States, residing at Newark, in the county of Licking and State of Ohio, have
 5 invented certain new and useful Improvements in Car-Platforms, of which the following is a specification.

This invention provides a platform for cars generally, and most especially for the type
 10 having double trucks and designed for inter-urban, elevated, subway and other traffic, the purpose being to have the platform independent of the body framing, to arrange the bumper in line with the platform, to utilize
 15 the bumper as a carrier for the draw-bar, and to devise a novel and substantial framework for the platform and bumper capable of withstanding the strain and shock to which cars are subjected when in use.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings
 25 hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying
 30 drawings, in which—

Figure 1 is a top plan view of the invention, the dotted lines indicating the nose-piece of the platform and the body portion of the car. Fig. 2 is a central longitudinal section on the line P Q of Fig. 1. Fig. 3 is a rear view. Fig. 4 is a detail view of the central part of the bolsters and the intermediate beams crossing said bolsters and attached thereto. Fig. 4^a is a section on the line X X
 40 of Fig. 4. Fig. 5 is a view similar to Fig. 1, showing a single bolster. Fig. 6 is a central longitudinal section on the line P' Q' of Fig. 5. Fig. 7 is a rear view of the construction shown in Fig. 5.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The substructure at each end of the car is
 50 substantially alike. Hence one only is illus-

trated. The several beams comprising the structure are of metal and are riveted, bolted, or otherwise rigidly connected at their points of crossing, so as to form a substantial framework for the parts supported thereby. In
 55 the main the framework is substantially the same for heavy or light cars, the only difference being that in one form two bolsters are employed, as shown in Fig. 1 and the detail views, and in another form a single bolster is
 60 used, as illustrated in Fig. 5 and the detail views thereof.

The framing comprises longitudinal beams G, H, I, and J, arranged in parallel relation and spaced apart the required distance, trans-
 65 verse beams C and D, firmly attached to the longitudinal beams at the points of crossing, a bumper A, outwardly curved between its ends and secured to the longitudinal beams at points between its ends and attached at its
 70 ends to the nose-piece of the platform, as indicated by the dotted lines M of Figs. 1 and 5, and a single or double bolster, the same being secured in any substantial way to the rear portion of the longitudinal beam and adapted
 75 to be connected to the body of the car in any determinate way. The framing is essentially metallic, and the beams comprising the same may be of any cross-sectional outline
 80 such as illustrated. The longitudinal beams may be of I form in cross-section or channeled, and the transverse beams C and D are preferably of angle shape in transverse section, although this is not essential. The beam A,
 85 constituting the bumper, is curved throughout its length from one side of the platform to the other and is of channel form to secure the requisite strength and to provide upper and lower ledges or flanges to overhang the
 90 front ends of the longitudinal beams and to underlap the front end of the swing-beam N, carrying the draw-bar O. The end sill of the car is secured to the transverse beam B, and the cross-sills in the rear thereof are supported by the longitudinal beams, as indicated by the
 95 dotted lines in Figs. 2 and 6. The bumper is in line with the platform. Hence the force of the impact of two cars running together is distributed throughout the framing and is imparted thereto in the plane thereof, and as a
 100

result the shock is neutralized by all the elements and fastenings.

The swing-beam N is pivoted at its rear end to a box or plate P, bolted to the longitudinal beams H and I at a point between the transverse beams C and D, and its front end rests upon the lower flange *n* of the beam A. A bracket Q is pendent from the swing-beam intermediate of its ends and comprises spaced lugs, which are apertured for the reception of the shank R of the draw-bar O, the buffer-spring S being mounted upon the shank R and coming between the lugs of the bracket Q.

The bolster, whether single or double, as indicated in Figs. 5 and 1, is composed of an upper beam T and a truss U, the latter coming beneath the longitudinal beams H and I and over the beams G and J. This arrangement of the several beams increases the rigidity of the framing and provides a well-braced support for the car-body, which is attached either directly to the ends of the bolster or to plates affixed thereto. As shown in Figs. 2 and 6, the side longitudinal beams G and J have their rear end portions in a lower plane than the intermediate beams H and I, and the part between the transverse beam D and bolster is upwardly curved, so as to clear the wheels and allow ample movement for the car-body upon its spring-supports.

In the preferred construction two bolsters are employed and are indicated at B and E, each being of like construction and firmly attached to the several longitudinal beams at their respective points of crossing. Longitudinal bars K and L parallel the beams H and I and are secured at their ends thereto by the same bolts or fastenings employed for attachment of the parts T and U of the bolsters thereto. Plates V are arranged below the part of the beams H and I coming between the bolsters B and E and are secured at their ends to the respective bars K and L and in turn support a transverse body-plate W. The intermediate portion of the bars K and L is depressed, as shown most clearly in Fig. 4^a. Each end of the car will be similarly equipped, and it will be observed that the platform is independent of the body-framing, its nose-piece being secured to the transverse beam C and to the beam A and reinforcing the latter, the parts being combined in such a manner as to equalize and distribute the shock resulting from impact, whereby the life or period of usefulness of rolling-stock is materially prolonged.

Having thus described the invention, what is claimed as new is—

1. In combination, framing for supporting the platform of a car, a bumper applied to said framing, a swing-bar pivotally connected to the framing and slidably supported by the aforesaid bumper, and a draw-bar applied to said swing-bar, substantially as set forth.

2. In combination, framing for supporting

the platform of a car, a bumper applied to said framing and provided with a reinforcing-flange, a swing-bar pivoted at one end to the framing and supported at its other end by the reinforcing-flange of the bumper, and a draw-bar applied to said swing-bar, substantially as specified.

3. In combination, a series of longitudinal beams disposed in parallel relation and spaced apart, a transverse beam firmly attached to each of the longitudinal beams and adapted to have the end sill of a car-body secured thereto, a second transverse beam firmly attached to the several longitudinal beams and having the nose-piece of the platform supported thereby, and a third beam transversely arranged and curved forward between its ends and secured to each of the aforesaid longitudinal beams and having its terminal portions attached to the aforementioned nose-piece, said curved beam constituting a bumper, substantially as set forth.

4. In combination, a series of longitudinal beams disposed in parallel relation and spaced apart, transverse beams firmly attached to the several longitudinal beams, the foremost transverse beam being curved and constituting a bumper, and a bolster comprising upper and lower members connected at their ends and separated intermediate of their ends and receiving the intermediate longitudinal beams in the space and having the lowermost member of the bolster crossing over the side longitudinal beams, the members of the bolster being firmly attached to the longitudinal beams at the point of crossing, substantially as described.

5. In combination, a series of longitudinal beams transversely spaced, the side beams having their rear ends in a lower plane than the intermediate beams and the part near their rear ends upwardly curved to clear the car-wheels, and a bolster comprising upper and lower members connected at their ends and spaced apart intermediate of their ends and resting upon the side longitudinal beams and receiving the intermediate longitudinal beams between the upper and lower members, substantially as set forth.

6. In combination, longitudinal beams, bolsters spaced apart and firmly connected to the longitudinal beams, longitudinal bars located beneath the beams and connected thereto and to the bolsters and having the middle portion depressed, plates located above the depressed parts of said bars and secured thereto and coming between the bolsters, and a body-plate secured to and supported by said plates, substantially as set forth.

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

NIEL PAULSON. [L. s.]

Witnesses:

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