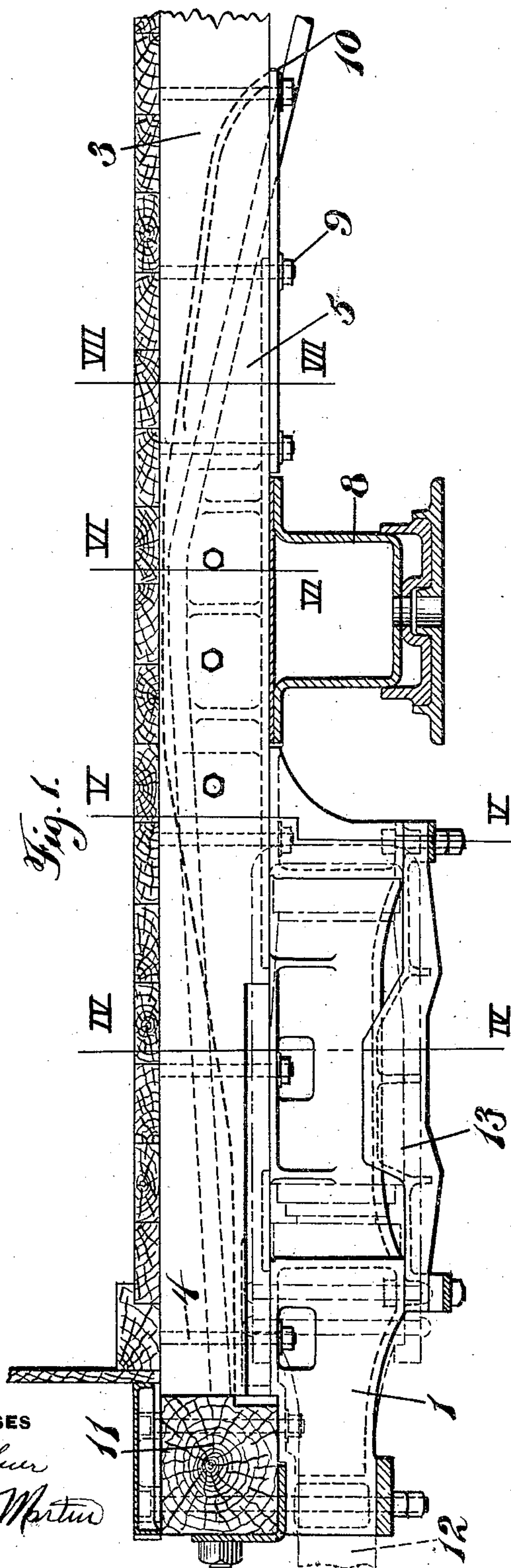


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915,272.

Patented Mar. 16, 1909.
3 SHEETS—SHEET 1.



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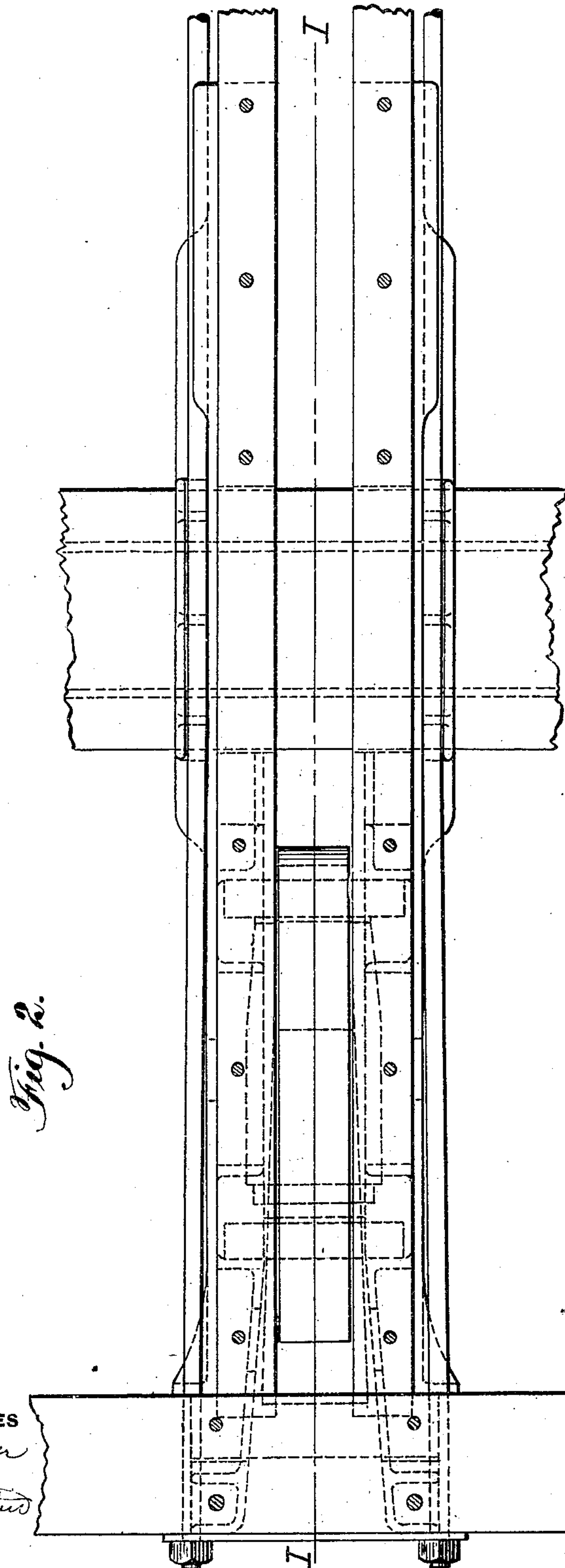


Fig. 2.

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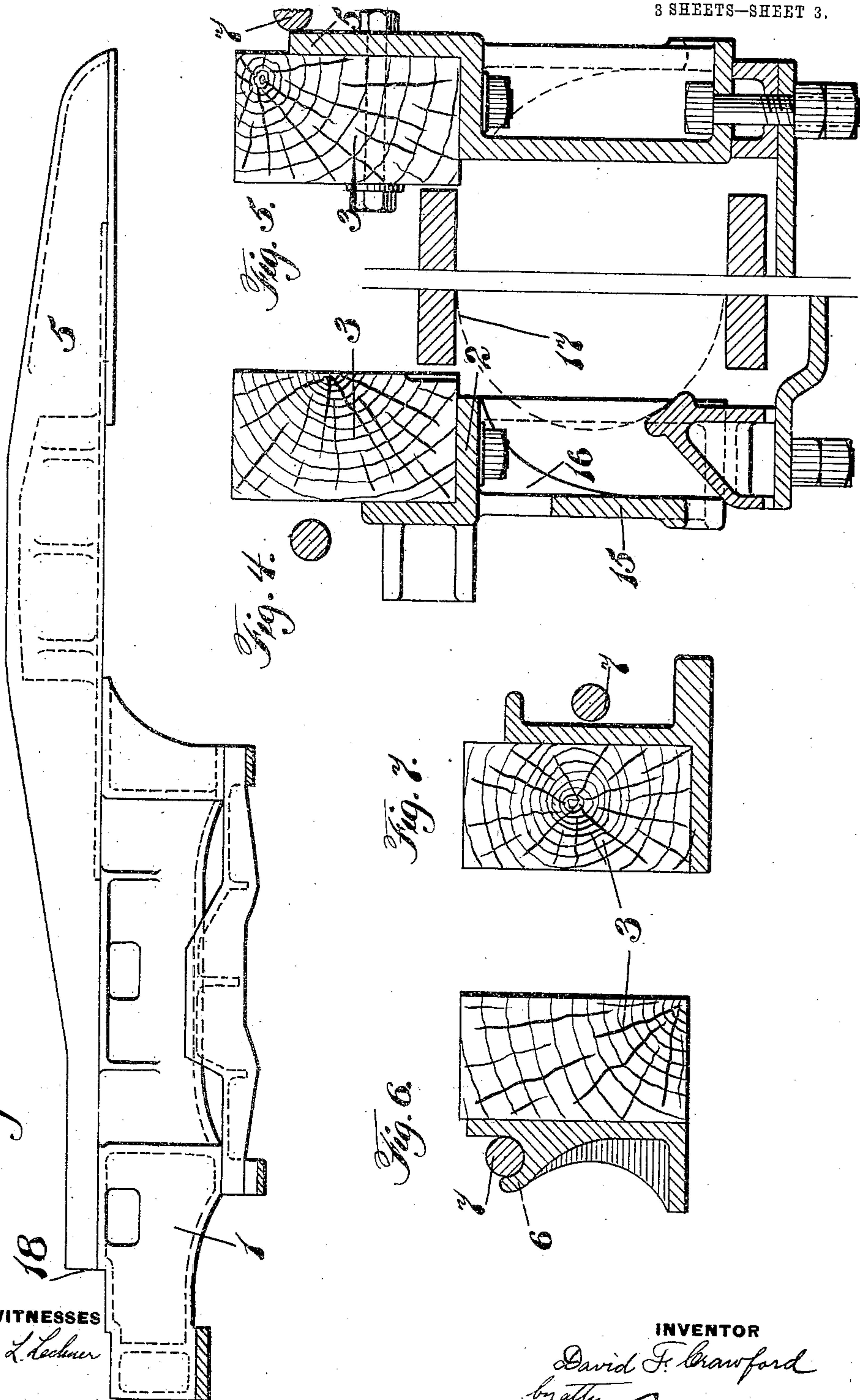


Fig. 3.

Fig. 5.

Fig. 4.

Fig. 7.

Fig. 6.

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UNITED STATES PATENT OFFICE.

DAVID F. CRAWFORD, OF PITTSBURG, PENNSYLVANIA.

DRAFT-GEAR MECHANISM.

No. 915,272.

Specification of Letters Patent.

Patented March 16, 1909.

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REISSUED

To all whom it may concern:

Be it known that I, DAVID F. CRAWFORD, a citizen of the United States, residing at Pittsburg, Pennsylvania, have invented certain new and useful Improvements in Draft-Gear Mechanisms, of which the following is a specification.

This invention has for its objects: the provision of means for supporting the draft gear on a car, said supporting means being so constructed as to extend past the car bolster and at one side thereof, and arranged for attachment to the car's center sill, whereby the buffing and pulling strains of the draft rigging will be transmitted to said center sill at a point beyond the bolster, and eliminate the tendency to breakage encountered in car structures where the draft sills or other draft supporting devices extend back to or are secured to the body bolster of the car.

This improvement is particularly applicable to cars in which the sills, whether made of wood or metal, are continuous and located above the body bolster, the bolster extending transversely underneath the sill and substantially in the plane of the draft rigging.

It is found in connection with car constructions of the character last described, especially where wooden sills are employed, that there is apparently a downward and upward strain induced by the buffing and pulling strain of the draft gear, which has its center of effective resistance upon or about the body bolster, and tends to break or split the sills at or approximately at this place. In connection with car structures of this general character it has been found by experience in practice that the addition of a better form of draft gear is not productive of the desired results in many cases, on account of the tendency of the sill to give way at the point indicated.

A further object of this invention is the provision of means whereby draft gears of larger diameter, as for example the standard Westinghouse friction draft gear and other friction gears can be applied in car constructions built some years before the general use of devices of this character, in which the center sills are built too closely together to permit of ready introduction of the gearing, either between the center sills or between sub sills or draft sills located immediately under the center sills as in the common form of construction.

The above, as well as such other objects

which may hereinafter appear, I attain by means of the construction which I have illustrated in the preferred form in the accompanying drawings wherein—

Figure 1 is a longitudinal sectional view on the line I—I of Fig. 2.

Figure 2 is a plan view of a portion of the car framing, showing two longitudinal center sills with my improved mechanism or draft gear supporting device applied thereto;

Figure 3 is a view in elevation of the body portion or main part of my improved device, and

Figure 4 is a sectional view taken on the line IV—IV of Figure 1;

Figure 5 is a sectional view on the line V—V of Fig. 1.

Figure 6 is another sectional view taken on the line VI—VI of Fig. 1, and

Figure 7 is a sectional view on the line VII—VII of Fig. 1.

Referring now more particularly to Figures 1 and 3, it will be seen that in carrying out my improvement I provide first a main or body portion of the gear supporting device indicated by the reference character 1, said gear supporting device preferably being constructed of cast metal and arranged with a plate 2 (see Figure 4) adapted for attachment on the underside of the center sill 3 by means of bolts 4 or other suitable devices, and extending above said body portion 1 of the gear supporting device I raise a projecting or extending part 5 constructed to run along adjacent to the sill 3 on the outside thereof, as clearly indicated in the sectional views—Figures 5, 6, and 7—and adapted for attachment to said center sill 3 by any suitable means (as for example a plurality of vertical bolts 9), said extended portion 5 also being provided with a seat 6 as indicated in Figure 6, intended for the engagement of a truss rod 7 at a point substantially above the body bolster 8.

By the use of the bolts 9 the gear supporting device is caused to strengthen the sill as by the operation of a stiffening plate, and this at the point most subject to breakage. The projection 5 extends also above the body bolster at the side of the sill as indicated, and is provided with securing bolts 9 at a point beyond the bolster in a direction toward the center of the car, the end of the projection 5 being indicated at 10, and as shown, being preferably some distance within the body bolster.

At the forward end or the outside end of the car the body portion of the gear supporting device indicated at 1 projects below the end sill 11 in position to receive the draft rigging shank 12, and below the gear supporting device or main body casting is a saddle bar 13 secured to the body portion by bolts as indicated, upon which saddle portion 13 the draft rigging is adapted to rest.

Referring to Figure 4 it will be noticed that the gear supporting device at the place where the draft rigging is inserted is arranged with an offset downward projection 15 having brackets 16 for stiffening the same, so as to leave more space for the insertion of a large-sized gear such as the ordinary friction gear commonly employed. Thus it will be seen by examination of Figure 4 that the distance from the center line of the car to the inside face of the sill 3 is considerably less than the clearance space within which the friction gear indicated by the dotted half-circle 17 is located.

In order to provide a means for taking the buffing strain from the end sills direct, the upper portion of the gear supporting device is projected forward to form a shoulder indicated at 18 in Figure 3. The construction shown in Figure 3, as is evident from an examination of the drawings, will therefore transmit strains directly from the end sills and from the friction gear, to a point upon the center sill, beyond or inside of the bolster, and the location of the projecting part 5 at each

side of the center sills and above the bolster makes it easy to replace the supporting device in case of any breakage, without disturbing either the sills of the car or the bolster itself.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent, is the following:

1. In combination in a car having a wooden center sill and a transverse bolster, of a gear supporting device at the front of the bolster provided with a truss portion extending to the rear alongside the sill and rigidly secured to the sill for stiffening it above the bolster.

2. A draft gear supporting device provided with rearwardly extending truss portion and a seat thereon arranged to support a car truss rod, intermediate the ends of said rod.

3. In combination in a car having a wooden center sill and a transverse bolster, of a gear supporting device at the front of the bolster and beneath the center sill provided with a truss portion extending to the rear alongside the sill and rigidly secured to the sill for stiffening it above the bolster.

In testimony whereof I have hereunto signed my name in the presence of the two subscribed witnesses.

DAVID F. CRAWFORD.

Witnesses:

ARCHWORTH MARTIN,
DOERING BELLINGER.