

Dec. 19, 1939.

W. E. KUDRNA

2,183,682

WAGON

Original Filed June 26, 1937

3 Sheets-Sheet 1

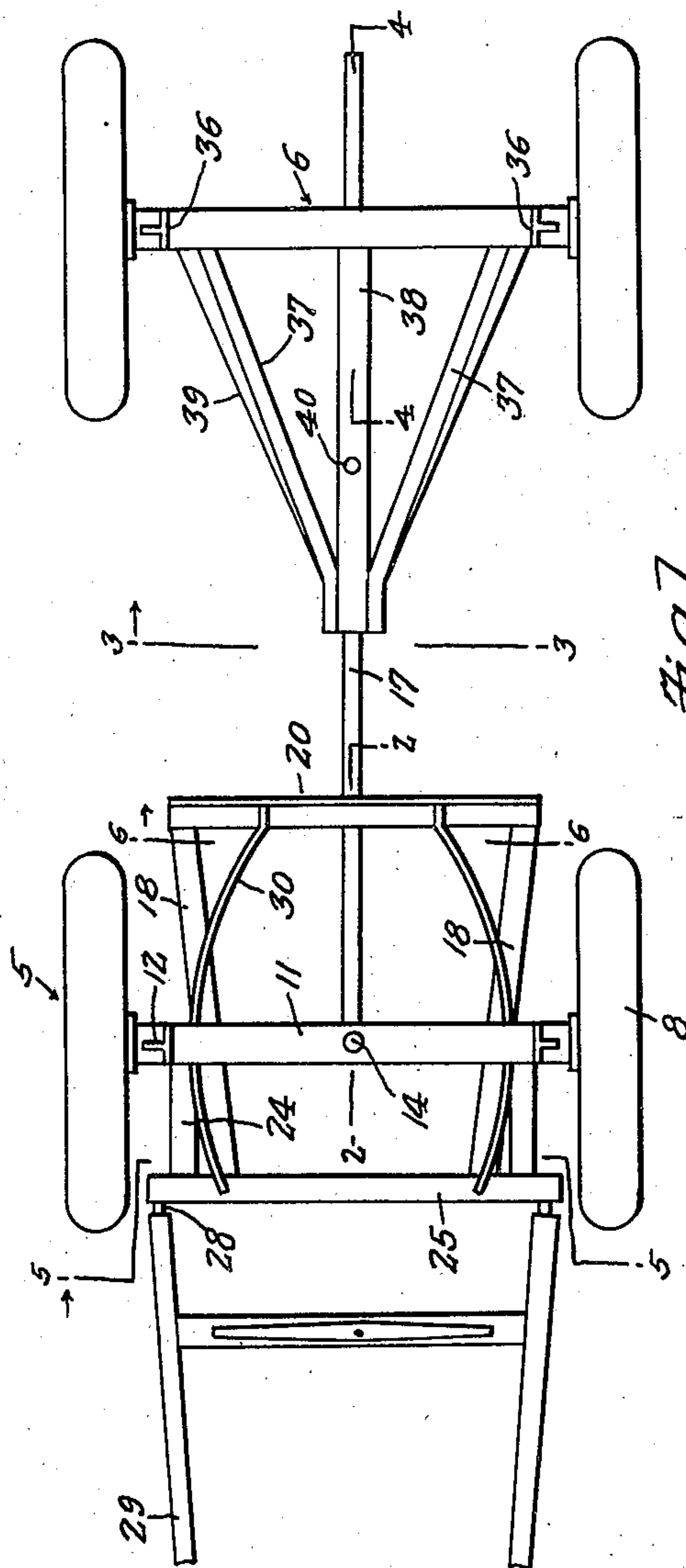


Fig. 1.

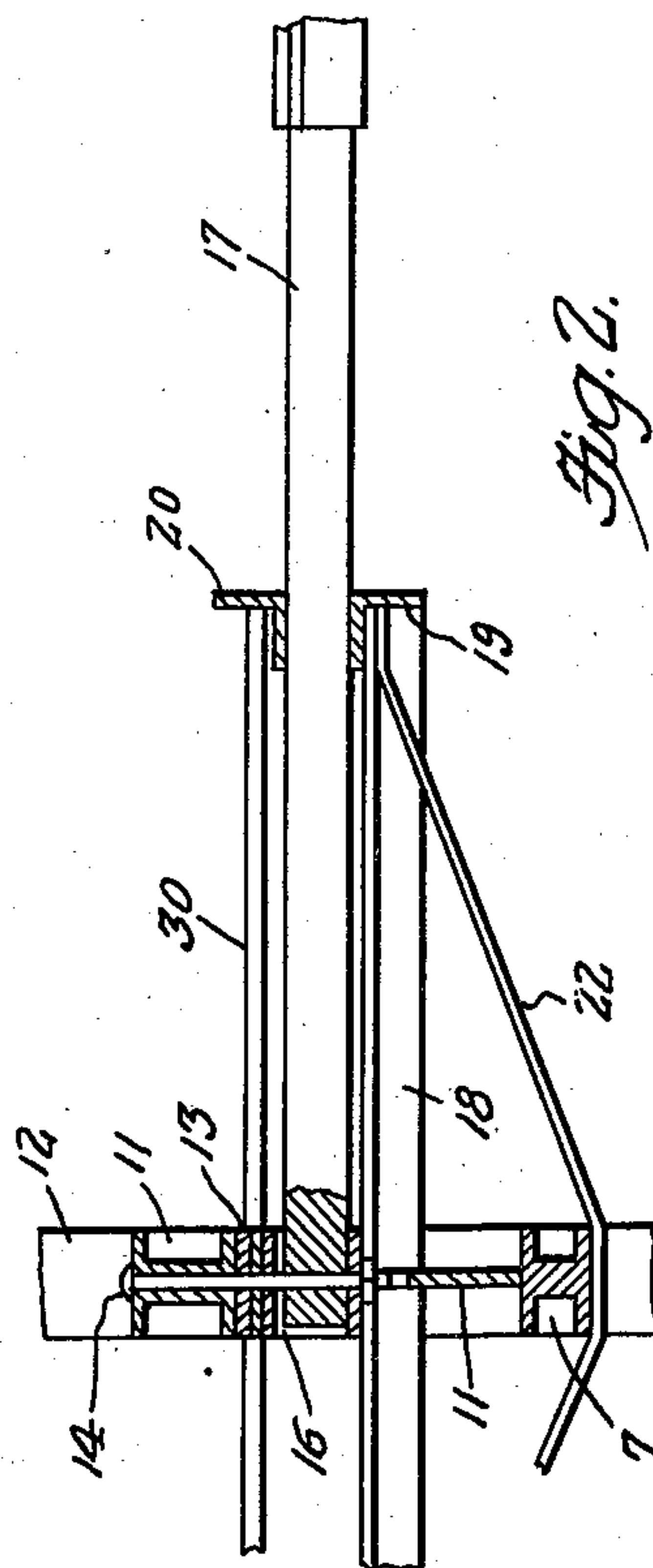


Fig. 2.

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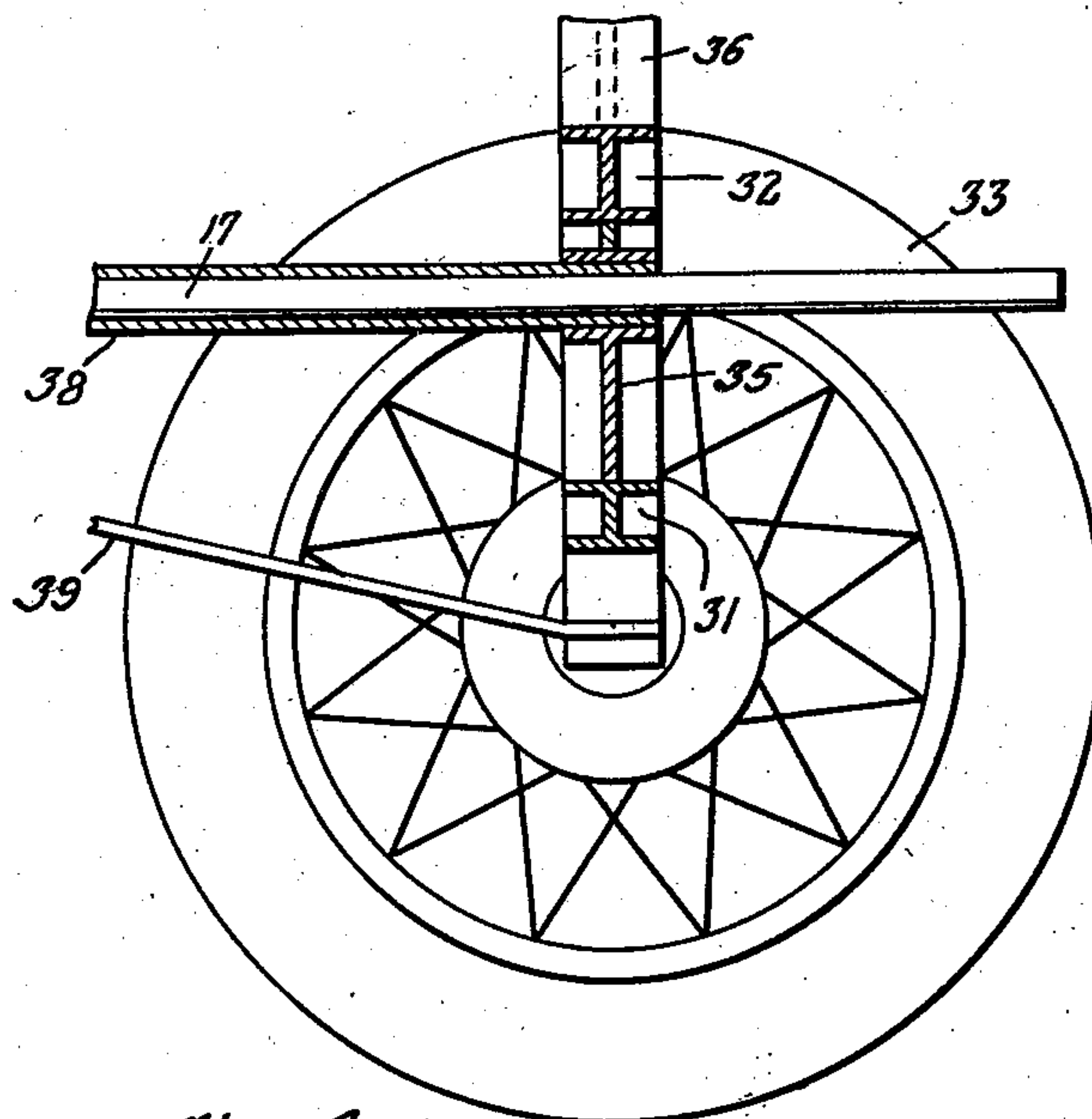
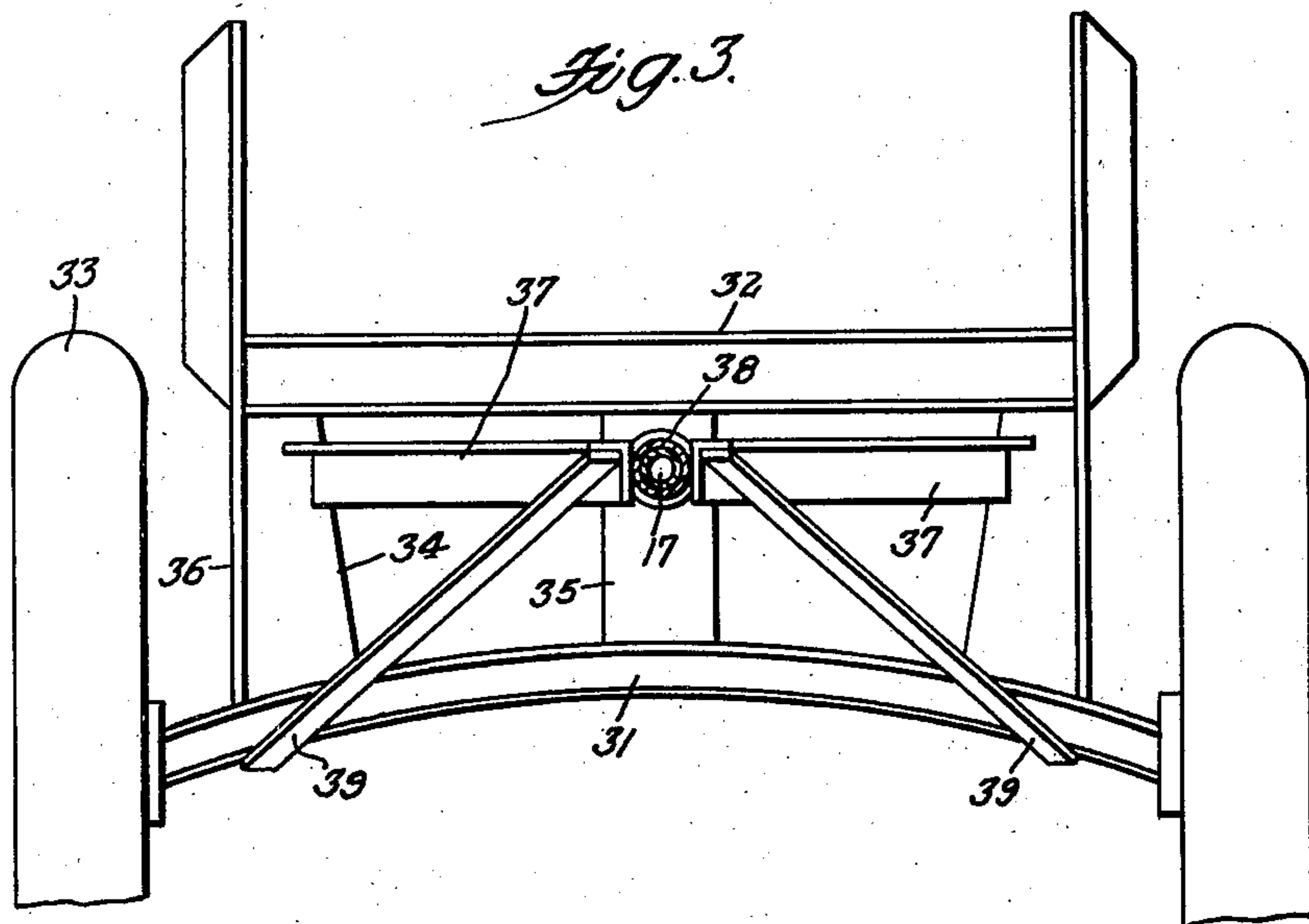


Fig. 4.

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3 Sheets-Sheet 3

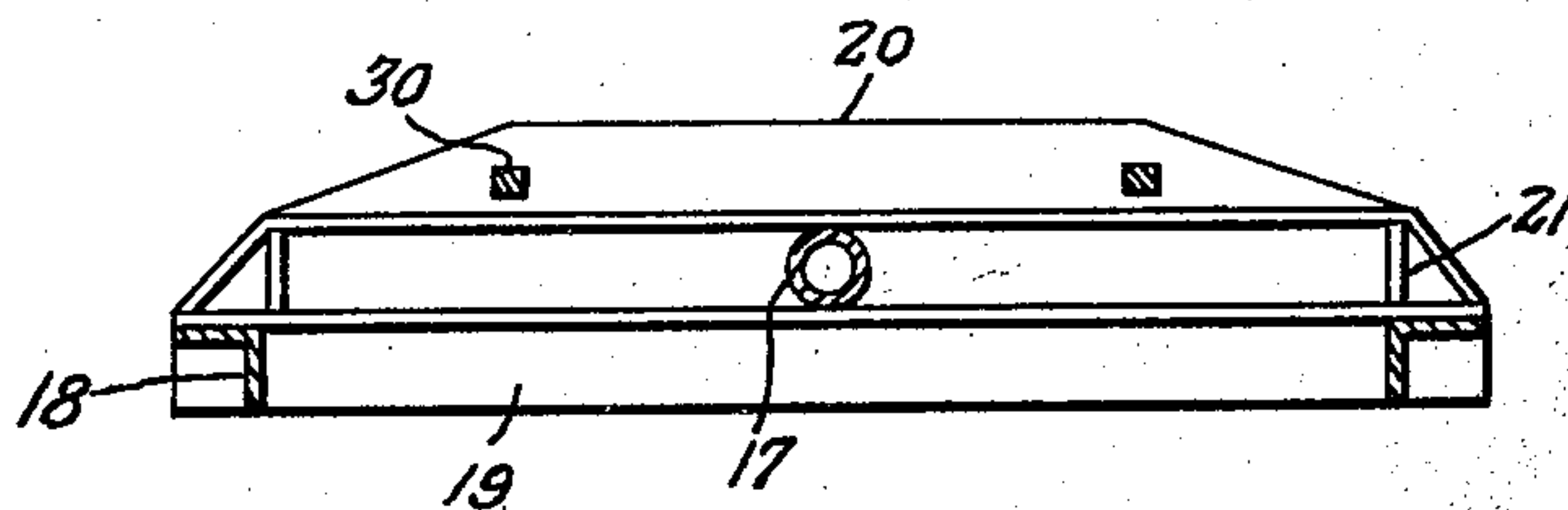
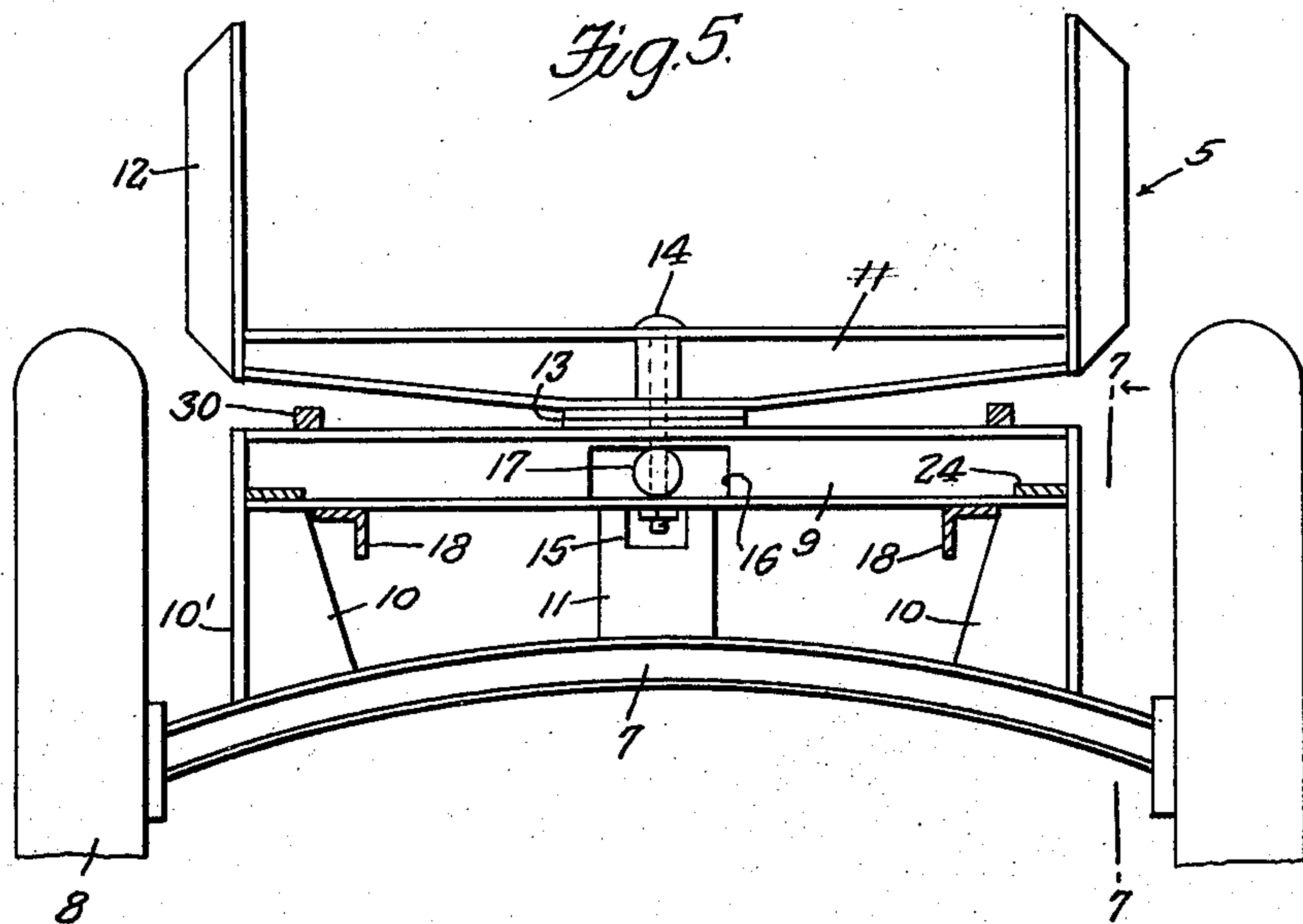


Fig. 6.

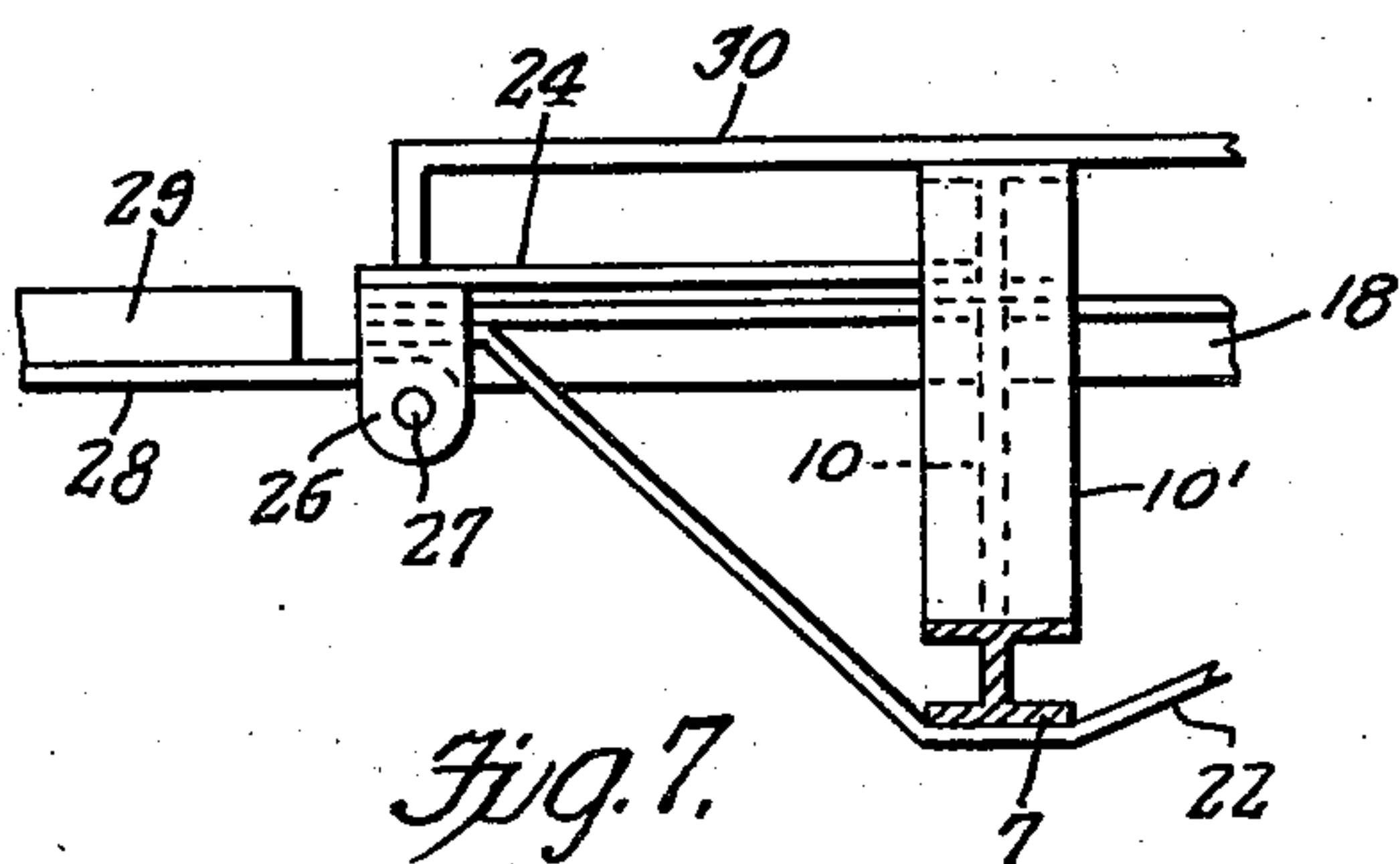


Fig. 7.

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UNITED STATES PATENT OFFICE

2,183,682

WAGON

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Original application June 26, 1937, Serial No. 150,613. Divided and this application September 22, 1938, Serial No. 231,266

2 Claims. (Cl. 280—80)

This is a divisional application of my co-pending application, Serial No. 150,613, filed June 26, 1937, Patent No. 2,153,257.

This invention relates to wagons, and an object of the invention is to provide a one-horse, all-steel utility wagon.

A further object of the invention is to provide a wagon of this character wherein the front and rear gear assemblies are made entirely of steel electrically welded, thus precluding the use of any bolts.

A further object of the invention is to provide a wagon of this character which may be easily pulled by a single horse.

The invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings, wherein:

Figure 1 is a top plan view of the wagon.

Figure 2 is a detail sectional view taken substantially on the line 2—2 of Figure 1.

Figure 3 is a detail view taken substantially on the line 3—3 of Figure 1.

Figure 4 is a fragmentary detail sectional view taken substantially on the line 4—4 of Figure 1.

Figure 5 is a detail sectional view taken substantially on the line 5—5 of Figure 1.

Figure 6 is a detail sectional view taken substantially on the line 6—6 of Figure 1; and

Figure 7 is a detail sectional view taken substantially on the line 7—7 of Figure 5.

Referring to the drawings by reference numerals, it will be seen that the improved wagon, in the preferred embodiment thereof, includes a front gear assembly indicated generally by the reference numeral 5 and a rear gear assembly indicated generally by the reference numeral 6.

The front gear assembly includes an axle 7 that is curved longitudinally and on the ends of the axle are suitably provided wheels 8. The front gear assembly 5 also includes a lower bolster 9, in the form of an I-beam and is supported from the axle 7 through the medium of perpendicular end web plates 10 and an intermediate web plate 11.

Also, welded to and rising from the axle 7 are plates 10' which at their upper portions are welded to the ends of the bolster 9.

The gear assembly 5 also includes a top bolster 9' of I-beam construction and preferably the bolster 9' is so formed as to have the opposite end portions thereof longitudinally tapered with the under flange inclined as shown, the bolster 9' at the top being flat throughout its length.

Rising from the top bolster 9' at the ends of the

bolster, and suitably welded thereto are standards 12 formed of T iron.

Interposed between the bolsters 9 and 9' are shims 13, and the bolsters 9 and 9' intermediate their ends are suitably drilled and otherwise provided to accommodate the king pin 14, the web 11 being provided with a notch 15 to accommodate the lower nut-equipped end of pin or bolt 14, as shown in Figure 5.

It will also be seen that the bolster 9 intermediate its ends is provided with an opening 16 that accommodates the apertured end of a reach rod 17, the king pin or bolt 14 extending through the opening provided therefor in said end of the reach rod 17.

Welded to the under side of the bolster 9 are intermediate portions of angle bars 18. Bars 18 extend diagonally of the bolster 9 and welded to the rear ends of the bars 18 is a lower transverse angle bar 19. Disposed above and in spaced parallelism to the angle bar 19 is an angle bar 20 a horizontal flange of which at its extremities is bent downwardly and welded to the top flange of the angle bar 19, as shown in Figure 6. Angle bars 19 and 20 are secured in spaced relation through the medium of spacer plates 21 welded to the bars 19 and 20, as will be clear from a study of Figure 6. The bars 12 and 20 provide therebetween a guide for the reach rod 17.

The end portions of the bars 18 are braced with respect to the axle 7 through the medium of metallic brace straps 22 intermediate portions of which are welded to the under side of the axle 7 and the end portions of which are welded to the ends of said bars 18, as clearly suggested in Figure 2.

Also, welded to and extending forwardly from the bolster 9 are metallic plates or strap members 24 to the forward or free ends of which is welded a transverse bar or strap member 25.

The strap member 25 at the ends thereof is provided with depending lugs 26 to which are pivoted as at 27 hinge plates 28 riveted or otherwise secured to the draft poles 29 provided for hitching a draft animal to the wagon. Also, arcuate rods 30 of steel or other suitable material extend transversely of the bolster 9 and at one end are welded or otherwise secured to the vertical flange of the reach pole guide bar 20, while at their forward ends said rods 30 are downturned and welded to the transverse flat iron-strap or cross-member 25.

The structure of the rear gear assembly 6 is clearly illustrated in Figures 1, 3, and 4, and is therein shown, in the preferred embodiment

thereof, the rear gear assembly 6 comprises a longitudinally curved axle 31 above which is supported a rear bolster 32. Journaled on the ends of the axle 31 are traction wheels 33.

5 The bolster 32 is supported from the axle 31 through the medium of vertical end web plates 34 and an intermediate web plate 35, plates 34 and 35 being welded to the axle 31 and bolster 32 which latter is of I-beam construction.

10 Also rising vertically from the axle 31 and welded to the vertical outer edges of webs 34 and the ends of bolster 32 are standards 36 that extend upwardly beyond the bolster 32 to provide standards for the bolster. These standards 15 36 are formed of T-beams and webs of said beams 36 on the lower portions of the beams are removed, as will be clear from a study of Figure 3.

Welded to and extending forwardly from the 20 webs 34 are angle plates 37 that converge at their forward ends where they terminate in parallel terminals welded or otherwise secured to a reach rod-accommodating pole 38 which at one end is welded or otherwise secured to the 25 web 35 in alignment with an opening in said web provided to accommodate the reach rod 17. At the forward ends thereof the angle bars 37 are braced with respect to the axle 31 through the medium of brace members 39 formed of flat 30 lengths of steel or other suitable metal. The brace members 39 at one end are welded to the axle 31 and at their upper forward ends are also welded to the angle bars 37.

35 Reach rod 17 is provided with a series of openings adapted to be selectively aligned with opposed openings provided in the guide member 38 to accommodate a pin 40 through the medium of which the front and rear gear assemblies 5

and 6 are secured at the desired position of adjustment relative to one another.

From the above it will be seen that I have provided a wagon particularly designed to be drawn by a horse or other draft vehicle, and 5 wherein the front and rear gear assemblies are respectively formed wholly of metal with all parts welded so that fastening bolts or analogous fastening elements are eliminated.

It is thought that a clear understanding of 10 the construction, utility and advantages of the invention will be had without a more detailed description thereof.

What is claimed is:

1. In a wagon construction of the character 15 described, a bolster comprising upright members rising adjacent each side of the wagon, a web plate on the lower portion of the opposed faces of said upright members, a horizontal bolster member supported on the upper ends of said web 20 plate, the ends of said horizontal bolster member abutting the respective uprights and a reinforcing web on the outer faces of the upper portion of said uprights above the horizontal bolster member. 25

2. In a wagon construction of the character described, a bolster comprising a plurality of upstanding web plates including a pair of side web plates and an intermediate web plate, a horizontal bolster member secured on the upper 30 edges of said web plates, flanges on the side web plates projecting upwardly above the horizontal bolster member and providing an abutment for the ends of said member, said intermediate web plate having an opening therein, a tubular pole 35 secured at one end in said opening for accommodating a reach rod and braces connecting the other end of said pole to the side web plates.

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