

No. 665,930.

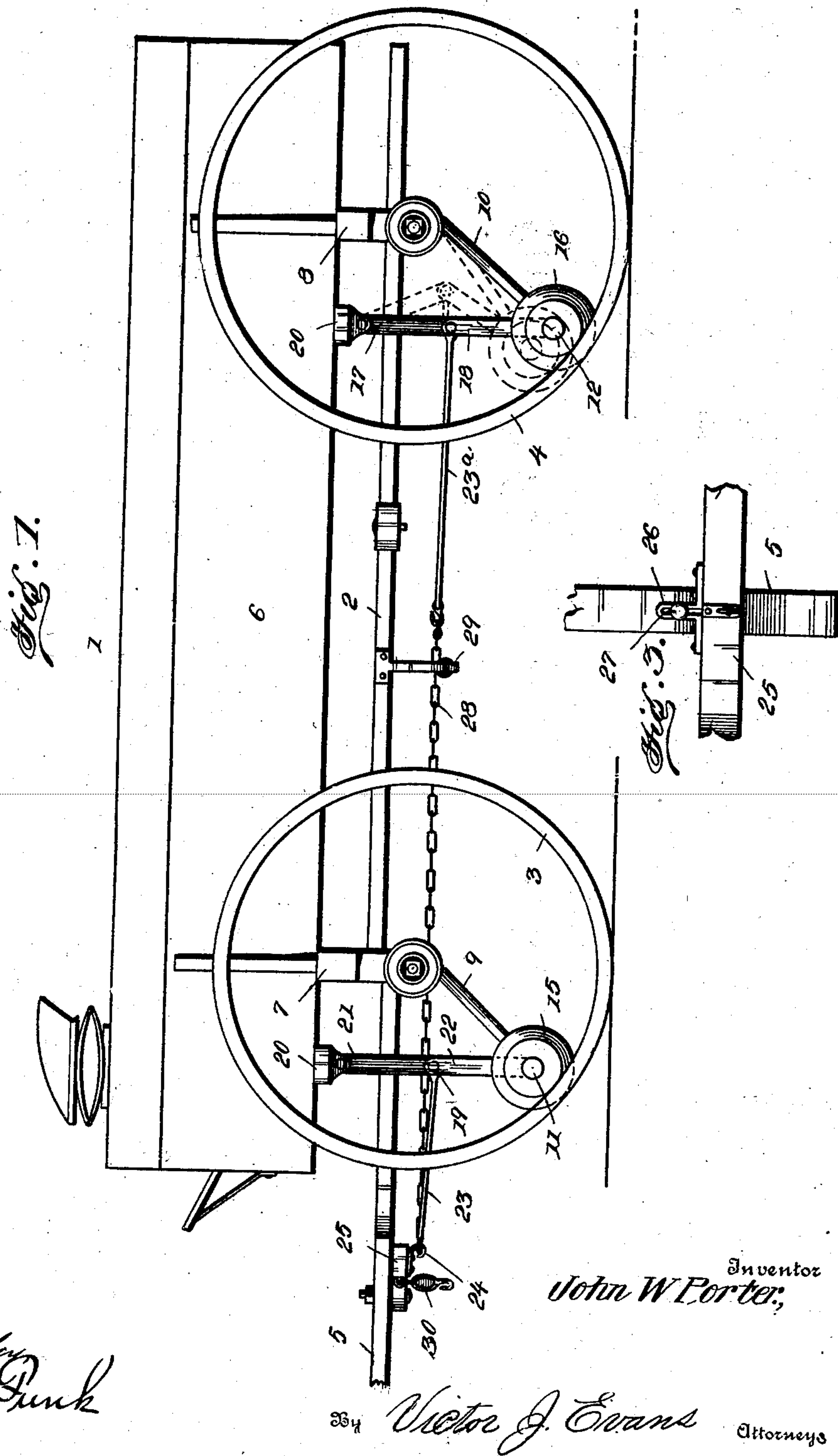
Patented Jan. 15, 1901.

J. W. PORTER.
DRAFT DEVICE FOR VEHICLES.

(Application filed June 25, 1900.)

(No Model.)

2 Sheets—Sheet 1.



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2 Sheets—Sheet 2.

Fig. 2.

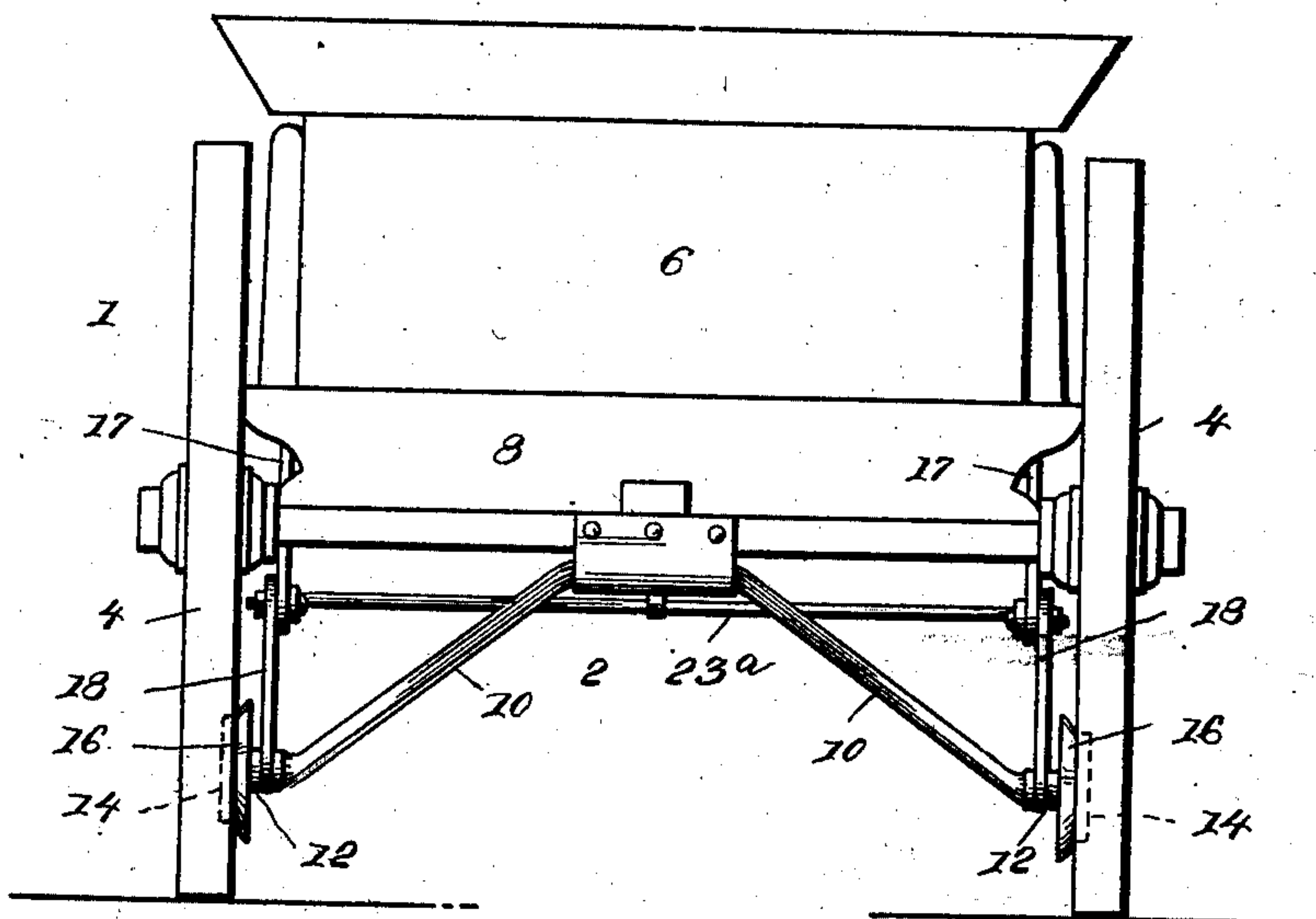


Fig. 4.

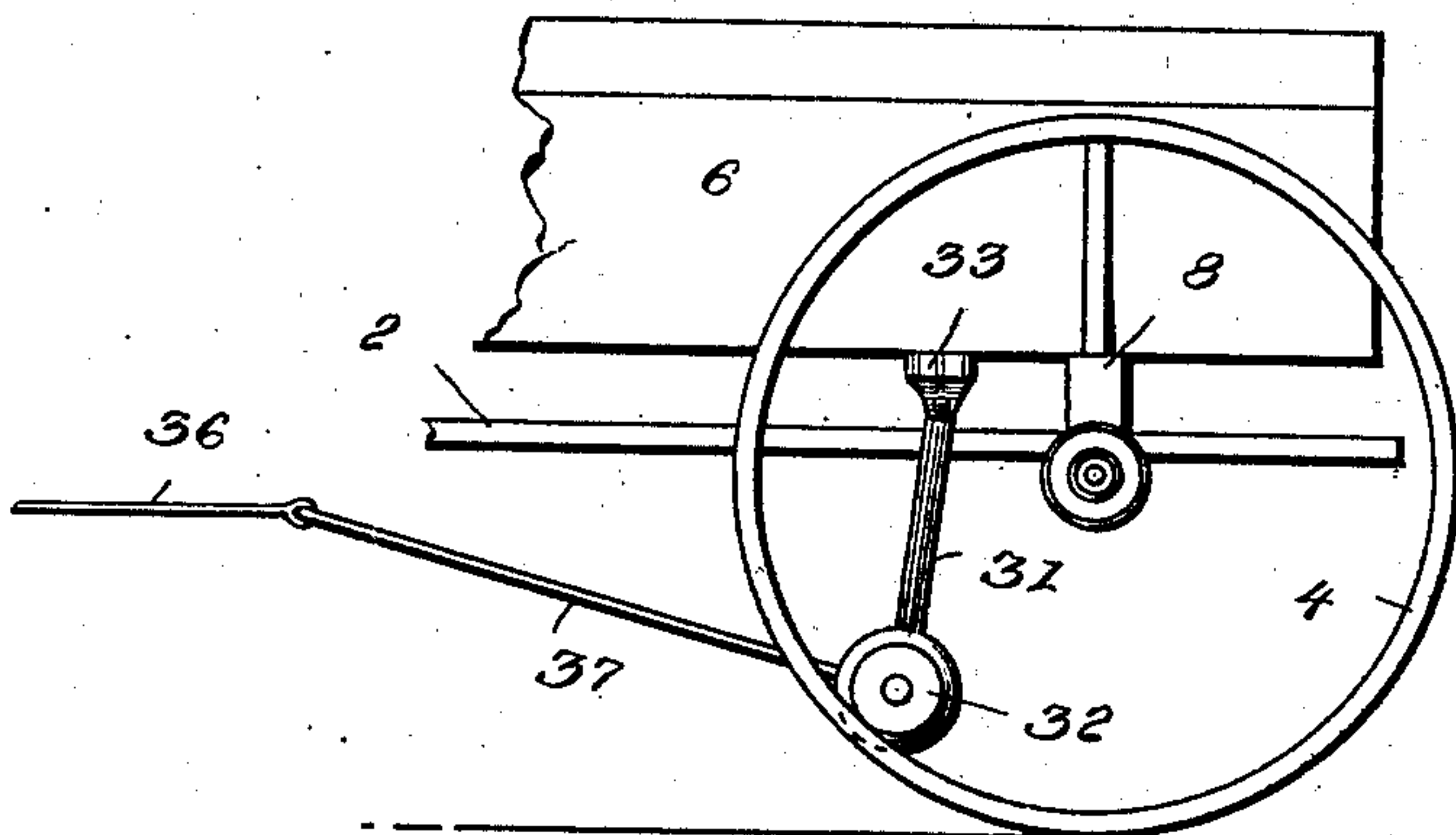
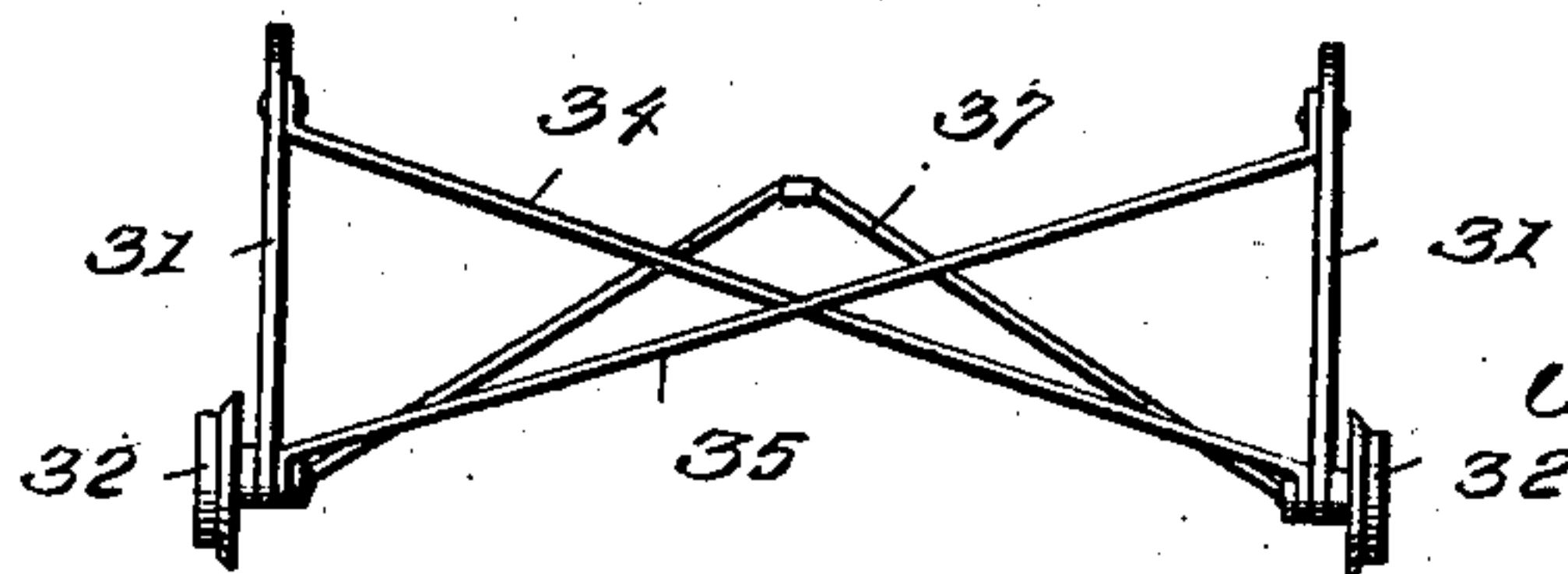


Fig. 5.



Witnesses

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DRAFT DEVICE FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 665,930, dated January 15, 1901.

Application filed June 25, 1900. Serial No. 21,549. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. PORTER, a citizen of the United States, residing at Viola, in the county of Sedgwick and State of Kansas, have invented new and useful Improvements in Draft Devices, of which the following is a specification.

This invention relates to a device for facilitating the propulsion of wagons and other vehicles, which for the sake of brevity I will entitle a "draft-equalizer."

The object of the invention is to so distribute the power exerted by the draft-animals to the running-gear and wheels of the vehicle to which it is attached that the maximum amount of propelling power will be given to said vehicle, so that less power will be required to move a given load or weight than is ordinarily required.

With this object in view my invention consists in the peculiar arrangement and novel construction of parts, all of which will be described hereinafter and recited in the claims.

In the drawings forming a part of this specification, Figure 1 is a side elevation of a wagon or vehicle of approved construction to which my invention has been applied, the spokes being absent, so as not to obscure the view. Fig. 2 is a rear view of the same. Fig. 3 is a top plan view of the manner of attaching the whiffletree to the tongue or pole of the wagon. Fig. 4 is a fragmentary side elevation of a wagon embodying a slight modification, and Fig. 5 is an end view of the modified form detached.

Referring now to the drawings, 1 designates a wagon provided with the usual running-gear 2, front and rear wheels 3 and 4, and the tongue or pole 5. The body 6 is supported on the running-gear in any well-known manner.

Intermediate the ends of the hounds 7 and 8 are swiveled rock-shafts 9 and 10, each provided with oppositely-bent and downwardly-projecting arms terminating in journals 11 and 12, which carry friction-wheels 13 and 14, to be thrown into and out of contact with the inner peripheries or fellys of the wheels 3 and 4. Peripheral flanges 15 and 16 are provided on the respective friction-wheels 13 and 14 to act as guides when said wheels are thrown in contact with the traction-wheels.

17 and 18 designate two vertically-arranged

toggle-levers pivoted at 19 and connected to the journals by pins 11 and 12 of the rear rock-shaft and to blocks 20 on the wagon-body. Similar levers 21 and 22 are connected in the same manner to the front rock-shaft 11, and the pivot-pins of the levers pass through eyes on one end of each of two forwardly-projecting bars 23 and 23^a. The bar 23 is provided at its forward end with an eye which engages a hook 24, carried by the slidable whiffletree 25, secured to the wagon-pole by the sliding and slotted iron 26 and the bolt 27. From the forward end of the bar 23^a is carried a chain or other flexible connection 28, which is also engaged by the hook 24 after passing through the supporting-hanger 29.

30 designates singletrees carried by the whiffletree and to which the draft-animals are to be attached.

The operation of the device will be as follows: All of the parts being properly assembled, the rock-shafts and friction-wheels will be in the position shown in dotted lines in Fig. 1—that is, the wheels 13 and 14 will lie against the fellys of the respective traction-wheels. However, as soon as the draft-animals start off force will be exerted upon the toggle-levers, which will force the friction-wheels against the fellys of the respective traction-wheels. As this force will be applied at a point tangential to the axis of each traction-wheel, the tendency will be to throw the wheels forward; but as they are journaled to the axles of the vehicles said wheels will be revolved. The power thus exerted will be greater than if the same amount of force were applied directly to the pole of the vehicle, and it will not therefore be necessary to employ as many draft-animals as would ordinarily be required.

In the modification shown in Figs. 4 and 5 the device comprises pivoted levers 31, carrying the friction-wheels 32 and supported by blocks 33. Cross-braces 34 and 35 connect the levers 31, and the rod 36, to which the force or pull is applied, is connected to the respective levers through the medium of a centrally-bent bar 37.

While I have described in detail the very best means now known to me for accomplishing the desired result, I would have it understood that I do not limit myself to the exact

construction shown, but reserve the right to make such changes and alterations as might suggest themselves without departing from the spirit of this invention.

5 I claim—

1. In a device of the character described, the combination with a vehicle, of levers carried by said vehicle, idle wheels on the ends of said levers and adapted to bear upon the
10 felloes of the traction-wheels at a point at a tangent to the axis thereof, and connections between the levers and vehicle-draft whereby force can be exerted upon the traction-wheels to propel the vehicle.

15 2. In a device of the character described, the combination with a wagon, of two sets of downwardly-projecting toggle-levers arranged on the body of said wagon, a sliding whiffletree on the tongue of the wagon and
20 connected to each set of toggle-levers, and wheels carried by the toggle-levers and adapt-

ed to engage with the peripheries of the wagon-wheels, so that when draft is applied to the whiffletree, the first-named wheels will bear upon the wagon-wheels to give them a forward impetus. 25

3. In a device of the character described, the combination with a vehicle, of levers depending from the body thereof, wheels or rollers mounted on said levers and bearing on
30 the wagon-wheels at a tangent to the axis thereof, a sliding whiffletree on the wagon-tongue, a connection between the whiffletree and the levers whereby the forward movement of the whiffletree will force the rollers
35 against the wagon-wheels to rotate the same.

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

JOHN W. PORTER.

Witnesses:

JOHN NELSON,
A. H. EISHAR.