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PATENTED DEC. 26, 1905.

H. E. DREW.
TENDER TRUCK.

APPLICATION FILED JULY 22, 1905.

2 SHEETS—SHEET 1.

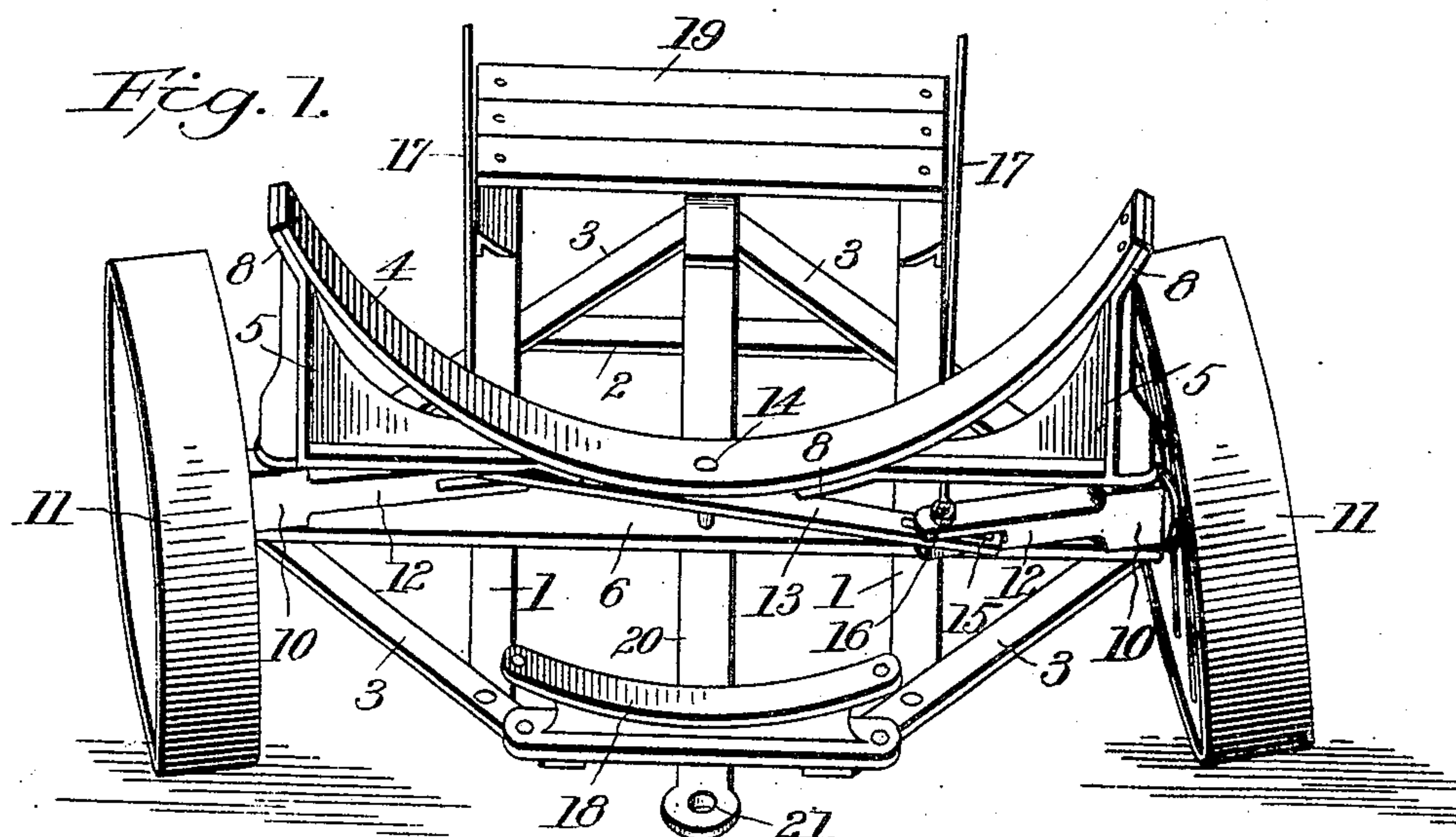
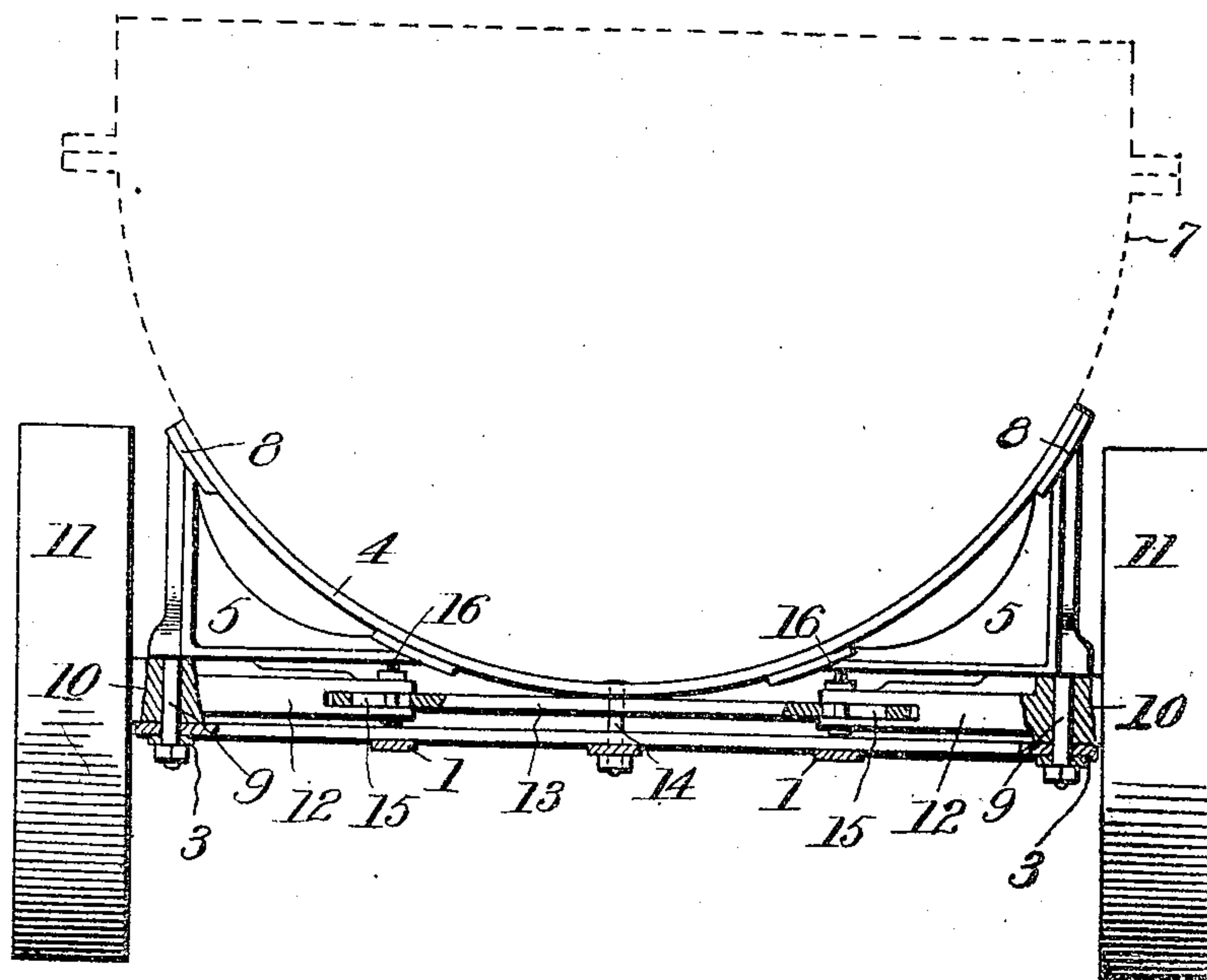


Fig. 2.



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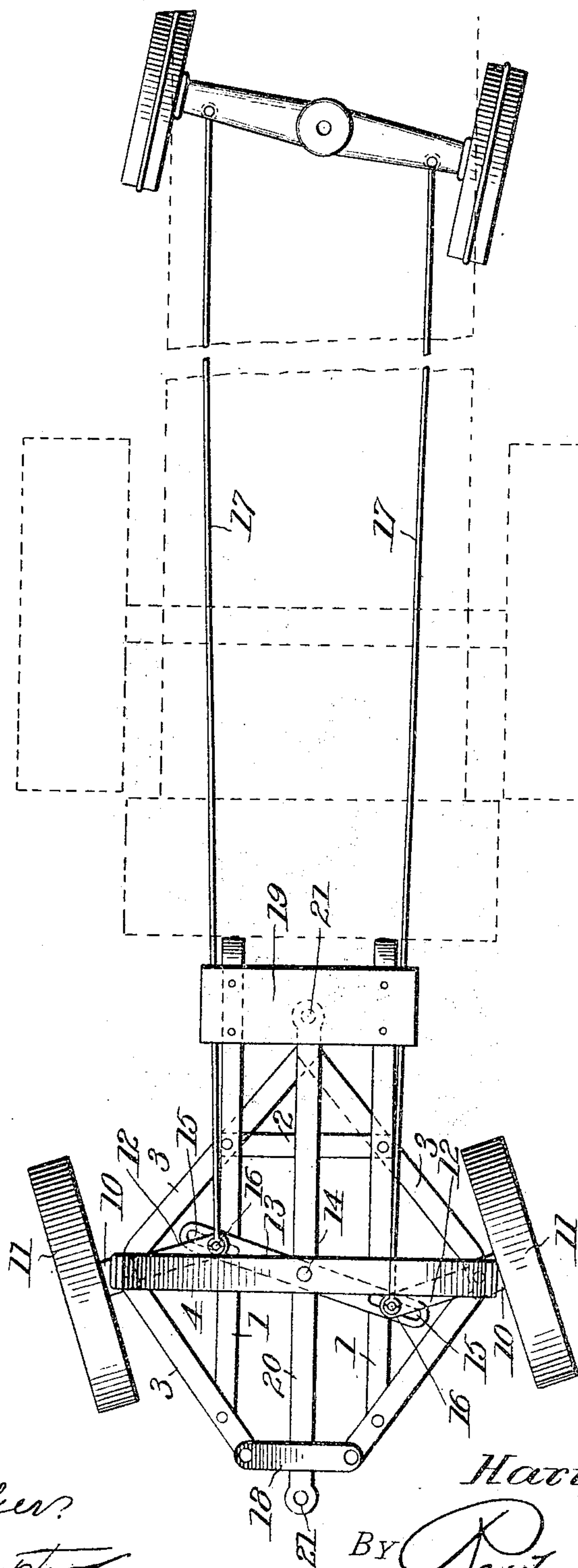
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Fig. 3.



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TENDER-TRUCK.

No. 808,440.

Specification of Letters Patent.

Patented Dec. 26, 1905.

Application filed July 22, 1905. Serial No. 270,784.

To all whom it may concern:

Be it known that I, HARRY E. DREW, a citizen of the United States, residing at Battlecreek, in the county of Calhoun and State of Michigan, have invented a certain new and useful Tender-Truck, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to tender-trucks, and especially to the trucks of tenders designed for use in connection with traction-engines, the object of the invention being to provide a simple, light, and durable truck composed of metal throughout and having the running-gear thereof so constructed and arranged as to permit the truck to turn in a short circle and closely follow the traction-engine to which it is coupled.

A further object of the invention is to provide such truck with short-turning steering-gear so connected with the traction-engine running-gear that the truck-wheels will be automatically controlled by the traction-engine and the tender-truck caused to follow the movements of the engine, the tender-truck wheels being compelled to track behind the steering-wheels of the traction-engine.

With the above and other objects in view the invention consists in the novel construction, combination, and arrangement of parts, as hereinafter fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of the tender-truck frame embodying the present invention. Fig. 2 is an end elevation of the same, partly in section, showing the body in dotted lines. Fig. 3 is a diagrammatic plan view illustrating the connection between the tender-truck and the steering-axle of a traction-engine.

Like reference-numerals designate corresponding parts in all figures of the drawings.

In tender-trucks, especially those used in connection with traction-engines, it is important for the tender-truck to follow very closely behind the traction-engine, particularly in turning curves. In order to accomplish this, special provision must be made whereby the tender-truck wheels will turn short and be readily controlled automatically by the turning of the wheels of the traction-engine.

In carrying out the present invention I construct a tender-truck frame which comprises longitudinal frame-bars 1, one or more cross-

bars 2, connecting the bars 1, and diagonal bars 3, which form the marginal bars of the frame and also serve as braces for the frame as a whole. In connection with the truck-frame thus far described I also employ an axle-frame embodying a body-bolster 4, pedestals or brackets 5, located beneath the end portions of the bolster, and a tie-bar 6, which extends beneath the brackets 5. The body-bolster 4 is curved or dished, as shown, to form a supporting-seat for the body 7, which is usually of semicylindrical form, said body being secured directly to the bolster. The pedestals or brackets 5 are substantially triangular in shape and are provided with ears or lugs 8 to allow for fastening the brackets firmly to the under side of the bolster. At their outer lower corners the brackets are provided with downwardly-extending pintles 9, which pass through the tie-bar 6 and receive nuts or other suitable fasteners beneath said bar. Upon the pintles 9 are mounted stub-axles 10, which are thus adapted to swing or turn horizontally. These axles are provided with spindles upon which the carrying and steering wheels 11 are journaled, and they are also provided with inwardly-projecting lever extensions 12, which are slotted, as shown, to receive the opposite ends of an equalizing-lever 13, said lever being fulcrumed at a central point on a pivot 14, consisting of a pin or bolt, which passes through the body-bolster 4 and the tie-bar 6 and connects the same together. The ends of the equalizing-lever are slotted, as shown at 15, and receive bolts or coupling-pins 16, carried by the inner ends of the stub-axles, which arrangement allows the lever and stub-axles to swing freely and causes the swinging movement of one stub-axle to be imparted to the other. The stub-axles thus swing in unison and to an equal extent and keep the wheels in parallel relation at all times. Steering connections 17, preferably in the form of rods, connect with the stub-axles through the pins 16 and extend forward to the steering-axle of the traction-engine, to which they connect pivotally, as shown. Thus as the axle of the traction-engine is turned corresponding movement is imparted to the stub-axles of the tender-truck and the wheels of the latter are caused to track the steering-wheels of the engine. The tender thus closely follows the path of the engine whether the latter is moving in a straight or curved line.

18 designates an auxiliary bolster for supporting the rear end of the body of the tender, and 19 represents a foot-platform mounted on the truck-frame and arranged in front of the body. A draft or draw bar 20 extends lengthwise of the truck-frame, reaching from end to end thereof, and is provided at both ends with eyes 21 to receive suitable coupling devices for enabling other trucks to be coupled to the tender-truck in front or in rear. Said draw-bar takes all the strain of following trucks attached behind the tender-truck, and thus relieves the tender-truck frame, which may therefore be made quite light.

Having described the invention, I claim as new—

1. A tender-truck comprising a truck-frame, an axle-frame connected thereto and embodying a body-bolster, brackets secured to the body-bolster, pintles formed on the brackets and projecting downward therefrom, a tie-bar connecting the pintles beneath the brackets, stub-axles journaled on the pintles between the brackets and tie-bar, and an equalizing-lever pivoted between the body-bolster and tie-bar and having jointed connection at its ends with the stub-axles.

2. A tender-truck comprising a truck-frame, an axle-frame connected thereto and embodying a body-bolster, brackets secured to

the body-bolster, pintles formed on the brackets and projecting downward therefrom, a tie-bar connecting the pintles beneath the brackets, stub-axles journaled on the pintles between the brackets and tie-bar, and an equalizing-lever pivoted between the body-bolster and tie-bar and having a pin-and-slot connection at its ends with the stub-axles.

3. The combination with the steering-axle of a self-propelled vehicle, of a tender-truck comprising a truck-frame, an axle-frame connected thereto and embodying a body-bolster, brackets secured to the body-bolster, pintles formed on the brackets and projecting downward therefrom, a tie-bar connecting the pintles beneath the brackets, stub-axles journaled on the pintles beneath the brackets and tie-bar, a slotted equalizing-lever pivoted between the body-bolster and the tie-bar, steering connections leading from the said steering-axle to the stub-axles, and pins forming common connections between the stub-axles, equalizing-lever and steering connections.

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

HARRY E. DREW.

Witnesses:

H. D. FERGUSON,
DARWIN C. ROLFE.