

No. 710,028.

Patented Sept. 30, 1902.

F. J. WOOD.
TENDER FOR TRACTION ENGINES.

(Application filed Aug. 13, 1902.)

(No Model.)

2 Sheets—Sheet 1.

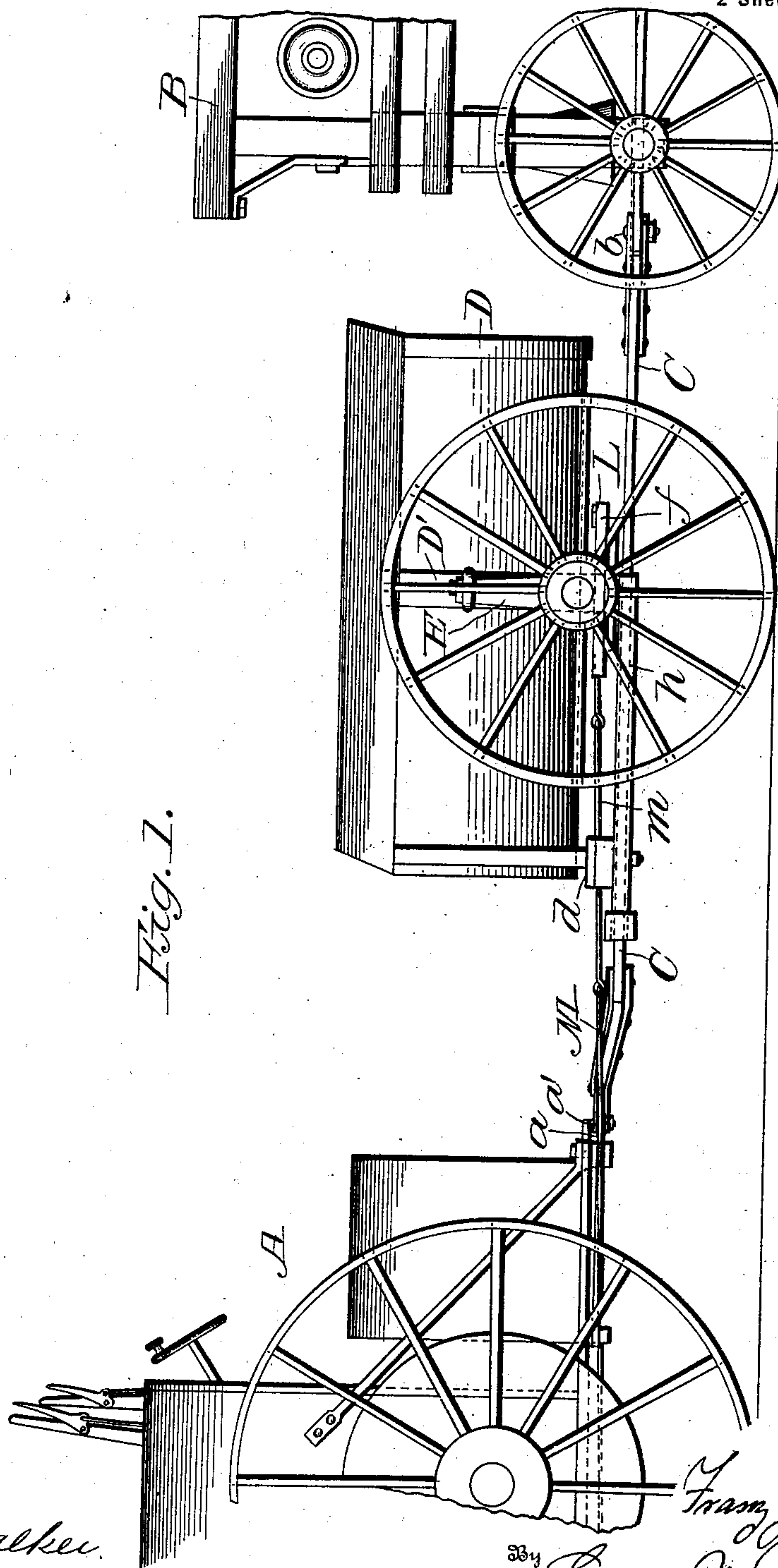


Fig. 1.

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2 Sheets—Sheet 2.

Fig. 2.

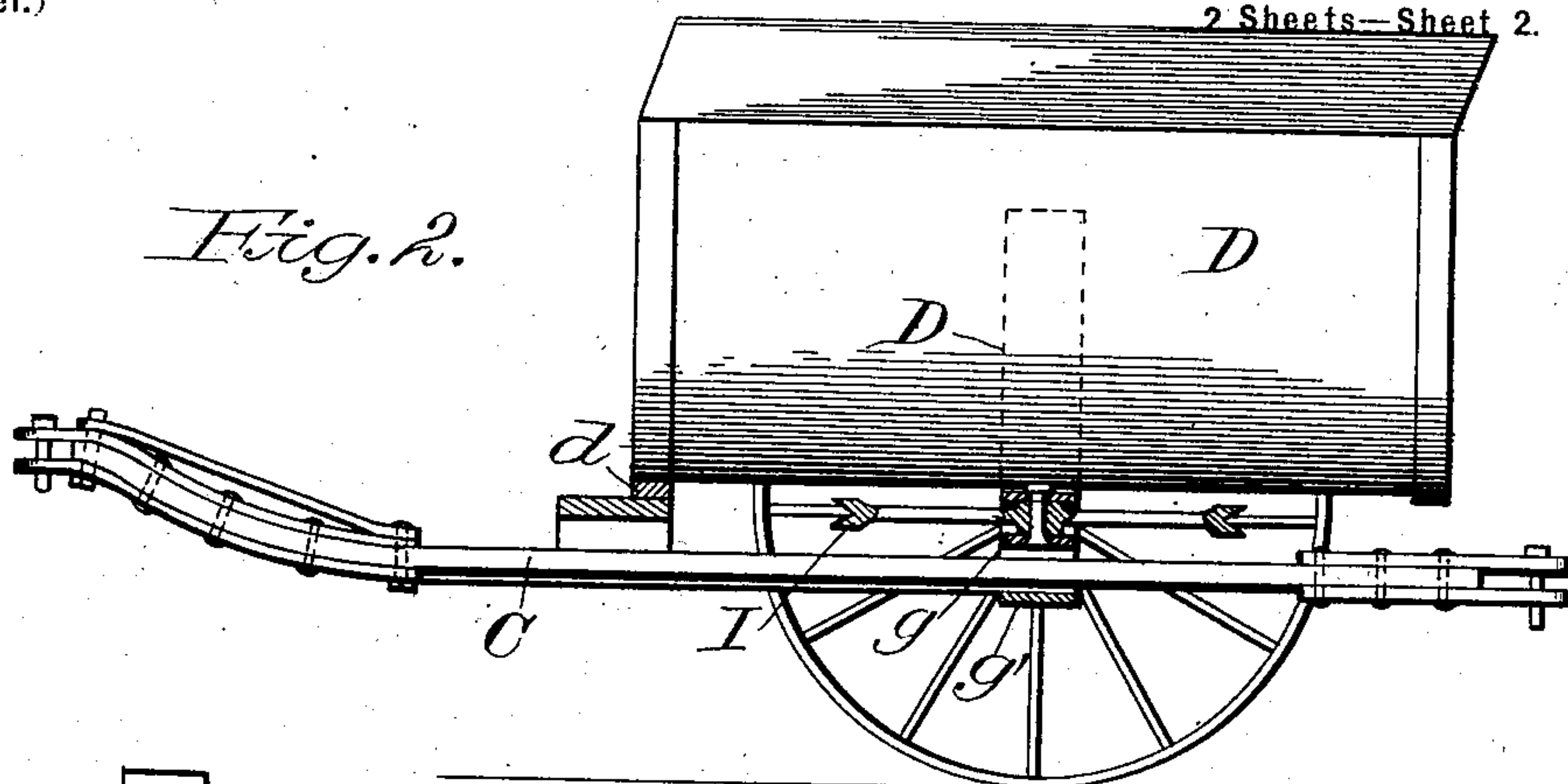


Fig. 3.

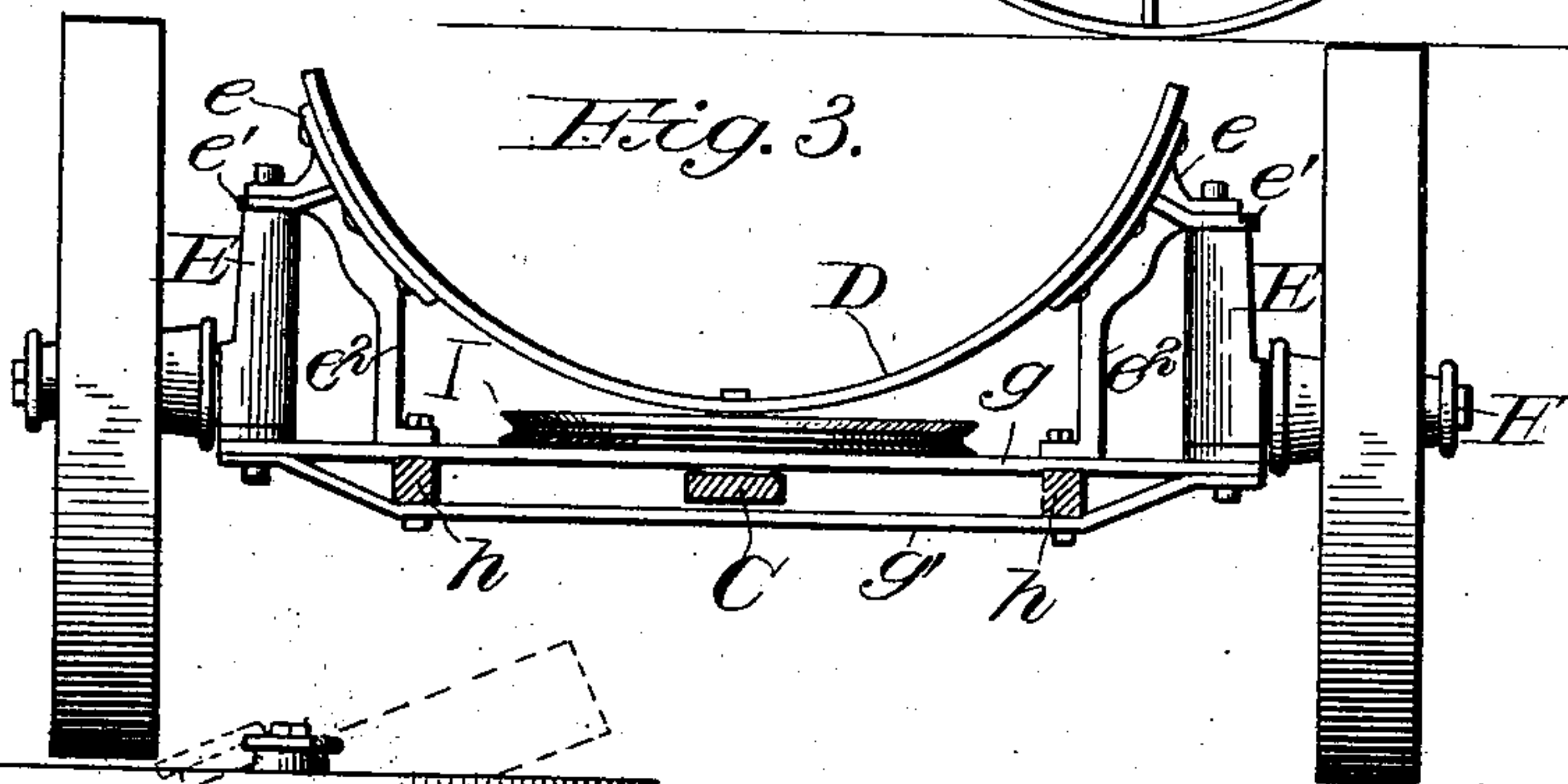
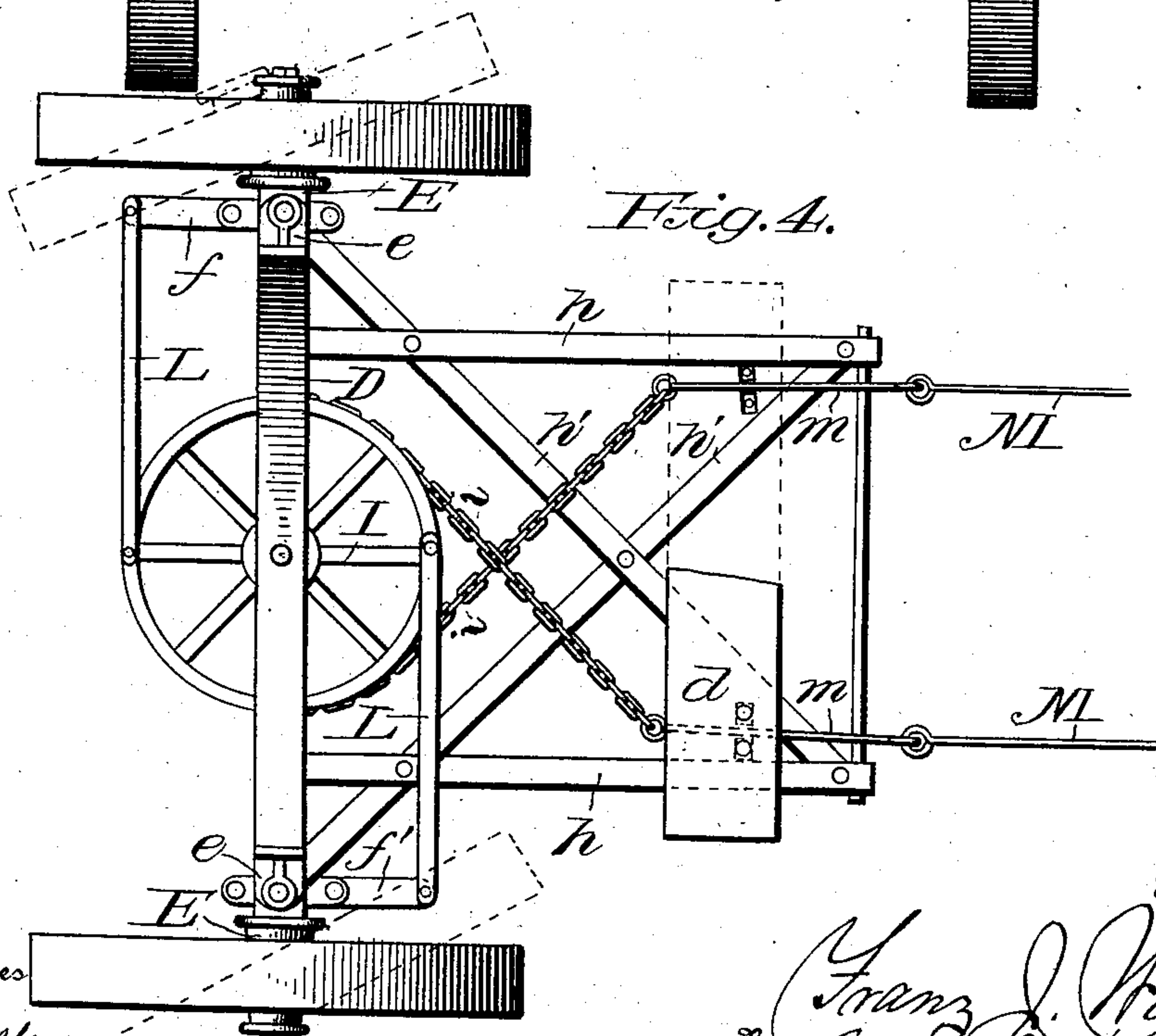


Fig. 4.



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TENDER FOR TRACTION-ENGINES.

SPECIFICATION forming part of Letters Patent No. 710,028, dated September 30, 1902.

Application filed August 13, 1902. Serial No. 119,504. (No model.)

To all whom it may concern:

Be it known that I, FRANZ J. WOOD, a citizen of the United States, residing at Des Moines, in the county of Polk and State of Iowa, have invented new and useful Improvements in Tenders for Traction-Engines, of which the following is a specification.

This invention appertains to tenders for traction-engines, the object being to provide a self-steering tender the running-gear of which is constructed so that the supporting-wheels thereof will turn or track with the wheels of the traction-engine to which the tender is coupled, the invention also providing means for coupling another machine to the traction-engine in such a manner that the draft will be direct upon the engine and not on the tender or its supporting-frame; also, to improve and simplify the parts with regard to construction and efficiency in use.

The invention consists in the construction, combination, and organization of the parts, as will be hereinafter set forth, and specifically pointed out in the claims.

In the accompanying drawings, which illustrate one embodiment of my invention, Figure 1 is a side elevation showing the tender and another machine coupled to a traction-engine. Fig. 2 is a side elevation, partly in section. Fig. 3 is a rear elevation, partly in section; and Fig. 4 is an inverted plan of the running-gear of the tender.

Referring to the drawings, A designates a traction-engine which is steered by turning the front axle or the front wheels, such engine having means for coupling thereto a tender and another machine, as a thresher B, which is coupled to the engine by a draw-bar C. The rear end of the traction-engine has an eye or link α for the reception of a pin α' when passed through the apertured plates attached to the draw-bar C. The rear end of the draw-bar is connected to the front axle of the thresher or other machine B by a coupling-pin b , which passes through parallel plates on the draw-bar and through an aperture in a projecting portion of the thresher. The draw-bar C is of sufficient length to allow the tender to be placed between the traction-engine and the thresher. Its front end is preferably upturned and provided with a brace, and the plates or flat bars may extend

the entire length of the draft-bar. The lateral and vertical dimensions of the draw-bar are such that said bar may be passed through and have a play between the plates which constitute the axle of the tender.

The tank or body D of the tender may be of any suitable construction, preferably semi-circular or approaching that shape, and said body is supported mainly by a saddle or segmental plate D' , auxiliary supporting means d being provided, and when pressed they rest upon side bars attached to the axle, so as to project therefrom.

The saddle D' is bolted or riveted to fixtures $e e$, which are constructed to present horizontally-projecting member e' , the same having apertures for the passage therethrough of the upper ends of vertical uprights E. The fixtures $e e$ have vertical members e^2 , the lower ends of which are turned inward to be positioned over the longitudinal bars of the supporting-frame of the tender. It will be noted that the fixtures e to which the saddle is attached are identical in construction and can be stamped out, forged, or cast from the same dies or molds.

The uprights E on opposite sides of the machine are also similar in construction and carry projecting stub-axes or spindles F and projecting arms f , one of the arms, f' , projecting forward, the other arm, f , extending rearward, and these arms are maintained parallel with each other.

The axle G is preferably made up of upper and lower plates g and g' , the top plate g being perfectly straight, while the lower plate g' is bent upward near its ends and then parallel with the top plate. These two plates are securely bolted to each other, and the ends have apertures which receive downward-projecting studs on the parts E E or a bolt which passes vertically through said parts. The fixtures e have feet which are in line with the parallel bars $h h$, and between these bars is a rectangular space of considerable length through which may be passed the draft-bar C, and when in said space the draft-bar may have considerable lateral play without contacting with the running-gear of the tender. From the ends of the axle to the forward ends of the bars h are braces h' , which cross each other, such braces being bolted to the bars h

where they cross the same. To the front of the bars *h h* there is a cross-piece *d*, which may carry a supporting block or blocks for the forward end of the tank or body D. Between the upper plate of the trussed axle and the saddle there is pivoted or journaled a disk I, the periphery of which may be grooved to receive chains or flexible connections *ii*, which are attached to the disk. Links *L L* connect the forward and rearward projecting members *f f'* to the disk I, these links being preferably bolted to the upper ends of the disk and arms, and the chains have rods *m* with hooks at one end to engage the forward ends of the chains and at their other ends there are eyes with which rods *M M* are connected, said rods extending to the forward wheel supports or axle of the traction-engine, so that when the axle is turned, as in steering the engine, the wheels of the tender will be turned at opposing angles to the forward wheels of the traction-engine, so as to provide a short-turn running-gear for the tender.

As the tender's wheels turn and the direction of travel of the tender is changed the draw-bar from the rear end of the traction-engine to the front end of the separator or thrasher will move between the plates of the axle and change the line of draft, and by the construction shown there is no direct strain on the tender, and as a consequence the supporting-frame of the tender may be light in construction. The parallel bars *h h* may extend forward, so that they can be coupled to the engine when it is desired to back the engine and tender.

The draw-bar C when the tender is detached from the engine may be used as a pole for said tender, and when so used the wheels can be locked by fastening the disk, chains, or the rods *m*.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a tender for traction-engines, a body-supporting frame mounted on an axle constructed to provide an unobstructed opening

between the upper and lower members of said axle, in combination with a draw-bar the size thereof being such that it may be passed through the axle and be movable therein without moving the tender, substantially as shown and for the purpose set forth.

2. In a tender for traction-engines, a rigidly-connected axle and body-supporting saddle, uprights journaled between the axle and saddle each upright having a spindle and an arm, the arm of one upright projecting rearward and that on the other upright forward, a disk between the axle and saddle, bars attached to the disk and to the arms on the uprights, and means for connecting the disk to the traction-engine, substantially as shown.

3. In a tender for traction-engines, an axle made up of two connected members, bars attached between the members of the axle and maintained at right angles thereto, a body-supporting saddle carried by the axle, uprights journaled between the ends of the axle and the supports for the saddle, a spindle and an arm on each of the uprights, a disk mounted centrally on the axle between the axle and saddle, links between each arm and the disk, flexible connections attached to the disk, and rods attached to the flexible connections for engagement with the traction-engine, substantially as shown and for the purpose set forth.

4. In a tender for traction-engines, the combination with a trussed axle having an open central portion, saddle and wheel supporting fixtures on the axle, pivotal uprights between the ends of the axle and the fixtures, spindles and arms integral with the uprights, a disk journaled between the axle and saddle, links which extend from the arms to the disk, and means for connecting the disk to the steering-wheel supports of the traction-engine, substantially as set forth.

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Witnesses:

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