J. D. INGRAM.

DRAFT GEAR.

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1,066,618.

Patented July 8, 1913.

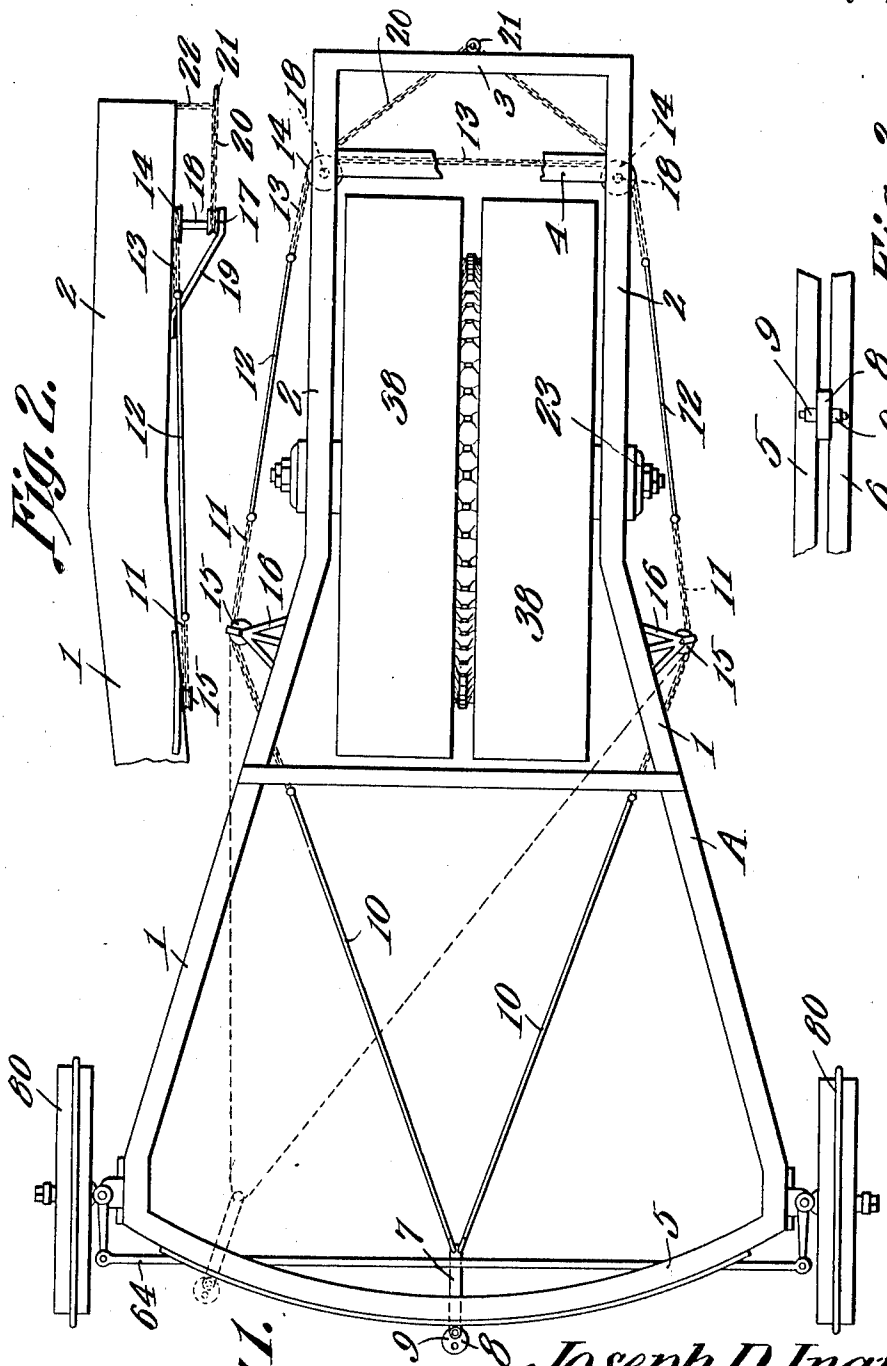


Fig. 2.

Fig. 3.

Fig. 1.

Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH D. INGRAM, OF PANHANDLE, TEXAS.

DRAFT-GEAR.

1,066,618. Specification of Letters Patent. Patented July 8, 1913.

Original application filed August 9, 1911, Serial No. 643,085. Divided and this application filed February 7, 1912. Serial No. 675,927.

To all whom it may concern:

Be it known that I, JOSEPH D. INGRAM, a citizen of the United States, residing at Panhandle, in the county of Carson and State of Texas, have invented a new and useful Draft-Gear, of which the following is a specification.

This invention relates to traction engines and is more particularly a division of an application filed by me in the United States Patent Office on August 9, 1911, said application bearing Serial No. 643,085.

One of the objects of the present invention is to provide improved means for coupling the load to the machine, said coupling or connecting means being movably mounted so as to maintain the line of draft from the load to the center of the main or drive axle irrespective of the position of the load relative to the engine.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed can be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a plan view of a portion of the machine having the present improvements combined therewith. Fig. 2 is a side elevation of a portion of the structure shown in Fig. 1. Fig. 3 is a rear elevation of a portion of said machine.

Referring to the figures by characters of reference A designates the main frame of the machine, the same being formed of beams of any preferred type, the side beams 1 of the frame converging forwardly and upwardly and terminating in forwardly extending parallel portions 2 connected by cross beams 3 and 4 located adjacent the front end of the frame. The forwardly extending portions 2 are disposed substantially horizontally, forming obtuse angles with the beams 1. The rear ends of the beams 1 are connected by upper and lower arcuate beams 5 and 6 respectively forming a slot or guideway therebetween for the reception of a stem 7. A head 8 is formed at the rear end of the stem and is adapted to be engaged by a chain or other element extending from the load to be drawn and rollers 9 are mounted on the upper and lower faces of the head 8 and are designed to travel along the rear faces of the beams 5 and 6. Forwardly diverging rods 10 are pivotally connected to the forward end of the stem 7 and the front ends of these rods are connected, as by means of chains 11, to rods 12 arranged adjacent but outside of the forwardly extending portions 2 of the frame A. Said rods 12 are in turn connected by a chain 13. This last mentioned chain is mounted on guide sheaves 14 journaled on frame A adjacent the ends of the beam 4 and the chains 11 are mounted on guide sheaves 15 carried by brackets 16 extending laterally from the front end portion of the forwardly converging beams 1.

Sheaves 17 are supported under the sheaves 14 and are journaled on studs 18 suitably held, as by means of braces 19. An endless chain 20 is mounted on the sheaves 17 and extends forward to a coupling ring 21. A chain 22 connects the ring 21 with the front end of the frame A and serves to hold said ring supported out of contact with the ground. The chain 20 is only used where it is necessary to pull the machine forward or where two or more traction engines are coupled together. While the chain 20 is in use it is free to move upon the sheaves 17 so as to adjust itself automatically to the line of draft.

An axle 23 is mounted at its ends within the forwardly extending portions 2 of the frame A and close to the forwardly diverging beams 1, any desired means being employed for securing the ends of the axle within the member A. Wheels 38 are carried by this axle and are adapted to be driven by any suitable mechanism (not shown). Steering wheels 80 are located at the rear ends of the sides of the member A and may be shifted simultaneously by mechanism such as indicated generally at 64.

It will be apparent that when the machine is in operation power will be transmitted therefrom through the chains 20 and 11 and the rods 12 and 10 to the stem 7 and from said stem to the load. When the machine is turning, the stem 7 is free to move longitudinally of the slot between the beams 5 and 6, the rollers 9, during this movement, traveling along the outer faces of the arcuate

beams. Chains 11 and 20 also shift along the guide sheaves and it will be apparent that the line of draft will at all times extend to the center of the axle 23. Side draft upon the steering wheels will thus be practically eliminated and the machine will be free to travel along a predetermined path without danger of being pulled laterally by the load being drawn.

What is claimed is:—

1. The combination with a structure including a drive wheel, of a member mounted to travel in an arc transversely of said structure, said member constituting means for engaging a load to be drawn, and a flexible element extending from said member and around the wheel, said element being shiftable with the first named member to maintain the force of draft along a line extending from the center of the axis of the wheel,

2. The combination with a structure including a drive wheel, and arcuate guiding means, of a member mounted to travel along said guiding means, said member constituting means for engagement by a load to be drawn, a flexible element extending from said member and around the wheel, and revoluble guide elements upon the structure and engaged by said flexible element.

3. The combination with a structure including a drive wheel, and an arcuate guide, of a member mounted to travel along the guide and adapted to be engaged by a load to be drawn, a flexible element secured at its ends to said member and extending around the wheel, revoluble guide devices engaged by said flexible element and carried by the structure, said member and flexible element coöperating with the revoluble guides for maintaining the force of draft along a line extending from the center of the axis of the wheel.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOSEPH D. INGRAM.

Witnesses:
J. J. WYNN,
RAY POOL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."