

993,370.

2 SHEETS—SHEET 1.



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DRAFT ATTACHMENT FOR TRACTION ENGINES.
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2 SHEETS—SHEET 2.

Fig. 2.

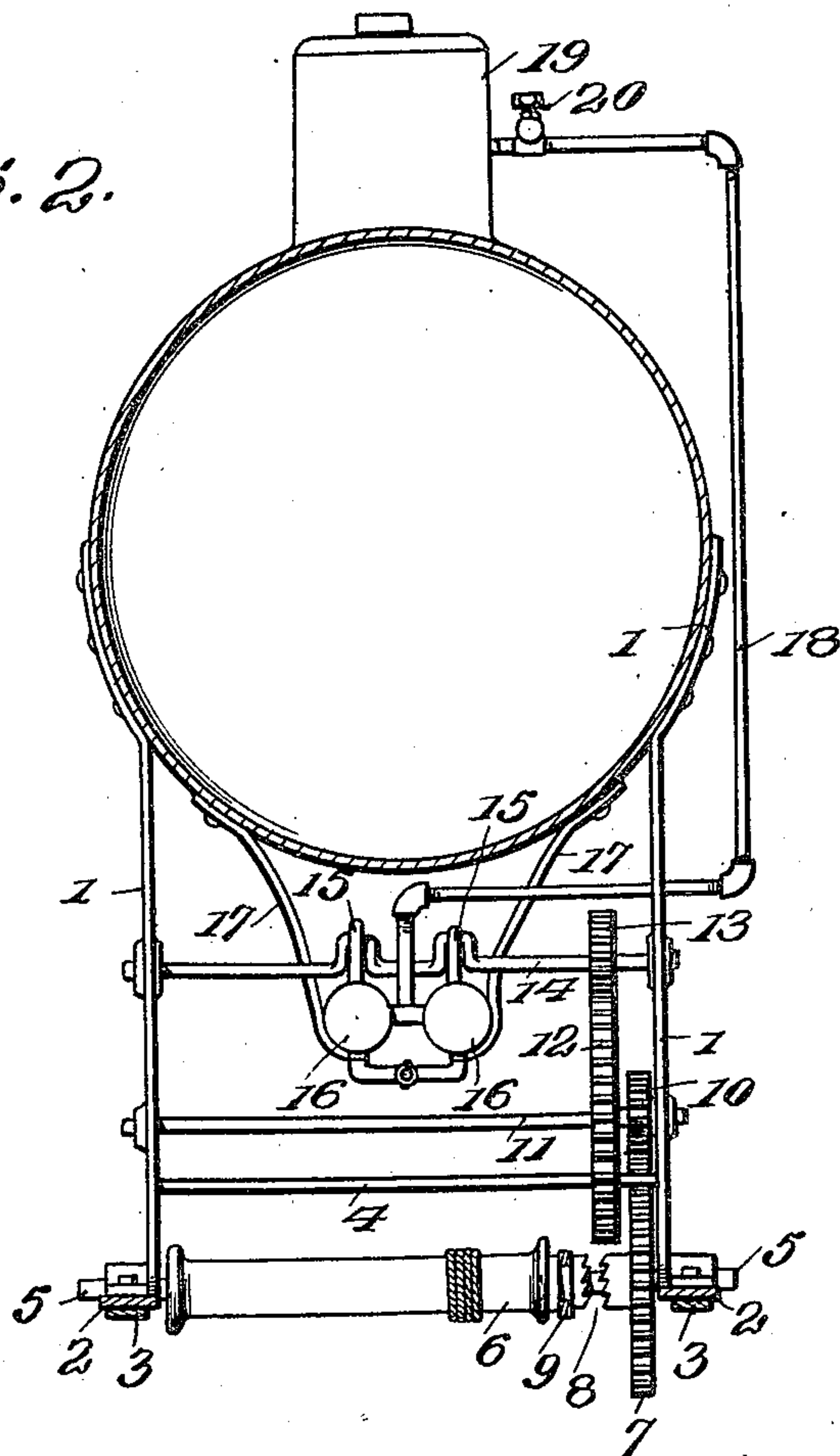
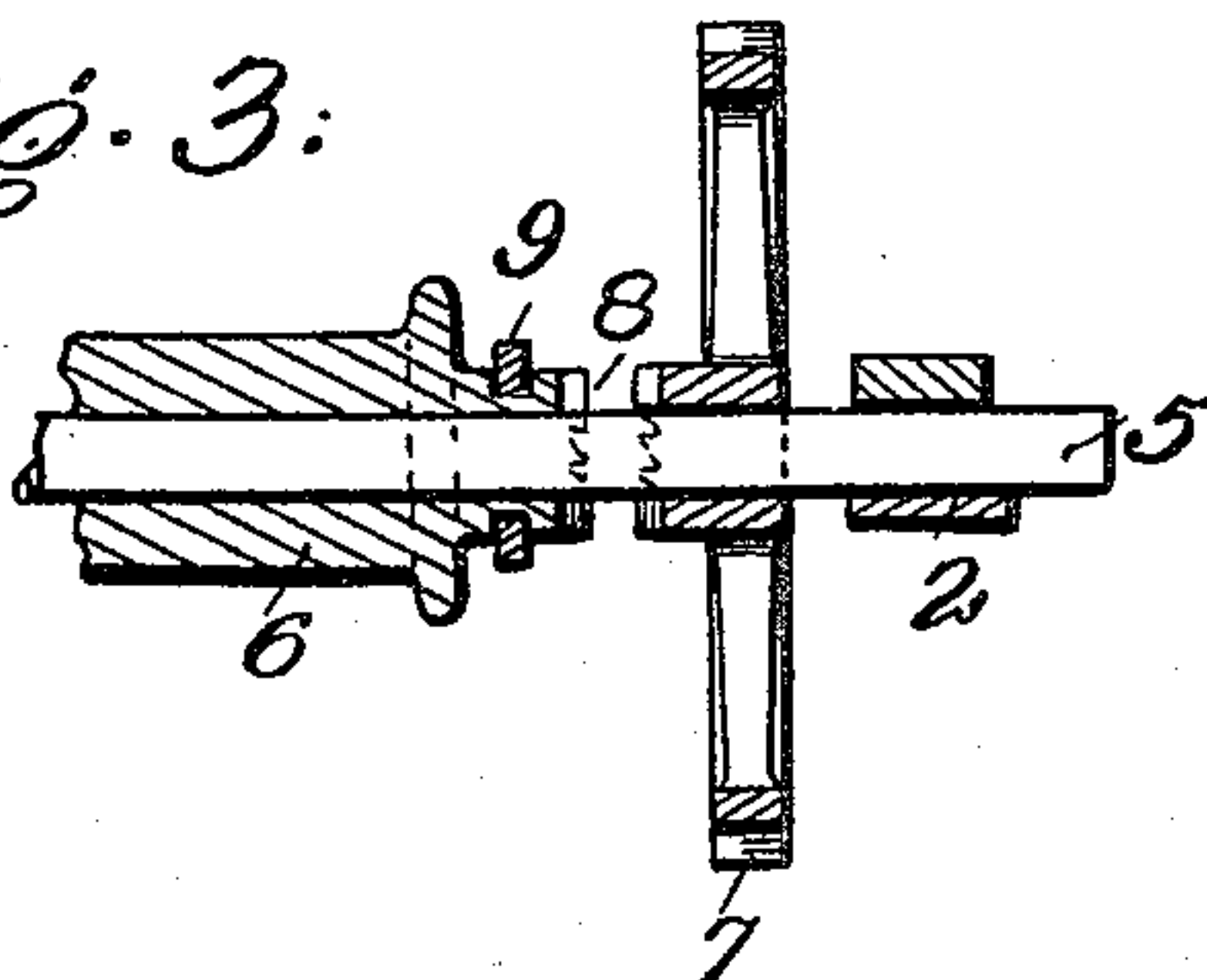


Fig. 3.



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UNITED STATES PATENT OFFICE.

CHARLES HILDEBRAND AND JOHN HILDEBRAND, OF ELLINWOOD, KANSAS.

DRAFT ATTACHMENT FOR TRACTION-ENGINES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, CHARLES HILDEBRAND and JOHN HILDEBRAND, citizens of the United States, both residing at Ellinwood, in the county of Barton and State of Kansas, have invented certain new and useful Improvements in Draft Attachments for Traction-Engines, of which the following is a specification.

10 This invention comprehends certain new and useful improvements in traction engines and relates particularly to draft devices therefor designed for use in propelling the traction engine over soft soil or the like
15 where it would be otherwise impossible to travel and also for use in driving a separator or the like along the road under similar conditions.

The invention has for its primary object
20 an improved draft apparatus of this character which will be simple, durable and efficient in construction, and easily controlled by the engineer or operator of the traction engine.

25 With these and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements, and combinations of the parts that we shall hereinafter
30 fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings in which:

35 Figure 1 is a side elevation of a portion of a traction engine embodying the improvements of our invention; Fig. 2 is a transverse sectional view thereof, showing the improvements in front elevation; and Fig.
40 3 is a detail sectional view showing a portion of the winding drum and its clutch gear.

Corresponding and like parts are referred to in the following description and accompanying drawings by the same reference
45 numerals.

The framework for supporting the moving parts of our improved draft appliance or attachment may be of any desired construction and embodies vertically disposed
50 angle iron bars 1 secured at their upper ends to the opposite side of the boiler of the traction engine and extending downwardly in front of the furnace thereof, said bars being
55 connected at their lower ends to similar bars

2 which extend forwardly from the front of the firebox, as shown. The framework may also include forwardly and upwardly extending brace rods 3 and a transversely extending brace rod 4, the latter being connected to the bars 1 near the lower ends of the latter. Journaled in boxings secured to the lower ends of the framework bars 1, or at the juncture of the bars with the horizontal framework bars 2, is a transverse winding shaft 5. A drum 6 is secured on said shaft, as shown. The shaft 5 carries at one end a gear wheel 7 which is mounted loose thereon and adapted to be secured thereto by means of a clutch 8 carried by any suitable form of shipper lever 9 extending up to the platform of the traction engine where it may easily be manipulated by the operator. The gear wheel 7 meshes with a spur pinion 10 secured on one end of an idler shaft 11 journaled in the framework, said shaft also carrying a gear wheel 12 which meshes with a driving pinion 13 secured on one end of a transversely extending crank shaft 14. The cranks of the shaft 14 are respectively connected by means of pitmen 15 to the crossheads of the piston rods, the pistons of said rods working in steam cylinders 16 which are arranged side by side, extending forwardly and rearwardly and suspended underneath the boiler in front of the fire box, by means of hangers 17, as clearly illustrated in the drawings.

18 designates a steam supply pipe connected at one end to the cylinders 16. The steam supply pipe 18 is connected at its upper end to the steam dome 19 of the engine and is controlled in any desired way as by a throttle 20. The exhaust pipe 21 leading from the cylinders 16 extends into the smoke stack 22.

A cable 23 winds upon the drum 6 and is preferably passed through the platform and held in an inoperative position in any desired way.

From the foregoing description in connection with the accompanying drawings, the operation of our draft attachment will be apparent. Under normal conditions, the cable will be wound up on the drum 6, and its relatively free end secured to the platform of the traction engine. In the practical use of the device, say for example, as the traction engine is drawing a separator along the road, should a soft stretch be encountered

countered and the engine driver find that it is impossible for the traction wheels to obtain the proper surface traction to draw the separator over such stretch, he need only
5 uncouple the traction engine from the draw bar of the separator and run the traction engine ahead a predetermined distance the clutch 8 being disengaged at this time and the cable 23 unwound and secured to the
10 separator. It will then only be necessary to throw in the clutch 8 and open the throttle 20 so as to wind the cable 23 upon the drum 6 and draw the separator up to the traction engine. If found necessary, the
15 engineer may throw in the steam to the main cylinder of the traction engine so as to hold it stationary while it is being used as a draft device. Should it happen that the engine itself cannot pass over a soft stretch, it will
20 be necessary for the operator to merely uncouple the loose end of the cable 23 and unwind the cable from the drum, the cable being run in front of the traction engine the required distance and being secured to an
25 anchor or any sufficiently stable object whereupon the clutch 8 is thrown in and the throttle 20 opened so as to wind the cable upon the drum and assist the main engine cylinders in propelling the traction
30 engine over the ground.

Having thus described the invention what is claimed as new is:

The combination with a traction engine embodying a platform and rear ground wheels, of hanger bars secured to the traction engine and extending downwardly therefrom in front of the platform and wheels, a crank shaft journaled in said hanger bars, auxiliary steam cylinders suspended from the traction engine and arranged to drive said crank shaft, a drum shaft journaled in the lower ends of the hanger bars, a drum loosely mounted on said shaft, a gear wheel fixed to the shaft and arranged for clutch connection to the drum, an operative driving connection between said gear wheel and the crank shaft, and a cable adapted to wind on said drum, said cable being adapted to pass through an opening formed in the platform with its free end secured above the platform to hold the cable in its inoperative position.

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES HILDEBRAND. [L. s.]
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Witnesses:

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