

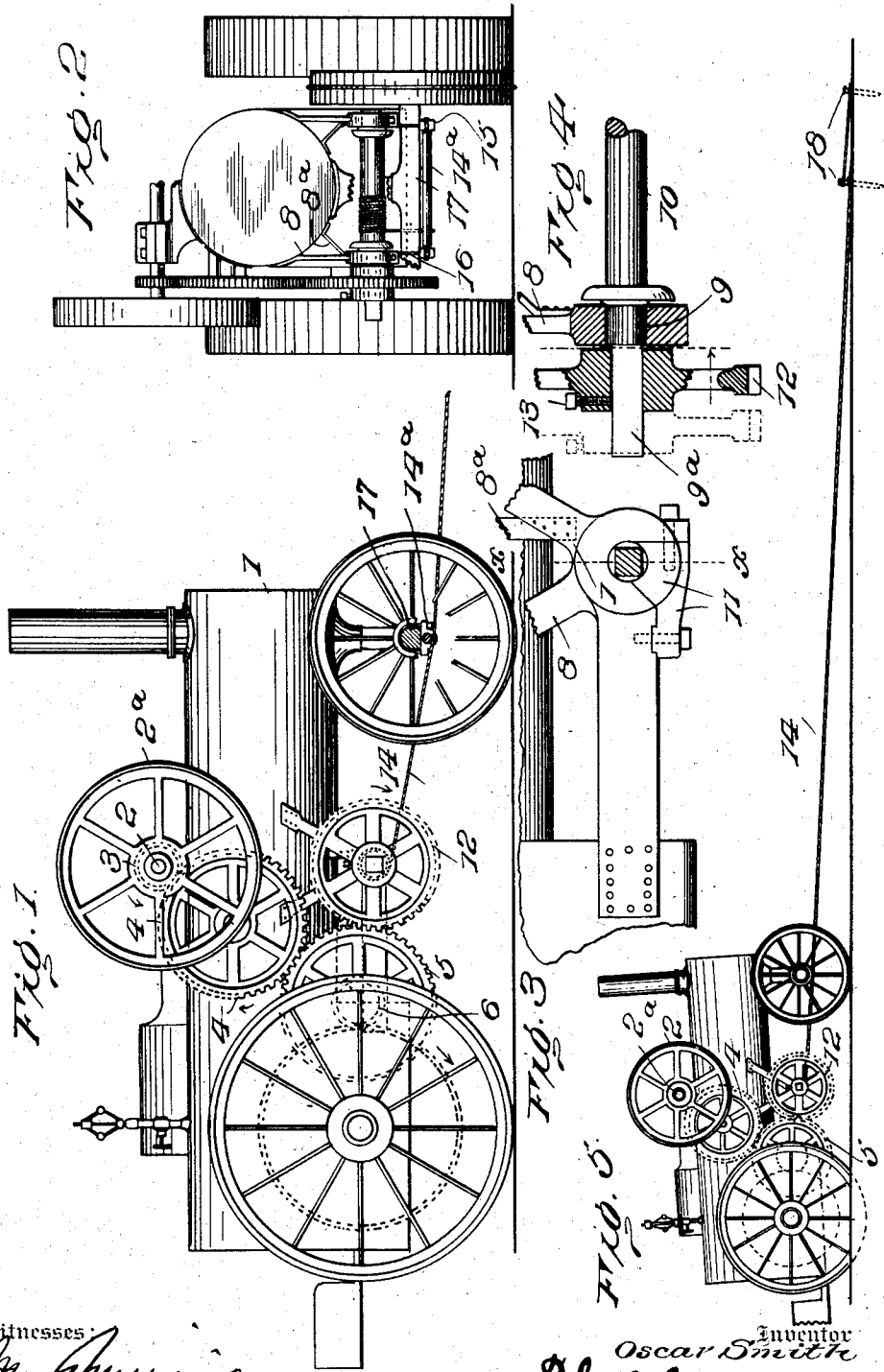
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O. SMITH.

ATTACHMENT FOR SELF PROPELLED VEHICLES.

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UNITED STATES PATENT OFFICE.

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ATTACHMENT FOR SELF-PROPELLED VEHICLES.

No. 874,128.

Specification of Letters Patent.

Patented Dec. 17, 1907.

Application filed April 15, 1907. Serial No. 368,317.

To all whom it may concern:

Be it known that I, OSCAR SMITH, citizen of the United States, residing at Milton, in the county of Sumner and State of Kansas, have invented certain new and useful Improvements in Attachments for Self-Propelled Vehicles, of which the following is a specification.

This invention has for its object an attachment for traction engines, automobiles, or similar self-propelled vehicles whereby the vehicle may pull itself free after having its wheels more or less embedded in a miry road way, and the invention consists in certain constructions and arrangements of parts which I shall hereinafter fully describe and then point out the novel features in the appended claims:

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation of a traction engine equipped with the improvements of my invention. Fig. 2 is a front elevation thereof, parts being broken away. Fig. 3 is an enlarged fragmentary view illustrating one of the means for journaling the shaft of the reel or capstan employed. Fig. 4 is a sectional view on the line $x-x$ of Fig. 3. Fig. 5 is a side elevation, on a reduced scale, illustrating the application of the invention.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

Referring to the drawings, the numeral 1 designates the boiler of a traction engine, and 2 the drive shaft thereof with its fly wheel 2^a, said shaft being operatively connected to a gear ring 7 or the like on the rear driving axle, by means of the intermediate drive gears 3, 4, 5 and 6.

Hangers 8 are provided in which to journal the transversely extending shaft 9 of a reel or capstan 10. In the present instance these hangers have three branches, two of which are connected to the boiler and the third of which is connected at its rear end to the walls of the boiler furnace. One of these branches may be used as a connecting means for the supporting brace 8^a of the boiler.

In order that the capstan may be detached whenever desired, the journal bearings at the

juncture of the arms or branches of the hangers are provided respectively with removable sections 11, secured in place by screws or bolts as shown. One end 9^a of the capstan shaft 9 is extended as shown and carries a gear wheel 12 which may be splined for movement thereon, or formed with a square opening receiving the end 9^a of a corresponding shaft, and the gear wheel 12 is adapted to be held at different points along the extension 9^a by means of a set screw 13, or the like. A rope 14 is adapted to be swung around the capstan and to pass forwardly underneath and in contact with a roller 14^a which is journaled within the blocks 15 suspended by means of staple bolts or stirrups 16 from the front axle 17. The purpose of the roller 14^a is to reduce friction, and to raise the front end of the engine when the front wheels are mired and to prevent the raising of the rear end of the engine under the strain of the cable.

In describing the practical operation of the invention, reference is to be particularly had to Fig. 5, wherein is illustrated a traction engine the rear wheels of which have become embedded in the road way. In order to free the engine by its own power, the cable or rope 14 is unwound from the capstan 10 and carried forward the required distance and secured to one or more stakes 18 driven into the ground. The engine is then started in a direction to wind up the cable upon the capstan, which will manifestly result in drawing the traction engine or other vehicle forwardly and practically lifting the embedded wheels from the road way.

As the gear wheel 12 is mounted for adjustment upon the extension 9^a of the capstan shaft 9, it may be moved outwardly upon said extension, as indicated by dotted lines in Fig. 4, and be held at an inoperative position out of engagement with the gear wheel 5, or it may be moved inwardly and held by the set screw 13 in engagement with the gear wheel 5, so as to be driven directly therefrom, whenever it is desired to bring the capstan into play. It is manifest that any form of clutch may be substituted for the set screw 13.

It is to be understood that my invention is not limited to traction engines, but is applicable equally to automobiles and other self-propelled vehicles, and that the capstan may be suspended or supported in any way from the vehicle and be driven by any desired

train of gearing from the motor or engine of the vehicle.

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

- 5 The combination with a self-propelled vehicle and its engine and boiler, of hangers secured to and depending from the boiler in front of the rear traveling wheels of the vehicle, driving gears operatively connecting the
10 engine with the rear traveling wheels, a capstan shaft mounted in bearings in the hangers, a capstan mounted on said shaft, said bearings being provided with removable sec-

tions whereby the capstan and its shaft may be detached, one end of said shaft being extended laterally, a spur gear longitudinally slidable on the extension of said shaft and adapted to be moved into or out of engagement with one of the drive gears, and a cable adapted to wind on said capstan.

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

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