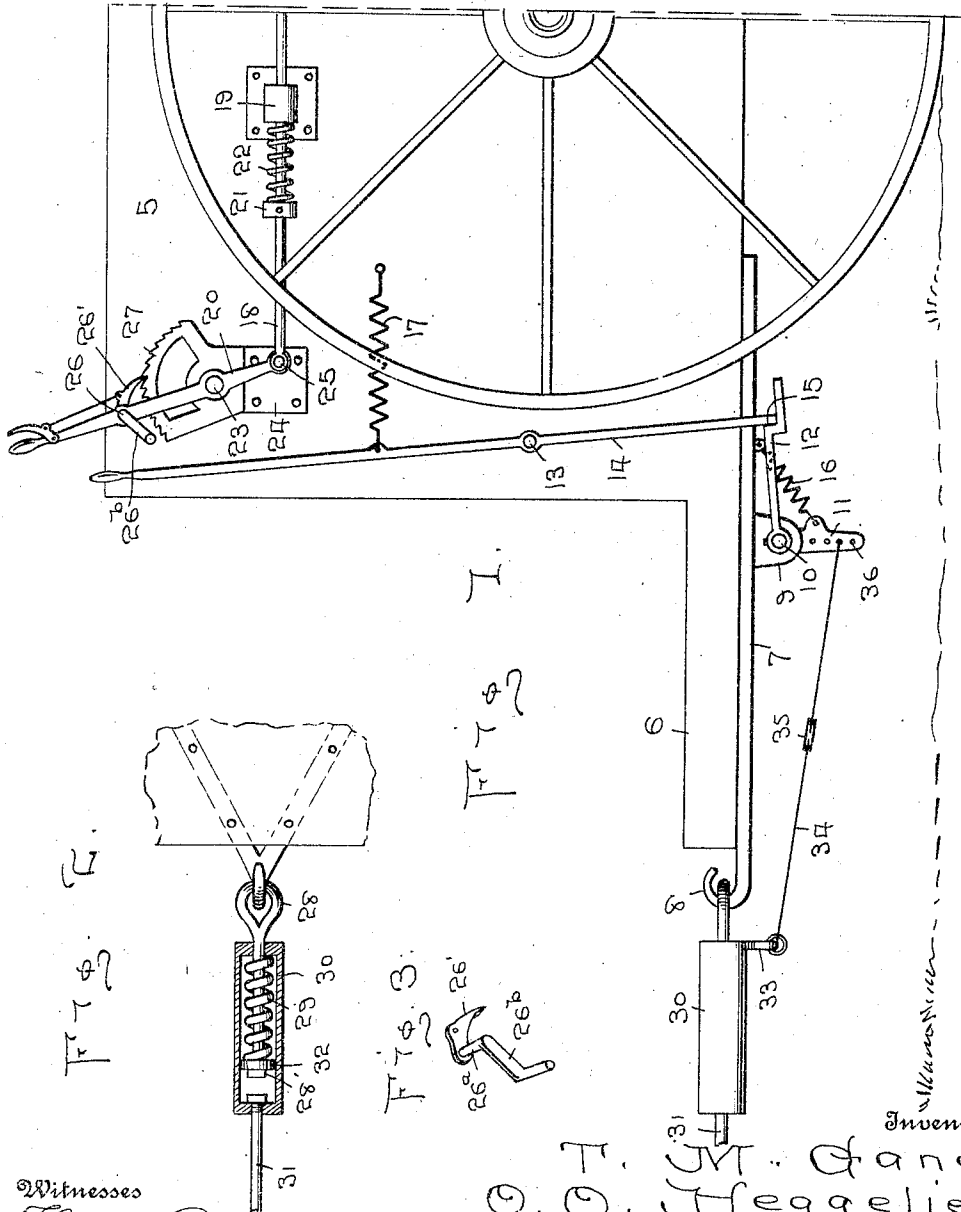


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Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS M. GANDY AND OLE O. HEGGELIEN, OF WEBSTER, SOUTH DAKOTA.

TRACTION-ENGINE PLOW-STOPPER.

1,053,286.

Specification of Letters Patent.

Patented Feb. 18, 1913.

Application filed April 13, 1912. Serial No. 690,539.

To all whom it may concern:

Be it known that we, THOMAS M. GANDY and OLE O. HEGGELIEN, citizens of the United States, residing at Webster, in the county of Day and State of South Dakota, have invented certain new and useful Improvements in Traction-Engine Plow-Stoppers; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to draft appliances, and it relates more particularly to a resilient draft medium, designed to connect a traction engine or the like with the object being drawn thereby, such, for instance, as a gang-plow.

An object of the invention is to provide, in connection with a draft medium, between a source of motive power and the object moved thereby, means whereby, when the resistance is increased above a predetermined normal, a trip or trigger will be actuated, for causing the motive power to be diminished, diverted, counteracted, annulled or otherwise rendered inoperative.

A still further object of the invention is to provide an improved resilient draft medium, between a motor and an object which is to be moved thereby, for preventing a shock, received by the said object, from being transmitted to the motor.

Other objects and advantages may be recited hereinafter and in the claims.

In the accompanying drawings which form a part of this application, Figure 1 represents, somewhat diagrammatically, the rear end of a traction engine having our improved draft medium connected thereto. Fig. 2 is a detail sectional view through the casing containing the resilient medium, and, Fig. 3 is a view, in perspective of the pawl-trip member.

Referring to the drawings, in which similar reference characters designate corresponding parts throughout the several views, the body of the engine is designated, 5, and to the platform 6 thereof is secured a bracket 7, provided with a hook 8 and with a lug or bearing 9. In this bearing 9 is journaled a shaft 10 having an apertured vertical arm 11 and a shouldered horizontal arm or trigger 12 fixed thereto. Pivoted to the engine at 13, is a hand-lever 14, having its lower end in engagement with the shoulder or

keeper 15, of the arm 12, and a spring 16, having one end secured to the engine 5 and its other end secured to the arm 11, tends to retain the engagement of the lever 14 and the keeper 15, under normal conditions, while a spring 17 tends to draw the top part of the lever 14 rearwardly of the engine. A rod 18, mounted to be reciprocated in a bearing 19, by means of a hand-lever 20, has a collar 21 secured thereon, and a spring 22 interposed between the collar and the bearing 19. The lever 20 is pivoted at 23 to a bracket 24 and pivoted at 25 to the rod 18, and said hand-lever 20 is provided with a pawl-trip member 26 which engages with a toothed segmental portion 27 of the bracket 24, said bracket being secured to the engine by any proper means. The pawl-trip member consists of a pawl 26^a, a journal 26^b and a crank 26^c.

The draft medium consists of an eye-bolt 28 engaging the hook 8 and having a helical spring 29 around the shank thereof, the spring 29 being inclosed by an elongated casing or housing 30, apertured at both ends for the reception of the shank of the bolt 28 and a link 31, respectively, the latter being intended to properly connect with a gang-plow, or other object to be drawn, (not shown). A nut 28^a and a washer 32 are secured on the shank of the bolt 28, and the spring 29 is interposed between the washer 32 and an end of the casing or housing 30, so that when a pull is exerted on the bolt 28 and a resistance is applied to the link 31, the spring 29 yields in proportion to said pull and resistance. The rear and lower end of the casing 30 carries a lug 33, to which is secured an end of a connecting member or link 34, provided with a turn-buckle 35 for adjusting the length thereof, the other end of the link 34 is secured to the arm 11, through one of the apertures 36, and it is obvious that, by means of these apertures 36 and the turn-buckle 35, the rod 34 may be adjusted, for increasing or decreasing the amount of pull necessary to disengage the lever 14 from the keeper 15, against the action of the springs 16 and 29.

In operation; assuming that there is a gang-plow or other means of resistance applied to the link 31, and that the power exerted by the engine or motor is sufficient to overcome the resistance; the engine will continue to overcome the resistance until the latter is increased above a certain predeter-

mined normal, whereupon, the action of the springs 16 and 29 will be overcome, the casing 30, the link 34 and the lower end of the arm 11 will be moved rearwardly, thereby moving the keeper 15 downwardly, whereupon the spring 17 will suddenly draw the top end of the lever 14 against the crank 26^b and thereby release the pawl 26^a from engagement with the toothed segment 27 and the spring 22 will now cause the rod 18 to move forward.

The rod 18 may be connected with a clutch mechanism (not shown) but which may be of any usual construction, for connecting the motive power with the traction wheels of the engine. It is obvious, however, that the rod 18 could be connected with any ordinary form of brake mechanism or valve controlling mechanism (not shown), whereby the action of the engine is controlled. It is obvious that when a gang-plow is drawn by an engine through the medium of our improved draft mechanism, and said plow is suddenly stopped by an obstacle, the spring 29 will yield, while the engine moves slightly forward, during the operation of the trip and its adjuncts, so that the shock received by the plow is not transmitted to the engine.

It will be seen that we have provided an improved mechanism which is capable of attaining the foregoing objects, and in a thoroughly practical and efficient manner.

We do not limit our invention to the exact details of construction, combination and arrangement of parts, as described and illustrated, but our invention may only be limited by a reasonable interpretation of the following claims.

What we claim is:

1. In combination with a traction engine, a yieldable element adapted to be connected to a movable object to be drawn, an engine-controlling element, means for holding the

engine controlling element normally out of engine-controlling position, and a trigger on the platform and cooperatively connected with the yieldable element for releasing said engine-controlling element from the last said means.

2. In a device adapted to be connected between a traction engine and an object drawn thereby, a yieldable element adapted to be connected to said object, a movable element adapted to be connected to an engine-controlling device, a lever carrying a pawl-trip for engagement with a toothed segment for holding said movable element normally out of operative position, a spring actuated lever adapted to actuate the trip for releasing it from engagement with the toothed segment, a keeper for holding said lever normally out of contact with the pawl-trip, and means operatively connecting the keeper with the yieldable element for releasing the lever therefrom.

3. In combination with a yieldable draft element connecting a source of motive power and an object drawn thereby, a power-controlling element, means including a pawl trip for normally retaining the power controlling element out of operative position, a lever having means connected therewith for releasing the pawl trip, a keeper for normally holding the lever out of trip-releasing position, and means operatively connecting said keeper with the yieldable element for releasing the lever from the keeper.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

THOMAS M. GANDY.
OLE O. HEGGELIEN.

Witnesses:

E. A. SCHULLIAN,
JACOB BOYD.