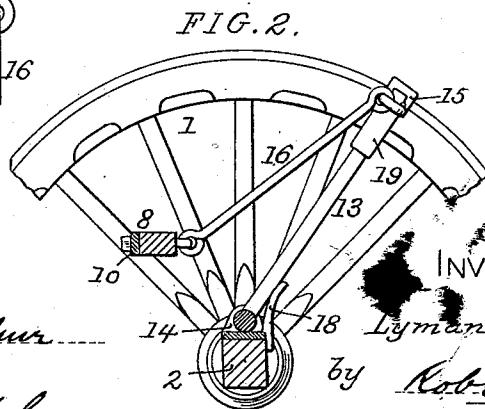
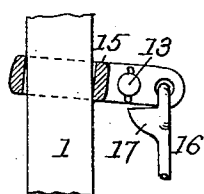
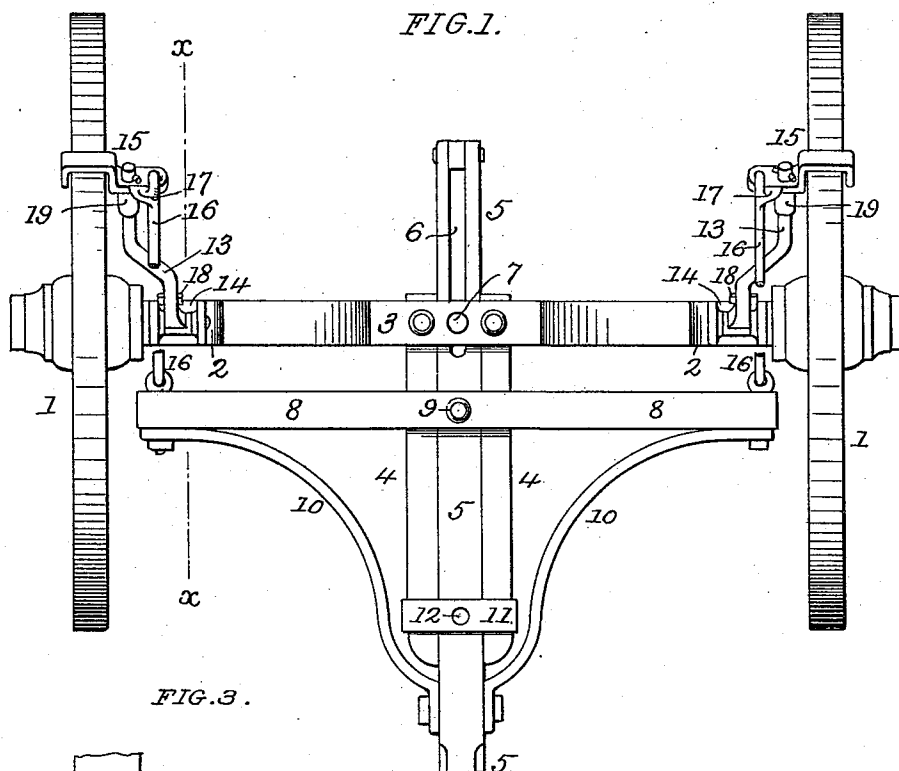


(No Model.)

L. O. TOMLINSON.
WAGON STARTER.

No. 469,758.

Patented Mar. 1, 1892.



ATTEST:

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UNITED STATES PATENT OFFICE.

LYMAN O. TOMLINSON, OF CHICAGO, ILLINOIS.

WAGON-STARTER.

SPECIFICATION forming part of Letters Patent No. 469,758, dated March 1, 1892.

Application filed February 24, 1891. Serial No. 382,639. (No model.)

To all whom it may concern:

Be it known that I, LYMAN O. TOMLINSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Wagon-Starters; and I 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.

The purpose of the present invention is to provide a simple and effective mechanism for attachment to a wagon, so as to afford an effective and powerful means for starting the same when from any cause the same has become stalled, the draft of the horses being employed to operate the attachment, as will hereinafter more fully appear.

In the accompanying drawings, illustrating my present improvements, Figure 1 is a plan view of the front portion of the running-gear of a wagon to which my present improvement is applied; Fig. 2, a detail sectional elevation on line *xx*, and Fig. 3 a detail sectional plan view of the clutch that engages the rim of the wagon-wheel.

Similar numerals of reference indicate like parts in the different views.

Referring to the drawings, 1 represents the front wheels; 2, the axle; 3, the bolster or lower member of the fifth-wheel, and 4 the hounds, of the usual form and construction.

In the present invention the tongue 5 is capable of a limited longitudinal movement between the hounds 4, and such longitudinal movement may be circumscribed by an elongated slot 6, formed in its rear portion and made to engage around the ordinary king-bolt 7, as illustrated in Fig. 1. Dependence, however, is placed more upon the cross-piece or bar 8, arranged on top of the tongue and secured thereto by bolt 9 and yoke-brace 10, such bar or piece 8 sliding along the tops of hounds 4 and in its forward movement coming to a stop against the fixed cross-piece 11 of said hounds.

12 is an orifice down through the cross-piece 11 and the tongue 5 for the passage of a bolt or pin to lock the tongue in its rearward position for the purpose hereinafter stated.

The mechanism for imparting motion to the

wheels of the wagon is of a dual arrangement, one for each wheel, and each consisting of a radial bar or arm 13, journaled to the axle by the pivot-bracket 14, and carrying at its outer end the grip-lever 15. This grip-lever is pivoted at its middle on the radial arm 13, its outer end being bent so as to straddle the outer rim and sides of the wheel, as shown, while its inner end is connected by a link or rod 16 to the respective end of the cross-bar 8 of the tongue, the construction being such that an initial longitudinal movement of the tongue in its hounds will first draw the grip-levers into oblique positions, so as to clamp or grip the wheel-rims, and with further longitudinal movement of the tongue will impart motion to the wheels to start the wagon.

17 is a stop or lug on the side of each draw link or rod 16, against which the side of the grip-lever abuts to be held in parallel and non-engaging position when the starter is in its retracted position, as indicated in Fig. 1.

With the construction shown when the tongue in its forward movement comes to a stop the grip-lever will automatically assume a parallel or non-engaging position, so as not to interfere with the further movement or rotation of the wheel.

18 is a back-stop on the axle to limit the rearward movement of the radial arm 13 and hold the parts in operative position.

In the construction shown, owing to the differences in the pivotal axis of the wheel and the radial arms of the grip mechanism, means are required to allow for an expansion and contraction of the radial arms, so that the same radial distance of the grip-lever from the axis of the wheel will at all times be preserved. I accomplish this in a very effective manner by a sleeve connection 19, that forms both the pivotal connection for the grip-lever, as well as an expansion-joint, for the purpose above stated.

In my present improvement the distinguishing feature is the independent dual arrangement of the concentrically-acting grip mechanism for imparting a simultaneous starting movement to the wheels of the wagon, and in the practical carrying out of my invention modifications may be made in the structure and mechanical arrangement of the parts

without departing from the spirit of this part of my invention. Among such may be mentioned the application of the starting mechanism to the hind wheels of the wagon instead of to the front wheels, as shown, the substitution of a yoke connection surrounding the axle to form a pivotal connection for the radial arm 13 instead of the pivot-bracket 14, as well as the use of any other usual and suitable gripping device for the special form of grip-lever 15 illustrated in the drawings.

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

1. The combination, with a wagon-tongue adapted to have limited longitudinal movement and carrying a cross-bar, of the dual arrangement of radial arms pivoted to the axle and carrying at their outer ends a grip mechanism adapted to engage the wheels, substantially as set forth.

2. The combination, with a wagon-tongue adapted to have limited longitudinal movement and carrying a cross-bar fixedly braced thereto, of the dual arrangement of radial arms pivoted to the axle and carrying at their outer ends a pivoted grip-lever, one end of which is bent or channeled to engage the wheel-rim and the other end formed with an eye for the attachment of the connecting-rods between said grip-levers and the ends of the cross-bar on the tongue, substantially as set forth.

3. The combination, with a wagon-tongue adapted to have limited longitudinal movement and carrying a cross-bar fixedly braced thereto, of the dual arrangement of radial arms pivoted to the axle and carrying at their outer ends a pivoted grip-lever, one end of which is bent or channeled to engage the wheel-rim and the other end formed with an

eye for the attachment of the connecting-rods between said grip-levers and the ends of the cross-bars on the tongue, and a back-stop 18 on the axle to limit the rearward movement of the radial arms of the grip mechanism, substantially as set forth.

4. The combination, with a wagon-tongue adapted to have limited longitudinal movement and carrying a cross-bar fixedly braced thereto, of the dual arrangement of the radial arms pivoted to the top of the axle by pivot-brackets 14 and carrying at their outer ends a grip-lever pivotally connected thereto by a sleeve connection 19, one end of the grip-lever being bent or channeled to engage the wheel-rim and the other end formed with an eye for the attachment of the connecting-rods between said grip-levers and the ends of the cross-bar on the tongue, substantially as set forth.

5. The combination, with a wagon-tongue adapted to have limited longitudinal movement and carrying a cross-bar fixedly braced thereto, of the dual arrangement of the radial arms pivoted to the top of the axle by pivot-brackets 14 and carrying at their outer ends a grip-lever pivotally connected thereto by a sleeve connection 19, one end of the grip-lever being bent or channeled to engage the wheel-rim and the other end formed with an eye for the attachment of the connecting-rods between said grip-levers and the ends of the cross-bar 8, said rods being provided with stop-lugs 17, substantially as set forth.

In testimony whereof, witness my hand this 21st day of February, 1891.

LYMAN O. TOMLINSON.

In presence of—

ROBERT BURNS,
GEO. H. ARTHUR.