No. 738,086. PATENTED SEPT. 1, 1903.

J. R. TROTT & S. H. SUTPHIN.

CAR STARTER.

APPLICATION FILED APR. 20, 1903.

NO MODEL.

Fig. 1.

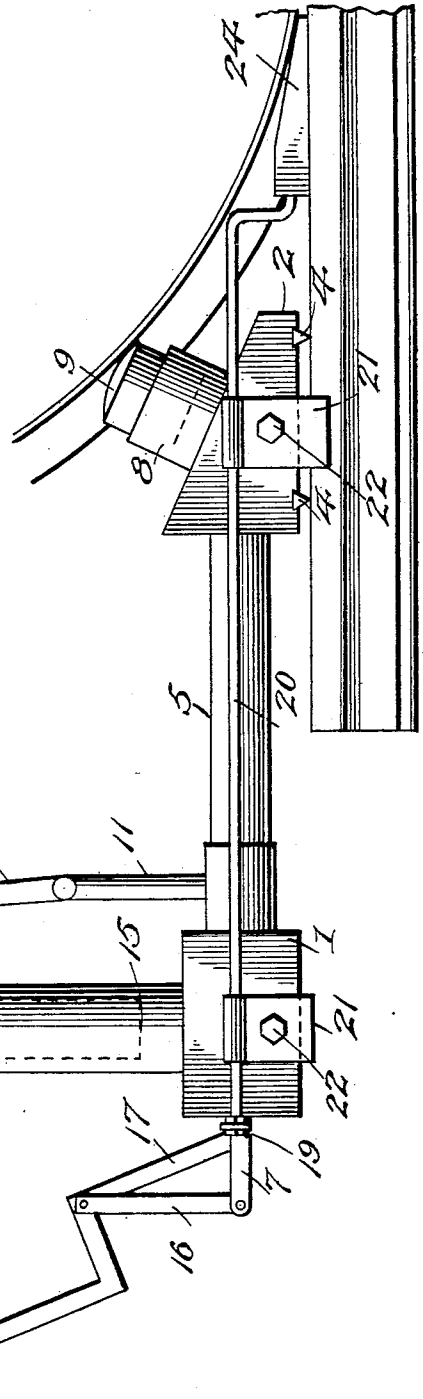
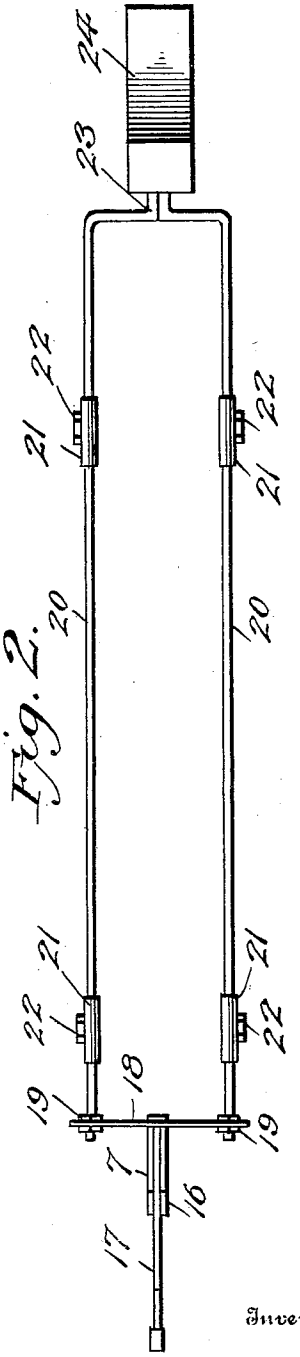


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN ROSS TROTT AND SIMON HENRY SUTPHIN, OF VIRDEN, ILLINOIS.

CAR-STARTER.

SPECIFICATION forming part of Letters Patent No. 738,086, dated September 1, 1903.

Application filed April 20, 1903. Serial No. 153,556. (No model.)

To all whom it may concern:

Be it known that we, JOHN ROSS TROTT and SIMON HENRY SUTPHIN, citizens of the United States, residing at Virden, in the county of Macoupin and State of Illinois, have invented new and useful Improvements in Car-Starters, of which the following is a specification.

Our invention has relation to car-starters, and is more particularly designed as an improvement on Letters Patent granted to us November 25, 1902, and numbered 714,623; and the same consists in the construction and arrangement of parts, as will be hereinafter described, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation of our apparatus. Fig. 2 is a top view of the rods, their guides, the shoe, and the lug at the opposite ends of the rods.

Referring to the drawings, the numerals 1 and 2 designate blocks which are spaced apart and arranged one in front of the other, the forward one of which has an inclined top surface provided with a pressure-head 9, operating in a socket-chamber 8. On the upper surface of the block 1 is mounted a socket-chamber 15, in which operates a plunger 14. Secured to the two blocks 1 and 2 is a fluid-chamber 5, communicating therewith and with the chambers 8 and 15. The forward block 2 is provided with sharp wedge-shaped grippers 4, which are adapted to coact with the upper surface of the rail to prevent the same from slipping during operation of the apparatus.

Mounted on the fluid-chamber 5 is an upright 11, having pivoted thereto an extension 12, which in turn has its upper end pivoted to the inner end of the lever 13, said upright and its extension serving to regulate and give force to the lever 13 during the operation of the plunger 14, and said lever serving also to operate the shoe 24 by means of the rods 20, secured thereto.

The numeral 20, as shown in Fig. 2, designates two horizontal parallel bars arranged on opposite sides of the blocks 1 and 2, and 21 designates guides by which the blocks are retained on the rail, the upper part of guides 21 being so shaped as to form a tube or carrier through which rods 20 may be easily worked forward and backward.

22 designates cap-screws by means of which guides 21 are held securely in place.

23 designates the junction of the rods 20, at which point said rods 20 are attached to a shoe 24, which is suitably shaped to the configuration of the periphery of the wheel and the tread of the rail.

18 designates a cross-bar joining together the rear ends of rods 20 by suitably-adjusted nuts 19.

The rearwardly-projecting lug 7 at its rear extremity is attached to upright 16, the upper end of said upright being pivotally connected with an angle-iron 17.

That the operation may be more fully understood we hereby give a detailed description of the different parts and their positions before operating. The car-starter being placed on the rail a short distance behind the car-wheel, lever 13 is raised to its highest point, and the same being attached to plunger 14 necessarily carries it to its highest elevation, this movement at the same time causing pressure-head 9 to recede to its lowest point. When lever is elevated, angle-iron 17, being released from downward pressure from lever 13, assumes a position parallel with upright 16, cross-bar 18 resting against angle-iron 17 at its lower end in its receded position. The shoe 24 being in its rearward position is resting against front end of car-starter 2. The apparatus being now in proper position is pushed forward by means of lever 13 until convex bearing 10 of the pressure-head 9 engages rim of wheel. Lever 13 now being depressed, 14 is thereby at its lower extremity brought in forcible contact with fluid in chamber 5, thereby necessarily forcing pressure-head 9 upward and moving car forward. Lever 13 in its downward stroke is brought in contact with upper top end of angle-iron 17. By this means the lower end of angle-iron 17, being forced forward, comes in contact with cross-bar 18, forcing rod 20 forward and placing shoe 24 snugly in place under wheel. By raising lever and pushing car-starter forward the same operation may be repeated indefinitely.

Having described our invention, what we claim is—

A car-starting apparatus comprising blocks, a fluid-chamber secured between the same

and communicating therewith, socket-chambers in said blocks, a plunger in one of said chambers and a pressure-head in the other chamber, bars on opposite sides of the blocks operating in guides secured thereto, a shoe on one end of the rods, and a lug on the other end thereof, a lever pivoted to the plunger to operate the pressure-head and means secured to the lug, and coacting with the lever to operate the shoe and means secured to the fluid-chamber and to the lever to act as a fulcrum for the lever, substantially as specified.

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