(No Model.)

G. D. ROWELL.

CAR STARTER.

No. 591,498. Patented Oct. 12, 1897.

Fig. 1.

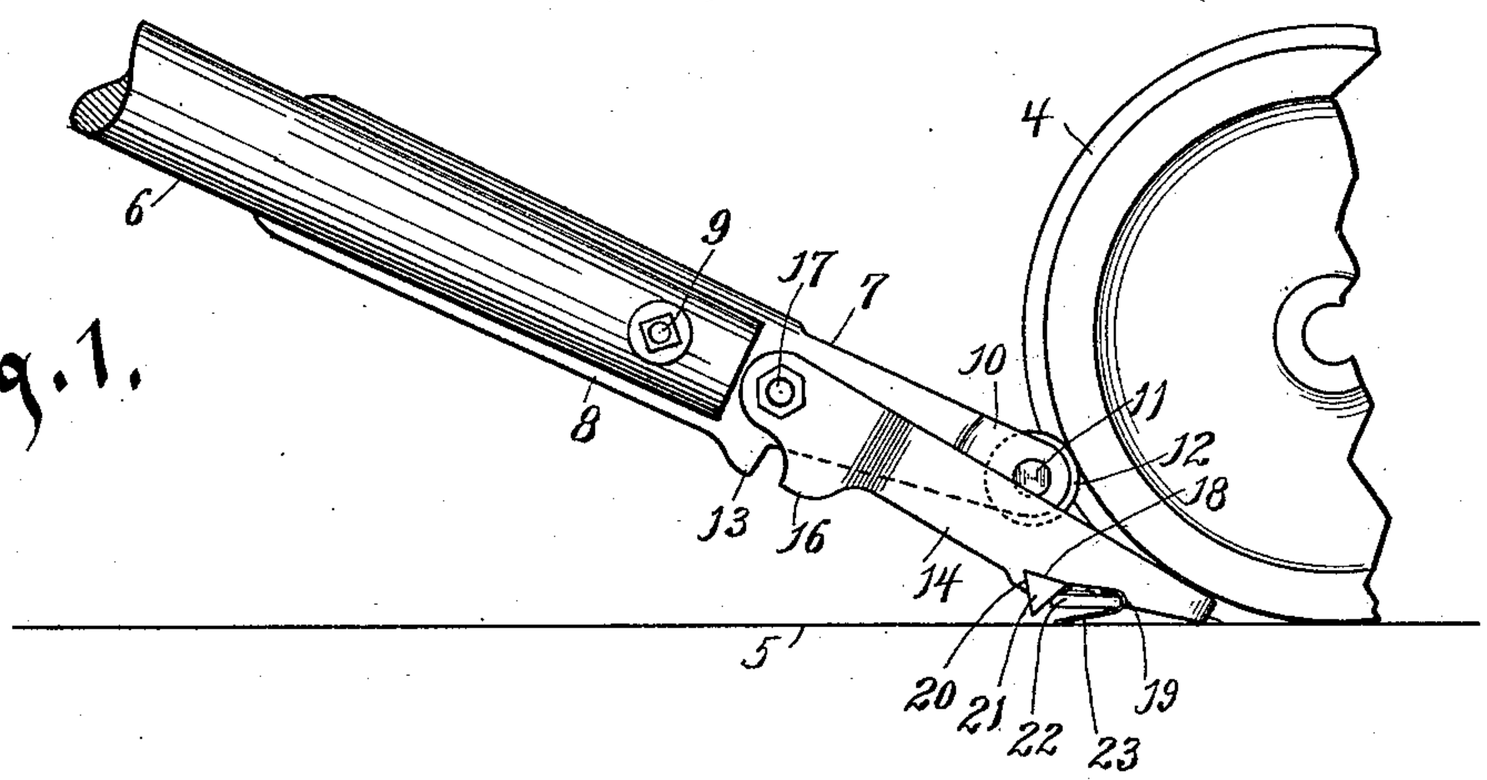


Fig. 2.

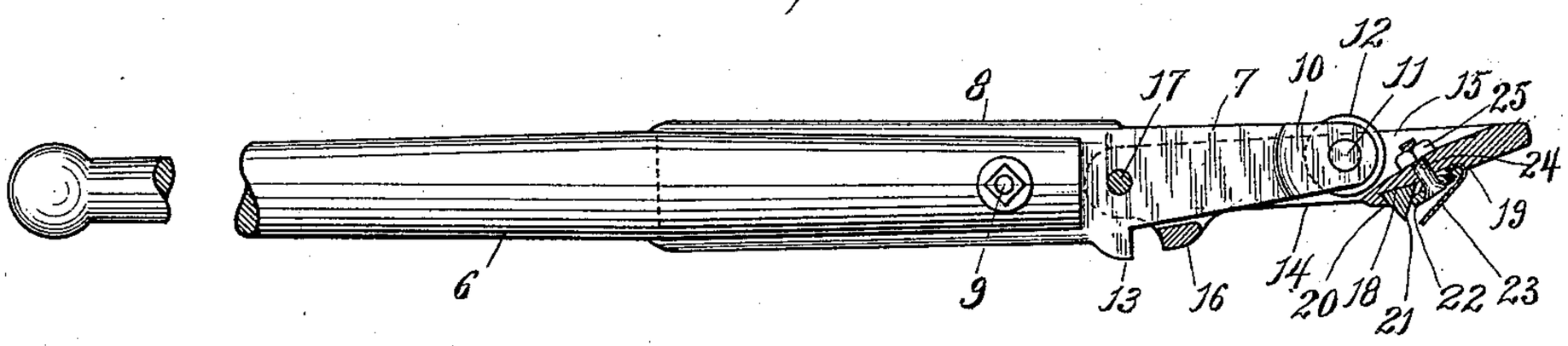
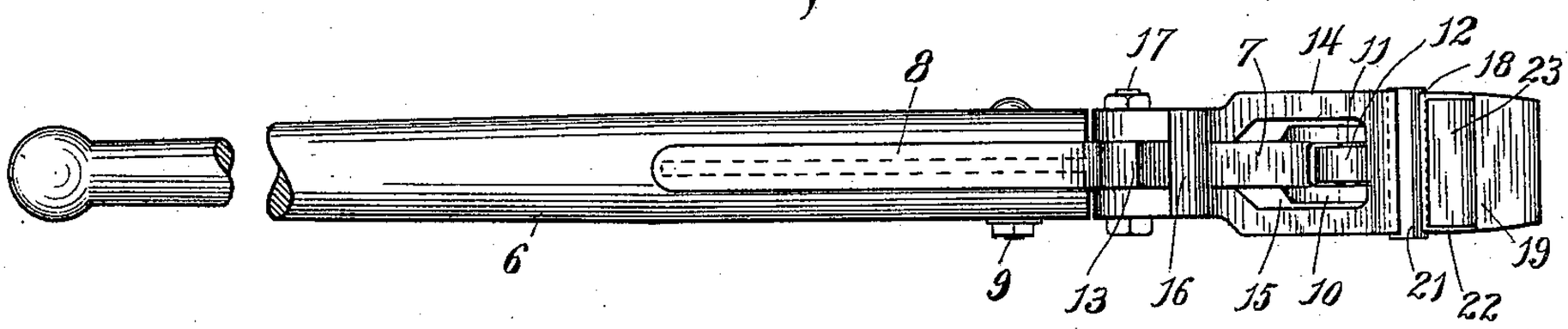


Fig. 3.



Witnesses.

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GUILFORD D. ROWELL, OF APPLETON, WISCONSIN.

CAR-STARTER.

SPECIFICATION forming part of Letters Patent No. 591,498, dated October 12, 1897.

Application filed March 29, 1897. Serial No. 629,659. (No model.)

To all whom it may concern:

Be it known that I, GUILFORD D. ROWELL, of Appleton, in the county of Outagamie and State of Wisconsin, have invented a new and useful Improvement in Car-Starters, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in car-starters.

The object of my invention is to provide an improved construction of car-starter possessing the advantages of simplicity, cheapness, and maximum leverage.

With the above primary object in view the invention consists of the devices and parts or their equivalents, as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a view of a fragment of my device, showing it properly applied to the wheel of a car. Fig. 2 is a detail view of the device, parts being in section and parts broken away; and Fig. 3 is a view of the under side of the device.

Referring to the drawings, the numeral 4 indicates a car-wheel, and 5 the rail of a track on which said wheel is adapted to travel.

My improved starter consists of three principal parts or members, the numeral 6 indicating the handle portion thereof, which is preferably made of wood in order to secure as much lightness as possible. Another member or part consists of a casting 7. This casting is formed with a projecting arm 8, which arm is I-shaped in cross-section and is adapted to enter a suitable recess therefor in the end of the handle, the top and bottom flanges of this I-shaped arm resting, respectively, upon the top and bottom of the handle. This arm is rigidly secured to the handle by means of a transverse bolt 9, which passes through the handle and through the connecting-web of the I-shaped arm, as clearly shown. This casting is preferably composed of malleable iron, and its forward end is bifurcated, as indicated at 10. The furcate parts are connected by a transverse bolt 11, which forms an axle for an antifriction-roller 12. The casting is provided on its under edge, just in advance of the arm 8, with a depending lug 13.

The numeral 14 indicates a wedging-shoe which is also preferably made of malleable iron. The forward extremity of this shoe is preferably solid and beveled upon its under side. From the solid front extremity of this shoe said shoe is slotted or bifurcated rearwardly, as indicated at 15, to form a yoke, the slot being interrupted at one point upon the under side by a transverse connecting-web 16. The projecting portion of the casting 7 is adapted to be received in the slotted or yoke portion of the shoe, and the rear extremities of said yoke are pivoted to the casting 7 by means of a transverse pivot-bolt 17. The solid portion of the shoe upon the under side thereof is provided with a recess 18, said recess forming two shoulders 19 and 20, respectively, the latter being beveled to accommodate and receive thereagainst the inclined side of a spur 21, said spur being preferably triangular in cross-section, so as to present a plurality of angles or corners. Adapted to bear against the opposite side of this spur is an inclined plate 22, the forward edge of said plate resting in the angle of the shoulder 19.

The numeral 23 indicates a flat spring-plate, preferably of steel, the free edge of which is below the plate 22, so as to leave a space therebetween, and said free edge also being just in advance of the angle or corner of the spur. The forward edge of this spring-plate is bent around between the shoulder 19 and the edge of the plate 22, adjacent to said shoulder, and is clamped between the upper side of the plate and the bottom of the recess 18. The rear edge of the plate 22 is held in firm engagement with the spur, so as to maintain said spur in position, by means of a screw-bolt 24, which bolt passes through said plate and through the solid forward extremity of the shoe. The upper end of this bolt is threaded for a desired distance to receive thereon a locking-nut 25.

In operation when it is desired to give a car an initial impetus or start the device is slid along the rail of the track until it is brought in proper position beneath the wheel, as shown in Fig. 1. When it is thus slid along and brought into position, it will be seen that only the forward extremity of the shoe and the free edge of the flat plate-spring 23 bear on the rail. This plate-spring therefore prevents the corner or angle of the spur from coming into contact with the rail until pressure is brought

to bear on the handle. It will therefore be obvious that this plate prevents undue wear on the angle of the spur, only permitting said spur to come into operation when the actual work of starting the car begins. From Fig. 1 it will be seen that the forward extremity of the shoe extends into the contracted space between the rail and the car-wheel, while by reason of the pivotal connection between the shoe and the handle and its casting 7 the antifriction-roller 12 bears against the periphery of the wheel at a point some distance above the point where the extremity of the shoe acts. When in this position, all that is necessary in order to start the car is simply to bear down on the end of the handle 6. This will cause said handle and its casting 7 to turn on the pivot-bolt 9 and cause an up pressure by the antifriction-roller 12 on the periphery of the car-wheel. The extent of this down pressure on the handle is limited by contact of the depending lug 13 of the casting 7 with the transverse connecting-web 16 of the shoe.

The movement just described will cause the car to travel a certain distance, and if it is desired to still further move the car the device is again adjusted to position and the same operation takes place as before described.

What I claim as my invention is—

1. In a car-starter, the combination, of a handle, a member or part having its forward end of substantial **I** shape in cross-section, the web of said **I**-shaped end adapted to fit in a recess in the end of the handle and the flanges of the **I**-shaped end adapted to bear against opposite sides of the handle, a bolt passing through the handle and through the connecting-web of the **I**-shaped portion of the projecting member or part, and a shoe pivoted to said projecting member or part.

2. In a car-starter, the combination, of a handle formed or provided with a projecting member or part, said member or part provided with a downwardly-projecting lug, and a shoe having a bifurcated portion straddling the projecting member or part and pivoted thereto, the furcate parts on their under edges being connected by a transverse connecting-web which is adapted to be contacted with by the downwardly-projecting lug, whereby the extent of down pressure on the handle is regulated.

3. In a car-starter, the combination, of a member adapted to engage a car-wheel, and provided on its under side, near its forward end, with a recess having a beveled shoulder at one end, a spur provided with a plurality of corners or angles, said spur being less in width than the width of the recess, and adapted to have one of its inclined sides bear against the inclined end shoulder of the recess, a plate filling up the remaining width of the recess and adapted to bear against and hold the spur against the shoulder, and a bolt removably holding the plate in position.

4. In a car-starter, the combination, of a member adapted to engage a car-wheel, a spur provided with a plurality of corners or angles and adapted to be placed against a shoulder on the under side of the member, a plate bearing against the spur to hold said spur against the shoulder, a screw-bolt passing through the plate, and a spring-plate having its free edge normally extending down beyond the point of the spur, and having its opposite edge clamped between the plate and the under side of the member.

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

GUILFORD D. ROWELL.

Witnesses:
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