R. BOGARDUS.

Improvement in Car-Starters.

No. 128,527. Patented July 2, 1872.

Fig. 1.

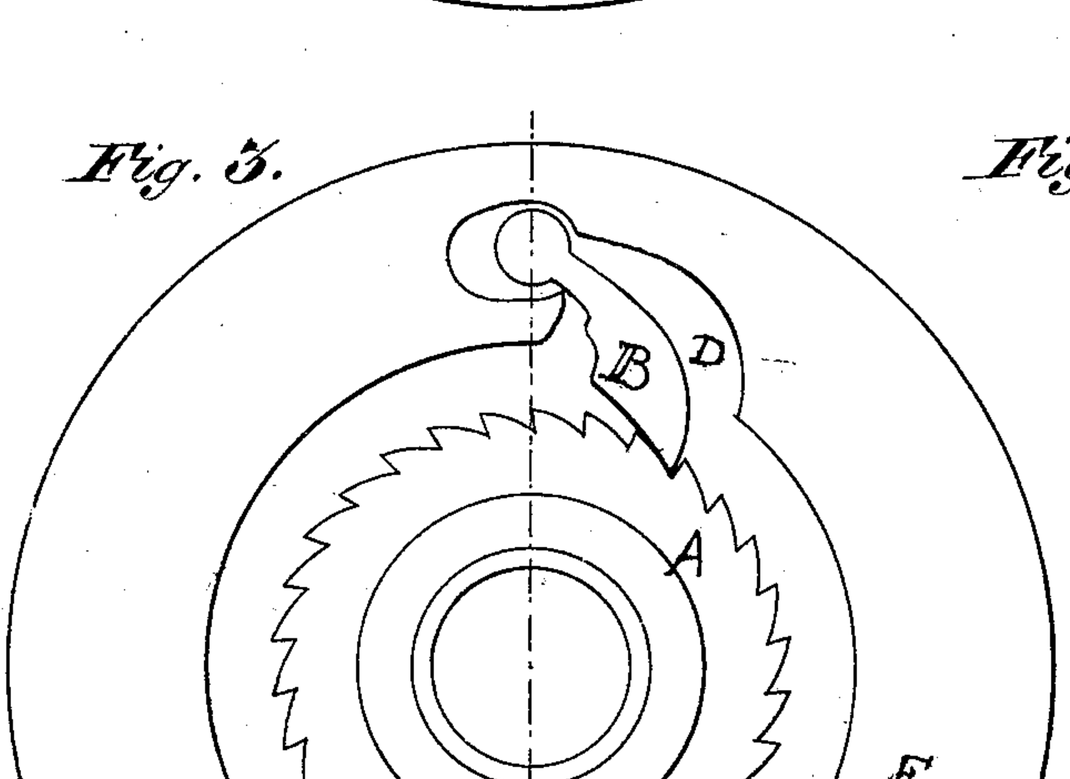

Fig. 2.

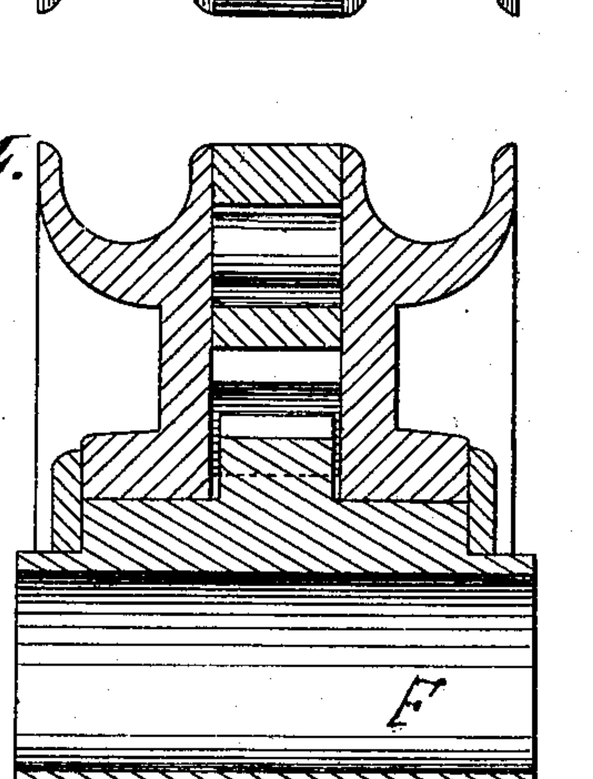

Fig. 3.

Fig 4.

Witnesses:

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128,527

UNITED STATES PATENT OFFICE.

ROBERT BOGARDUS, OF NEW YORK, N. Y.

IMPROVEMENT IN CAR-STARTERS.

Specification forming part of Letters Patent No. 128,527, dated July 2, 1872; antedated June 29, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, ROBERT BOGARDUS, of the city of New York, in the county of New York and State of New York, have invented a new and useful Improvement in Car-Starters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing and the letters of reference marked thereon.

My invention consists of certain improvements made in my car-starter patented June 21, 1870, No. 104,411, which will be more fully described hereafter.

In order to enable others to make and use my invention, I will proceed to describe its construction and operation with reference to the accompanying drawing.

Figure 1 is a plan view, showing the grooved pulley E, which is substituted for the grooved pulley E described in said patent No. 104,411. Fig. 2 is a side view of the grooved pulley E, showing the shaft or car-axle F. Fig. 3 is a sectional elevation, showing the ratchet-wheel A, recess D, and pawl B. Fig. 4 is a sectional view of the pulley E.

A is a ratchet-wheel, secured immovably upon the car-axle. B is a pawl. D is a recess, in which the pawl B enters or recedes. E is the grooved pulley, so arranged, as set forth in former patent, to turn freely upon the axle of the car. F is the axle of the car, to which is secured the ratchet-wheel A, and upon which the grooved pulley E turns. The pulley E is so constructed as to form a case or cover for the pawl B and ratchet-wheel A, which protects them from dust and ice, which protection is very important, and is perfectly accomplished by my device, as is shown by Fig. 3. The ratchet-wheel A is arranged to turn freely either way within the pulley E when not in contact with the pawl B. The recess D and pawl B are so arranged and constructed that, when the pulley E is in the proper position to start the car, as is shown in Fig. 3, the pawl B will drop on the ratchet-wheel A, thus causing the power applied to the pulley E to be transmitted to the car-axle. The pulley E revolves with said axle until the recess D takes the position shown by the dotted line in Fig. 3; the pulley E is then brought to rest. The pawl B then enters or recedes in the recess D, the construction being such as to prevent its being thrown or jarred, so as to again come in contact with the ratchet-wheel A. While the pulley E is in that position the car can be reversed, and rattle and wear are prevented. When the pawl B is again required, the pulley E is reversed, and, while returning, the recess D becomes inverted, and the pawl B, by its own weight, drops into the position shown by Fig. 3. The pulley E and ratchet B can be constructed wholly or in sections, bolted or otherwise put together, so as to be placed on the car-axle without removing the car-wheels.

Having thus described the construction and arrrangement of my invention, what I claim, and desire to secure by Letters Patent, is—

The pawl B and recess D, constructed and arranged to operate substantially as described.

ROBT. BOGARDUS.

Witnesses:

WASHINGTON BOGARDUS,

IRA G. LANE.