

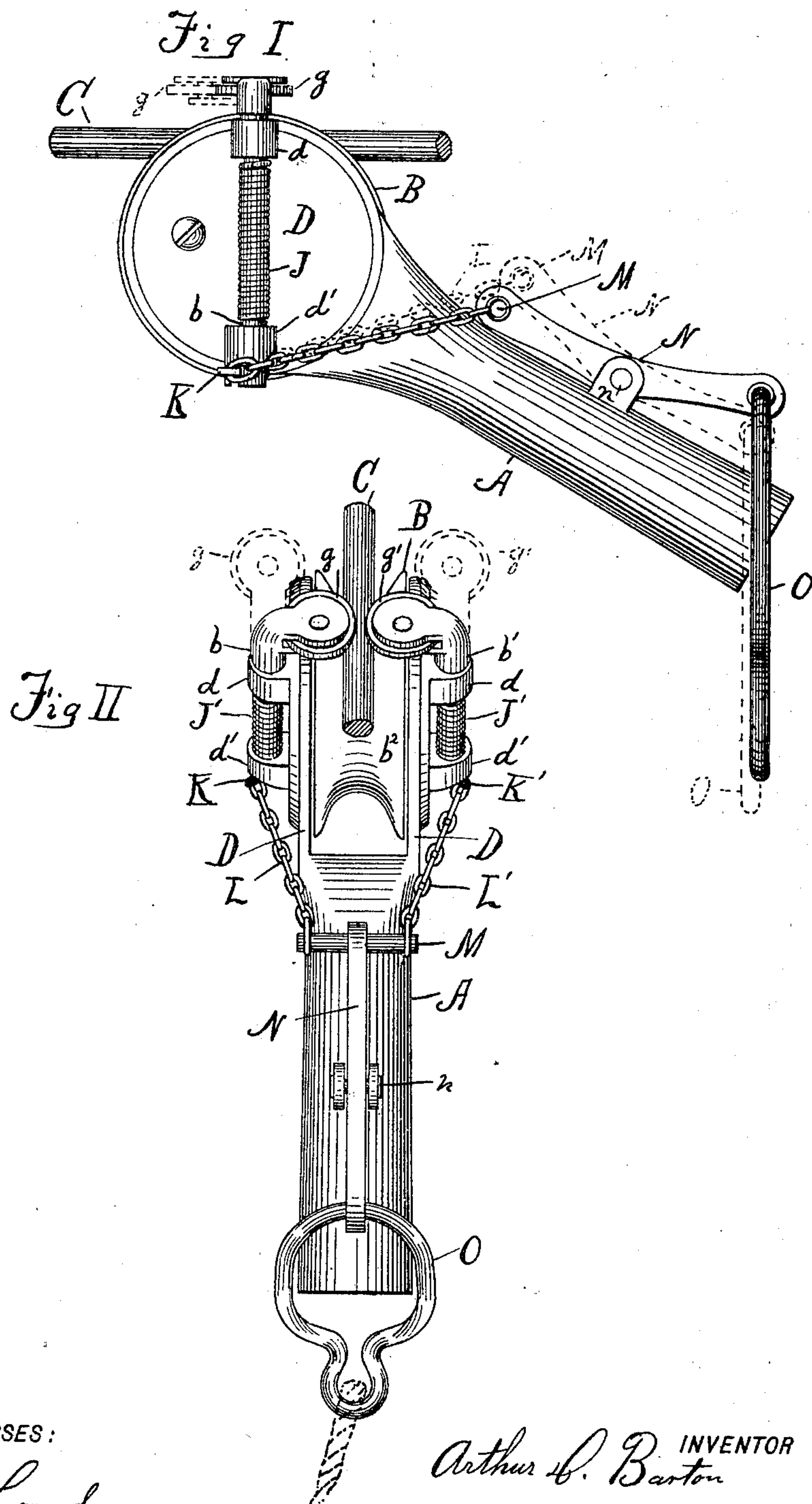
No. 695,997.

Patented Mar. 25, 1902.

A. D. BARTON.
TROLLEY WHEEL RETAINER.

(Application filed Dec. 3, 1900.)

(No Model.)



WITNESSES:

A. L. Lord.
A. W. Bonnelly

Arthur D. Barton INVENTOR

BY
W. E. Donnelly ATTORNEY

UNITED STATES PATENT OFFICE.

ARTHUR D. BARTON, OF RAVENNA, OHIO, ASSIGNOR OF ONE-HALF TO
BYRON J. SANFORD, OF RAVENNA, OHIO.

TROLLEY-WHEEL RETAINER.

SPECIFICATION forming part of Letters Patent No. 695,997, dated March 25, 1902.

Application filed December 3, 1900. Serial No. 38,475. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR D. BARTON, a citizen of the United States, residing at Ravenna, county of Portage, and State of Ohio, have invented certain new and useful Improvements in Trolley-Wheel Retainers; and I 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 pertains to make and use the same.

My invention relates to retainers for trolley-wheels, which are to be employed for retaining the wheel to the trolley-wire.

My invention consists in the peculiar construction of the device, whereby the trolley-wheel is prevented from escaping from the trolley-wire, but may be released therefrom for the purpose of transferring the wheel and trolley-pole from one end of the car to the other, all of which will be hereinafter fully set forth and claimed.

In the drawings, Figure I is a view in side elevation of a device embodying my invention. Fig. II is a perspective view, in front elevation, of my device, showing the same used in connection with an ordinary trolley pole and wheel.

A represents a trolley-pole which is provided at its free end with a grooved wheel B, adapted to engage and run along a trolley-wire C. At the outside of each cheek-piece D D, forming the harp, which cheek-pieces act as bearings and guides for the trolley-wheel B, I provide two journals d d' , one beneath the other. The journals d and d' act to support or carry spindles b and b' , which are pivotally mounted so as to swing therein, with their upper ends turned inwardly over wheel B. At the upper end of each of the spindles b and b' I mount a flat wheel g g' , respectively, which wheels are so mounted that they will rotate in a direction at right angles to the trolley-wheel B and also that they will extend over a groove b^2 of the said wheel and leave a space large enough for the free passage of the trolley-wire C, inclosing or surrounding the said wire C, so as to retain the wheel from becoming free from the wire or slipping off from the said wire. The wheels g g' are adapted to engage the wire C at one side or face, and peripheries of said wheels almost meet when the position of the parts

are as illustrated in solid lines, Fig. II, thus leaving a small space between them.

J and J' represent springs which surround the spindles b b' , respectively, and retain the wheels g and g' in their closed position.

K and K' represent arms which extend out from and are secured to the lower ends of spindles b and b' , respectively. The arms K and K' are secured at their outer or free ends to chains or cords L L'. The other ends of said chains or cords L and L' are in turn secured to a cross-arm M of a pivoted lever N, which has its fulcrum at n in turn secured to the trolley-pole A. The free end of the lever N is attached to a link O, which affords means for securing the guiding and shifting rope to the lever N, and thus allowing the trolley-pole to be shifted from one end to the other of the car.

The operation of my retainer is as follows: In placing the wheel B on the wire C the shifting-rope is pulled downward, which acts to pull down the free end of lever N, elevate the cross-bar M, as illustrated by dotted lines in Fig. I. This in turn pulls on chains or cords L and L' and arms K and K', thus turning the spindles b and b' around and shifting the position of wheels g and g' to that illustrated by dotted lines, producing an open space between the periphery of the wheels g and g' large enough for the passage of the trolley-wire. When the wheel B has reached and engaged the trolley-wire C, the wheels g and g' are allowed to assume their closed position, as illustrated by the solid lines, and thus the trolley-wire is inclosed, as shown. When passing a hanger or other obstruction on the trolley-wire, the wheels g and g' , or either one of them, will spring back and allow of its passage and then again automatically assume the normal position.

It will be clearly seen that it is impossible for the wire C to slip from the wheel B on account of the wheels g and g' and that the shifting of the pole may be quickly and easily accomplished by merely manipulating the trolley-pole in the usual manner.

What I claim is—

1. A trolley-wheel retainer, comprising a trolley-harp carrying a trolley-wheel, pivoted spindles mounted outside of the harp at each side thereof with their upper ends turned in-

wardly, wheels mounted in said inturned ends of the spindles to lie normally over the trolley-wheel, springs mounted on said spindles to normally hold the wheels over the trolley-wheel, and means connected to the lower ends of the spindles to shift the wheels and permit the engagement and disengagement of the trolley-wheel with the trolley-wire.

2. In a trolley-wheel retainer, the combination with the harp carrying the trolley-wheel, and bearings mounted on the outer faces of said harp, of spindles mounted to swing in said bearings, wheels mounted for rotation in the upper ends of said spindles and lying normally over the trolley-wheel, means mounted on the spindles intermediate the bearings to retain said wheels in their normal position, arms carried by said spindles below the bearings, and means connected to said arms for operating the spindles to permit engagement and disengagement of the trolley-wheel with the trolley-wire.

3. In a trolley-wheel retainer, the combination with the harp, the trolley-wheel mounted in said harp, and bearings mounted on the outer side faces of the said harp, of trolley-retainers mounted to swing in said bearings with wheels in their upper ends which lie normally over the trolley-wheel, springs for holding said wheels in their normal position, and means including a lever pivoted on the trolley-pole, arms on the trolley-retainers, and connections between the said arms and lever, substantially as described.

4. In combination with a trolley-pole, a harp mounted thereon, and a trolley-wheel mounted in said harp, of spindles mounted to swing in bearings on the outer faces of the harp with their upper ends turned inwardly, wheels mounted in said upper ends of the spindles and lying normally over the trolley-wheel, springs mounted on the spindles between the bearings thereof to retain said wheels in their normal position, a lever pivoted on the trolley-pole and carrying a cross-arm, and connections between the cross-arm and the spindles for operating the latter when the lever is actuated, substantially as described.

5. In a trolley-retainer, the combination with a trolley-pole, the harp carried thereby, the trolley-wheel, and bearings carried on the outer face of the cheek-pieces of said harp, of spindles mounted to swing in said bearings, wheels carried by the upper ends of said spindles and lying normally over the trolley-wheel, means for retaining said wheels in their normal position, arms carried by said spindles, and means connected to said arms for actuating the spindles to swing the same within their bearings, as and for the purpose described.

Signed by me at Cleveland, county of Cuyahoga, and State of Ohio, this 24th day of August, 1900.

ARTHUR D. BARTON.

Witnesses:

E. B. DONNELLY,

W. E. DONNELLY.