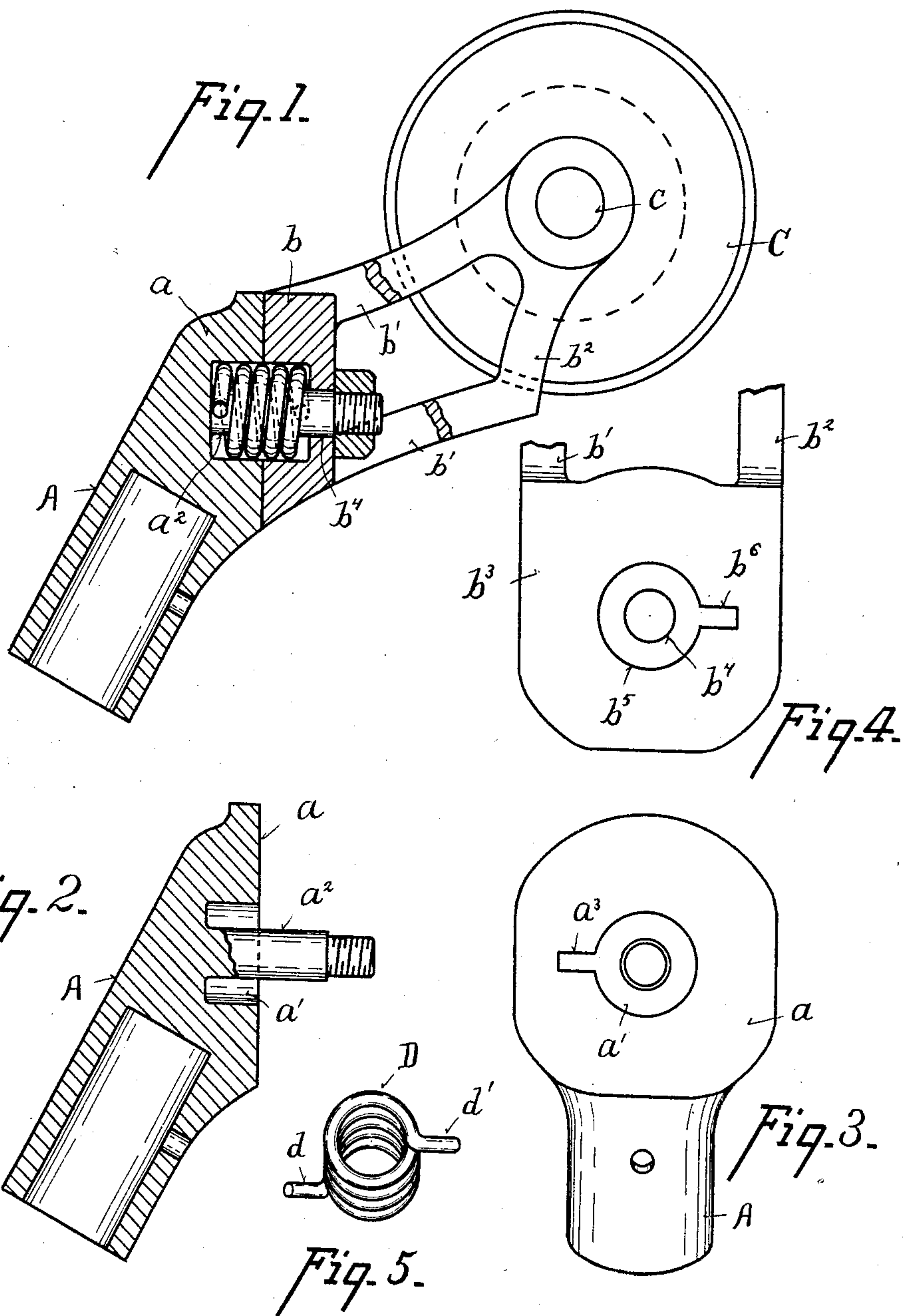


No. 771,423.

PATENTED OCT. 4, 1904.

J. N. DRAKE.
TROLLEY WHEEL.
APPLICATION FILED DEC. 15, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH N. DRAKE, OF CINCINNATI, OHIO.

TROLLEY-WHEEL.

SPECIFICATION forming part of Letters Patent No. 771,423, dated October 4, 1904.

Application filed December 15, 1903. Serial No. 185,193. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH N. DRAKE, a citizen of the United States of America, and a resident of Cincinnati, county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Trolley-Wheels, of which the following is a specification.

The object of my invention is a trolley-wheel which while having a swiveling movement upon the pole to enable it to follow the trolley-wires readily in going around curves always returns to its normal position parallel to the wires and is held in that position with a firmness such that the operator may engage it with the wires readily should it be disengaged therefrom.

This object is attained by the means illustrated in the accompanying drawings, in which—

Figure 1 is a view, partly in side elevation and partly in section, of a trolley-wheel embodying my invention. Fig. 2 is a detail sectional view of the sleeve for engaging the upper end of the pole, the journal-bracket having been removed therefrom. Fig. 3 is a front elevation of the same. Fig. 4 is a detail front elevation of the base of the journal-bracket, the journal-arms being shown broken off. Fig. 5 is a detail perspective view of the spring for returning and holding the journal-bracket in its normal position.

Referring to the parts, sleeve A, which is to be secured rigidly upon the upper end of a trolley-pole, has a flat head a , in the face of which is formed a central circular depression a' , from the center of which a journal-pin a^2 , screw-threaded upon its end, projects. Leading into depression a' is a radial slot a^3 . The journal-bracket consists of a base b and two journal-arms b' b^2 , between which are supported axis c of trolley-wheel C. Base b of the journal-bracket has a flat face b^3 to fit against flat head a and has a central perforation b^4 to receive journal-pin a^2 . In face b^3 and surrounding perforation b^4 is a central depression b^5 , registering with depression a^2 . Running into depression b^5 is a radial slot b^6 , which stands at a point diametrically opposite slot a^3 when the journal-bracket is in its normal position—that is, when axis c is in a

horizontal position and the groove in the wheel is in alinement with the pole.

A coiled spring D is used to hold the journal-bracket in its normal position. Spring D has its ends d d' bent outward at diametrically opposite points and is seated in the chamber formed by depressions a' and b^5 , with its end d engaging slot a^3 and its end d' engaging slot b^6 . In use spring D holds the journal-bracket normally in a position such that the groove in the wheel C is in alinement with the pole and with a firmness such that the wheel may be engaged readily with the trolley-wire, but so as to yield to allow the wheel to swivel on the pole, so that it follows the wire smoothly in going around curves.

What I claim is—

1. The combination of a trolley-pole, a bracket secured upon the pole having a flat face and recessed to form part of a chamber for a spiral spring, a bracket carrying a trolley-wheel, said bracket having a flat face to bear against the flat-faced bracket on the pole and recessed to form part of a chamber for a spiral spring, said bracket also having upwardly-extending arms, a trolley-wheel journaled in the upper end of said arms, a pivot-bolt to hold the two brackets together while permitting the upper bracket to swivel upon the lower one, a spiral spring fitted in the chamber formed by the two brackets having outwardly-extending arms, one of which is connected to the bracket upon the pole and the other to the trolley-wheel bracket so as to normally maintain the trolley-wheel in alinement with the wire, and permit the bracket to turn in either direction when the car is turning a curve either to the right or left and be again returned to its normal position substantially as shown and described.

2. The combination of a trolley-pole, a bracket secured to the upper end of the trolley-pole having a flat face and chambered to receive a spiral spring, a pivot-pin extending from said bracket having its extended end screw-threaded, a similar bracket having a flat face chambered and perforated to pass the pivot-pin extending from the bracket, said bracket having upwardly-extended perforated arms, a trolley-wheel journaled in the arms

of said bracket, both of said brackets having slots to pass the outwardly-extending ends of the spiral spring, the spiral spring having outwardly - extending ends adapted to pass
5 over the pivot-pin and enter the slots in the bracket for retaining the brackets in alignment with the trolley-wire, and a nut to hold the two brackets pivotally connected substantially as shown and described.

10 3. The combination of a head for a trolley-pole having a flat face with a projecting journal-pin surrounded by a depression having a radial slot running into it, a journal-bracket

having a flat face having a central perforation to pass the journal-pin, a depression surrounding the perforation and a radial slot running
15 into the depression, and a spring with its ends bent outward seated in the chamber formed by the two depressions and having its ends engaging the slots, substantially as shown and
20 described.

J. N. DRAKE.

Witnesses:

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