

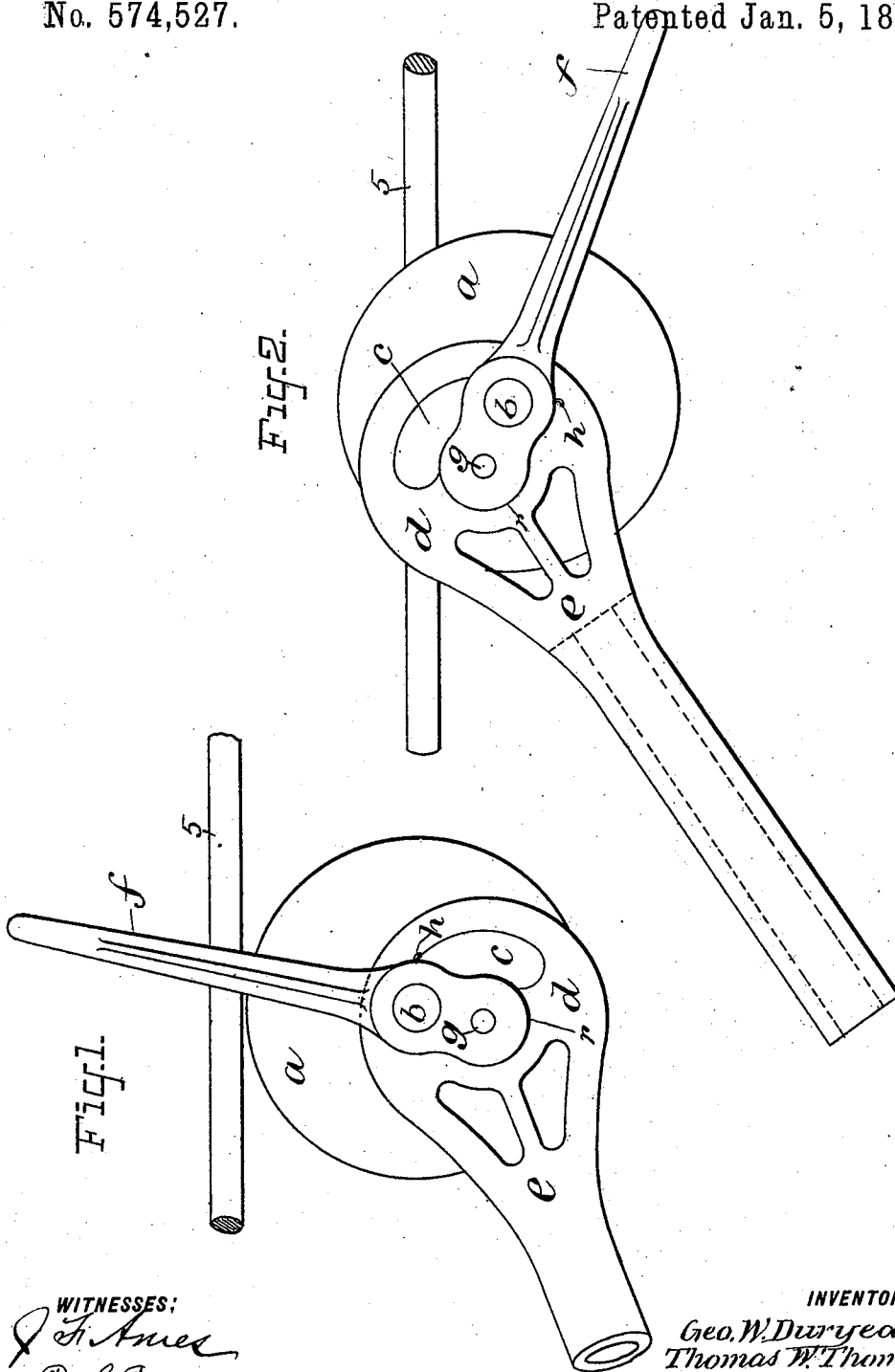
(No Model.)

2 Sheets—Sheet 1.

G. W. DURYEA & T. W. THOMPSON.
SELF ADJUSTING TROLLEY WHEEL.

No. 574,527.

Patented Jan. 5, 1897.



WITNESSES:
J. H. Ames
D. S. Dolbear

INVENTORS:
Geo. W. Duryea
Thomas W. Thompson
BY *J. S. Hurdle*
ATTORNEY

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FIG. 3.

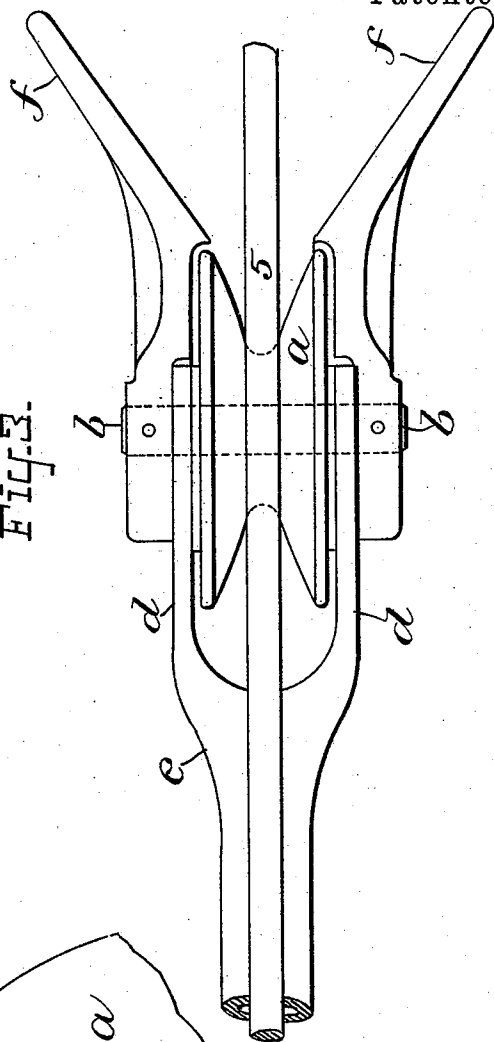
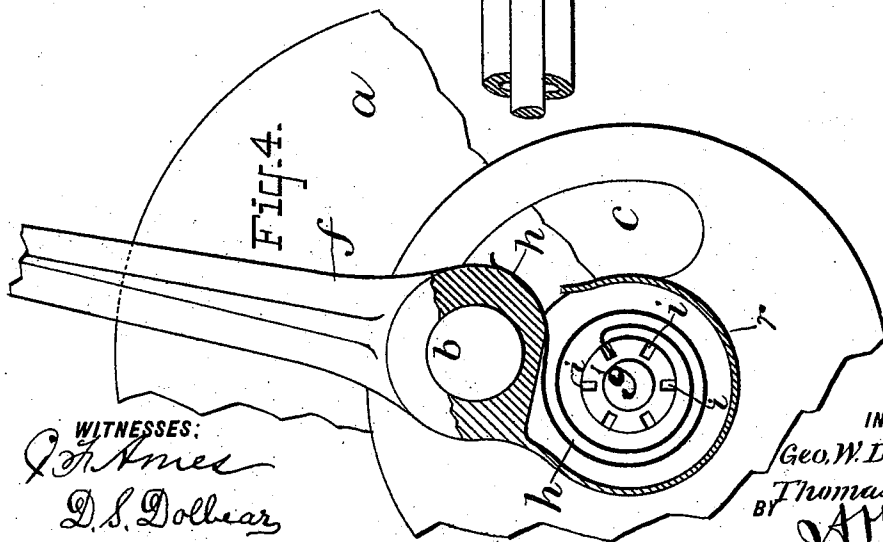


FIG. 4.



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UNITED STATES PATENT OFFICE.

GEORGE W. DURYEA AND THOMAS W. THOMPSON, OF BROOKLYN, NEW YORK.

SELF-ADJUSTING TROLLEY-WHEEL.

SPECIFICATION forming part of Letters Patent No. 574,527, dated January 5, 1897.

Application filed August 3, 1896. Serial No. 601,545. (No model.)

To all whom it may concern:

Be it known that we, GEORGE W. DURYEA and THOMAS W. THOMPSON, citizens of the United States, and residents of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Self-Adjusting Trolley-Wheels, of which the following is a specification.

Our invention relates to an electric trolley-wheel constructed in a manner that will, when it is suddenly thrown from the trolley-wire, readjust itself automatically in proper frictional contact with the said trolley-wire, all of which will be fully described hereinafter.

Our invention consists of a trolley-wheel provided with guiding-arms and automatically-acting devices connecting therewith, the whole mounted upon the end of a trolley-pole.

In the drawings, Figure 1 represents the trolley-wheel as being held up against the trolley-wire by means of a convolute spring, the latter of which also holds the guiding-arms in a depending position. Fig. 2 represents the trolley-wheel as having left the trolley-wire and the guiding-arms thrown into an upright position automatically. Fig. 3 represents a plan view of Fig. 1. Fig. 4 represents an enlarged detail view of the mechanism controlling both the trolley-wheel and guiding-arms.

Similar letters refer to similar parts throughout the drawings, in which—

a represents the trolley-wheel proper, mounted upon a spindle or shaft *b*, the latter of which is adapted to play within the segmental slots *c* made in the sides *d*, the said shaft *b* having its ends supported in the guiding-arms *f*, the lower ends of the latter being each fulcrumed upon the fixed studs *g*, of which there are two, one on the exterior of either side *d*, forming the fork-shaped carrier *e*. The guiding-arms *f* are operated by the convolute spring *h*. One end of the latter is secured within one of the radially-arranged slots *i* made in the base of each of the fixed studs *g*, while the other end of the said spring *h* is forced in proper contact with the guiding-arm *f*. The lower end of the guiding-arm *f* is provided with a circumferentially-arranged rim *r*, the latter of which forms a housing for the aforesaid spring *h*, thus preventing its ex-

posure to the different changes of the weather at all times.

The stud *g*, it will be seen, is formed with a series of seats or recesses *z*, the purpose of which is to admit of the adjustment of the springs to maintain the proper tension of the springs under all conditions.

Mode of operation: When the wheel is performing its functions, as shown in Fig. 1, the convolute spring in this instance gives way to the pressure brought to bear upon the wheel, thus allowing the wheel and guiding-arms to assume the position as shown in said figure. It will here be obvious that when the wheel by any sudden jar or jolt should leave the wire the convolute spring will then perform its function by its retracting power and carry the guiding-arms to an upright position and simultaneously moving the wheel, so that its bearings will assume a position in the upper end of the segmental slot, as shown. It will be obvious that by the upward and instantaneous movement of the guiding-arms, which diverge from the edge of the wheel, they will, if the wheel is thrown out of line laterally, strike against the trolley-wire and guide the wheel to its proper place, when the arms will again assume a depending position, as shown in Fig. 1.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

The combination of the forked carrier, studs carried thereby and having a series of radially-arranged slots, guiding-arms mounted thereon having housings at their lower ends, flat coiled springs arranged in said housings and having one end fitting in the radial slots of the studs and the other ends bearing against the said arms, said shaft being movable within arc-shaped slots in the arms of said fork, and a trolley-wheel mounted on said shaft.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of two witnesses, this 1st day of August, 1896.

GEORGE W. DURYEA.
THOS. W. THOMPSON.

Witnesses:

D. S. DOLBEAR,
J. F. AMES.