

No. 618,674.

Patented Jan. 31, 1899.

W. P. HOLT.

TROLLEY WHEEL AND SUPPORT.

(Application filed June 2, 1898.)

(No Model.)

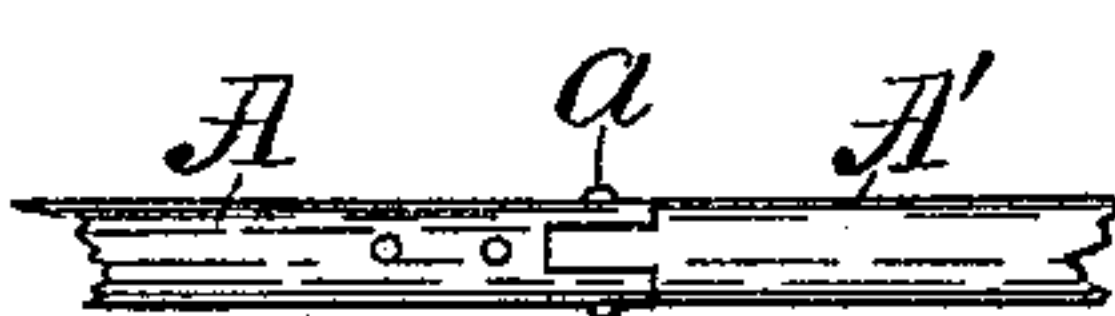
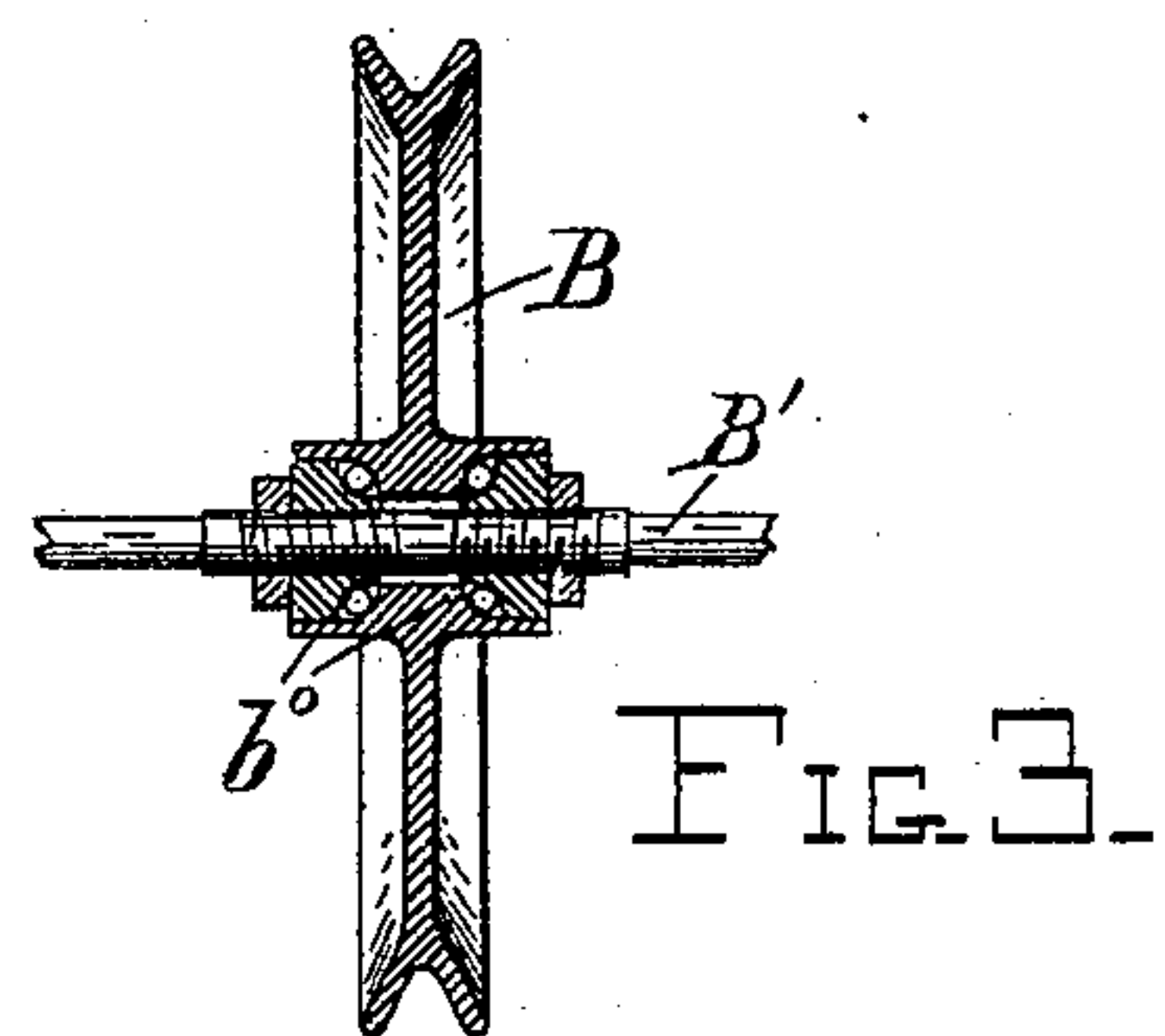
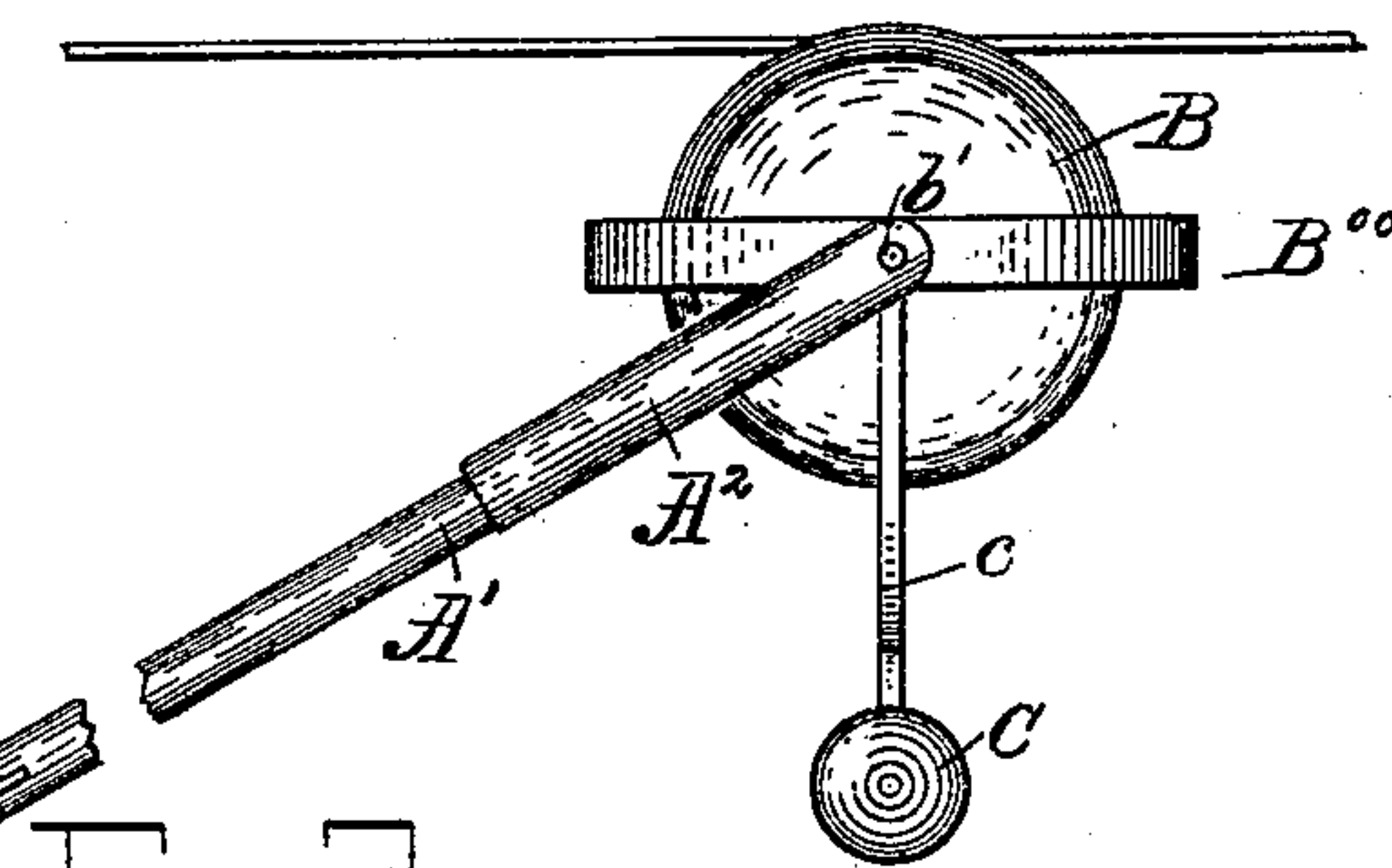
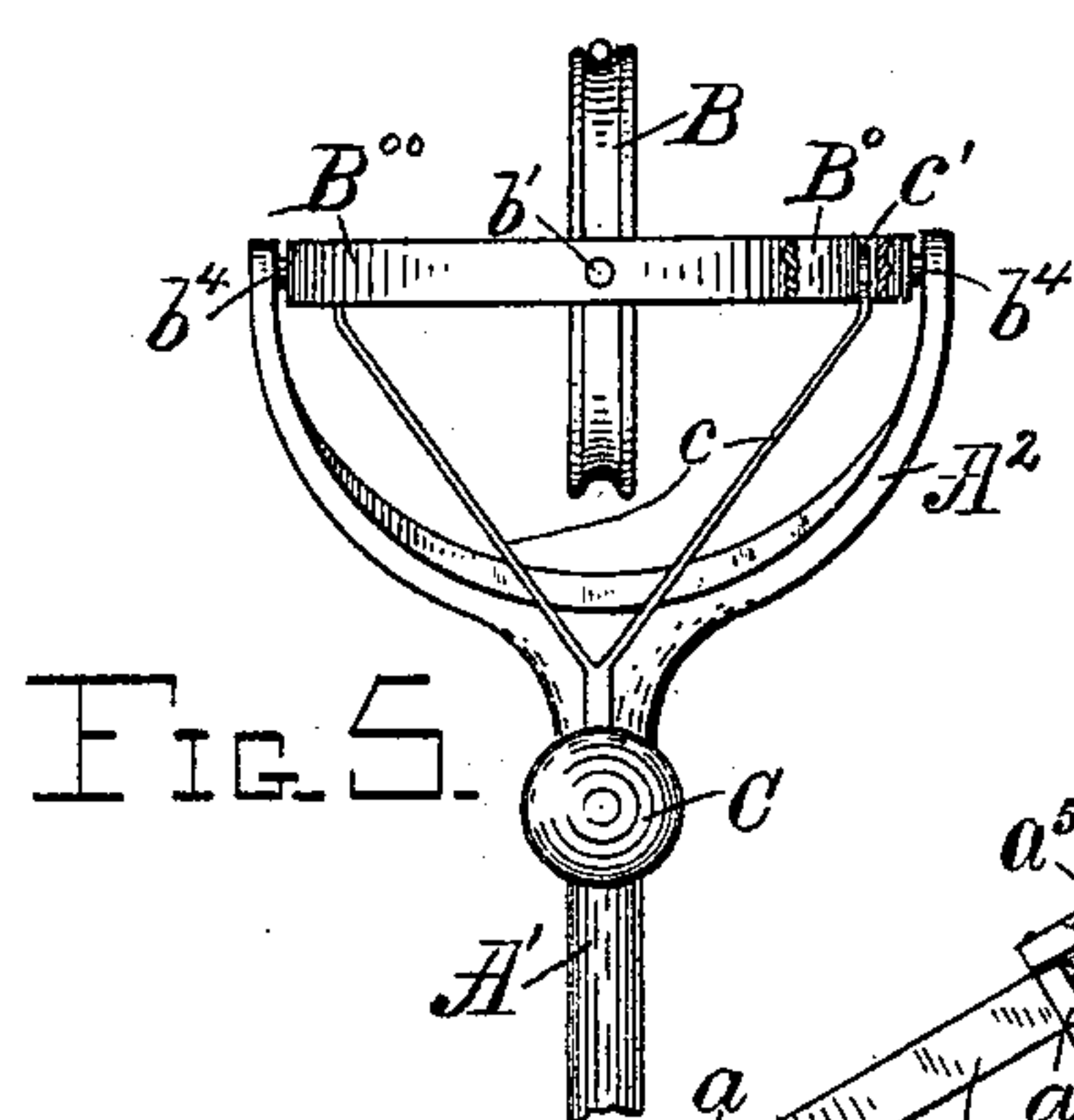
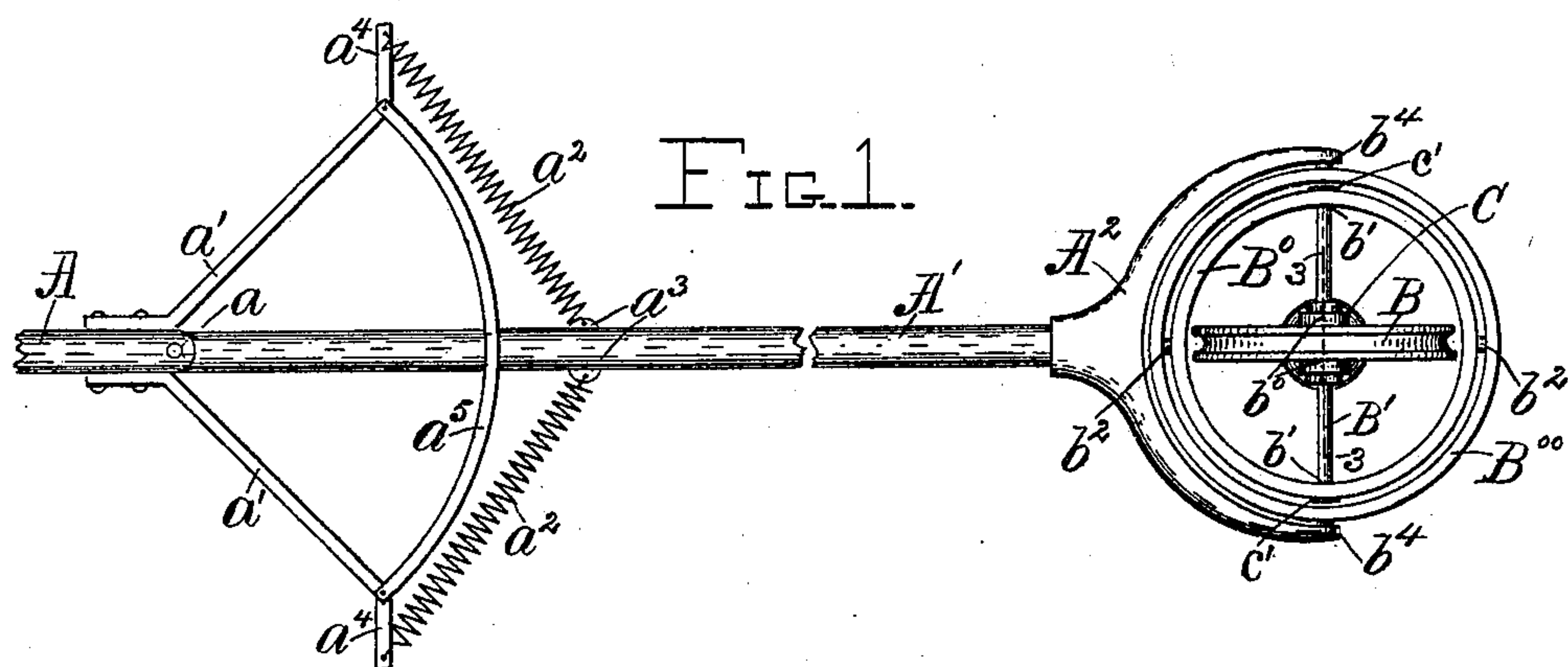


Fig. 4.

Witnesses

John W. Volk
C. A. Bateman

Inventor

W. P. Holt
by Wilkinson & Fisher
Attorneys

UNITED STATES PATENT OFFICE.

WILLIAM P. HOLT, OF SAVANNAH, GEORGIA.

TROLLEY-WHEEL AND SUPPORT.

SPECIFICATION forming part of Letters Patent No. 618,674, dated January 31, 1899.

Application filed June 2, 1898. Serial No. 682,388. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. HOLT, a citizen of the United States, residing at Savannah, in the county of Chatham and State of Georgia, have invented certain new and useful Improvements in Trolley-Wheels and Supports; and I do 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 appertains to make and use the same.

My invention relates to improvements in mountings and supports for trolley-wheels used upon railway-cars of electric-railway systems; and it consists of the novel features and combination of parts hereinafter described and claimed.

My invention will be understood by reference to the accompanying drawings, wherein the same parts are indicated by the same letters throughout the several views.

Figure 1 represents a plan view, with parts broken away, of a trolley-wheel bearing and support constructed according to my invention. Fig. 2 represents a side elevation of the same in the position assumed when in use. Fig. 3 represents a central vertical section through the trolley-wheel and its bearing. Fig. 4 is a side elevation of a broken-away portion of the trolley-pole, showing the hinged joint therein; and Fig. 5 is a rear elevation of the trolley-wheel and support with portions broken away to more clearly show the weight attachment.

The trolley-pole A is provided with a hinged joint at *a*, and on said pole, immediately beneath the said joint, are fixed divergent arms *a'*. A pair of coil-springs *a² a²* are connected to the upper portion of the said pole, as at *a³ a³*, and to the oppositely-disposed ends *a⁴ a⁴* of the divergent arms *a' a'*. A pair of segmental guide-bars *a⁵* connect the outer ends of the divergent arms *a' a'* and, passing beneath and also above the upper portion of the trolley-pole, act as a support therefor to relieve the strain upon the joint *a*, as will be readily understood.

Upon the upper end A' of the trolley-pole A is mounted the forked frame A², which latter carries the trolley-wheel and its supports.

The trolley-wheel B is made with the usual peripheral groove therein and is preferably mounted upon a ball-bearing *b⁰* on the shaft B'. The ends of the shaft B' are mounted at *b' b'* in a ring B⁰, which latter is of large enough diameter to inclose the wheel B at a short distance therefrom, and this ring B⁰ is pivotally mounted at points *b² b²* intermediate between the points *b' b'* in a second larger ring B⁰⁰, which latter ring is in turn pivotally mounted at *b⁴ b⁴* in the ends of the forked frame A², as seen most clearly in Fig. 1.

A weight C is suspended below the trolley-wheel by arms *c*, which are secured to the ring B⁰ at points *c'* ninety degrees from the pivotal points *b²*. This gimbal arrangement, provided with the suspended weight, will counteract the effect of any lateral motion and will allow the wheel to constantly assume a vertical position, the inner ring B⁰ being free to turn upon its pivotal points *b² b²* within the outer ring B⁰⁰, so that however much the forked frame A² may ordinarily tilt to one side or the other the wheel B may keep its vertical position and the outer ring B⁰⁰ being free to turn upon its pivotal points *b⁴ b⁴*, as will be obvious.

The advantages of the hereinbefore-described construction will be apparent to those skilled in the art.

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

1. A trolley-wheel support comprising a trolley-pole having a forked frame at its upper end, a ring pivotally mounted in the ends of said forked frame, a second ring pivotally mounted within said first-named ring, forming a gimbal-joint, a shaft having bearings thereon for the trolley-wheel, mounted within said inner ring, and means for preventing the gimbal-joint from swinging too far, substantially as described.

2. The combination with the trolley-pole having a forked frame at its upper end, and a ring pivotally mounted in the ends of said forked frame, of a second and smaller ring pivotally mounted within the first-named ring, a shaft mounted transversely within said smaller ring, forming a gimbal-joint, a

weight suspended from said joint, and a peripherally-grooved wheel rotatably mounted upon ball-bearings on said shaft, substantially as described.

- 5 3. The combination of a trolley-pole; a gimbal-support for the wheel carried by said pole; a trolley-wheel mounted in said gimbal-support; and a weight rigidly suspended from

said gimbal-support, substantially as described. 10

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

WILLIAM P. HOLT.

Witnesses:

JACOB GAZAN,
CHAS. H. KING.