

No. 717,076.

Patented Dec. 30, 1902.

G. F. CHAPMAN.

ADJUSTABLE HEADLIGHT FOR STREET CARS, &c.

(Application filed May 31, 1902.)

(No Model.)

FIG. 1.

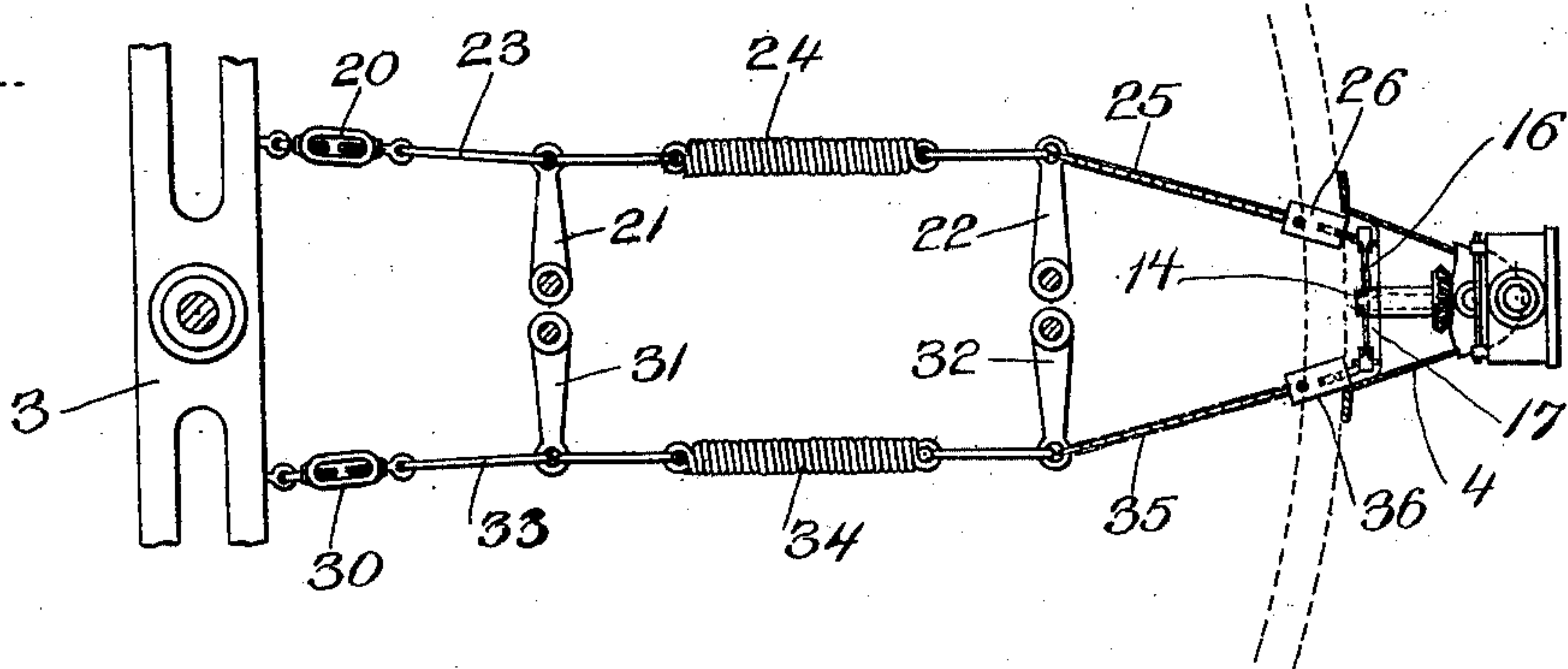


FIG. 2.

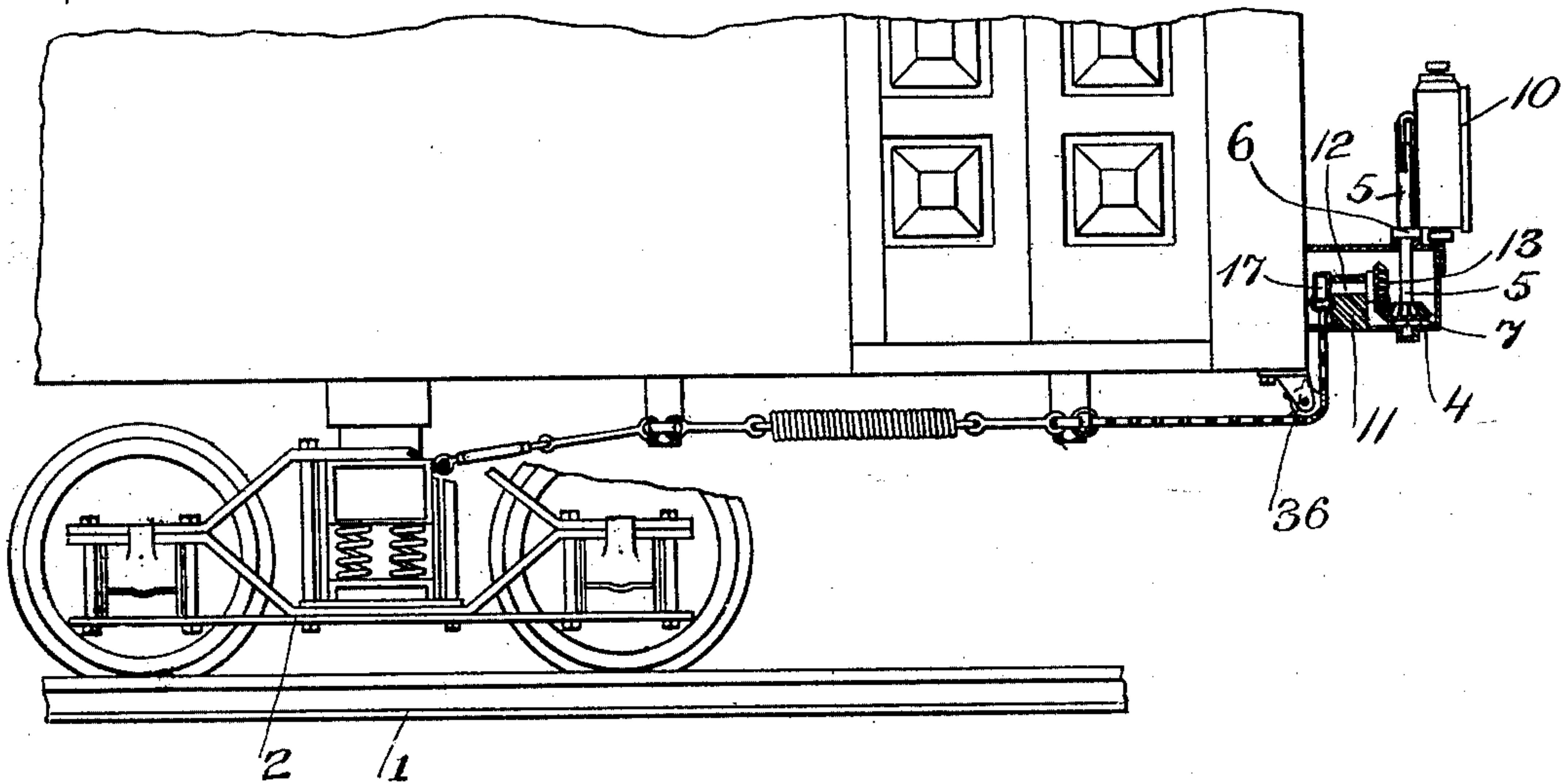
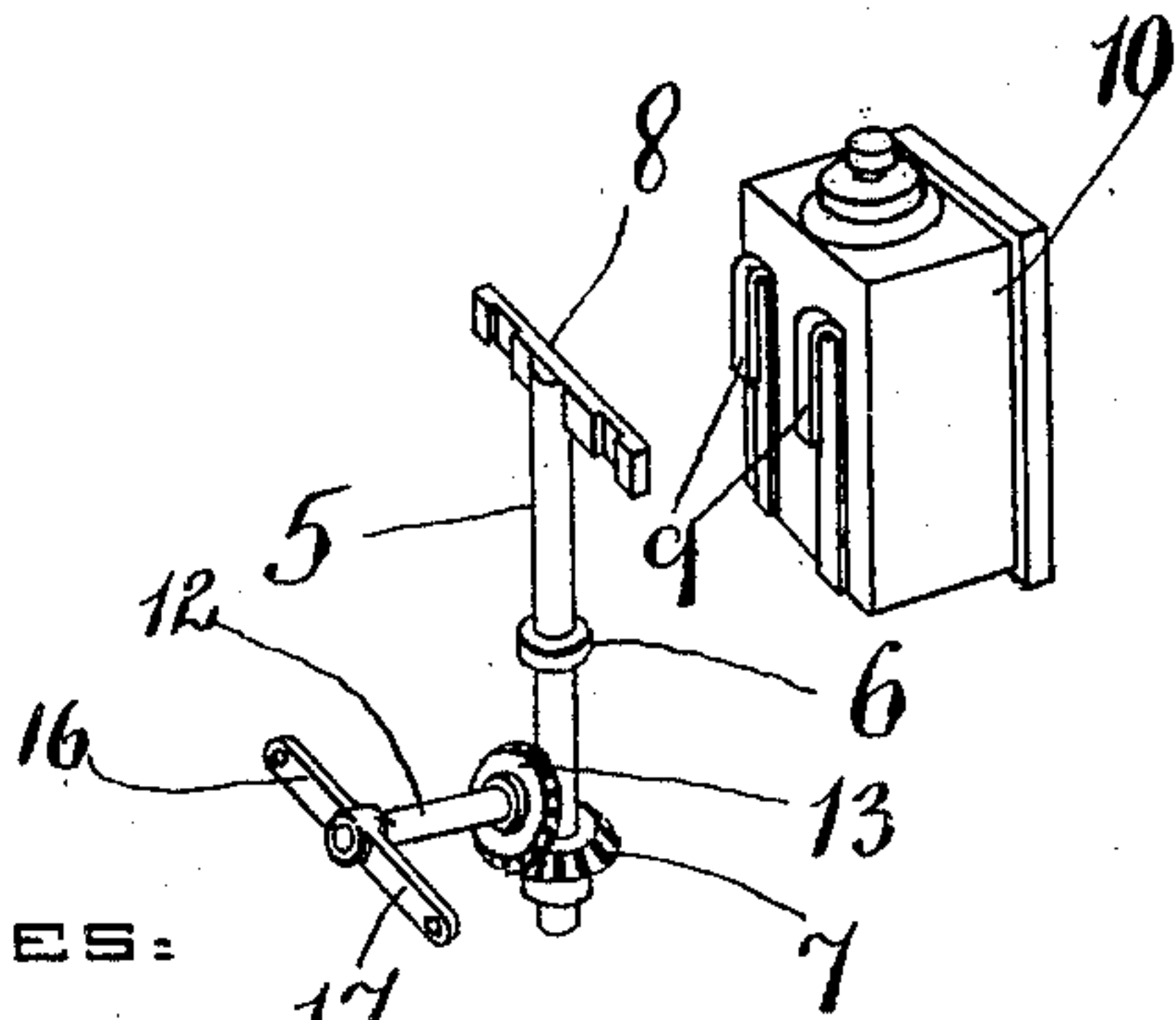


FIG. 3.



WITNESSES:

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GEORGE F. CHAPMAN, OF MARLBORO, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO LEVI WALLACE, OF AYER, MASSACHUSETTS.

ADJUSTABLE HEADLIGHT FOR STREET-CARS, &c.

SPECIFICATION forming part of Letters Patent No. 717,076, dated December 30, 1902.

Application filed May 31, 1902. Serial No. 109,595. (No model.)

To all whom it may concern:

Be it known that I, GEORGE F. CHAPMAN, of Marlboro, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Adjustable Headlights for Street-Cars, &c., of which the following is a specification.

This invention relates to an automatically-adjustable headlight for street-cars and other vehicles; and it consists in the novel features of construction and relative arrangement of parts as set forth.

Figure 1, in top plan view, shows a device constructed in accordance with my invention, the view showing also the truck-beam of the car and the front of the vestibule, the other parts of the car being removed. Fig. 2, in side elevation, shows a car equipped with my invention. Fig. 3 is a detail perspective view showing the lamp-post and the lamp.

The same numerals of reference indicate the same parts in all the figures.

1 represents the rails of an ordinary street-railway.

2 represents an ordinary car-truck.

3 represents the truck-beam.

4 represents a box or casting, here shown as secured to the lower side of the vestibule in the place ordinarily occupied by the headlight. This casting might be located on either side of the vestibule, if desired.

5 represents a lamp-post arranged in said casting. The lower end of this post is arranged in a suitable bearing in the lower side of the casting 4. (See Fig. 2.)

6 represents a flange on the post engaging the outer edge of the bearing in the upper side of the casting.

7 represents a beveled gear inside the casting and secured to the lower end of the post.

8 represents an arm or cross-piece secured to the upper end of the post 5, over which clips 9 on the lamp 10 are adapted to be sprung or slid, and thus hold the lamp in the desired position. Inside the box or casting 4 is arranged a bearing 11, carrying a counter-shaft 12. Upon one end of this counter-shaft is arranged a beveled gear 13, adapted to engage with the beveled gear 7 in the end of the post 5. On the end of the shaft 12, opposite

the gear 13, is secured a hub 14, provided with arms 16 17. (See Fig. 1.)

20 represents a turnbuckle secured to the truck-beam 3.

21 22 represent arms pivotally connected to the bottom of the car in front of the truck-beam 3.

23 represents a rod connected at one end to the free end of the turnbuckle 20 and at the other end to the end of the arm 21.

24 represents a coiled spring, the ends of which are connected, respectively, to the ends of the arms 21 and 22.

25 represents a sprocket-chain connected at one end to the end of the arm 22 and extending along under the front end of the vestibule over an idler 26, then up and secured to the end of the arm 16. (See Fig. 1.) The opposite side of the car is equipped in a corresponding way with a turnbuckle 30, pivoted arms 31 32, a rod 33, a spring 34, sprocket-chain 35, and an idler 36. The end of the sprocket-chain 35 passes up over the idler 36 and is connected with the end of the arm 17.

When a car equipped with this device enters upon a curved portion of the track or roadway, the truck-beam 3 will turn with the wheels upon its pivotal point with respect to the car-body. This movement of the truck-beam will deflect the light 10, so that its rays will follow the car-track or roadway irrespective of the position of the longitudinal axis of the car. By this arrangement the light is always maintained upon the roadway. Further, by the construction shown—that is to say, the sprocket-chain and the arms 21 22 31 32—I am enabled to apply the invention readily to any car and secure the mechanism in a compact manner. The arms 21, 22, 31, and 32 serve to keep the rods, springs, chains, or other connecting mechanism in place close to the car-body, while the sprocket-chain serves as a convenient means for passing around the bends, &c.

I do not claim, broadly, in this application a lateral deflectible headlight and means for automatically turning the headlight toward either side of its central position, since this invention is claimed by me in my application Serial No. 103,850.

I do not claim herein the headlight-support comprising a pivotally-mounted rod and having a cross-piece at its upper end, said cross-piece having a vertical recess or groove each
5 side of its center and adapted to receive headlight-clips, as the same forms the subject-matter of a claim in my application Serial No. 106,268, filed May 7, 1902.

While the light as described is represented
10 as arranged to normally shine along the longitudinal axis of the car-body, I do not wish to be limited to this arrangement, since the invention in its broad phase includes an adjustable light controlled by the truck or an
15 equivalent device.

Having thus explained the nature of my invention and described a way of making and using the same, although without attempting to set forth all of the forms in which it may

be made or all of the modes of its use, what I 20 claim, and desire to secure by Letters Patent, is—

The combination with a vehicle having a laterally-deflectible headlight, of a truck-frame, two pairs of arms pivotally connected 25 with the under side of the vehicle-body, connections between the truck-frame and the nearest arms of each pair, flexible connections between the front pair of arms and the deflectible headlight, and a yielding connection 30 between the two arms of each pair.

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

GEORGE F. CHAPMAN.

Witnesses:

R. BULLOCK,
H. L. ROBBINS.