

No. 692,422.

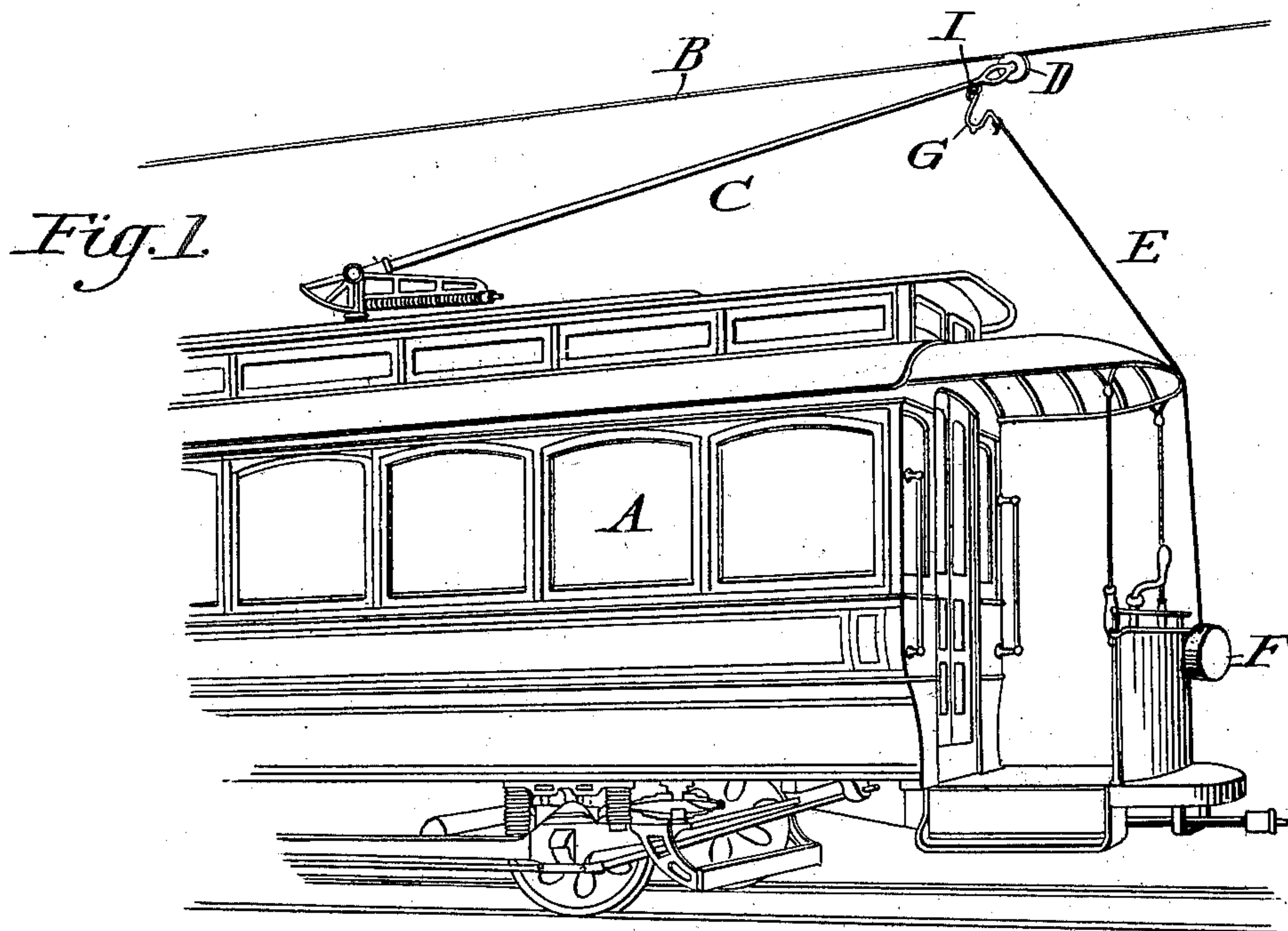
Patented Feb. 4, 1902.

S. J. BUCKLAND.

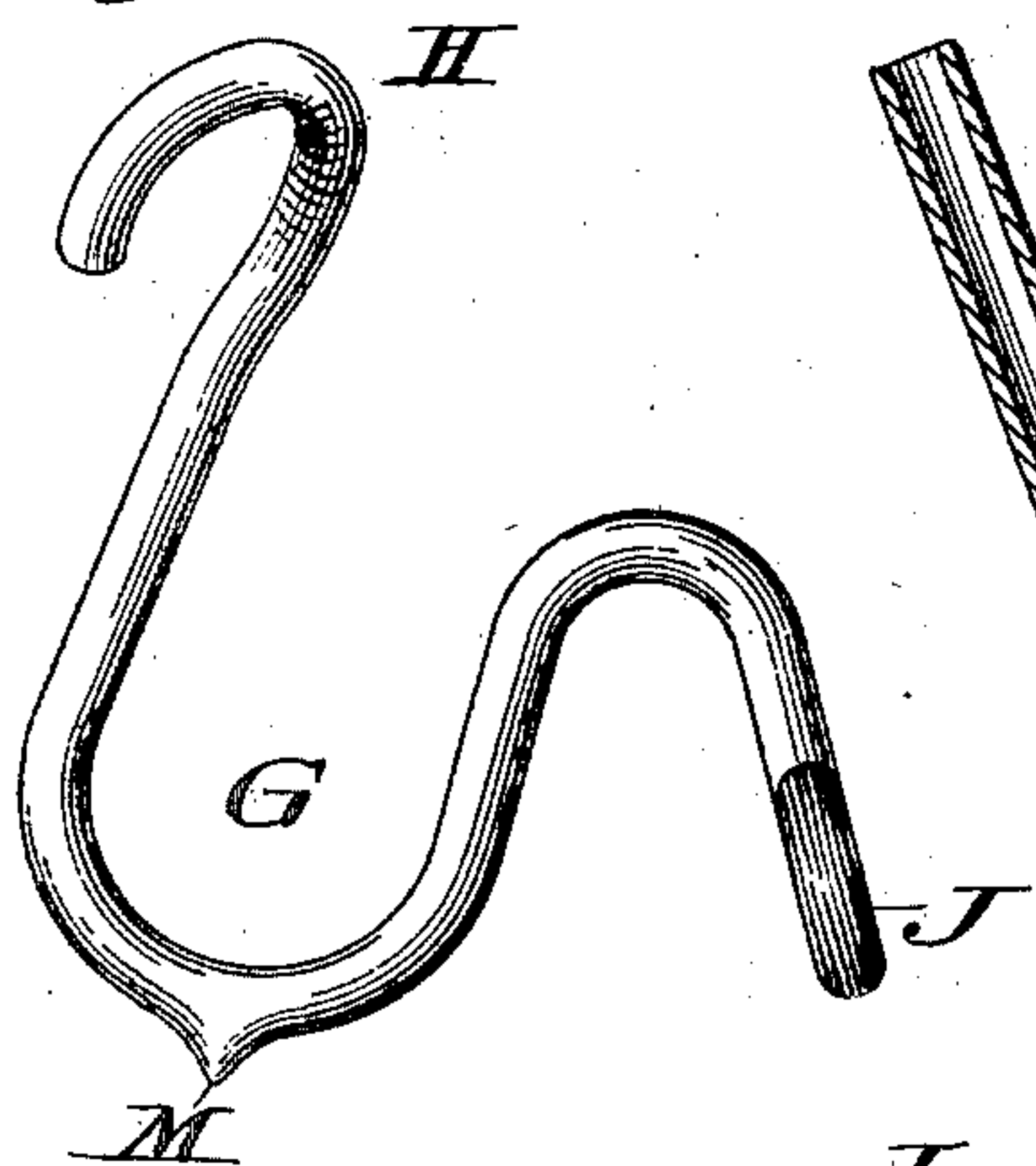
WATER SHED OR DEFLECTOR FOR TROLLEY POLES AND ROPES.

(Application filed Sept. 30, 1901.)

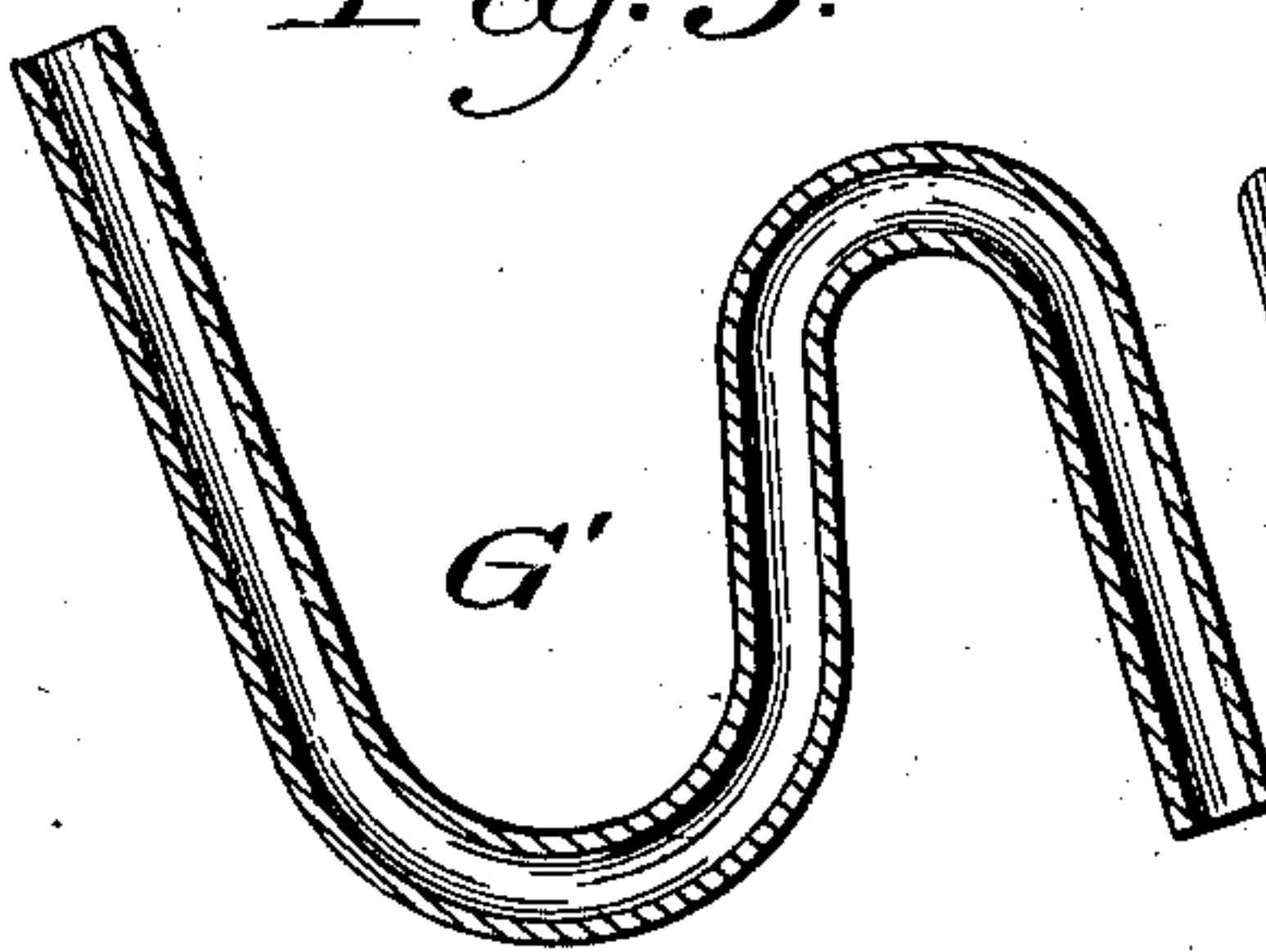
(No Model.)



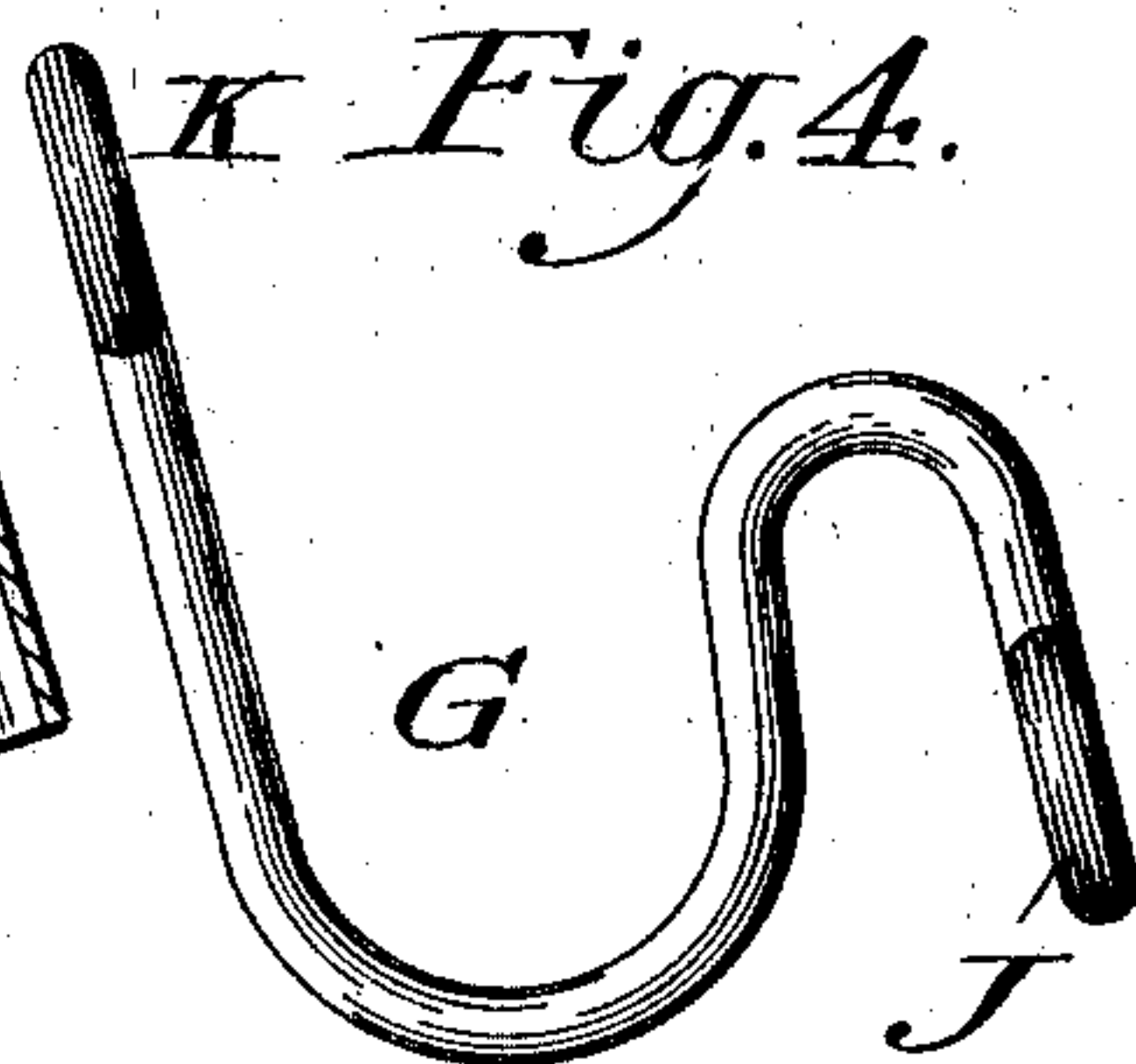
*Fig. 2.*



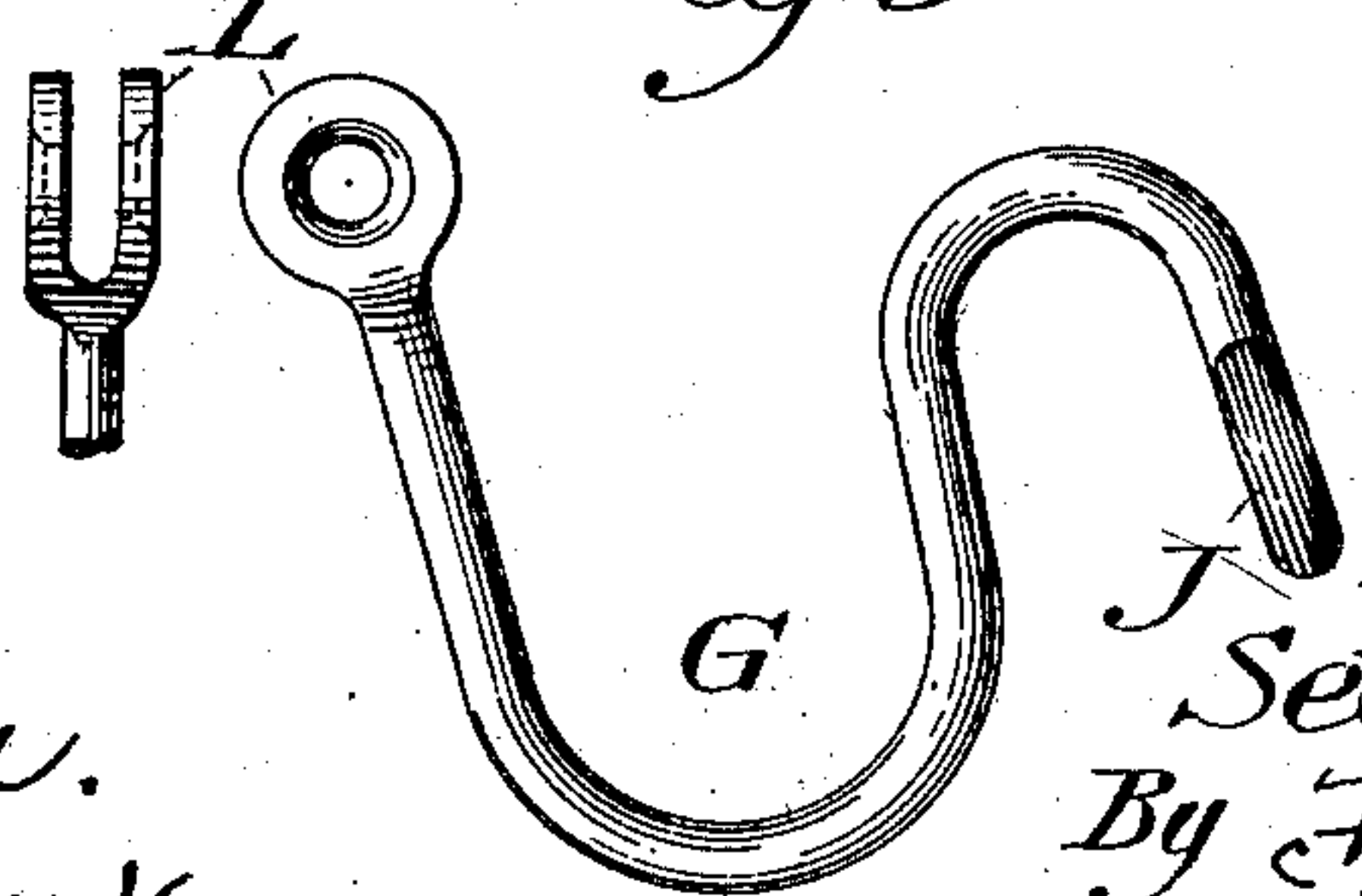
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

SETH J. BUCKLAND, OF SPRINGFIELD, MASSACHUSETTS.

## WATER SHED OR DEFLECTOR FOR TROLLEY POLES AND ROPES.

SPECIFICATION forming part of Letters Patent No. 692,422, dated February 4, 1902.

Application filed September 30, 1901. Serial No. 77,055. (No model.)

*To all whom it may concern:*

Be it known that I, SETH J. BUCKLAND, a citizen of the United States, residing at Springfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Water Sheds or Deflectors for Trolley Poles and Ropes, of which the following is a specification.

This invention relates to trolley-cars, and has for its object the providing of the rope connection which unites the trolley-pole and platform of the car or take-up device with means constituting a water shed or deflector, whereby the water, which is often dirty and greasy, upon the conducting-wire is prevented from running down the said rope to the platform or to the take-up, and thereby wetting and soiling the former and injuring the operative parts of the latter.

With this end in view my invention consists of the construction and combinations and arrangements of parts hereinafter set forth and claimed.

On the accompanying drawings, which form a part of this specification, similar characters indicate like parts throughout the several views.

Figure 1 represents in perspective a portion of the trolley-car, a conducting-wire, a trolley-pole, a take-up, and a rope with my improvement connected therewith, the take-up being located upon the dash of the car and enlarged for the purpose of showing the same more clearly. Fig. 2 is a perspective view of one form of the means embodying my invention and which connects the trolley-pole with the controlling-rope. Fig. 3 represents a central vertical section of another form of the invention. Figs. 4 and 5 are side views of other modifications.

The letter A designates a car, and B the usual trolley-wire or conductor. Secured to the car is the trolley-pole C, with its wheel D engaging said wire B. The controlling-cord E of the trolley-pole is connected with the platform or with a take-up device F of any usual and well-known form of construction and which is not claimed herein *per se*. To prevent the water which during a storm is held by the conducting-wire B from coming into contact with the cord E and thence being transmitted downwardly by gravity to

the platform or to the operative mechanism of the take-up, and thereby wetting and soiling the platform or injuring the said take-up, the said cord is connected to the trolley-pole by means of the water shed, shield, or guard G, which receives the dripping water from the pole and causes it to drop upon the roof of the car, so that it is prevented from passing downwardly upon the cord.

The deflecting shield or guard G is preferably formed, as in Figs. 1, 2, 4, and 5, of a double-looped or reversely-curved rod or of a large depending looped portion and a smaller upper looped portion and having a hook or eye H on one end for attachment to a hook or eye I on the trolley-pole and an eye J on the other end for the attachment thereto of the cord E. An eye K may be used at the upper end of the deflector or guard, as shown by Fig. 4, or a double eye L, as shown in Fig. 5.

In Fig. 3 the guard G' is shown as consisting of a hollow tube, through which the cord is passed, the tube being located on the rope at any desirable point between the pole and platform and the tension of the rope holding it against longitudinal movement upon the same.

In Fig. 2 the guard is shown provided with a bulb or projection M on the under side of the lower loop to facilitate the conducting of the water therefrom. As before stated, in Figs. 4 and 5 each end of the guard is provided with an eye for attachment to the trolley pole and cord, respectively. The eye L at the upper end of the guard in Fig. 5 being double or bifurcated permits the insertion between the parts of the same of an eye or loop attached to the trolley-pole and their connection by a pin or bolt, as will readily be understood.

It is obvious that by the use of my device the water which accumulates on the wire instead of passing entirely downwardly upon the cord to the platform or to the take-up will be deflected downwardly from the large or depending loop of the guard and not ascending the smaller loop will drop off the guard at the lower portion thereof or at the projection M and fall upon the roof of the car.

The guard G, which is attached to the pole directly over the roof of the car, may be formed of any suitable material having suffi-



cient rigidity so that it will retain its looped shape under all conditions, and it preferably has a smooth surface, so that the water will readily fall therefrom. The tubular form of  
5 my invention (shown by Fig. 3) may obviously have parts thereof cut away to facilitate the introduction of the rope or cord and to prevent the water from being retained within the looped or curved portion.

10 Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a trolley-pole, a car-platform, and a controlling-cord, of a  
15 guard or deflector consisting of a loop-shaped device located on the cord between the pole and platform; substantially as described.

2. A guard or shield for connecting a trolley-pole and its controlling-cord, consisting  
20 of a double-looped or reverse-curved device of suitable material; substantially as described.

3. A guard or shield for connecting a trolley-pole and its connecting-cord, consisting  
25 of a double-looped or reverse-curved device of suitable material having attaching means at its ends; substantially as described.

4. A guard or shield for connecting a trolley-pole and its controlling-cord, consisting

of a double-looped or reverse-curved device  
30 of suitable material having a projecting bulb or point on the under surface of its lower looped portion; substantially as described.

5. A trolley-pole in combination with a controlling-cord, and a guard, having its ends  
35 connected to said pole and cord, respectively, said guard having a depending looped portion; substantially as described.

6. A guard or shield for connecting a trolley-pole and its controlling-cord, consisting  
40 of a device having a large depending loop and a smaller upper loop and provided at its ends with eyes for attaching the same to said pole and cord; substantially as described.

7. The combination with a controlling-cord  
45 for trolley-poles, of a double-looped or reverse-curved device of suitable material for the purpose of deflecting water and preventing the same from passing downwardly to the car-platform or take-up; substantially as de- 50  
scribed.

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

SETH J. BUCKLAND.

Witnesses:

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