

(No Model.)

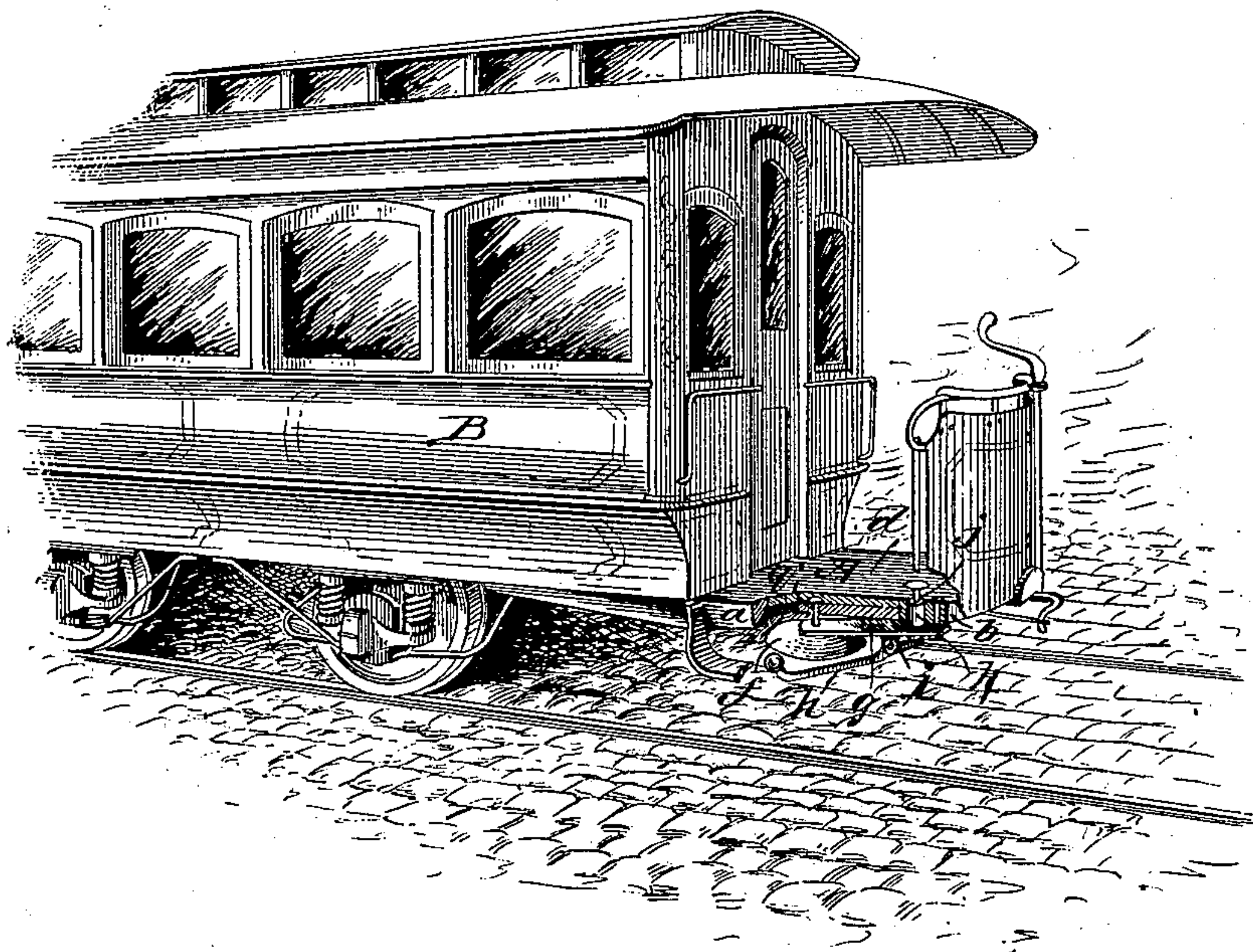
L. PFINGST & S. A. BEMIS.

ALARM SIGNAL FOR CABLE OR ELECTRIC RAILWAY CARS.

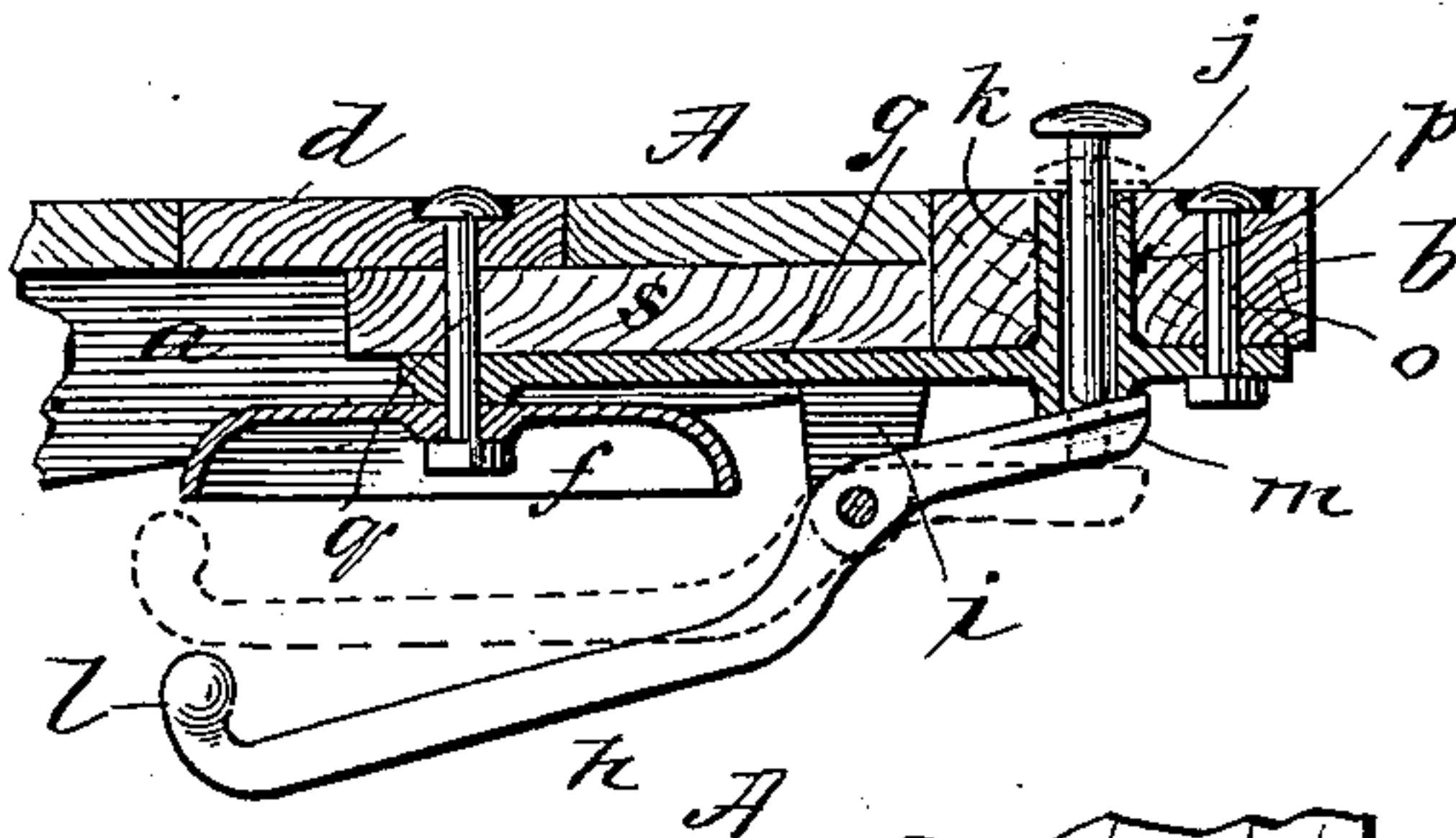
No. 404,981.

Patented June 11, 1889.

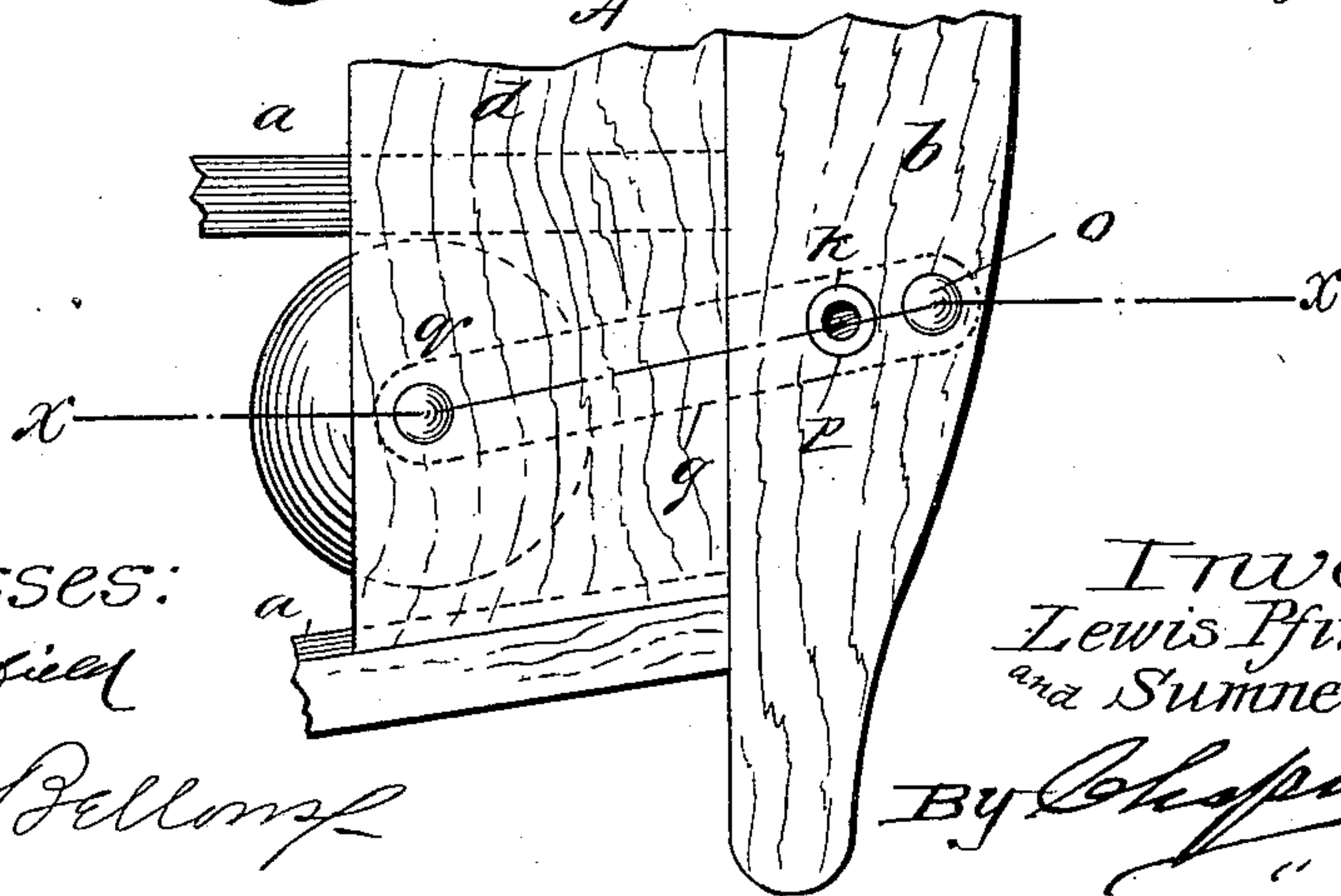
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

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## ALARM-SIGNAL FOR CABLE AND ELECTRIC RAILWAY CARS.

SPECIFICATION forming part of Letters Patent No. 404,981, dated June 11, 1889.

Application filed January 31, 1889. Serial No. 298,286. (No model.)

*To all whom it may concern:*

Be it known that we, LOUIS PFINGST and SUMNER A. BEMIS, citizens of the United States, residing at Boston and Springfield, respectively, in the counties of Suffolk and Hampden and State of Massachusetts, have invented new and useful Improvements in Alarm-Signals for Cable and Electric Railway Cars, of which the following is a specification.

This invention relates to improved audible alarm-signals for employment in electric and cable railway cars, the object thereof being to provide an alarm device which is easily applied and operated, and is inexpensive, durable, and effective; and the invention consists in the construction and combination of the parts constituting the alarm in itself and in its operative combination in relation to the car, all substantially as will hereinafter more fully appear, and be set forth in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of an electric car, a portion of the platform and one step thereof being shown as broken away, exposing to view the alarm-bell and the sounding mechanism therefor. Fig. 2 is a sectional view through the platform and the alarm at one end of the car; and Fig. 3 is a plan view of a portion of one platform, the position of the alarm mechanism being indicated.

In the drawings, A represents the platform of an electric or cable car B, of which *a a* are the longitudinal girders, *b* the end cross-beam, and *d* the flooring. The alarm mechanism comprises a cup-shaped gong-bell *f*, a carrier-plate *g* therefor, striking means consisting of a lever *h*, intermediately pivoted in ear-pieces *i*, formed on the said carrier-plate, and a headed push-rod *j*, guided in a vertical socketed boss *k*, which is also formed on said carrier-plate, said socket being open at each end, the said push-rod being in the line of and adapted to bear on the one end portion of said hammer-lever, which is so hung that its hammer end *l* by the weight thereof will be lowermost and away from the edge of

the gong-bell, and the opposite end *m* will be swung up to lie upon the lower end of the socketed boss, and such end *m* supports the push-rod in its uppermost position, as shown. The said alarm-bell mechanism is disposed and secured on the under side of the platform by having its socketed boss *k* projected through a hole *p*, bored in the cross-beam *b*, and by a bolt *o*, passing through the forward end of said carrier-plate and the cross-beam, and also by the bolt *q*, which passes through the gong-bell and its carrier-plate and through the floor and a section of plank or a block *s*, which is interposed between the bottom of the floor and the top of the carrier-plate, and all whereby sufficient rigidity is afforded to the said alarm mechanism in its attachment to the platform.

It will be noticed on reference to Fig. 2 that the push-rod *j* is of such a length that when depressed to its full extent, which is limited by the abutment of its head against the top of the socketed boss, swinging the hammer-lever, said lever is capable of a slight further swing before its hammer strikes the gong-bell.

In operation, the push-rod, depressed by the foot of the person acting as guard or conductor, with the proper degree of force, imparts to the lever a momentum sufficient to throw the hammer upon the edge of the gong, and it is permitted to quickly fall back, so that no muffling of the sound will result, even if the foot momentarily remains on the push-rod, keeping the same depressed. On releasing the foot-pressure from the push-rod it is raised by the natural return swinging of the hammer-lever.

The platform at each end of the car is to be similarly provided with the alarm mechanism, as described; but it is the intention to provide but one push-rod for both mechanisms, and as the same is readily removable it may be taken from its guiding-socket at one end of the car and placed for operation in the other end of the car when the car is run in the reverse direction, and thus the alarm at whichever is the rear end of the car is rendered practically inoperative, whereby undue tampering therewith by unauthorized persons is prevented.



The upwardly-extended socketed boss on the carrier-plate may be omitted and a vertical hole through the plate of proper diameter may serve as the guiding-socket for the push-rod.

5 It is preferred, however, to employ the socketed boss, substantially as shown.

What we claim as our invention is—

1. In an alarm-bell and operating mechanism therefor, in combination, the gong and a  
10 horizontal carrier-plate therefor, from one end portion of which said gong is supported in a pendent position, said carrier-plate being at its other end portion provided with a vertical socket, a hammer-lever intermediately there-  
15 of pivoted on the under side of said carrier-plate and adapted to normally rest with its hammer end depressed and away from the gong, and having its opposite end resting under and against said socket, and a push-rod  
20 vertically movable in said socket and supported in its uppermost position by the end of the hammer-lever, substantially as described.

2. In an alarm-bell and operating mechanism therefor, in combination, the gong and a  
25 horizontal carrier-plate *g* therefor, from one end portion of which said gong is supported in a pendent position, said carrier-plate being at its other end portion provided with a vertical socketed boss, and intermediately with  
30 the pendent ear-pieces *i*, a hammer-lever intermediately thereof pivotally hung in said ear-pieces and normally resting with its hammer end depressed and away from the gong, and having its opposite end resting under and  
35 against the end of said socketed boss, and a

headed push-rod movable in said socket and normally resting on the end of said lever and adapted to have the extent of its downward movement limited, whereby on the downward depression of said rod to its full extent the  
40 hammer-lever may still have a slight further movement before its end contacts with the bell, substantially as and for the purpose described.

3. The combination, with the car-platform  
45 having the hole *p*, of the carrier-plate *g*, provided with the socketed and upwardly-extended boss *k*, passing therethrough and provided with the ear-pieces *i*, the gong-bell and the bolt *q*, passing through same, the carrier-  
50 plate, and the platform-floor, the hammer-lever intermediately pivotally hung in said ear-pieces and normally resting with its hammer depressed, and a removable headed push-rod playing in said socket and normally resting  
55 on the end of said lever opposite its hammer, the extent of the downward movement of said push-rod being slightly less than the extent of the downward swing of the adjacent end of the hammer-lever, substantially as and for  
60 the purpose described.

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