

No. 710,941.

Patented Oct. 14, 1902.

R. A. BOETTLE.
STREET CAR FENDER.

(Application filed June 21, 1902.)

(No Model.)

2 Sheets—Sheet 1.

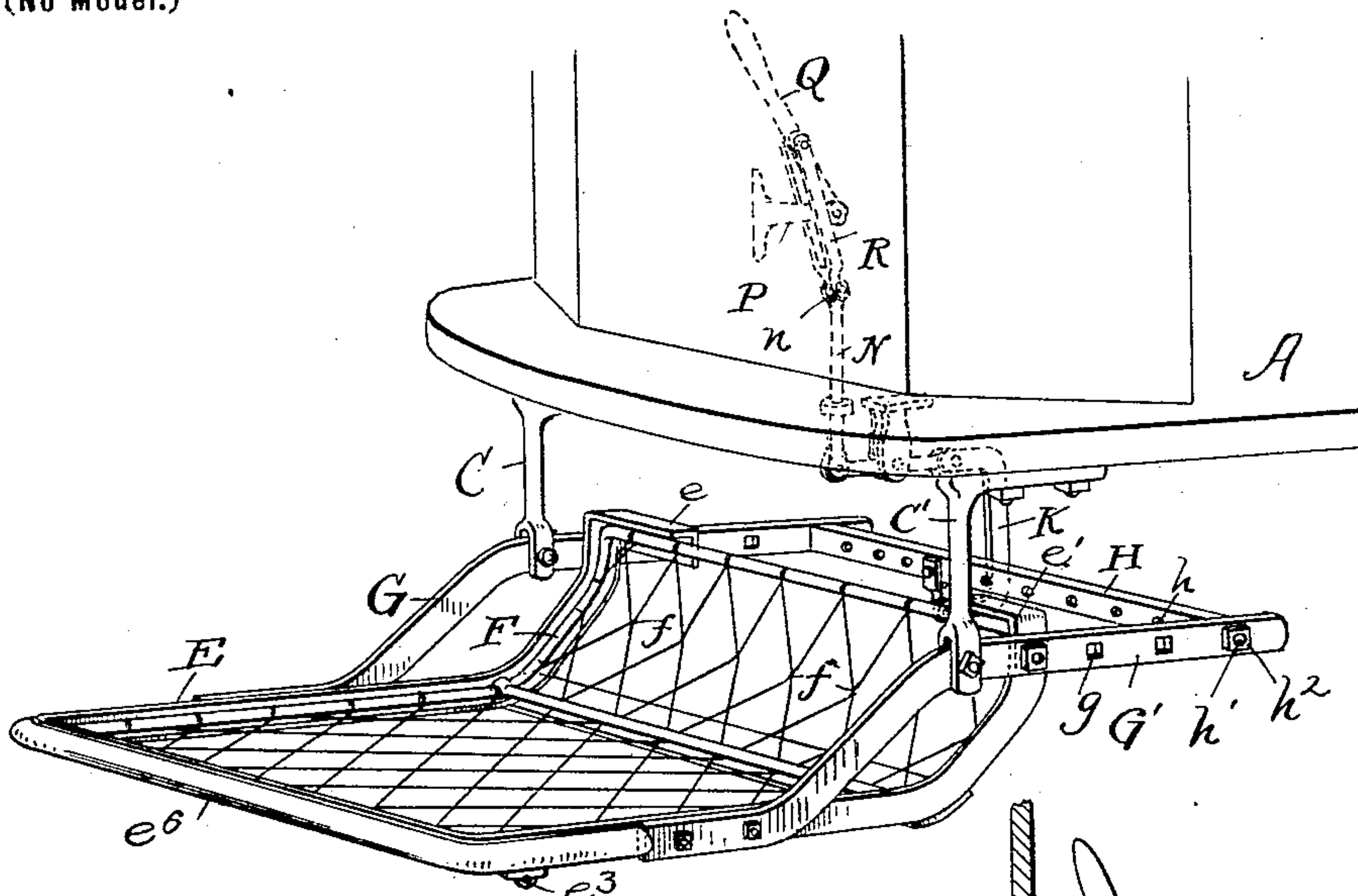


Fig. 1,

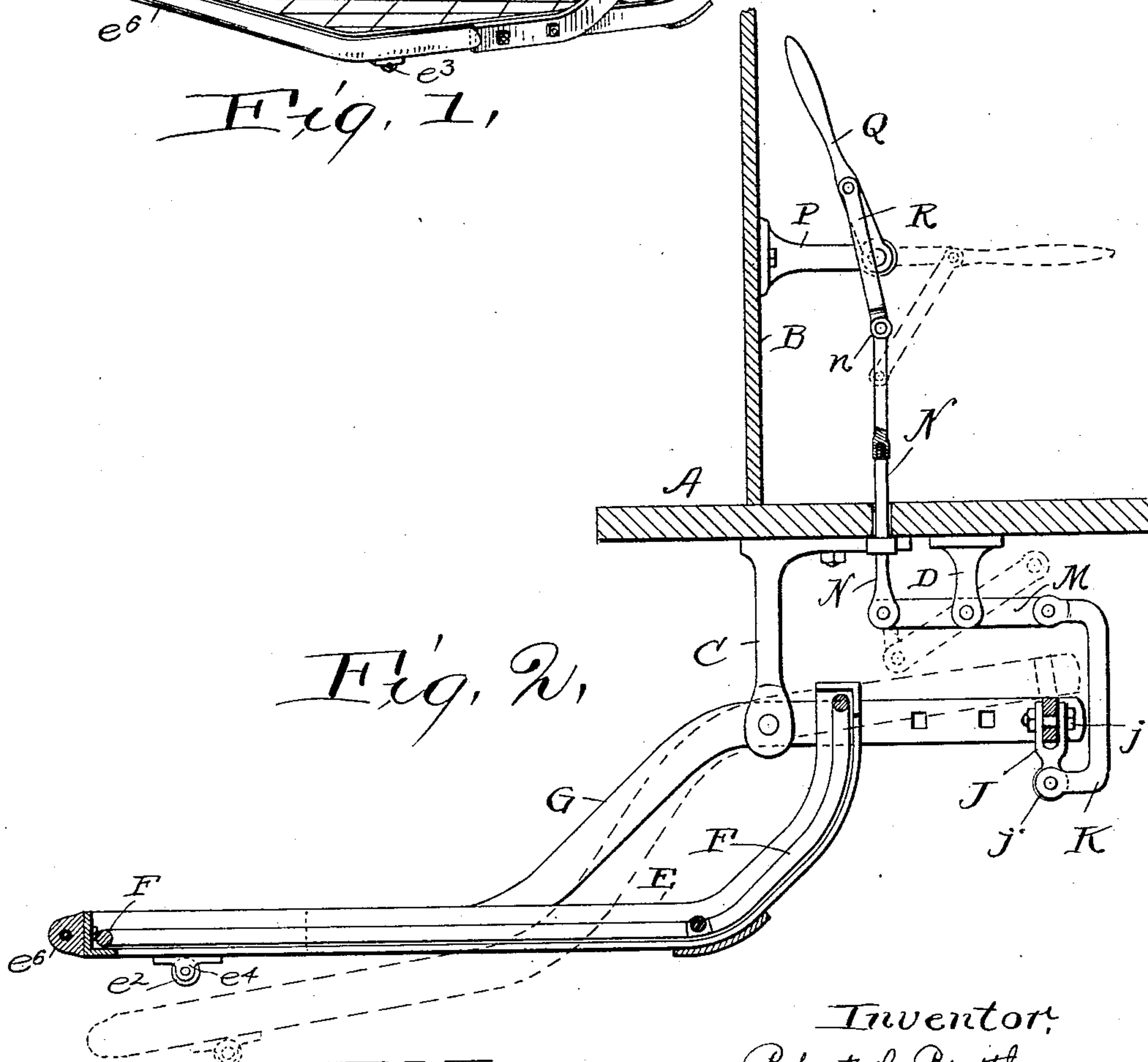


Fig. 2,

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H. M. Wiser } Witnesses.

Inventor,
Robert A. Boettler
By his attorney
Shurston & Bates

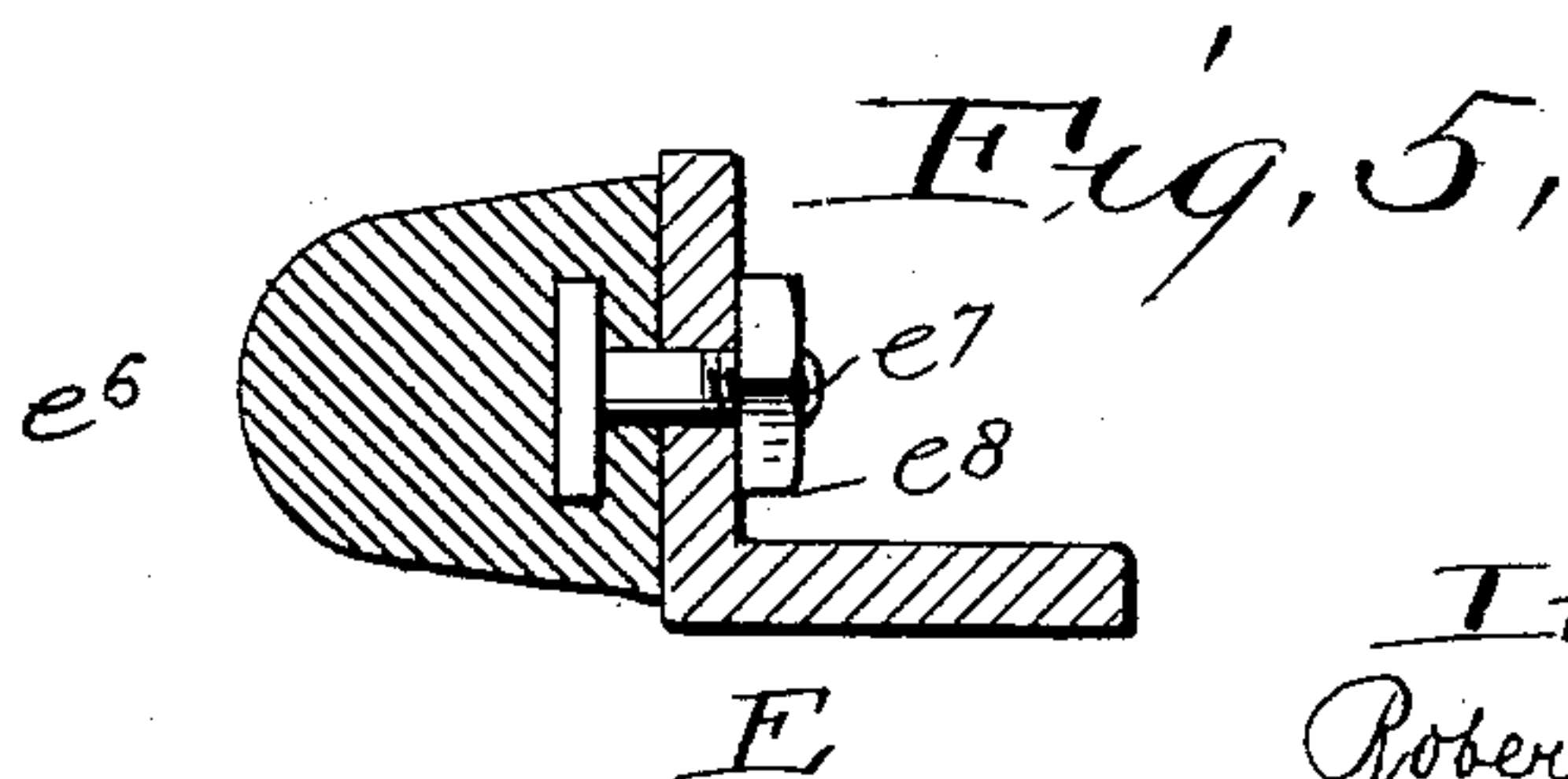
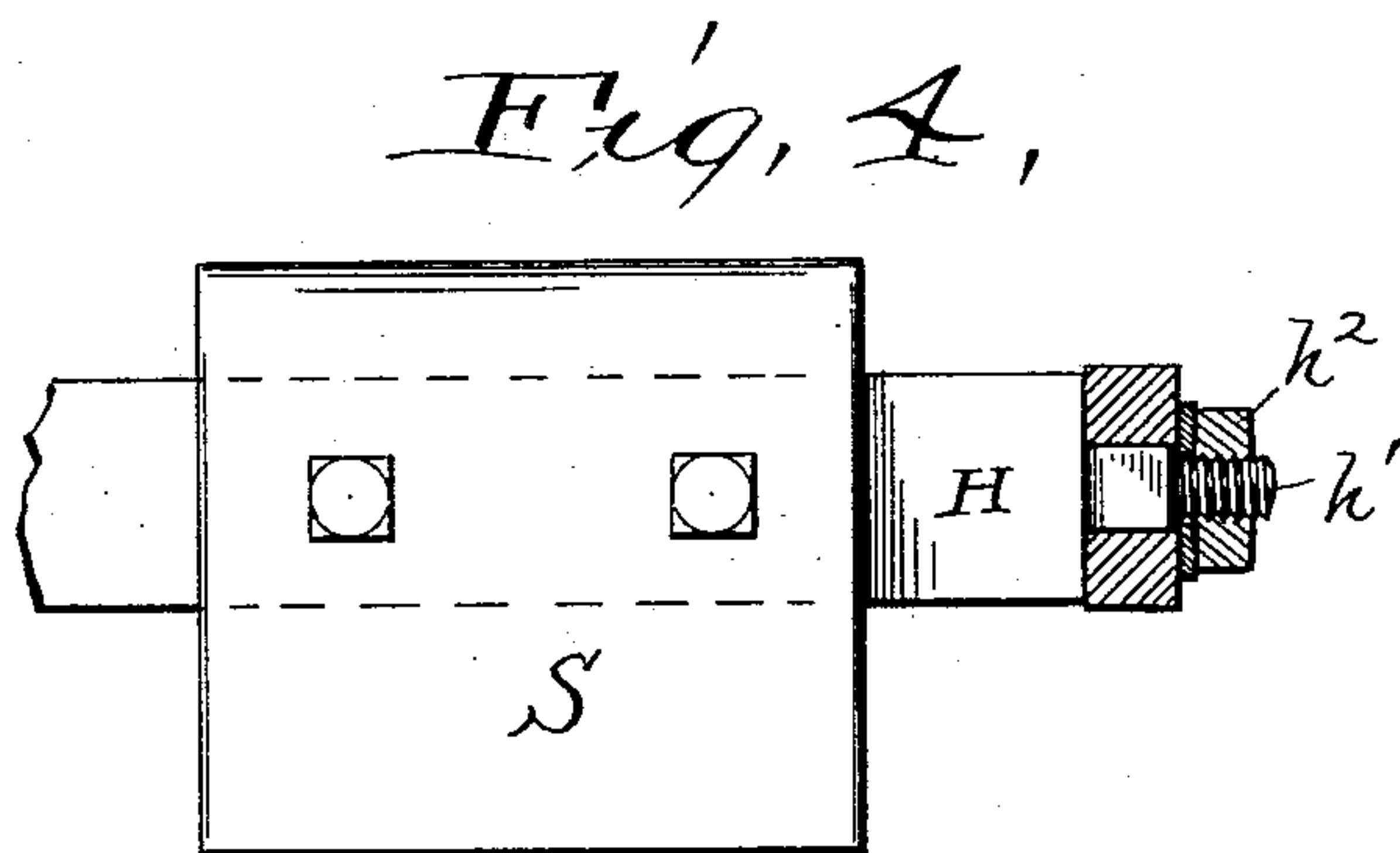
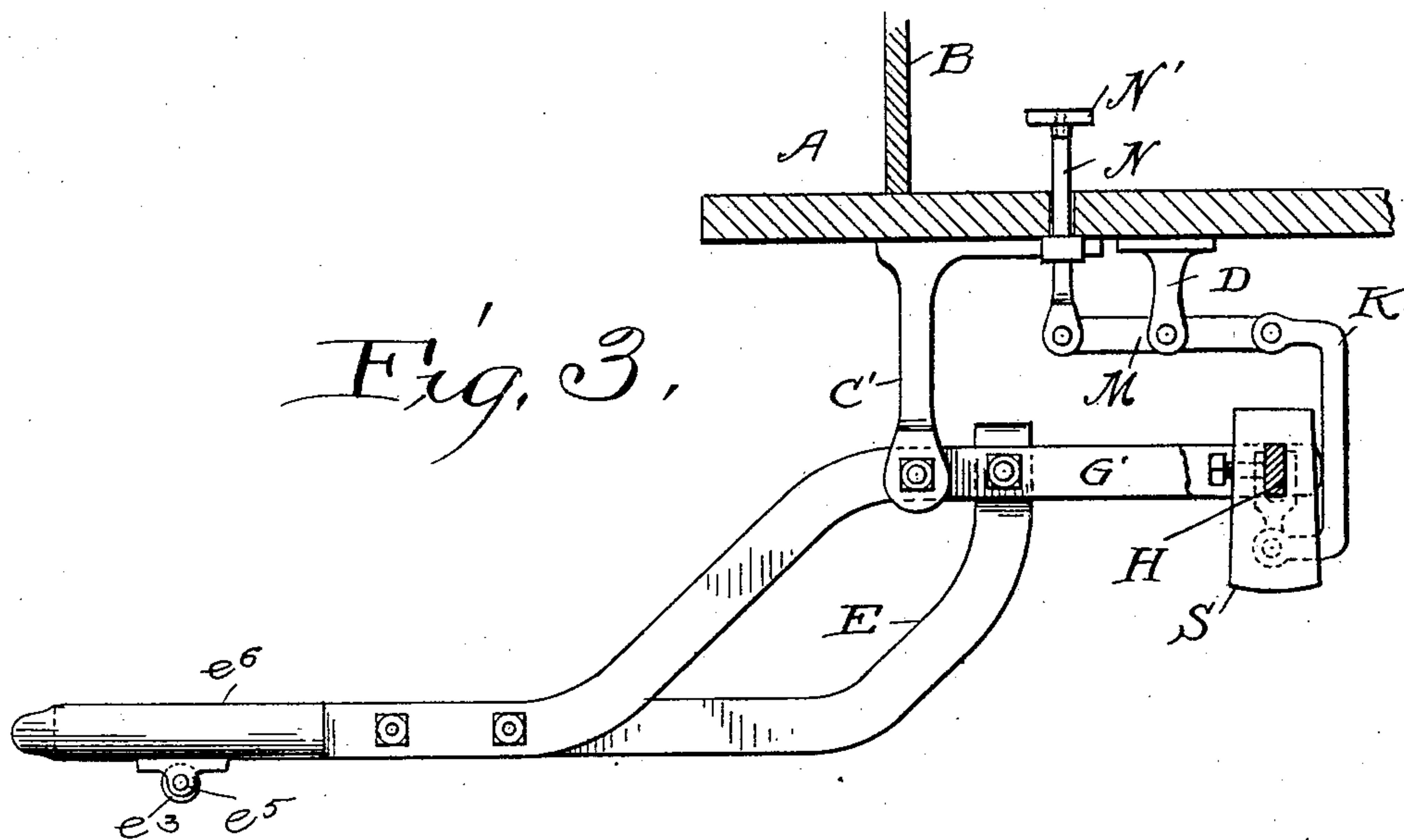
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Witnesses.
E. B. Gilchrist
H. M. Wise.

Inventor.
Robert A. Boettler
By his attorney
Thurston Bates

UNITED STATES PATENT OFFICE.

ROBERT A. BOETTLER, OF CLEVELAND, OHIO, ASSIGNOR OF ONE-HALF TO
A. HABERMAN AND PHILLIP ESCHELBACH, OF CLEVELAND, OHIO.

STREET-CAR FENDER.

SPECIFICATION forming part of Letters Patent No. 710,941, dated October 14, 1902.

Application filed June 21, 1902. Serial No. 112,572. (No model.)

To all whom it may concern:

Be it known that I, ROBERT A. BOETTLER, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Street-Car Fenders, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

My invention relates to improvements in car-fenders; and it consists in the novel features of construction described in the following specification and shown in the drawings.

The object of my invention is to provide a device which may be operated by the motor-man by foot-power or by hand-power. The device is designed so that when the motor-man desires to operate the same he can drop the fender upon the ground.

Referring to the drawings, Figure 1 represents the front of the car-body provided with a fender constructed according to my invention. Fig. 2 is a longitudinal section of the same. Fig. 3 is a side elevation of my device, showing the weights. Fig. 4 represents a cross-bar with the weight applied thereto. Fig. 5 is a cross-section of the angle-iron, showing the rubber cushion applied thereto.

Referring to the parts by letters, A represents a car-body, and B represents the front dash, secured to the under side of which are two brackets C C', adapted to support the main portion of said fender, and a third bracket D, mounted somewhat in the rear of said brackets C C' for supporting the operating device.

I prefer to make my fender-frame E of a single piece of angle-iron, with one flat portion thereof extending inward and forming a ledge to receive the frame F of a net f. The free ends e e' of the fender-frame are bent in toward the center, as shown, for the purpose of firmly securing the net-frame within the fender-frame. Rigidly secured to the sides of the fender-frame are two side bars G G', pivoted in said brackets C C' in such a manner that the normal tendency of the frame is to drop in front. Rollers e² e³, mounted in the bearings e⁴ and e⁵, are also secured to the under side of the front of said frame. The frame is further provided with a suitable

cushion e⁶, preferably rubber, secured to the frame by bolts e⁷ and nut e⁸. The free ends of the side bars G G' are provided with adjusting-holes g, which permit the fender to be applied to any form of car-body and also allow it to be arranged so that it will have a tendency to operate more freely by gravity.

For operating the fender to let it drop upon the ground I fasten in the adjusting-holes g of the side bars a cross-bar H, which is secured in the same by means of bolt ends h' and nuts h² and is provided with adjusting-holes throughout its length for permitting the operating mechanism hereinafter described to be applied at any position along the same. Fastened in one of said holes h I pass a bolt j, which carries a clip J, having on its end a connecting-loop j'. To this connecting-loop j' is pivoted a link K of substantially the configuration shown in the drawings and pivoted to one end of a lever M, which is fulcrumed in the bracket D. Pivoted at the other end of this lever is the operating-rod N, passing up through the floor of the car and having movably secured thereto an eye n. This eye n may be removed and a footpiece N' provided upon the rod N.

On the inside of the dash B is mounted a bracket P, secured by bolts or screws. A hand-lever Q is pivoted in the end of this bracket and has an opening midway for receiving a bolt carrying one end of a link R, which is at its other end pivoted in the eye n. The arrangement of the hand-lever and its link is such that when the lever is in a position to retain the fender raised the link will pull down upon the hand-lever at a point which is beyond the vertical line of the pivoting-point of said hand-lever, as shown in Fig. 2.

When the motorman desires to use the fender, he pulls the link across the line of its pivot, and thus lowers the operating-rod N, which in turn raises the link K, connected with the cross-bar H, allowing the rear end of the fender-frame to raise and the front end to drop upon the ground. The reverse operation takes place when the motorman desires to again raise the fender to its normal position. If it is desired to have the device operated by foot-power, the operating mechan-

ism on the inside of the dash is done away with and a footpiece N' is secured upon said operative rod, and weights S are provided upon the cross-bar H, which will more than
 5 counterbalance the weight of the fender-frame and make it necessary to raise the rear end thereof in order to lower the front end upon the bracket. This is accomplished by pressing down on the footpiece.

10 Having described my invention, I claim—

1. The combination with the car-body of a fender-frame having side bars pivoted to the car-body and extending rearward of the pivots, a cross-bar connected to the rear portion
 15 of said side bars, an operating-rod extending up through the car-platform, a lever pivoted beneath the platform and connected both with said rod and said cross-bar, substantially as described.

20 2. In a car-fender, the combination with the car-body, of a frame, side bars secured to said frame and pivoted to the car-body and having portions extending to the rear of its pivot, a cross-bar connecting the rear portion of said
 25 side bars and being adjustable along the same, an operating-rod extending up through the car-body, and adjustable connections between said rod and said cross-bar, substantially as described.

30 3. In a car-fender, the combination with the car-body, of a frame, side bars secured to the same and pivoted to the car-body and having rearwardly-extending end portions, a cross-bar connecting said end portions and adjustable along the same, an operating-rod extend-
 35 ing through the floor of the car, a lever connected with said rod, a link connected with said lever, and a clip connecting said link and said cross-bar and adjustable along the same, substantially as described.

40 4. In a car-fender, the combination with the car-body, of a frame, side bars secured to the same and pivoted to the car-body and having rearwardly-extending end portions, a cross-
 45 bar connecting said end portions and adjustable along the same, an operating-rod extending through the floor of the car, a lever connected with said rod, a link connected with said lever, a clip connecting said link and
 50 said cross-bar and adjustable along the same, and means for operating said rod, substantially as described.

55 5. In a car-fender, the combination with the car-body, of a frame, side bars secured to said frame and pivoted to the car-body and having portions extending to the rear, a cross-bar connecting the rear portion of said side bars and adjustable along the same, an oper-
 60 ating-rod extending up through the car-body, adjustable connections between said rod and said cross-bar, and a hand-lever with suitable connections for operating said rod, substantially as described.

65 6. In a car-fender, the combination with the car-body, of a frame carrying a net, a cushion provided on the front of said frame, side

bars secured to said frame and having rear-
 wardly-extending portions, a cross-bar con-
 necting said end portion, a clip secured to
 and adjustable along said cross-bar, an oper- 70
 ating-rod, a lever connected with said rod, a
 link connected to said lever and pivoted to
 said clip, a hand-lever and connections be-
 tween said hand-lever and said rod whereby
 said lever is adapted to operate said rod, sub- 75
 stantially as described.

7. In a car-fender, the combination with the car-body, of a frame carrying the net, a rubber
 cushion upon the front of said frame, side
 bars secured to said frame and having rear- 80
 wardly-extended portions, said side bars be-
 ing pivoted to the car-body, a cross-bar con-
 necting said side bars and being adjustable
 along the same, a clip adjustable along said
 cross-bar, an operating-rod, a hand-lever, a 85
 toggle-link between said hand-lever and said
 rod, a lever connected to said rod, and a link
 connecting said lever to said clip, substan-
 tially as described.

8. In a car-fender, the combination with the 90
 car-body, of a frame made of a single piece of
 angle-iron, a flat portion of said angle-iron ex-
 tending inward to receive the net, means for
 pivoting said frame to the car-body, and
 means for raising and lowering the rear end 95
 of said frame, substantially as described.

9. In a car-fender, the combination with the car-body, of a frame made of a single piece of
 angle-iron adapted to carry the net, a rubber
 cushion upon the front of said frame, side 100
 bars secured to said frame and having rear-
 wardly-extended portions, said side bars be-
 ing pivoted to the car-body, a cross-bar con-
 necting said side bars and being adjustable
 along the same, a clip adjustable along said 105
 cross-bar, an operating-rod, a hand-lever, a
 toggle-link between said hand-lever and said
 rod, a lever connected to said rod, and a link
 connecting said lever to said clip, substan-
 tially as described. 110

10. In a car-fender, the combination with the car-body, of a frame made of a single piece
 of angle-iron and having a flat portion extend-
 ing inward to receive the net, a rubber cush- 115
 ion upon the front of said frame, side bars se-
 cured to said frame and having rearwardly-
 extending portions, said side bars being piv-
 oted to the car-body, a cross-bar connecting
 said side bars and being adjustable along the
 same, a clip adjustable along said cross-bar, 120
 an operating-rod, a hand-lever, a toggle-link
 between said hand-lever and said rod, a lever
 connected to said rod, and a link connecting
 said lever to said clip, substantially as de-
 scribed. 125

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

ROBERT A. BOETTLER.

Witnesses:

E. B. GILCHRIST,
 B. W. BROCKETT.