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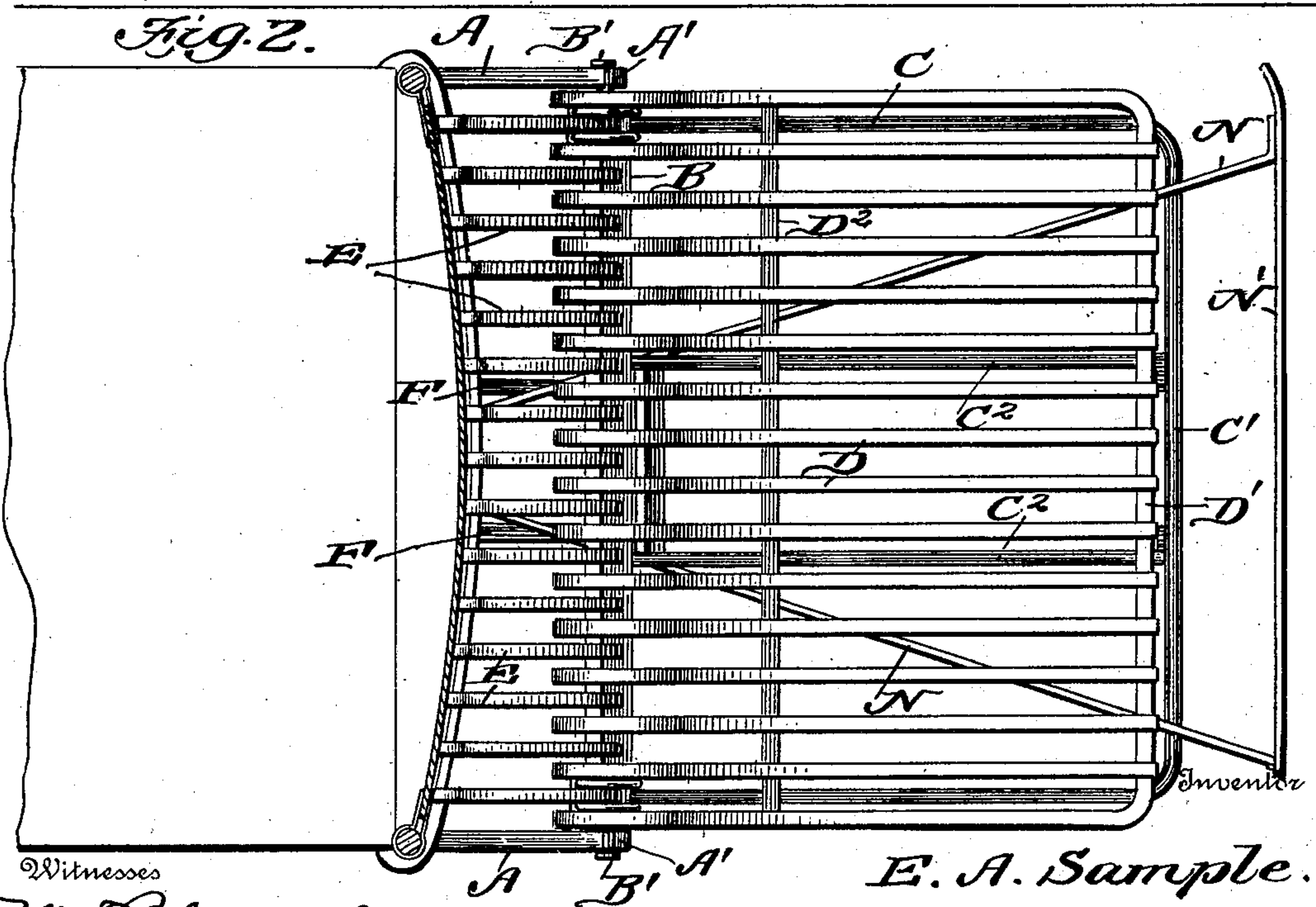
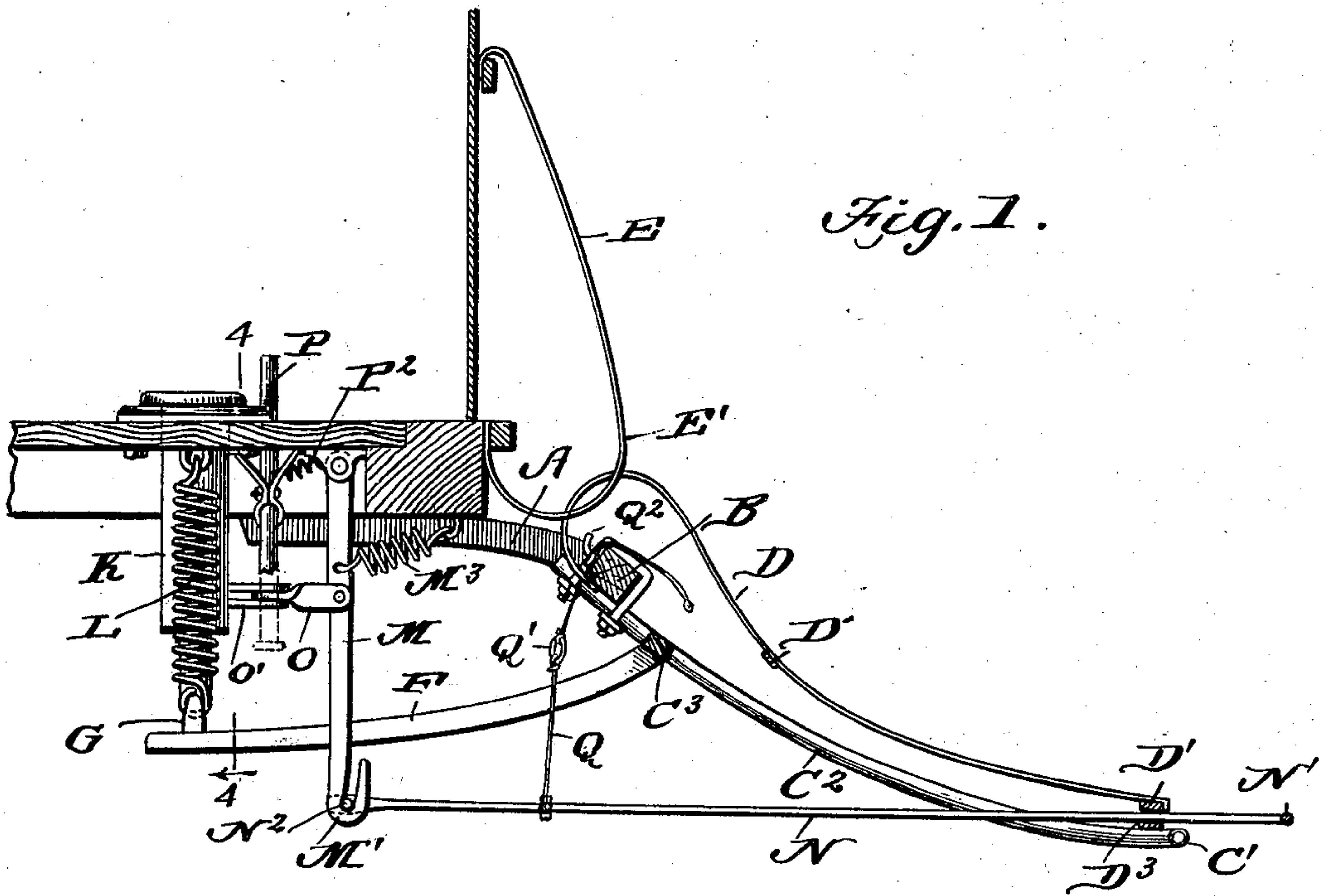
Patented June 10, 1902.

E. A. SAMPLE.
CAR FENDER.

(Application filed Jan. 14, 1902.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses

Wm. Bloude,
Charles Shaw

E. A. Sample.

By Oliver Brock
Attorneys

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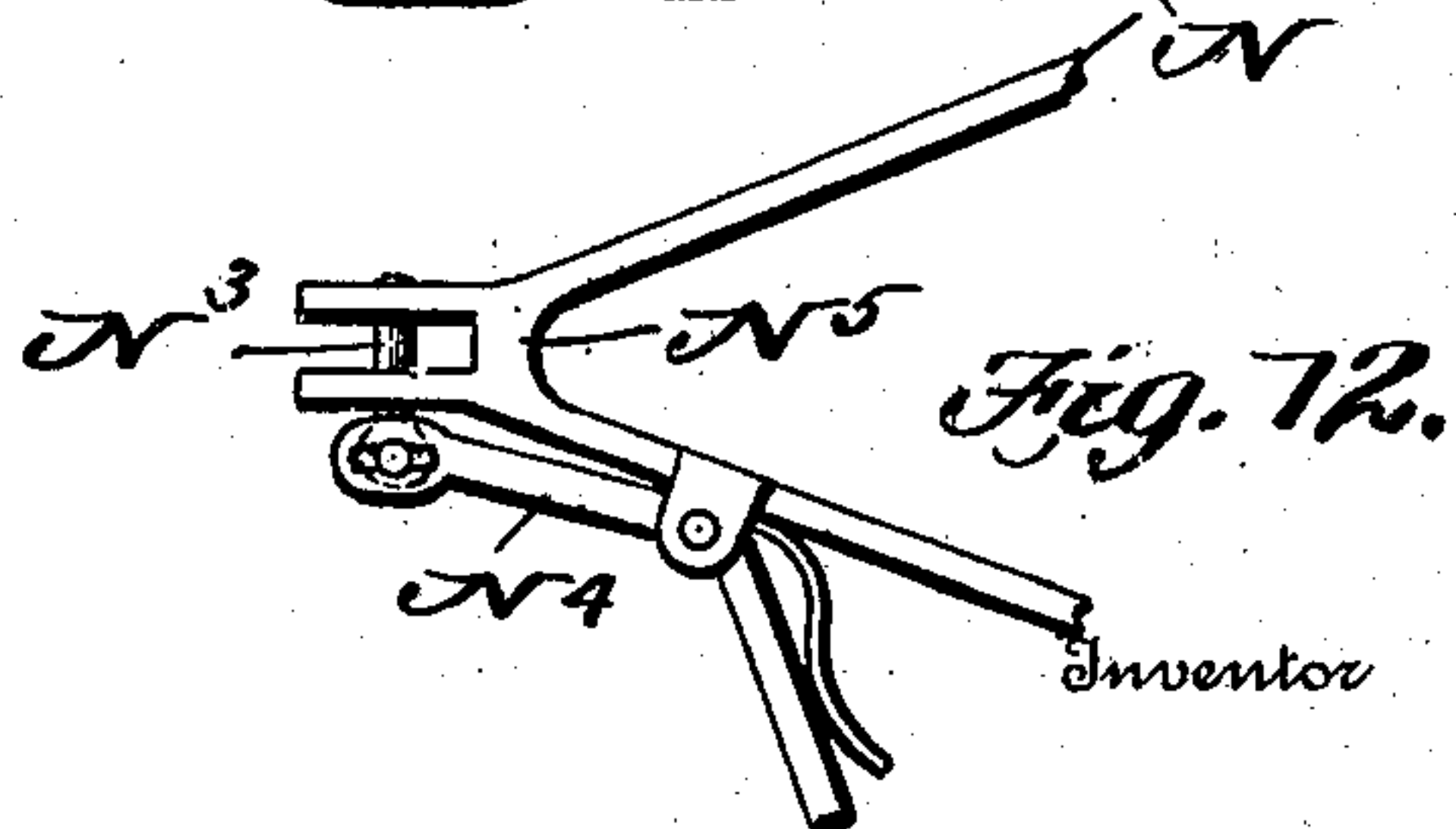
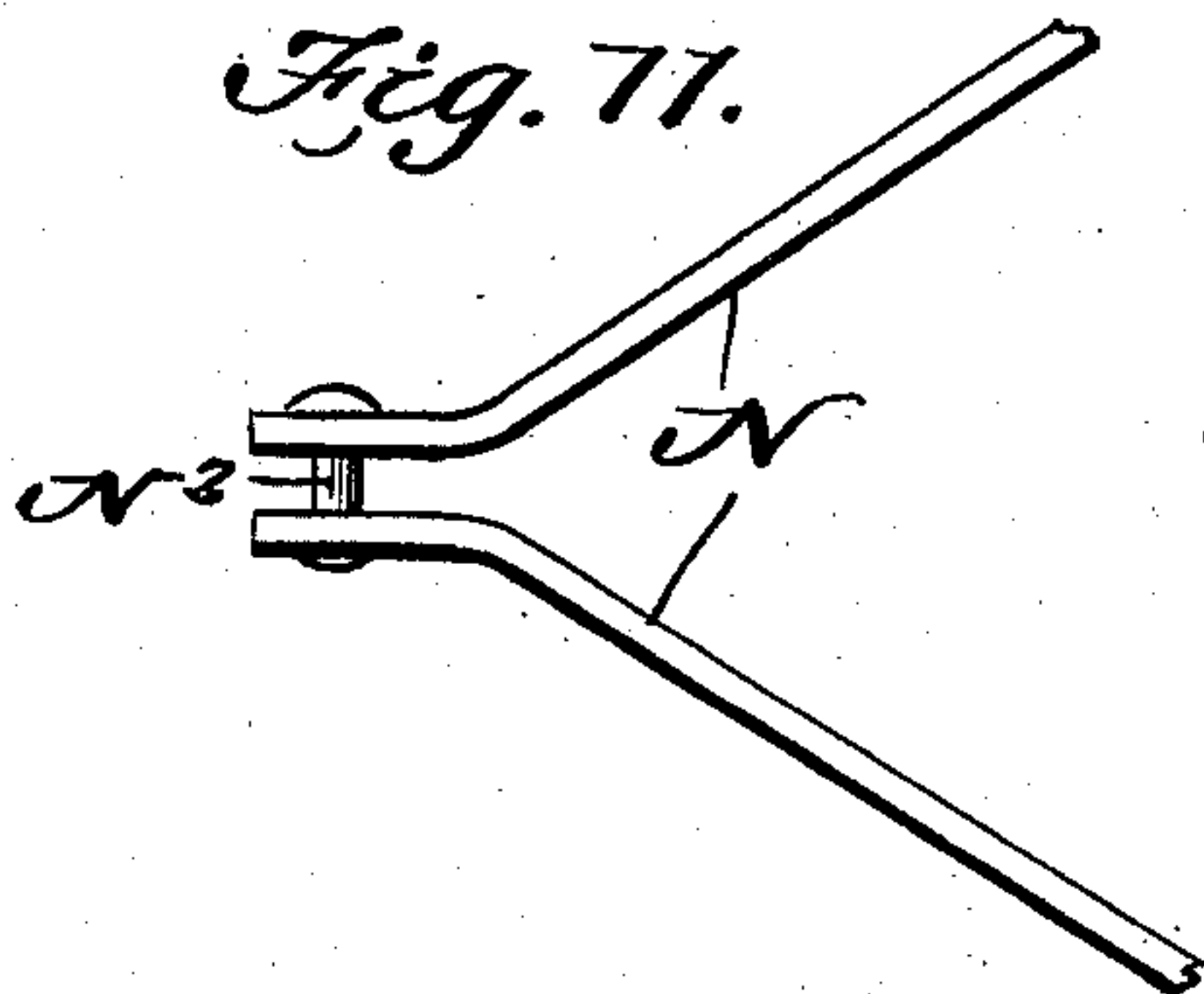
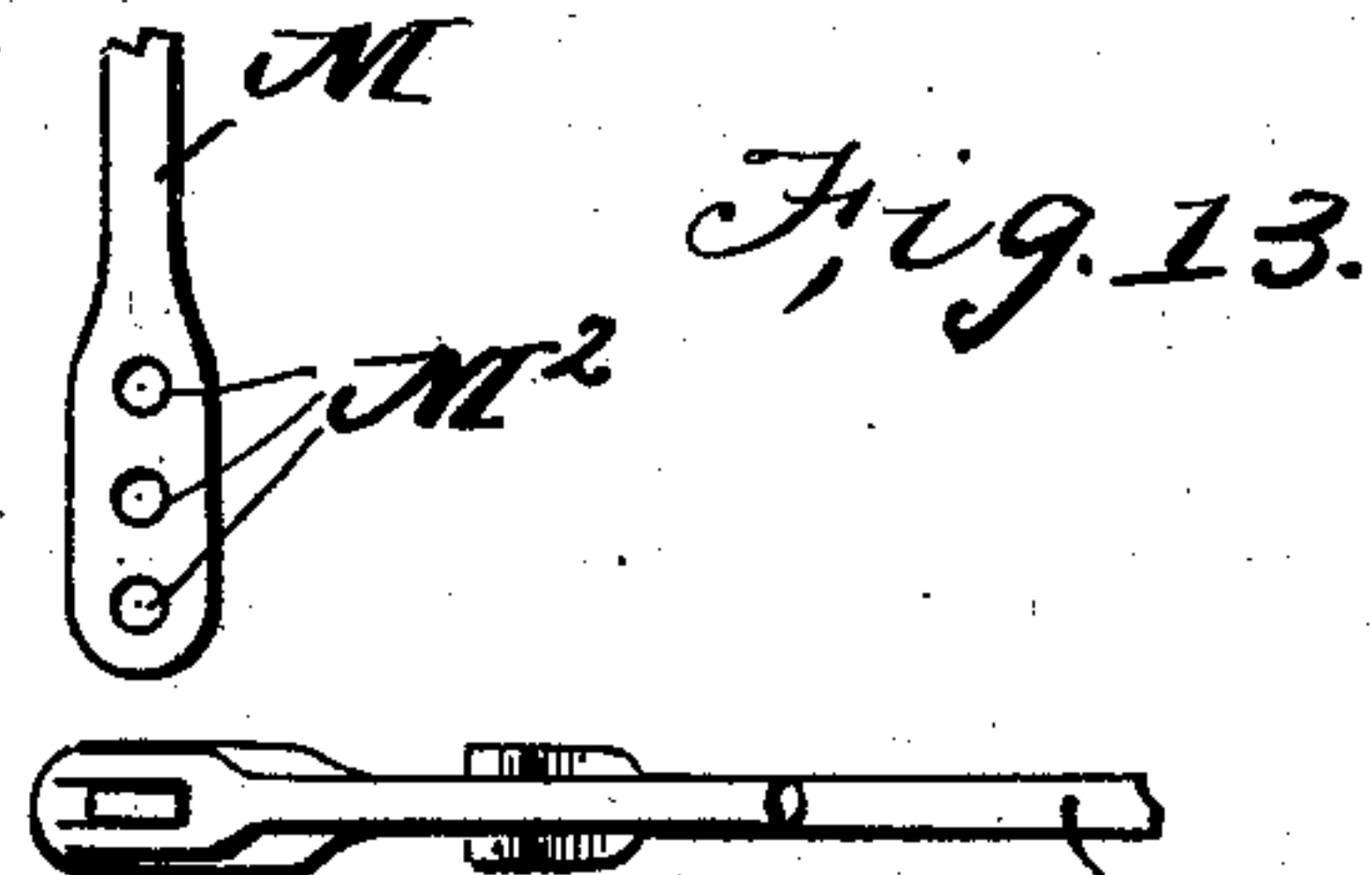
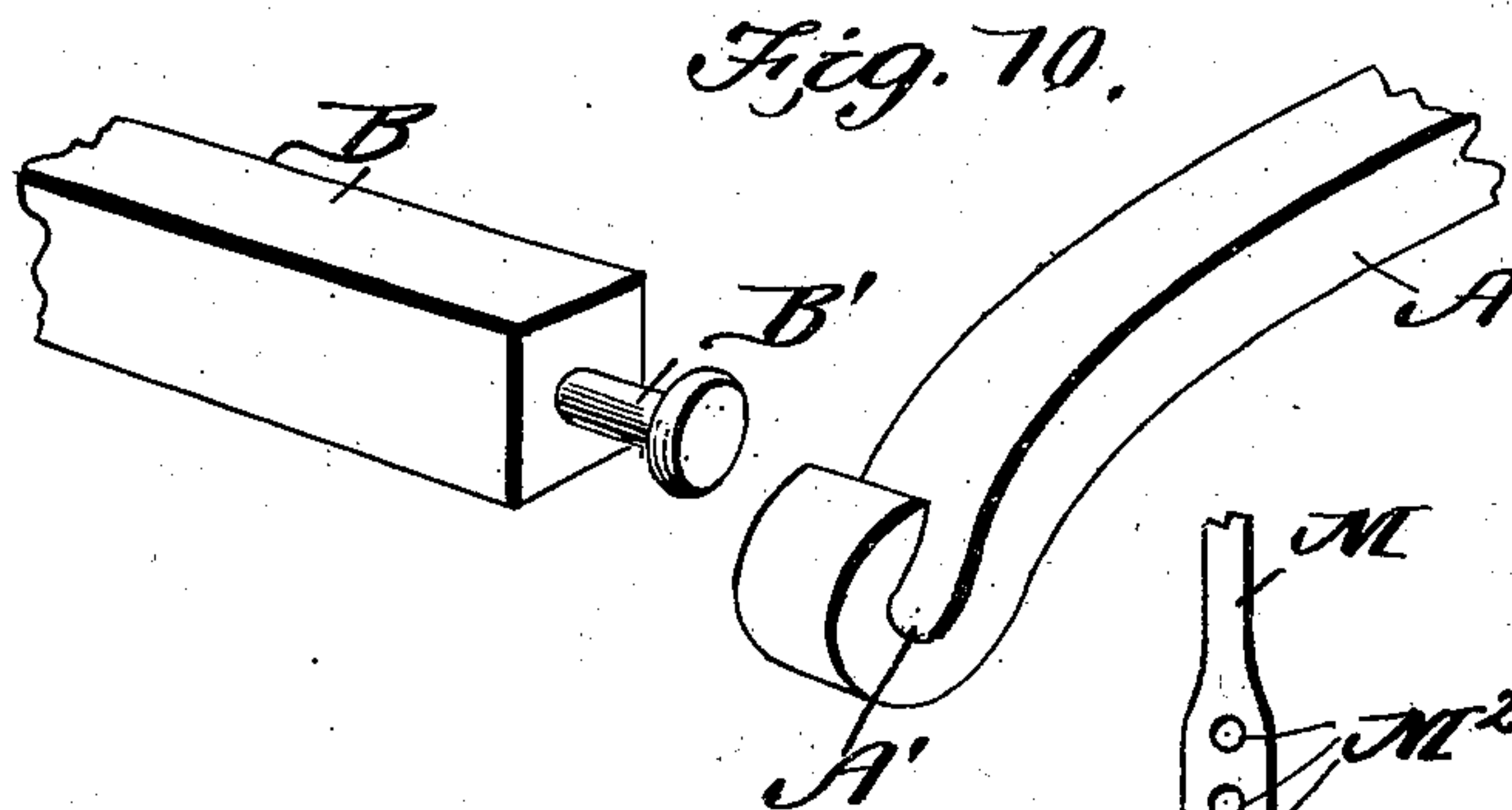
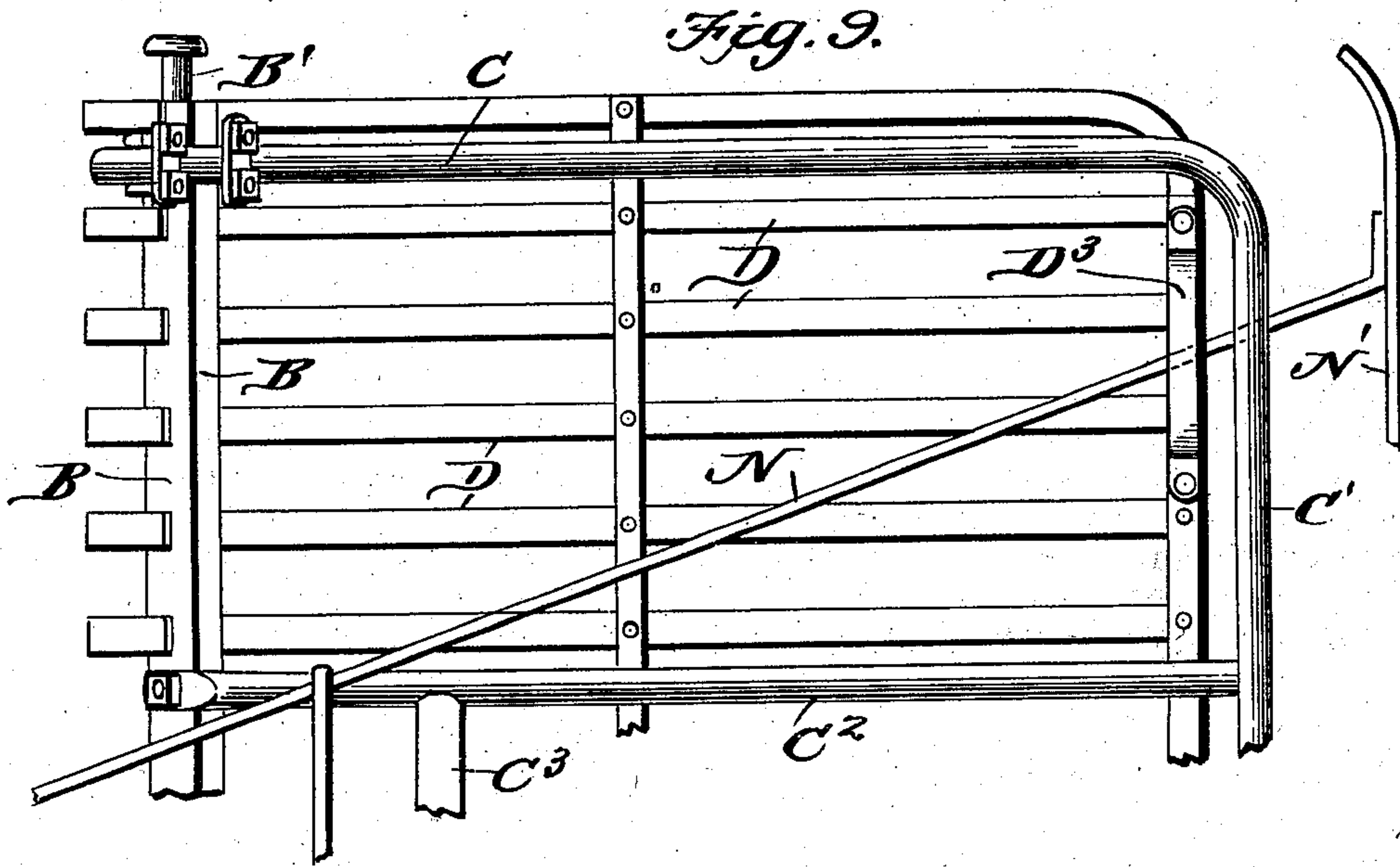
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3 Sheets—Sheet 3.



Witnesses
Wm. H. Landel
Charles Shaw

E. A. Sample,
By *Oliver & Brock*
Attorneys

UNITED STATES PATENT OFFICE.

EZEKIEL A. SAMPLE, OF FREDERICKTOWN, MISSOURI.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 701,945, dated June 10, 1902.

Application filed January 14, 1902. Serial No. 89,693. (No model.)

To all whom it may concern:

Be it known that I, EZEKIEL A. SAMPLE, a citizen of the United States, residing at Fredericktown, in the county of Madison and State of Missouri, have invented a new and useful Car-Fender, of which the following is a specification.

This invention relates generally to car-fenders, and more particularly to one in which the fender is normally held elevated a short distance above the track and automatically dropped the moment the fender comes in contact with an object.

The object of the invention is to provide a simple and efficient construction of fender embodying these characteristics; and another object is to provide a fender which can also be operated by the foot of the motorman whenever so desired.

With these and other objects in view the invention consists in the novel features of construction and combination hereinafter fully described, and pointed out in the claims.

In the drawings forming part of this specification, Figure 1 is a vertical longitudinal section illustrating my improved construction of fender attached to the forward end of a street-car. Fig. 2 is a sectional view of the same. Fig. 3 is a perspective view illustrating the means for throwing the fender downwardly, such view being taken from a point to the rear and below the said mechanism. Fig. 4 is a view on the line 4 4 of Fig. 1 looking in the direction of the arrow. Fig. 5 is a detail view in elevation, illustrating the means for setting and locking the fender in an elevated position and also the foot-operated releasing mechanism. Figs. 6, 7, and 8 are detail views illustrating the slotted sleeve, tubular push-rod, and shank working in said sleeve. Fig. 9 is a bottom plan view of one side of the fender. Fig. 10 is a view illustrating the pivotal connection of the fender. Figs. 11, 12, and 13 are detail views illustrating the detachable connection between the tripper-arms and depending lever.

In constructing a fender in accordance with my invention I employ two downwardly-extending brackets A, which are rigidly attached to the under side of the front platform of the car, the ends of which are provided with bearings A', in which are jour-

naled trunnions B' of the rear member B of the fender-frame, said member B being preferably constructed of wood, to which the side members C are attached, said side members C and front member C' being formed of a single piece of tubing, and this frame is strengthened by means of the longitudinal tubing C², said longitudinal members being connected to the wooden beam B at their rear ends and to the front member C' at their forward ends. The frame thus described supports the fender proper, which consists of the spring metallic strips D, secured at their rear ends to the under side of the beam B and at their forward ends to a cross-strip D', which rests upon the upper side of the rectangular supporting-frame adjacent to its forward end, said strips being connected intermediate their ends by means of a cross-strip D². These strips D are bowed or curved considerably where they pass over and to the rear of the beam B, thereby providing considerable of a cushion at that point. Similar strips E are connected at their upper ends to the front dash and at their lower ends to the buffer-beam, said metallic strips being curved or bowed, as at E', and passing between the bowed or curved portions of each pair of strips D, thereby thoroughly protecting the person thrown upon the fender against contact with any of the rigid parts thereof. The longitudinal members C² are connected by means of a cross-bar C³, to which the rearwardly-extending bars F are rigidly attached, said bars F being curved slightly, as shown, and normally rest upon the under side of a cross-bar G, carried upon the lower end of a shank H, which shank is secured at its upper end to the lower end of a tubular push-rod I, which works in a sleeve K, depending from the front platform of the car, said sleeve having a guide-slot K' produced in the front thereof and a bayonet-slot K² produced in the side thereof, a guide-pin H' working in the guide-slot, said guide-pin being attached to the shank H, and the locking-pin H² is adapted to work in the bayonet-slot K², said pin being carried by a collar H³, which surrounds the shank H at a point above the guide-pin H', as most clearly indicated in Figs. 6, 7, and 8.

Coil-springs L are attached to the bottom of the car-platform at their upper ends and

are connected to the outer ends of the cross-bar G at their lower ends, the tendency of said springs being to normally elevate the bar G, and the said bar is held in its lowered position by the locking-pin H^2 being forced into the transverse portion of the bayonet-slot K^2 .

M' indicates a depending lever pivoted to the under side of the car-platform and having a hook M' at its lower end, to which the tripper-arms N are connected, said tripper-arms extending forwardly in diverse directions, passing through the fender-frame beneath the cross-bar D' , working in a guide D^3 , arranged upon the under side of said cross-bar D' , said tripper-arms being connected at their forward ends to the front cross-bar N' . In Fig. 11 I have shown the tripper-arms N connected by means of a bolt N^2 , which is adapted to engage the hooked end M' of the depending lever M. In Fig. 12 the lever is shown provided with perforations M^2 , which are adapted to be engaged by a bolt N^3 , carried by a spring-actuated lever N^4 , arranged upon one of the tripper-arms N, said tripper-arms being united by a webbing N^5 adjacent to their rear ends. Either construction may be employed; but for the purpose of quick action in the matter of detachment I prefer to employ the construction shown in Figs. 1 and 3. Springs M^3 , connected to the lever M adjacent to its upper end, normally holds the said lever in a vertical position, and when the said lever M is in such position the front cross-bar N' is held in its most forward position, at which time it will rest a short distance in advance of the fender-frame and parallel therewith. A twisted arm O is pivotally connected to the lever M at a point a short distance below the spring M^3 , the rear and flat portion of said arm being connected to a clip-arm O' , which arm is pivotally connected or clamped to the outer end of the locking-pin H^2 , as most clearly shown in Figs. 3 and 5.

A depending crank-lever P is pivoted in brackets P' upon the bottom of the platform of the car, the upper end of the lever extending upwardly through a slot produced in said platform, the lower end extending downwardly and adapted to contact with the locking-pin H^2 whenever the upper end is pressed forwardly, as indicated in Figs. 1 and 5, said lever being normally held in an upright position by means of a spring P^2 , attached to the said lever at a point below its pivot or opposite end, said spring being connected to the bottom of the car-platform.

Q indicates a cord attached to the cross-bar connecting the tripping-arms and by means of which the tripping-arms can be quickly and easily disengaged from the hooked end of the depending lever M whenever it is desired to fold the fender up against the dashboard of the car, said cord being provided with a ring Q' , which engages a hook Q^2 , ar-

ranged upon the rear side of the cross-beam B.

In operation the various parts are arranged as shown in Fig. 1, and the fender is therefore elevated a short distance above the track. The moment the cross-bar N' comes in contact with an object the tripping-arms N are forced rearwardly, operating upon the depending lever M, which is also swung rearwardly, and this action of the lever M is transmitted to the locking-pin H^2 through the medium of the arms O and O' , thereby throwing said locking-pin out of the transverse portion of the bayonet-slot, and the moment the said locking-pin has been forced from such transverse portion the springs L, acting upon the cross-bar G, force said bar upwardly, thereby relieving the arms F of pressure, and the moment pressure is removed from said arms they will move upwardly, permitting the fender to drop by its own weight and rest upon the track, so that the object struck will be thrown upon the fender and not permitted to pass under the same. In case the motor-man desires to operate the fender it is only necessary for him to force the foot-lever forwardly, thereby forcing the lower end of said lever rearwardly until it contacts with the locking-pin H^2 and disengaging it from the bayonet-slot in the same manner as heretofore described. In order to reset the fender, it is only necessary to push down upon the tubular push-rod I and all of the parts will immediately resume their normal positions, inasmuch as the spring M^3 will draw the lever M forwardly, and this forward movement of the lever M will project the tripping-arms N forwardly and also draw the locking-pin H^2 into the transverse portion of the bayonet-slot K^2 . When it is desired to fold the fender up against the dashboard, the tripper-arms are disconnected from the lower end of the lever N and the fender-frame turned upon its rear member as an axis, and the longitudinal metallic strips of the fender and the buffer-strips upon the dashboard alternating with each other permit the fender to be folded close against the said dashboard.

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

1. A car-fender comprising a fender-frame provided with rearwardly-extending arms, a cross-bar adapted to bear upon the rear ends of said arms, a longitudinal movable tripper carried by the fender-frame, a lever to which the rear end of the tripper is pivotally connected, means for normally holding the cross-bar upon the rearwardly-projecting arms of the fender, and means for releasing the same, substantially as described.

2. In a car-fender the combination with the fender-frame having the rearwardly-projecting arms, of the slotted sleeve carrying a plunger, the spring-actuated cross-bar, the longitudinal movable tripper, the lever to which

the said tripper is attached and means connected with the said lever for releasing the cross-bar, substantially as described.

3. In a car-fender, the combination with a fender-frame having rearwardly-extending arms, of the sleeve having bayonet-slot therein, the plunger working in the sleeve through the upper end, the cross-bar having a shank working in the sleeve from the lower end, a finger working in the slot of the sleeve, a longitudinal movable tripper carried by the fender, a lever to which the rear end of the tripper is attached, said finger being pivotally connected to the said lever, substantially as described.

4. In a car-fender, the combination with the slotted sleeve, of the plunger working therein from the upper end, the cross-bar having a shank working therein from the lower end, springs connected to the cross-bar, the rearwardly-extending fender-arms upon which the cross-bar bears, the depending lever pivotally connected at its lower end to a tripper, a finger carried by the said shank and working in the slotted sleeve, and the lever pivoted between the sleeve and depending lever, and having a curved lower end adapted to contact with the finger, substantially as shown and described.

5. In a car-fender, the combination with a fender-frame having rearwardly-extending arms, of the sleeve having a straight and a bayonet slot produced therein, a plunger working in the sleeve in the upper end, a cross-bar having a shank working in the sleeve from

the lower end, a guide-finger attached to said shank and movable in the straight slot, a locking-pin movable upon the shank and adapted to engage the bayonet-slot of the sleeve, a longitudinally-movable tripper carried by the fender, a lever to which the rear end of the tripper is attached, said locking-pin being pivotally connected to the said lever, substantially as described.

6. In a car-fender, the combination with the sleeve having straight and bayonet slots, of the plunger or push-rod working therein from the upper end, the cross-bar having a shank working therein from the lower end, said shank and push-rod being connected, a guide-pin rigidly connected to the shank and working in the straight slot of the sleeve, a locking-pin movable vertically with the shank and transversely thereon, said locking-pin working in the bayonet-slot of the sleeve, springs connected to the cross-bar, the rearwardly-extending fender-arms upon which the cross-bar bears, the depending lever pivotally connected to the locking-pin, the forwardly-projecting tripper-arms connected at their rear ends to the lower end of the depending lever, said tripper-arms carrying the front cross-bar, and the foot-lever pivoted between the sleeve and the depending lever, the lower end thereof being adapted to contact with the locking-pin, substantially as set forth.

EZEKIEL A. SAMPLE.

Witnesses:

FRANK SONDERMAN,
B. O'CONNOR.