

No. 685,395.

Patented Oct. 29, 1901.

A. M. CUPPLES.

CAR FENDER.

(Application filed July 19, 1901.)

(No Model.)

2 Sheets—Sheet 1.

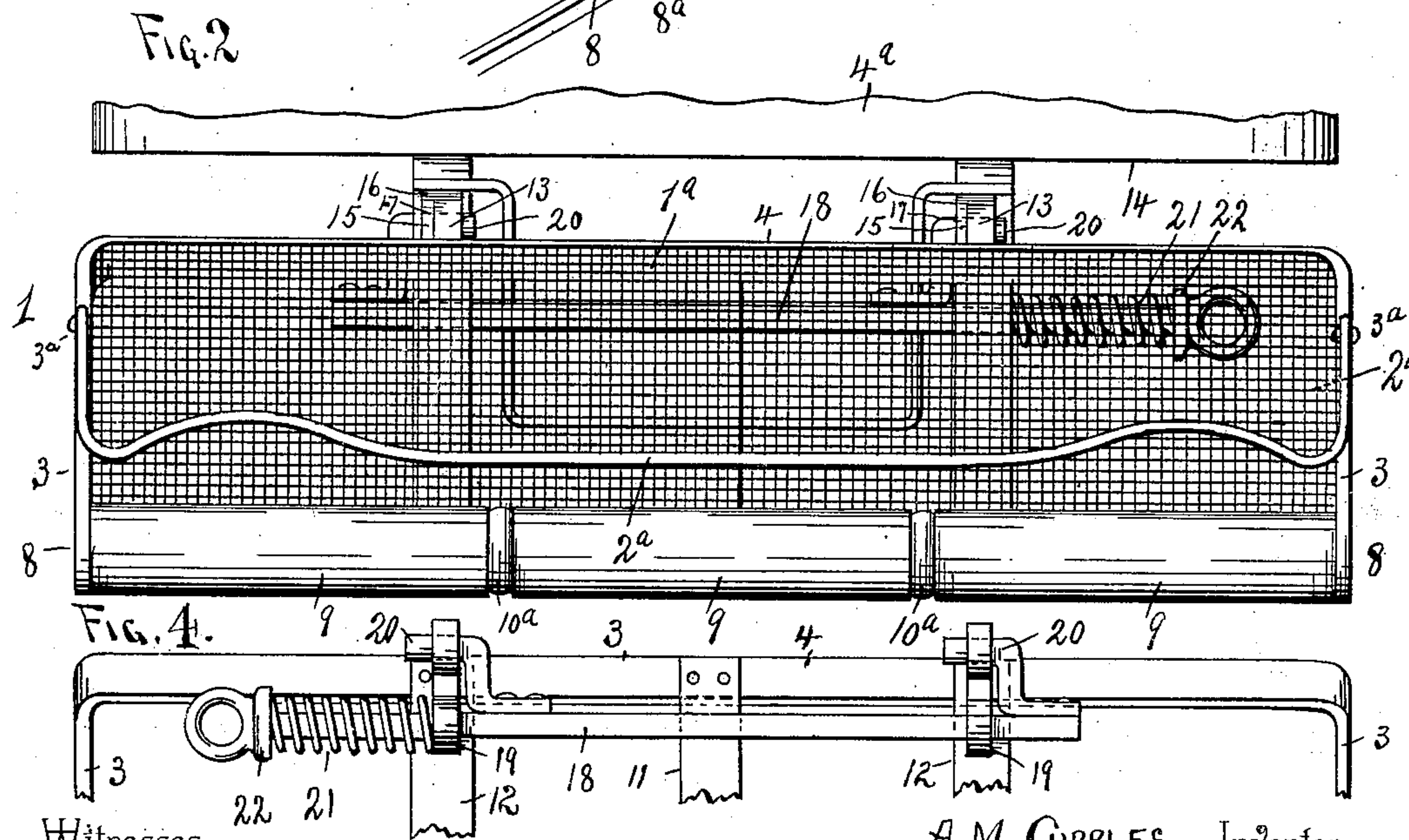
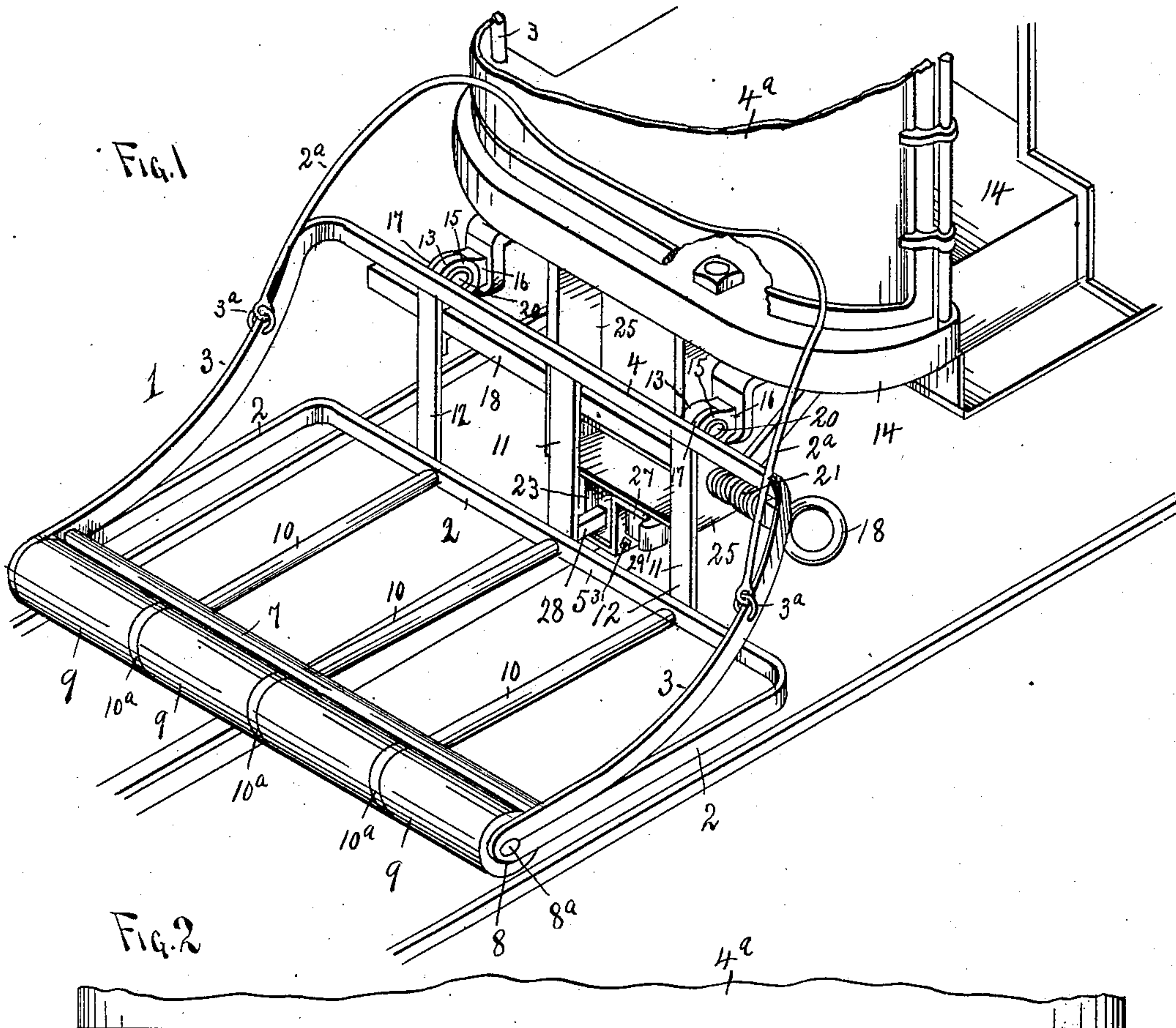


Fig. 4.

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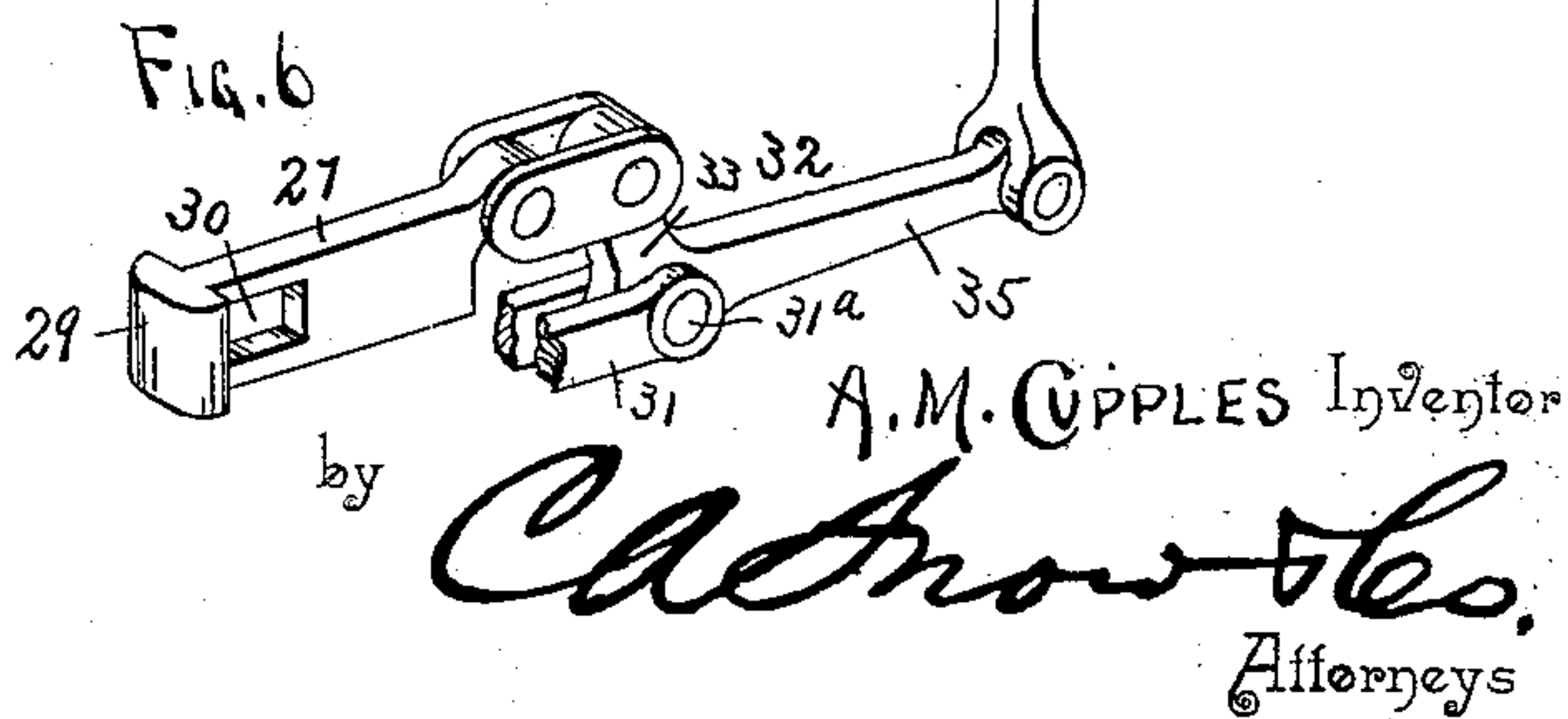
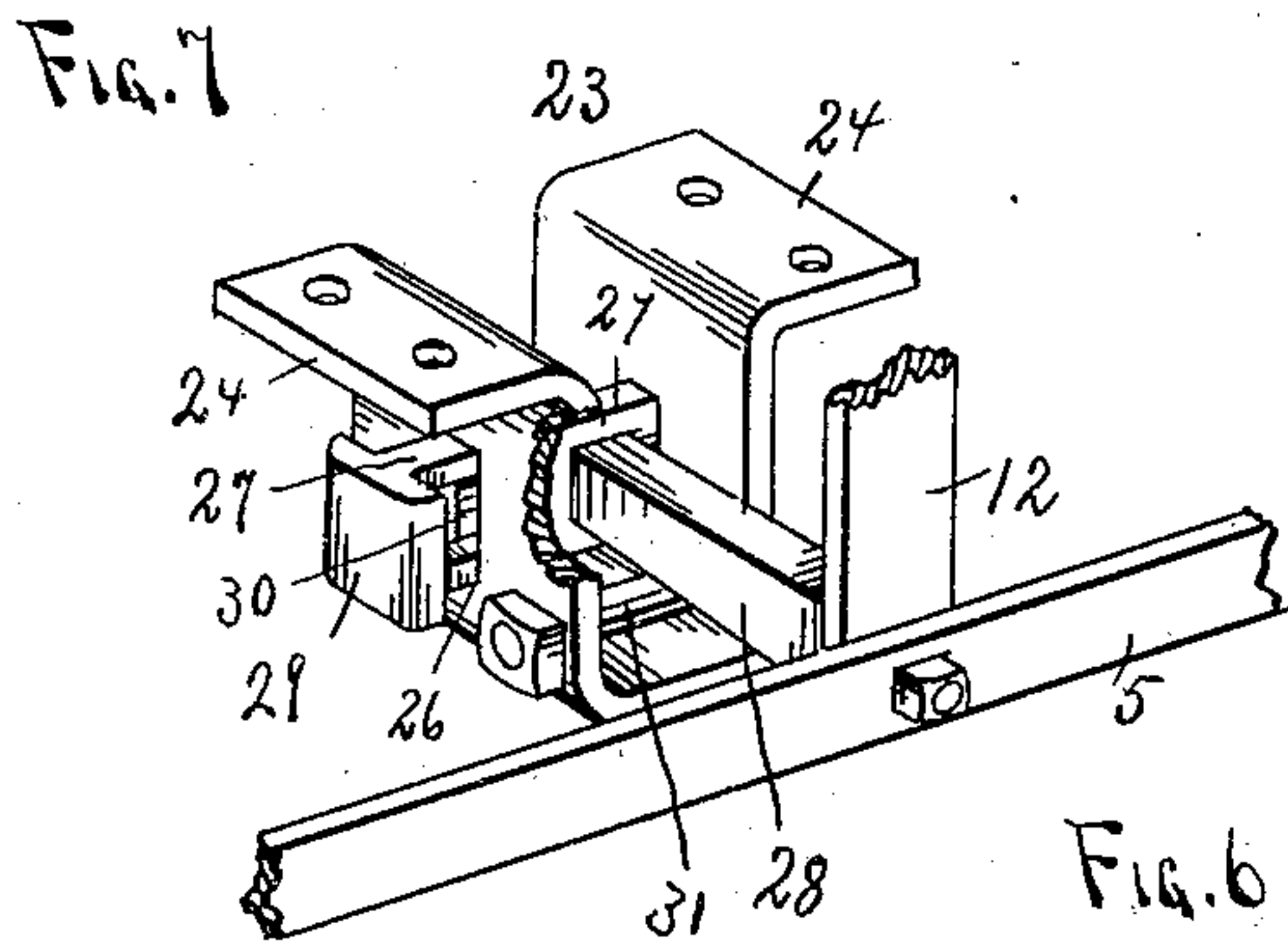
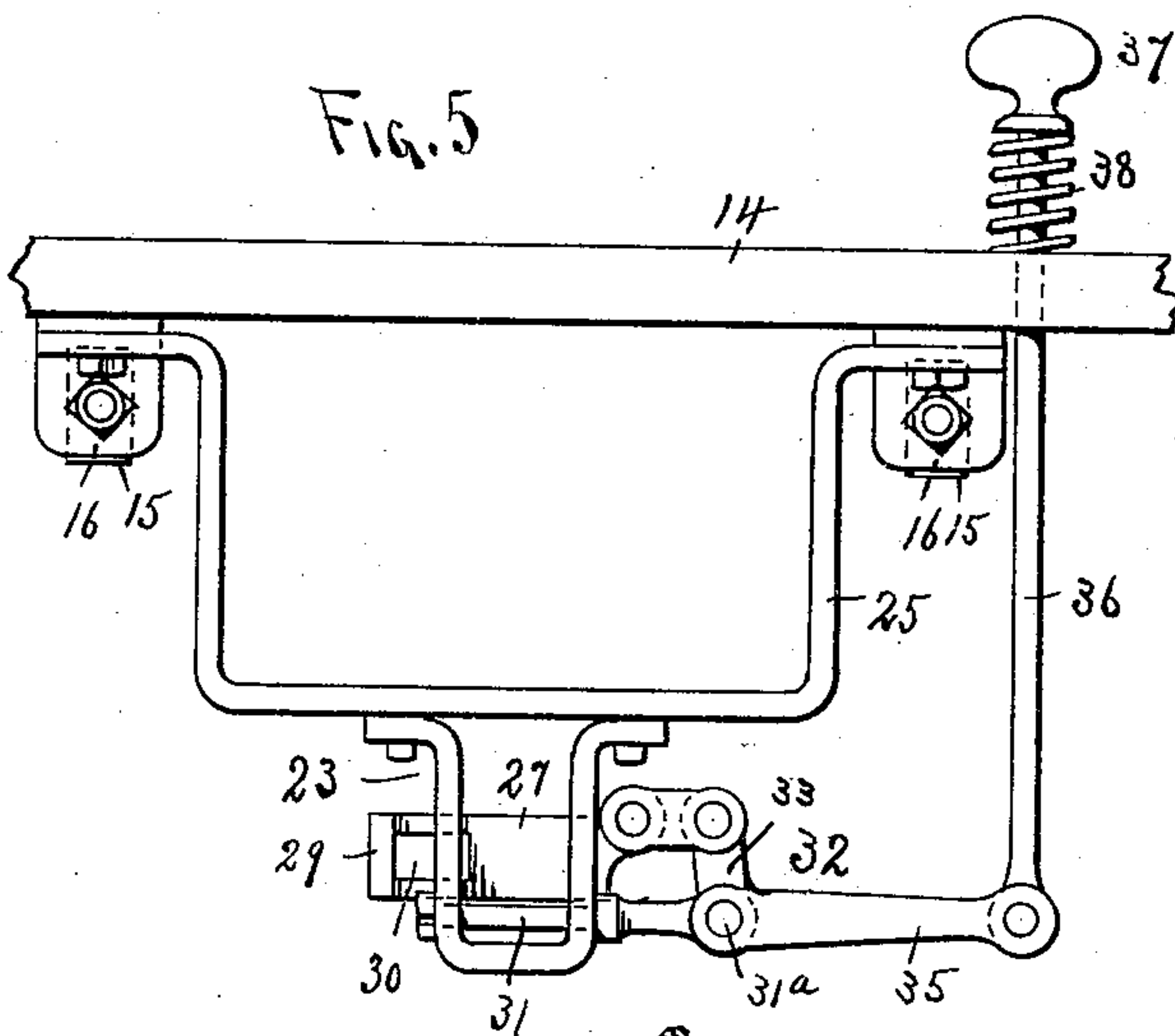
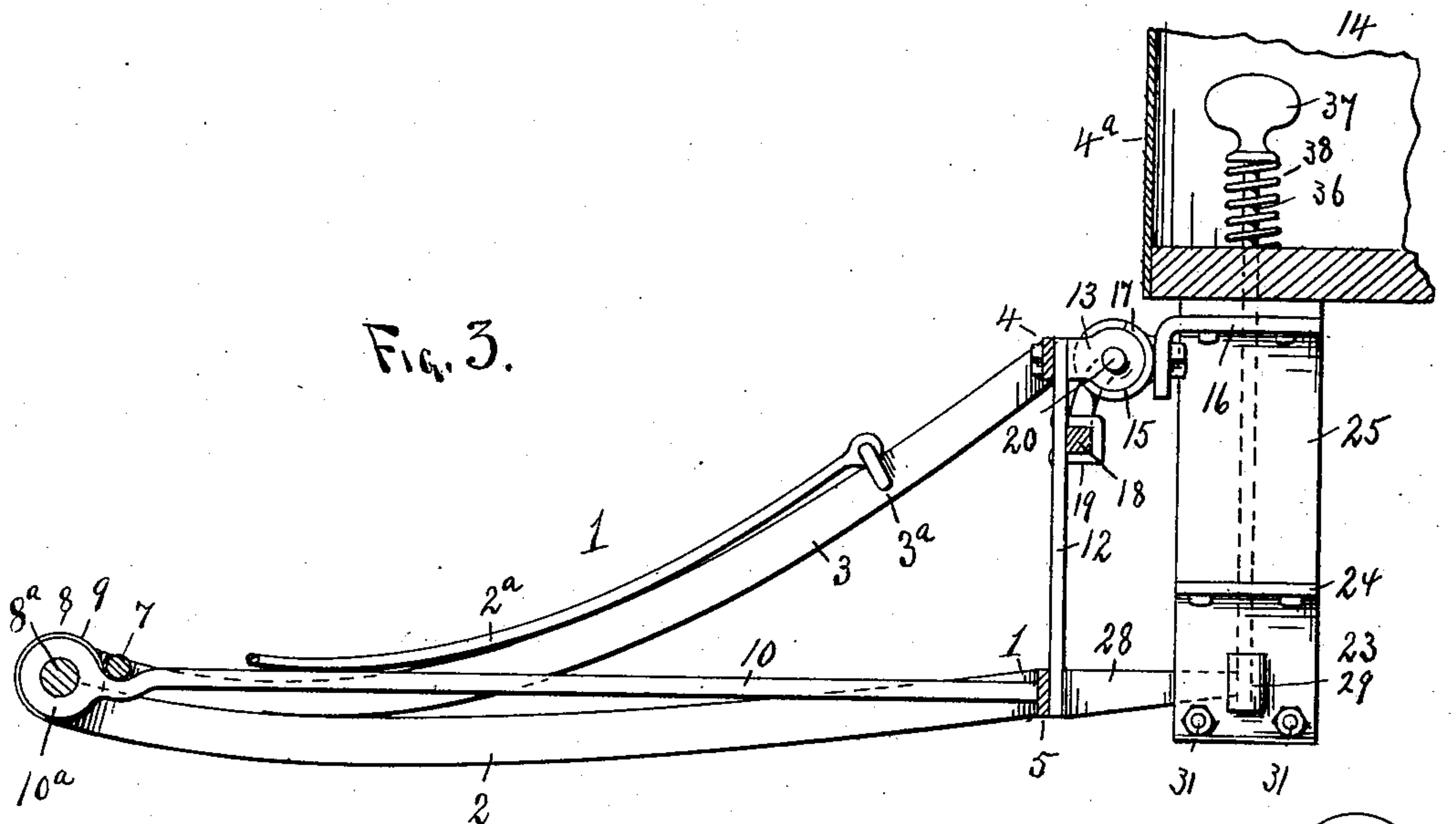
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UNITED STATES PATENT OFFICE.

ANDREW M. CUPPLES, OF TYRONE, PENNSYLVANIA.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 685,395, dated October 29, 1901.

Application filed July 19, 1901. Serial No. 68,949. (No model.)

To all whom it may concern:

Be it known that I, ANDREW M. CUPPLES, a citizen of the United States, residing at Tyrone, in the county of Blair and State of Pennsylvania, have invented a new and useful Car-Fender, of which the following is a specification.

The invention relates to improvements in street-car fenders.

10 The object of the present invention is to improve the construction of street-car fenders, more especially the means for attaching the fender to a car and for supporting the same normally in a slightly-elevated position
15 above the track clear of the rails, and to provide a simple and inexpensive tripping device adapted to be readily operated and capable of dropping the fender instantly to the track to enable it to pick up a person or ob-
20 ject in its path.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed
25 out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a fender constructed in accordance with this invention, the netting or flexible covering being removed. Fig. 2 is a front
30 elevation of the car-fender. Fig. 3 is a longitudinal sectional view. Fig. 4 is a rear elevation of the upper portion of the fender, illustrating the construction of the spring-actuated bar which carries the pintles. Fig. 5 is
35 a front elevation of the tripping mechanism. Fig. 6 is a detail perspective view of a portion of the tripping mechanism. Fig. 7 is a detail view of the tripping-slide and its housing.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates the fender-frame, consisting, preferably, of a single bar of suitable metal of such strength and size as to adapt it for the
45 use for which it is intended and to provide a fender of great strength and durability. The main or border frame of the fender, as illustrated in the accompanying drawings, is made up of a single integral bar of iron or steel and
50 comprises a substantially rectangular base or bottom portion 2, the sides of which are bent backward upon themselves and extended

rearward to the back of the fender to form inclined sides of an upwardly approximately rectangular portion 3. The upper rectangular portion of the fender-frame has its sides
55 slightly curved, as clearly shown in Fig. 1, and they are connected by an upper transverse rear portion 4, which is located directly above the transverse rear portion 5 of the bot-
60 tom 2 of the fender-frame. The bottom 2 of the fender-frame is disposed horizontally, and its sides are supported near the front of the fender-frame by a transverse brace-rod 7, ex-
65 tending entirely across the frame and having its ends secured to the sides of the upper inclined portion 3 of the fender-frame. This transverse brace-rod is adapted to maintain
70 the side of the upper and lower portions of the fender-frame in parallelism, and in the turns or bends of the metal which form the side bars of the upper and lower portions 2
and 3 of the fender-frame are provided bearings 8, in which is mounted a transverse rod
75 or spindle 8^a of a buffer-roller 9. The buffer-roller 9, which is preferably constructed of rubber or other elastic material, is adapted to cushion the fender and lessen the force of
80 contact with a person or object, and it may be composed of any desired number of sections or parts mounted to rotate independently upon the shaft or spindle. The upper
inclined portion of the fender-frame is provided with a flexible cover 1^a, of netting or
85 other suitable material, and in order to prevent a person from coming in contact with the dashboard of a car the fender is provided with a hinged back 2^a, consisting of an approximately rectangular frame and a flexible
90 covering of netting or other suitable covering. The terminals of the frame are hinged by links 3^a to the upper portions of the sides of the inclined top 3 of the fender-frame, and
95 the transverse upper portion of the frame of the hinged back is curved to conform to the configuration of the curved front of the car 4^a. The bottom of the frame of the fender
is supported by longitudinal brace-rods 10, secured at their rear ends to the transverse por-
100 tion of the bottom of the fender-frame and provided at their front ends with eyes 10^a, interposed between the sections of the buffer-roller and receiving the shaft or spindle thereof. The upper and lower rear cross-bars of

the top and bottom of the fender-frame are connected and braced by vertical bars 11 and 12, located at the center and at opposite sides thereof, as clearly illustrated in Fig. 1 of the accompanying drawings. The bars 12 are provided at their upper ends with circular lugs or disks 13, perforated to form ears and registering with corresponding ears 15 of brackets 16, designed to be mounted on the front of a car 14, as clearly illustrated in the accompanying drawings. The brackets, which are secured beneath the platform of a car, are substantially L-shaped, and their perforated ears are provided at the back with curved peripheral supporting-flanges 17, which receive the rear edges of the ears of the fender and which form partial bearings for the same. The ears of the fender abut against the curved flanges, which assist in holding the said ears in alinement.

The fender is pivotally and detachably secured to the car by a spring-actuated bar 18, mounted in suitable guides 19 and provided with a pair of pintles or lugs 20, adapted to extend through the perforations of the said ears. The guides consist of sleeves mounted on the bars 12, and the pintles, which are disposed horizontally, are formed by L-shaped arms or extensions of plates or pieces secured to the upper face of the spring-actuated bar. The spring 21, which is disposed on the bar 18, is interposed between one of the guides and the stop 22, which may be formed by a pin passing through the bar and projecting from opposite sides thereof. One end of the spring-actuated bar is provided with a suitable grip or handle, which may consist of a ring, as illustrated in the accompanying drawings; but any other suitable form of grip may be employed. The curved flanges 17 are arranged at the inner faces of the perforated ears of the brackets, and the perforated ears of the fender fit between the said ears. The spring-actuated bar is adapted to be moved inward against the action of the spring to carry the pintles away from the ears to permit the latter to be arranged in alinement, and when the bar is released the spring will carry the pintles into the perforations of the ears. When it is desired to detach the fender, the spring-actuated rod is moved inward to carry the pintles out of engagement with the ears. This will enable the fender to be readily transferred from one end of a car to the other or from one car to another. The pintles hinge the fender to the car and permit the same to swing upward and downward for a purpose hereinafter described.

The fender is normally carried with the lower section or part of the frame horizontal, as indicated in the drawings, from which position it is dropped to an inclined position whenever required, so that the front end will be carried on the surface and in proper relation and position to pick up an obstacle or person, and to hold the fender in such horizontal position and to release it therefrom to

cause it to assume the requisite inclined position for the purposes mentioned the following-described mechanism is provided: To the bull-nose of the car or other convenient part of the platform or end of the car is rigidly secured a boxing, housing, or sleeve 23, disposed with its mouth or opening behind the fender, substantially as shown in the drawings. This housing or boxing may be secured in position by having its sides extended to form flanges 24, which are secured by suitable fastening devices to the bottom of the depending rectangular bracket or frame 25. The sides of the depending frame or bracket are secured to the L-shaped brackets which support the pintles of the fender. Transversely through the side walls of the housing is formed an opening or slideway 26 for a reciprocating slide 27. This slide constitutes a stop or button against which the free end of the rearwardly-extending arm 28 normally rests, and this arm is suitably secured to the base of the fender-frame and lodges against the solid portion of the slide when the same sets across the opening in the housing, whereby the fender is held in a horizontal position above the surface of the car-track or bed of the road. The free end of the slide is provided with oppositely-disposed side flanges 29, which form stops to prevent the slide from being entirely withdrawn from the sleeve or housing. Adjacent to the free flanged end of the slide is an opening 30, which opening when the slide is withdrawn to the limit of its movements stands in alinement or registration with the longitudinal passage through the housing or sleeve and with the arm 28, and the said arm 28 is then free to move backward into the housing to permit the fender to drop to an inclined position.

Projecting through and supported by and secured in the housing are two parallel bolts 31, carrying in their outer ends a suitably-secured fulcrum-bolt 31^a, on which is fulcrumed an elbow or bell-crank lever 32, having a short upwardly-extending arm 33, which is pivotally connected to the outer end of the slide, and the other or long arm 35 is pivotally connected to the lower end of a vertically-movable trip-rod 36. The trip-rod 36 is projected up through the platform of the car and is formed or provided at its upper end with a footpiece 37, by which it is depressed when it is desired to operate the tripping mechanism. A coiled spring 38 is suitably mounted on the upper portion of the trip-rod to lift the same after the tripping mechanism has been operated and after the pressure has been removed from the trip-rod, and this upward movement returns the slide to its normal position when the arm of the fender is withdrawn.

It will be seen that the slide stands normally with its solid portion across the longitudinal passage in the housing and that in this position the projecting arm on the rear

of the fender lodges against the slide and holds the fender in a horizontal position and that when an exigency happens which requires the fender to be dropped to its operative inclined position the foot of the motor-man is applied to the footpiece on the trip-rod and the latter is depressed to actuate the slide and bring the opening thereof into registration with the longitudinal passage in the housing, when the weight of the fender carries the arm rearward into the housing and at the same time the fender drops to an inclined position to take up whatever object may be in its path. When the exigency is over and it is desired to place the fender in a horizontal position, it is lifted or swung upward on its hinges until the point of its rearwardly-extending arm is free from the slide, when the force of the spring on the trip-rod will lift the latter and reciprocate the slide, so that the solid portion thereof will stand across the passage in the housing.

It will also be apparent that the fender is adapted to be used on either end of a car, since both ends of a car may be equipped with trip mechanism and bearings, and that whenever the change from one end of the car to the other is required all that is necessary to do is to detach the bearings of the fender by withdrawing the bearing lugs or pintles of the sliding or spring-actuated bar and carry the fender to the other end of the car and making the connections, as heretofore specified. Furthermore, it will be clear that the operation of the tripping mechanism being effected by the application of the foot the operator is enabled to use both hands in the manipulation of the brake and switch levers.

What I claim is—

1. A frame for a street-car fender comprising a single metal bar in substantially rectangular form bent back upon itself with the upper portion curved or inclined upward and the end bars arranged in alinement, a cross-bar secured across the frame adjacent to the front of the frame, a buffer-roller journaled between the side bars of the frame at the point of the reversal thereof, and means at the rear of the frame to pivotally connect it to a car.

2. The combination with a car provided at opposite sides with apertured bearings, of a fender provided with apertured bearings adapted to aline with those on the car, and a spring-actuated slidable bar mounted on the rear of the fender and provided near its ends with bearing-lugs to engage the alined apertured bearings on the fender and the car to pivotally and removably connect the fender to the car.

3. The combination with a car provided

with apertured bearings, of a fender provided with apertured bearings adapted to aline with those on the car, sleeves secured to the rear end of the fender, a bar slidably mounted in the sleeves and formed or provided with bearing-lugs to engage in the apertured bearings on the car and fender, and a spring on the said bar to hold the bearing-lugs in such engagement.

4. The combination with a fender pivotally supported to a car and formed with a rearward-projecting arm at the base, of a housing secured to the car in alinement with said arm, and having a slideway transversely there-through, a slide mounted in the slideway having a solid portion against which the said arm abuts and an opening through which the arm may move, and a trip-lever to operate the slide.

5. The combination with a fender pivotally supported to a car and formed with a rearward-projecting arm at the base, of a housing secured to the car in alinement with said arm and formed with a transverse slideway there-through, a slide mounted in the said way, having a solid portion and an opening for the purposes set forth, a trip mechanism to operate the slide, and a spring to restore the slide to normal position.

6. The combination with a fender pivotally supported to a car, and formed with a rearward-projecting arm at the base, of a housing secured to the car in alinement with said arm, and provided with a transverse slideway there-through, a slide having flanges on its free end to prevent withdrawal and having a solid part against which said arm abuts and an opening through which the arm may move, an elbow-lever fulcrumed to the housing and having one arm pivotally connected to the said slide, a trip rod or lever extending through the platform of the car and having its lower end connected to the long arm of the elbow-lever to operate the slide.

7. A car-fender pivotally supported to a car and formed with a rearward-extending arm at its base, a housing in the car in alinement with said arm and adapted to slidably receive the arm, a slide projected through the housing in the path of the arm and against which it abuts, and a lever mechanism operative from the platform of the car to reciprocate the slide and move it into and out of engagement with the arm.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ANDREW M. CUPPLES.

Witnesses:

C. O. TEMPLETON,
ALLIE WALKER.