

**No. 641,436.**

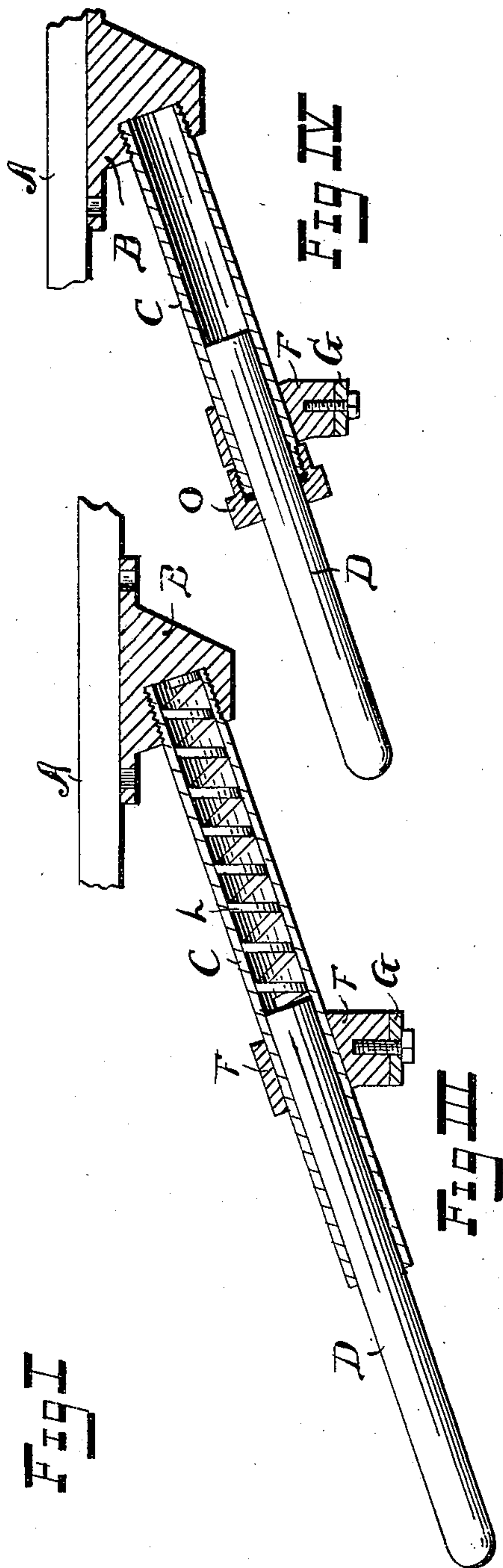
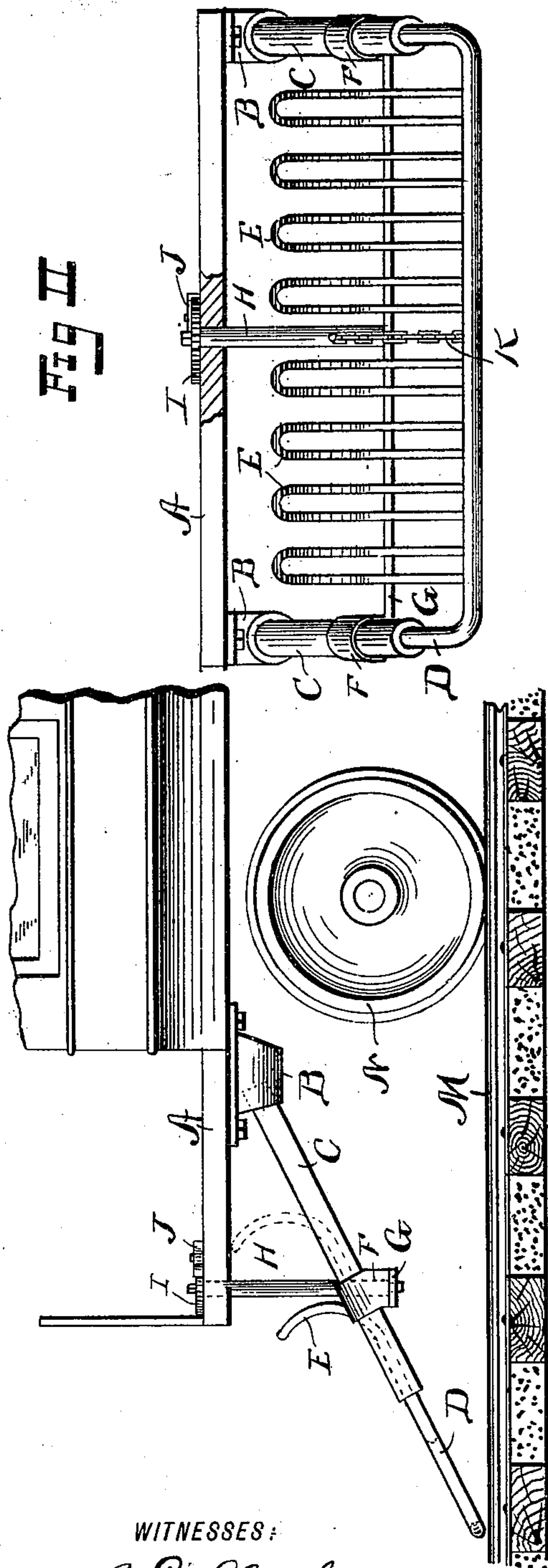
**Patented Jan. 16, 1900.**

**J. W. CRAMER.**

**CAR FENDER.**

(Application filed Nov. 2, 1896.)

(No Model.)



**WITNESSES:**

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# UNITED STATES PATENT OFFICE.

JOSEPH W. CRAMER, OF KANSAS CITY, KANSAS, ASSIGNOR OF ONE-HALF  
TO THEODORE O. CRAMER, OF SAME PLACE.

## CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 641,436, dated January 16, 1900.

Application filed November 2, 1896. Serial No. 610,792. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH W. CRAMER, a citizen of the United States, residing in Kansas City, in the county of Wyandotte and State of Kansas, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to improvements in car-fenders.

The object of my invention is to provide a fender which is normally in a raised position above the track, but which may be quickly lowered into close proximity to the track for the purpose of removing a person or obstruction from the track.

My invention provides a fender having an apron which normally is held away from close proximity to the track against the pressure of a resisting medium, but which may be forced at the will of the operator by the said resisting medium close to the track for the purpose of removing obstructions therefrom.

My invention provides, further, a fender having an apron movable toward and from the track, one or more springs for forcing the the apron toward the track, and a releasable holding mechanism for holding the apron away from proximity to the track against the pressure of the spring or springs.

My invention provides, further, novel features of construction hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 represents a side elevation of the fender and a portion of the car to which it is applied, the fender-apron being shown in the released position. In this figure the position of the apron when in the raised position is shown in dotted lines. Fig. 2 represents a front elevation view of the fender attached to the car-platform, a portion of which is broken away, so as to better disclose the construction of the apron-holding mechanism. Fig. 3 represents a side elevation of the fender with the guiding-tube and tube-supporting parts in section. Fig. 4 represents a similar view to the one shown in Fig. 3 of a modified form of the invention in which a

fluid, such as air, is used as the apron-projecting medium.

Similar letters of reference indicate similar parts.

A indicates the car-platform, near the forward end and upon the under side of which at each side is secured a bracket B, the front side of which is provided with a screw-threaded opening, in which is fitted the rear screw-threaded end of a forwardly and downwardly projecting tube C. The two tubes C are of equal lengths and are parallel with each other and serve as guides for the fender-apron. The fender-apron consists of two parts—a U-shaped bar D, the arms of which are located within and are adapted to be reciprocated within the tubes C, and a series of upwardly and rearwardly extending U-shaped rods E, the ends of the arms of which are secured to the transverse horizontal portion of the bar D. The rear ends of the rods E are upwardly and forwardly curved, as shown in Fig. 1. The function of the curved rods E is to pick up and hold any person or obstruction which may be upon the track. Near the forward end of each of the guide-tubes C is secured a collar F, the under side of which is flat and has secured to it one end of a horizontal transverse flat bar G, near the center of which is provided a vertical opening, in which is rotatably mounted the lower end of a vertical post H, to the upper end of which, above the platform A, is rigidly secured a ratchet-wheel I. Pivotally mounted upon the upper side of the platform A and adjacent to and adapted to engage with the ratchet-wheel I is a pawl J. A chain K is attached at one end to the center of the horizontal portion of the bar D and at the other end to the post H. In each of the tubes C is located a coil compression-spring L, the forward end of which bears against the rear end of one of the arms of the bar D and the rear end of which bears against the bracket B.

In the form of my invention shown in Fig. 4 the forward end of each of the tubes C is externally screw-threaded and has fitted thereon a stuffing-box O for retaining packing at the end of the tube C around the bar D. In this form of my invention the springs L are



dispensed with, the apron being forced forwardly by means of air, which is compressed within the tubes C when the apron is drawn rearwardly.

5 The construction described and shown with reference to the vertical post H and the bar G and tubular guides C performs the double function of providing a support for the post H at its lower end and the providing of a vertical  
10 brace coöperating with the horizontal brace or bar G to support the free ends of the tubular guides C, which otherwise would be without forward support.

My invention is operated as follows: The  
15 apron is drawn into the raised position by revolving the post H, thus drawing up the chain K and withdrawing the apron. The post H is provided at its upper end with a squared top, to which a crank or wrench may be ap-  
20 plied for the purpose of turning the post so as to wind the chain thereon. When it is desired to force the apron forward, the pawl J is released from the ratchet-wheel I and the tension in the springs L, which have been  
25 compressed when the apron was drawn back, forces the apron suddenly forward. The springs L serve also as a cushion for the apron, minimizing the detrimental or injurious effects of contact with an obstruction on the  
30 track. The strength of the springs L should be sufficient for forcing the apron quickly forward, but should not much exceed the strength required for this purpose, as it is important that the apron on striking anyone should give  
35 easily to avoid injury to the person struck.

The form of invention shown in Fig. 4 is operated in the same manner as described with reference to the other form of my invention. In this instance the air which is held  
40 compressed by the bar-arms D forces the apron forward when the ratchet I is released, as already described.

My invention is subject to many modifications from the forms shown without departing from the spirit of my invention. It is ap-  
45 plicable to cars having either rigid or swivel trucks. Where swivel or pivoted trucks are

used, it may be found desirable to support the guide-tubes C from the truck instead of from the body of the car, so that the fender  
50 may follow the curves of the track closely. Other means for holding the apron in the raised position than those illustrated may be adopted. The various modes of applying the  
55 fender to cars may be adopted which are best suited for the particular construction or style of car to which the fender is to be applied. For the curved rods E may be substituted screen-wire or rope-netting, as the function  
60 of the said rods is merely to support the obstruction removed from the track.

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

1. In a car-fender, the combination with the  
65 car-platform, of two forwardly and downwardly extending tubular guides, a horizontal brace connecting the free forward ends of the tubular guides, a vertical rotatable post connecting the horizontal brace and the platform  
70 and serving as a vertical brace for the forward ends of the tubular guides, an apron provided with two arms forwardly and rearwardly movable in the tubular guides, means  
75 for forcing the apron forward, a chain secured to the apron and the vertical post and adapted to be wound on the post when the same is rotated, and a locking device for preventing  
80 rotation of the post, substantially as described.

2. In a car-fender, the apron comprising a frame provided with a transverse horizontal portion from which rearwardly extend two  
85 arms, and a series of U-shaped rods the forward ends of which are secured to the transverse portion of the frame and the rear ends of which are upwardly and forwardly turned, substantially as described.

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

JOSEPH W. CRAMER.

Witnesses:

J. ROY SMITH,

WARREN D. HOUSE.