

No. 668,977.

Patented Feb. 26, 1901.

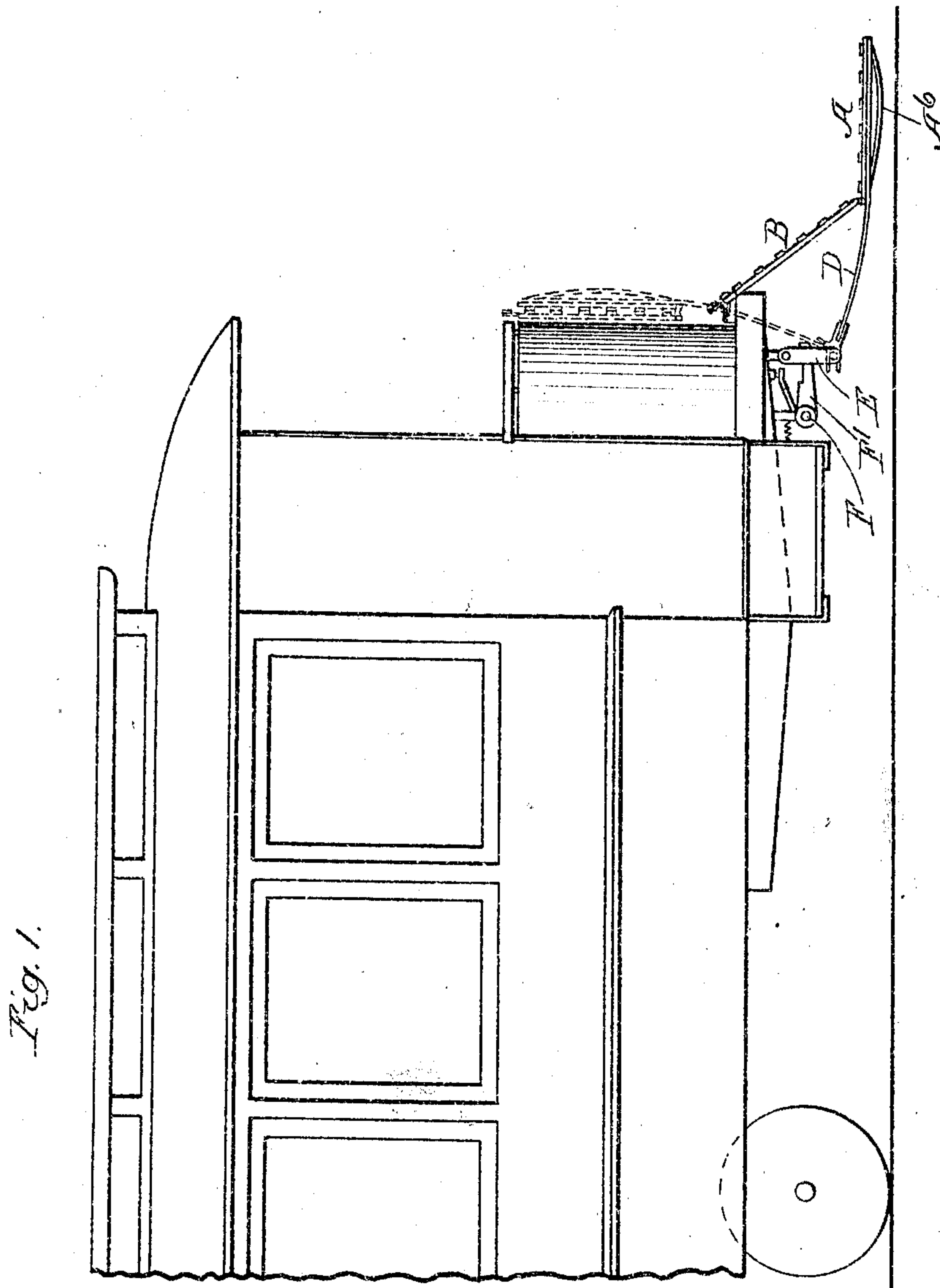
A. G. CARLSON.

CAR FENDER.

(Application filed Mar. 29, 1899.)

(No Model.)

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WITNESSES:

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Fig. 2.

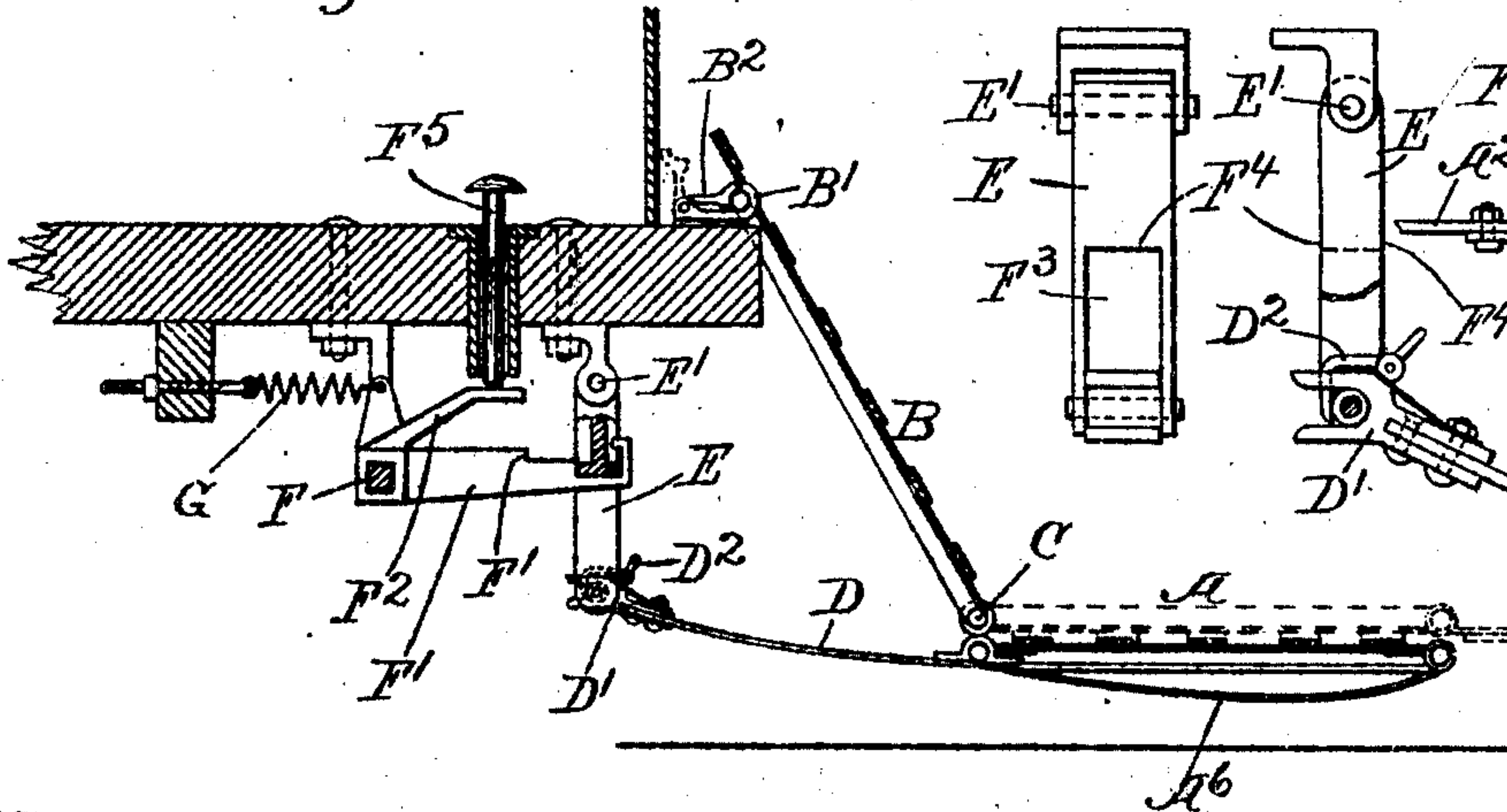


Fig. 4. Fig. 5.

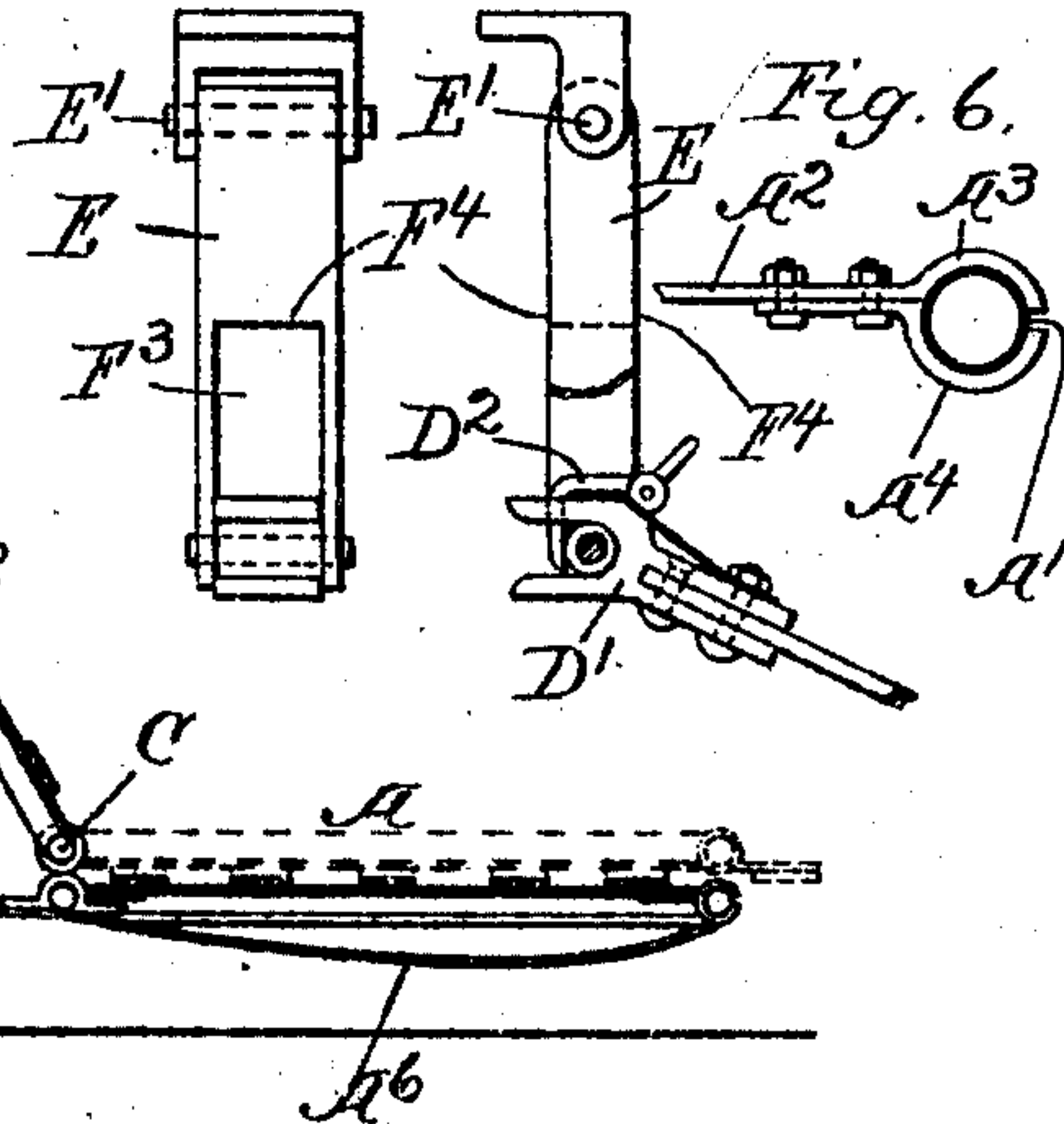


Fig. 6.

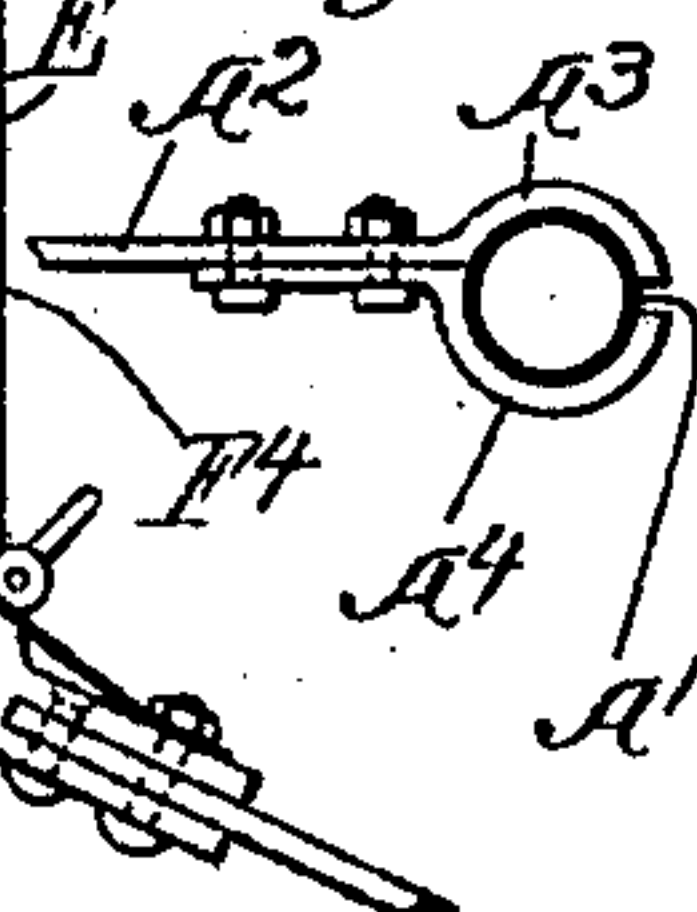
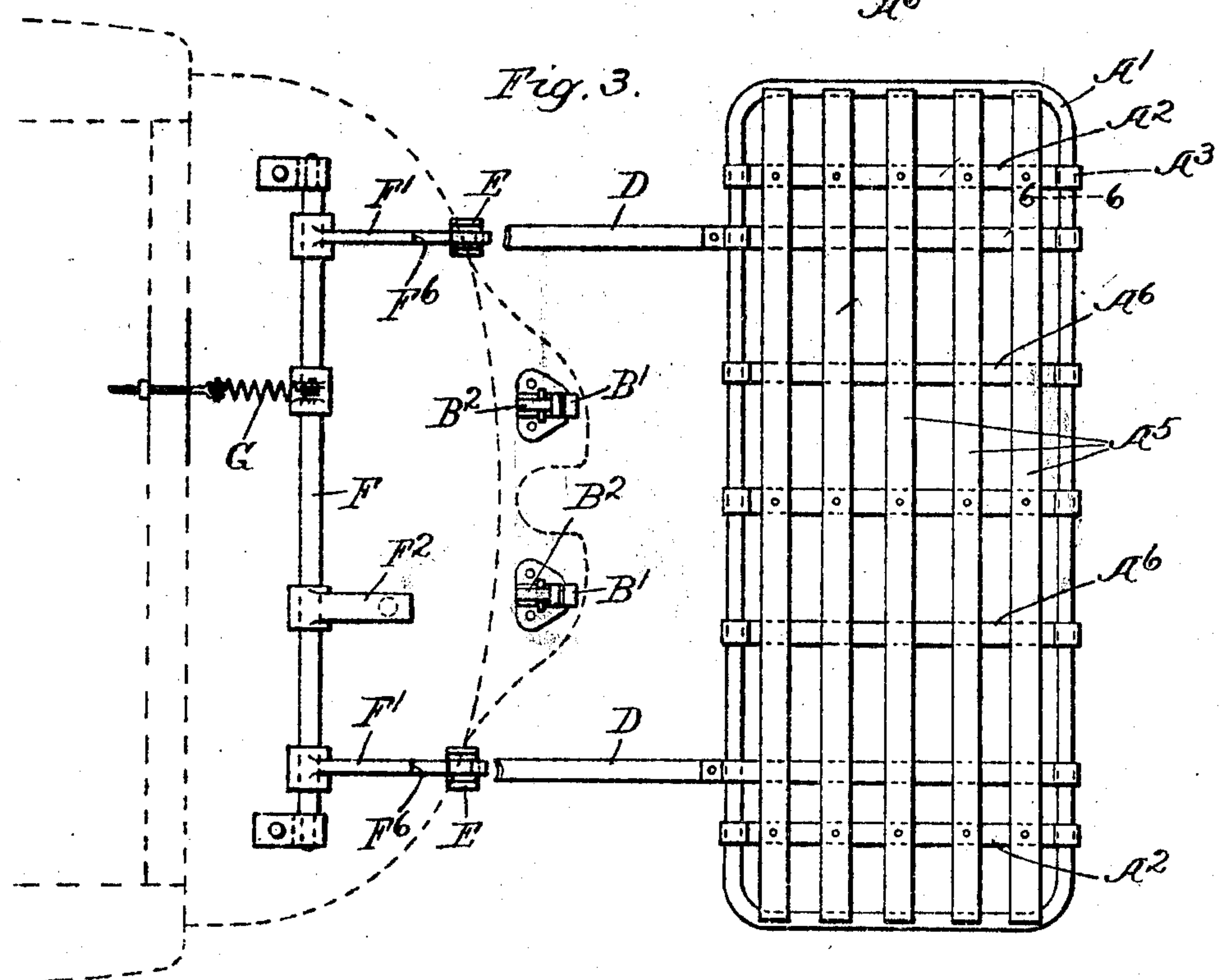


Fig. 3.



Witnesses

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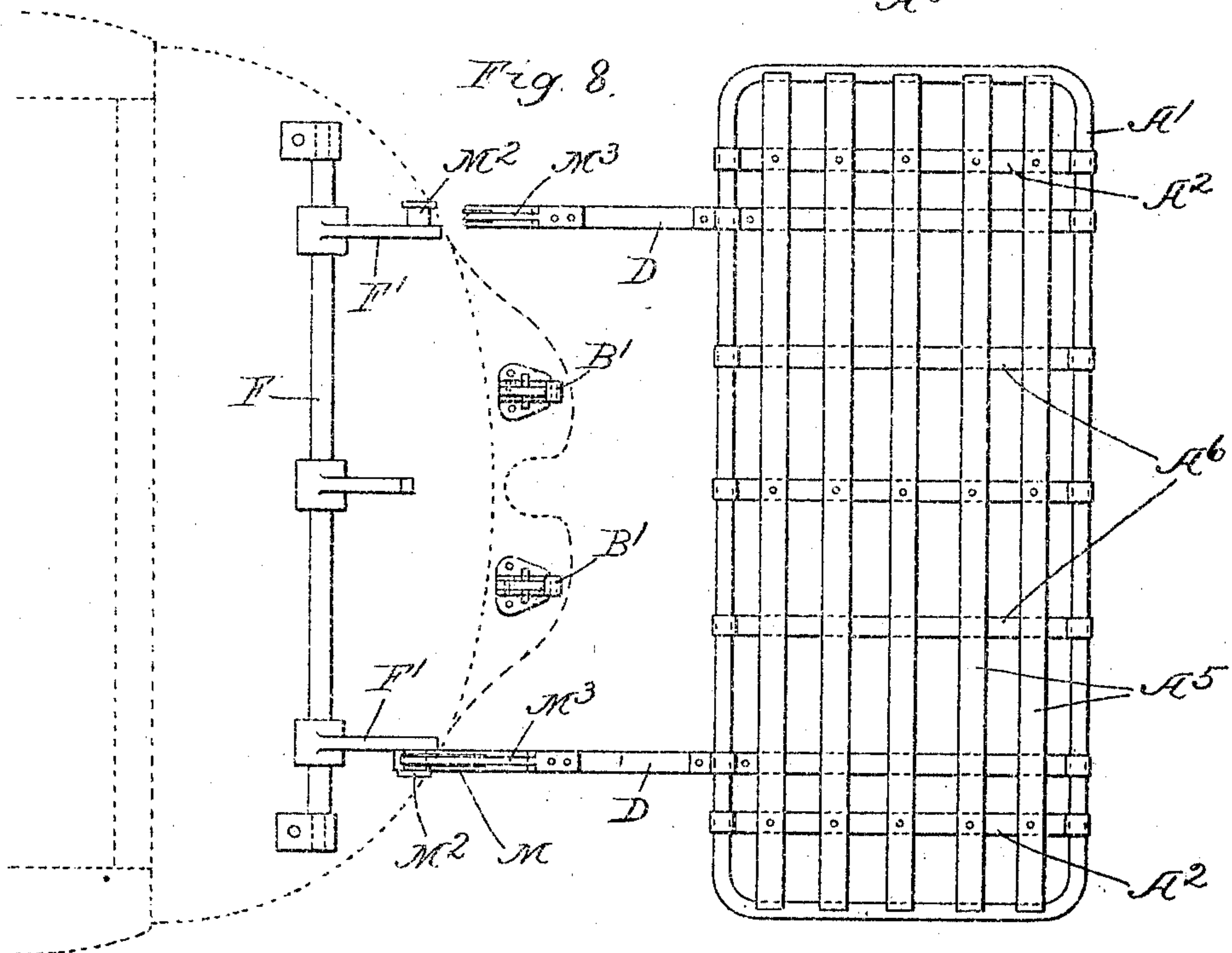
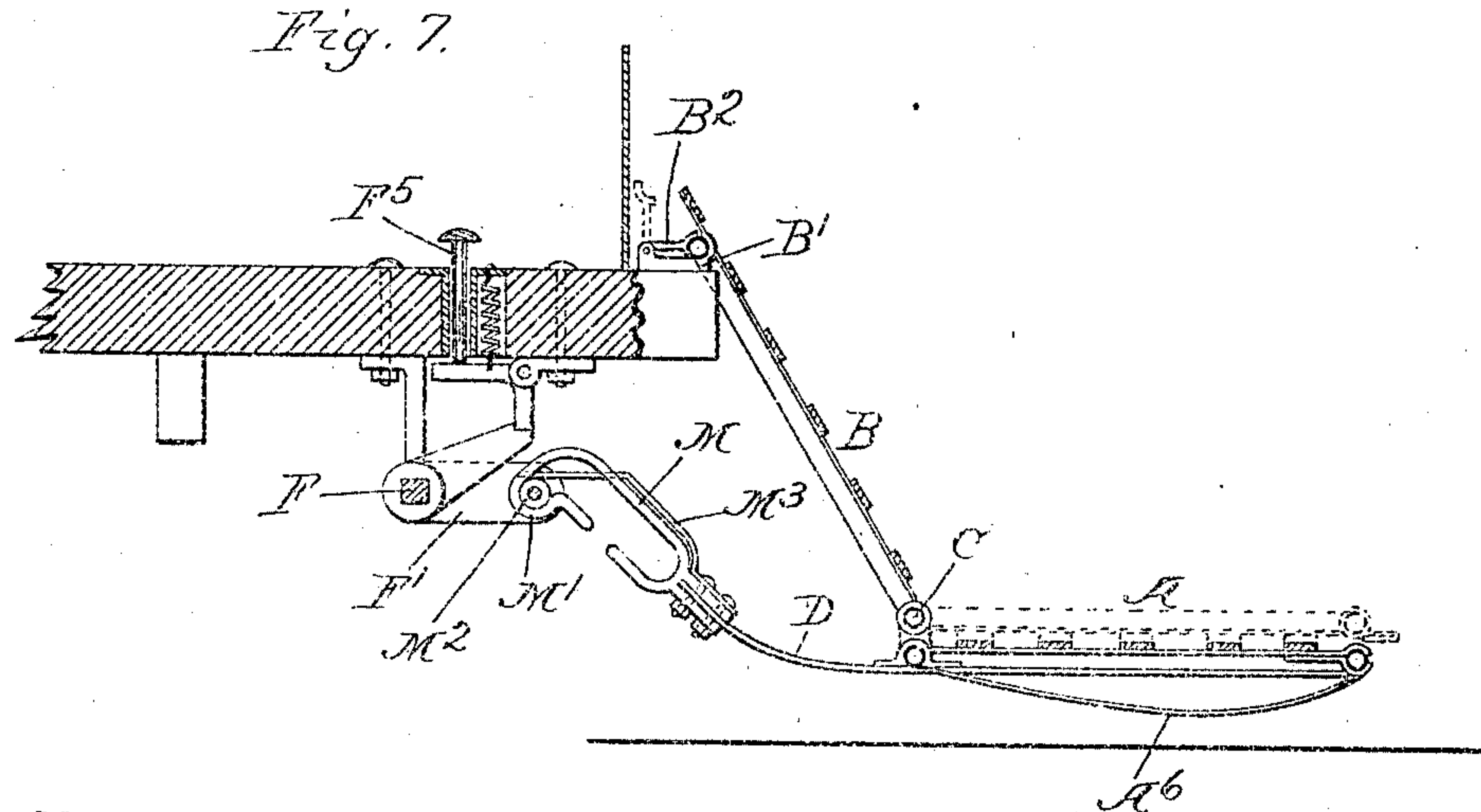
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3 Sheets—Sheet 3.



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# UNITED STATES PATENT OFFICE.

ADOLPH G. CARLSON, OF CHICAGO, ILLINOIS.

## CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 668,977, dated February 26, 1901.

Application filed March 29, 1899. Serial No. 710,921. (No model.)

*To all whom it may concern:*

Be it known that I, ADOLPH G. CARLSON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful improvement in Fenders for Cars, of which the following is a specification.

My invention relates to fenders for vehicles, such as street-cars and the like, and has for its object to provide a new and improved fender, of which the following is a description, reference being had to the accompanying drawings, wherein—

Figure 1 is a view of the front portion of a street-car, showing a fender embodying my invention in position on the car. Fig. 2 is a section through the front platform of the car with parts omitted, showing the fender-operating mechanism. Fig. 3 is a plan view of the fender mechanism when the upper wing is folded upon the lower wing, the platform of the car being shown in dotted lines. Figs. 4 and 5 are detail views of the hanger beneath the platform. Fig. 6 is a detail showing the manner of connecting the cross-pieces of the fender-wings to the fender-frame. Fig. 7 is a view similar to Fig. 2, showing a modified construction. Fig. 8 is a plan view of the construction shown in Fig. 7.

Like letters refer to like parts throughout the several figures.

The fender proper may be made up in any suitable manner, and as herein illustrated consists of two wings A and B, suitably pivoted together at C. These two wings are similar in construction. In making these wings I provide an outer frame A', preferably made of tubing bent into shape and connected together, so as to be formed with a single joint. Extending across the frame are a series of metallic cross-pieces A<sup>2</sup>, preferably formed at their ends with a curved portion A<sup>3</sup>, which fits one side of the frame-piece, there being provided a similar curved piece A<sup>4</sup> at the other side, the two pieces being connected together by suitable bolts or the like. When the parts are in position, the frame is clamped between them, as shown in Fig. 6. A series of slats A<sup>5</sup>, preferably of wood, are attached to the cross-pieces A<sup>2</sup> in any suitable manner. When the fender is in its operative position, the upper wing B is in the

position shown in full lines in Fig. 2 and is held in this position by the hooks or engaging devices B' B', supported on the platform of the car, and which engage the frame of the fender, as shown. These hooks are provided with movable arms B<sup>2</sup>, which hold the fender in position, but which may be moved, as shown in dotted lines in Fig. 2, in order to permit the frame of the fender to be removed from the hooks. Attached to the lower wing of the fender are the connecting-pieces D. These connecting-pieces are preferably made of spring metal and are also the main supports of the fender, being attached at their inner ends to suitable hangers E E, supported beneath the car platform. These hangers are preferably movably connected to the car in some desired manner—as, for example, by the pivotal connections E'. The inner ends of the connecting-pieces D are preferably provided with the engaging pieces D<sup>1</sup>, which engage a portion of the lower ends of the hangers E, said pieces being held in position by the movable fingers D<sup>2</sup>, as shown in Fig. 5. Associated with the hangers E is a suitable holding device, by means of which they are held in such position as to keep the lower wing of the fender a short distance above the surface over which the car is traveling, said holding device being provided with an operating mechanism under the control of the operator of the car. This construction may be of various forms, and as herein illustrated comprises a rocker-shaft F, suitably mounted beneath the platform and provided with releasing-levers F' and the operating-lever F<sup>2</sup>. The releasing-levers are adapted to engage the hangers E and normally hold them in a predetermined position, but adapted to release them when the operating-lever is actuated. Any suitable construction for this purpose may be used. As herein shown, the releasing-levers are notched and pass through the openings F<sup>3</sup> in the hangers, the notched portions engaging the faces F<sup>4</sup> at the upper end of the openings F<sup>3</sup>. The operating-lever F<sup>2</sup>, as herein shown, is located beneath a suitable plunger F<sup>5</sup>, so that it may be actuated by pressing the foot upon the plunger. Some suitable means—as, for example, the spring G—is used to hold the releasing-levers in their engaging posi-



tion. Beneath the lower wing of the fender I provide suitable runners A<sup>6</sup>, which are normally out of contact with the surface over which the car is traveling.

5 When the ordinary fender is used, the horizontal part, which corresponds to the lower wing in the present device, is a short distance from the ground, and hence if a person gets in front of the car when the car is moving the edge of the fender strikes the person above the ankles and is liable to cause serious injury. When my device is used, this result is obviated. If, for example, a person is in front of the car when the car is in motion, the operator presses his foot upon the plunger F<sup>5</sup>, thus moving the releasing-levers F', so as to release the hangers E. The weight of the fender then swings it about the pivotal points E', thus lowering the lower wing into engagement with the surface over which the car is traveling. When in this position, the runners A<sup>6</sup> engage the ground and prevent injury to the fender when the ground is uneven, and the fender is so near the ground that it will scoop up, as it were, a person in front of it without material injury to the person or to the fender.

The releasing-levers are preferably provided with the engaging faces F<sup>6</sup>, which engage the hangers when they are released, so as to limit their backward movement. The fender is then moved to its normal position, the spring G moving the parts so that the releasing-levers engage the hangers, as shown in Fig. 2.

35 The fender may be folded up, so as to be out of the way and so as to permit two cars to be coupled together. In order to fold the fender, the upper wing is first released from the car-platform and folded down upon the lower wing, as shown in dotted lines in Fig. 2. The entire structure is then moved to the position shown in dotted lines, Fig. 1, and held in this position by any suitable mechanism. It will be seen that when in this position the fender does not obstruct the coupling of the cars.

In Figs. 7 and 8 I have shown a modified construction wherein the connecting-pieces D are provided with the loops M, having the depressed portions M', which normally receive suitable projections M<sup>2</sup> on the releasing-levers F'. A spring M<sup>3</sup> is attached to the loop M and normally engages the projection M<sup>2</sup>, so as to hold the parts in position. If now an object strikes the end of the fender, the spring gives and the parts are moved, so that the projection M<sup>2</sup> is moved out of the depression M' into the main body of the loop, thus permitting the lower wing of the fender to be automatically lowered to the ground. The fender may also be lowered by the foot by operating the plunger F<sup>5</sup>.

I claim—

65 1. The combination with a fender for vehicles of a supporting device therefor, one or

more movable hangers attached to the car and to said supporting device, a releasing-lever engaging said hanger or hangers, and a controlling-lever for operating said releasing lever or levers.

2. The combination with a fender for vehicles of one or more connecting-pieces acting as the main support of the fender, one or more hangers movably attached to the car and engaged by said connecting-pieces, a releasing-lever engaging said hanger or hangers so as to hold the fender in an operative position, an operating-lever connected with said releasing lever or levers, and a plunger adapted to be operated by the foot, so as to actuate the operating-lever and lower the fender before it strikes an object in front of the car.

3. The combination with a fender for vehicles of a supporting device therefor, one or more hangers movably connected to the car and to the supporting device, a notched releasing-lever engaging said hanger or hangers so as to hold the fender in an operative position, and an operating mechanism controlled by the foot and adapted to actuate the releasing-lever and lower the fender to the ground.

4. A car-fender, comprising two wings movably connected together, the lower wing adapted to project in a horizontal position in front of the car, two connecting-pieces attached to said lower wing, two hangers movably attached to the car-frame, each of said connecting-pieces engaging one of said hangers, a rocker-shaft mounted on the car and provided with two notched releasing-levers, one opposed to each of said hangers and engaging the same so as to hold the fender in an operative position, and an operating mechanism associated with said rocker-shaft and adapted to rock it so as to release the hangers and permit the lower wing to be moved into contact with the surface over which the car is traveling.

5. A fender for vehicles and the like, comprising an upper and a lower wing pivotally connected together, one or more engaging devices on the platform of the car and adapted to removably engage the upper wing, two connecting-pieces connected with the lower wing and attached to suitable hangers on the car, the upper wing adapted to be released from the platform and folded down upon the lower wing and both wings then folded up against the dashboard of the car, the connecting-pieces being longer than the distance from their connection to the car-bumper, so that the bumper will project beyond the folded fender free therefrom, and supporting mechanism for both wings beneath the car-platform.

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Witnesses:

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