

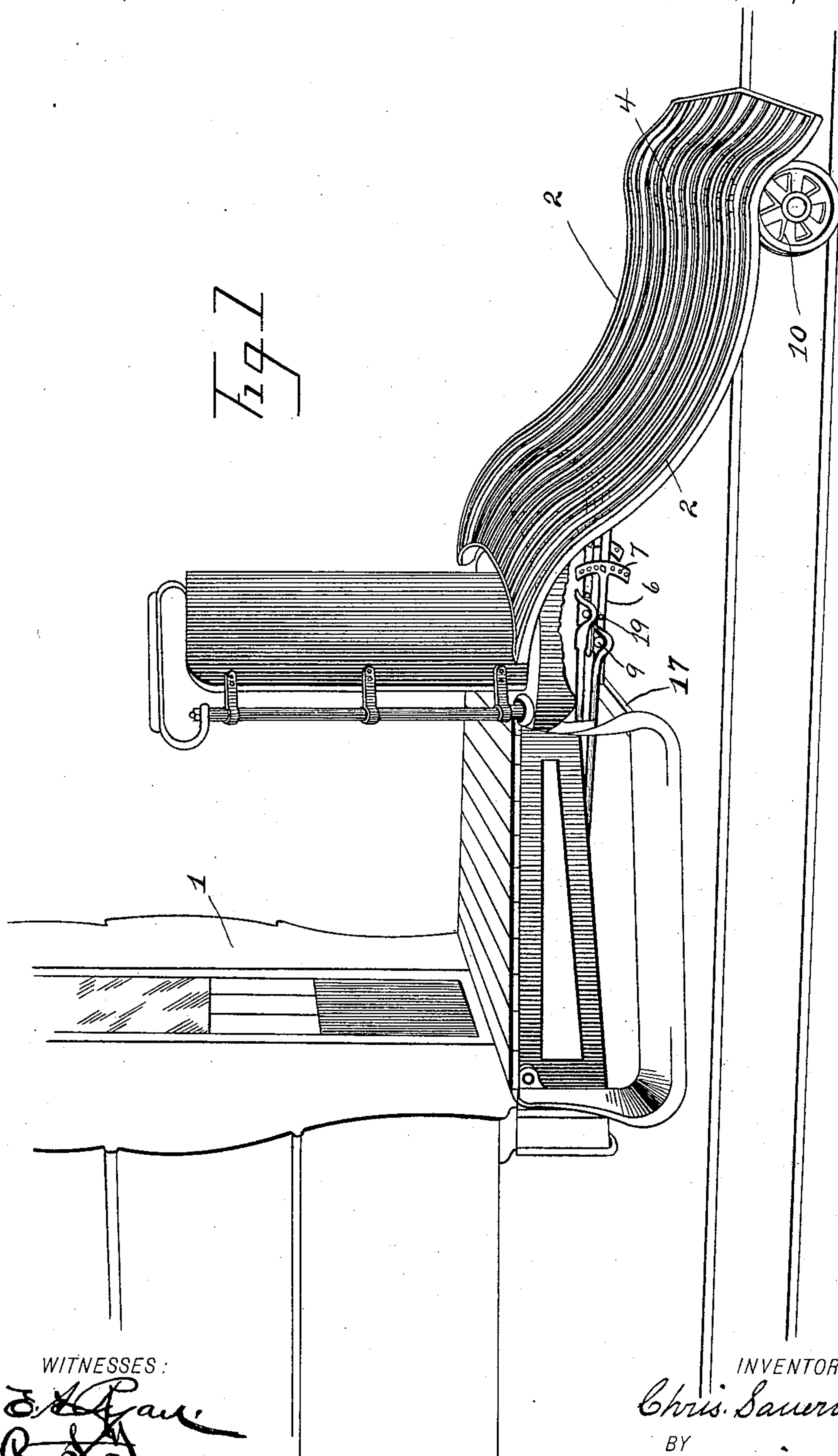
(No Model.)

3 Sheets—Sheet 1.

C. SAUERBREY.
DEVICE FOR ATTACHING FENDERS TO CARS.

No. 606,156.

Patented June 21, 1898.



WITNESSES:
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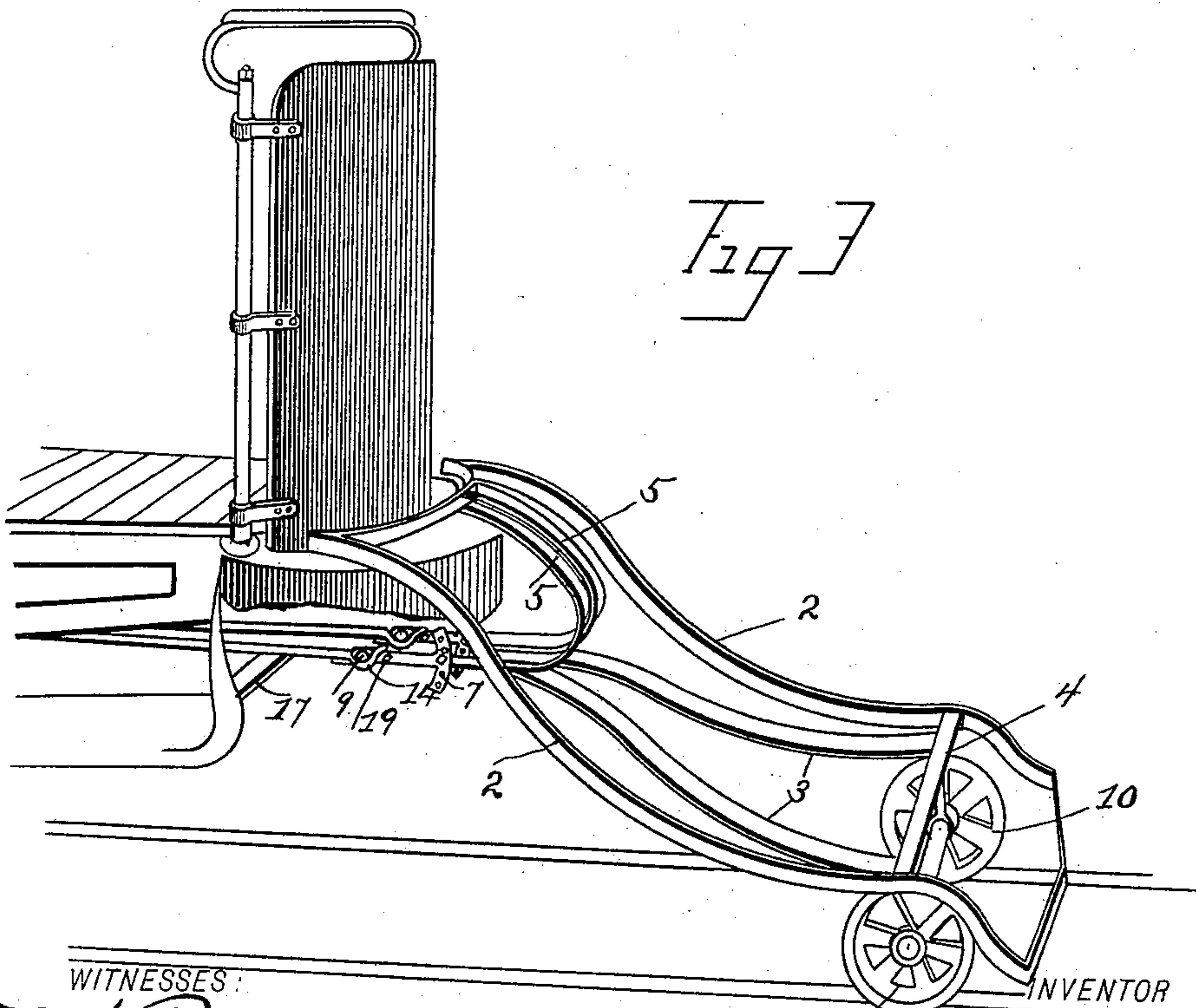
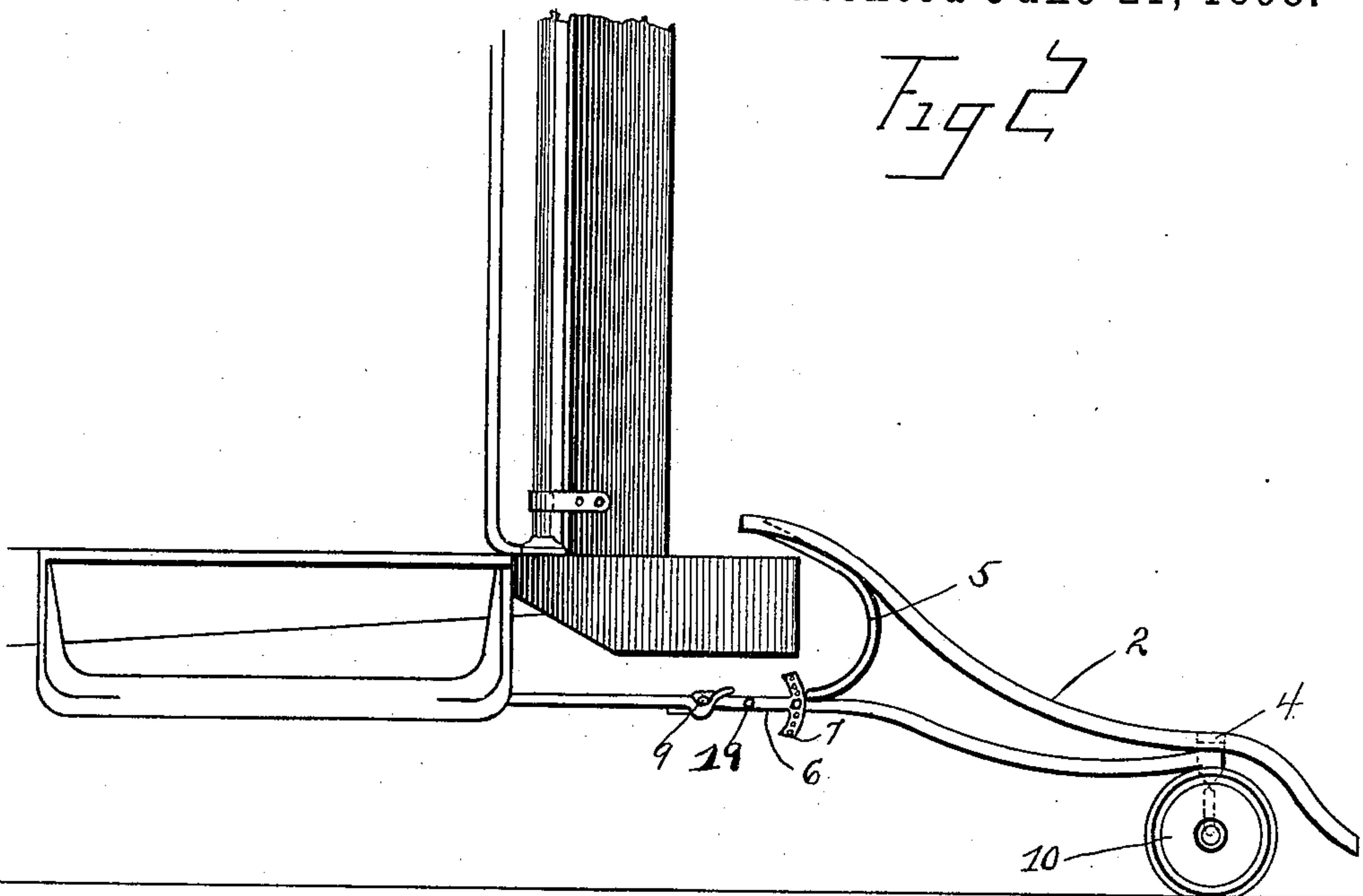
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WITNESSES:

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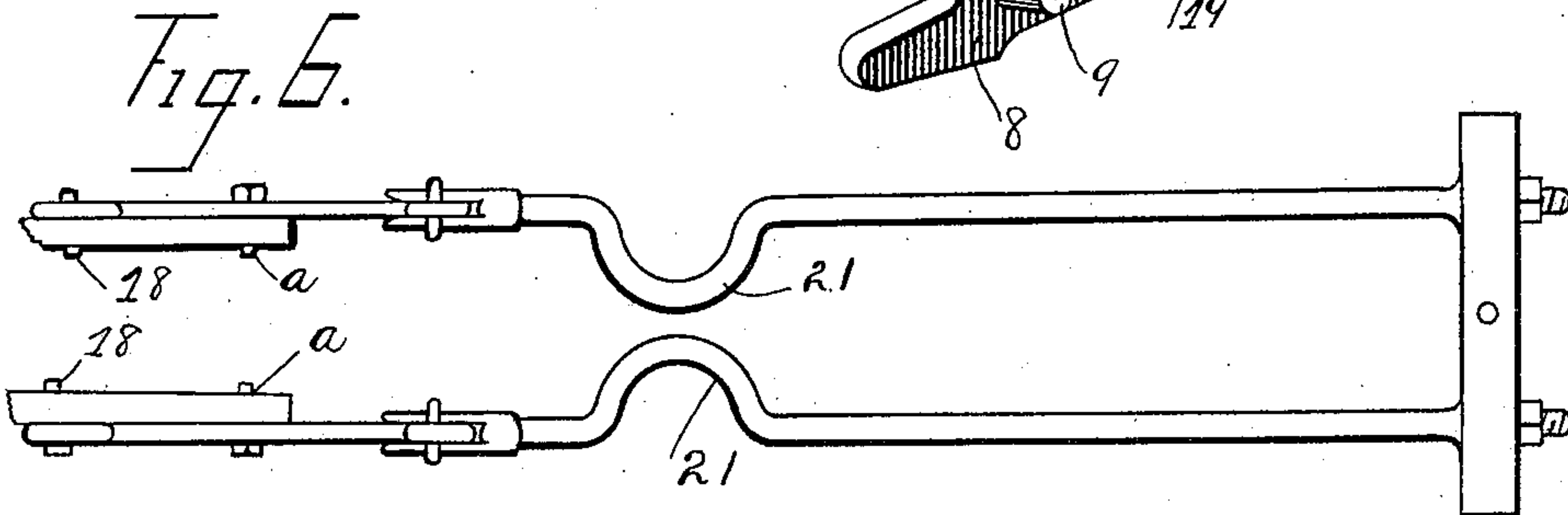
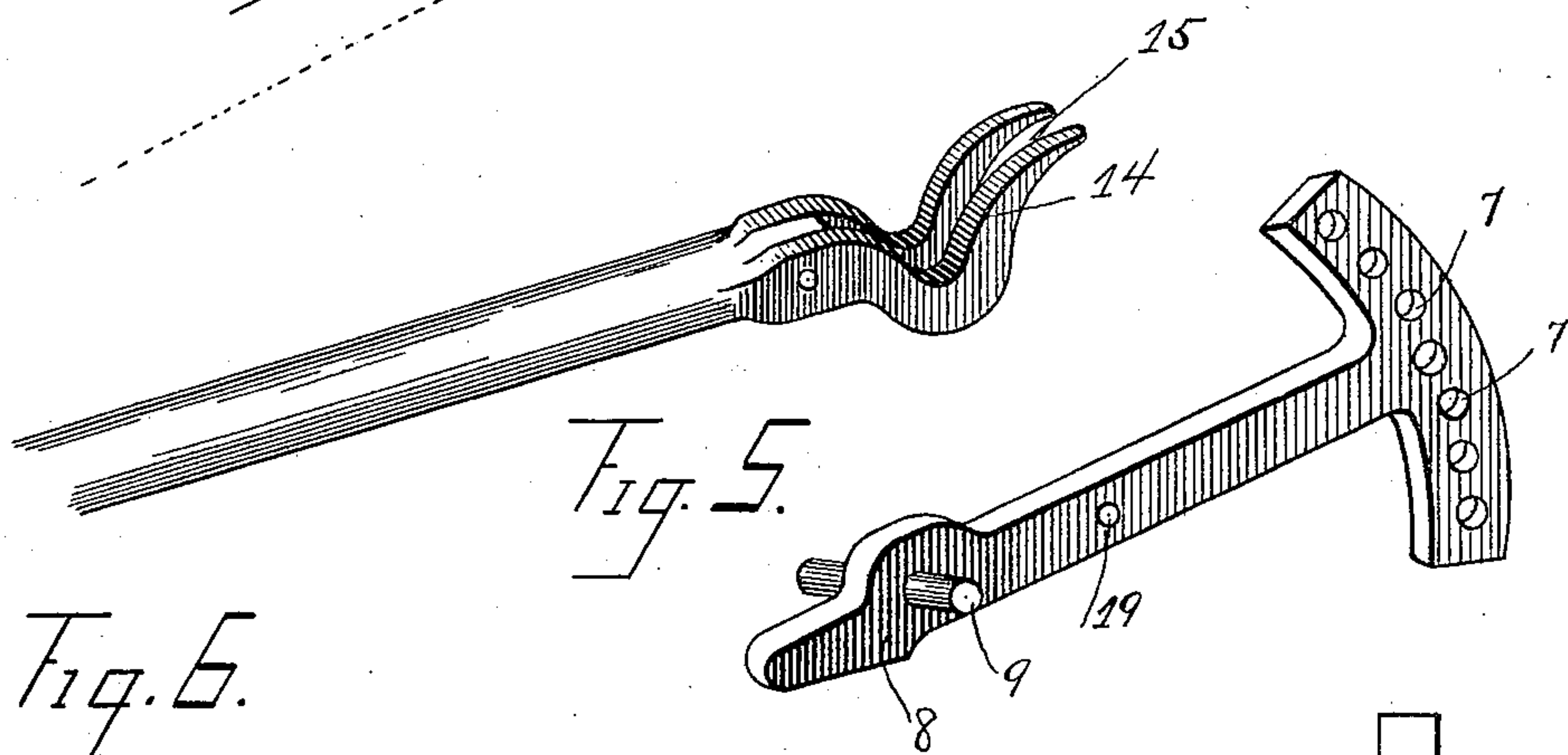
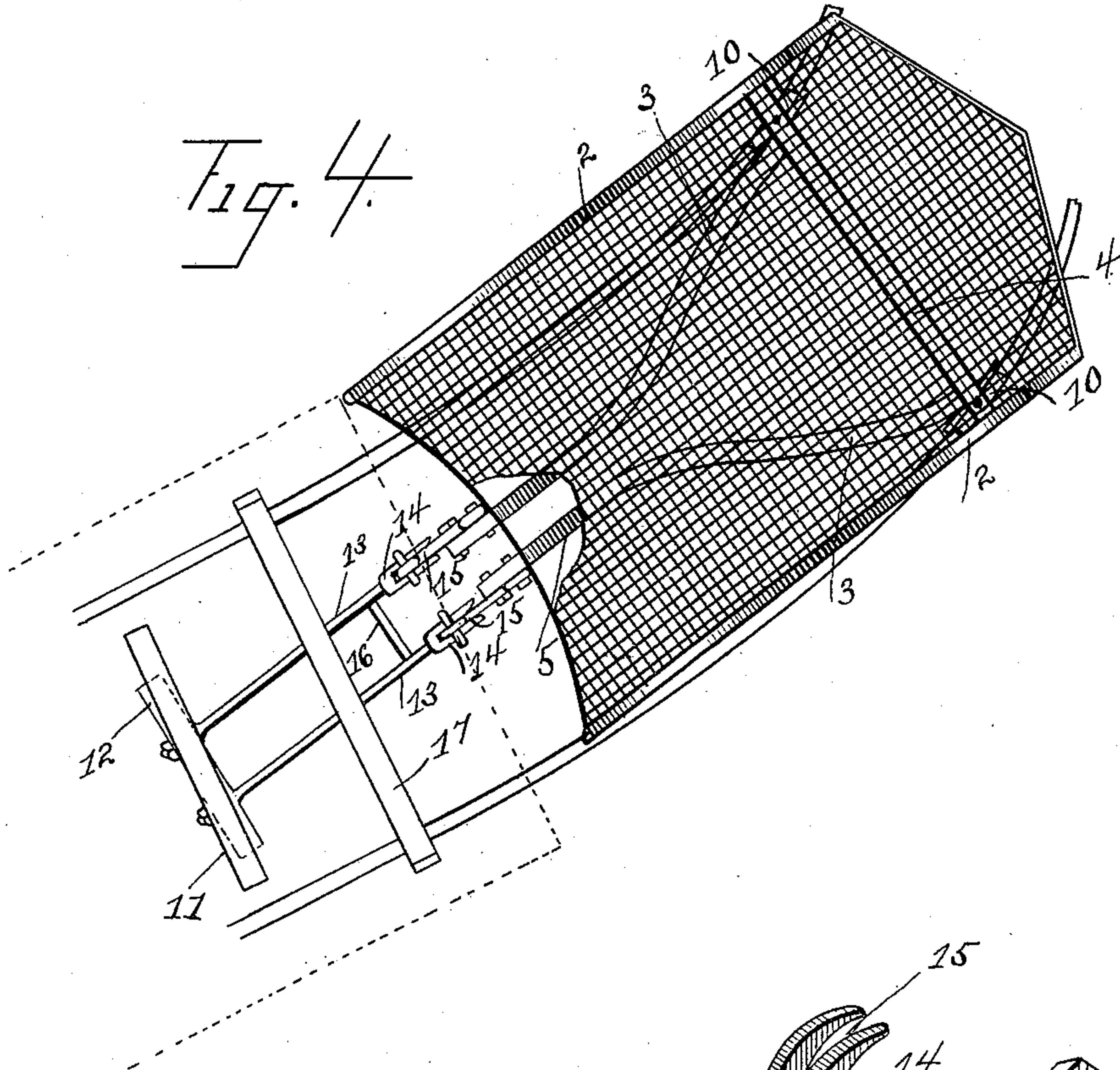
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3 Sheets—Sheet 3.

C. SAUERBREY.
DEVICE FOR ATTACHING FENDERS TO CARS.

No. 606,156.

Patented June 21, 1898.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHRISTIAN SAUERBREY, OF OWEGO, NEW YORK, ASSIGNOR OF ONE-HALF
TO THEODORE D. GERE, OF SAME PLACE.

DEVICE FOR ATTACHING FENDERS TO CARS.

SPECIFICATION forming part of Letters Patent No. 606,156, dated June 21, 1898.

Application filed October 4, 1897. Serial No. 654,022. (No model.)

To all whom it may concern:

Be it known that I, CHRISTIAN SAUERBREY, a citizen of the United States, residing at Owego, in the county of Tioga and State of New York, have invented certain new and useful Improvements in Devices for Attaching Fenders to Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to devices for attaching fenders to street-railway cars, and is particularly designed to be applied to that class of fenders which are pivotally supported from and in advance of the car and which are caused to follow at all times the curves or bends in the track; and the principal object is to provide a connecting means between the fender and the point of pivotal attachment to the car or truck, which will be perfectly rigid, at the same time detachable, and cause the fender to be maintained in positive alignment with the pivoted supports throughout their entire length, thus preventing any independent lateral swinging of the fender from its point of connection with the supporting bars or rods and the consequent tendency of the fender-wheels to "climb" or "jump" the track, but will permit of a free lateral or swinging movement from the point of pivotal attachment to the car body or truck.

Still another object of the invention is to provide for the adjustment of the forward end of the fender with respect to the track-rails or road-bed.

These objects are attained by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the front portion of a car, showing my improved device for attaching a fender thereto; Fig. 2, a side elevation of the same; Fig. 3, a perspective view of a fender-frame and the attaching devices; Fig. 4, a top plan view of the fender and the attaching mechanism; Fig. 5, a detached and detail perspective view of one of the detachable connections, and Fig. 6 a modified form of the support which is pivoted to the car.

In the construction of wheeled fenders heretofore all efforts have been directed with the idea in view of providing a flexible connection between the fender and the car or truck; but my investigations and experiments have conclusively shown that it is absolutely necessary that such connections must be rigid in order that the fender may be kept in positive alinement with the rods which are pivoted to the car; otherwise the wheels of the fender will show a constant disposition to climb or jump the rails, especially where the track is at all uneven, as well as at frogs, switches, and curves; and therefore my invention consists, essentially, in providing a connection, between the fender and the support which is pivoted to the car or truck and from which support the fender is connected, that shall possess the essential features of detachability and rigidity of connection.

Referring to the several views the numeral 1 indicates one end of a car to which my improved fender and connections are shown attached. The fender may consist of a frame of any desired shape.

The numeral 3 indicates the bars or rods which have their front ends secured to a cross-bar 4, which is secured between the sides of the frame near the front end thereof. The other end of each of these bars is welded, respectively, to bars or rods 5, which curve outwardly and upwardly and have their ends secured to a curved end of the frame, as shown in Fig. 3. To the welded ends of each set of bars at *a* is pivoted a segmental bar 6, provided with a series of holes 7 in its segmental portion. Each segment-arm, a short distance from its end 8, carries a transverse pin 9, projecting on each side, by means of which the fender is detachably connected to suitable devices carried by the car, which devices support the fender in front thereof, as will be hereinafter described. The front end of the fender is supported above the track by two flanged wheels 10, which are journaled in suitable frames pivotally connected to the cross-bar 4. These wheels are adapted to ride upon the track-rails and may be of any desired diameter.

In attaching the fender to the end of the car

I preferably employ a cross-beam 11, which may be secured either to the bottom of the car-body or to the truck in any suitable manner. To the beam 11 I preferably pivot a bolster 12, to which are attached the respective ends of two coupling and supporting bars or rods 13. The other or free end of each of these bars is provided with a double hook 14, having a space 15 between each hook for the reception of the pin end 8 of the segment-arm. The free or hook ends of the coupling-bars are preferably connected together by a bar or rod 16 of a length sufficient to hold them the proper distance apart for coupling with the segmental arms.

In all cases where single trucks (four wheels) are used it is well known that the car-body necessarily projects a long distance beyond the truck, and when rounding curves the forward end of the car is thrown greatly out of alinement with the tracks. This makes long supporting bars or rods necessary in this class of fenders and requires the free or forward ends of said bars to be properly supported, so that they may have full and free lateral movement when the car is rounding a curve. I support the forward ends of the bars 13 by means of a transverse bar 17, situated, preferably, between the steps.

The fender is attached to the end of the car in the following manner: The segment-arms being free in their pivots, the free ends are brought into coupling position with the hook ends of the supporting-bars and inserted between the double hooks, with the ends 8 seated under the solid portion of the said hooks and the pin 9 resting therein. The segment-arms are then properly adjusted to regulate the height of the front end of the fender from the track-rails or the road-bed, and a pin or bolt 18, inserted in the proper hole in each segment, registering with the hole 19 in the bars 3 to prevent the accidental uncoupling of the fender. To detach the fender, all that is necessary to be done is to withdraw the pins 18 and uncouple the parts.

The rigidity of the coupling is the important feature of my invention, as it prevents any independent lateral motion of the fender and presents a rigid connection between the fender-wheels and the pivotal point of the supporting-bars. The adjustable feature is also important, as it allows for the elevation or depression of the front end of the fender with respect to the road-bed or track-rails, whether said road-bed be smooth or uneven, and the rearwardly-inclined front edges of the fender afford many advantages not possessed by the average fenders, as any obstruction met with on the track is shoved to one side or the other, and thereby out of the way of the wheels of the car.

The device is quite simple and inexpensive to construct, and will prove efficient in operation, since it can be adjusted to have its front end at any desired height from the track-rails.

It is especially well adapted for use on street-railway cars, as it can be readily and quickly detached from one end of the car and attached to the other end and is caused to follow the curves of the track freely and without liability to jump the track.

Various modifications may be made in the construction of my connecting means without departing from the spirit of the invention or sacrificing the principle thereof—such, for instance, as is shown in Fig. 6, wherein the supporting-bars are shown provided with semicircular curves 21, whereby a much greater lateral movement of the fender may be obtained when rounding sharper curves, as said semicircular curves afford sufficient clearing-space for the inner front corner of the steps.

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

1. The combination with a car provided with pivoted fender-supporting bars which extend, approximately, to the end of the car, and a wheeled fender, of a detachable rigid connection between the free ends of the fender-supporting bars and the fender, whereby lateral movement of the fender, independent of the supporting-bars, is prevented.

2. The combination with a car provided with pivoted fender-supporting bars extending approximately, to the end of the car, and a wheeled fender provided with coupling-bars, of a detachable rigid connection between the free ends of the fender-supporting bars and the coupling-bars attached to said fender, whereby the fender may be detached at will.

3. The combination with a car provided with pivoted fender-supporting bars carrying coupling-hooks, and a wheeled fender provided with coupling-bars carrying segmental coupling-arms, of means for securing the coupling parts together, whereby accidental uncoupling is prevented, and a rigid connection obtained.

4. The combination with a car provided with pivoted fender-supporting bars carrying coupling-hooks, and a wheeled fender provided with coupling-bars carrying segmental coupling-arms, of a pin or bolt securing said segmental arms against accidental uncoupling.

5. The combination with a car body or truck, of pivoted supporting-bars, each one carrying a set of coupling-hooks separated by a space, and a wheeled fender provided with rigid coupling-bars, carrying segmental coupling-arms which are received in the spaces between said coupling-hooks, with the transverse pins resting in the bottom of the hooks, thereby forming a rigid detachable connection between the fender and the fender-supporting bars.

6. The combination with a car body or truck, of pivoted fender-supporting bars, each bar carrying a set of spaced coupling-hooks, a

wheeled fender provided with the bars 3 and 5, a segmental coupling-arm pivoted to each set of bars, and means for securing the coupling-hooks and coupling-arms against accidental uncoupling.

7. The combination with a car provided with fender-supporting bars, pivoted to move laterally in the arc of a circle and supported horizontally at the outer ends, and a wheeled fender, of a rigid detachable connection between the fender and pivoted attachment to the car body or truck.

8. The combination with a car provided with pivoted fender-supporting bars formed with curves 21, a transverse bar supporting the outer ends of said bars horizontally, and a wheeled fender, of a rigid detachable con-

nection between the fender and pivoted attachment to the car body or truck.

9. The combination with a car provided with fender-supporting bars, pivoted to move laterally in the arc of a circle, and a wheeled fender, of detachable means for rigidly connecting the bars to the fender, between the pivotal point of the supporting-bars and the fender, whereby lateral motion of the fender, independent of the supporting-bars, is prevented.

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

CHRIS. SAUERBREY.

Witnesses:

HERBERT L. SCHARLACH,
JOSEPH M. RINGROSE.