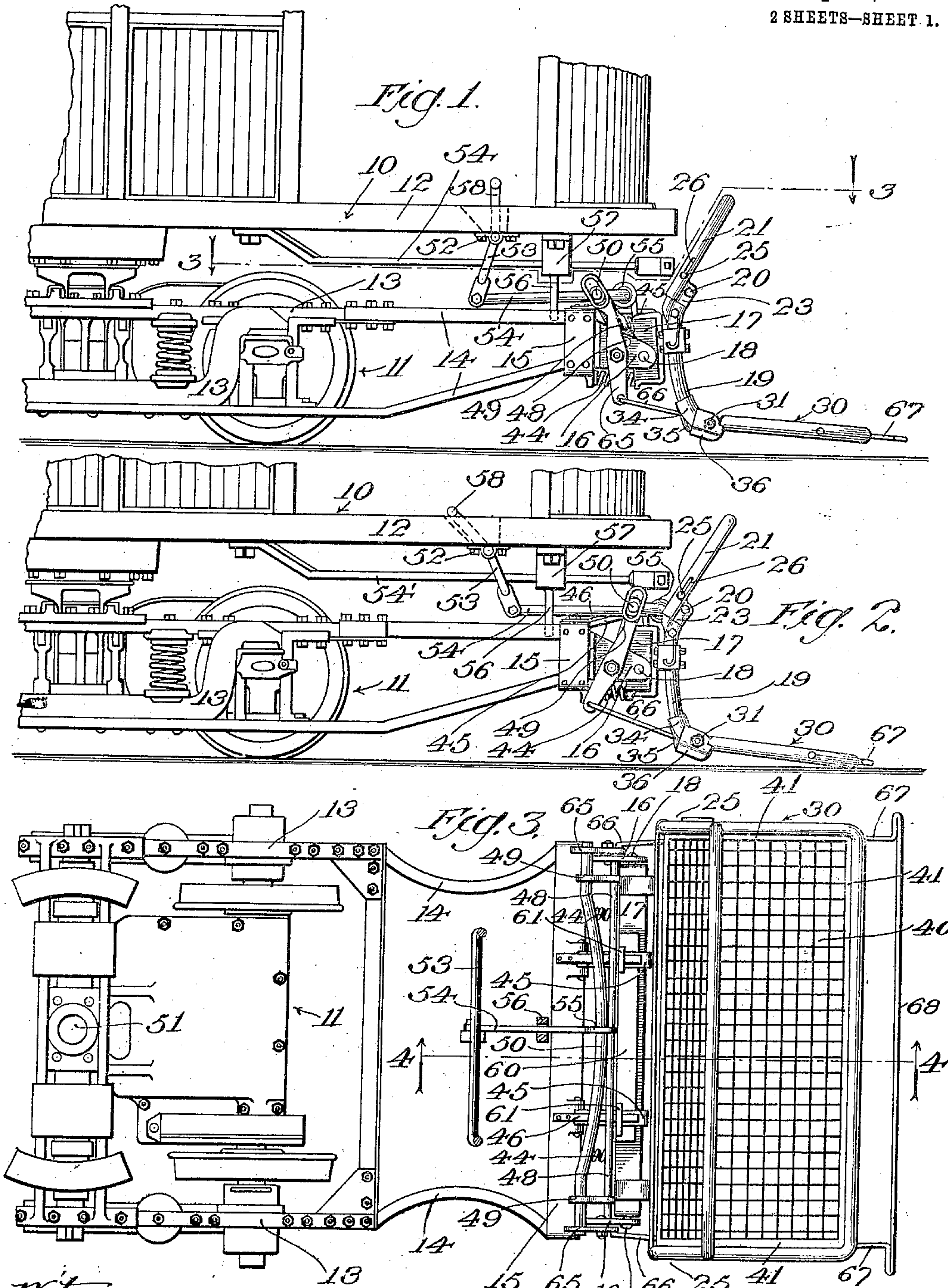


F. C. AUSTIN.
CAR FENDER.
APPLICATION FILED JAN. 27, 1908.

917,520.

Patented Apr. 6, 1909.
2 SHEETS—SHEET 1.



Witnesses:

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John M. Bucklew

Inventor:

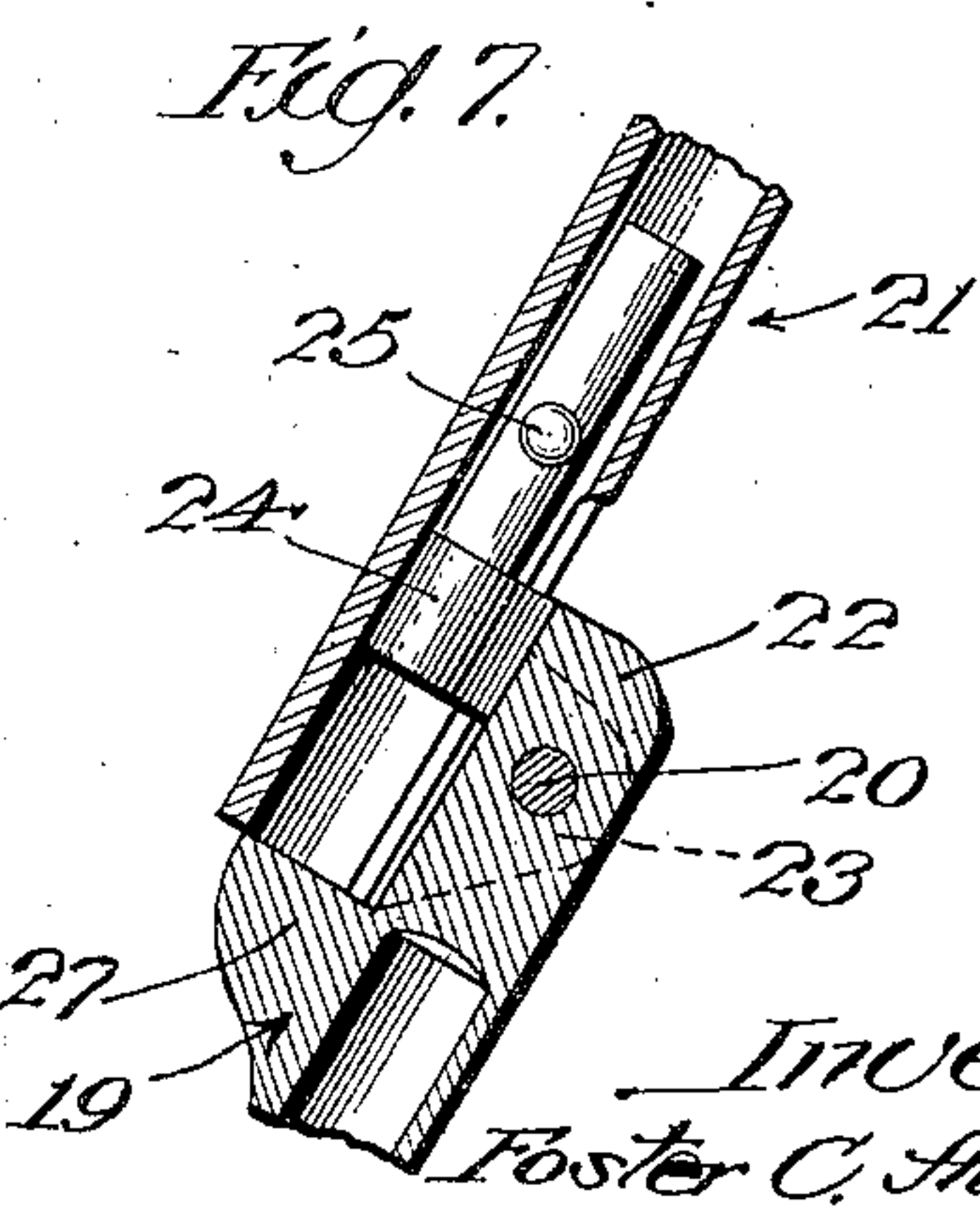
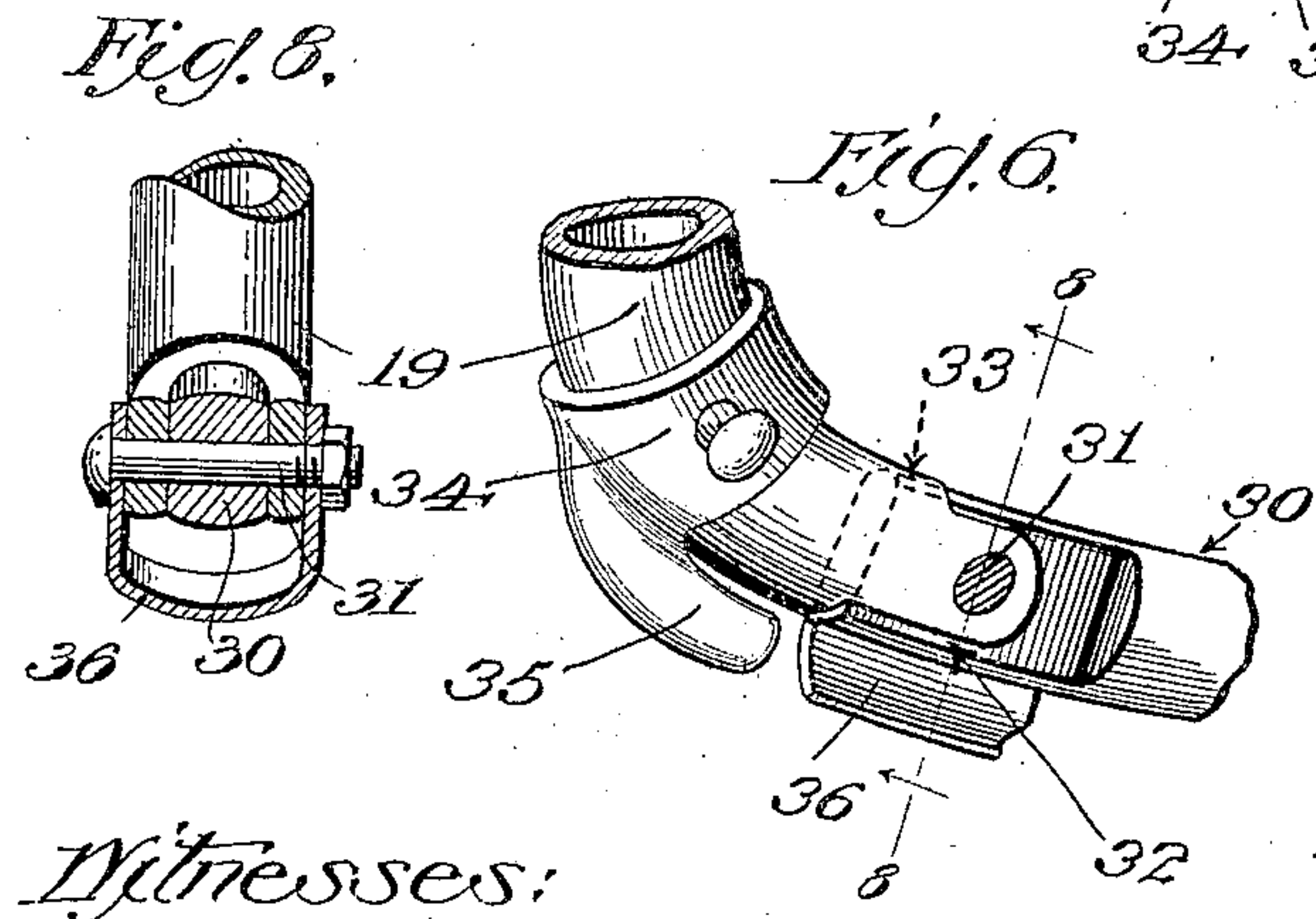
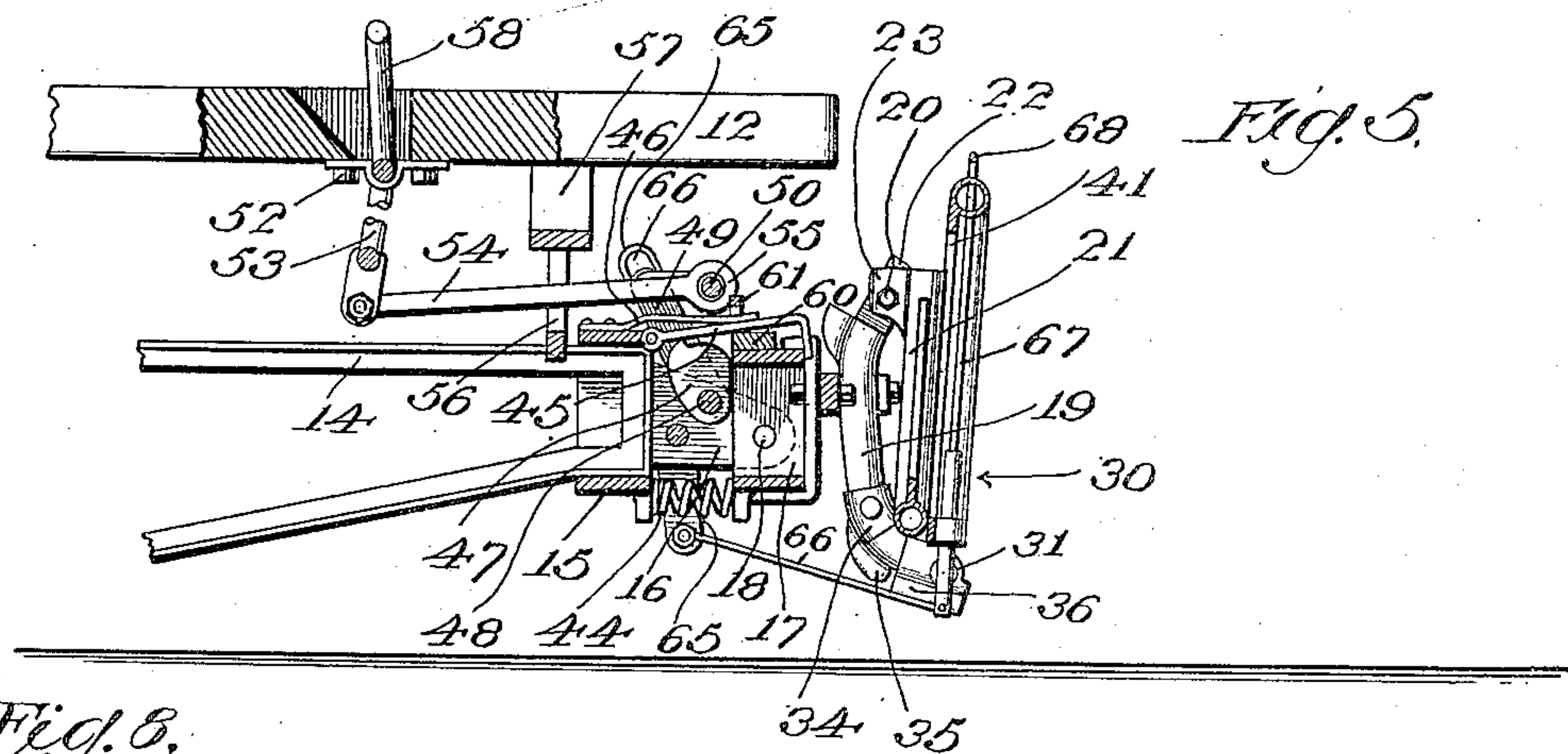
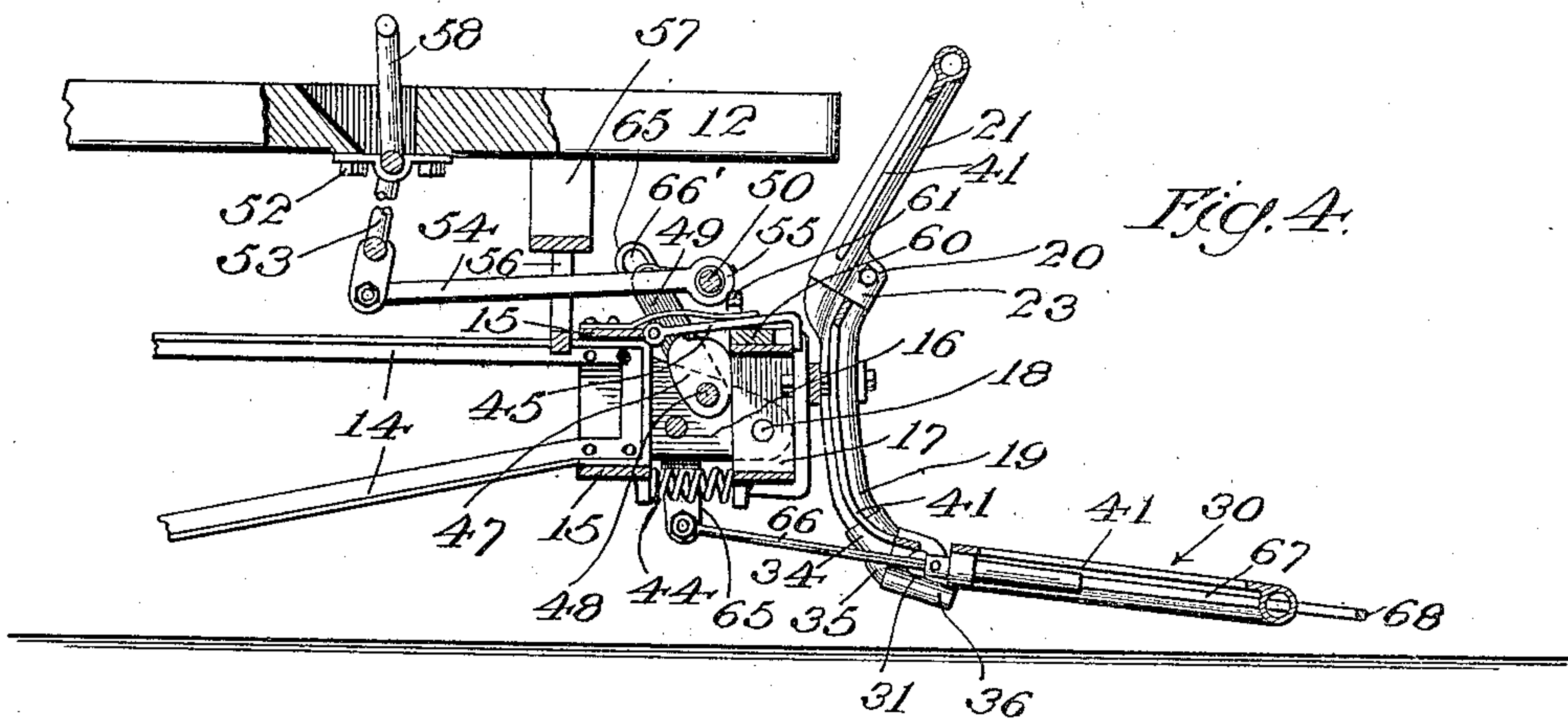
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2 SHEETS—SHEET 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

FOSTER C. AUSTIN, OF LOS ANGELES, CALIFORNIA.

CAR-FENDER.

No. 917,520.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed January 27, 1908. Serial No. 412,738.

To all whom it may concern:

Be it known that I, FOSTER C. AUSTIN, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Car-Fenders, of which the following is a specification.

This invention relates to improvements on my car fender for which Letters Patent No. 829,564, were issued to me on August 28, 1906, and consists in the combination with the former apparatus of an automatic tripping device which will lower the fender into its operative position upon its front end striking any obstruction upon the track.

The invention further consists in the improved construction of the different parts in arranging the fender to be folded up, and also in supporting the same from the trucks at a point in front of the car body.

I accomplish the above by means of the device described herein and illustrated in the accompanying drawings, in which:—

Figure 1, is a side elevation of a portion of a car equipped with my improved fender, which is shown in its normal position. Fig. 2, is a view similar to Fig. 1 with the fender in its lowered or operative position. Fig. 3, is a plan view taken as indicated by line 3—3 of Fig. 1. Fig. 4, is an enlarged section taken on line 4—4 of Fig. 3. Fig. 5, is a view taken similarly to Fig. 4 with the fender in its folded position. Fig. 6, is an enlarged perspective detail of the lower hinged joint of the fender frame. Fig. 7, is an enlarged perspective detail of the upper hinged joint of the fender frame. Fig. 8, is an enlarged sectional perspective detail of the upper hinged joint of the fender frame taken on line 8—8 of Fig. 6, looking in the direction indicated by the arrows.

Referring to the drawings 10 designates a car body of the construction usually utilized for electrically operated street cars, truck 11 pivotally supporting the car body in the usual manner. Truck 11 is provided with the usual frame 13 to which supporting frame 14 for the fender is secured. This frame is preferably composed of angle iron and carries upon its outer or front end a frame 15 which is formed preferably of a flat strip of iron bent into a rectangular form. Attached to frame 15 and near the ends thereof are mounted bearing brackets 16 to the front ends of which is secured a second rectangular frame 17 pivoted as at

18 to the brackets 16. Rigidly secured to frame 17 at the front end thereof is the fender proper which is preferably composed of three members secured together in any suitable manner.

Central frame member 19 of the fender is preferably formed of hollow tubing and stands in an approximately vertical position, preferably extending upwardly to a point below the draw bar of the car so that when it is desired to couple the car to another, as is frequently the case, the fender will not offer an obstruction. To the upper end of central frame member 19 is hinged, at 20, upper frame member 21 which extends upwardly and forwardly, the joint between these two frame members being shown in enlarged detail in Fig. 7. The upper ends of frame member 19 are each provided with a hinge lug 22, and frame member 21 with a hinge lug 23, which are pivoted together at 20. Frame member 21 is constructed preferably of hollow tubing, and inside this tubing a locking bolt 24 is slidably mounted, a knob 25 projecting through a slot 26 in the wall of the tubing providing means for moving the locking bolt. This locking bolt 24 is adapted to bear against the upper end of hinge lug 22 and thereby to prevent forward movement of the upper frame member, while the lower end of the upper frame member bears directly against lug 27 forming a part of frame member 19 which prevents its rearward movement. When it is desired to fold the upper frame member into the position shown in Fig. 5, locking bolt 24 is moved upwardly out of engagement with extension 22, and the whole upper frame may then be swung forwardly and downwardly into the position shown in Fig. 5 of the drawings.

Lower frame member 30 extends from the lower end of central frame member 19 forwardly and slightly downwardly, being hinged to the central frame at 31. Referring particularly to Fig. 6 the inner end of frame member 30 is pivoted to the ends of the tubing frame 19 and projects beyond the pivotal point into the tubing. The lower part of the tubing is cut away as at 32 so that frame member 30 may be moved upwardly and rearwardly into its folded position as shown in Fig. 5. The end of frame member 30 bearing upwardly against the tubing of frame member 19, as at 33, prevents the downward movement of the outer

end of frame member 30, and a sleeve 34, provided with a projecting finger 35, is adapted to slide downwardly on frame member 19 so that the finger may pass under the end of frame member 30 and prevent its downward movement, and the upward movement of the front end of the same. An apron 36 is attached to the lower end of frame member 19, into which apron finger 35 projects when in its lowered position, this apron forming a brace for the finger and also protecting it from any accidental injury by striking an object on the track and for further strengthening the joint at that point. All of the frame members are provided with a netting 40 which is stretched upon inner frame 41 attached to the tubular frames. This netting may be composed of any suitable material which is preferably soft and resilient, such materials as hemp cord giving good results. From the drawings it will be noted that a basket shaped structure is thus formed which will prevent any object upon the track from passing beneath the truck wheels and from escaping from the fender over its top.

In its normal position the fender will be held a short distance above the track, the front end of frame 30 clearing the track by a suitable distance so that no object of any size may pass underneath the same. I have provided mechanism whereby the front end of the fender may be lowered so as to rest directly upon the track, and this mechanism is so constructed that it may be operated either by the motorneer or by any object upon the track which strikes the front end of the fender.

Referring particularly to Fig. 4 frame 15 is provided with a pair of hinged hooks 45 which are adapted to hook over the front edge of pivoted frame 17 and prevent its downward movement. These hooks are resiliently pressed down by springs 46 so that they are held in engagement with the frame until raised by cams 47 mounted on operating shaft 48 which is journaled in bearing pieces 16. On the outer ends of shafts 48 are mounted arms 49 which normally project upwardly and rearwardly to carry on their ends a curved transverse operating bar 50. This bar is formed on the arc of a circle whose center is at 51, the bearing point of the car body upon truck 11. Mounted upon the under side of the car floor 12 in bearings 52 is a rectangular frame 53 which is of sufficient transverse extent to allow draw bar 54' to pass therethrough in any position it may assume on curves.

Pivotaly connected to the center of the lower side of frame 53 is a reach bar 54 which loosely connects with operating bar 50 as at 55. This reach bar is prevented from any transverse movement relative to the car body by a vertical guide 56 which

is mounted upon the under side of draw bar support 57 and which allows of vertical movement of the reach bar to accommodate any relative movement between the car body and the trucks. On account of the curvature of bar 50 it will be seen that reach bar 54 will always remain in operative engagement with the same without changing the position of frame 53, and foot lever 58 attached thereto so that upon the rearward movement of the foot lever to the position shown in Fig. 2 bar 50 will be moved forwardly to rotate operating shaft 48. Cam 47 is thereby thrown against hook 45 which is raised out of engagement with frame 17. This cam is also of such configuration that it bears against the rear upper edge of frame 17 and will force the frame forwardly upon its rotation. A stop bar 60 is mounted on the upper face of frame 17 and this stop bar immediately contacts with hook 45 upon the forward movement thereof. A stop 61 prevents any excessive upward movement of hook 45 so that it may not move out of engagement with stop bar 60. Thus when the parts are in the position shown in Fig. 2 hook 45 prevents the further forward and downward movement of the fender while cam 47 prevents its rearward and upward movement. When the foot lever is released the frame is moved to its normal position by means of springs 44.

Pivotaly mounted on the outer faces of bearing pieces 16 are levers 65 which are slotted on their upper ends as at 66' to receive the outer ends of curved bar 50. The lower ends of these levers are connected to forwardly extending rods 66 which are pivotaly connected to a trip frame 67. This trip frame is slidably mounted in lower frame member 30 and is provided with a transverse contact bar 68 which is normally in a position shortly in advance of the front end of the fender frame. Upon this contact bar striking any obstruction upon the track it is immediately forced rearwardly and the fender is thereby operated into its lowered or operative position to pick up the object which has been struck.

From the foregoing description it will be seen that my fender embodies the advantages of being suspended or supported from the car truck so that it may follow the rails closely, and also that it is supported at a point in front of the car body where its action is most efficient. It will further be noted that the automatic tripping means for lowering the fender to its operative position is simple in construction and therefore not likely to become disordered. When folded up this fender presents a neat and compact appearance and is out of the way of the draw bar so that the same may be utilized whenever desired without any interference.

On account of the pivoted mounting of

my fender, and its consequent adaptability to be instantly lowered to its operative position, it is possible to carry it in a normal position at some distance above the track.

5 This clearance allows my fender to be used with absolute safety on high speed cars, without any danger of the fender buckling by contact with the track and wrecking the car, as is often the case with non-adjustable
10 fenders.

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

1. A fender, comprising a rigid frame
15 adapted to be secured to the vehicle truck, a fender frame pivotally attached to said rigid frame, said fender frame comprising a central vertical member, a horizontal member pivoted to the lower end of said vertical
20 member and a forwardly overhanging member pivoted to the upper end of said vertical member, and automatic means to control the movement of said fender frame.

2. A fender, comprising a fender frame
25 attached to the vehicle truck frame, said fender frame comprising a central vertical member, a horizontal member pivoted to the lower end of said vertical member and a forwardly overhanging member pivoted to
30 the upper end of said vertical member, and

fender control means adapted for either automatic or manual operation.

3. A device of the class described, comprising a fender frame adapted to be pivotally secured to a truck frame of a power
35 operated vehicle, said fender frame comprising a central vertical member, a horizontal member pivoted to the lower end of said vertical member and a forwardly overhanging member pivoted to the upper end of said
40 vertical member, and a tripping mechanism operatively connected to said fender and adapted to be operated automatically upon striking an obstruction.

4. A vehicle fender, comprising a rigid
45 supporting frame secured to the vehicle truck frame, a fending member pivotally mounted on said supporting frame, a rectangular frame pivotally mounted on the under side of the vehicle body, said frame encompassing
50 the draw bar of the vehicle, and sliding connective means between said rectangular frame and the fending member.

In witness that I claim the foregoing I have hereunto subscribed my name this 17th
55 day of January, 1908.

FOSTER C. AUSTIN.

Witnesses:

EDMUND A. STRAUSE,
OLLIE PALMER.