

No. 766,999.

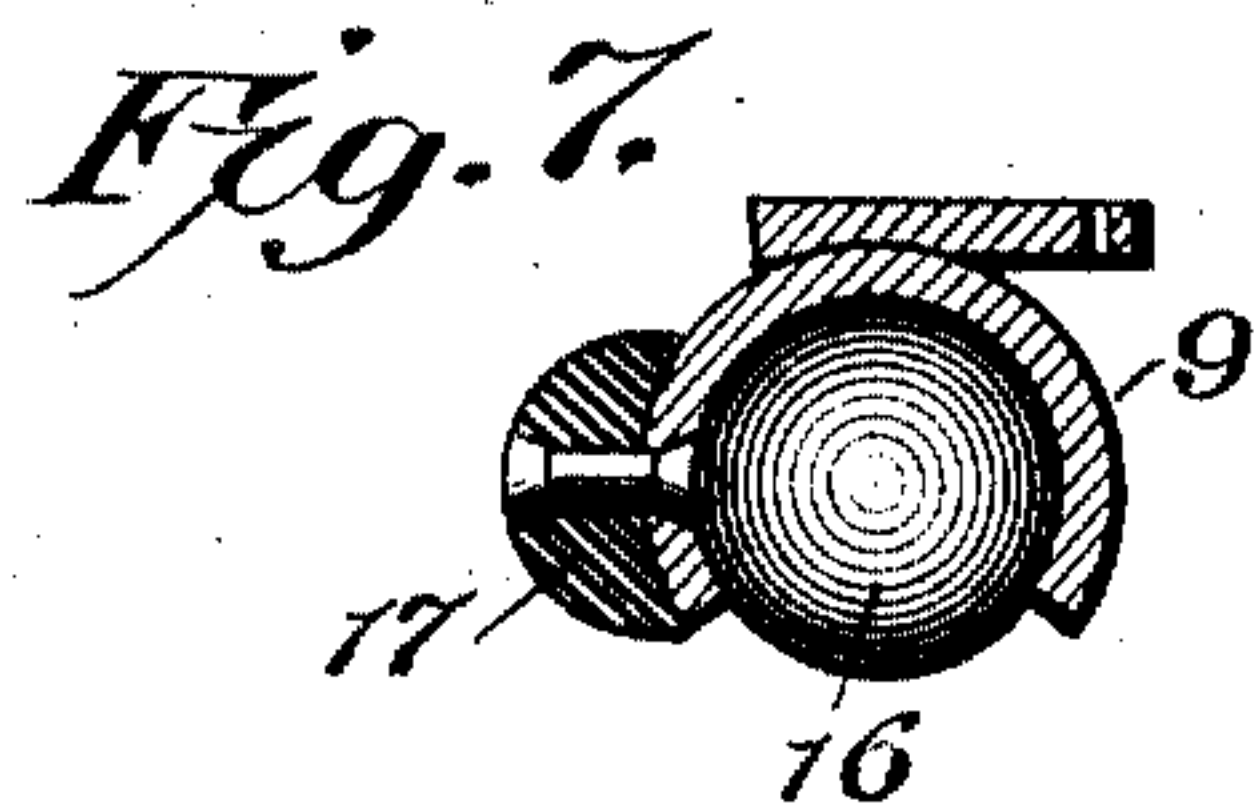
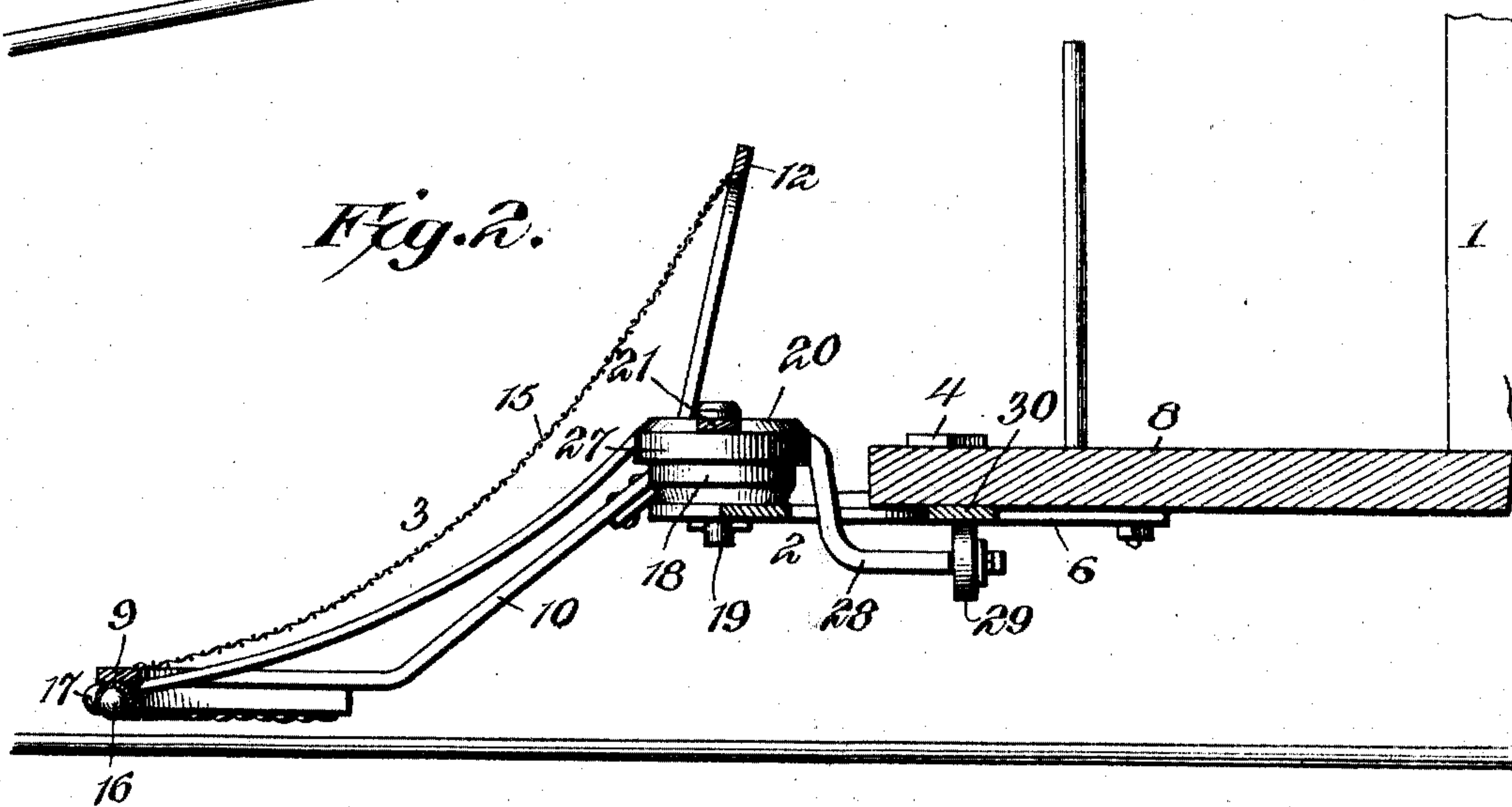
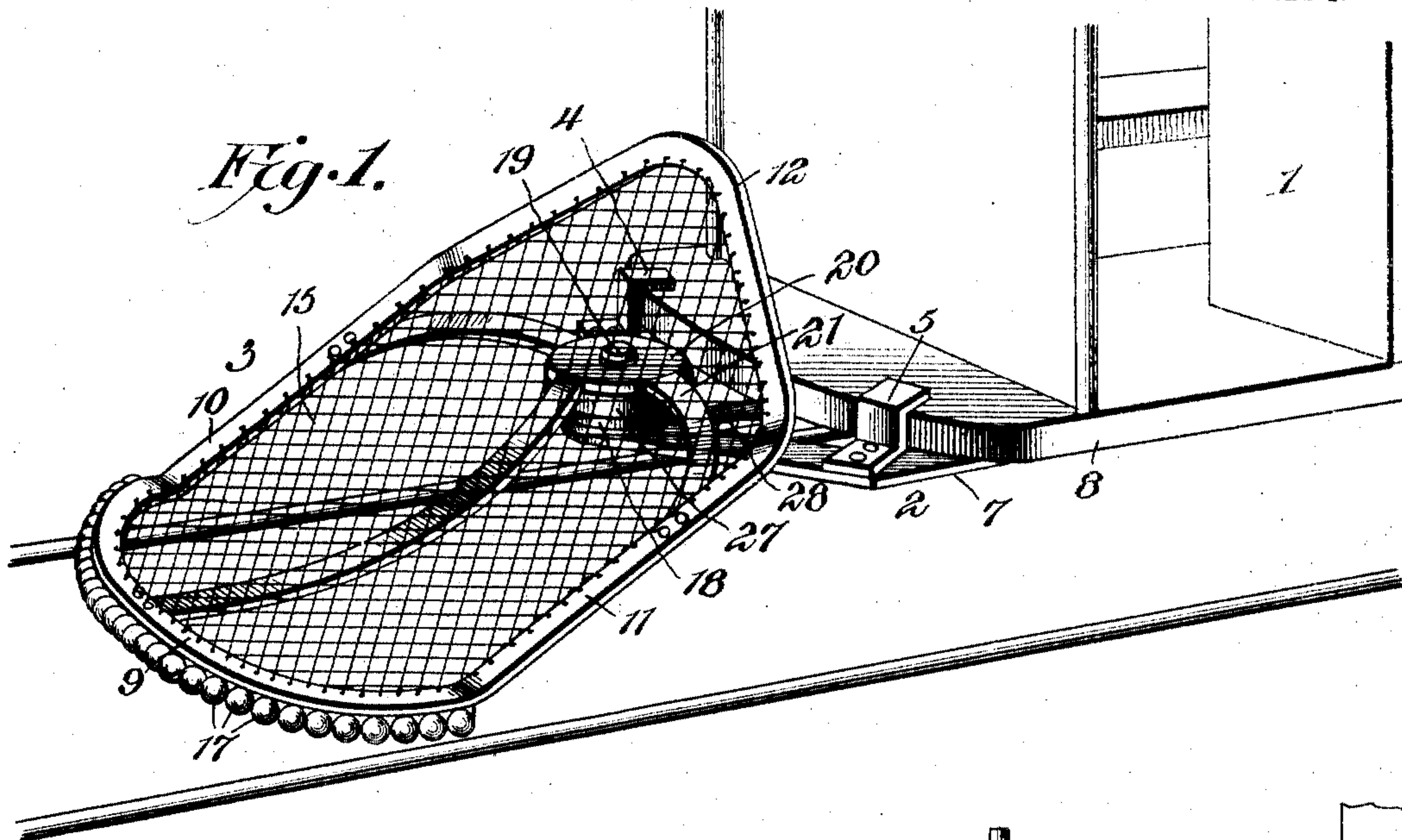
PATENTED AUG. 9, 1904.

H. W. HOWE.
CAR FENDER.

APPLICATION FILED FEB. 24, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

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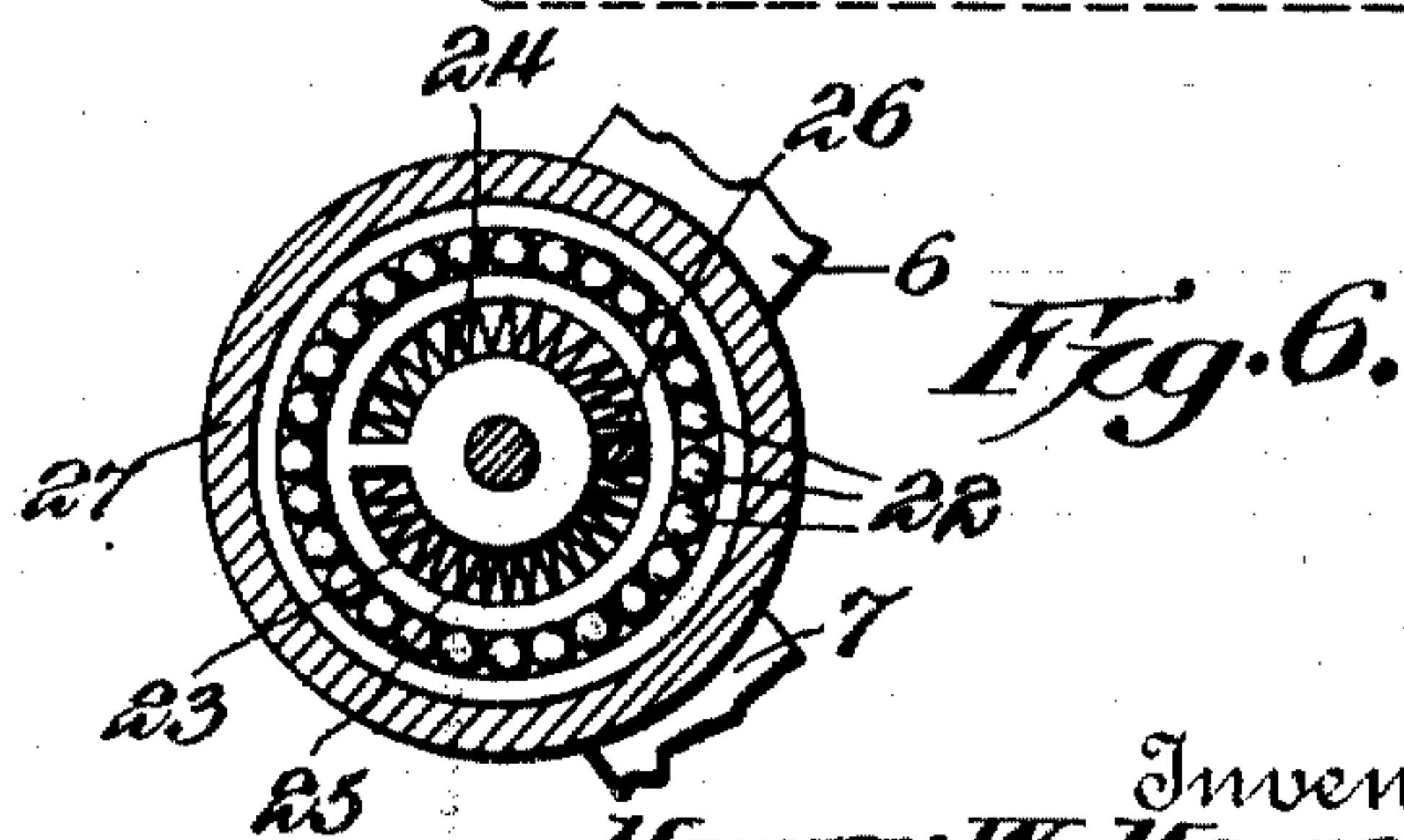
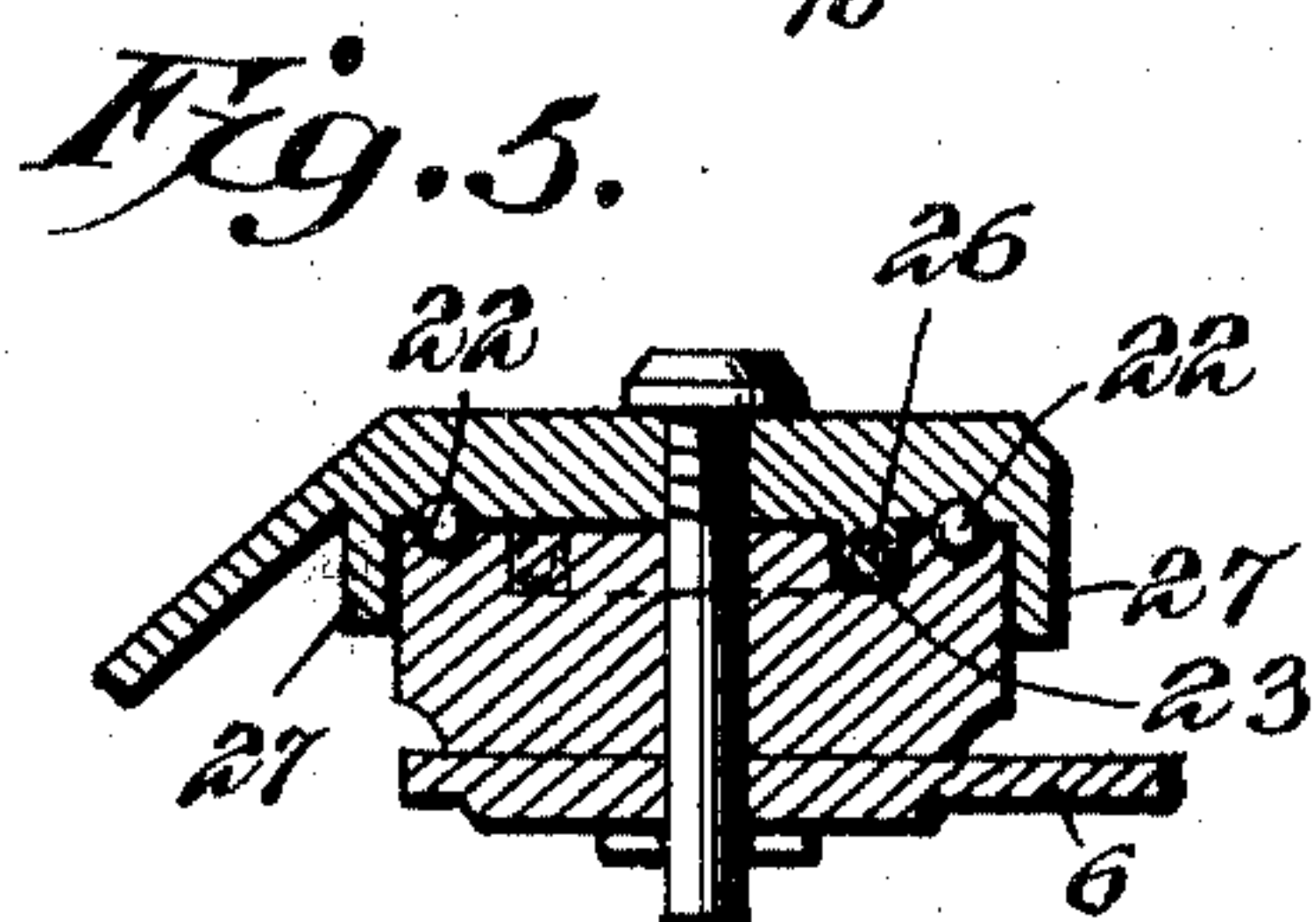
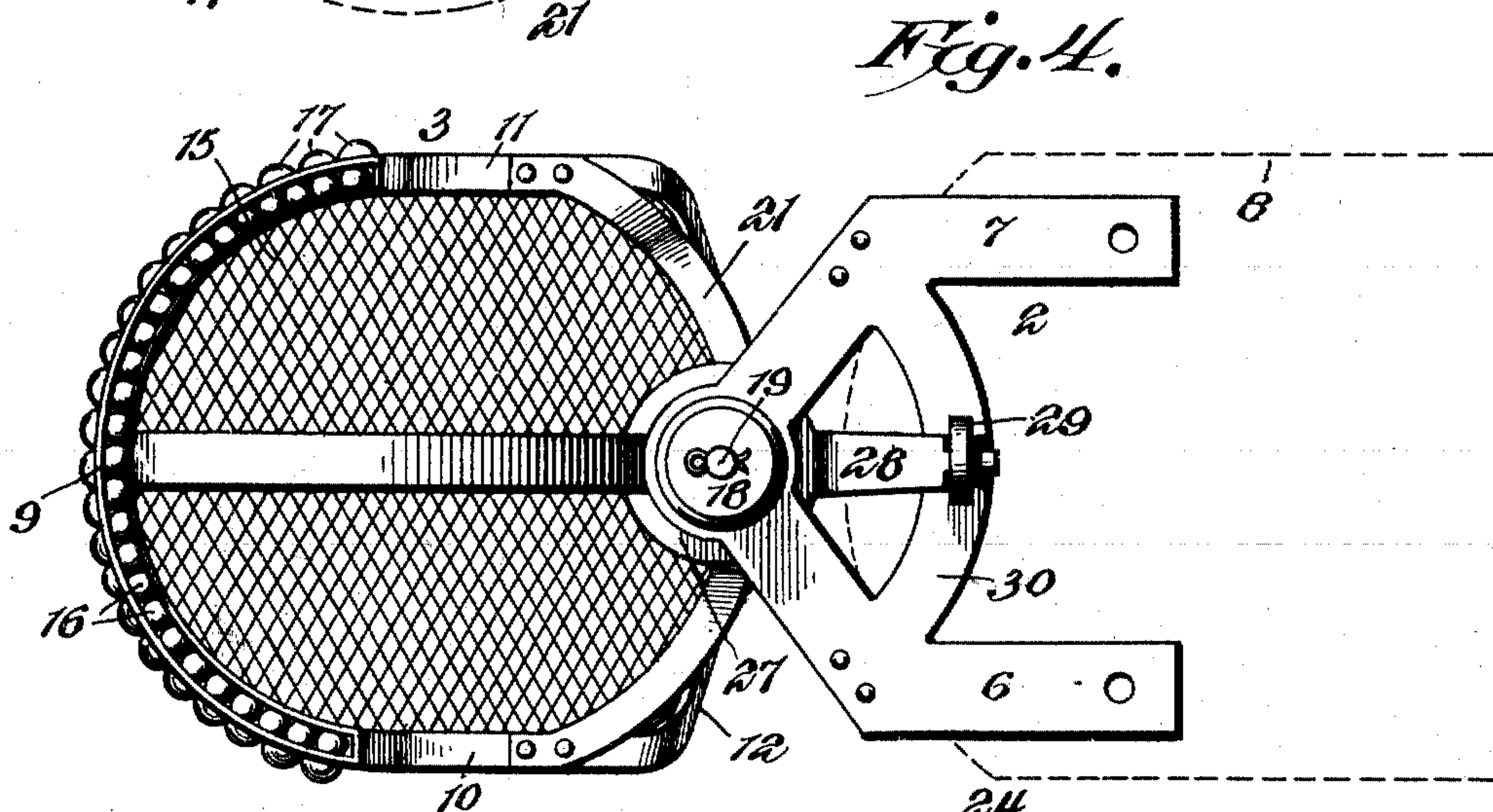
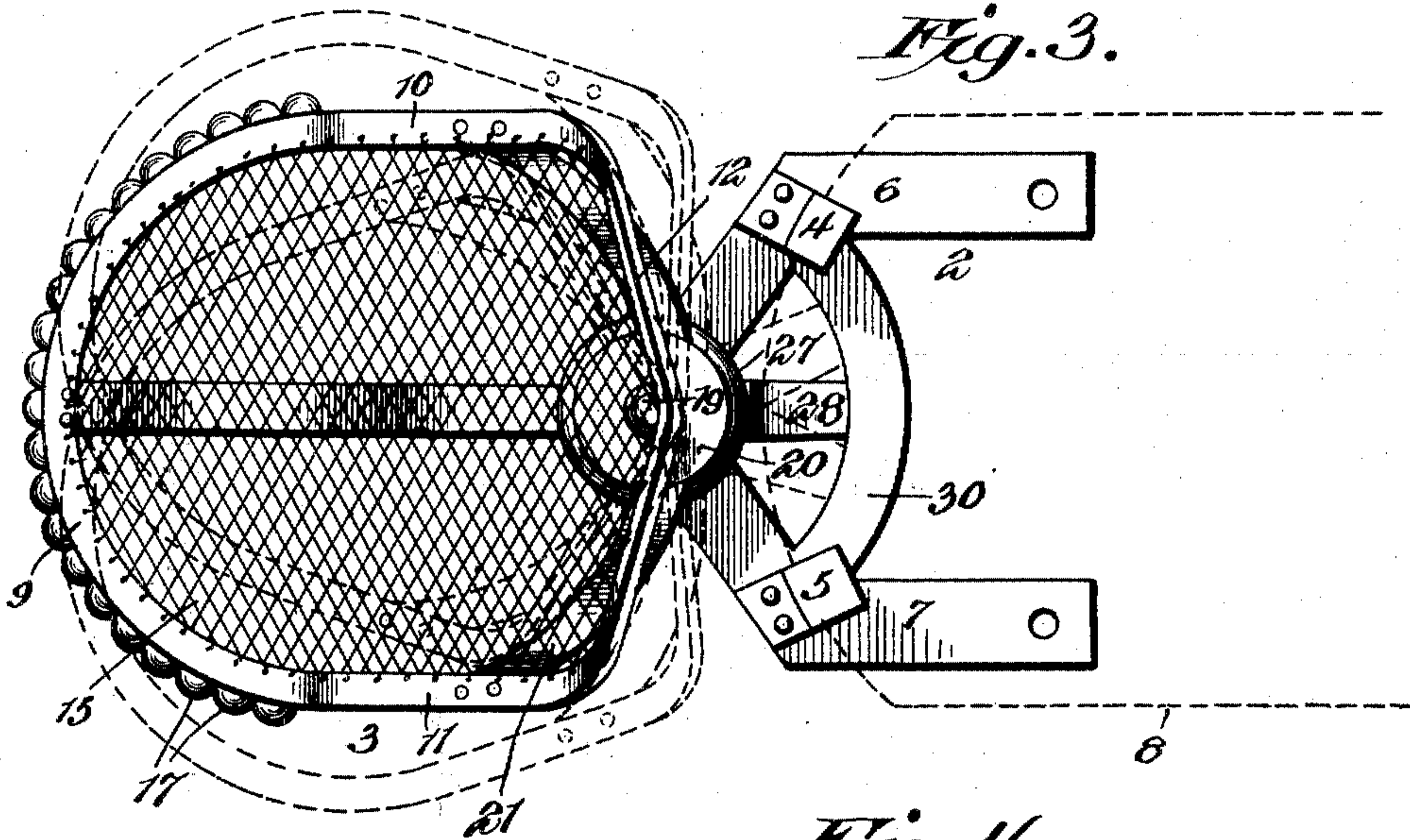
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2 SHEETS—SHEET 2.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY W. HOWE, OF MEXICO, MEXICO.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 766,999, dated August 9, 1904.

Application filed February 24, 1904. Serial No. 195,003. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. HOWE, a citizen of the United States, residing at the city of Mexico, in the Republic of Mexico, have
5 invented a new and useful Car-Fender, of which the following is a specification.

My present invention relates to a novel car-fender, the primary object being to so mount the fender proper that when a person or object is struck the position of the fender will
10 be shifted for the purpose of shoving the person or object to one side or the other out of the path of the vehicle.

Another object is to provide an improved
15 form of mounting for the fender and novel mechanism for yieldingly retaining the fender in alined or central position.

A further object is to provide the fender with a novel buffer-rail having an efficient
20 form of cushion in its front face and equipped with antifriction-balls projecting below the rail to prevent the fender from catching when lowered sufficiently to contact with the rails or projecting portions of the road-bed.

To the accomplishment of these objects and others subordinate thereto the invention consists in that construction and arrangement of
25 parts to be hereinafter described, illustrated in the accompanying drawings, and succinctly defined in the appended claims.

In said drawings, Figure 1 is a perspective view of a portion of a car equipped with my invention. Fig. 2 is a longitudinal section of the same subject-matter. Fig. 3 is a plan
35 view of the same with the car-body removed, two positions of the fender being shown in dotted lines. Fig. 4 is a bottom plan view of the same subject-matter. Fig. 5 is a vertical section through the pivotal mounting of the
40 fender. Fig. 6 is a horizontal section on the line 6 6 of Fig. 5, and Fig. 7 is a sectional view of the buffer-rail.

Like numerals of reference are employed to designate corresponding parts throughout
45 the several views.

1 indicates a fragment of a car-body, and 2 a fender support or bracket in the form of a light metal frame carrying the fender 3 at its front end.

50 The specific form of connection between the

car and the fender-bracket is not material, but preferably comprehends a pair of hooks 4 and 5, rising from the side bars 6 and 7 of the bracket 2 and engaging over the front edge of the car-platform 8, to the under side
55 of which the rear ends of the side bars 6 and 7 are bolted or otherwise secured.

The fender 3 is in the form of a light open frame comprising an arcuate buffer-rail 9, carried at the lower ends of a pair of inclined
60 side bars 10 and 11, the rear ends of which are connected by a peaked guard-bar 12, preferably integral with the side bars 10 and 11 and rising to a sufficient height to act as a guard, preventing a person or other object
65 from being thrown back over the fender. Over the frame thus constructed is stretched a cover 15, which is preferably stout wire-netting, but may be any material—as, for instance, braid, cord, canvas, or the like—which
70 will sustain the weight of a person without being sufficiently rigid to cause injury to a person precipitated upon the fender with violence.

The buffer-rail 9 (shown in detail in Fig. 7) 75 is preferably in the form of a tube having its lower portion cut away to permit the lower portions of a series of steel balls 16, mounted in the rail, to project below the latter for the purpose of preventing undue friction when
80 the front of the fender rests upon the tracks or other surface. At the front or outer side of the buffer-rail 9 is secured a frictional cushion in the form of a series of rubber or other similar buttons 17, preferably of semi-
85 spherical form, as shown.

We now come to consider what is perhaps the most important feature of the invention—to wit, the mounting of the fender upon a vertical axis in such a manner that when a person is struck the impact will cause the fender
90 to swing laterally for the purpose of shoving the victim of the accident to one side or the other and out of the path of the moving vehicle.

At the front end of the fender-bracket 2 is formed or mounted a socket 18, supported by the converging front ends of the bars 6 and 7. Through the socket 18 is passed a king-
95 bolt 19, upon the upper end of which is screwed 100

a cap or hub 20, rigid with the frame of the fender and preferably formed integral with the transverse frame-bar 21, extending between the rear ends of the side bars 10 and 11 of the fender. The fender is thus mounted to swing from the king-bolt 19 as an axis, and this movement is rendered substantially antifrictional by the interposition of a series of antifriction-balls 22 between the proximate surfaces of the socket 18 and the hub or cap 20. (See Fig. 5.)

It is obviously necessary to normally maintain the fender in a central position—that is to say, in substantial alinement with the vehicle—and for this purpose I provide the upper end of the socket 18 with a spring-seat 23, within which are located a pair of oppositely-active springs 24 and 25, bearing upon the opposite sides of the lug 26, extended into the spring-seat 23 from the under side of the cap or hub 20 of the fender. As the springs 24 and 25 are backed by the end walls of the spring-socket 23, it will be seen that they exert counteractive pressures upon the opposite sides of the lug 26, and as said lug is rigid with the fender-frame the latter will be yieldingly held in alinement with the vehicle. The springs 24 and 25 and the bearings of the fender are protected from dust by forming the hub or cap 20 with a depending annular flange 27, surrounding the upper portion of the socket member 18.

For the purpose of relieving the king-bolt of undue strain when a person is precipitated upon the fender the latter is provided with a traveling brace 28, fixed to the hub 20 and provided with a terminal roller 29, imposed against and designed to travel along the under face of a segmental bar 30, located under the car-platform and connecting the side bars 6 and 7 of the bracket 2.

Briefly, the operation of the device is as follows: Assuming the parts to be in the positions indicated in the full lines in Fig. 3, a person struck by the fender will cause the latter to swing laterally in one direction or the other, according to the position of the person with respect to the axis of the fender. This movement of the fender is positive, for the reason that a portion of its periphery is obstructed, while the axis of the fender is constantly moving forward with the car. It is therefore obvious that the person struck instead of being thrown violently into the fender or possibly on the road-bed in advance of the fender, as with ordinary constructions, will be shoved laterally and thrown entirely out of the path of the moving vehicle, the position assumed by the fender under such conditions being indicated by dotted lines in Fig. 3.

As soon as the fender is relieved it will be returned to its normal position by one or the other of the springs 24 or 25, since one of these springs will necessarily have been compressed by the movement of the fender and

will expand to restore the fender to its proper normal position.

It is thought that from the foregoing the construction, mode of operation, and many advantages of my fender will be clearly apparent; but while the present embodiment of the invention appears at this time to be preferable I desire to be distinctly understood as reserving the right to effect such changes, modifications, and variations of the illustrated structure as may fall fairly within the scope of the protection prayed.

What I claim is—

1. The combination with a support and a car-fender; of interfitting members constituting a swivel-bearing for the fender, and means mounted in said bearing for yieldingly retaining the fender in its normal position.

2. The combination with a support and a car-fender; of interfitting members constituting a swivel-bearing permitting the fender to swing sidewise, and counteractive springs mounted in the bearing to resist such movement of the fender.

3. The combination with a supporting-bracket having a bearing member, of a car-fender having a hub formed with a downwardly-opening cavity for the reception of the bearing member, and a king-bolt constituting an axial connection between the bearing member and hub.

4. The combination with a support, of a car-fender mounted thereon and movable sidewise, and a movable brace connected to the fender and engaging the under side of the support.

5. The combination with a car-fender mounted to swing laterally, of a swinging brace extending from the fender in rear of its axis, and means resisting upward movement of the brace and thereby preventing tilting of the fender.

6. The combination with a fender-frame, of a cover secured thereto and a hub, a plurality of bars extending to the hub from the frame, a support having a bearing member engaging the hub, and a vertical king-bolt connecting the bearing member and hub.

7. The combination with a support provided with a socket, of a fender having a hub mounted on the socket, a king-bolt extending into the socket from the hub, springs mounted in the socket, and a projection extending from the hub and engaged by the springs.

8. The combination with a support provided with a socket; of a fender having a hub mounted on the socket member, a king-bolt extending into the socket from the hub, antifriction-balls interposed between the socket and hub, a pair of springs mounted in the socket, a projection on the hub engaged by the springs to yieldingly retain the fender in its normal position, and an annular flange extending from the hub and surrounding the upper end of the socket to protect the bearing.

5 9. The combination with a bracket including a segmental bar; of a swinging fender mounted on the bracket, and a swinging brace connected to the fender and movable along the under face of the segmental bar of the bracket.

10 10. The combination with a fender-bracket attachable to the underside of a car-platform and having means disposed to engage over the front edge thereof; of a horizontally-swinging fender mounted on said bracket.

15 11. The combination with a fender-bracket having means of attachment to the under side of a car-platform, and provided with hooks arranged to engage over the edge of the platform; of a horizontally-swinging fender carried by the bracket.

20 12. The combination with a fender-bracket comprising side bars, hooks rising therefrom, and an arcuate bar connecting the side bars; of a horizontally-swinging fender carried by the bracket, and a brace-bar extending from

the fender and traveling against the under side of the arcuate bar of the bracket.

13. A fender provided with a hollow buffer-rail, and contact-balls mounted in and projecting below said rail. 25

14. A fender having an arcuate buffer-rail provided with a yielding cushion projecting from its front side, and with antifrictional contact-balls projecting below the rail. 30

15. A fender having a hollow arcuate buffer-rail, a series of yielding buttons projecting from its front face, and a series of antifrictional contact-balls housed within the buffer-rail and projecting below the same. 35

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

HENRY W. HOWE.

Witnesses:

JNO. W. BUTLER,

A. W. GOBRECHT.