

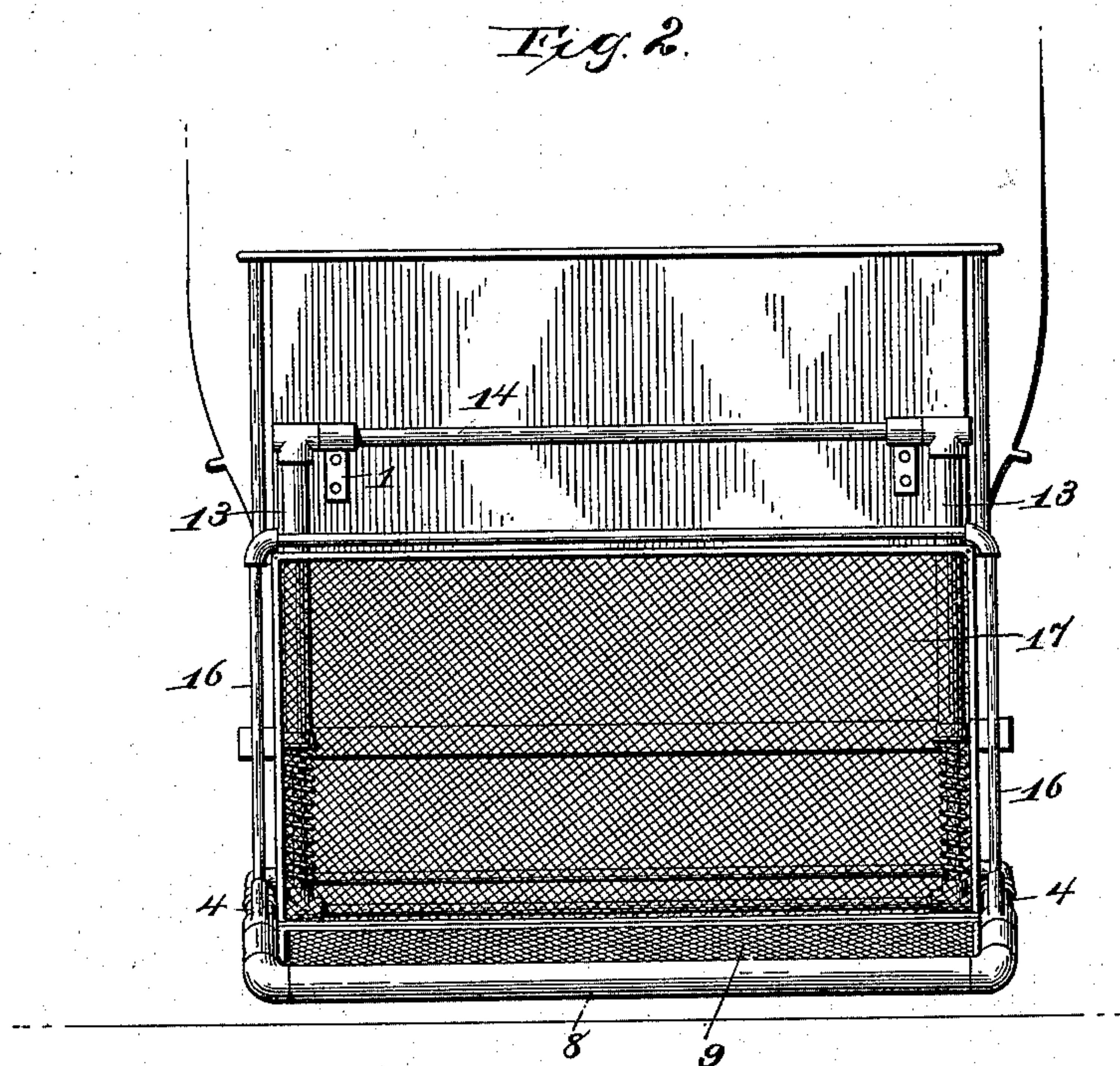
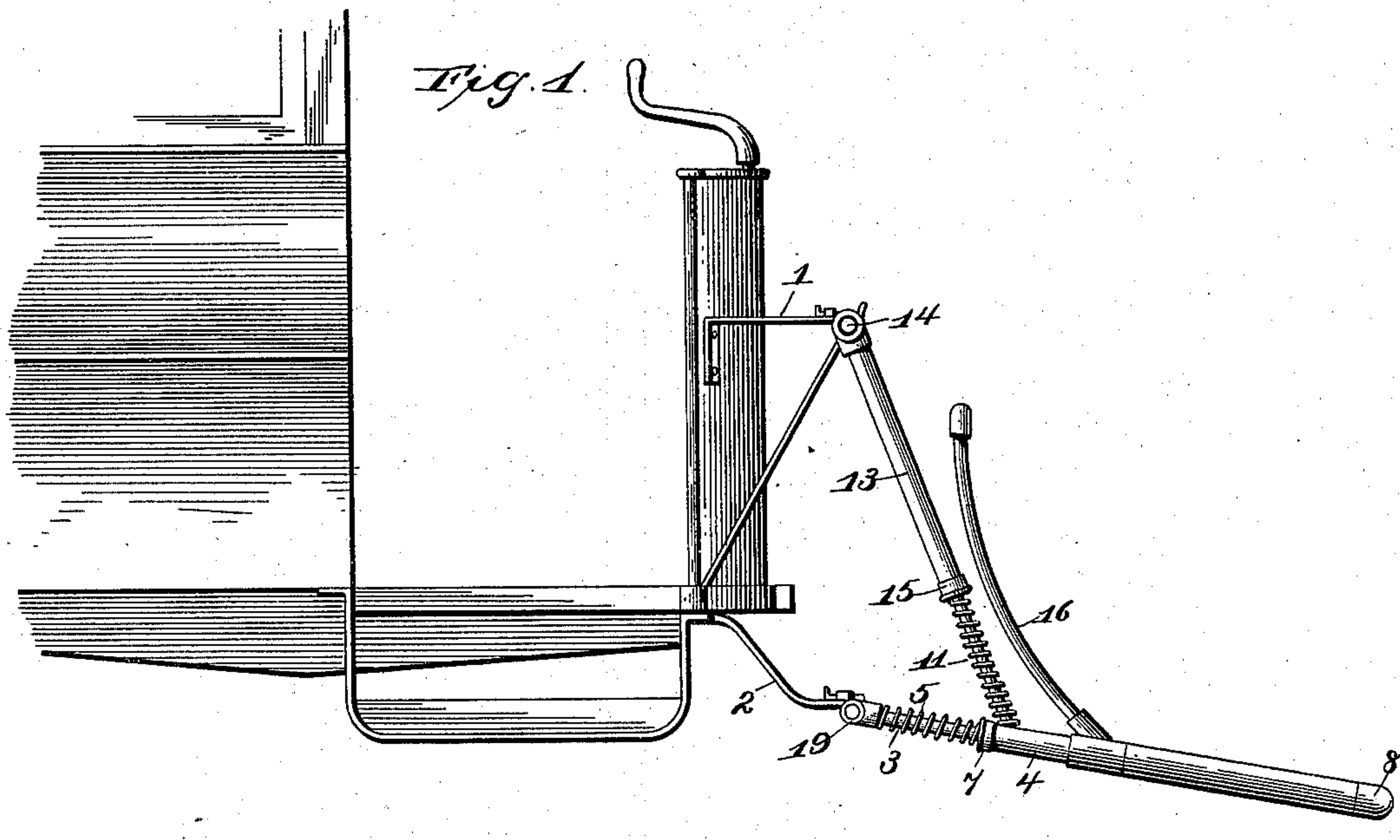
(No Model.)

2 Sheets—Sheet 1.

G. W. BENNUM.
CAR FENDER.

No. 568,187.

Patented Sept. 22, 1896.



Witnesses

E. C. Wideman
J. Williamson

Inventor

George W. Bennum
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(No Model.)

2 Sheets—Sheet 2

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Fig. 3.

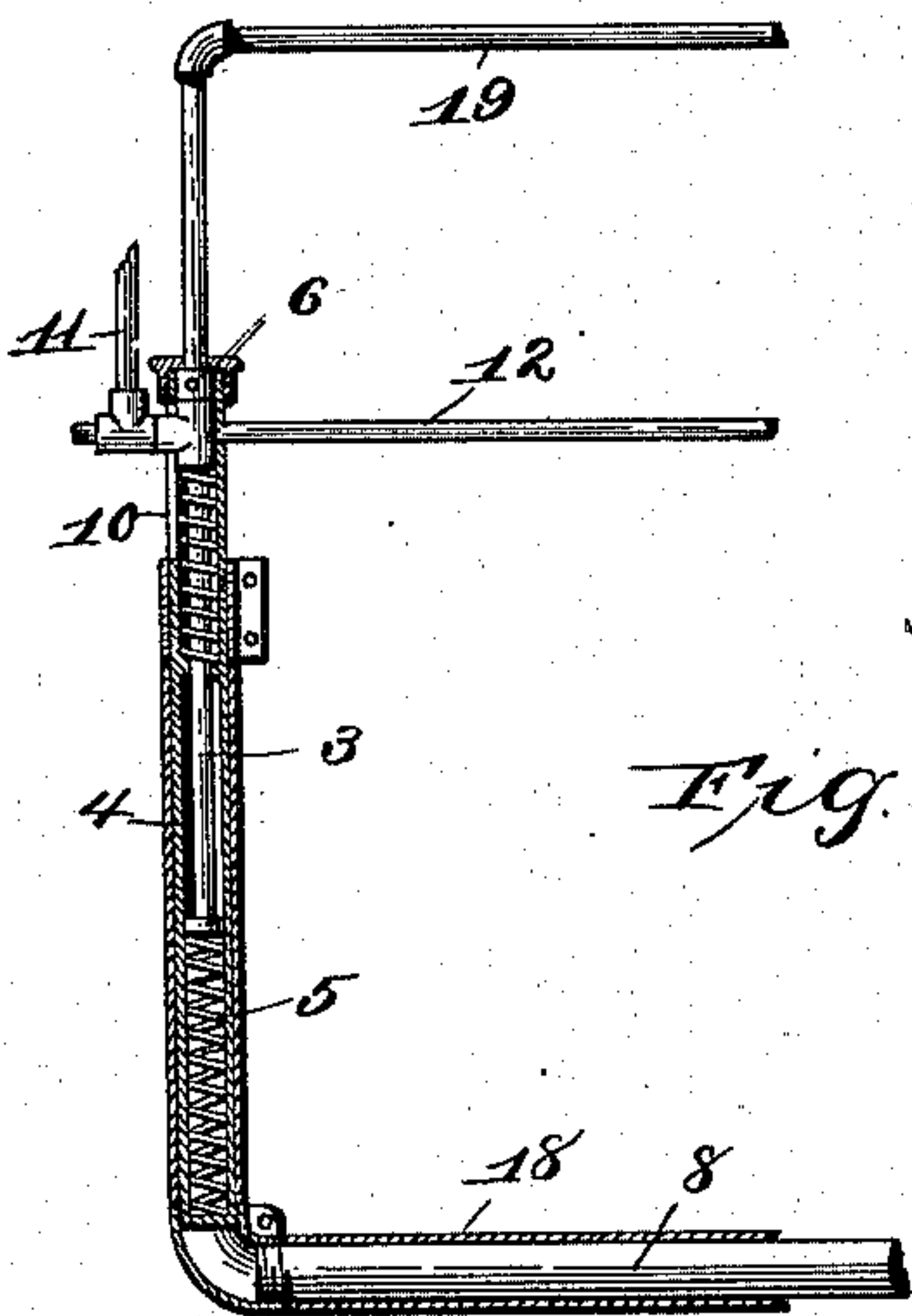
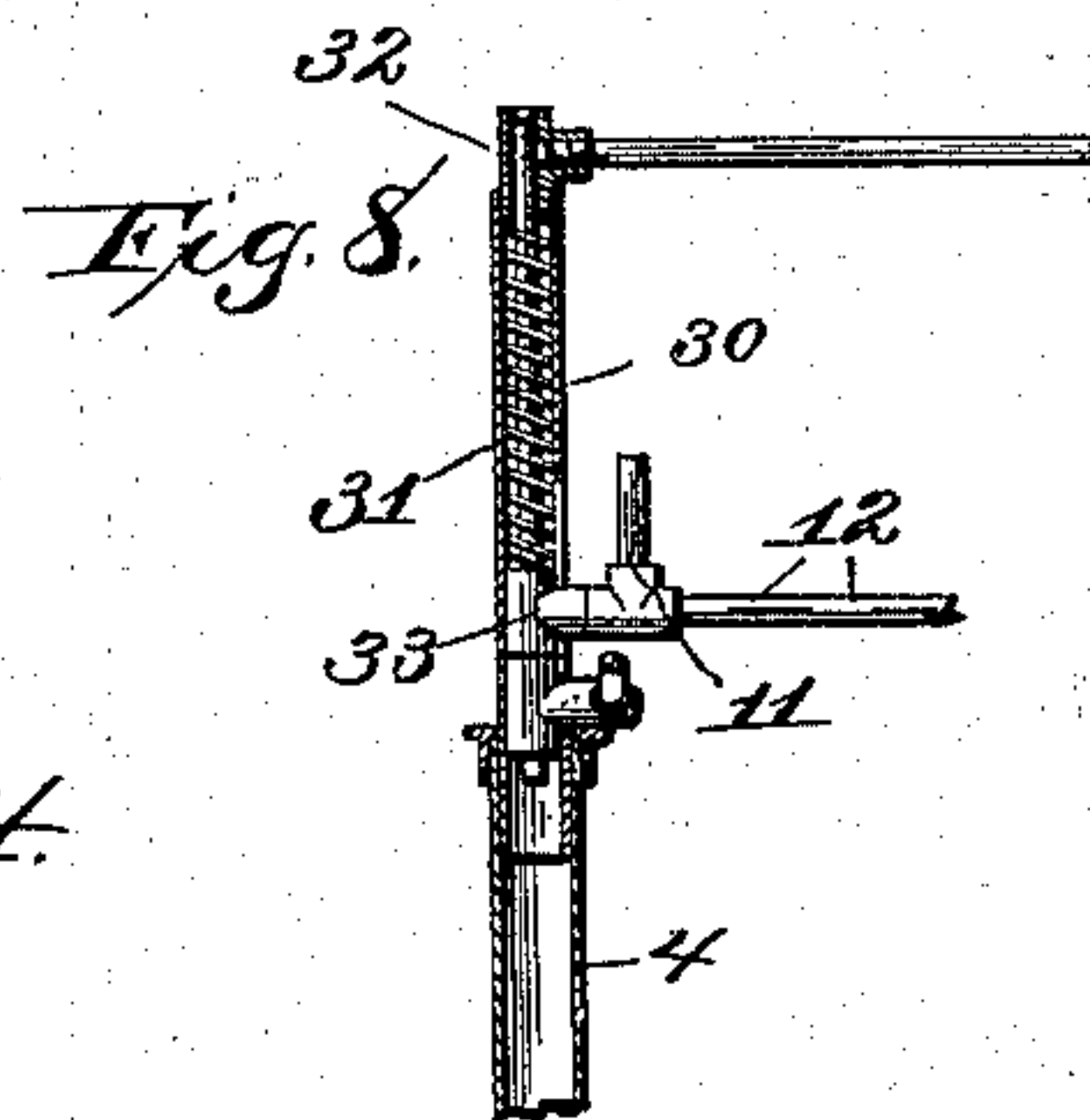
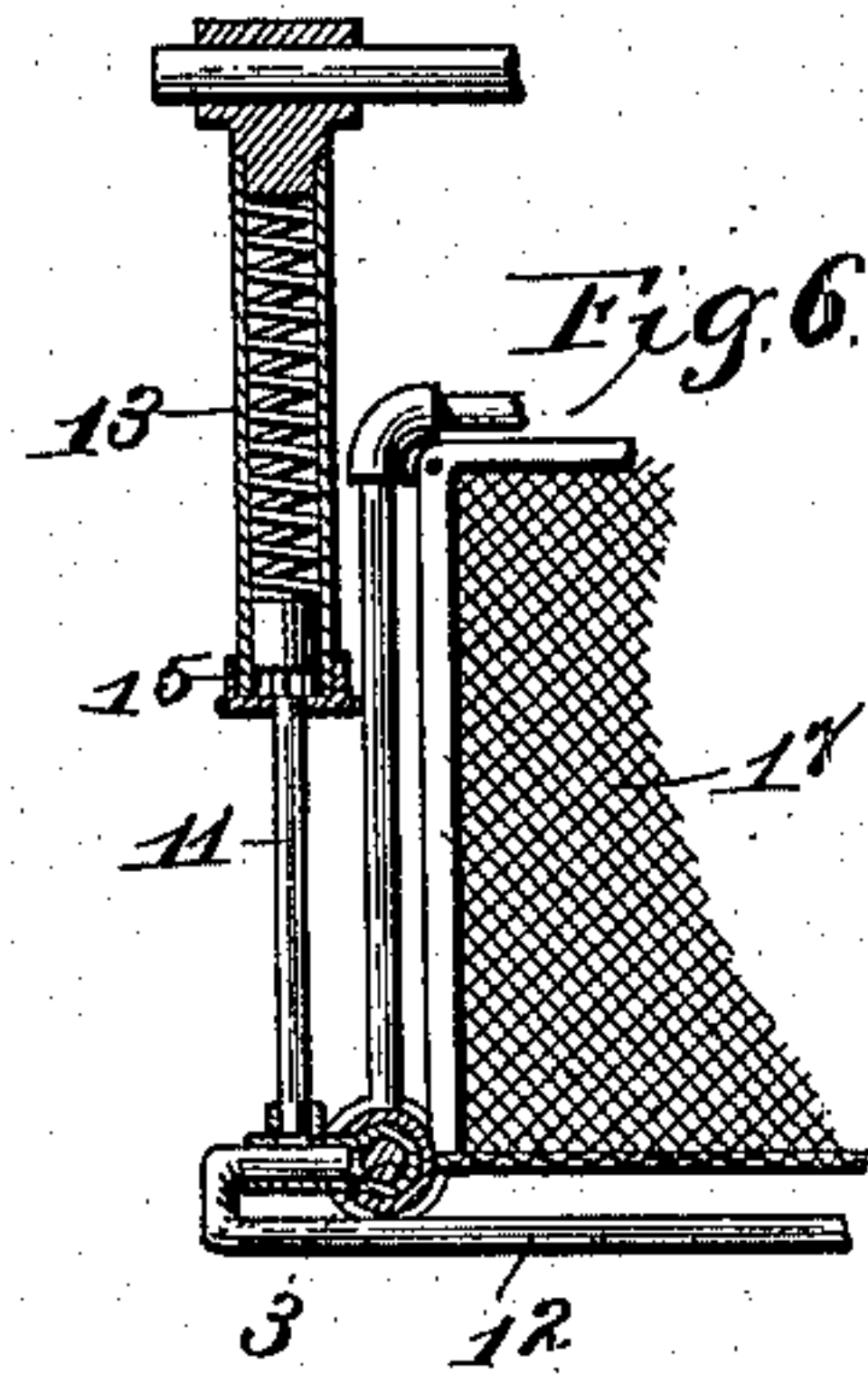
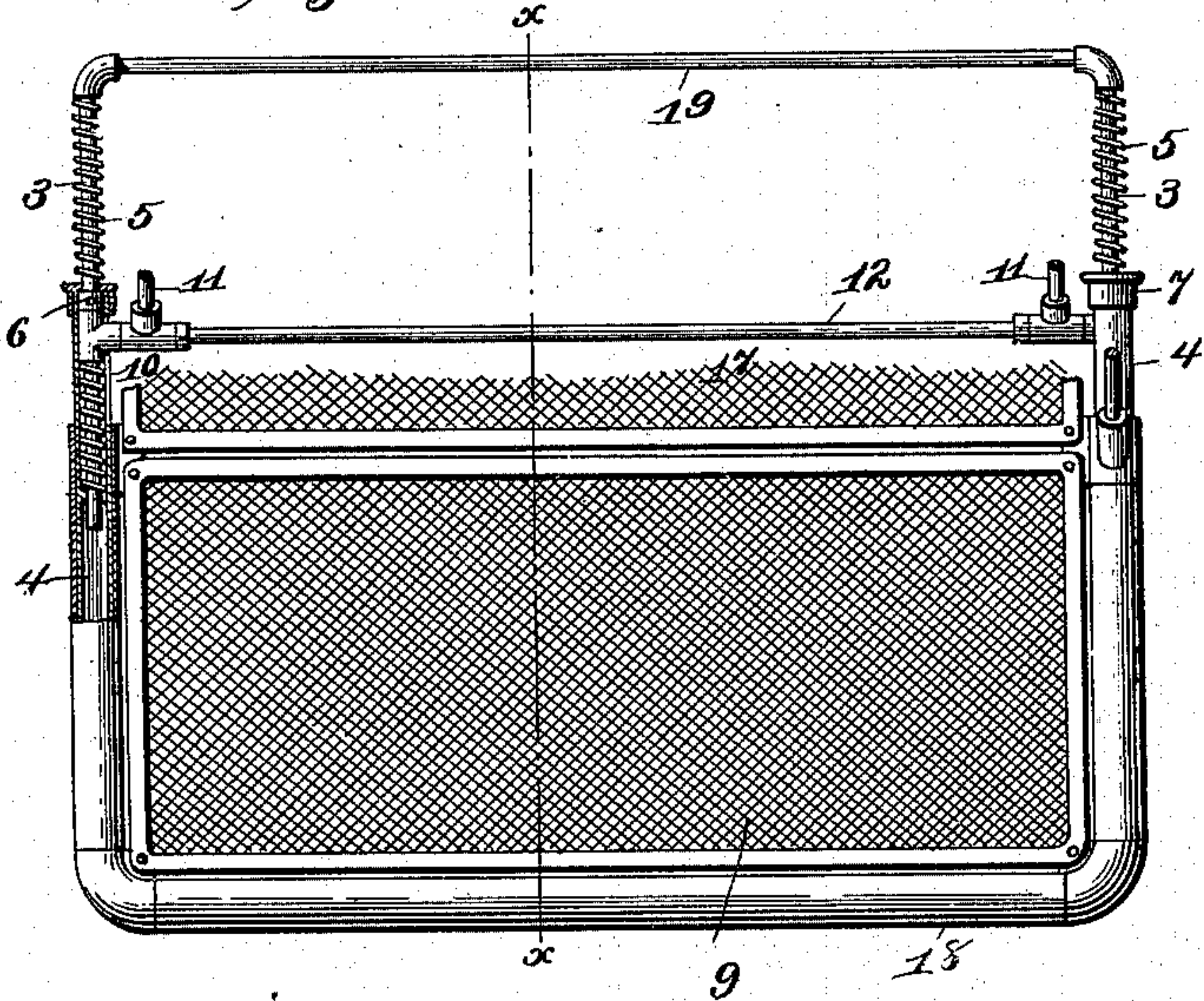


Fig. 5.

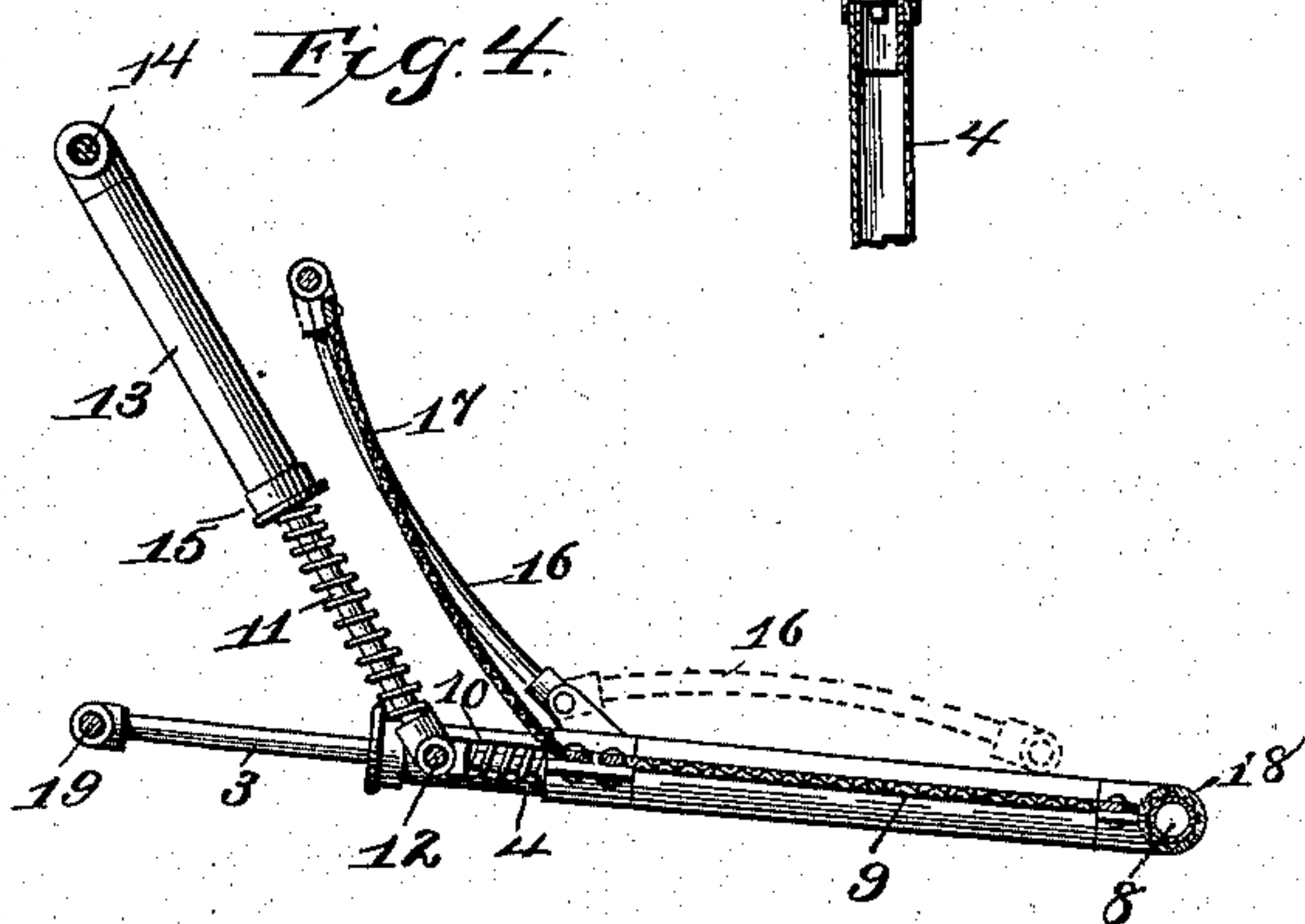
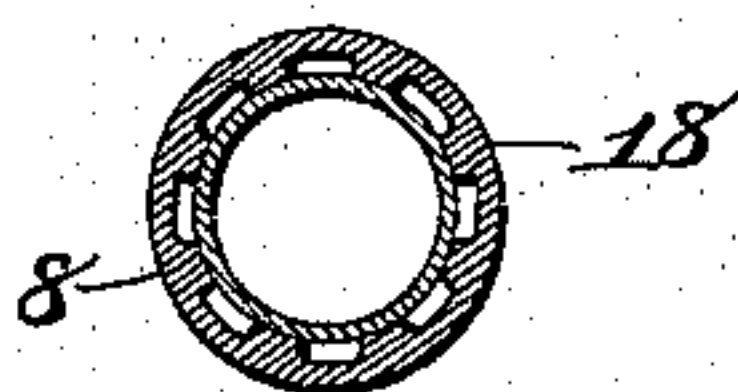


Fig. 7.



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UNITED STATES PATENT OFFICE.

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CALHOUN, ALFRED B. ROBINSON, JOHN F. BACON, JOSEPH D. TRUXTON,
AND ROBERT H. FOOKS, OF SAME PLACE, AND CHARLES H. BENNUM
AND WILLIAM T. A. TOWNSEND, OF GIRDLETREE, MARYLAND.

CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 568,187, dated September 22, 1896.

Application filed January 2, 1896. Serial No. 574,105. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. BENNUM, a citizen of the United States, residing at Georgetown, in the county of Sussex and State of Delaware, have invented certain new and useful Improvements in Car-Fenders, of which the following is a specification.

My invention relates to a new and useful improvement in car-fenders, and has for its object to provide a device which when attached to a car will prevent accident to a person in that it will first come in contact with such person and so operate as to scoop them up and carry them safely upon a yielding platform until the car may be stopped.

A further object of my invention is to so construct such a fender that it shall be light, durable, cheap, yielding, and readily folded to a closed position, in which it will be entirely out of the way.

With these ends in view my invention consists in the details of construction and combination of elements hereinafter set forth, and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction and operation in detail, referring by numbers to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a side elevation of one end of the car having my improved fender attached thereto in its normal position; Fig. 2, a front view of the same; Fig. 3, a plan view, a part of the tubing being broken away so as to show the connection between the framework; Fig. 4, a section at the line $x x$ of Fig. 3; Fig. 5, a slight modification of the connection between the parts of the frame; Fig. 6, a detail view of this modification, showing a spring-actuated plunger-rod within its housing; Fig. 7, a cross-section of the buffer-rod and its covering, and Fig. 8 is a detail of a modified arrangement of the telescoping parts.

Similar numbers denote like parts in the several views of the drawings.

In carrying out my invention I provide

suitable brackets 1, which are secured in any ordinary manner to the front end of the dashboard or other part of the car, and brackets 2, which project forward from the under side of the car, and to these last-named brackets are pivoted rods or tubes 3, upon which slide the tubes 4, in such manner as to telescope therewith. Said tubes are held in their normal distended position by the springs 5, which are coiled about the rods or tubes, so that by abutting against the caps 7 the outward movement of the tubes will be limited. These tubes are coupled by ordinary elbows to a buffer-tube 8, or may be bent instead of using couplings or elbows, which extend across the front of the fender and, in connection with the first-named tubes and rods or tubes, form a rectangular frame, to which a suitable netting or yielding surface 9 is secured. The tubes are protected by a suitable rubber or other covering 18 of the desired thickness to prevent injury from contact therewith, and which is preferably molded in the shape shown in Fig. 7, by which spaces are formed between the tube and covering.

10 are slots formed through the tubes 4, and through these slots project the rods or tubes 11, which are pivoted to the rods or tubes 3 at 12. The rods or tubes 11 then project upward and fit within the tubes 13, the upper ends of which are pivoted at 14 to the brackets 1, before described. The connection between these tubes and brackets is preferably a slip-joint, in order that the rods or tubes may be readily disconnected from said brackets for the purpose hereinafter set forth.

15 are caps threaded upon the lower end of the tubes 13, and the rods or tubes 11 are provided with stops, so as to prevent their withdrawal from said tubes by abutment against said caps.

16 is a frame, slightly concave, which in Fig. 1 is shown as made stationary with the tubes 4 and in Fig. 4 as being pivoted to said tubes so as to fold down, as shown in dotted lines, when not in use; or this frame may be fastened to the front end of the car

and not to the fender. Upon this frame is supported a suitable netting or other yielding surface 17, for the purpose hereinafter set forth.

5 From the foregoing description the operation of my improvement will be obviously as follows: Should the front end of the fender come in contact with a person when traveling rapidly along the track, the impact thereof
10 will force the tubes 4 backward against the resiliency of the spring 5, thus modifying the blow to such an extent as to prevent injury to the person, and when these springs react the effect will be to scoop up such per-
15 son and thrust them upon the yielding platform formed by the netting 9, and should the force thereof be sufficient to carry them rearward they will be arrested by the upright netting 17. Should the oscillations of the car
20 at any time cause the front end of the fender to come in contact with the road-bed, the springs 11 will yield to permit said fender to move upward and pass over any ordinary obstruction. When it becomes necessary to
25 close the fender, the frame 16, when not fastened to the front end of the car, is turned down to the position shown in dotted lines in Fig. 4, and the connection 14, between the tubes 13 and the brackets 1, is moved, as
30 before described, and the fender swung upward upon the pivot-points 19, when it may be secured against the dashboard.

As the framework of my improved fender is entirely composed of rods and tubing con-
35 nected by the ordinary pipe-couplings, or bent instead of using couplings or elbows, it will be seen that a very cheap, strong, and durable device is provided which at the same time has but little weight.

40 In the modification shown in Figs. 5 and 6 I have made a slight change in the connection between the rods or tubes 3 and tubes 4, so as to house the springs 5, by either placing the springs in the front end of side tubes or
45 placing in front of the slide on the ends of the rods or tubes 3 and behind plunger in front end of side tubes, which is also true of the rods or tubes 11 and their springs, which in this modification are housed in the tubes
50 13. This arrangement also permits of the placing of these tubes outside of the upright frame 16 when said frame is not fastened to front of car, thus permitting said frame to swing between said rods and tubes when the
55 fender is moved to its closed position without having to first fold the frame 16 down upon the fender, as before described. There may

be a wheel used at each front corner of the frame, if so desired, to prevent the frame or rubber on front of frame from touching the
60 ground or cobblestones when going up a rise or hill.

In the modification shown in Fig. 8 the tube 4 is arranged to telescope upon the tube 30, in which are the coil-spring 31 and the rod 32, 65 which connects with the head 33, between which and the end of the tube 30 the spring 31 is compressed. This permits the frame composed of the tube 4 to move backward against the action of this spring 31 and carry 70 with it the cross-rod 12.

Other modifications in the construction and arrangements of the parts here shown and described may be made without departing from the spirit of my invention, and I therefore 75 do not wish to be understood as limiting myself thereto.

Having thus fully described my invention, what I claim as new and useful is—

1. In a car-fender, the combination of up- 80 per and lower brackets 1 and 2, rods 3, pivoted to the lower bracket, forwardly-projecting tubes 4 having slots at their rear ends and adapted to slide upon the rods 3, springs 5 acting against the tube 4, tubes 13 depend- 85 ing from the upper bracket, rods 11 slidable in the tubes and working in the slots of the tubes 4, and a frame supported by the tubes 4 and a buffer-tube connecting the front ends of said frame, as and for the purpose de- 90 scribed.

2. The herein-described combination of the brackets 1 and 2, the rods or tubes 3 pivoted to the last-named brackets, tubes 4 adapted to slide upon said rods or tubes, springs 5, 95 for imparting resiliency to said tubes, rods or tubes 11 pivoted to the first-named rods or tubes, tubes 13 in which the last-named rods or tubes slide, suitable springs for holding the rods or tubes 11 in their normal position, 100 a rubber covering, secured around the tubes 4, a netting 9 supported by the tubes 4 and an upright frame concave upon its front side and supporting a netting 17, which is either fastened to the front of the car or to frame or 105 tubes 4, arranged substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

GEORGE W. BENNUM.

Witnesses:

S. S. WILLIAMSON,

WILLIAM F. BLACKSTONE.