

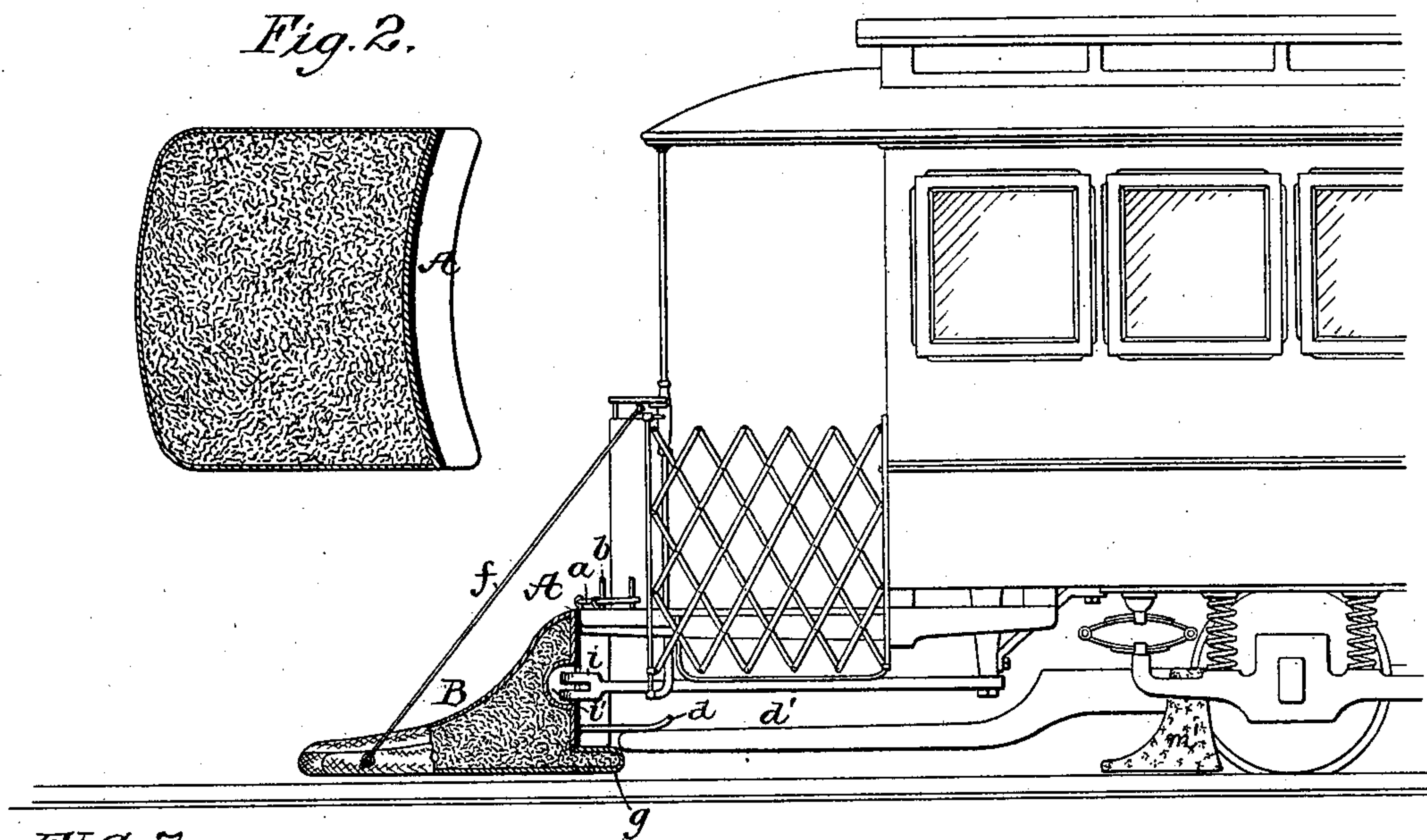
(No Model.)

J. KELLER.  
CAR FENDER.

No. 601,968.

Patented Apr. 5, 1898.

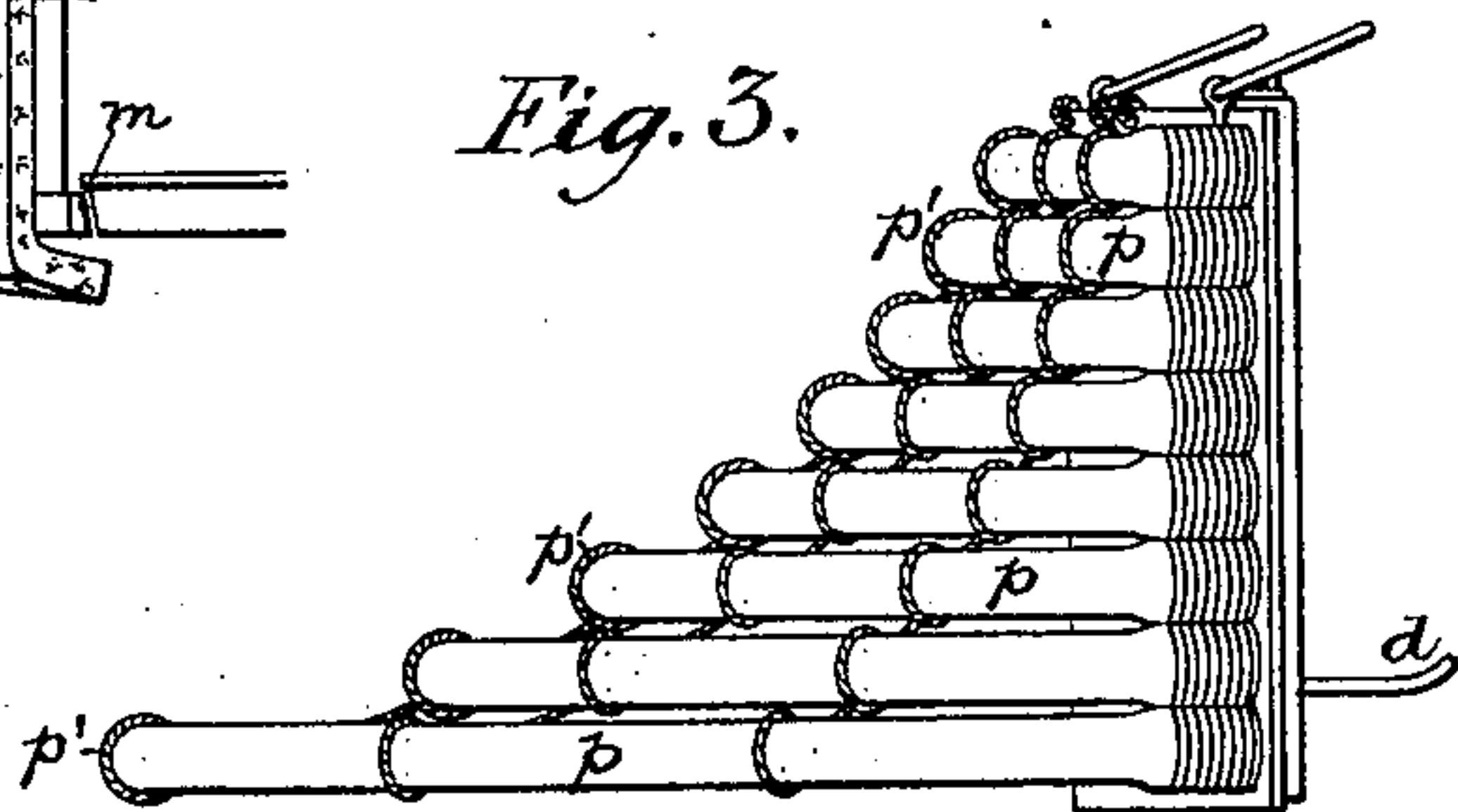
*Fig. 1.*



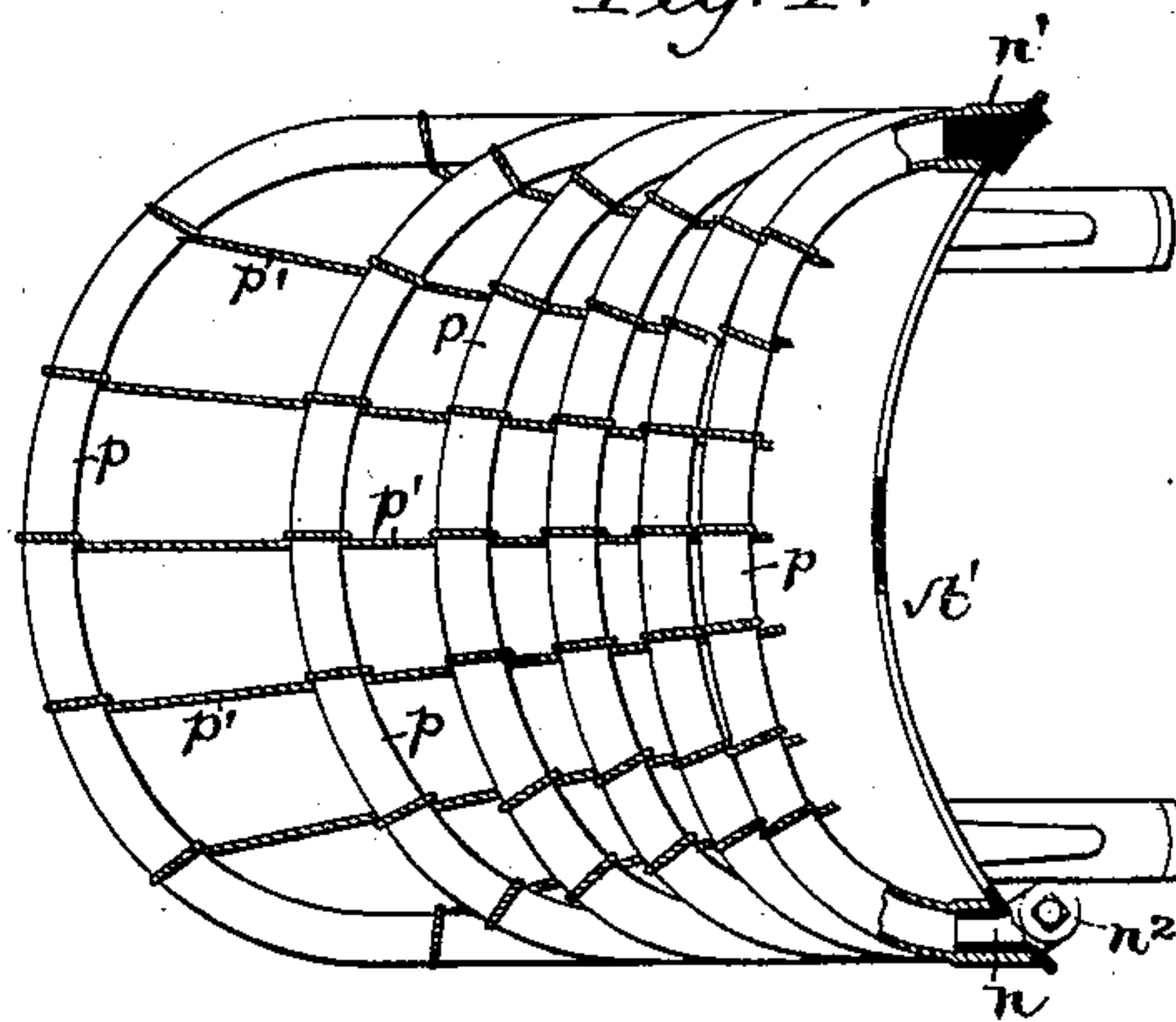
*FIG. 7.*



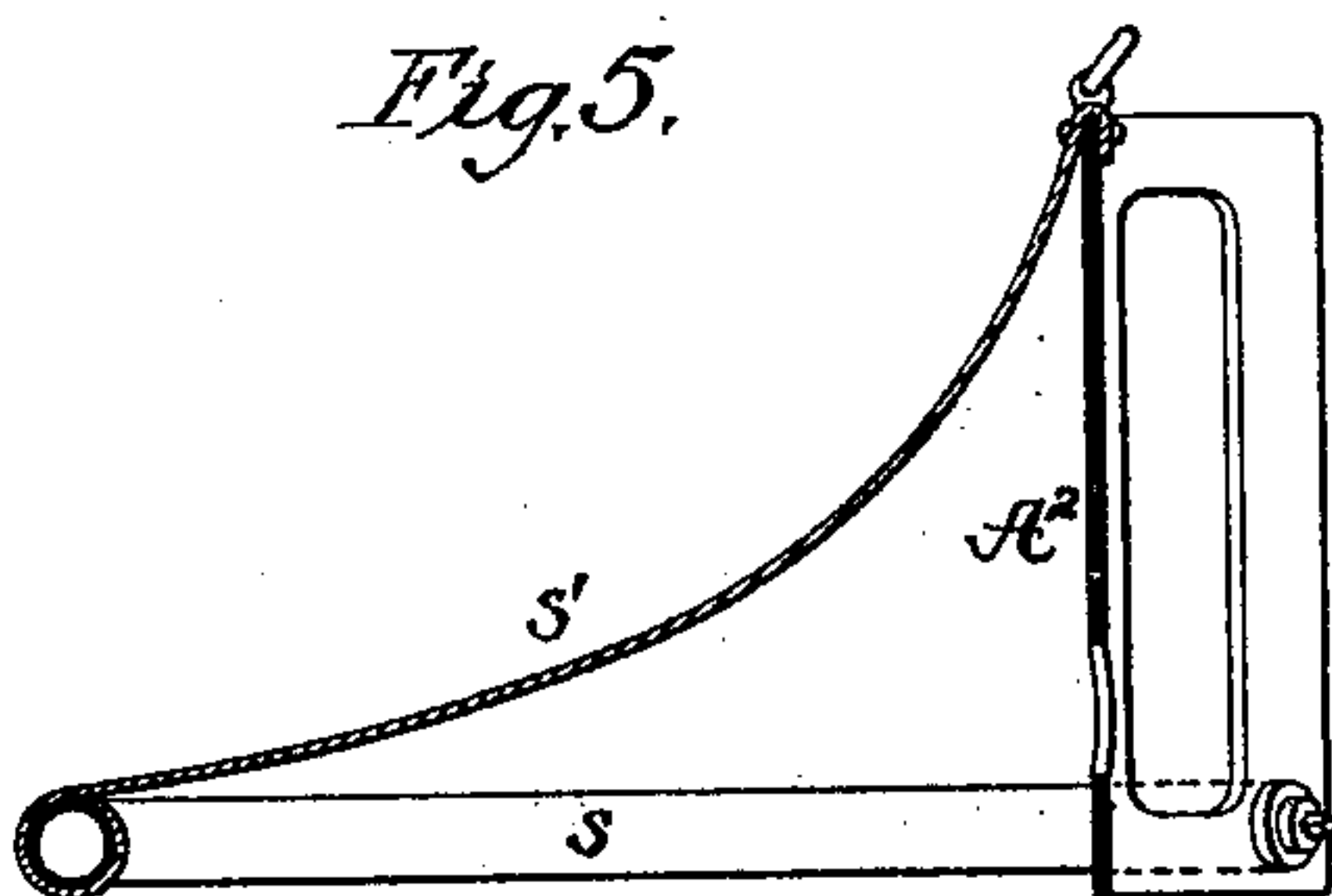
*Fig. 3.*



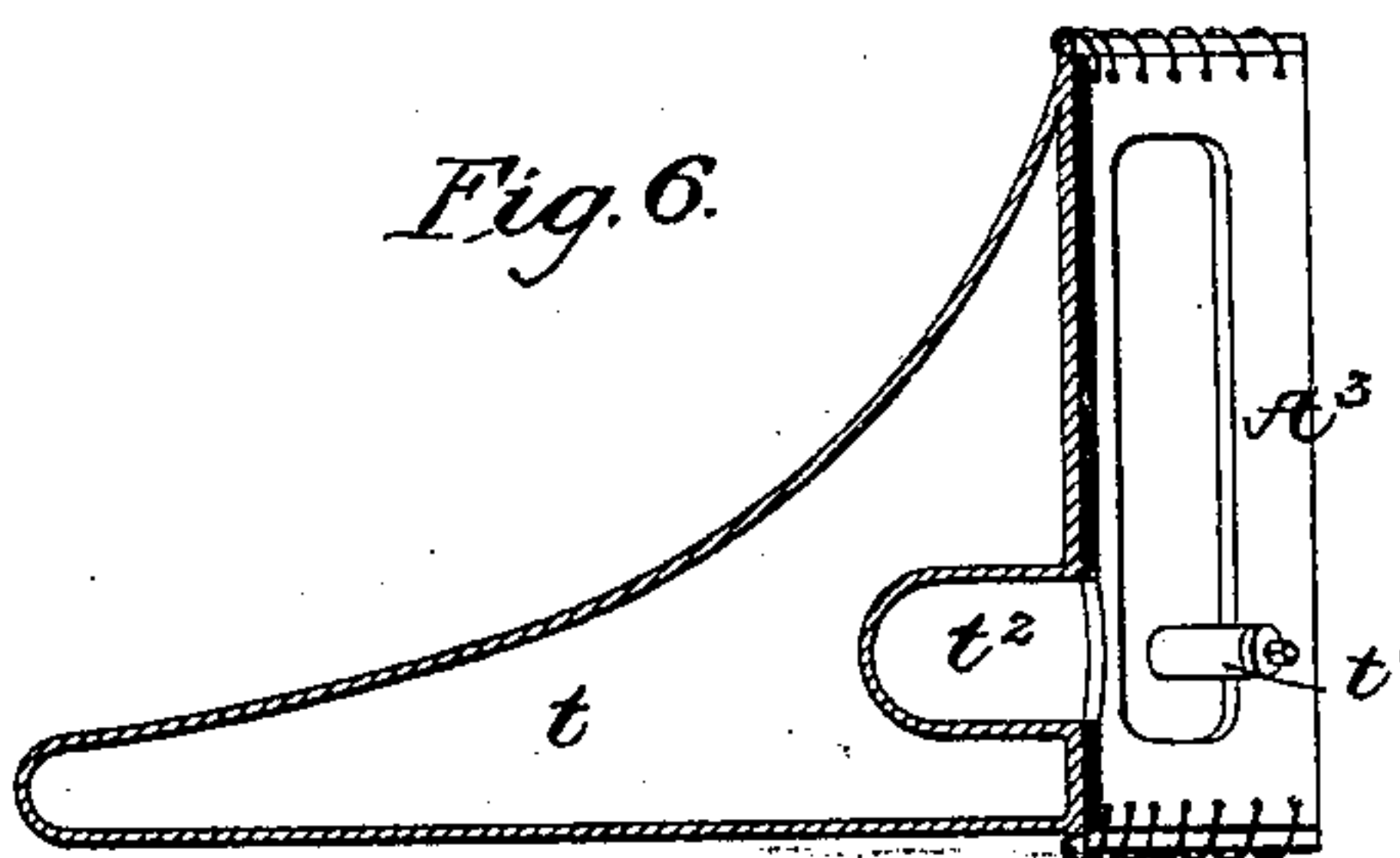
*Fig. 4.*



*Fig. 5.*



*Fig. 6.*



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# UNITED STATES PATENT OFFICE.

JOHN KELLER, OF PHILADELPHIA, PENNSYLVANIA.

## CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 601,968, dated April 5, 1898.

Application filed June 25, 1896. Serial No. 596,891. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN KELLER, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Car-Fenders, of which the following is a specification.

One object of my invention is to so construct a car-fender as to prevent injury to persons struck thereby, a further object being to provide for maintaining the fender in proper position close to the rails irrespective of the vertical movements of the car-body, a still further object being to prevent the passage of a hand, foot, arm, or leg beneath the fender, and a final object being to prevent injury to any part of the person from contact with the brake shoes or wheels. These objects I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of a front portion of a car provided with my improved fender, the latter being shown partly in section. Fig. 2 is a sectional plan view of the fender. Figs. 3, 4, 5, and 6 are views illustrating modified forms of the fender, and Fig. 7 is a plan view of part of the brake-fender.

The fender shown in Figs. 1 and 2 consists of a frame A, detachably mounted on the dasher or frame of the car and conforming in shape to the curved projecting sill or bumper, from which it depends to a point comparatively close to the track. To this detachable frame is secured the projecting portion B of the fender, which is of angular or scoop form and consists of a flexible or elastic cushion comprising top, bottom, and sides, secured together by wiring, stitching, or other appropriate means and stuffed with curled hair or other suitable material, so that it is yielding throughout and presents no rigid surface for injuring bodies with which it may come in contact.

The casing of the cushion may be of textile material, rubber, leather, or equivalent material, and the cushion is preferably provided with through-and-through stitching, such as used in quilting or padding, so that without losing its flexibility or elastic character it will retain the desired shape and can be properly supported in front of the car. The cushion may be provided with a slip-cover of rubber

or other waterproof material, especially if the casing of the cushion itself is not waterproof.

It will be evident that when the projecting or pick-up portion of the fender is flexible or elastic throughout, as described, it will simply have the effect of tripping up and catching the person struck thereby without risk of bruising the flesh or breaking the bones of said person. Hence the fender is an improvement upon prior fenders of the pick-up class with which I am familiar, for in all of the latter there is more or less rigid projecting framework. Hence there is always an attendant liability to cause injury to persons with whom the projecting portion of the fender comes into contact.

The fender has rings *a*, adapted to upright pins *b* on the projecting portion of the car-frame, only one of these rings and pins being shown in the drawings, and the fender also has rearwardly-projecting shoes *d*, adapted to rest upon forward extensions *d'* of the rigid frame, so that the fender is supported in its vertical position close to the track irrespective of the teetering or vertical movement of the front end of the car, such movement simply causing the pins *b* to play in the rings *a* of the fender without losing their hold thereon.

The outer projecting portion of the fender is supported by means of ropes or cords *f*, which extend up to the top of the dasher and are secured thereto by means of snap-hooks or other suitable fastenings, so that the forward end of the fender can be lifted when desired.

Beneath the frame A projects a heel *g*, formed upon the lower rear portion of the fender, said heel extending rearwardly beyond the pivotal supports for the fender, so that when the projecting outer end of the fender is lifted said heel *g* will be thrown down toward the track and will prevent the passage beneath the fender of any small body—such as a hand, foot, arm, or leg—injury to the latter being prevented, as the projecting heel is, like the forwardly-projecting cushion, of flexible or elastic material.

When the car is provided with the projecting draw-head *i*, the cushion B may have a pocket *i'* for the reception of said draw-head, as shown in Fig. 1.

The car has the usual brake-beams carry-



ing the shoes  $m$  for application to the wheels, and the outer face of each of these brake-beams has a cushion  $m'$ , preferably of scoop form, as shown in Fig. 1, and constructed in the same manner as the cushion at the front of the car. As the brake-beam is drawn inward, so as to apply the shoes to the wheels, this cushion  $m'$  swings into position close to the track and serves to push away from the front of the wheels any object with which it may come in contact. The cushion is preferably continued around the ends of the beam and overlaps the shoes, as shown in Fig. 7, so as to prevent side contact of any object with the beam or shoe and also prevent such object from falling sidewise beneath the wheels.

Various forms of flexible or elastic fender may be made in accordance with my invention. Thus in Figs. 3, 4, 5, and 6 I have shown certain forms of pneumatic fender to be used in place of the stuffed casing or quilted form of fender shown in Figs. 1 and 2.

In the fender shown in Figs. 3 and 4 nipples  $n$   $n'$ , near the opposite edges of the supporting-frame  $A'$ , receive the opposite ends of sections of flexible or elastic tubing  $p$ , these tubes being of such size and so disposed as to give the desired scoop shape to the projecting portion of the fender and the various tube-sections being suitably connected to each other by means of ropes or other flexible or elastic braces  $p'$ . In this case also a suitable opening may be made in the frame  $A'$  to receive the projecting draw-head. The nipples  $n$  are hollow and communicate with a pipe  $n^2$ , into which air can be forced in any suitable manner and in which, as well as in the pipe-section  $p$ , it can be maintained under any desired degree of pressure.

In the fender shown in Fig. 5 there is but a single projecting flexible or elastic tube  $s$  at the base of the fender, a flexible or elastic apron  $s'$ , of rubber or equivalent material, extending from the forward portion of this tube to the top of the frame  $A^2$ . In this case the tube  $s$  is provided at one or both ends with means for introducing air into the tube and maintaining it under pressure. The tube  $s$  may be secured to the frame  $A^2$  in the same manner as the tubes  $p$  are secured to the frame  $A'$ , the upper edge of the apron  $s'$  being secured to the frame by wiring or in any other available manner.

In the fender shown in Fig. 6 a hollow casing  $t$ , of flexible or elastic material of the desired shape, is employed, this casing being secured to the supporting-frame  $A^3$  at top, bottom, and sides by wiring, stitching, or other appropriate means and being provided with an ordinary valved nipple  $t'$ , whereby it may be filled with air under pressure and caused

to retain the same. This casing has a pocket  $t^2$  for the reception of the projecting draw-head.

Slip-covers of waterproof material may, if desired, be used in connection with any of the forms of fender shown in Figs. 3 to 6, as well as with the fender shown in Figs. 1 and 2.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. A fender of the pick-up class having a contracted projecting nose portion, and a vertically-thickened rear portion bearing rigidly on the frame of the car, the projecting portion of the fender being flexible and elastic in all directions throughout its entire extent, substantially as described.

2. A car-fender supported in front of the car and having a vertical support upon the truck-frame, and a vertically-movable connection with the front portion of the car-body, whereby teetering movements of the latter will not cause like movements of the fender, said fender being free to be lifted vertically from its supports, substantially as specified.

3. A car-fender of the pick-up class, having its portion projecting beyond the car flexible and elastic throughout and provided with means for introducing air into the same and maintaining it therein under pressure, substantially as specified.

4. A car-fender consisting of a supporting-frame and a series of hollow flexible pipe-sections projecting forwardly beyond said supporting-frame and supported thereupon one above another but having no rigid support in the projecting portions, substantially as specified.

5. A car-fender consisting of a supporting-frame and a series of flexible pipe-sections projecting forwardly beyond said supporting-frame and supported thereon, one above another but having no rigid support in the projecting portions, and flexible stays or braces connecting said pipe-sections, substantially as specified.

6. The within-described wheel-guard for cars, said guard consisting of a cushion applied to the forward side of the brake-beam, substantially as specified.

7. The within-described wheel-guard for cars, said guard consisting of a cushion applied to the forward side of the brake-beam and overlapping the shoes, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN KELLER.

Witnesses:

F. E. BECHTOLD,  
JOS. H. KLEIN.