

No. 755,788.

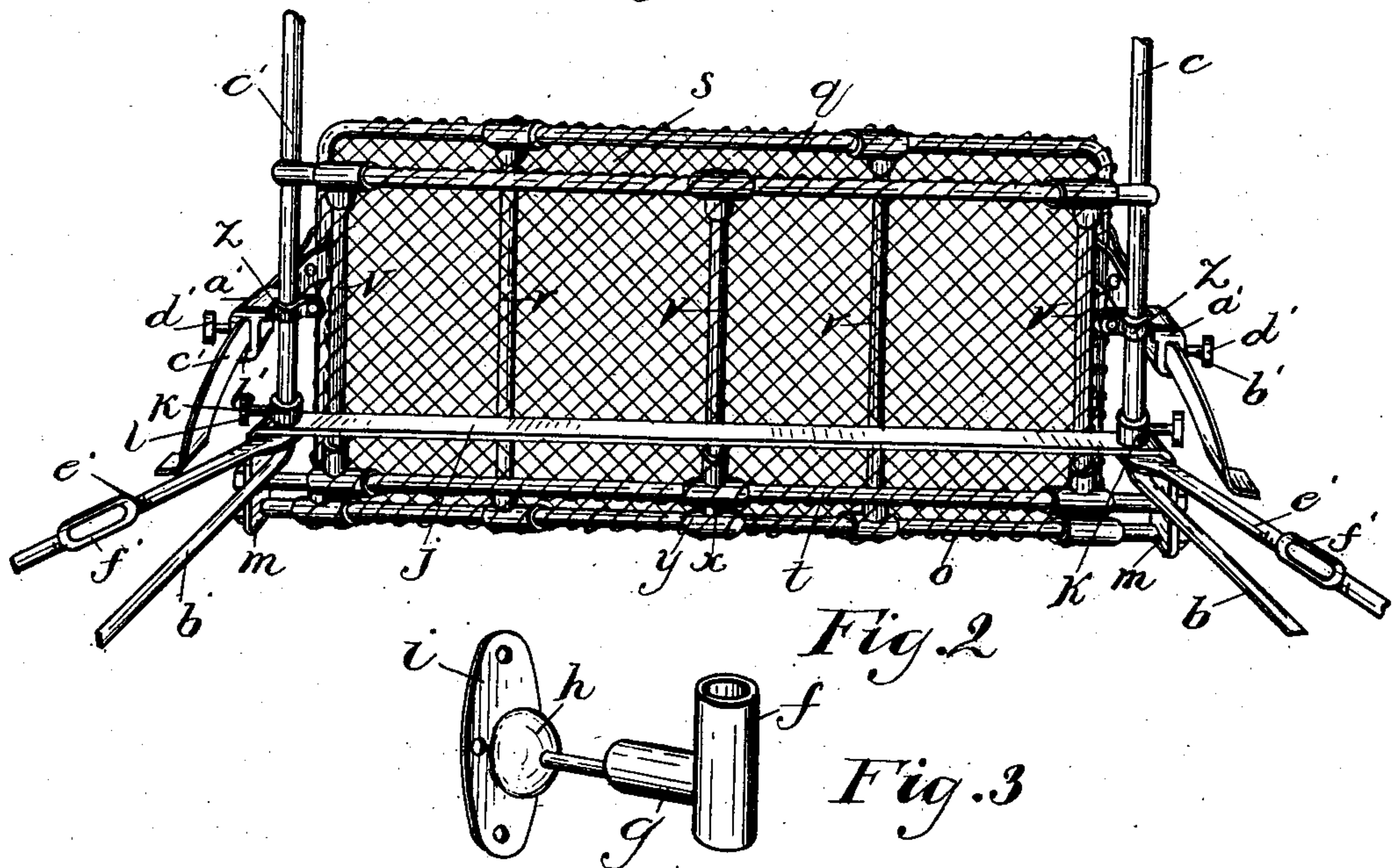
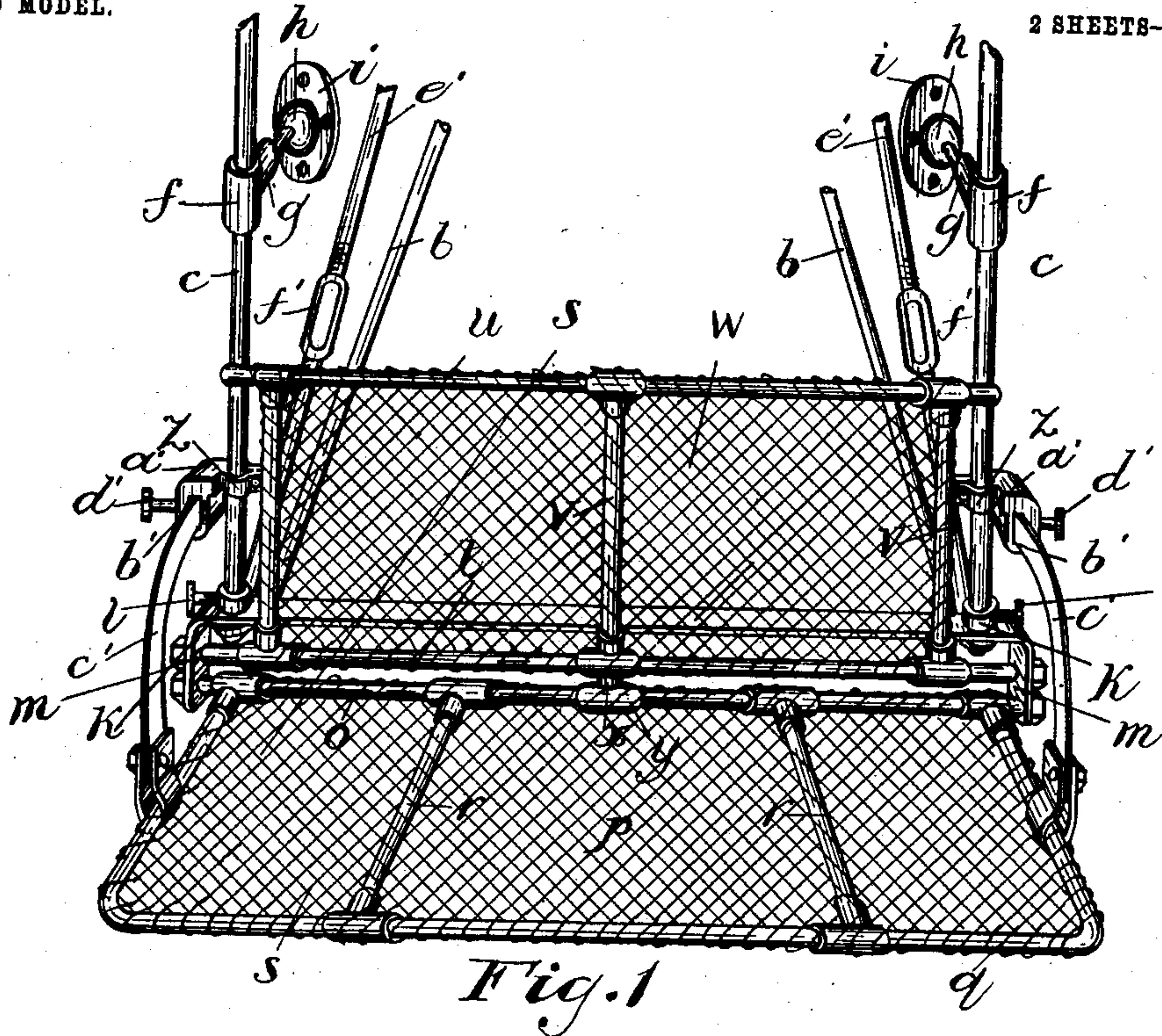
PATENTED MAR. 29, 1904.

A. E. McLEAN.  
CAR FENDER.

APPLICATION FILED DEC. 30, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses

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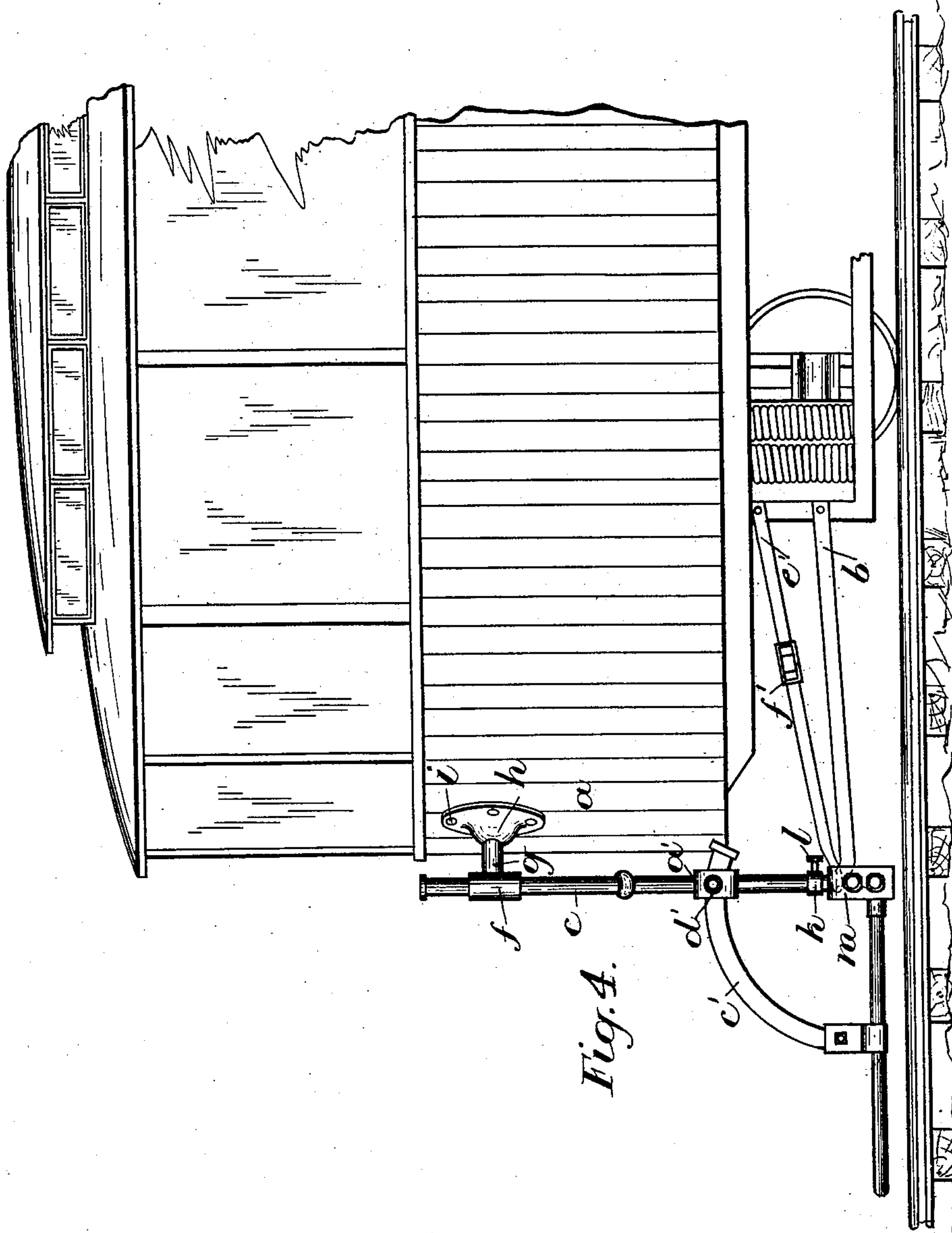
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2 SHEETS—SHEET 2.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## CAR-FENDER.

SPECIFICATION forming part of Letters Patent No. 755,788, dated March 29, 1904.

Application filed December 30, 1903. Serial No. 187,238. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT EDGAR McLEAN, of the city of Toronto, in the county of York and Province of Ontario, Canada, have invented certain new and useful Improvements in Car-Fenders; and I hereby declare that the following is a full, clear, and exact description of the same.

The object of the present invention is to attach the fender to the truck or truck-frame in such a manner that it can be adjusted relatively to the road-bed or track-rails and carried rigidly in its adjusted position, irrespective of the motion, speed, or direction of the car.

In carrying the invention into practice I provide the car-fender with two fender-supporting arms rigidly connected to the truck or truck-frame above the track-rails in such a manner that they and the car-fender will be capable of adjustment vertically to the road-bed or track-rails by the action of the fender-supporting arms, which have motion radially from their point of connection with the truck or truck-frame for that purpose and which are locked in their adjusted position by the fender-adjusting stays connected to them and to the truck or truck-frame to hold the fender rigid in its adjusted position and brace it and the fender-supporting stays to resist the ordinary strains to which they may be subjected during the travel of the car. In the second essay in this direction the car-fender is constructed in two parts—namely, the platform member and the back member, the back member being rigidly connected to the fender-supporting stays and the platform member hinged to the fender-supporting stays or to the back member and provided with segmental arms to be engaged and held by locking members secured to the fender-supporting stays.

For a full understanding of the invention reference is to be had to the following specification and to the accompanying drawings, in which—

Figure 1 is a front view of the fender, showing the platform member in a substantially horizontal position. Fig. 2 is a perspective view looking at the car-fender from the rear, showing the front member folded against the

back member. Fig. 3 is a perspective view, partly in section, of one of the bracing-arms and socket-plates. Fig. 4 is a side elevation showing the fender-supporting arms connected to the car-truck.

Like letters of reference refer to like parts throughout the specification and drawings.

The horizontal arms *b* of the fender-supporting stays are arranged to be connected to the truck or truck-frame vertically above the track-rails with the vertical arms *c* parallel to the car-front *a* and slightly in advance of the same. Loosely embracing the vertical arms *c* are the collars *f* of the bracing-arms *g*, and fitted to the arms *g* are balls *h*, contained in the sockets *i*, securely attached to the car-front *a* and alining with the vertical arms *c* of the fender-supporting stays. The fender-supporting stays are braced or tied together at the junction of the vertical and horizontal arms by a cross-stay *j*, having vertical apertures therethrough fitted with collars *k*, through which pass the vertical arms *c*, and fitted to the collars *k* are set-screws *l*, by means of which the cross-stay is locked in its adjusted position on the fender-supporting stays. The ends of the cross-stay *j* project beyond the vertical arms *c* and are bent at substantially right angles to the body of the cross-stay to form the bearings *m* for the shaft or rod *o*, upon which the platform member *p* articulates. This platform member *p* consists of a substantially rectangular frame *q*, of which the shaft or rod *o* forms the rear side braces or stays *r*, connected to the front of the rectangular frame *q* and to the rod *o*, and a resilient covering *s*, supported by the rectangular frame and braces, such covering being preferably made of woven wire or wicker-work. Passing through the bearings *m* above the shaft or rod *o* is a tie-rod *t* to brace the bearings against the bending or spreading strains of the load upon the shaft or rod *o*. Encircling the vertical arms *c* above the cross-stay *j* are the ends of the top piece *u* for the back member, and connected to the top piece *u* and tie-rod *t* are the vertical braces *v* of the back member, such tie-rod and top piece and vertical braces being covered with a resilient covering *w*, similar to the resilient



covering *s*. To support the shaft or rod *o* intermediate the bearings *m*, the tie-rod is fitted with a T-iron *x*, having a horizontal collar *y*, through which passes the shaft or rod *o*.

5 Connected to the vertical arms *c* between the cross-stay *j* and the bearing-collars *f* are the adjustable clamps *z* for the locking members *a'*, which have horizontally-disposed sleeves *b'* to receive the segmental arms *c'*, connected

10 to the platform member of the car-fender, the arms *c'* being locked in their adjusted position in the sleeves *b'* by set-screws *d'*. By means of the locking members *a'* and the segmental arms *c'* the platform member of the

15 car-fender can be locked at any inclination to the road-bed or track-rails between its horizontal and vertical positions, and by means of this adjustment it is possible to bring the front of the platform member close to the

20 track-rails, irrespective of the elevation therefrom of the shaft or rod *o*, or it is possible to fold the platform member and lock it in its folded position, as shown in Fig. 2, against the back member. Connected to the truck or truck-

25 frame and to the fender-supporting stays, preferably at the junction of the vertical and horizontal arms, are the fender-adjusting stays *e'*, fitted with turnbuckles *f''*, by means of which they can be lengthened or shortened

30 to respectively decrease or increase the tension upon the fender-supporting stays. The fender-adjusting stays *e'* are preferably connected to the truck or truck-frame at a higher elevation than the connection for the fender-

35 supporting stays, so that the shortening of the fender-adjusting stays will have the effect of raising the fender-supporting stays into a higher elevation than before the shortening of the stays was effected, while the lengthen-

40 ing of the fender-adjusting stays would have the opposite effect—namely, of lowering the elevation of the fender-supporting stays. By means of the fender-adjusting stays the elevation of the cross-stay *j* and shaft or rod *o*

45 from the track-rails or road-bed can be varied. In the case of single-truck cars the car-body usually projects beyond the truck and has a tendency to oscillate or rock upon its connection therewith, and where the car-fen-

50 der is connected to the car-body it must necessarily oscillate with it. In the case of cars of certain patterns the car-fender has been known to oscillate for a distance from two to three feet from the road-bed, and in the event

55 of an obstacle being in the path of an advancing car during such oscillation the tendency of the fender has been to crush it to the road-bed instead of picking it up and carrying it until the progress of the car can be arrested.

60 By attaching the fender-supporting stays and the fender-adjusting stays to the truck or truck-frame this oscillation of the car-fender is obviated and the platform member of the fender is steadily maintained at the same elevation

65 and inclination to the road-bed as that at which

it is set, so that it will always be prepared to pick up any obstacle which may be located in its path. By providing the car-fender with the fender-supporting stays and the fender-adjusting stays it is possible to readily vary the 70 elevation of the car-fender to the road-bed by merely adjusting the turnbuckles of the fender-adjusting stays, the vertical arms of the fender-supporting stays moving freely in the guide-collars during such adjustment. The 75 supporting-arms, with their ball-and-socket connection, permit of the guide-collars freely moving in a vertical direction upon the vertical arms during the oscillation of the car-body without imparting the slightest motion 80 to them or to the car-fender.

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

1. In a car-fender, the combination of the 85 fender-supporting arms adjustable relatively to the road-bed, fender-adjusting stays to adjust the fender-supporting arms and hold them in their adjusted position and a fender-platform carried by the fender-supporting arms. 90

2. In a car-fender, the combination of the fender-supporting arms adjustable relatively to the road-bed, fender-adjusting stays connected to the fender-supporting arms to adjust them and hold them in their adjusted po- 95 sition, a fender-platform rotatably connected to the fender-supporting arms, and adjustable locking members connected to the platform and to the fender-supporting arms to hold the fender at any predetermined inclination to the 100 road-bed.

3. In a car-fender, the combination of the fender-supporting arms adjustable relatively to the road-bed, fender-adjusting stays connected to the fender-supporting arms to ad- 105 just them and hold them in their adjusted position, a fender-platform rotatably connected to the fender-supporting arms adjustable locking members for the fender-platform and the fender-supporting arms to hold the fender- 110 platform at any predetermined inclination to the road-bed and a fender-back connected to the fender-supporting arms.

4. In a car-fender the combination of the fender-supporting stays consisting of horizon- 115 tal arms to be connected to the car-truck or truck-frame, and vertical arms to extend parallel with the car-front, fender-adjusting stays connected to the fender-supporting stays to adjust them relatively to the road-bed and 120 rigidly hold them in their adjusted position a fender-platform connected to the fender-supporting-arms and bracing members loosely mounted upon the vertical arms and arranged to be connected to the car-body. 125

5. In a car-fender the combination of the fender-supporting stays consisting of horizon- tal arms to be connected to the car-truck or truck-frame, and vertical arms to extend par- 130 allel with the car-front, fender-adjusting stays



connected to the fender-supporting stays to adjust them relatively to the road-bed and rigidly hold them in their adjusted position a fender-platform rotatably connected to the fender-supporting arms and adjustable, locking members for the fender-platform and the vertical arms of the fender-supporting stays to hold the fender-platform at any predetermined angle to the road-bed.

6. In a car-fender the combination of the fender-supporting stays consisting of horizontal arms to be connected to the car-truck or truck-frame, and vertical arms to extend parallel with the car-front, fender-adjusting stays connected to the fender-supporting stays to adjust them relatively to the road-bed and rigidly hold them in their adjusted position a fender-platform rotatably connected to the fender-supporting arms and adjustable locking members for the fender-platform and the vertical arms of the fender-supporting stays to hold the fender-platform at any predetermined angle to the road-bed, and bracing members loosely mounted upon the vertical arms and arranged to be connected to the car-body.

7. In a car-fender the combination of the fender-supporting stays consisting of horizontal arms to be connected to the car-truck or truck-frame, and vertical arms to extend parallel with the car-front, fender-adjusting stays connected to the fender-supporting stays to adjust them relatively to the road-bed and rigidly hold them in their adjusted position a fender-platform rotatably connected to the fender-supporting arms and adjustable locking members for the fender-platform and the vertical arms of the fender-supporting stays to hold the fender-platform at any predetermined angle to the road-bed, bracing members loosely mounted upon the vertical arms and arranged to be connected to the car-body, such bracing members consisting of collars loosely encircling the vertical arms, rearwardly-extending arms for the collars fitted with balls and socket-plates inclosing the balls arranged to be connected to the car-body.

8. In a car-fender the combination of the fender-supporting stays consisting of horizontal arms to be connected to the car-truck or truck-frame and vertical arms to extend parallel to the car-front, fender-adjusting stays connected to the fender-supporting stays to adjust them and hold them relatively to the road-bed, bearings carried by the fender-supporting stays, a fender-platform having a shaft rota-

tably mounted in the bearings, adjustable locking members for the fender-platform and the vertical arms of the fender-supporting stays to hold the fender-platform at any predetermined inclination to the road-bed, a fender-back connected to the fender-supporting stays, and bracing members consisting of collars loosely encircling the vertical arms of the fender-supporting stays, rearwardly-extending arms therefor fitted with balls and socket-plates for the balls to be connected to the car-body.

9. In a car-fender the combination of the fender-supporting stays consisting of horizontal arms to be connected to the car-truck or truck-frame and vertical arms to extend parallel with the car-front, fender-adjusting stays connected to the fender-supporting stays to adjust them relatively to the road-bed and hold them in their adjusted position, a cross-stay for the fender-supporting stays having bearing members, a fender-platform having a shaft rotatably mounted in the bearings, a locking member adjustably connected to the vertical arms of the fender-supporting stays and fender-adjusting arms connected to the fender-platform and adjustably held by the locking members.

10. In a car-fender the combination of the fender-supporting stays consisting of horizontal arms to be connected to the car-truck or truck-frame and vertical arms to extend parallel with the car-front, fender-adjusting stays connected to the fender-supporting stays to adjust them relatively to the road-bed and hold them in their adjusted position, a cross-stay for the fender-supporting stays having bearing members, a fender-platform having a shaft rotatably mounted in the bearings, a locking member adjustably connected to the vertical arms of the fender-supporting stays and fender-adjusting arms connected to the fender-platform and adjustably held by the locking members, a fender-back connected to the vertical arms of the fender-supporting stays, guide-collars loosely embracing the vertical arms having rearwardly-extending arms fitted with balls and socket-plates for the balls to be connected to the car-body.

Toronto, December 19, 1903.

A. E. McLEAN.

In presence of—

L. F. BROCK,

C. H. RICHES.