

C. E. BROWN.
Wheel-Fender for Railway-Cars.

No. 217,676.

Patented July 22, 1879.

Fig. 1.

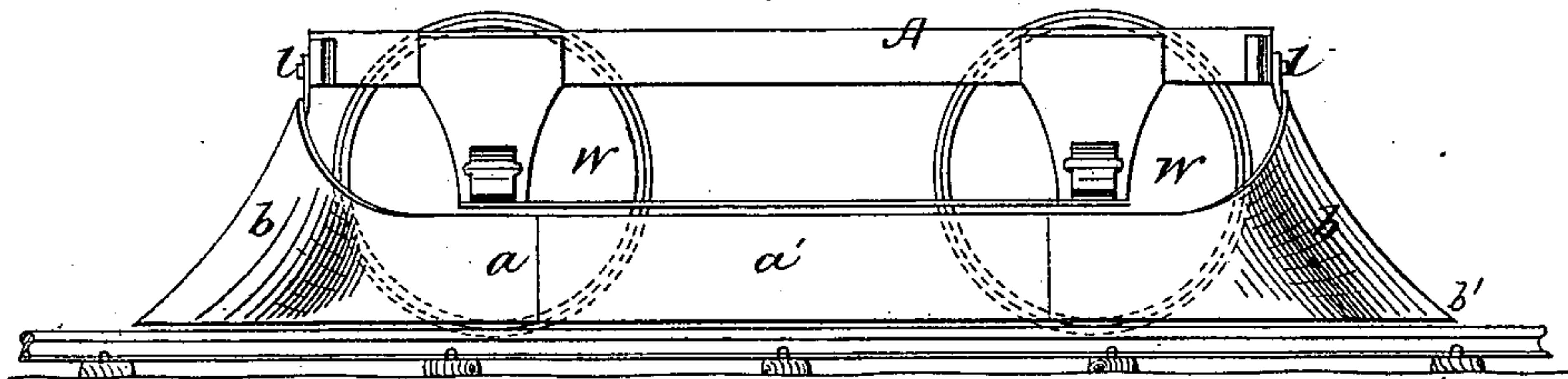


Fig. 2.

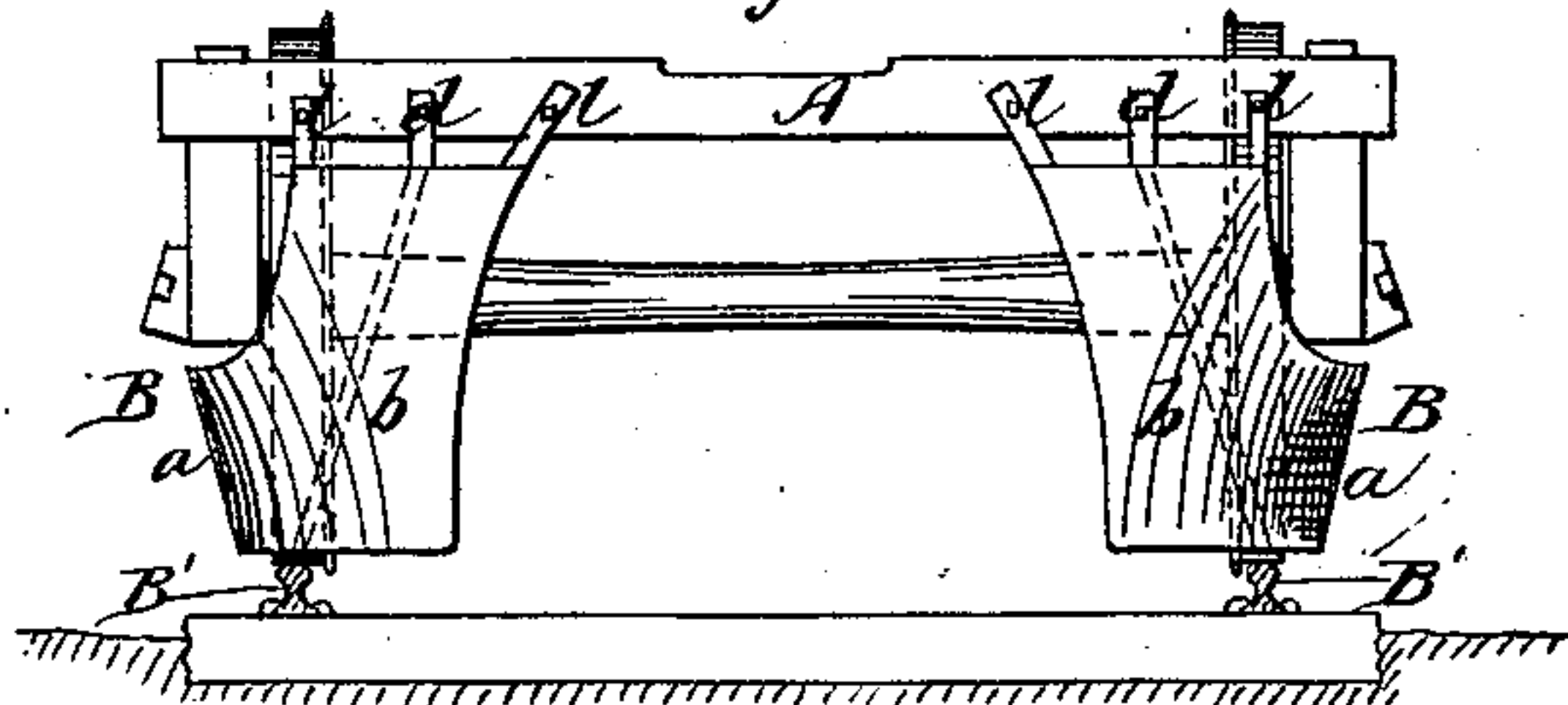


Fig. 3.

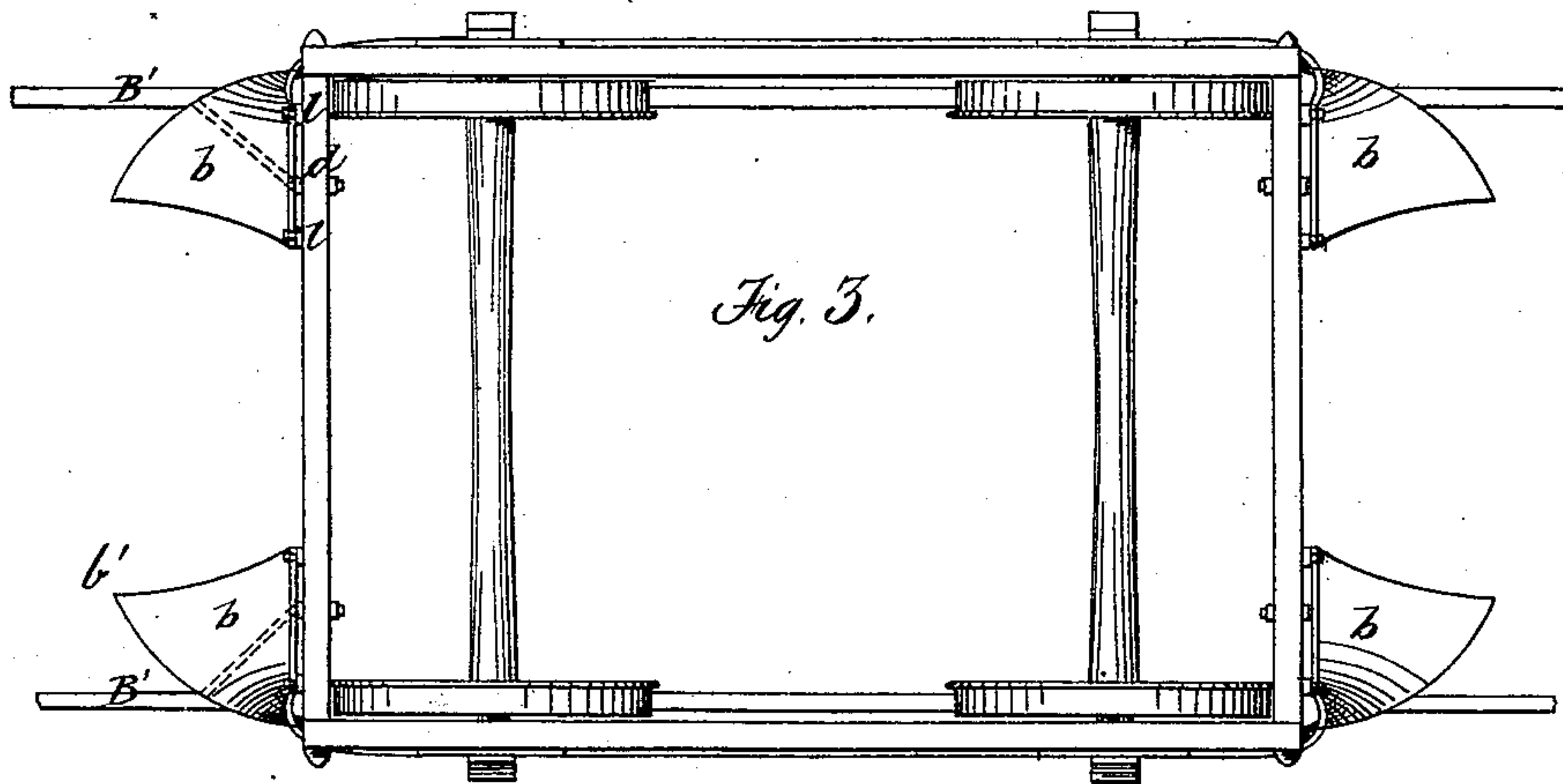
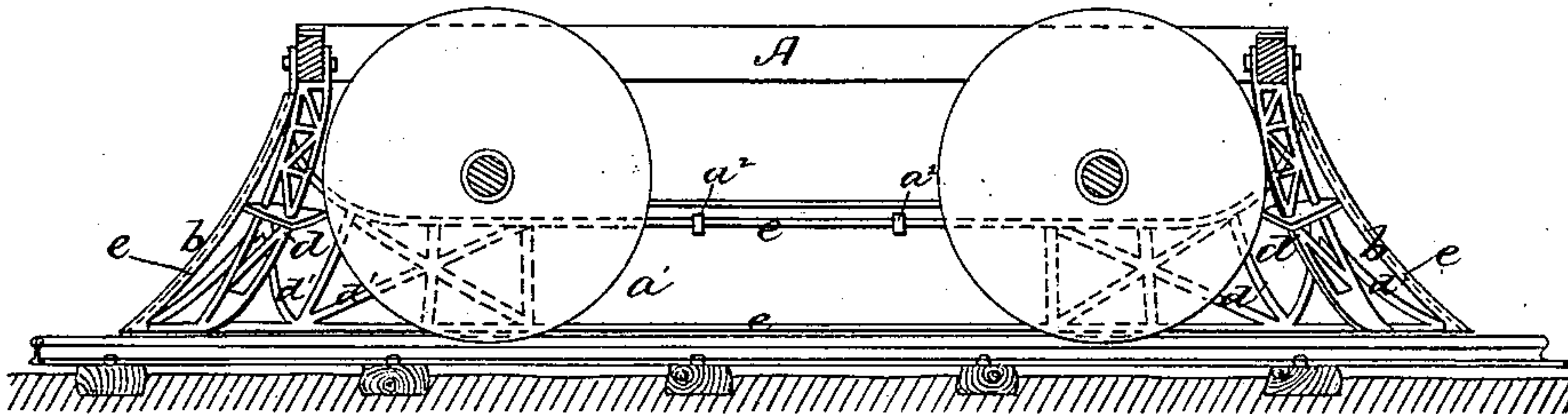


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

CHARLES E. BROWN, OF SALEM, MASSACHUSETTS.

IMPROVEMENT IN WHEEL-FENDERS FOR RAILWAY-CARS.

Specification forming part of Letters Patent No. **217,676**, dated July 22, 1879; application filed April 19, 1879.

To all whom it may concern:

Be it known that I, CHARLES E. BROWN, of Salem, in the county of Essex and State of Massachusetts, have invented certain Improvements in Safeguards for Cars, of which the following is a specification.

This invention has for its object to improve the construction of safeguards for car-wheels, so as to render such safeguards stronger and more durable, more efficient in preventing accidents of various kinds resulting from the falling of persons or objects upon the track, and less liable to interfere with free access of workmen to the wheels and journals for the purpose of testing and examining the same.

To these ends my invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of a car-truck provided with my improved safeguard. Fig. 2 represents an end view of the same. Fig. 3 represents a top view of the same. Fig. 4 represents a view of the inner side of the safeguard, showing the truck in section.

Similar letters of reference refer to like parts in all the figures.

In the drawings, A represents an ordinary car-truck to which my invention is applied. B B represent my improved safeguards, one of which is located on each side of the truck, as shown. Each safeguard is composed of a side portion or guard, *a*, curved and inclined end portions, *b b*, and a suitable supporting marginal frame, *e*, to which the portions *a b b* are attached, said frame being adapted to be attached to the truck A or other support, so as to hold the safeguard in the position hereinafter described.

The parts *a b b* are of sheet or plate metal, and are attached to the frame *e* by any suitable means, preferably by riveting, excepting a section of the part *a*, which is preferably detachable, as hereinafter described.

The frame *e* is composed of steel or wrought iron rods, and is of considerable strength and stiffness.

The part *a* is located with its upper edge slightly below the axle-boxes of the truck, and extends downwardly and inwardly, so that its

lower edge is in close proximity to and parallel with the sides of two of the wheels, and with the rail R, on which said wheels run. The side portion, *a*, is of uniform length from one end of the truck to the other, and in consequence of its location exposes the upper portions of the car-wheels W, as shown, and is entirely below the axle-boxes, so that it does not interfere with the testing of the wheels and the lubricating of the boxes.

The ends of the portion *a* are widened and curved to form the end portions or guards, *b b*, each of which is curved inwardly, so that it projects across the rail B', extended or elongated in the direction of the length of the car-truck at its lower end, and extended upwardly nearly or quite to the truck-frame.

The horizontal section of the outer surface of each portion *b* is convex, and the vertical section is concave, with an inclination toward the truck-frame from bottom to top. Each end piece is thus adapted to operate like the mold-board of a plow, and lift and push outwardly any object not of excessive weight that may be on or near the rail in advance of the wheels, the lower edge of each end piece being close to the top of the rail, and therefore adapted to remove any object therefrom that would be likely to damage or be damaged by the car. The ends *b*, which run to a lifting-point, *b'*, are particularly adapted to lift and remove without injury a person who may have fallen on or near the rail, the lifting action due to their rearward inclination preventing the person from being injured by contact with the road-bed and rails while being moved by the car.

It is obvious that the frame *e* is formed to afford a rigid support for the portions *a b b* of the safeguard and hold them in the position shown. The frame is provided with lugs or ears *l l l*, which project upwardly from the ends *b b*, and are adapted to be bolted to the truck-frame, and enable the safeguard to be readily applied and removed. The ends of the frame *e* are strengthened by truss-braces *d*, which extend from the lower to the upper portion of the frame, and are suitably attached thereto, and are formed at their upper ends to bear against the under side of the truck-frame, as shown in Fig. 4. These braces impart a

great degree of stiffness to the ends *b*, and enable shocks or jars on the latter to be supported partly by the truck-frame. The ends of the frame are preferably further strengthened by diagonal braces *d' d'* extending in different directions, as shown.

It will be seen that the described form of the safeguard enables it to be readily applied and removed without requiring any change in the construction of the truck and of the wheels and axles. The ears *l l l* and truss-braces *d* are adapted to be readily attached to and removed from the truck-frame, and make the latter practically a portion of the frame *e* of the safeguard, thus imparting great strength and stiffness to the safeguard.

I prefer to make a section, *a*¹, of the side portion, *a*, removable, so that an opening may be made in the side of the safeguard for any purpose that may be desired. To this end I provide the section *a*¹ with hooks or other fastenings, *a*², whereby it may be detachably secured to the frame *e*.

I do not limit myself to the application of my improved safeguard to car-trucks, as it may be adapted to locomotives without departing from the spirit of my invention.

I claim as my invention—

The improved safeguard for cars, consisting of the marginal supporting-frame *e*, having the ears *l*, the truss-braces *d*, attached to the frame by means of the ears, the concavo-convex portion *b*, extending to a lifting-point, *b'*, and cut away so as to form the portion *a*, these parts being rigidly attached to the truss-braces, and the movable portion *a*¹, attached to the frame *e* by the hooks *a*², arranged as shown, and for the purpose set forth.

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

CHARLES ERASTUS BROWN.

Witnesses:

CHAS. E. HOAG,

HENRY A. BROWN.