

A. BRIDGES.
CAR TRUCK.

No. 75,357.

Patented Mar. 10, 1868.

Fig. 1.

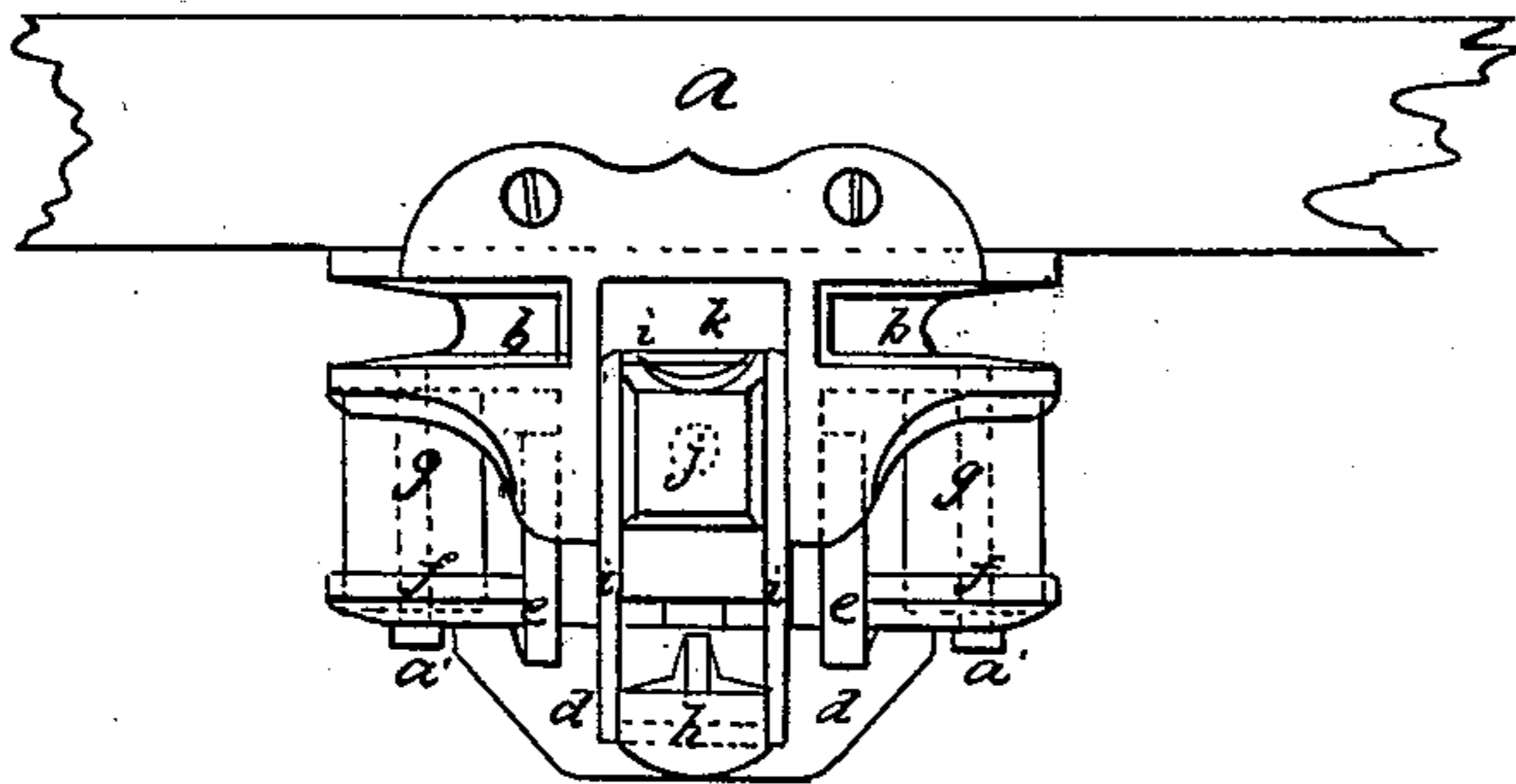


Fig. 2.

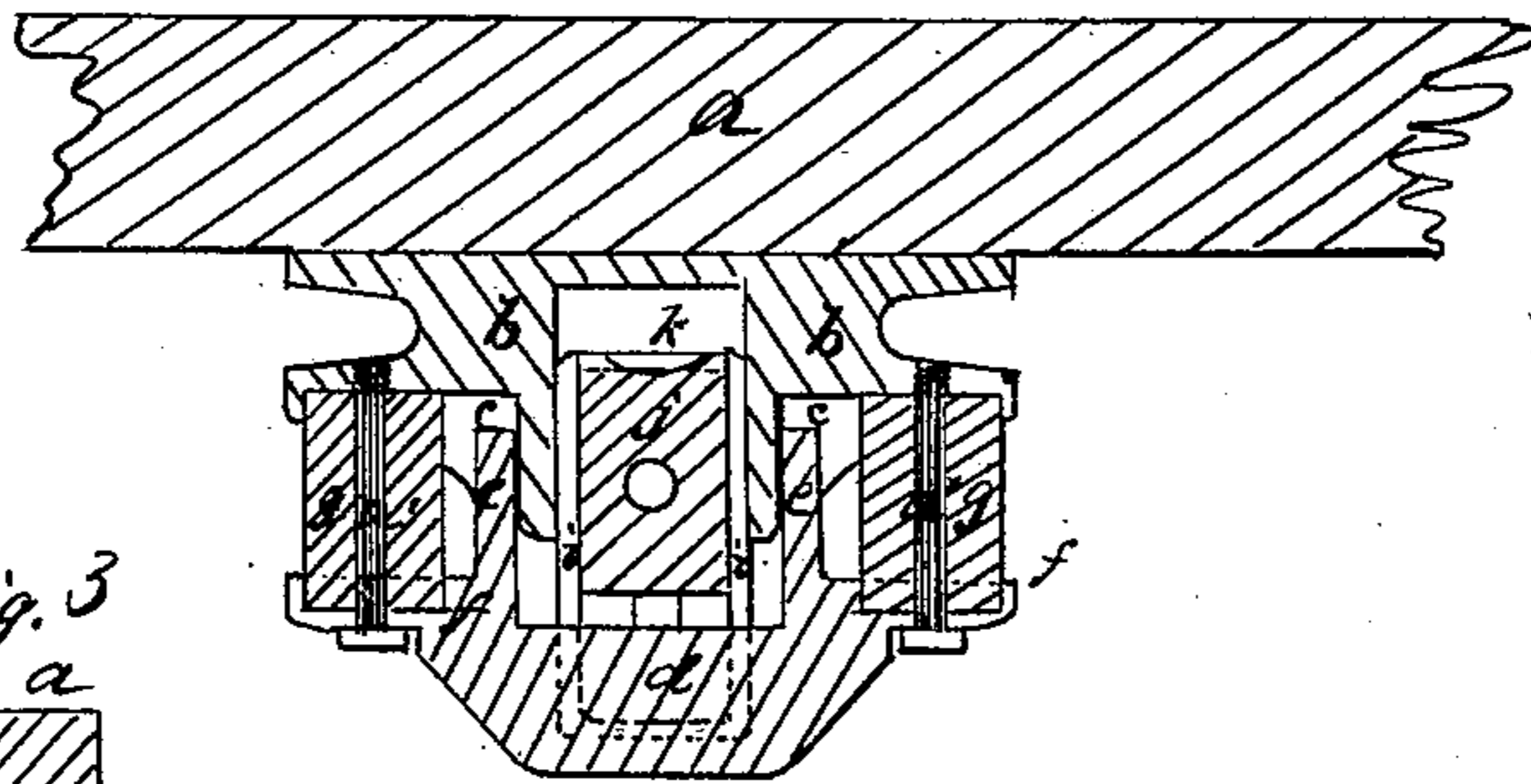


Fig. 3.

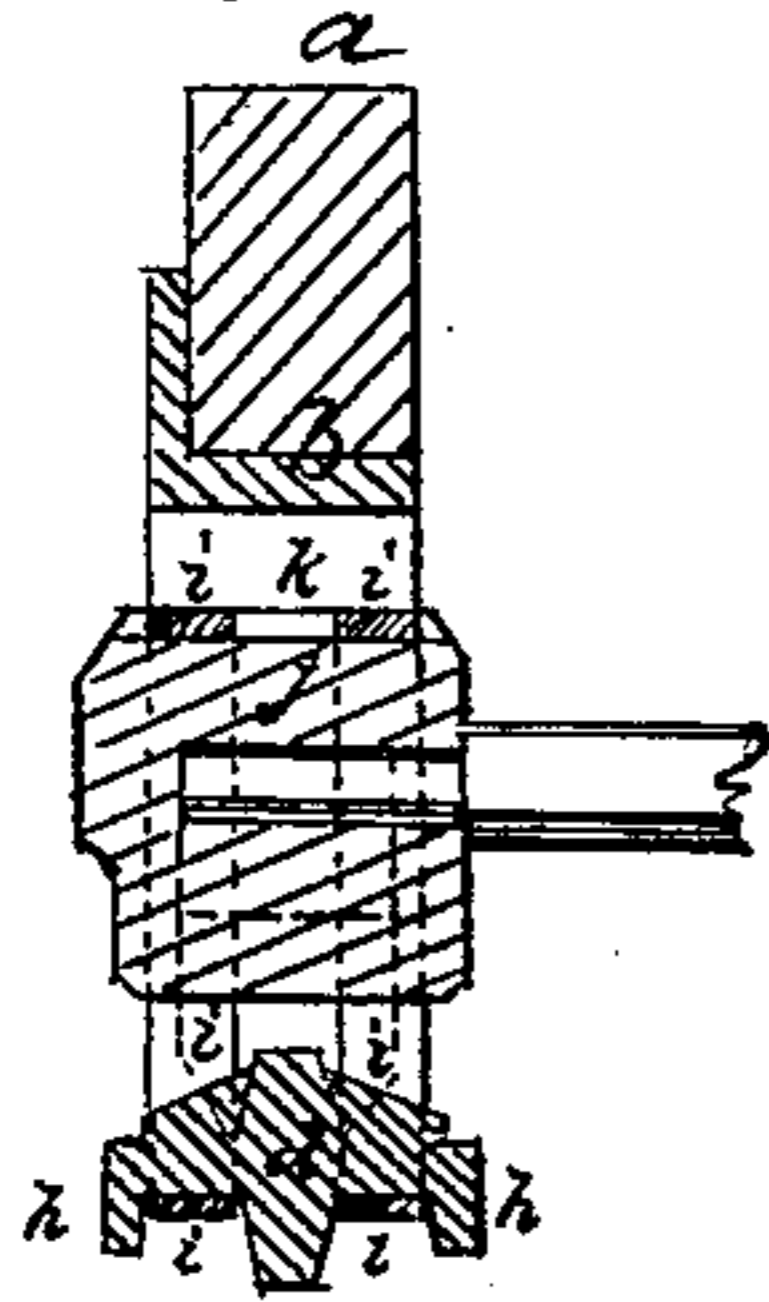
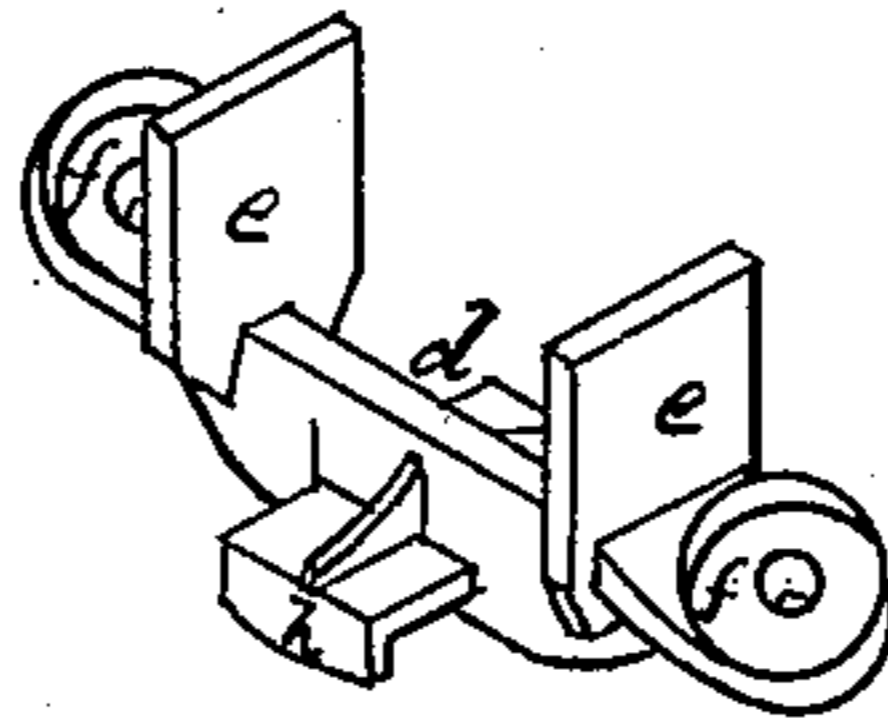


Fig. 4.



Witnesses.
Edward Griffith
C. H. Baldwin

Inventor.
Alfred Bridges.
by his Attorney.
Frederick Curtis

United States Patent Office.

ALFRED BRIDGES, OF NEWTON, MASSACHUSETTS.

Letters Patent No. 75,357, dated March 10, 1868.

IMPROVED CAR-TRUCK.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Be it known that I, ALFRED BRIDGES, of Newton, in the county of Middlesex, and State of Massachusetts, have invented a new and useful Improvement in Trucks or Running-Mechanism of Railway-Cars; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawings, making part of this specification, and in which—

Figure 1 is a side elevation,

Figure 2 a vertical and longitudinal section, and

Figure 3 a vertical and transverse section of a portion of a railway-car truck, constructed in accordance with my invention.

Figure 4 is a representation of its adjustable support or cross-head, as detached from the remaining portion of the device.

The object of this invention is mainly to relieve the axle-journals and boxes, as well as their housings, of railway-cars, from the constant lateral strain and concussion to which they are now subject, and to maintain an equal bearing upon all parts of the journals, as well as to preserve the body of the car in horizontal adjustment with respect to the rails of the track.

The invention consists in suspending the car from the journal-box by means of an auxiliary housing or cross-head, which is connected to the journal-box by metallic links, in such manner as to allow of the lateral vibrations of the car independent of the journal-box, the said journal-box being situated within the opening or passage of the housing, so as to allow of the lateral vibrations, while at the same time any longitudinal thrust or twisting of such journal-box is prevented from taking place.

To enable others conversant with the branch of mechanics to which my invention appertains, I will describe its construction and operation.

By referring to the drawings above mentioned as making part of this specification, *a* denotes a portion of the body or side-rail of a car-body or its truck-frame, from which is suspended a fork or "housing," *b*, in the end faces of whose arms a vertical recess or guide, *c*, is formed, for supporting and guiding the vertical movements of an auxiliary housing or cross-head, *d*, formed, as shown in the drawings, with two standards, *e e*, to work in the side-guides *c c*, and with two shelves, *f f*, for supporting the rubber springs *g g*, the upper of such springs bearing against similar-shaped shelves disposed over the others, and formed upon the housing *b*, a bolt, *a'*, being passed through the two shelves, and serving to prevent entire separation of the housing and cross-head.

The inner and outward faces of the lower portion of the cross-head *d* are provided with ears, *h h*, for receiving the lower ends of two links, *i i*, counterparts of each other in size and shape, which are extended underneath them, and parallel to each other, the upper ends of such links clasping the opposite outer ends of the journal-box *j*, which moves freely laterally within the opening *k* of the housing *b*, and, by means of the links *i i*, support the weight of the car and its load, it being of course understood that the above-described arrangement of parts refers to one of four or more applied to a car.

The lower part of the journal-box should be provided with a suitable device which will retain it in proper relation with the housing and cross-head under ordinary circumstances, but which will allow of its being removed from and applied thereto with facility.

It will be seen by the above description, and by referring to the drawings, that the journal-box, through the agency of the cross-head *d* and springs *g g*, supports the weight of the car and its load, and that free vertical play is allowed for such car by the arrangement of the housing and cross-head.

It will also be evident that a free lateral swinging movement of such car will be permitted by means of the links without the violent jar and concussion now often experienced.

The journal-box also is always maintained in a proper horizontal position, and no strain can come upon any one part of the journal revolving within it, thus causing such journal not only to move smoothly and evenly, but to wear for a much greater length of time.

Owing to the disposition of the said journal-box within the housing, and the form and application of the links *i i*, any possibility of twisting or misplacement of such box is prevented.

The guides *c c* and standards *e e* serve to prevent any lateral displacement or disarrangement of the cross-head *d*, while allowing its vertical movements with respect to the housing to be freely actuated by the springs.

Having thus described my invention, and its operations and advantages, what I claim and desire to secure by Letters Patent of the United States, is—

The combination of the journal-boxes and housings with the links for supporting the car-body, and the cross-heads upon which said links are held in the manner described, so that the said boxes, while having a free lateral motion, shall be prevented from twisting in their housings, as herein shown and set forth.

ALFRED BRIDGES.

Witnesses:

FREDERICK CURTIS,
EDMUND H. HEWINS.