

J. M. & R. F. PHILLIPS.
 RUNNING GEAR FOR MINE CARS.
 APPLICATION FILED MAR. 25, 1909.

928,066.

Patented July 13, 1909.

Fig. 1.

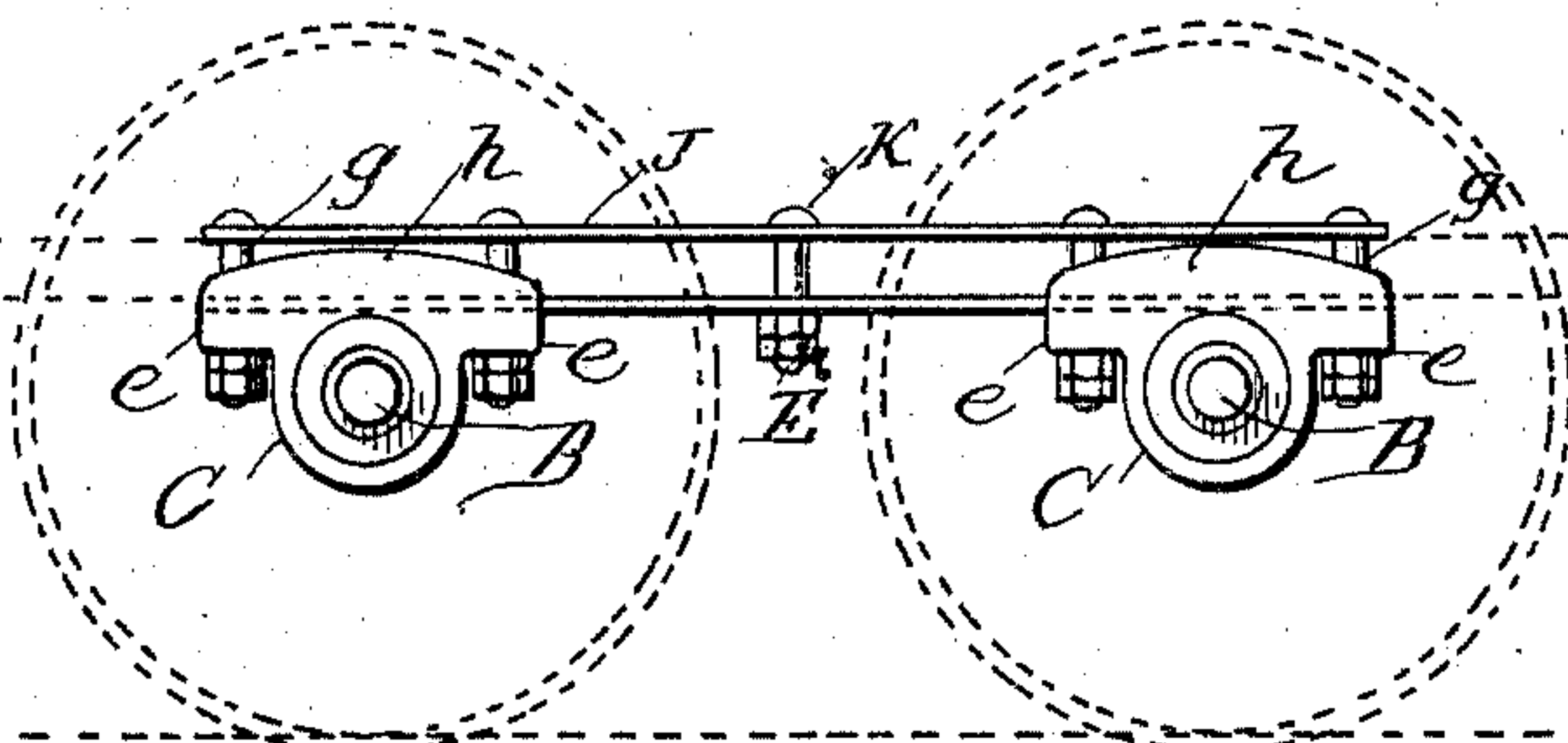


Fig. 2.

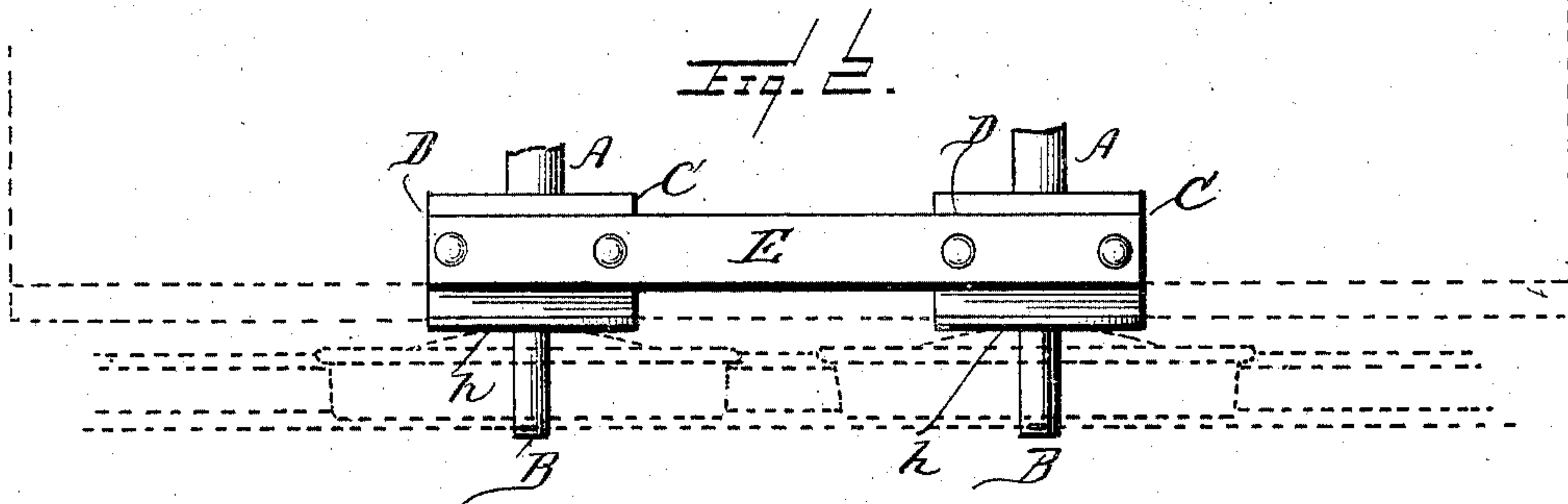


Fig. 3.

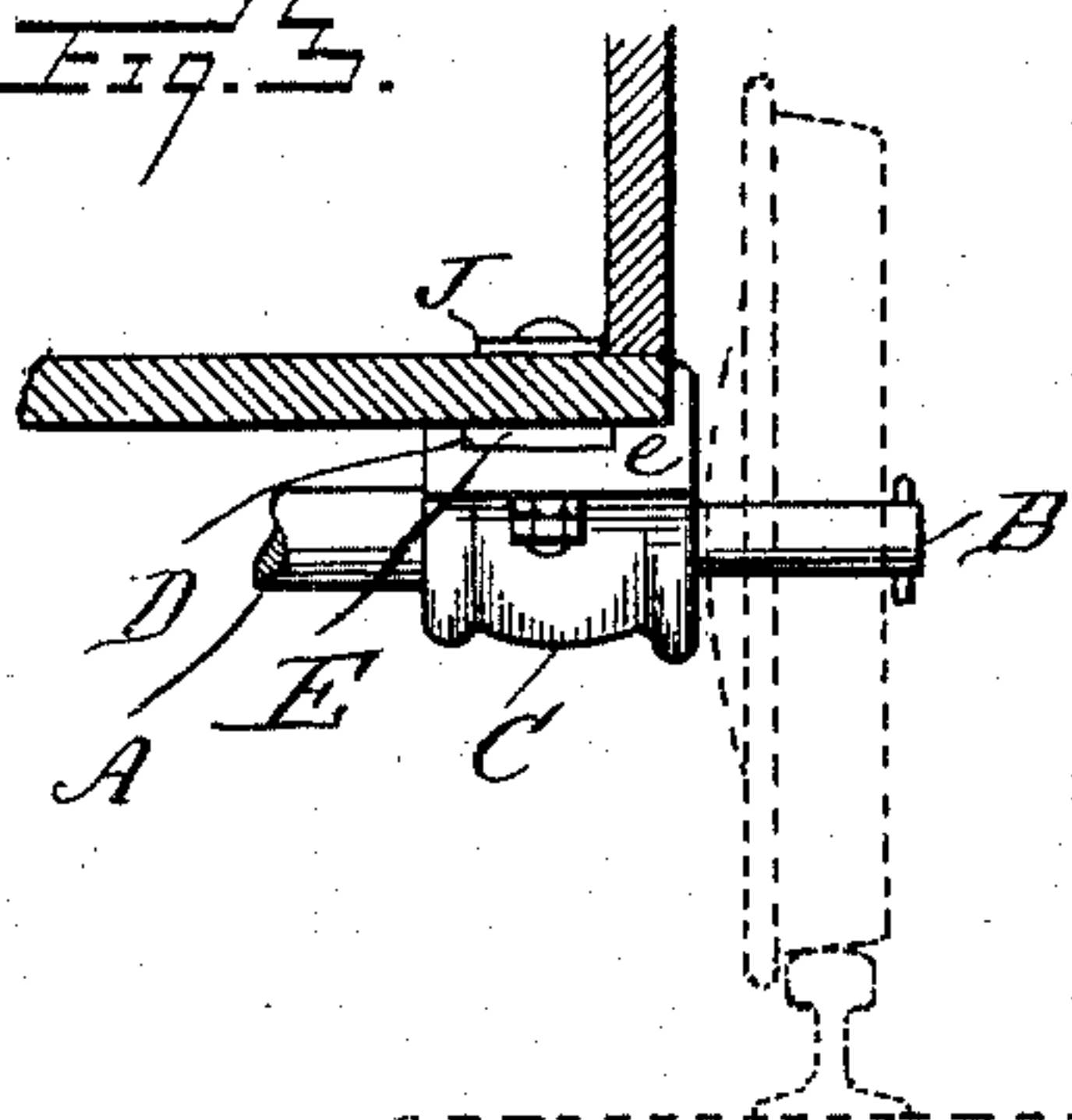
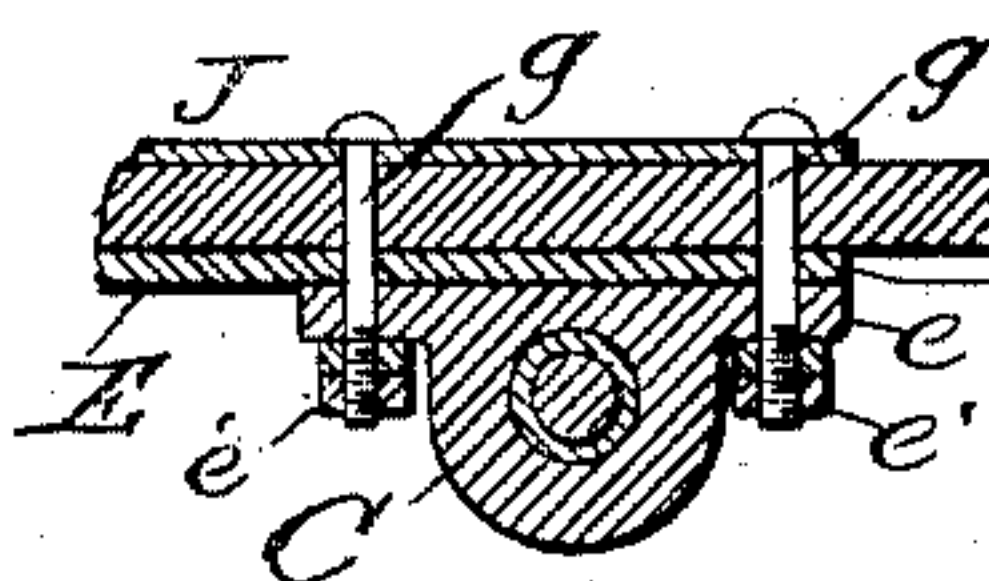


Fig. 4.



John M. Phillips
 Robert F. Phillips

WITNESSES

Wm. F. Roy
 J. P. Stimler.

INVENTORS

BY *Connell Bros*

Attorneys

UNITED STATES PATENT OFFICE.

JOHN M. PHILLIPS AND ROBERT F. PHILLIPS, OF CARRICK, PENNSYLVANIA, ASSIGNORS TO
THE PHILLIPS MINE AND MILL SUPPLY COMPANY, OF PITTSBURG, PENNSYLVANIA, A
CORPORATION OF PENNSYLVANIA.

RUNNING-GEAR FOR MINE-CARS.

No. 928,066.

Specification of Letters Patent.

Patented July 13, 1909.

Application filed March 25, 1909. Serial No. 485,667.

To all whom it may concern:

Be it known that we, JOHN M. PHILLIPS and ROBERT F. PHILLIPS, citizens of the United States, residing at Carrick, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Running-Gear for Mine-Cars, of which the following is a specification.

This invention has relation to the running gear of mine cars and particularly to the running gear of cars having stationary axles with wheels mounted to turn loosely thereon, of the type shown and described in Letters Patent of the United States No. 882,534, granted to us March 17, 1908, in which the hub of each wheel is formed with rearwardly extending sleeve which enters the cylindrical cavity of a box or bearing secured to the bottom of the car, and has for its object the provision of means for connecting and bracing the bearing boxes which are secured to the bottom of the car so as to insure correct alinement at the sides of the cars and prevent displacement under the excessive strain to which the cars are subjected in use.

Mine cars of the class to which the invention pertains are usually mounted on four wheels, and the stationary axles pass through and are rigidly secured in the boxes or bearings on opposite sides of the car. These boxes are secured directly to the bottom of the car two on each side, by bolts passing through flanges or ears on the sides of the boxes.

Owing to the rough usage to which mine cars are subjected and the strain imposed on the axles under heavy loads, these bolts frequently become loosened and the boxes displaced thus throwing the wheels and axles out of proper position and impairing the stability of the running gear.

According to our invention, the two boxes on each side of the car are connected together and caused to mutually brace and strengthen each other by means of a plate or bar of wrought iron or steel through which pass the bolts securing the boxes to the bottom of the car. The mounting for the two axles in each side of the car is thus a single structure the connection being of such a character as to cause one box and its fastening to brace, strengthen and maintain the rigidity and stability of the other. To accommodate the connection plate or bar and insure and main-

tain the boxes in alinement, the boxes are cast with longitudinally located channels or recesses, corresponding to the shape of the bars in cross section, and of such depth that the bars and boxes will be flush on their upper surfaces, so that when the parts are in position the boxes and connecting plate will be in close contact with the bottom of the car.

In the accompanying drawing: Figure 1 is a front view of a pair of bearing boxes or axle supports embodying our invention. Fig. 2 is a plan view of the same. Fig. 3 is a side view and, Fig. 4 is a vertical longitudinal section of a box.

The car represented in dotted lines in Fig. 1, is of the usual construction and is mounted on four wheels revolving on rigid axles.

C, C, are the bearing boxes in which are secured the ends of the main portions A of the axles, the spindles B, B, projecting therefrom and carrying the wheels. These boxes are formed with flat upper surfaces, and have ears *e, e*, pierced for the passage of bolts *g, g*. A flange or riser *h*, formed on the front of the box above its central opening abuts against the side edge of the car bottom and aids in holding the box in position against the end thrust. For the purpose of our invention the boxes C, C, are cast each with a longitudinal rectangular groove or channel in its upper surface, to receive the wrought iron or steel bars or plate E, by which the boxes on each side of the car are connected together as shown. These bars or plates are of a width and thickness equal to the width and depth of the grooves, so that the tops or upper surfaces of the boxes on either side of the grooves or channels D, D, will be flush with the upper surface of the bar E, and hence both bars and boxes will fit closely against the bottom of the car and when bolted thereto, the boxes on each side of the car will be kept in exact alinement with each other and each will partially brace and sustain the other against displacement should any of the bolts become loose, or wear the hole through which it passes in the bottom of the car.

The connecting bars E, E, are of wrought iron or steel so as to combine elasticity with strength and allow for strain or flexure without breaking.

The bolts *g, g*, pass through the car bottom from above and are fastened by nuts be-

low the ears *e, e*, of the boxes, jam nuts *e', e'*, being used to lock the nuts *e, e*. The heads of the bolts rest on the bottom of the car, or preferably on a metal bar *J*. One or more
5 bolts *K*, in addition to the bolts *g, g*, is preferably inserted through the car bottom and the bars *E, J*, between the boxes *C, C*.

Having described our invention what we claim and desire to secure by Letters Patent is:

10 1. In running gear for mine cars the bearing boxes for the support of stationary axles located in pairs at the sides of the car and having each a rectangular channel of greater
15 width than depth in its upper side in combination with flat connecting bars resting in said channels and flush with the upper surfaces of the boxes and bolts passing through the boxes and bars and securing them to the
20 bottom of the car, the said boxes being connected together in pairs on each side of the car by said bars and bolts.

2. In running gear for mine cars the combination with a pair of bearing boxes bolted
25 to the bottom of a car for the support of stationary axles, of flat wrought metal connecting bars for the boxes on each side of the car,

said boxes having recesses in their upper surfaces to receive the connecting bars of the same cross sectional dimensions as the bars 30 and the bars each having its upper surface flush with the upper surface of the boxes and the bars bearing on the bottom of the car.

3. In running gear for mine cars the combination with a pair of bearing boxes at the side of and below the car body for the support of stationary axles, said boxes having each a longitudinal recess in its upper surface of a connecting bar resting in said recesses, and having its upper surface flush 40 with the tops of the boxes a second bar resting on the upper surface of the bottom of the car and bolts passing through the ears of said boxes, through both of said bars and through 45 the bottom of the car.

In testimony whereof we affix our signatures, in presence of two witnesses.

JOHN M. PHILLIPS.
ROBERT F. PHILLIPS.

Witnesses:

ALBERT G. WALTER,
J. E. ROTH.