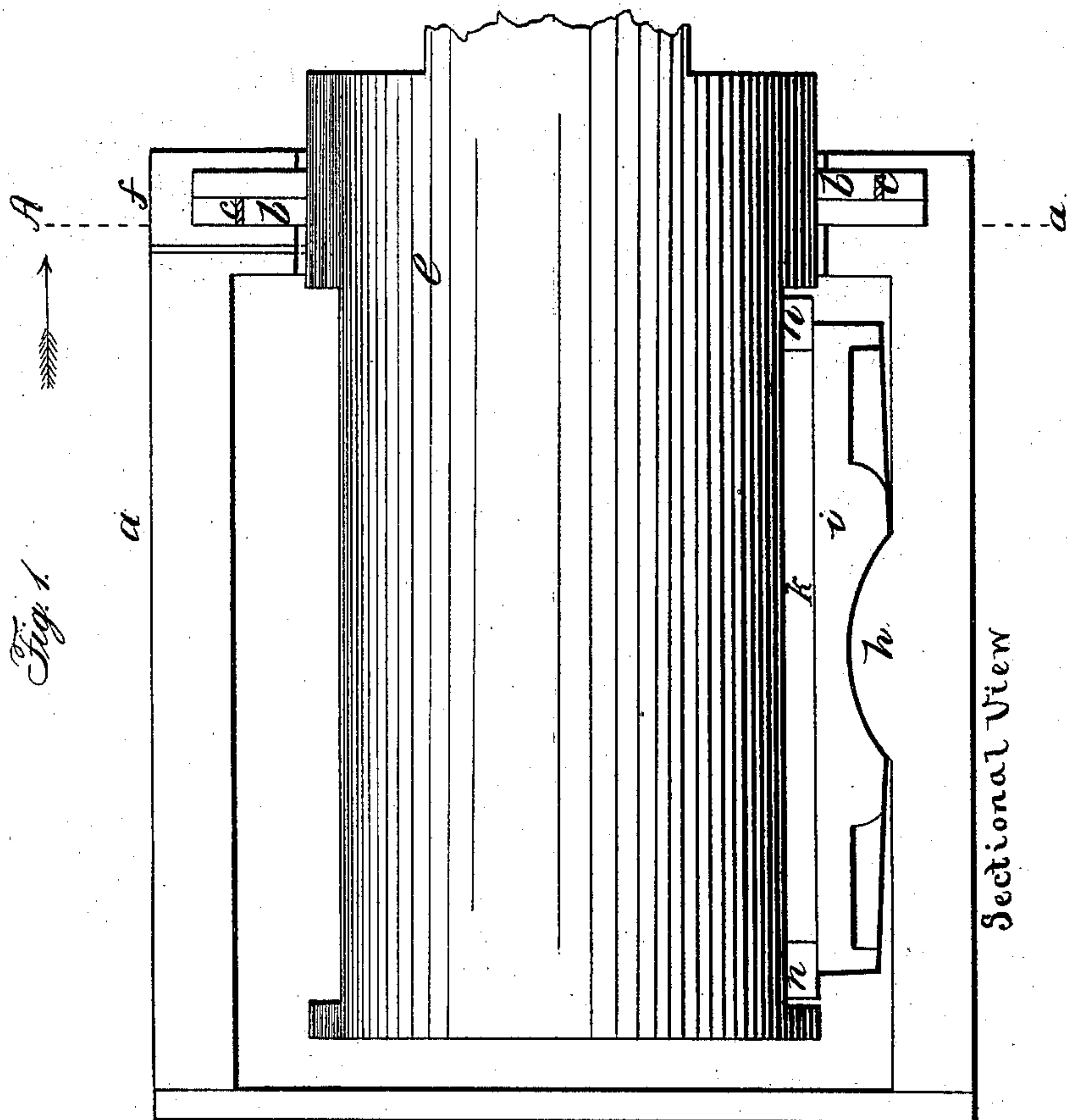


H. TURNER.
Car-Axle Box.

2 Sheets—Sheet 1.

No. 8,915.

Patented Apr. 27, 1852.

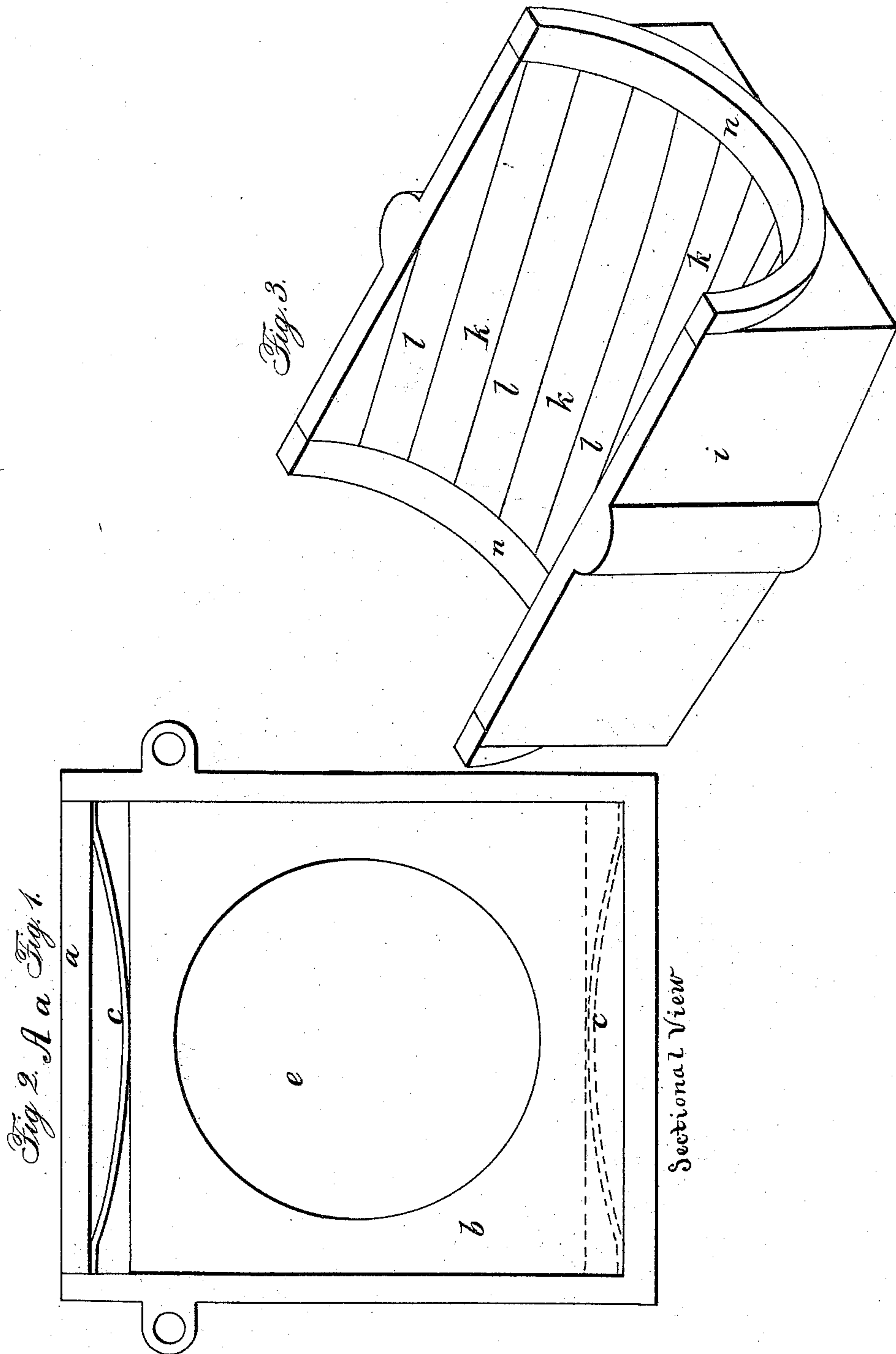


H. TURNER.
Car-Axle Box.

2 Sheets—Sheet 2.

No. 8,915.

Patented Apr. 27, 1852.



UNITED STATES PATENT OFFICE.

HENRY TURNER, OF CHARLESTOWN, NEW HAMPSHIRE.

BOX FOR JOURNALS.

Specification of Letters Patent No. 8,915, dated April 27, 1852.

To all whom it may concern:

Be it known that I, HENRY TURNER, of Charlestown, Sullivan county, and State of New Hampshire, have invented new and useful Improvements in Boxes for Railroad-Cars, and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—
Figure 1, is a longitudinal section. Fig. 2, a cross section at A, *a*, Fig. 1, and Fig. 3, a perspective view of the lining of the inside bearing.

The same letters indicate like parts in all the figures.

My invention has reference to the construction of the cap box in which the journal bears, with the view to give it the requisite strength and at the same time prevent friction and overheating. With this view I make the cap box of cast or malleable iron in the following way: I take two or more flat square rods of wrought iron and coat them by casting on them gun metal; these are placed in the sand mold diagonally and the mold formed to cast the box thereon, so that when molded they project out of the cast iron. The space between them is then filled up with soft metal; the said rods of wrought iron are placed in the mold in a diagonal position with reference to the length of the box and curved to correspond with the semicircular form of its cross section.

In the accompanying drawings *a* represents a cast iron box which may be of the usual or any desired form; the inner face *f*, of this box, in which is made the opening through which the journal *e*, enters, is composed of a double plate of metal in which I place two leather washers *b*, *b*, each provided with an opening for the journal *e*, concentric or nearly so with the opening in the plate; each of these washers is provided with a spring *c*, of any desired form of means of which one of the washers is kept constantly bearing down on the journal and the other up to it, thus keeping the whole circumference around the journal constantly closed which effectually prevents the escape

of oil and the entrance of dust into the boxes.

The top of the box *a* is cast with a spherical ball or knob *h*, on the inside, against which the cap box *i*, which has a corresponding recess in its bottom, rests, by means of which the cap box is enabled to yield to the motion of the journal due to inequalities in the road, thereby preventing strain, friction and consequent over-heating.

The cap box *i*, is made of cast or malleable iron and has two or more flat square rods *k*, of wrought iron placed in a helical position in the cylindrical cavity of the box, and which have been previously coated with gun or other hard metal. The spaces between them are filled with soft metal *l* or composition. By means of this combination and arrangement the wrought and gun metal sustain the weight, and keep the soft metal in place (except that a thin film spreads itself over the hard metal surface), and the iron pieces being in a diagonal position, they, together with the semicircular end pieces *n*, of the cap box retain the soft metal or composition in place. In view also of the diagonal position of the hard metal pieces it follows that they act on the journal in the line of a helix, and that consequently there is little or no tendency to cut or injure the journal.

It is obvious that it is not indispensable to make the inner face of the box of a double plate, as the object is simply to sustain the leather washers in their proper positions, the same thing is obtainable by other means; nor do I desire to limit myself to leather, as other and perhaps better material may be found applicable.

I claim—

Making the cap box in the manner described, that is to say of alternate pieces of hard and soft metal, arranged in a helical position, by which, together with the circular end pieces the soft metal is kept in place, and friction and injury to the axle prevented, substantially as described.

HENRY TURNER.

Signed in our presence—

EDMUND L. CUSHING,
EDMUND H. CUSHING.