R. C. WRIGHT.

Car-Axle Box.

No. 50,982. Patented Nov. 14, 1865.

Fig. 6.

Fig. 5.

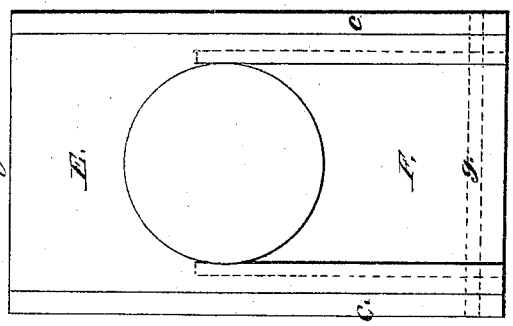


Fig. 4.

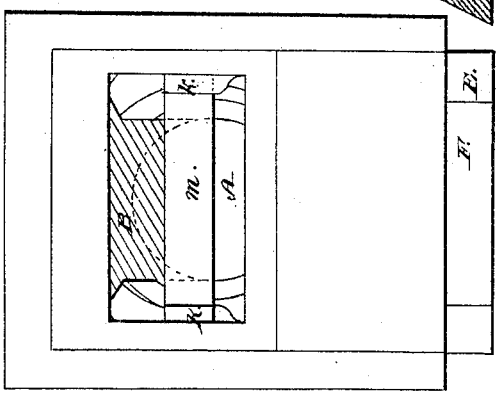


Fig. 3.

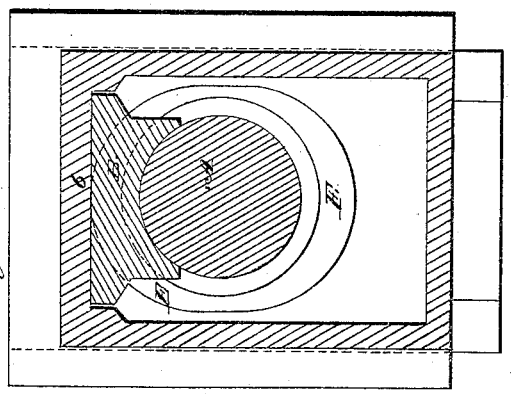


Fig. 2.

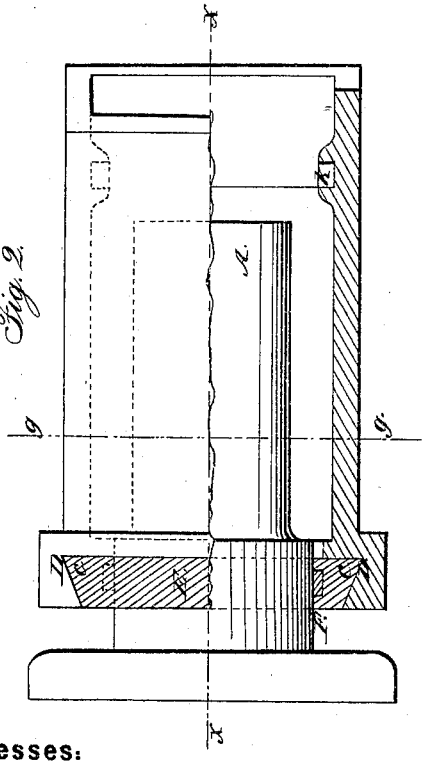
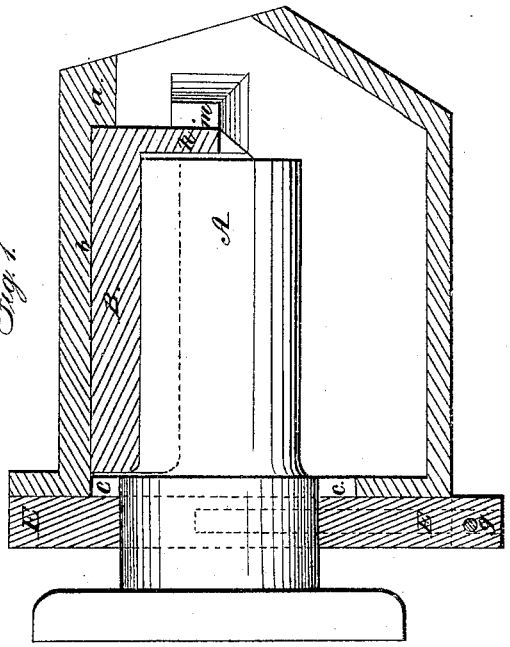


Fig. 1.



Witnesses:

Otto Dusch

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Inventor:

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UNITED STATES PATENT OFFICE.

RANSOM C. WRIGHT, OF MEADE TOWNSHIP, CRAWFORD COUNTY, PA.

IMPROVED RAILWAY JOURNAL-BOX.

Specification forming part of Letters Patent No. **50,982**, dated November 14, 1865.

To all whom it may concern:

Be it known that I, RANSOM C. WRIGHT, of Meade township, in the county of Crawford and State of Pennsylvania, have invented new and useful Improvements in Railway-Axle Journal-Boxes; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal section through the center, as indicated by *x*, Fig. 2, Fig. 2 being one-half plan and one-half section of the plan; Fig. 3, a cross-section through the center, as indicated by the line *y y*, Fig. 1; Fig. 4, a front end elevation; Fig. 5, a detached elevation of the movable back or packing; Fig. 6, a plan of Fig. 5.

Similar letters of reference indicate like parts.

The nature of my invention consists, first, in providing a movable tight back or packing to railway-axle journal-boxes, these boxes being constructed with an opening through their back ends, through which the axle is passed for its journal A to receive its brass or bearing B; and in order to enable the bearing B to be worn away by friction of the journal A, the opening C, through the back end of the box is carried upward away from the journal A to prevent the box from coming in contact with the journal A when it shall have worn down thin. The opening C below the journal A is carried down away from the journal A to allow the box to be moved perpendicularly over the journal A, and still leave the journal A undisturbed in its position, this movement being necessary in this box to allow the bearing B to be passed through the outer end of the box to its position in the box over the journal A. In ordinarily-constructed boxes the upward movement of the box is necessary to allow the bearing to be passed over the collar at the outer end of the journal. Thus it will be readily seen that the opening through the back end of the box is necessarily much larger than the axle passing through it, consequently leaving the box exposed to the injurious effects of dirt, dust, and foreign substances set in motion by the contiguous moving parts, and also exposing it to loss of lubricating materials inclosed within it. Through the opening my movable back or packing closes up this opening, excludes dirt, dust, and foreign substances and perfectly secures the lubricating materials within.

The nature of my invention consists, second, in applying to railway-axle journal-boxes a brass or bearing, B, so constructed as to prevent end-thrust or lateral motion of the journal. Bearings as generally constructed are placed upon the journal between collars of the journal at each end; but owing to the small amount of surface that it is practicable to obtain by this means to resist the end-thrust or lateral play the collars soon cut away the bearing in length, create lateral play or motion, and destroy the effectiveness of the bearing. "Thrust-plates" have been introduced into boxes to come in contact with the end of the journal and aid the bearing in preventing lateral motion; but being detached, and consequently liable to be removed, they cannot be depended upon to do the work assigned them.

To enable others to understand my invention, I will proceed to describe it.

I construct on each side of the back end of railway-axle journal-boxes recesses or grooves D D′, reaching from top to bottom of the box, and into these recesses or grooves I insert a movable back or packing, made in two parts, E F, having edges properly shaped to fit into the grooves or recesses D D′. I construct the piece E with an opening at or near its center equal to the diameter of the axle A, over which it passes and fits closely, and from this opening, extending toward the opposite side of the box, are two extensions or projections, *e e*, their greatest width being the distance between the grooves or recesses D D′, and their least width or distance between them being a distance equal to the diameter of the axle A, over which they pass, and into these nearest edges of the projections *e e*, I construct grooves or recesses *d d*. I construct the piece F of a width equal to the distance between the nearest edges of the extensions *e e* of the piece E, and on its edges I construct tongues or projections *f f*, properly constructed to fit the recesses *e e* of the piece E. (See Fig. 6.) The upper end of the piece F is of a shape to closely fit the diameter of the axle A. To apply this mova-

ble back or packing E F to the box, the piece E is entered into the recesses or grooves D D′ on the box and passed down against the axle A. The piece F is then, by means of the grooves or recesses *d d* and the tongues or projections *f f*, passed against the axle from the opposite way, and a pin, *g*, inserted through an opening made through the projections *e e* of the piece E, and through the lower part of the piece F, thus securing them together snugly over and against the axle *a*, while allowing them to move up or down freely and fully protecting the contents of the box and excluding dirt, dust, and foreign substances, preventing the exit or waste of lubricating materials inclosed within the box, and being capable of being removed for renewal or otherwise without disturbing the position of the axle in the box.

I construct my axle brass or bearing B of a length to properly receive the journal A and afford a base for a projection, *h*, at its outer end, that passes by and against the outer end of the journal A, this projection *h* preventing the journal A from having lateral motion or thrust. The bearing B, I insert into a recess or pocket, *b*, at the top of the inside of the box, said pocket *b* having a lip or projection, *a*, at its outer end, to keep the bearing B from being thrust outward. (See Fig. 1.)

To more effectively secure the bearing B and its projection *h*, I construct pockets K K on the inside of the sides of the box, and into these pockets I insert a bar, *m*, one side of which bears against the projection *h* of the bearing B and assists it to resist the lateral motion or thrust of the journal A.

What I claim as new, and desire to secure by Letters Patent, is—

1. The bearing B, with its projection *h* and pocket *b*, all substantially as and for the purposes set forth.

2. The bar or support *m*, with its pockets K K, in combination with the bearing B and projection *h*, all substantially as and for the purposes set forth.

RANSOM C. WRIGHT.

Witnesses:

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