J. LIGHTNER.

Car-Axle Box.

No. 5,935. Patented Nov. 21, 1848.

Fig. 3.

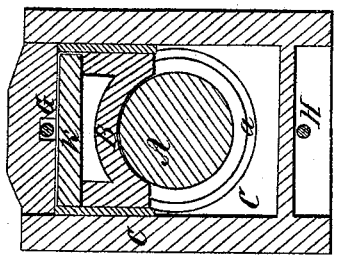


Fig. 4.

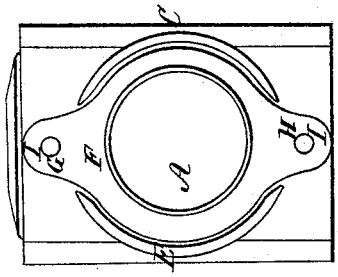


Fig. 5.

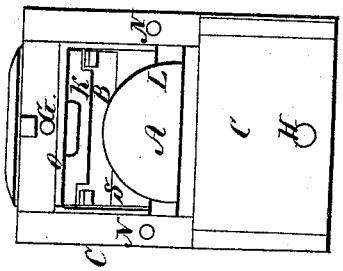


Fig. 2.

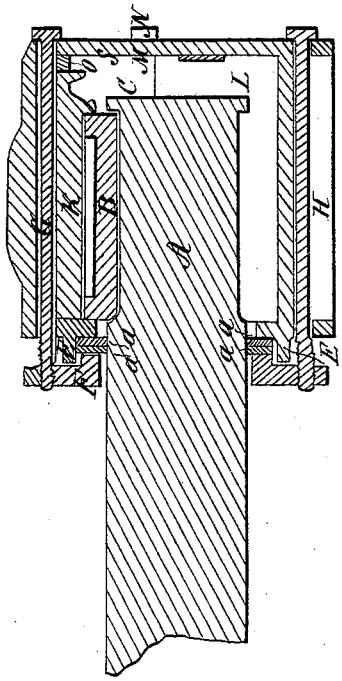
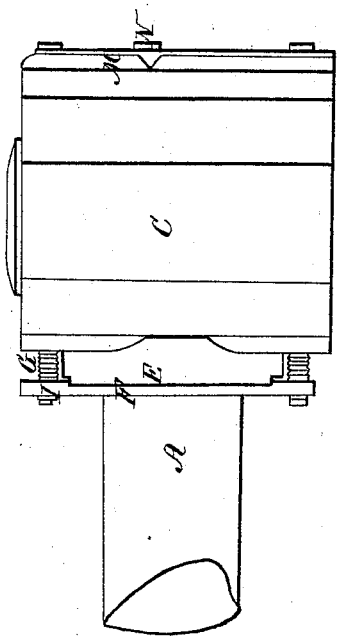


Fig. 1.



AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS.)

UNITED STATES PATENT OFFICE.

JOHN LIGHTNER, OF ROXBURY, MASSACHUSETTS.

IMPROVEMENT IN AXLE-BOXES.

Specification forming part of Letters Patent No. **5,935**, dated November 21, 1848.

To all whom it may concern:

Be it known that I, JOHN LIGHTNER, of Roxbury, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Boxes for the Journals of Railway-Cars; and I do hereby declare that the same is fully described and represented in the following specification and accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1 denotes a side elevation of my improved box. Fig. 2 is a central section taken in line of the axis of the journal of the axle which plays on it. Fig. 3 is a transverse section of the box, and Fig. 4 is a rear elevation of it. Fig. 5 is a front view of the case as it appears with the plate M, hereinafter described, removed.

The nature of my invention consists, first, in applying to or combining with the box and axle a stuffing-box so disposed as to effectually prevent the admission of dirt or dust into the box or between it and the axle; second, in so constructing the composition bearing of the box and other parts connected with it as to readily admit of the removal of said bearing at any time after it may have become heated or injured.

In said drawings, A represents the journal of the axle, B the composition box or bearing against which it plays, and C the inclosing or oil case. The journal is made to enter the box through a circular aperture made through the rear side of it, and of a size a very little larger than the diameter of that part of the axle which remains within said aperture when the axle is fitted to the box. Around this aperture and at about one-half an inch from the axle I place a circular flange E, which is attached to or made to project from the rear face of the box C, as seen in the drawings, and to be of a diameter sufficient to admit one or more leather rings or suitable packing *a a*, to be arranged between it and the axle, the said packing being held in place by a cap-ring F, which is made to surround the axle and to fit into the flange E and be drawn within the same and close down upon the packing by two screws G H, which pass entirely through the case C and screw into ears or projections I I, made to extend from the ring F.

Between the composition-bearing B and the top of the box C, I arrange a slide or plate of metal or other proper material K, the said plate being made to correspond in width with the composition-bearing. The said bearing rests directly against the said silde-plate, while the latter bears against the top of the inclosing-case. It (the plate K) should be of a thickness sufficient to allow when it is removed or withdrawn from the case the composition-bearing to be lifted far enough above the collar L of the journal to be easily drawn out of the case and through an aperture S, made in or through the front part of it, (see Fig. 5,) which aperture is generally closed by a plate M, confined down by screws N N. In order to prevent the slide-plate from being forced against the movable plate M, so as to strain the screws, I form a ledge or flange O on the top of the case, which I make to project down in front of the front end of the slide K, as seen in Fig. 2. The case C should be so fitted to its vertical slides as to admit of its being canted sufficiently to allow the front end of the plate K to drop below the flange O to the extent required to enable a person to withdraw the slide-plate.

The aforedescribed method of supporting the composition-bearing on a slide-plate made capable of being removed and of making the inclosing case C with an opening through its front sufficiently large to allow of the removal of the slide-plate and composition-box is a very great improvement, inasmuch as it saves much of the labor and time usually consumed in common methods of proceeding required to effect a change or removal of the composition-box.

What I claim as my invention is—

The movable plate K and aperture S made through the front of the box, in combination with one another and the composition-bearing and inclosing case, and made to operate substantially as above specified.

In testimony whereof I have hereto set my signature this 23d day of March, A. D. 1848.

JOHN LIGHTNER.

Witnesses:
R. H. EDDY,
OLIVER N. FRENCH.