J. S. LISTER.

Axle Box.

No. 86,679. Patented Feb. 9, 1869.

Fig. 1

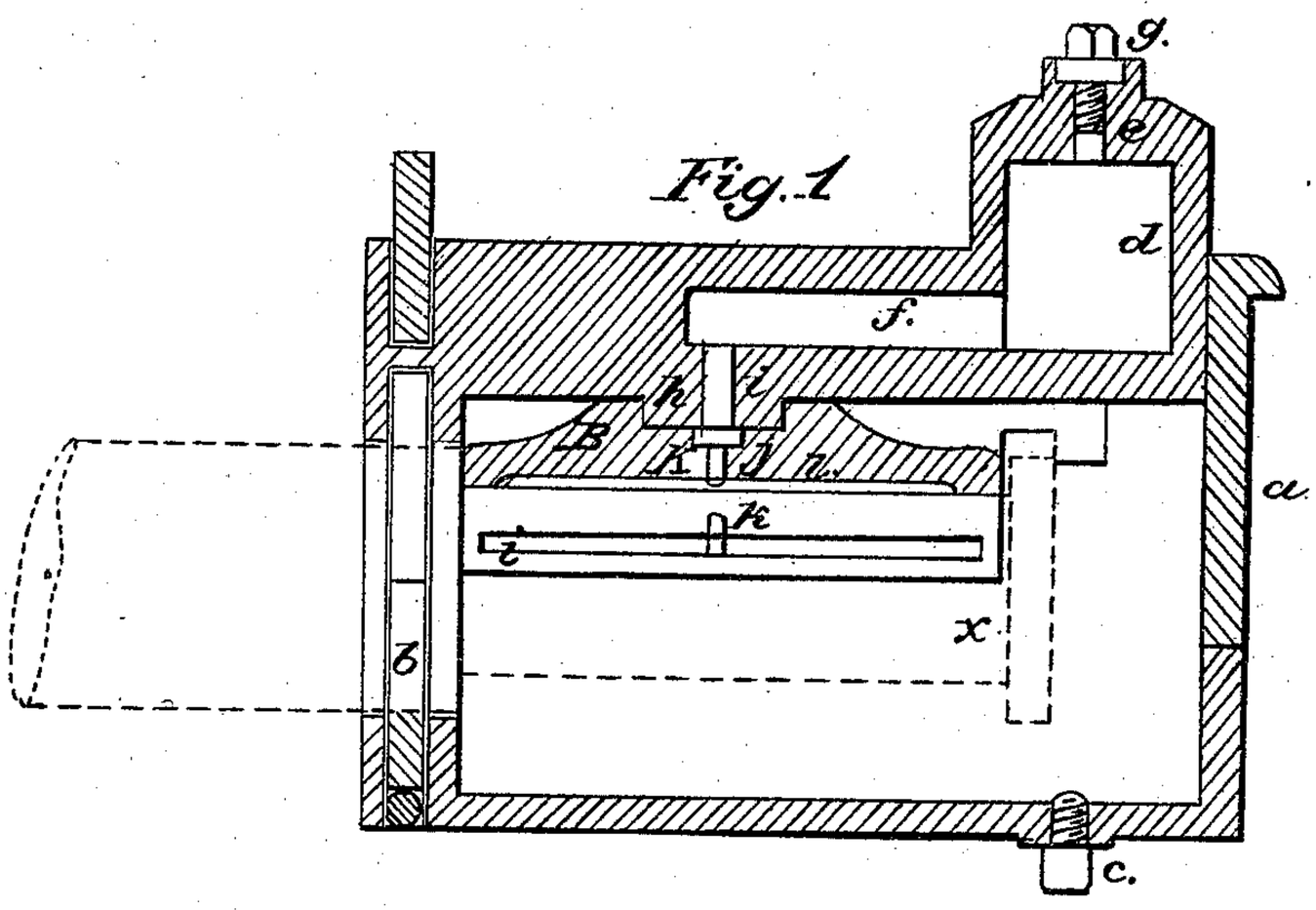
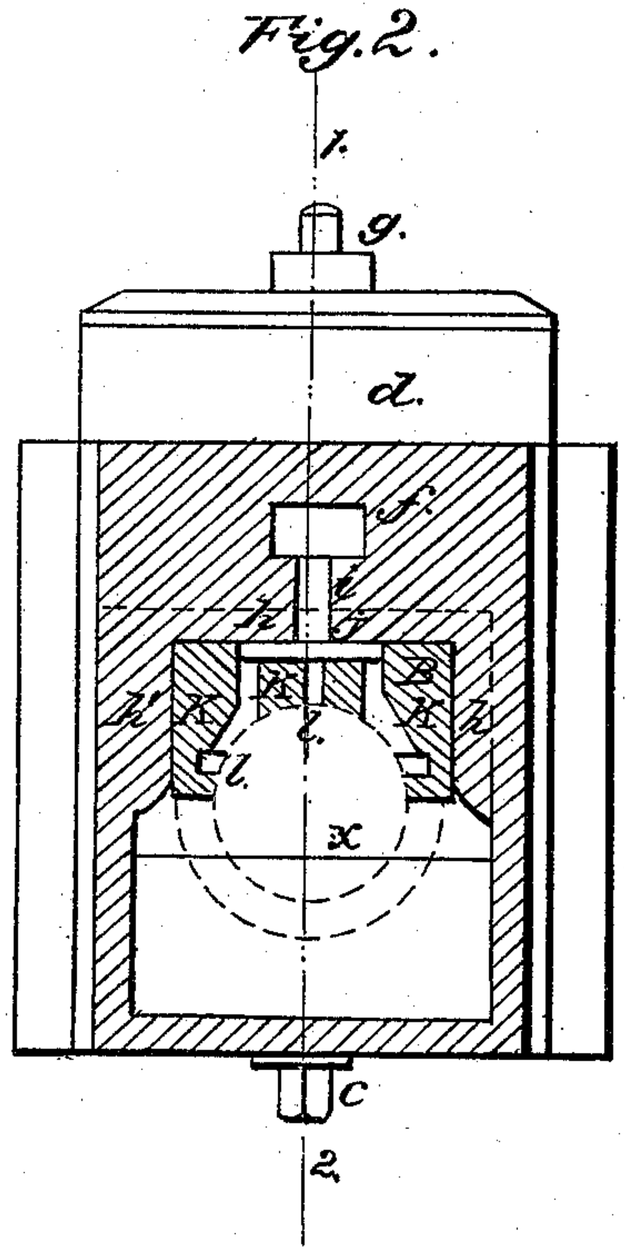


Fig. 2.



Witnesses.

Wm A Steel

Jno. B. Harding.

Inventor.

J. Stone Lesley

by his attorney

Henry Howson

United States Patent Office.

J. STONE LISTER, OF PHILADELPHIA, PENNSYLVANIA.

Letters Patent No. 86,679, *dated February* 9, 1869.

IMPROVEMENT IN AXLE-BOXES.

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

To all whom it may concern:

Be it known that I, J. STONE LISTER, of Philadelphia, Pennsylvania, have invented an Improvement in Axle-Boxes; and I do hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to an improvement in the axle-box for which Letters Patent were allowed to me, on the 23d day of June, 1868; and

It consists in so chambering the top of the box, instead of the journal-bearing, as fully described hereafter, that the cost of the box is much reduced, without detracting from its utility.

In order to enable others skilled in the art to make and apply my invention, I will now proceed to describe its construction and operation, reference being had to the accompanying drawing, which forms a part of this specification, and in which—

Figure 1 is a longitudinal section of an axle-box with my improvement, and

Figure 2, a transverse section of the same on the line 1–2, fig. 1.

In the front of the box is a sliding door, *a;* at the rear of the same, the usual opening and packing, *b;* and in the bottom of the box is a screw-plug, *c*, by withdrawing which the interior may be drained of drippings from the journal, &c.

The top of the box is of more than usual thickness, and is enlarged at the front end, being chambered so as to form a reservoir, *d*, and a channel, *f*, communicating with the same.

In the top of the reservoir is an opening, *e*, through which it is filled with lubricating-material, this opening being closed by a screw-plug, *g*, which regulates the supply of air to the reservoir, and the consequent flow of oil from the same, as fully described in my aforesaid patent of June 23, 1868.

The journal-bearing, or brass, B, is firmly held in its place and prevented from moving, either laterally or longitudinally, by projections *h* and *h'*, at the top and sides of the box, adapted to corresponding recesses of the bearing, and the latter is arranged to fit over the journal of the axle in the usual manner.

At the top of the brass, and communicating through an opening, *i*, with the channel *f* in the top of the box, is a short transverse passage, *j*, fig. 2, and the latter, by means of openings *k*, communicates with three longitudinal grooves, *l l l*, on the curved under side of the brass.

The operation of my improved box is exceedingly simple, the oil, when air is admitted to the reservoir through the opening *e*, passing, by its own gravity, through the channel *f* and passages of the brass, to the feeding-grooves, *l l l*, of the latter, and thence to the journal, which, as in my former invention, is lubricated from the top, and more effectually and economically than by the usual method.

I have found, in practice, that when the brass is chambered, and the reservoir *d* made detachable, and fitted to the brass, as described in my former patent, the box is rendered too expensive for general use, but, by forming both the channel *f* and the reservoir in the top of the box during the operation of casting, the cost of the box is much reduced without detracting from its utility.

I claim as my invention, and desire to secure by Letters Patent, as an improvement on my aforesaid patent of June 23, 1868—

An axle-box, in the upper part of which are a reservoir and channels, formed during the process of casting the box, substantially as and for the purpose described.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

J. STONE LISTER.

Witnesses:

JOHN WHITE,

C. B. PRICE.