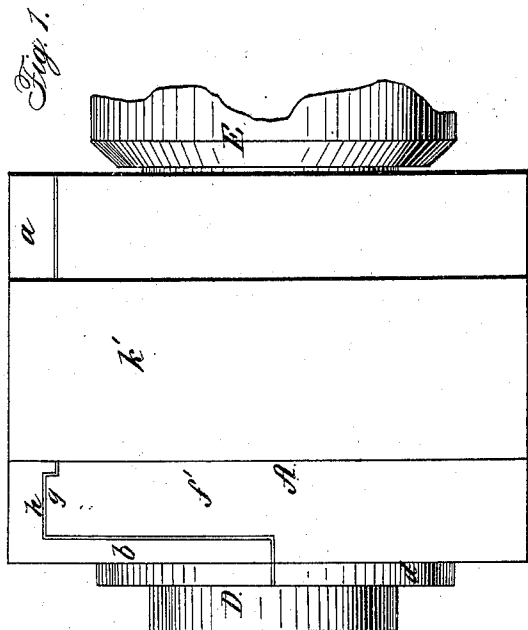
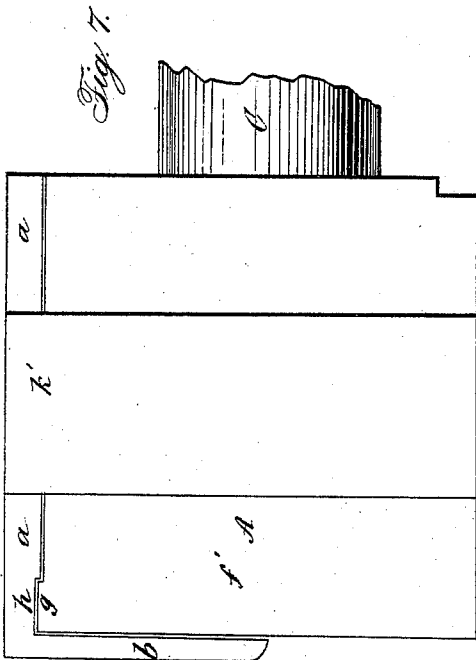
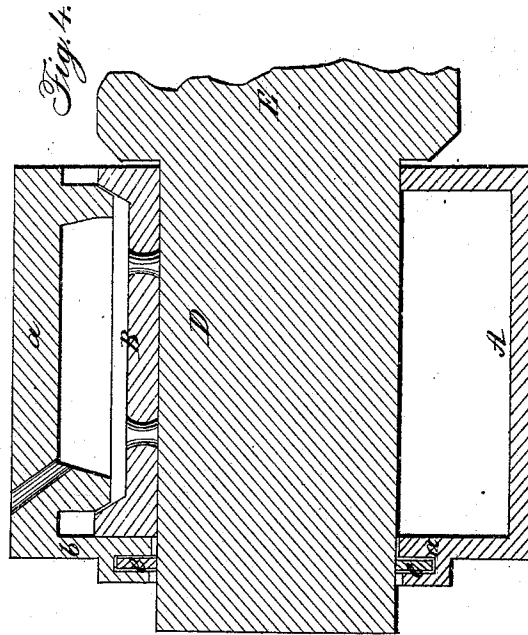
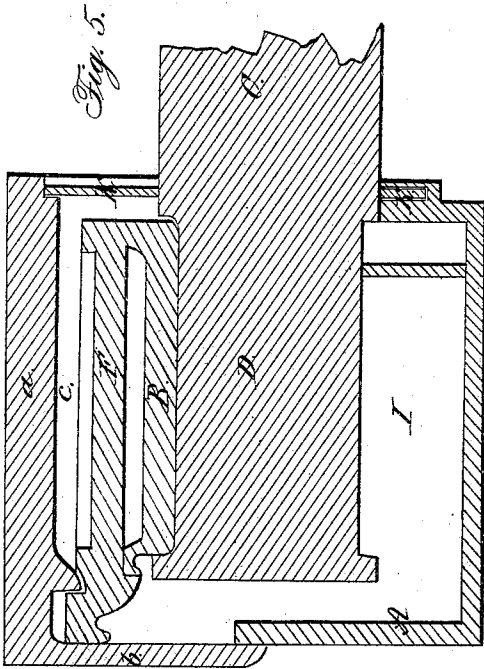


O. N. FRENCH.

Car-Axle Box.

No. 8,220.

Patented July 15, 1851.



O. N. FRENCH.
Car-Axle Box.

2 Sheets—Sheet 2.

No. 8,220.

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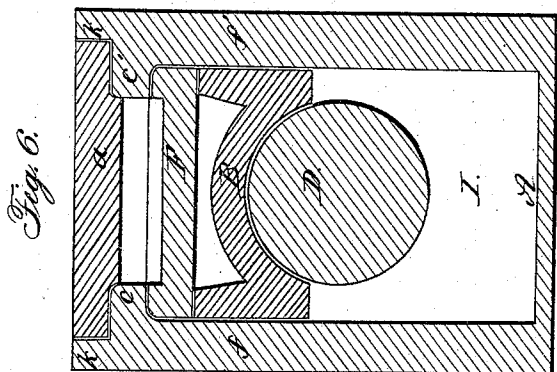
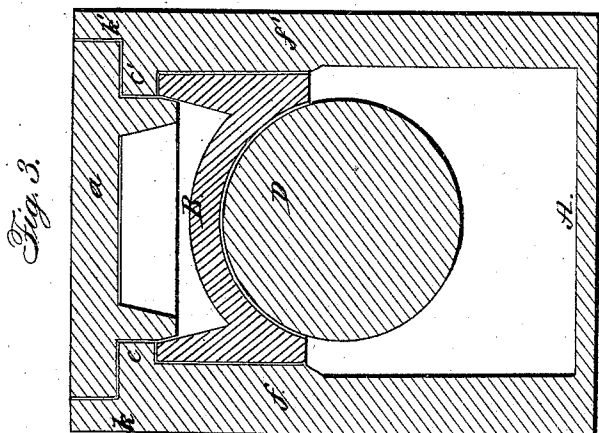
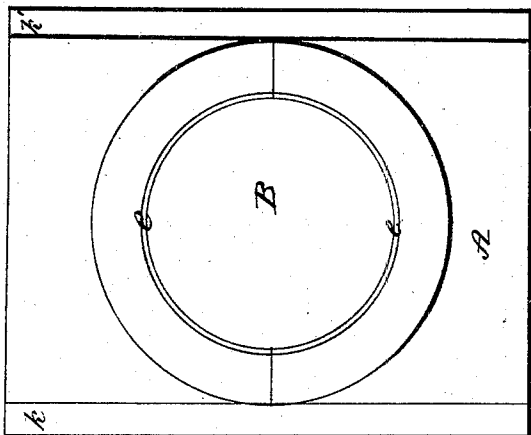


Fig. 2.



UNITED STATES PATENT OFFICE.

OLIVER N. FRENCH, OF NEW LONDON, CONNECTICUT, ASSIGNOR TO OLIVER N. FRENCH
AND EB. STEVENS, OF HOPKINTON, NEW HAMPSHIRE.

AXLE-BOX FOR JOURNALS FOR RAILROAD-CARS.

Specification of Letters Patent No. 8,220, dated July 15, 1851.

To all whom it may concern:

Be it known that I, OLIVER N. FRENCH, of New London, in the county of New London and State of Connecticut, have invented
5 a new and useful Improvement in Axle-Boxes for Journals of Railway-Carriages; and I do hereby declare that the same is fully described and represented in the following specification and accompanying
10 drawings, letters, figures, and references thereof.

Of the said drawing Figure 1, denotes a side elevation of one of my improved boxes as made for inside bearings or in other
15 words, for an axle, whose journals are between the two wheels. Fig. 2, is a rear end view of the same. Fig. 3, is a central vertical and transverse section of the box and axle. Fig. 4, is a central vertical and longitudinal
20 section of the same.

My improvement although represented as applied to inside bearings is equally applicable to outside bearings. The object or purpose of it, is to entirely dispense with
25 screw bolts, nuts or contrivances of like character, to hold any one or more of the parts of the box together, as it is well known that their liability to become loosened by reason of the constant shocks, concussion,
30 and jar produced by the wheels and irregularities of the rails, of the track, is such as to often require careful inspection, and tightening up on the part of those in charge. In the said drawing it represents the case
35 of the box. In the common manner of constructing such case it has been made with its top cast in one piece with its sides, and with an opening through one side, which opening had to be covered by a cover or
40 plate secured in place by screws. In my improved box the top *a*, is made separate from the sides, and has the cover plate *b* of the side opening cast at right angles to and in one piece with it. Each of the two opposite
45 sides of the case *A*, has a projection or shoulder *c* or *c'*, cast or formed on its inner surface, and at its upper part as seen in the drawing, such projections being for the purpose of supporting the case *A* on
50 the bearing *B*, which bearing is made to extend or slide directly underneath them, and to rest upon the axle or journal *D*. The cover plate *b* and the end *d*, of the case, are each provided with a semicircular recess or

groove for the reception of a semicircular
55 packing *e* or *e'*, of leather which is placed in them and made to surround the axle, in order to prevent the admission of dirt or extraneous matter into the box.

A portion of the hub of the wheel is seen
60 at *E* as placed outside of the box and on the axle.

In order to keep the top *a* and side plate
b in place each side plate *f* or *f'*, has a rectangular projection *g* from and cast upon
65 its top, and when the top is placed on the sides such projection is made to enter into a corresponding recess *h* cast or formed up into the top plate *a*. The checks *k* *k'* of the
box extends up above the top surface of the
70 sides *f* *f'*, in order to hold the top *a*, in place in directions transversely of the axle.

Fig. 5 shows a vertical central and longitudinal section of my improved box, as
made for outside bearings or those for jour-
75 nals which project beyond the outer surface of a wheel. Fig. 6, is a vertical central and transverse section of such box. Fig. 7, is a side view of it. In the said figures,
80 *A* denotes the case of the box, *B* is the bearing, *C* the axle, *D* the journal thereof, *F* is the slide plate such as is now in general use, and is known as the improvement patented
on the twenty-first day of November
eighteen hundred and forty-eight by John
85 Sightener.

a, is the movable top plate of the box, while *b*, is the cap or cover plate cast to it and making one piece with it.

c, *c'*, are the projections from the sides
90 *f*, *f'*, of the case, the slide plate *F*, being made to extend underneath and rest against the same, while the bearing *B* rests against the under side of such slide plate. The
checks are seen at *k*, *k'*.
95

I, is the sponge and oil reservoir, while *K*, is the leather packing extending around the axle. *g'* denotes the projection and *h* the recess as before described.

What I claim as my invention or im-
100 provement is—

To support the case *A*, or the bearing *B*, by projections *c*, *c'*, or analogous contrivances applied to its sides in combination with making the top plate *a* of the case
105 and the cap or side plate *b*, in one piece, separate from the rest of the case, and holding them in place by recesses and projec-

tions or analogous contrivances substantially as described, the whole being to enable me to entirely dispense with the use of the screws or screws or nuts in the construction of a railway car, axle box, and thereby
5 avoid not only the injurious consequences which frequently result from their becoming loose, but also the necessity of that care and attention on the part of the carman or

attendant so necessary when boxes are used, having any of their parts secured by screws.

In testimony whereof I have hereto set my
signature this twenty-fourth day of May 10
A. D. 1851.

OLIVER N. FRENCH.

Witnesses:

WILLIAM H. GRIGGS,
ISAAC W. DOW.