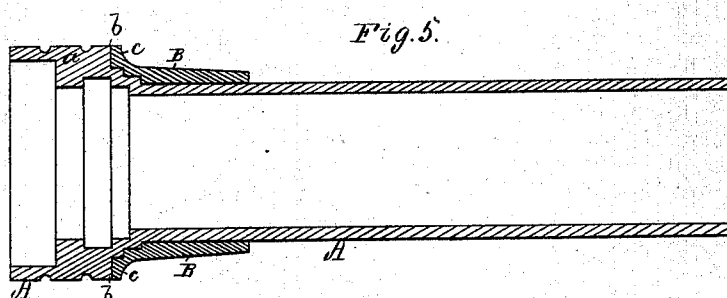
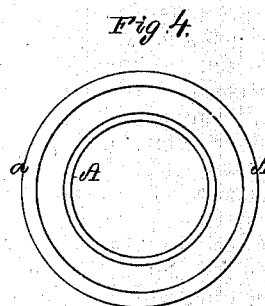
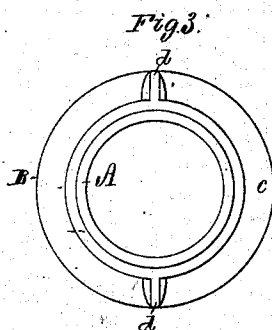
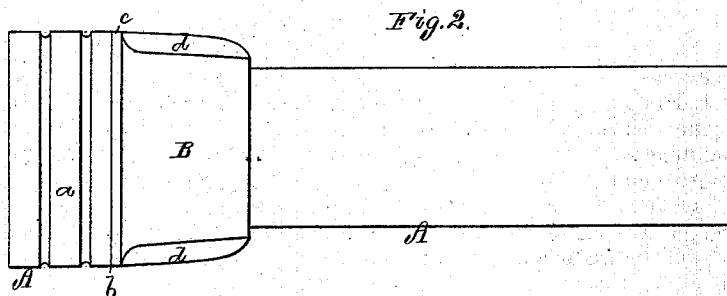
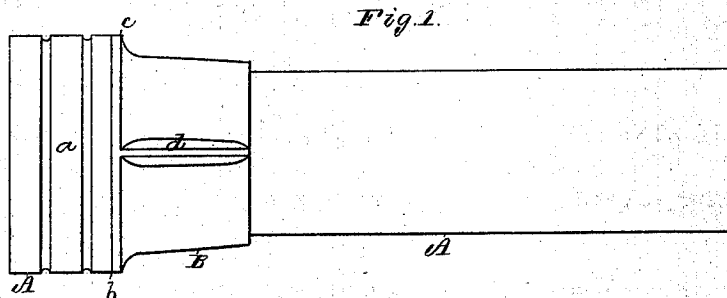


E. L. KINSLEY.
Axle-Boxes for Vehicles.

No. 146,394.

Patented Jan. 13, 1874.



Witnesses.
J. N. Piper
L. N. Moller

Edgar L. Kinsley
by his attorney
R. H. Eddy

UNITED STATES PATENT OFFICE.

EDGAR L. KINSLEY, OF CAMBRIDGEPORT, MASSACHUSETTS.

IMPROVEMENT IN AXLE-BOXES FOR VEHICLES.

Specification forming part of Letters Patent No. **146,394**, dated January 13, 1874; application filed November 13, 1873.

To all whom it may concern:

Be it known that I, EDGAR L. KINSLEY, of Cambridgeport, of the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Carriage-Wheel Boxes; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figures 1 and 2 are side views, Figs. 3 and 4 end views, and Fig. 5 a longitudinal section, of a wheel-box provided with my invention.

The sleeve or part A of the box is to be a wrought-iron tube, terminating at one end in a cylindrical head or enlargement, *a*, which, at its junction with the tube, has a shoulder, *b*, all being constructed and arranged as represented. There is combined with such tubular part or sleeve A a cast-metal collar, B, flanged at one end, as shown at *c*, and provided with wings or tongues *d d* extended from it, all being as shown. This collar B fits concentrically upon the sleeve or part A, and rests against the shoulder, the collar, preparatory to being placed upon such part A, being heated so as to expand it, in order that it may be driven thereon, and subsequently, by contraction while cooling, fit firmly to it.

In making a common wheel-box in one piece of metal with wings, it has generally to be cast in a mold, for to construct it wholly of

wrought-iron, and turn and finish it, is an expensive and difficult matter. The part A can be readily and expeditiously turned and finished in a lathe, the cast flanged collar being previously or subsequently fixed in such part A. In this way I can produce a wheel-box much cheaper than one of like form made wholly of wrought-iron and in one piece, with its flanges or wings.

I do not claim the axle-box described in re-issue Patent No. 4,594, dated October 17, 1871, and granted to David Dalzell, as such differs in construction materially from my axle-box. In the first place, it has no head and shoulder to the sleeve, as in my axle-box; and, secondly, it has no collar provided with wings, and driven, in a heated state, on the sleeve, and up to the shoulder thereof, and fixed thereon by contraction induced by reduction of temperature. In my axle-box I avoid the use of screws to hold the parts together.

I claim as my invention—

The axle-box A, made with the enlargement *a* and shoulder *b*, in combination with the separate cast-metal collar B, having wings *d d*, and fixed on part A, all substantially as and for the purpose set forth.

EDGAR L. KINSLEY.

Witnesses:

R. H. EDDY,
J. R. SNOW.