

W. A. LEWIS.

Carriage Axle.

No. 100,646.

Patented March 8, 1870.

Fig. 1

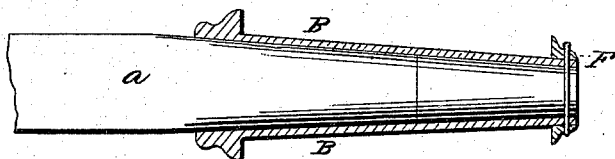


Fig. 2

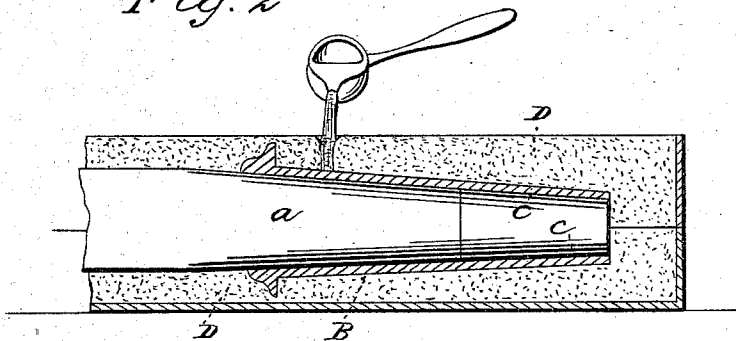
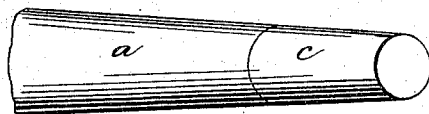


Fig. 3



Witnesses

Thos. L. Hutchins
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Inventor

William A. Lewis

United States Patent Office.

WILLIAM A. LEWIS, OF JOLIET, ILLINOIS.

Letters Patent No. 100,646, dated March 8, 1870.

IMPROVEMENT IN CARRIAGE-AXLES.

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

Be it known that I, WILLIAM A. LEWIS, of Joliet, in Will county, and State of Illinois, have invented a new and useful Improvement on a Carriage-Axle; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings making a part of this specification, in which—

Figure 1 is a longitudinal sectional view of the axle and skein;

Figure 2, a view of the same in the mold; and

Figure 3, a perspective view of the axle, with the thimble-core *c* on the end.

My invention consists in the use of a hollow tube of metal, *a*, for the axle, having the skein *B* cast on the ends, as I shall proceed to explain.

The ends of the axle *a* having first been swaged to taper at each end, the manner of casting or combining the skein *B* with the axle is as follows:

A pattern of the whole combined axle and skein being constructed of wood, the same is molded in the sand *D*. The same being removed, the hollow tube or axle *a* is put in its place, as shown in fig. 2, and the metal is poured in to cast the skein *B* on its ends, as shown in said figure.

To prevent the molten metal from running in to fill the hollow tube or axle *a*, I use a thimble-core, *c*, of metal, slipped on its ends, as shown in figs. 2 and 3, when it is put into the mold and the skein cast on the ends, as shown in fig. 2, and of course it remains in the skein, being of no detriment to the same.

The axle *a* passes in the skein *B* to near the middle, as shown in figs. 1 and 2, so as to give strength to the axle.

It is readily observed that the axle and skein are hollow the entire length, which makes the whole very light and strong.

I do not claim the idea of a compound axle as new and original, but desire to confine myself to the mechanical construction and combination described, so that what I consider I have invented is the combination of the three parts described in such a manner as I have set forth, so the whole will be hollow the entire length. The pattern by which the whole is cast has the necessary gather, so the pendent spokes will stand in any position required, and the same pattern being used for each axle, the same will cause the wheels to track exactly.

Having thus described my invention,

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

Claim.

The combination of the hollow axle *a*, skein *B*, and thimble-core *c*, constructed, operating, and arranged as and for the purposes set forth.

WILLIAM A. LEWIS.

Witnesses:

THOS. H. HUTCHINS,
H. LOWE.