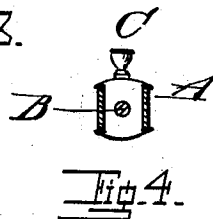
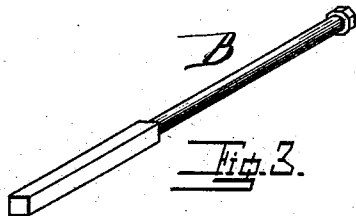
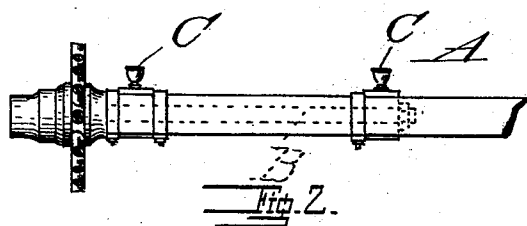
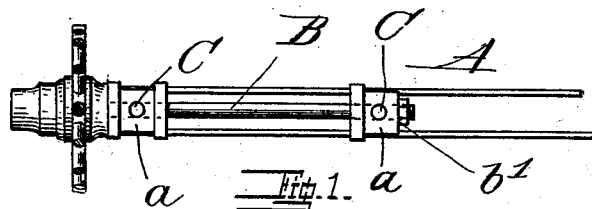


(No Model.)

T. S. FIELD.
VEHICLE AXLE.

No. 508,876.

Patented Nov. 14, 1893.



Witnesses
L. F. Hayden.
Edward P. Wood.

Thaddeus S. Field, Inventor

By Attorney
E. A. Woodson.

UNITED STATES PATENT OFFICE.

THADDIEUS S. FIELD, OF ATLANTA, GEORGIA.

VEHICLE-AXLE.

SPECIFICATION forming part of Letters Patent No. 508,876, dated November 14, 1893.

Application filed August 8, 1893. Serial No. 482,691. (No model.)

To all whom it may concern:

Be it known that I, THADDIEUS S. FIELD, a subject of the Queen of Great Britain, and a resident of Atlanta, in the county of Fulton and State of Georgia, have made certain new and useful Improvements in Vehicle-Axles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates as above stated to vehicle axles having however particular reference to that part of the axle intimately connected with the wheel, the invention consisting of certain details of construction herein-
after fully set up and shown in the accompanying drawings, in which—

Figure 1 is a plan of one end, approximately one-half of a complete axle. Fig. 2 is a side elevation of the part shown in Fig. 1, further showing the construction thereof. Fig. 3 is a perspective view of the axle-spindle, and Fig. 4 is a cross-section of the device between the bearing boxes.

In the figures like reference marks are uniformly employed in designating corresponding elements of construction in all the views.

A is the axle-tree which is composed of two flat bars of steel having considerable strength and resilience disposed edgewise vertically and parallel to each other. Between these spring-bars *a* are clamped bearing boxes *b*, two of same being near each end, one of each pair being at the extreme end and the others being a short distance therefrom toward the middle of the axle-tree. Running in these bearing boxes *b* is a spindle B which is round

on its inner half and rectangular on its outer end; whereby the hub of the wheel is so set on said spindle as to cause the spindle to revolve with the wheel, it turning as specified in its bearings in the bearing-boxes *b*. A nut *b'* on the inner end of each spindle prevents its withdrawal from its position in the bearing-boxes. Oil cups *C* are set, one in each bearing-box whereby the axle may be kept lubricated. By reason of the bars *a* being of resilient material this axle will spring laterally which allows the wheel to more easily surmount an obstacle, causes the jar incident to the first contact with an obstacle to be less, and allows, especially, the wheel to mount a street railway rail and pass over same without straining the wheel, this latter obviating a prolific source of accidents.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A spindle secured in blocks, said blocks being clamped between the extremities of two flat bars, and said bars so constructed and arranged as to have lateral resilience for the purpose specified.

2. The combination of two bars of resilient material disposed a short distance apart parallel longitudinally and placed on edge, bearing boxes clamped between each end of said bars, a spindle running in the bearing boxes of each end and a wheel secured to said spindles, substantially as and for the purpose specified.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

THADDIEUS S. FIELD.

Witnesses:

A. P. WOOD,
EDWARD P. WOOD.

Correction in Letters Patent No. 508,876.

It is hereby certified that Letters Patent No. 508,876, granted November 14, 1893, upon the application of Thaddieus S. Field, of Atlanta, Georgia, for an improvement in "Vehicle-Axles," were erroneously issued to said Field as sole owner of the invention; that said Letters Patent should have been issued to said *Thaddieus S. Field and George W. Dunn, jointly*, each being owner of one-half interest, as shown by the record of assignments in this office; and that said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 30th day of January, A. D. 1894.

[SEAL.]

JNO. M. REYNOLDS,
Assistant Secretary of the Interior.

Countersigned:

JOHN S. SEYMOUR,
Commissioner of Patents.