(No Model.)

A. PATERSON.

VEHICLE AXLE STOCK.

No. 397,609. Patented Feb. 12, 1889.

Fig. 1.

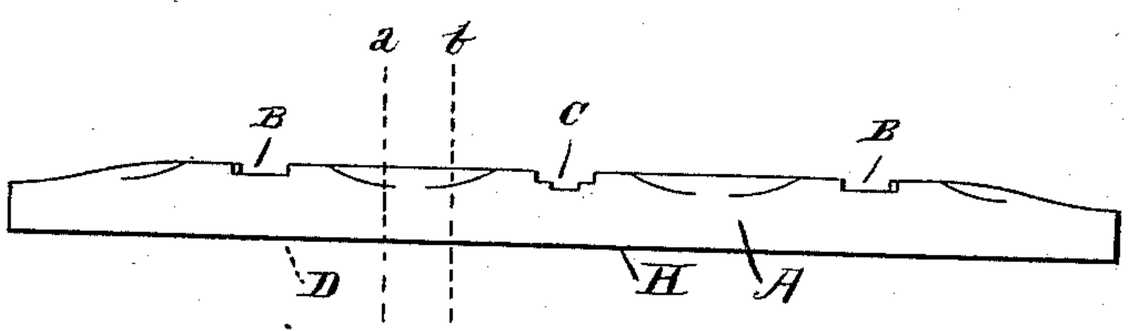


Fig. 2.

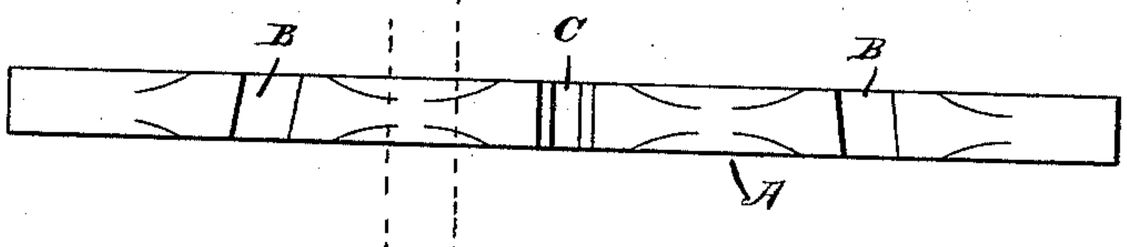
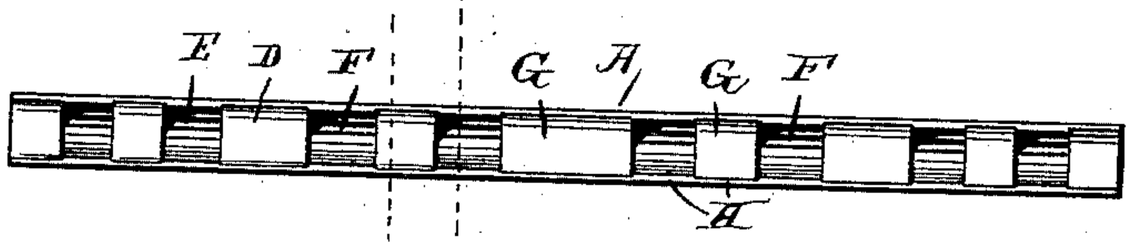


Fig. 3.



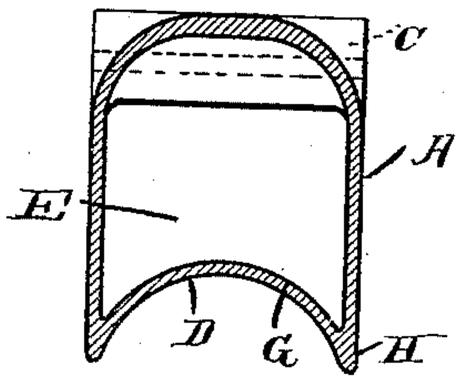


Fig. 4.

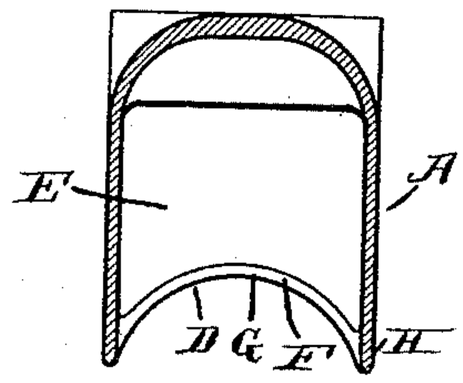


Fig. 5.

Witnesses:
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UNITED STATES PATENT OFFICE.

ANDREW PATERSON, OF McKEESPORT, PENNSYLVANIA, ASSIGNOR TO THE NATIONAL TUBE WORKS COMPANY, OF BOSTON, MASSACHUSETTS.

VEHICLE-AXLE STOCK.

SPECIFICATION forming part of Letters Patent No. 397,609, dated February 12, 1889.

Application filed August 1, 1888. Serial No. 281,613. (No model.)

To all whom it may concern:

Be it known that I, ANDREW PATERSON, of McKeesport, Allegheny county, Pennsylvania, have invented certain new and useful Improvements in Axle-Stocks, of which the following is a specification.

This invention pertains to improvements in metallic axle-stocks for use in connection with metallic axles, and will be readily understood from the following description, taken in connection with the accompanying drawings, in which—

Figure 1 is a front elevation of my improved axle-stock; Fig. 2, a plan of the same; Fig. 3, a bottom view of the same; Fig. 4, a vertical transverse section of the same upon an enlarged scale at line *a;* and Fig. 5, a vertical transverse section, on an enlarged scale, upon line *b*.

In the drawings, A indicates the body of the axle-stock, which is of the usual exterior form and constructed, preferably, of malleable or annealed cast-iron; B, the transverse notches in the top thereof for the reception of the hounds; C, the central transverse notch in the top for the reception of the reach; D, the lower surface of the axle-stock, forming a longitudinal groove whose cross-section corresponds with the body of the axle to which it is to be attached, the illustration showing the axle-stock as suited for cylindrical axle-bodies; E, the hollow interior of the axle-stock, as large as the proper thickness of walls will permit, the walls being as thin as is consistent with soundness of casting; F, ports through the bottom of the axle-stock, forming free openings outwardly from the hollow interior E, these ports being distributed at intervals along the entire length of the axle-stock; G, the bottom of the axle-stock, formed by the intermediate webs of metal between the ports F; and H, the bottom edges of the side walls of the axle-stock.

In casting these axle-stocks the core may be supported through the ports F. The ends are left closed by webs of metal, so that core-sand within the axle-stock will not work its way outwardly endwise to the spindles of the axle. The axle-stock is attached to the axle and gearing in the usual manner by clips, the lower surface, D, at the webs G fitting down upon the top of the axle, the bottom edges, H, of the side walls fitting neatly against the axle and capable of being bent into close conformation thereto. The alternating ports and webs at the bottom of the axle-stock permit of the axle-stock being thrown into proper engagement with the axle without the usual danger of springing the axle, and at the same time the form of the axle-stock is such as to secure superior stiffness. When the axle-stock and axle are united the joints of contact are essentially closed, owing to the self-conforming character of the bottom of the axle-stock.

Attempts have been made to produce an axle-stock formed of sheet metal in two or more pieces corresponding to the body A and the lower surface, D, of my construction. The longitudinal seams where these two pieces join each other were formed by an upturned roll on the lower piece clipping the edge of the upper piece. This construction was impracticable, as the complete axle-stock could not be given the peculiar characteristics of the rigid beam such as is required, and the roll-seam formed a dirt-catching projection and prohibited neat fitting by the inwardly-hammering process. Were such proposed sheet-metal axle-stock so constructed as to present a seamless edge where the upper piece joins the lower piece, as might be done by process of brazing or welding, then a thin lower edge would be secured capable of being hammered inwardly into neat smooth conformation with the axle, and at the same time the axle-stock structure being of integral formation would present the rigid beam-like characteristics so essentially required.

I disclaim axle-stocks formed of two pieces and presenting the characteristics of non-integrality at the lower edges, H.

I claim as my invention—

A hollow metallic axle-stock comprising the body A, having side walls, and the longitudinally-grooved lower surface or bottom, D, integrally united to the side walls of the body and forming the edges H, substantially as and for the purpose set forth.

ANDREW PATERSON.

Witnesses:
H. W. GRAY,
CHAS. J. ROESLER.