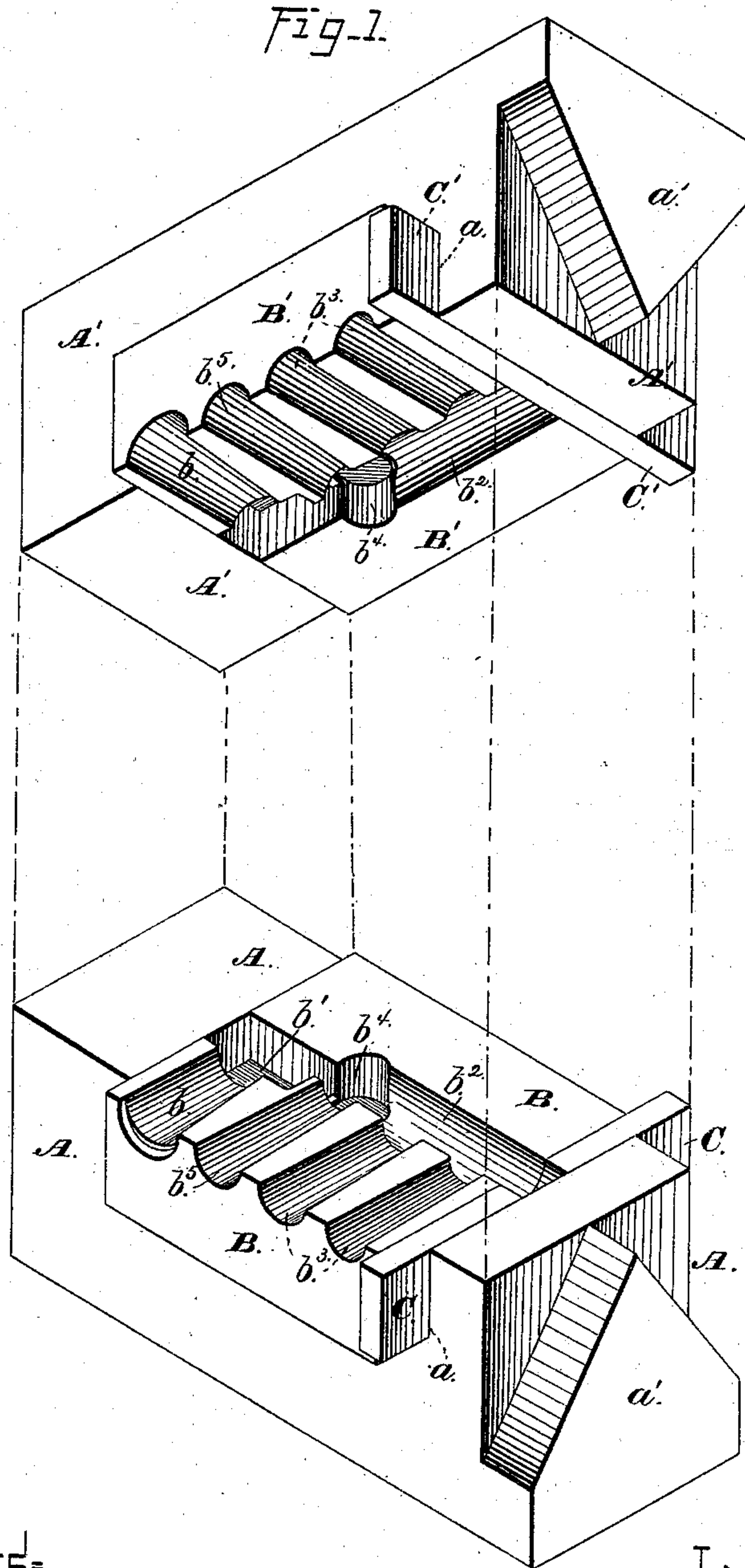


W. PEARCE.
Device for Making Pole Eyes for Carriages.
No. 235,805. Patented Dec. 21, 1880.



WITNESSES=

Jas. E. Hutchinson.
 Henry C. Hazard.

INVENTOR=

Wm. Pearce, by
 Geo. S. Prindle, his Att'y

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Fig. 2.

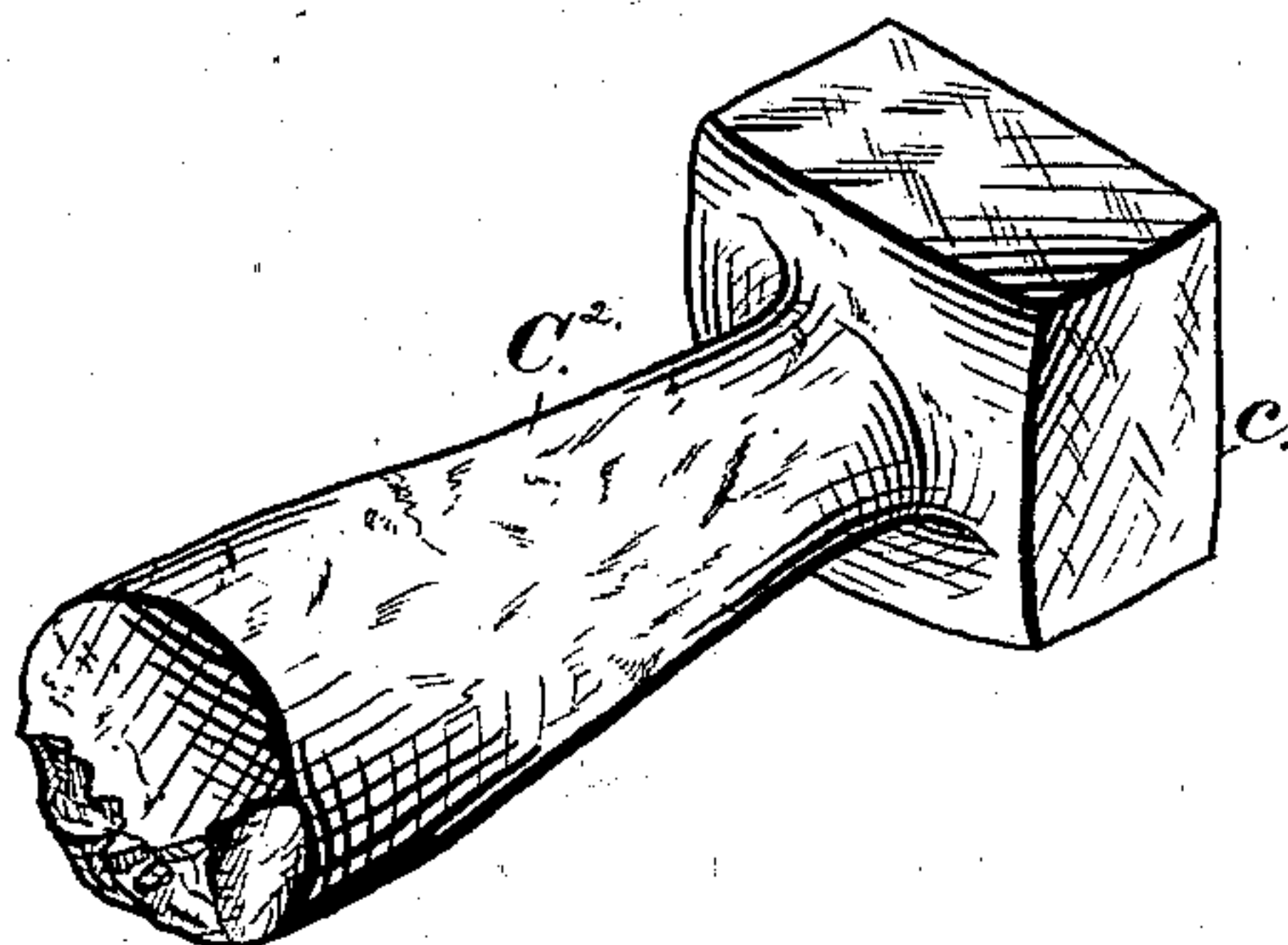
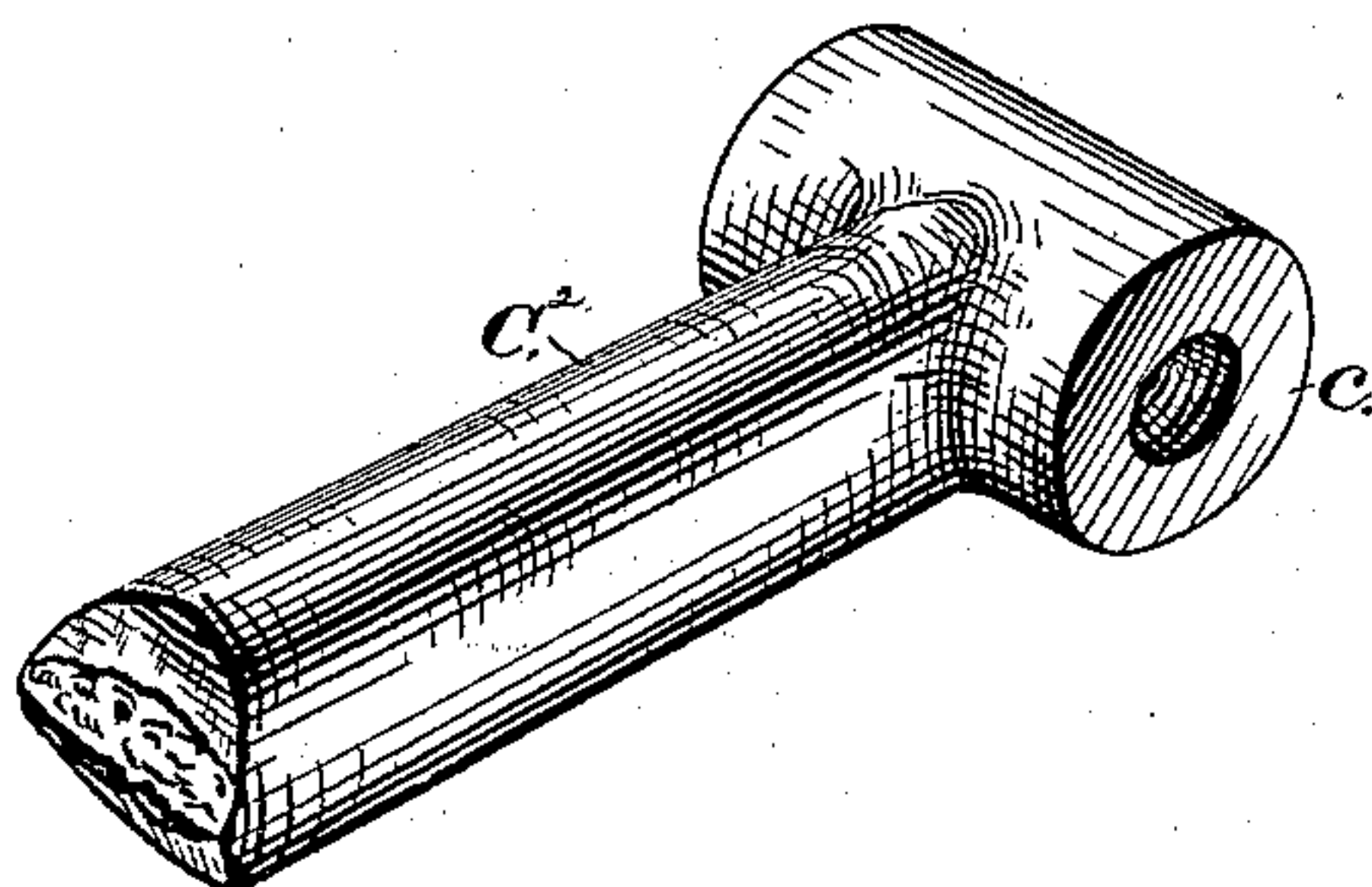


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM PEARCE, OF PLANTSVILLE, ASSIGNOR OF ONE-HALF TO MERIT N. WOODRUFF AND NORMAN A. BARNES, OF SOUTHTON, CONNECTICUT.

DEVICE FOR MAKING POLE-EYES FOR CARRIAGES.

SPECIFICATION forming part of Letters Patent No. 235,805, dated December 21, 1880.

Application filed February 27, 1880.

To all whom it may concern:

Be it known that I, WILLIAM PEARCE, of Plantsville, in the county of Hartford, and in the State of Connecticut, have invented certain new and useful Improvements in the Manufacture of Pole-Eyes for Carriages; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my dies separated from each other, and Figs. 2 and 3 are, respectively, like views of the blank and completed pole-eye.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to enable pole-eyes to be more easily and cheaply forged; to which end it consists in the series of dies used for forming the pole-eye from the bar, substantially as is hereinafter set forth.

In the annexed drawings, A represents a block or main die having, preferably, a rectangular form, and adapted to be fitted into the bed of an ordinary drop-press.

Within the upper face of the die A is a recess, a , which extends across the same and has vertical parallel sides, and into which is loosely fitted a detachable part or domino, B, that is secured in position therein by means of a wedge, C, placed between one of its ends and the contiguous side of said recess.

Near one end of the domino is provided a half-round groove, b , that extends transversely from one edge inward to and terminates within a recess, b' , said recess having a rectangular form with vertical sides and ends and a horizontal bottom, and being arranged at a right angle to said groove. Said groove b is largest at its outer end, and from thence inward decreases regularly in transverse dimensions.

From near the inner end of the recess b' a half-round groove, b^2 , extends lengthwise to the opposite end of the domino B, and at suitable points connects with one or more half-round grooves, b^3 , that extend transversely to the front edge of said domino, said latter grooves having less depth than said groove b^2 ,

and having a regularly-decreasing taper from their outer ends inward.

At the inner end of the groove b^2 , immediately adjacent to the recess b' , is a cylindrical recess, b^4 , which has a slightly-decreasing diameter from its upper to its lower end, and from which extends outward to the front edge of the domino B a half-round groove, b^5 , that, like the grooves b and b^3 , decreases in transverse dimensions from its outer end inward.

At one end of the block A is provided a Λ -shaped cutting-die, a' , that completes the lower die, which die is used in connection with an upper die, $A' B' C'$, that is the exact counterpart of that described, and is caused to impinge upon the same by a drop or other well-known means.

In the use of my dies I take a bar of square iron that has a diameter about equal to the length of the eye of the finished article, and after heating its end place it within the groove b of the lower die, its said end projecting into the recess b' , after which I cause the upper die to impinge upon said iron, and between the blows turn the latter one-fourth of a revolution, by which means, after a few blows, the metal contained within said groove is reduced in diameter and rounded, while its inner end maintains its size and shape, the result being the production of the blank C^2 . (Shown in Fig. 2.) The blank, properly heated, is now placed within the groove b^3 , with its head c contained within the groove b^2 , and, after one or more blows from the upper die, which has the effect to round the upper and lower sides of said head, is placed within the groove b^5 , its said head c being placed on end within the recess b^4 . By means of a few blows of the upper die, while the blank C^2 is transferred, alternately, from the grooves b^3 and b^2 to the groove b^5 and recess b^4 , the head c assumes the form of an eye and the shank becomes rounded, so as to produce the completely-forged pole-eye shown in Fig. 3, after which said article is cut from the bar by means of the cutting-dies a' .

The operation described is performed with great ease and rapidity, and to produce from

the bar a completed pole-eye requires but one heat.

Having thus fully set forth the nature and merits of my invention, what I claim as new

5 is—

The series of dies b and b' , b^2 and b^3 , and b^4 and b^5 , arranged in duplicate and combined substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 2d day of Jan- 10 uary, 1880.

WILLIAM PEARCE.

Witnesses:

A. M. LEWIS,

MARY J. LEWIS.