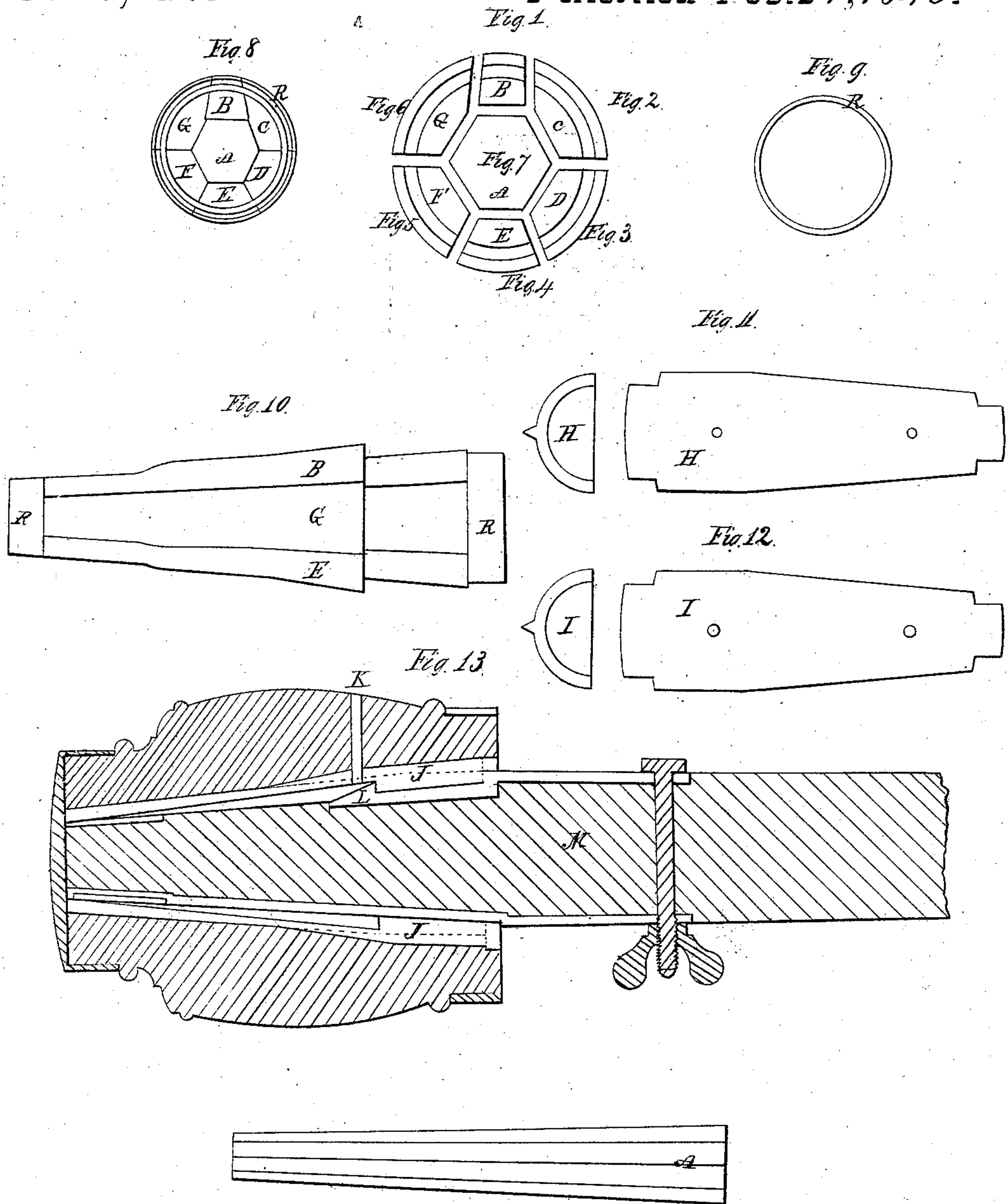


*J. Huntington,*  
*Making Carriage-Wheel Pipe-Boxes.*  
*N<sup>o</sup> 3,929.* *Patented Feb. 24, 1845.*



# UNITED STATES PATENT OFFICE.

JOHN HUNTINGTON, OF ZANESVILLE, OHIO..

IMPROVEMENT IN THE MODE OF MAKING METALLIC CORES FOR CHILLING CAST-IRON PIPE-BOXES FOR THE HUBS OF CARRIAGE-WHEELS, &c.

Specification forming part of Letters Patent No. **3,929**, dated February 24, 1845.

*To all whom it may concern:*

Be it known that I, JOHN HUNTINGTON, of Zanesville, in the county of Muskingum and State of Ohio, have invented a new and useful Improvement in the Mode of Making Cast-Iron Pipe-Boxes for Carriage-Wheels, and for other Purposes, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

The nature of my invention and improvement consists in casting the pipe-box upon a cast-iron core made in segments and bound together by iron bands, so that before the metal cools and contracts said core can be taken to pieces and extracted from the box, leaving it to cool gradually without any danger of breaking and imparting to the interior surface of the box a hardness that will resist the action of the file or chisel.

In order to cast the core, I prepare a set of patterns in wood of shapes corresponding to those represented in Figures 1, 2, 3, 4, 5, 6, 7, the central piece, 7, being a tapered polygon. With these patterns I form the impressions in the sand to cast corresponding figures. These being cast, I put them together and bind them with rings, forming the core, as represented in Fig. 8, R being the rings. A is the tapered polygon. B C D E F G are the segment-patterns.

With the patterns H I, Figs. 10 and 12, for the hub, I form the drag and cope. I then place the cast-iron core, Fig. 10, in the drag and put on the cope. I then pour in the melted

metal in the usual manner. Before the metal is cool I drive out the tapered polygonal center piece, A. I then drive inward toward the center one of the segment-pieces, B. The other pieces, C D E F G, will then fall asunder and must be removed from the interior of the box. The box J is then suffered to cool, and when cool it will be found to possess great accuracy of form, a good finish, and an extraordinary degree of hardness, which will resist friction a great length of time, and of course will have all the depressions and protuberances on its interior surface corresponding with the depressions and protuberances on the outer surface of the aforesaid metallic core, Fig. 10, necessary for admitting the lubricating matter introduced through an aperture, K, in the box, and an internal hook, L, fastened to the axle-tree M and reaching to near the middle of the box for holding or securing the box to the axle-tree without the use of a linchpin, screw, or cap, or any other fastening.

What I claim as my invention, and which I desire to secure by Letters Patent, is—

The mode or manner of casting pipe-boxes for carriage and other wheels by the use of the segment-core, Fig. 10, constructed and arranged and used in the way described, for chilling or hardening and finishing the interior surfaces of the boxes.

JOHN HUNTINGTON.

Witnesses:

WM. P. ELLIOT,  
A. E. H. JOHNSON.