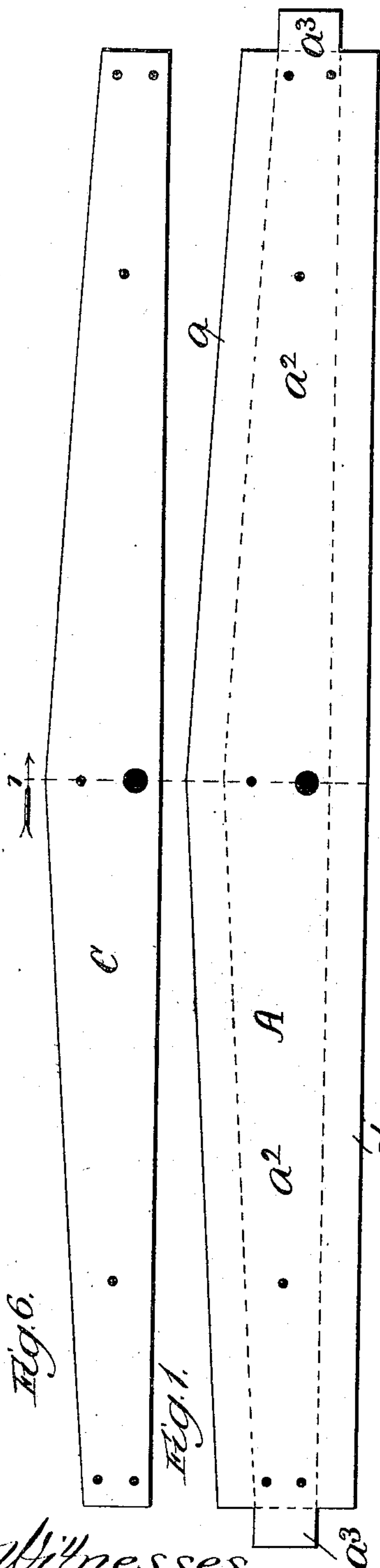


(No Model.)

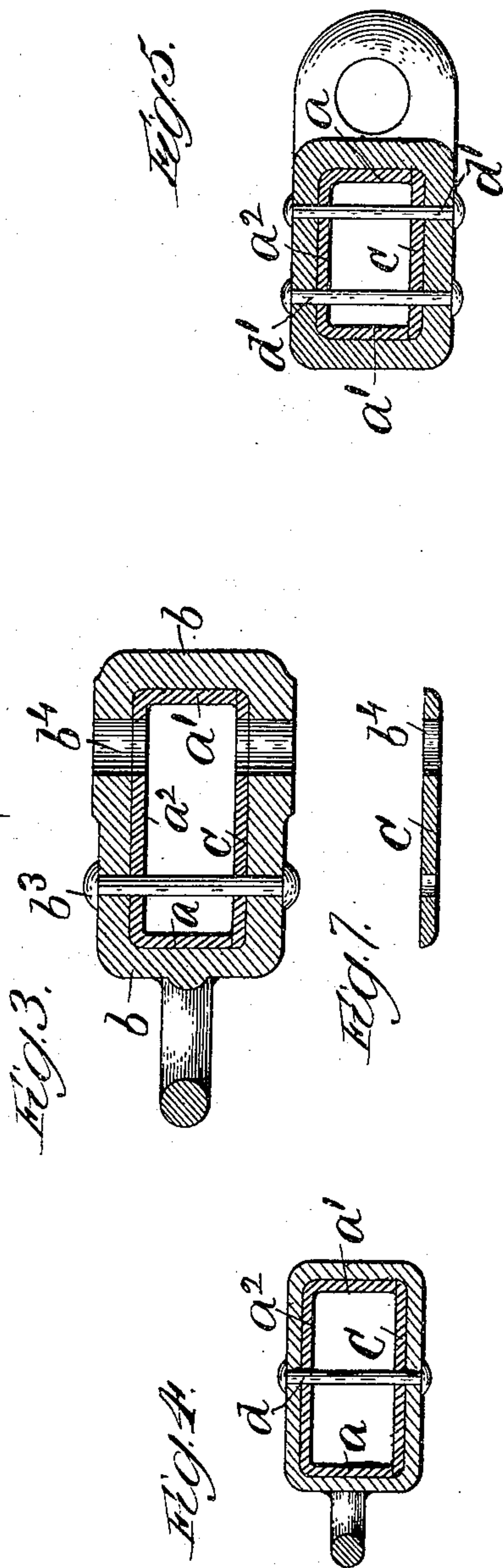
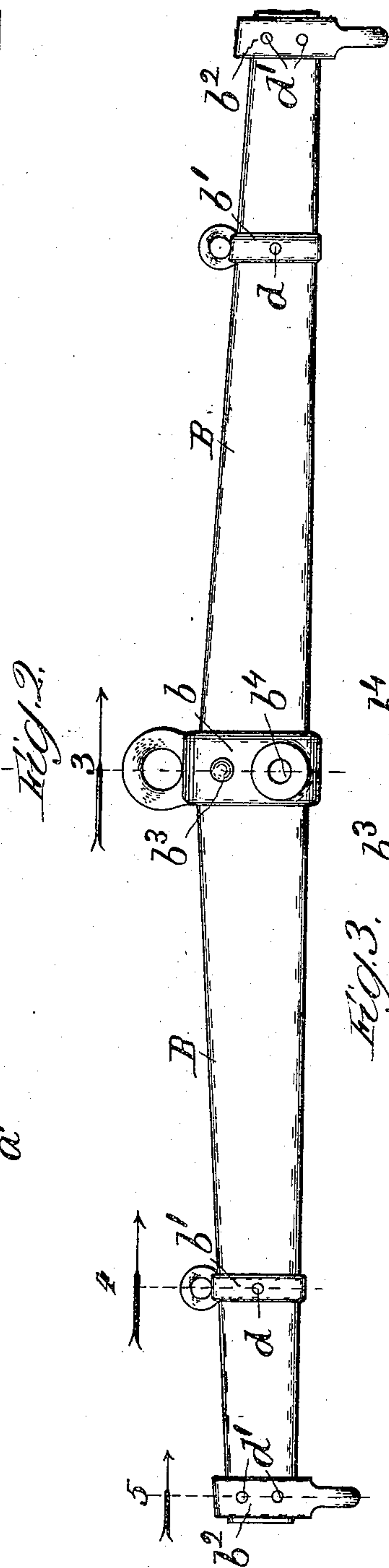
G. PEDERSEN.  
WHIFFLETREE.

No. 513,054.

Patented Jan. 16, 1894.



Witnesses  
 Geo. Gayles,  
 John A. Christianson.



Inventor;  
Geo. Pedersen.  
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Attys.

# UNITED STATES PATENT OFFICE.

GEORGE PEDERSEN, OF HOBART, INDIANA, ASSIGNOR TO THE SHOLL STEEL WHIFFLETREE MANUFACTURING COMPANY, OF SAME PLACE.

## WHIFFLETREE.

SPECIFICATION forming part of Letters Patent No. 513,054, dated January 16, 1894.

Application filed December 1, 1892. Serial No. 453,710. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE PEDERSEN, a citizen of the United States, residing at Hobart, in the county of Lake and State of Indiana, have invented certain new and useful Improvements in Whiffletrees, of which the following is a full, clear, and exact description, that will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to improvements in metal whiffletrees, and has for its object to provide an article of this character that is strong and durable and easily manufactured.

Figure 1 is an elevation of a blank which forms the top part and the two sides of the structure; Fig. 2, a plan or top view of the completed article; Fig. 3, a transverse section on line 3, Fig. 2, looking in the direction indicated by the arrow; Fig. 4, a transverse section on line 4, Fig. 2; Fig. 5, a transverse section on line 5, Fig. 2; Fig. 6, the part forming the under side of the structure; and Fig. 7, a transverse section of the same.

Referring to the drawings, A represents a flat blank piece of metal of the outline shown, which forms the top and the back, front sides and closing end flaps of the structure.

In the process of manufacture the blank A is first stamped out. The two edges  $a$   $a'$  are next turned at right-angles to the top part  $a^2$ , on the broken lines shown. The edge  $a$  forms the back, and  $a'$  the front sides of the completed structure. The blank is widest at the

center; the back line gradually narrowing in the direction of the respective ends so that the completed whiffletree B is of the greatest diameter at the center and gradually tapers toward the ends, as shown in Fig. 2. The flaps  $a^3$  are next turned inwardly to close the ends of the hollow structure, and the bottom plate C placed in position. The center clip  $b$  is then slipped over from the end and shrunk into place, as are the quarter-clips  $b'$   $b'$ , for the stay-chains, and the end-clips  $b^2$   $b^2$ . The center clip is also secured by a rivet-bolt  $b^3$  and is provided with an aperture  $b^4$  for the insertion of a king-bolt. The quarter-clips are also secured by a rivet-bolt  $d$ , and the end-clips by rivet-bolts  $d'$   $d'$  in each end, thus completing a structure combining strength and lightness, and firmly banding the parts together. The structure is of a rectangular form in cross-section, and so arranged as to bring the widest parts edgewise with reference to the line of draft.

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

The hollow metallic tree consisting of an integral top, sides and ends formed from a single blank as described, a bottom piece of substantially the same shape as the top, and binding clips surrounding and tightly embracing the tree body, substantially as described.

GEORGE PEDERSEN.

Witnesses:

WM. H. RIFENBURG,  
GEORGE STOCKER.