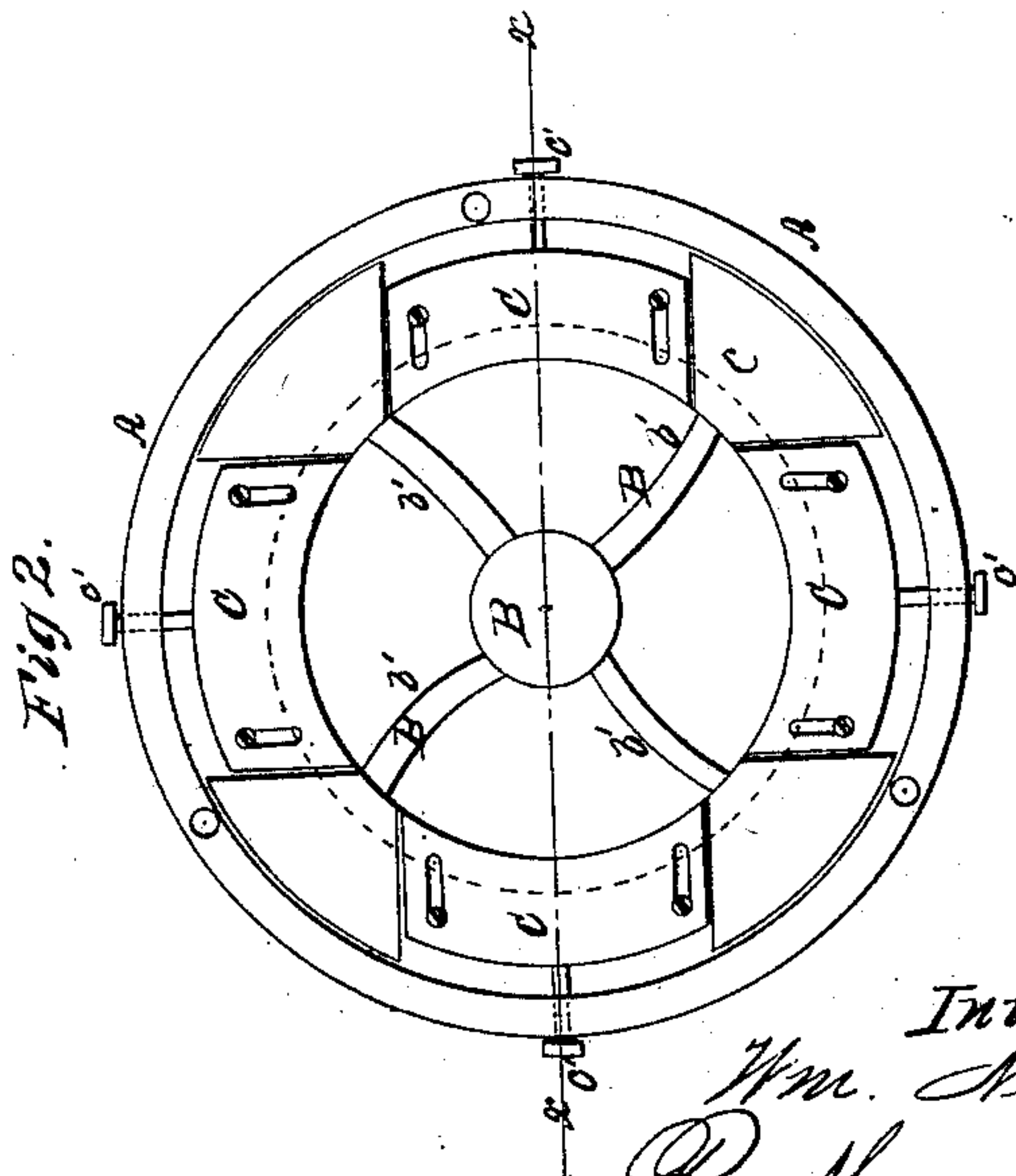
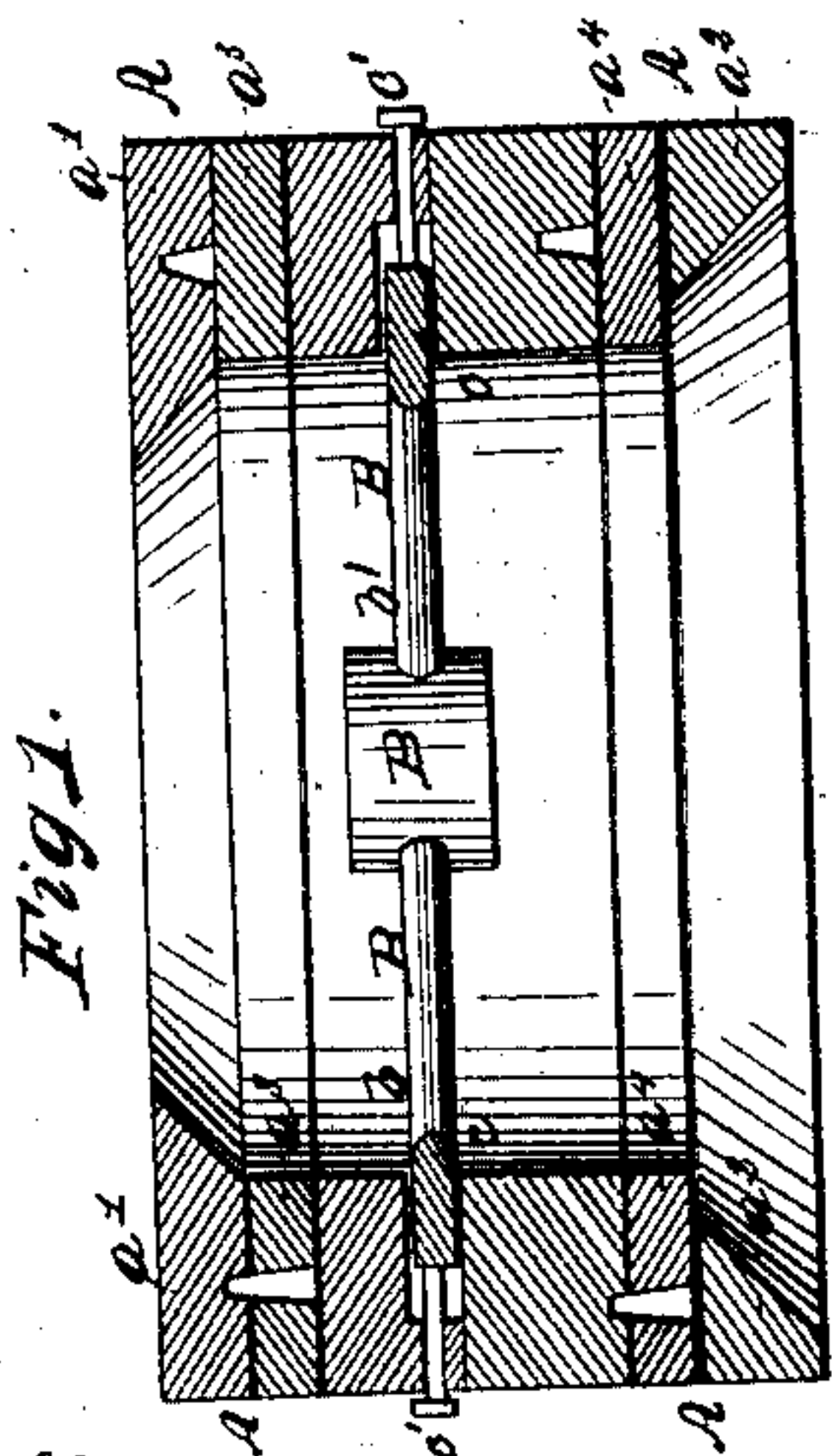
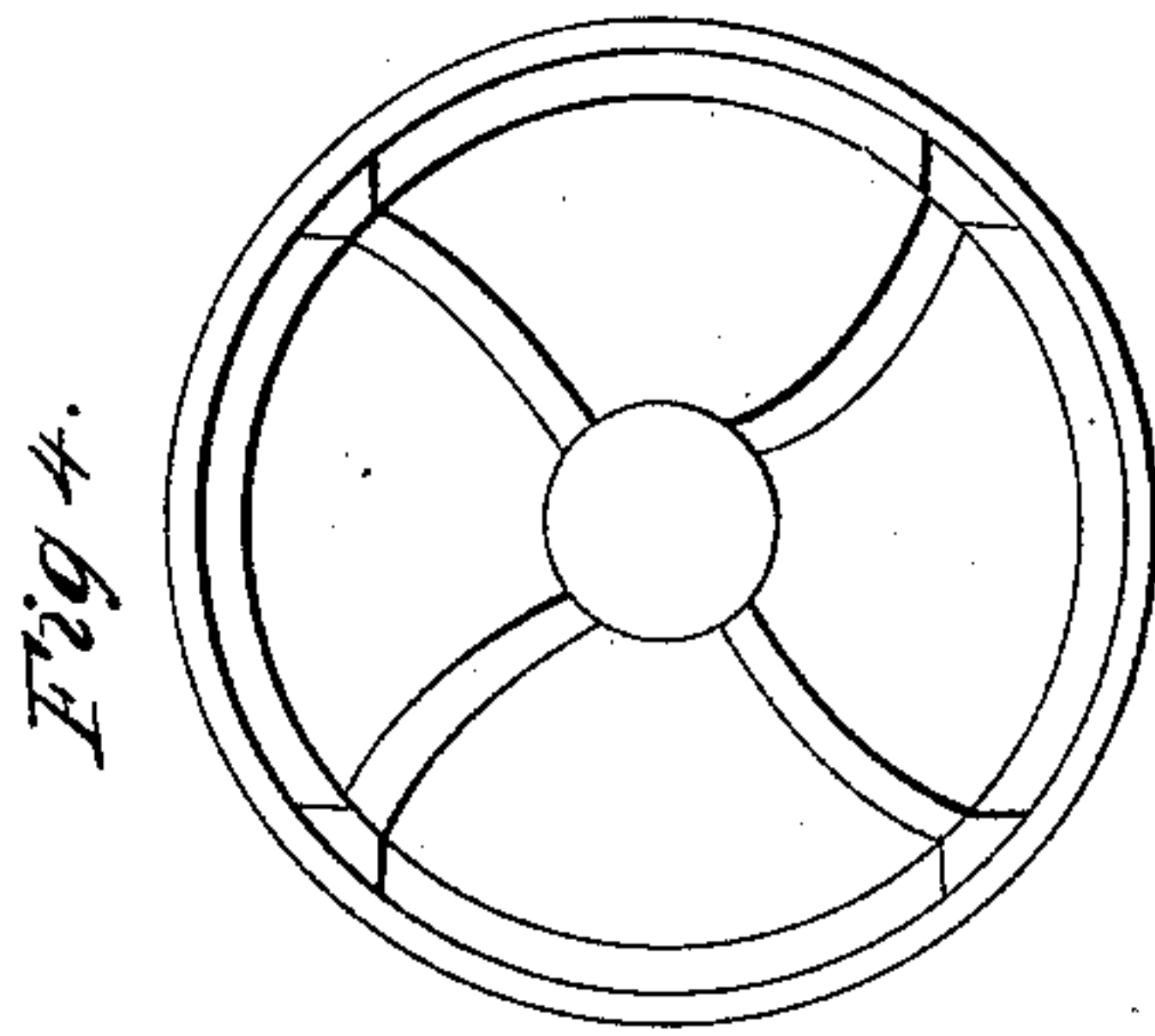
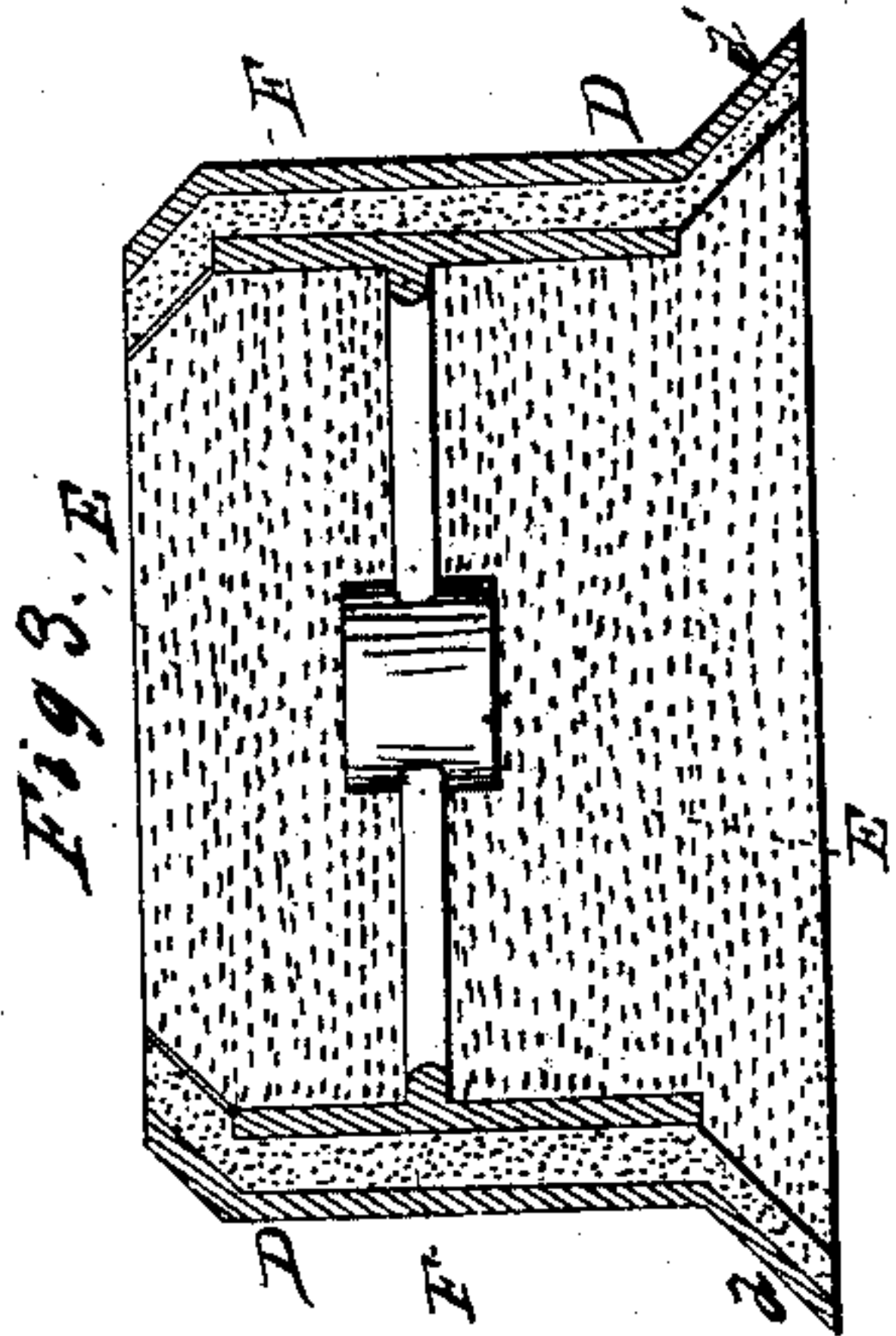


W. Neemes, Wheel-Molding Machine.

N^o 62,668.

Patented Mar. 5, 1867.



Witnesses.

Thos. French
F. A. Jackson

Inventor
Wm. Neemes
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Attorneys

United States Patent Office.

WILLIAM NEEMES, OF PITTSBURG, PENNSYLVANIA.

Letters Patent No. 62,668, dated March 5, 1867.

IMPROVEMENT IN MOULDING PULLEYS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM NEEMES, of Pittsburg, in the county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Moulding Pulleys; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical section of my improved box for moulding the arms and inside of the pulley, taken through the line *x x*, fig. 2.

Figure 2 is a bottom view of the top half of the said box.

Figure 3 is a vertical section of the outer case and sand mould when arranged for casting, and showing in red lines a cast pulley in the mould.

Figure 4 represents in red lines an end view of a pulley cast by my improved process.

Similar letters of reference indicate like parts.

My invention has for its object to furnish an improved process for casting pulleys, by means of which they can be cast accurately and much faster than by the ordinary process; and it consists, first, in the process of casting pulleys hereinafter more fully described; second, in the box slides and pattern for forming the mould for the inner side arms and hub of the pulley, when constructed and arranged as hereinafter more fully described; third, in the cast-iron case for forming the outer side or face of the pulley.

A is the box, in which is formed the mould for the inner side of the pulley; and B is the pattern for the arms and hub of the pulley. This box A should be formed in two or more parts separating at the centre, said parts being kept in their proper relative positions by dowelling pins, as shown in figs. 1 and 2. The drawings represent the pattern B, that forms the arms and hubs of the pulley, as being set wholly in the upper half of the box A, but I prefer to place it in the joint between the upper and lower halves, half the thickness of said pattern extending into each half of the box A. Upon the upper and lower ends of the box A are formed flanges or bevels, α^1 and α^2 , the upper bevel α^1 inclining inward, and the lower bevel α^2 inclining outward, as shown in fig. 1. The box A may be lengthened to form pulleys of any required length by inserting rings, α^3 and α^4 , of the required thickness, and securing them in place by dowelling pins, as shown in fig. 1. C are slides placed in the joint between the upper and lower halves of the box A, as shown in figs. 1 and 2. These slides are operated by rods, c' , extending out through the sides of the box, and are designed to form strengthening ribs around the inside of the pulley between the arms b' . In preparing the mould for casting, the lower half of the box A is inverted upon a board, into which the pattern B is let half its thickness. This half is then rammed with sand of the ordinary moisture. It is then inverted, and the upper half of the box is then placed in its proper position. This half of the box is then rammed with sand in the same way. The upper half is then lifted off and the pattern B removed. The core for the hub is then inserted and the said half of the box replaced in its former position. The slides C are then drawn out and the box A removed from the sand, leaving it in proper shape for forming the inner side arms and hub of the pulley. D is a cast-iron case for forming the outer side or face of the pulley. The upper and lower ends of the case D are bevelled to correspond with the bevel of the upper and lower ends of the box A. The sand is applied to and packed upon the inner side of the case D with the hand. The surplus sand is then shaved off with a tool or slicker, which is held until it rests upon the edge of the bevel d' . The inner surface may then be blackened and smoothed with a slicker bevelled to correspond exactly with the bevels of the interior sand core E. The outer case D is then placed upon the sand core E, with the bevels exactly fitting each other, as shown in fig. 3, and the mould, when dry, is ready for casting. Bars or strips may be placed along the inner side of the case D to assist in sustaining the sand F; and vent holes should be formed through the side of said case in the ordinary manner. If it is desired that the face of the pulley should be convex, the edge of the slicker, with which the face of the sand F is shaved and smoothed, should also be made convex, so as to give the desired form to the mould.

What I claim as new, and desire to secure by Letters Patent, is—

1. The box A, slides C, and pattern B, in combination with each other, when constructed and arranged substantially as described and for the purpose set forth.
2. The cast-iron case D for forming the outer side or face of the pulley, constructed as described, and used in conjunction with the sand moulds made in box A, substantially as herein described and for the purpose set forth.

WILLIAM NEEMES.

Witnesses:

J. McCRACKEN,
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