

A. Balding,
Core for Casting.
No. 100,585. Patented Mar. 8. 1870.

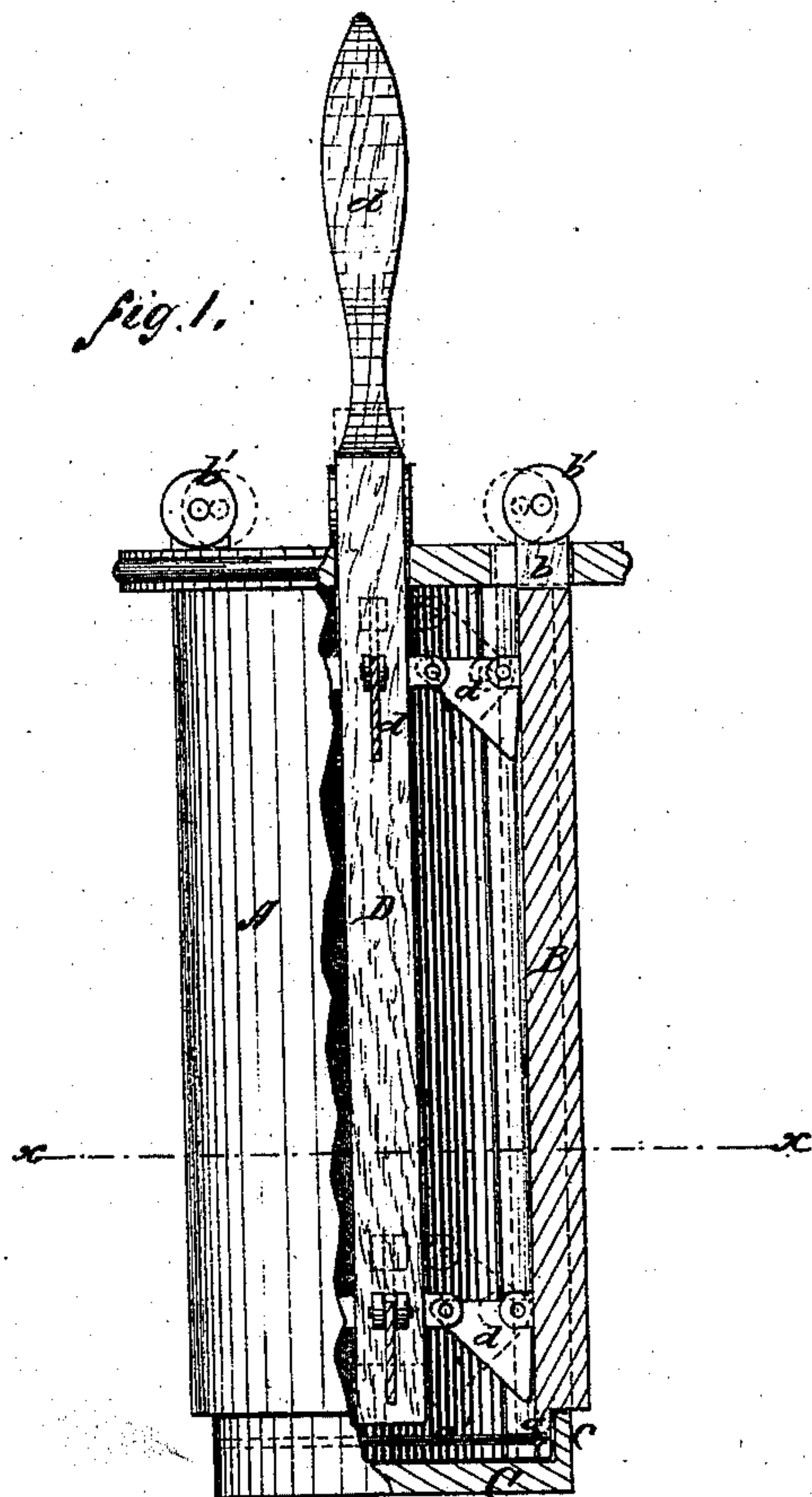
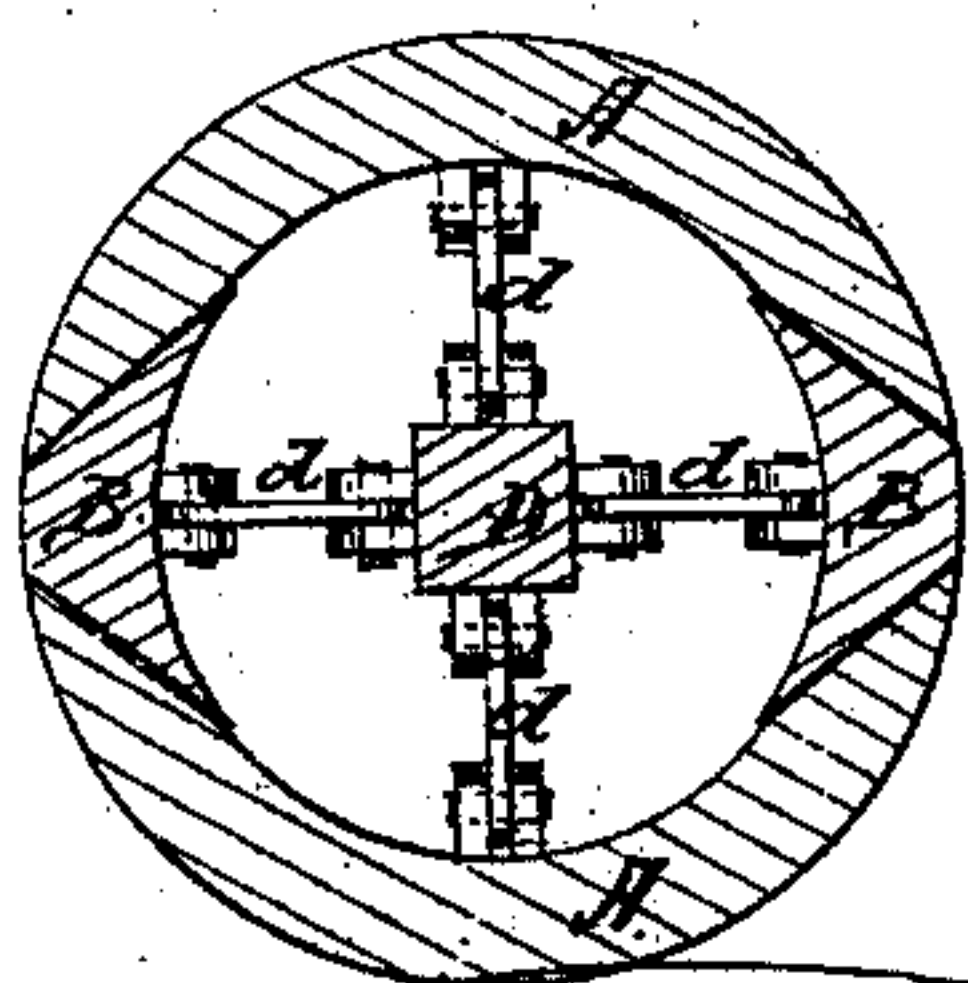


fig. 2.



Witnesses:

Victor Hagonaua

Chas. A. Pettit

Inventor:

A. Balding
per Hume & Co
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United States Patent Office.

ANSON BALDING, OF WHEELING, WEST VIRGINIA.

Letters Patent No. 100,585, dated March 8, 1870.

IMPROVEMENT IN EXPANSIBLE CORES FOR CASTING IRON, GLASS, &c.

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, ANSON BALDING, of Wheeling, in the county of Ohio, and State of West Virginia, have invented a new and improved Expansible Core for Casting Iron, Glass, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is partly a side and partly a sectional elevation, and

Figure 2 is a transverse horizontal section in the line *xx*, fig. 1.

This invention has for its object to enable the cores around which hollow articles are cast to be contracted after filling the mold, so as to facilitate the removal of the cores from within the casting. To this end,

The invention consists in a core, made in two or more separate longitudinal sections, whose adjacent interior edges are beveled away from each other; blocks with beveled edges placed in the intervals between the longitudinal sections; and an apparatus for expanding or contracting the core at pleasure by moving the beveled blocks outward or inward between the longitudinal sections.

In the drawings—

A A are the longitudinal sections with beveled edges, into which the core is divided.

B B are the beveled blocks placed between the sections, the blocks and sections being of the same thickness, and the inner and outer sides of each being turned on the same radius, so that the blocks and sections may form together a true hollow cylinder when the former are forced outward to their extreme limit, as is the case when the core is set within a mold and molten metal poured around it.

C is a foot-plate, with an upwardly-projecting flange, *c*, on which the core is placed when in the mold, the flange *a* of the core entering within the flange *c* and forming a tight joint.

The foot-plate is connected with the core by a rod, *c'*, passing horizontally and diametrically through the

flanges *a c*, in such a manner as not to interfere with the free play of the block B.

The foot-plate is needed only in glass casting, which is performed by thrusting the core into a mass of the molten metal, the foot-plate then serving as a protection to the interior of the core, as described.

D is a bar, whose upper end is provided with a handle, *d*, and which passes vertically through the middle of the cap of the core, and extends downward nearly to its bottom.

Four plates *d* near the top and four near the bottom of the core are jointed to the different sides of the bar D, and are also jointed one to each section and block in such a manner that, on pressing the bar D downward, the action of the plates *d* expands the core, and on drawing the bar upward, the same action contracts the core.

Necks *b* project upward from the top of each block B through the cap-plate, and rollers *b'*, pivoted upon the necks, roll on the cap-plate, when the blocks B move outwardly and prevent the latter from being drawn downward by the action of the bar and plates.

When the casting has cooled around the mold and shrunk after its fashion, it is only necessary to draw the bar B upward to contract the core and enable it to be readily drawn out of the casting.

Having thus described my invention,

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

1. The combination of the sections A, blocks B, bar D, and plates *d*, in the manner and for the object specified.

2. The combination of the block B with the rollers *b'*, in the manner and to the end set forth.

3. The combination of the core with the foot-plate C, in the manner and for the purpose explained.

ANSON BALDING.

Witnesses:

CHAS. A. PETTIT,
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