

H. Dickinson,

Casting Ingots.

N^o 67,171.

Patented July 30, 1867.

Fig. 1.

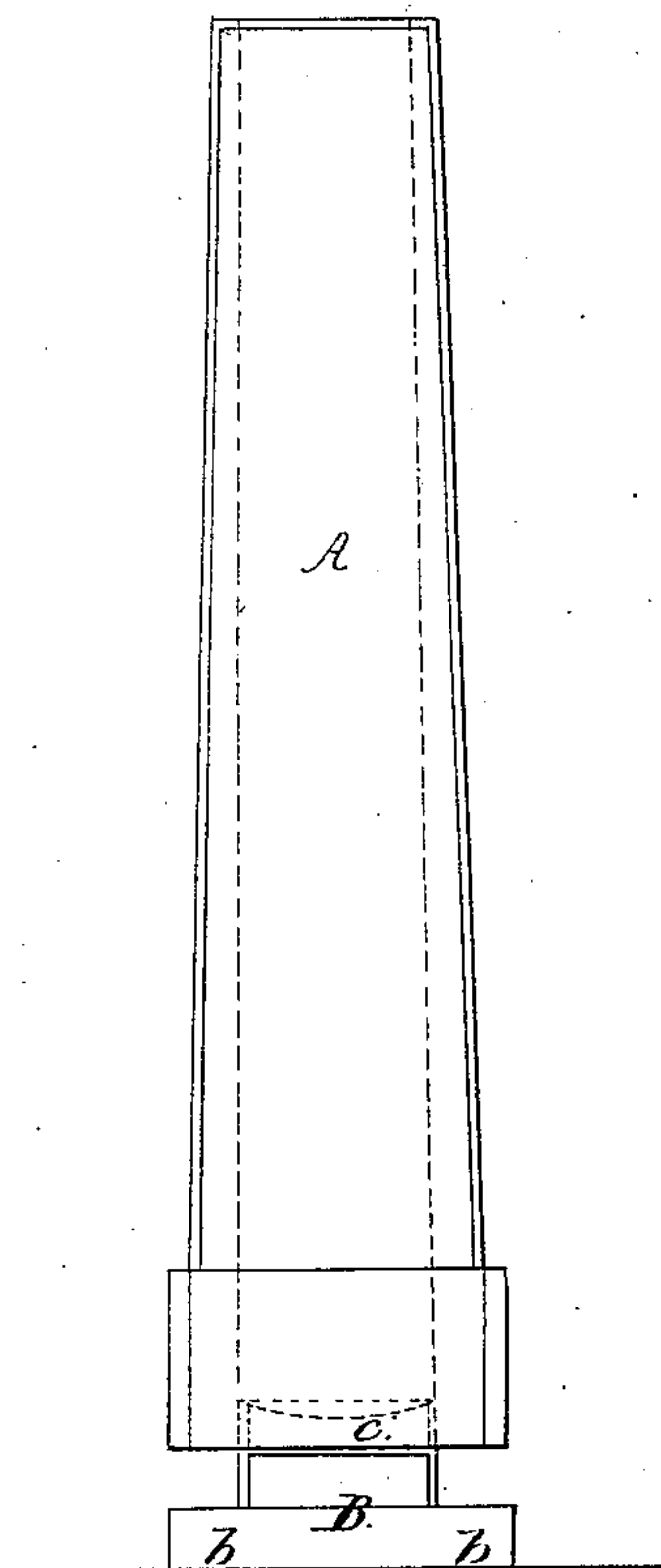


Fig. 3.

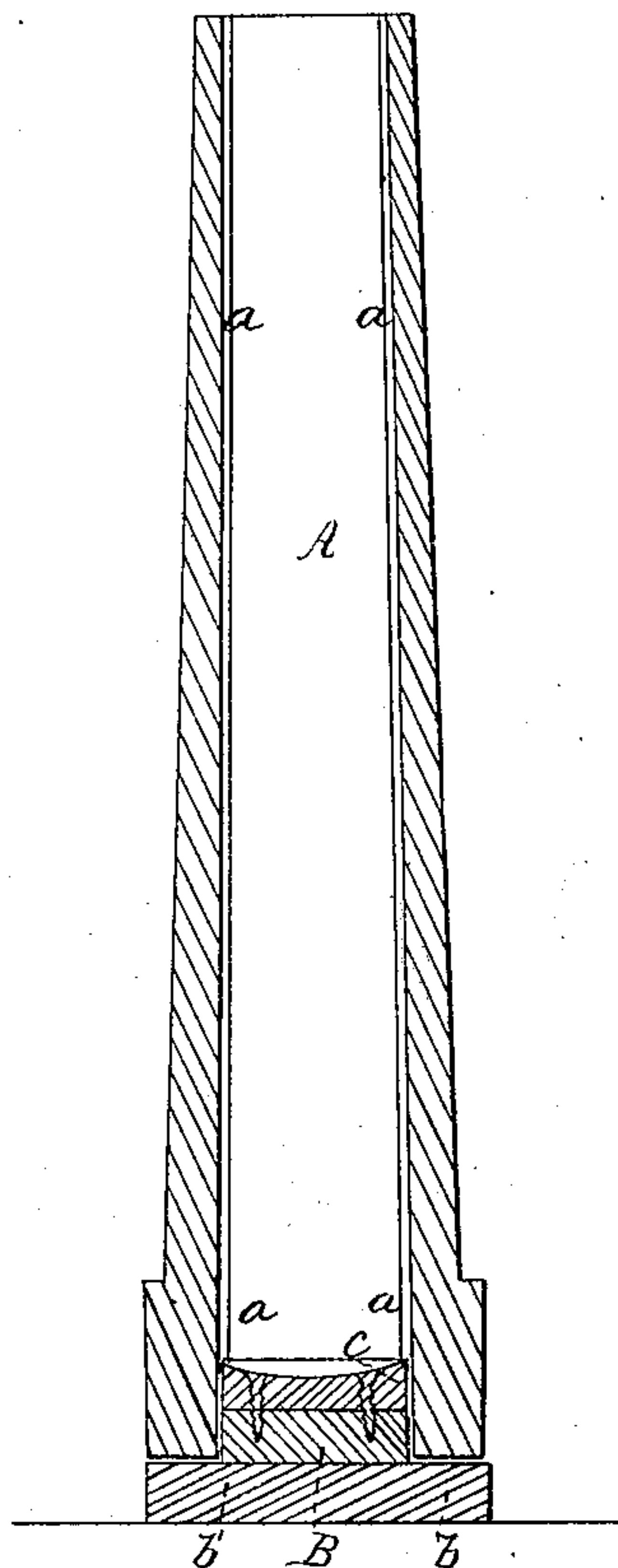


Fig. 2.

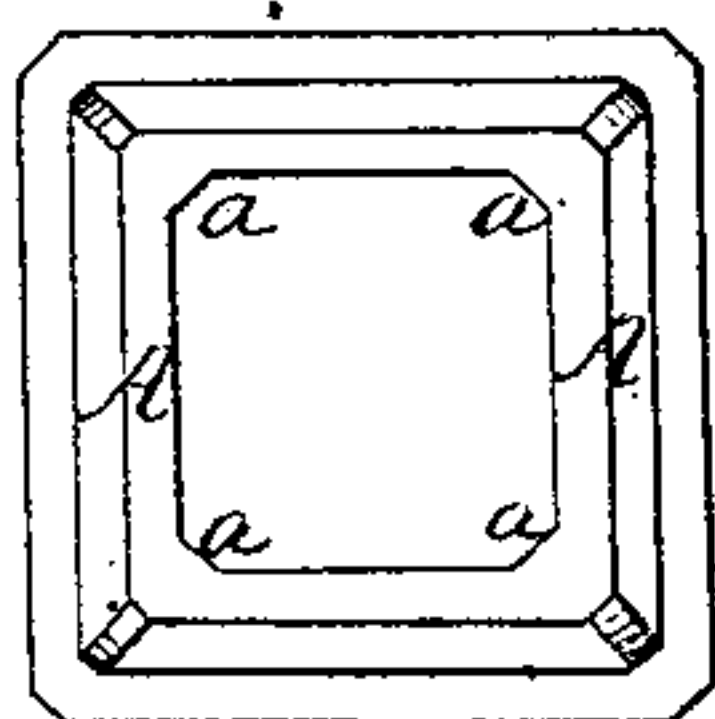


Fig. 4.



Witnesses;
A. Keice
Arno R. Douai.

Inventor;
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United States Patent Office.

HENRY DICKINSON, OF JERSEY CITY, NEW JERSEY.

Letters Patent No. 67,171, dated July 30, 1867.

IMPROVED MOULD FOR CASTING INGOTS.

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, HENRY DICKINSON, of Jersey City, county of Hudson, and State of New Jersey, have invented a new and useful improvement in Moulds for Casting Ingots; and do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 is a side elevation.

Figure 2, a top view.

Figure 3, a longitudinal and vertical section, and

Figure 4 a view of the movable bottom.

The nature of this invention consists in constructing a mould in which ingots are cast, of one piece, and in shape somewhat like an oblong box, open at both ends, one of said ends receiving a removable bottom; the object being to get a well-finished ingot, free from ribs and other defects incidental to moulds composed of two or more sections, as well as to reduce the cost of moulds as at present used for such purposes, and where much fitting is required.

In the drawings, A represents a square hollow shaft, into which the molten metal is cast, and having its angles *a a* blocked or filled in for the purpose of producing a casting free from burr or sharp corners. This shaft A tapers on the inside, being a little larger at the base than at the top, for the more easy discharge of the casting. B is the movable bottom, which is inserted in the base of the hollow shaft A preparatory to casting the ingot. Said bottom being also adjustable, may partially or entirely enter the hollow shaft (see figs. 1 and 2) during the operation of casting the ingot. This bottom has a flange, *b*, which abuts against the base of the hollow shaft A, when it is desired to use the mould in such position, (see fig. 3.) The part B, it will be observed, extends up into the hollow shaft, and has a piece, *c*, screwed on its top, which, on becoming worn from use, can be easily removed and replaced by a new one.

The hollow shaft and the removable bottom above described constitute my improved ingot-mould, which I intend to use in casting steel ingots, and whose advantages I will describe by a comparison with the mould as at present used for such purpose.

It is well known to persons conversant with casting steel ingots, that the old moulds or flasks now used, being composed of two sections, dividing on a line passing through the centre, require nice and frequent fitting; that these sections are clamped together by iron bands and wedges preparatory to casting the ingots, and, although they require more stock than my mould, will warp and spread apart, the consequence being that the ingots cast in such moulds will produce ribs on the casting, which must be chipped and filed off, causing much expense and loss of labor. Besides this, the bottom in the old mould being part of and cast with the sections, when it becomes worn from use cannot be replaced, rendering the entire mould worthless. My improved ingot mould obviates these difficulties; being cast in the form of an oblong box it does not produce seams or ribs on the casting, is more stable, is not liable to split or warp, requires less stock, does not require any fitting whatever, and is more convenient for smoking it preparatory to use. Furthermore, the removable bottom of my mould being surmounted with a case-hardened top plate, *c*, will last much longer than the old cast-iron bottom, and can, on becoming worn, be easily removed and replaced by a new one; thereby rendering the mould as good as new. By changing the form of my mould, while being cast, square, flat, and polygonal ingots may be produced; and I find from experience that while I produce a superior ingot mould, it can be manufactured for fifty per cent. of the cost of the old ingot mould.

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

The above-described construction and arrangement of a mould for casting steel and other ingots, substantially as and for the purposes set forth.

In testimony whereof I have hereunto set my signature this 1st day of June, A. D. 1867.

HENRY DICKINSON.

Witnesses:

A. NEIL,

ARNO R. DONAL.