

H.M. Bird,
Pipe Mould,
No. 63,781, Patented Apr. 16, 1867.

Fig: 1.

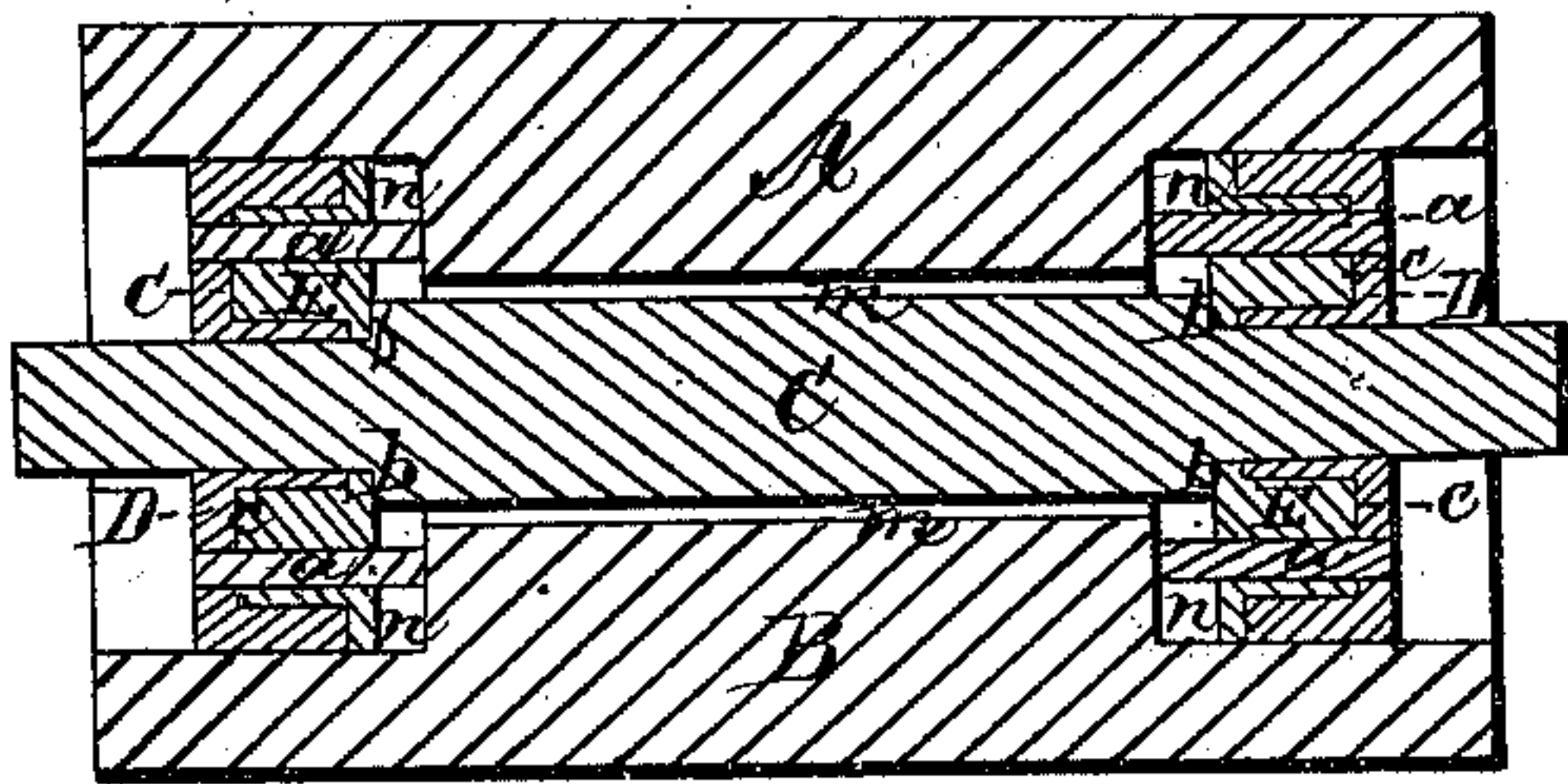


Fig: 2.

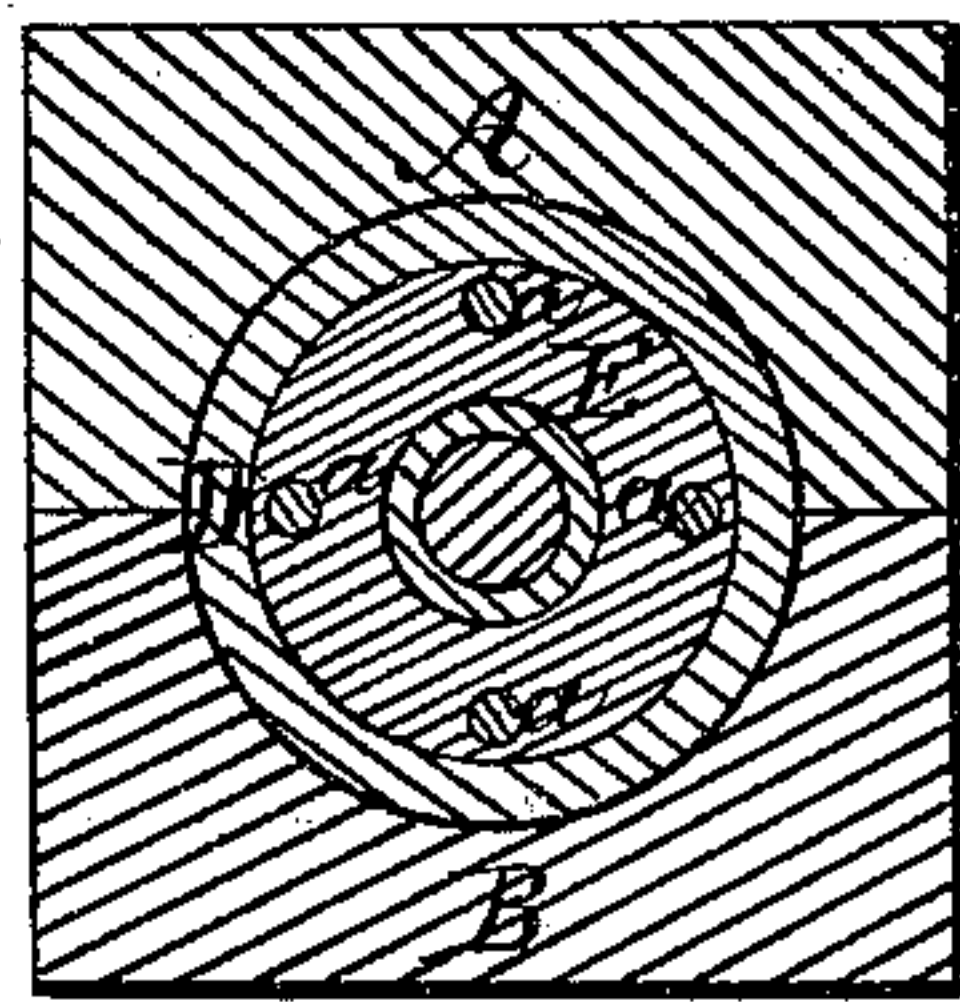


Fig: 3.

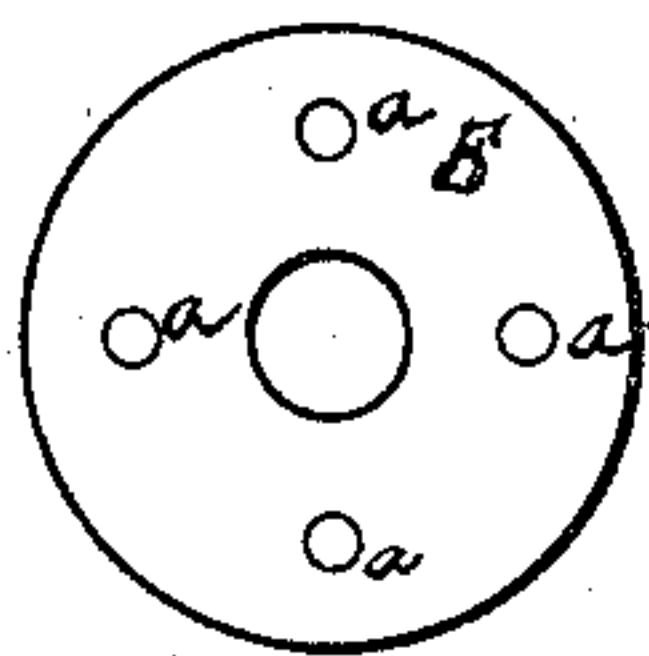
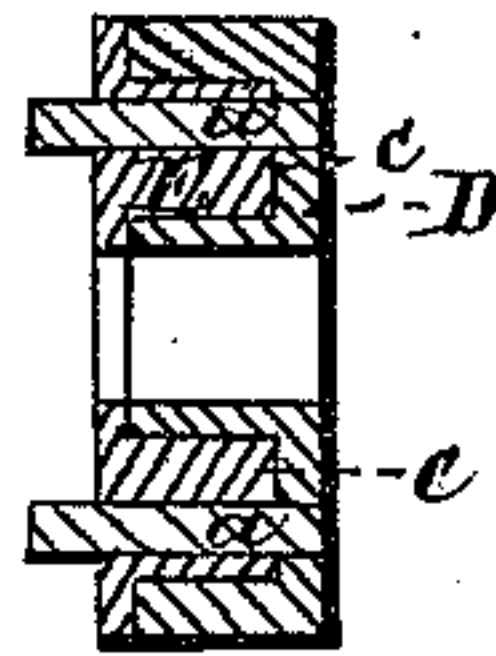


Fig: 4.



Witnesses.
Geo. W. Andrews,
Samuel C. Piper.

Inventor.
Henry M. Bird,
Per R. W. Sedy Atty

United States Patent Office.

HENRY M. BIRD, OF CAMBRIDGEPORT, MASSACHUSETTS.

Letters Patent No. 63,781, dated April 16, 1867.

IMPROVED MOULD FOR PIPE-CASTING.

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

TO ALL PERSONS TO WHOM THESE PRESENTS SHALL COME:

Be it known that I, HENRY M. BIRD, of Cambridgeport, in the county of Middlesex, and State of Massachusetts, have invented a new and useful improvement in Moulds for Casting Pipes with connecting flanges at their ends; and I do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a longitudinal and vertical section of a mould provided with my invention.

Figure 2 is a transverse section of it, taken through one of its core-supporting and moulding-sand-holding boxes or flasks.

Figure 3 is an inner end view; and

Figure 4, a vertical and transverse section of one of the core-supporting and moulding-sand-holding boxes or flasks.

The nature of my invention consists in the combination of two or any other suitable number of such boxes or flasks with two halves of the pipe mould and the core thereof.

I am aware that in a mould for casting a flanged pipe solid squaring blocks of metal, provided with cores to form the bolt holes in the flanges, have been employed for the purpose of squaring or finishing the ends of the pipes and forming bolt holes therein in the process of casting the pipe, such being the subject of the United States Patent No. 53,690, granted to George T. Sheldon on or about April 3, 1866, and therefore I make no claim thereto. When such squaring blocks of metal are used they operate to suddenly chill and harden the surfaces of the metal when cast against them, and thus they prevent such surfaces from being afterward easily filed or turned by tools.

The purpose of my invention is to accomplish the casting of the ends of the pipe without joint-marks diametrically across them, and without at the same time chilling or hardening the metal more than that of the body of the pipe. This I accomplish by means of metallic core-supporting flasks, provided with chambers to receive and hold masses of sand, loam, or other proper moulding material, such, for instance, as is employed to form the matrix for casting the body of the pipe.

In the drawings, A and B exhibit the two halves of the mould, which may be supposed to be formed of moulding sand or material packed into "flasks," or otherwise arranged. The core for forming the bore of the pipe is represented at C as extending through the body matrix *m* and into (so as to be supported by) the two cylindrical boxes D D, arranged within the mould halves A B in manner as shown in fig. 1. Each of the boxes D contains an annular chamber, *c*, arranged in it concentrically, and being open at the inner end of the box, such chamber being to contain a mass, E, of moulding material packed therein and formed with a plane face to rest against the shoulder *b* of the core and form the face of the flange. Several bolt-hole cores, *a a*, may extend from the box D through the mass E of the moulding material and the space or flange matrix *n*. To support the flasks D D in the parts A B of the mould I extend each of the flange matrices endwise, and place the said flasks in such extensions as shown in fig. 1, the boxes or flasks having diameters or sectional forms in correspondence with those of the said extensions. The contents, E E, of the core-supporting flasks D D, complete with such flasks the means for supporting and duly centralizing the core and forming the ends of the pipe unchilled when cast. I would remark that when a pipe is to be cast with one or more flanged branches there should be one of the core-supporting flasks to each branch as well as to either or each of the ends of the main trunk of the pipe.

What I claim as my invention or improvement is—

The combination as well as the arrangement of two or any other suitable number of the flange-finishing and core-supporting flasks D, provided with masses E of moulding sand or its equivalent, with a pipe mould, A B, and its core C, the whole being substantially as and for the purpose described.

HENRY M. BIRD.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.