

J. F. ANDREWS.

Molding-Flasks for Cement and Clay Pipes.

No. 153,923.

Patented Aug. 11, 1874.

Fig: 1

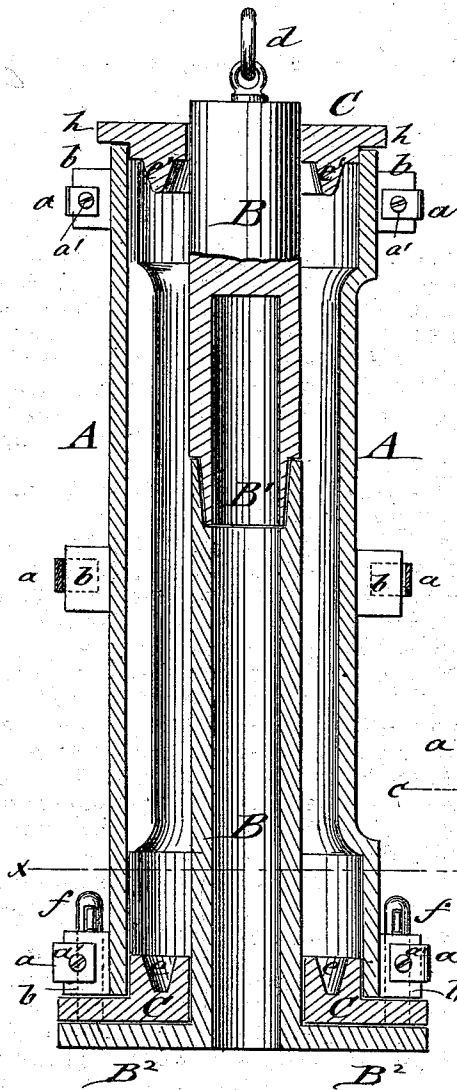


Fig: h.

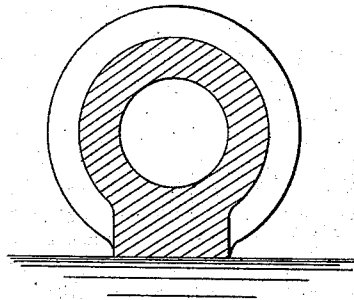
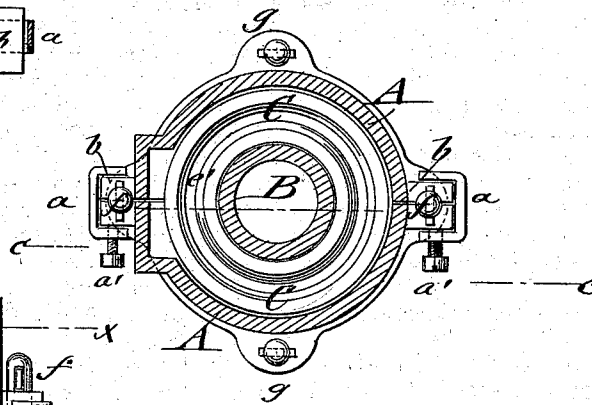


Fig: 3.



WITNESSES:

*Chas. Nida*  
*Chas. Nida*

INVENTOR.

*J. F. Andrews*  
BY *Munn & Co*

ATTORNEYS.

# UNITED STATES PATENT OFFICE.

JOSEPH F. ANDREWS, OF NASHUA, NEW HAMPSHIRE.

## IMPROVEMENT IN MOLDING-FLASKS FOR CEMENT AND CLAY PIPES.

Specification forming part of Letters Patent No. **153,923**, dated August 11, 1874; application filed June 13, 1874.

*To all whom it may concern:*

Be it known that I, JOSEPH F. ANDREWS, of Nashua, in the county of Hillsborough and State of New Hampshire, have invented a new and Improved Molding-Flask for Making Cement and other Pipes, of which the following is a specification:

In the accompanying drawing, Figure 1 represents a vertical central section of my improved molding-flask for making cement and other pipes taken on the line *c c*, Fig. 3. Fig. 2 is a vertical transverse section of the pipe produced thereby; and Fig. 3, a vertical transverse section of the mold or flask on the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts.

The invention relates to the construction of the core, as hereinafter described.

In the drawing, *A A* represent the exterior sections of the flask, which are firmly fastened together by clamps *a* and set-screws *a'*. The core *B* is constructed of two parts, which are connected horizontally by a tapering socket-joint, *B<sup>1</sup>*, the lower or bottom part of the core having a large flange, *B<sup>2</sup>*, which is secured to the bed-plate of the mold, so as to support the same in upright position. The upper or top part of the core *B* has a staple, *d*, by which the same is hoisted from the mold by suitable power when the pipe is completed.

The cylindrical form of the core and its circular joint enable its parts or sections to be withdrawn from the mold without injury thereto.

One of the end sections, *C*, of the mold has

a circular tapering groove, *e*, the other a projecting tapering tongue, *e'*, of corresponding shape for producing the joint. The lower end section *C* is placed between the end of the outer flask and the flange *B<sup>2</sup>* of core *B*, and fastened by bolt and key *f* to the perforated lugs *b* of the flask sections. The core flange *B<sup>2</sup>* is, in similar manner, keyed to ears *g* of the end section *C*.

The cement, or other material for forming the pipes, is filled in from the top, the end section being then placed on the top end and pressed on the material after the mold is completely filled. After the pipe is sufficiently dry, the upper core section is drawn out by suitable hoisting mechanism, the lower core being drawn out in the opposite direction by hoisting end section, pipe, and flask, which produces, by the draft of the core sections from the center, a smooth bore of equal diameter the full length of the mold. The top and bottom sections remain on the pipe until the ends are perfectly dry, when the outer flask and end sections are removed.

I do not claim a core made in two detachable parts, nor a flask whose sections are held together by lugs and clamps.

What I do claim is—

The cylindrical core *B*, made in two detachable parts or sections, united by a tapering circular joint, *B<sup>1</sup>*, and the lower section having the base *B<sup>2</sup>*, all as shown and described.

JOSEPH F. ANDREWS.

Witnesses:

GEORGE H. KNOWLES,  
EDWIN F. KNIGHT.