C. M. Peirce Jr.,

Drain Pipe Moulds,

No. 2,157,
No. 33,161,

Patented Aug. 27, 1861.

Fig. 1.

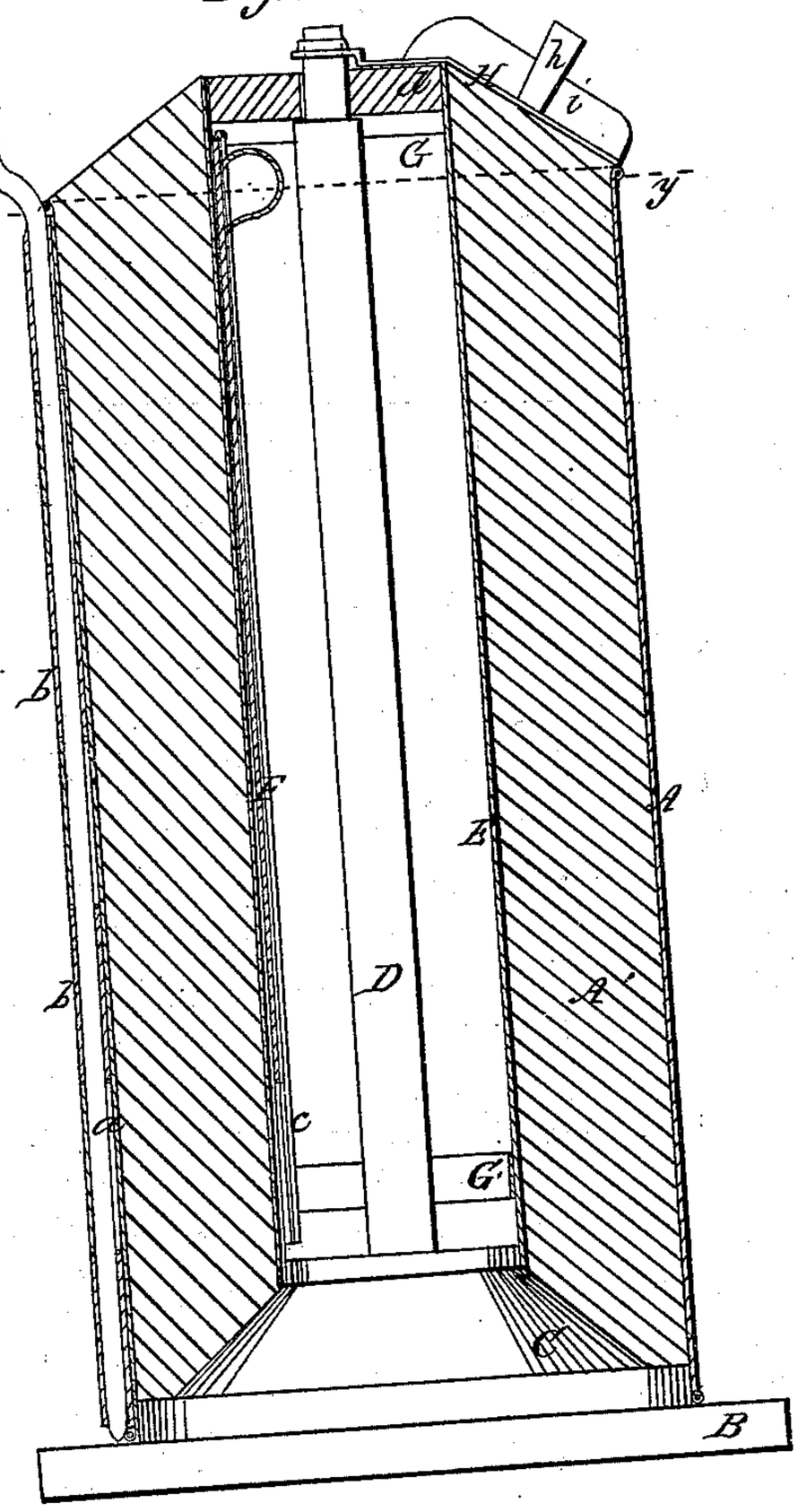


Fig. 3.

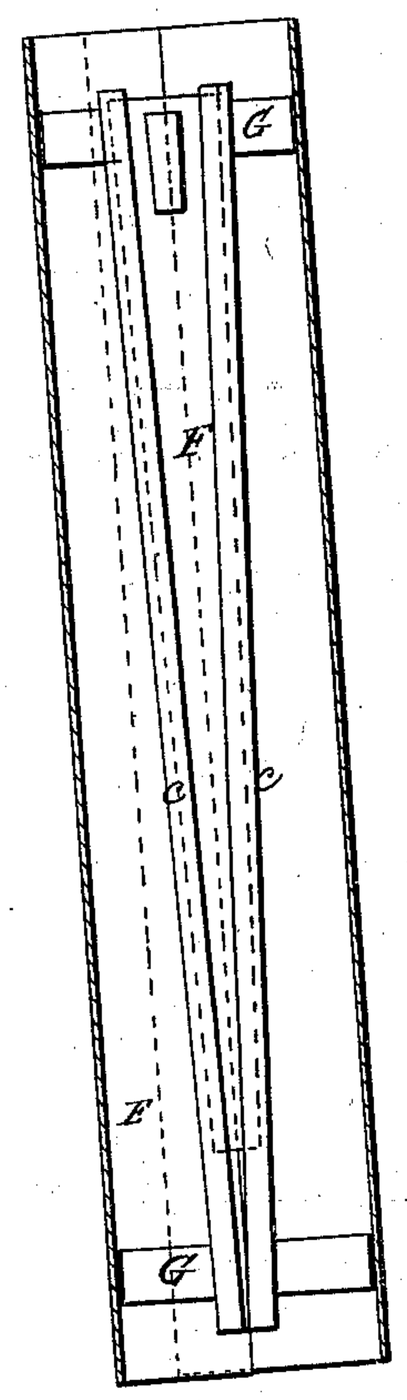


Fig. 2.

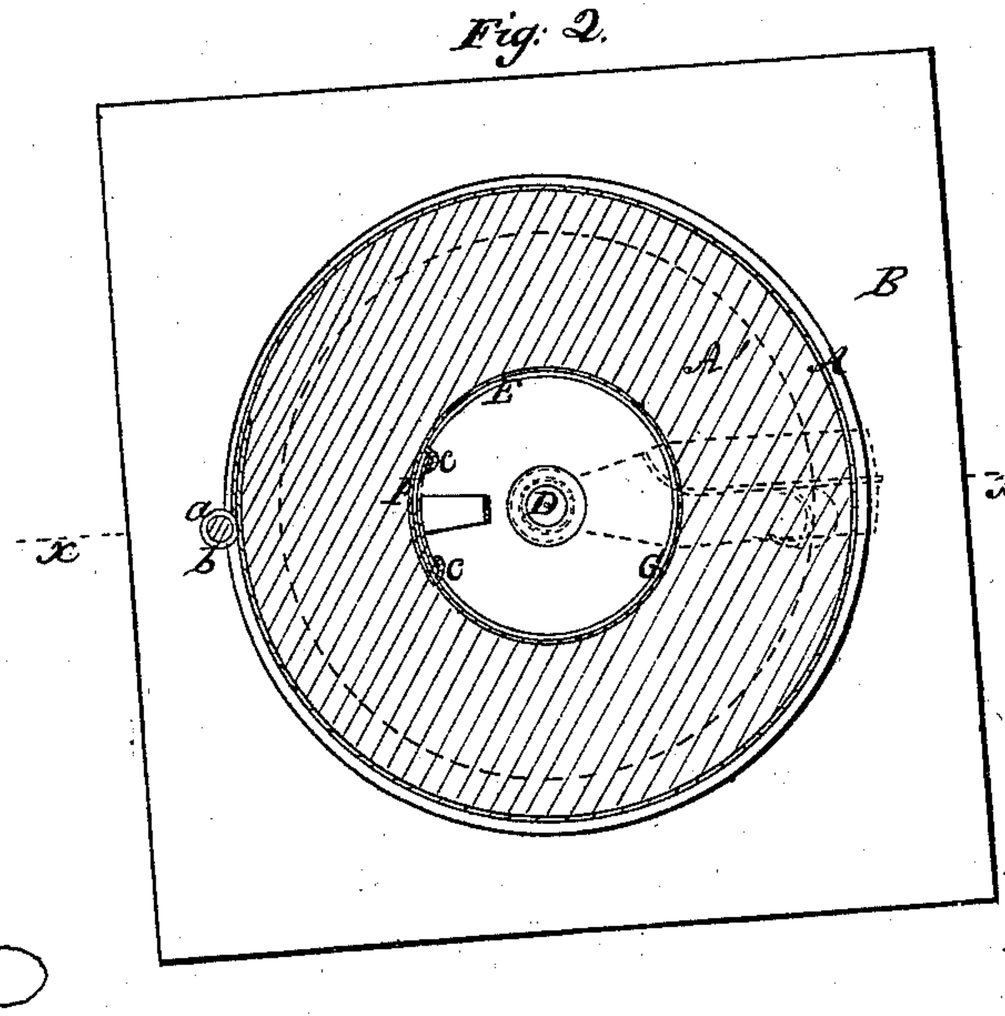
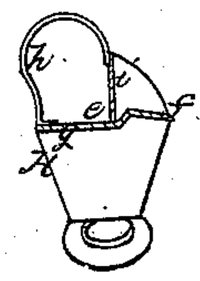


Fig. 4.



Witnesses:

J. W. Coombs

G. W. Reed

Inventor:

Chas M. Peirce Jr
per Munn & Co
Attorneys.

UNITED STATES PATENT OFFICE.

CHARLES M. PEIRCE, JR., OF NEW BEDFORD, MASSACHUSETTS.

IMPROVEMENT IN MOLDS FOR EARTHEN OR CEMENT PIPES.

Specification forming part of Letters Patent No. **33,161**, dated August 27, 1861.

To all whom it may concern:

Be it known that I, CHARLES M. PEIRCE, Jr., of New Bedford, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Molds for Cement or Earthen Pipes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a vertical section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a horizontal section of the same, taken in the line *y y*, Fig. 1; Fig. 3, a detached vertical section of the core, and Fig. 4 a detached transverse section of the smoothing-knife.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to facilitate the removal or withdrawal of the core after the pipe is formed, and also to obtain a core which will admit of being varied in diameter. so that pipes of different internal diameters may be molded with one and the same core.

The invention has also for its object the ready smoothing or forming of the convex end of the pipe by means of a tool or implement, hereinafter fully described.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a cylindrical case, which is constructed of a piece of sheet metal bent in cylindrical form and joined or connected at its edges by a rod *a*, fitting in loops or eyes *b*, said case having a certain degree of elasticity, so that it will expand when the rod *a* is withdrawn. The case A forms the exterior of the mold, and said case is fitted uprightly on a base B, which is provided with a conical flange or ledge C, as shown clearly in Fig. 1. D is a rod, which is inserted vertically in the flange or ledge C and extends upward a trifle above the case A.

E represents the core of the mold, which core, like the case A, is constructed of a piece of sheet metal bent in cylindrical form. The core is provided internally with two guides *c c*, between which a key or wedge F is fitted. The guides *c c* have an oblique position relatively with each other, the obliquity of the guides corresponding to the taper form of the key or wedge.

The core E is provided internally with springs G G, which have a tendency to keep it contracted to its smallest dimensions as regards diameter, and hence, by forcing inward the key or wedge, the core may be expanded to the required diameter.

The lower end of the core E is fitted on the upper end of the flange or ledge C, the rod D having a central position within it, and a circular block *d* is placed or fitted in the upper end of the core, the block *d* corresponding in diameter with the upper end of the flange or ledge C. It will be seen, therefore, that different-sized bases B, as well as different-sized blocks *d*, must be used, according to the diameter of the core, and it will also be seen that after the pipe A′ is formed the core E may be readily removed by withdrawing the key or wedge F, as the core will then collapse, the block *d* and base B being previously removed.

Previous to the removal or withdrawal of the core E, the upper or convex end of the pipe is smoothed and finished in conical form by a tool H, which is formed of a metal or steel plate or blade *e*, the cutting or front edge *f* of which is rather more elevated than the back part *g*, as shown in Fig. 4. The blade *e* is perforated at its upper end and is fitted on the top of the rod D, and the plate is then turned around the edge *f*, cutting off the superfluous material, and the back part *g* compacting and smoothing it. The outer part of the tool H rests on the upper edge of the case A, and the rod D extends sufficiently far above the top of case A that the tool H, in being turned around, will form a surface corresponding inversely to the concave at the opposite end of the pipe formed by the flange or ledge C.

The plate or blade *e* is provided at its upper surface with a handle *h* and plate *i*, the latter serving as a guard or deflector to cast the superfluous cement or other material of which the pipes are made off from the tool H.

I do not claim the cylinder or case A, having its edges connected by a rod *a*, for that

has been previously used, and may be seen in the patent granted to Bradford S. Peirce and Charles M. Peirce August 1, 1854; but

I do claim as new and desire to secure by Letters Patent—

1. The sheet metal or elastic core E, provided or arranged with a key or wedge F, or its equivalent, to operate as and for the purpose set forth.

2. The tool H, formed with a cutting or scraping edge *f* and smoothing-surface *g*, when applied to or used in connection with the case A and core E, for the purpose specified.

CHARLES M. PEIRCE, JR.

Witnesses:
CHAS S. PAISLER,
EZRA K. DELANO.