

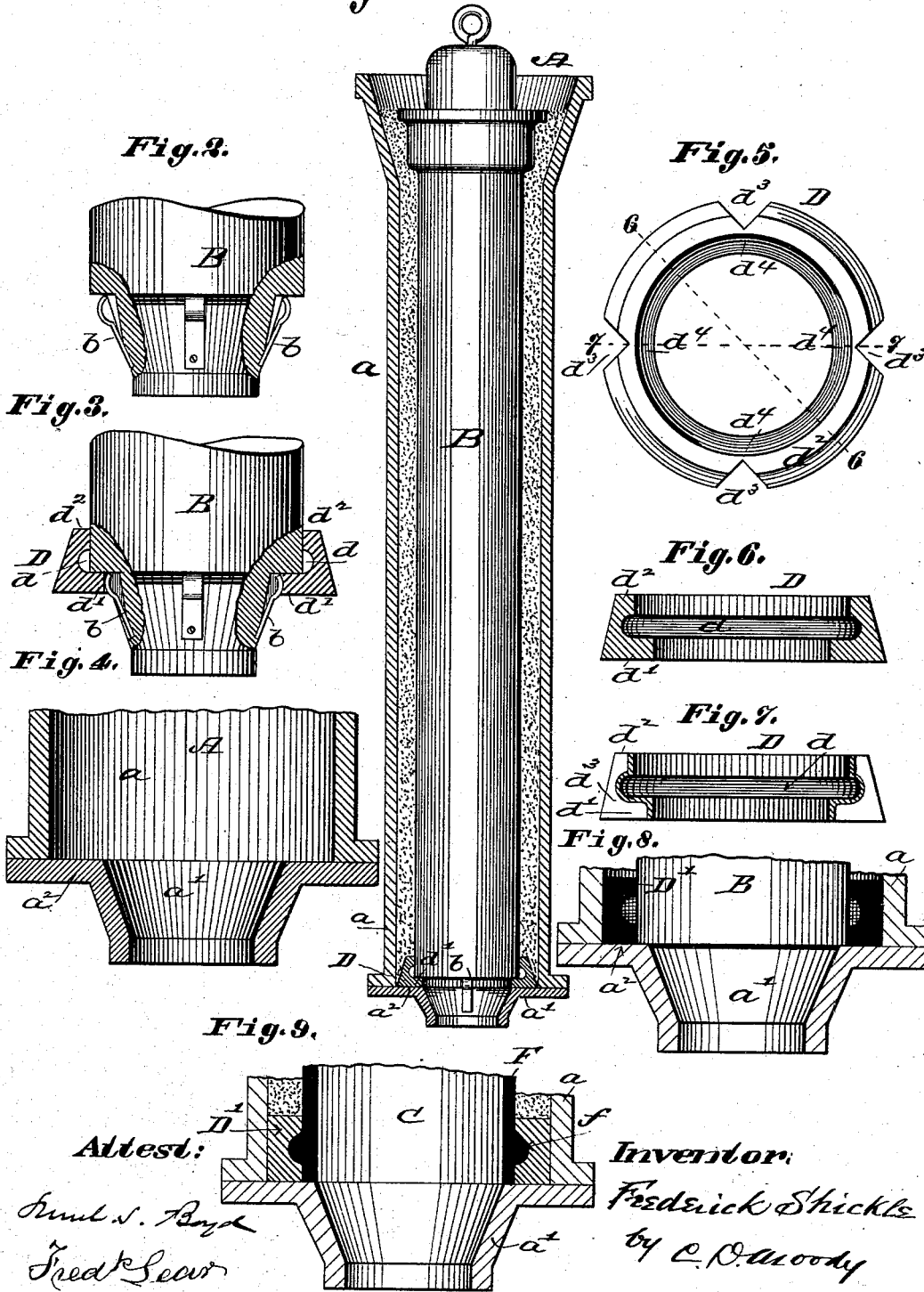
(No Model.)

F. SHICKLE.
PIPE MOLDING APPARATUS.

No. 261,964.

Patented Aug. 1, 1882.

Fig. 1.



Attest:
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UNITED STATES PATENT OFFICE.

FREDERICK SHICKLE, OF ST. LOUIS, MISSOURI.

PIPE-MOLDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 261,964, dated August 1, 1882.

Application filed April 22, 1882. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK SHICKLE, of St. Louis, Missouri, have made a new and useful Improvement in Pipe-Molding Apparatus, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a vertical section of a pipe-flask having the improvement; Fig. 2, a side elevation, partly in section, of the lower end of the pattern; Fig. 3, a similar view of the pattern, showing the bead-ring attached; Fig. 4, a vertical section of the lower end of the flask; Fig. 5, a plan of the bead-ring; Fig. 6, a section taken on the line 6 6 of Fig. 5; Fig. 7, a section taken on the line 7 7 of Fig. 5; Fig. 8, a vertical section of the lower end of the flask, showing the pattern and bead-ring in place, the bead-ring being a modification of that shown in Figs. 5, 6, 7; and Fig. 9, a vertical section of the lower end of the flask, showing the last-named bead-ring, the pipe, and the core in position.

The same letters denote the same parts.

The present invention relates mainly to the bead-ring, or that part of the pipe-molding apparatus used in forming the bead upon the pipe. It also has reference to the means used in supporting the bead-ring upon the pattern while being placed in the flask.

In the annexed drawings, A represents a pipe-molding flask of the usual kind, having the body *a* and the bottom *a'*.

B represents the pattern used in forming the mold, and C the core used in casting the pipe, both of the usual description, saving as modified by the present improvement.

D, Figs. 1, 3, 5, 6, 7, represents the improved bead-ring. It has a groove, *d*, of the shape of the bead, and the flanges or edges *d'* and *d''*. An additional feature of the ring is the means for enabling it to be readily removed from the pipe after the latter has been cast. So far as the first-named feature is concerned the ring can be of such shape as to enable the pattern, when in the flask, to rest upon the lower flange or edge, *d'*, of the ring, said lower edge in such case projecting inwardly beyond the upper edge, *d''*; or the lower edge, *d'*, may project evenly with the upper edge, *d''*, in which case the lower end of the pattern rests upon the

flask-bottom. In the last-named case, in forming the mold, the pattern is first placed in position in the flask, and then the bead-ring is slipped onto the pattern, sliding downward thereon until it reaches the flask-bottom, which constitutes the support of the ring, as seen in Figs. 8, 9; but in the first-named case the bead-ring is slipped from beneath up onto the lower end of the pattern, and caused to adhere there-to until the pattern is placed in the flask and the mold formed. In either case, after the mold has been formed, which is done by ramming the sand between the pattern and shell of the flask in the usual manner, the pattern is withdrawn from the flask, leaving the bead-ring in place to form the bead of the pipe. The preferable means for holding the ring onto the lower end of the pattern as the latter is being placed in the mold is that shown in Figs. 1, 2, 3, the pattern being furnished with spring-catches *b b*, which, when the ring is in place upon the pattern, spring outwardly and press against the lower edge, *d'*, of the ring, and with sufficient force to uphold the ring upon the pattern. The latter in this case, when within the flask, rests upon the lower flange, *d'*, of the ring while the sand is being rammed. The sand holds the ring down in the flask when the pattern is being lifted out of the flask, the catches *b b* yielding and allowing the pattern to be disengaged from the ring. The core C is then placed in the mold and the casting made in the usual manner. The bead-ring, from its being of a single piece and of shape to form the entire bead, necessarily is attached to the pipe when the latter is cast, and can be removed therefrom only by breaking or dividing it. To this end the ring may be of such material as will enable it to be readily broken or divided, and without injury to the pipe. Clay is a suitable material in this connection for the bead-ring; but other materials—iron, for instance—can be used. In either case it is desirable to make the ring weak at various points to facilitate its being broken or divided while on the pipe. To this end the ring may be notched, as shown at *d³ d³*, Figs. 5, 7, the notches being preferably of such depth and shape as to leave only enough material *d⁴* to hold the ring together while being used. The ring can then be readily broken in the line of the notches and removed from the pipe.

It is not essential, as above stated, that the

flange d' should project inwardly, so as to come beneath the main body of the pattern; but it may be made as shown in Figs. 8, 9, in which case, when the pipe is made, the bead f' will
5 not be formed exactly at the end of the pipe F. The modified bead-ring D' , however, in this case, as in the first named, will be attached to the pipe when cast, and will have to be similarly removed therefrom, and, as in the case of
10 the ring D, it should be of material that is easily broken or divided, and it is desirable to have it similarly weakened at various points to facilitate its being divided. As shown, the bead-ring D or D' rests upon the flat part a^2 of

the flask-bottom. The latter, however, may 15 have a recess in it to receive the bead-ring.

I claim—

1. The bead-ring D, having one or more notches, $d^3 d^3$, for the purpose described.

2. The combination of the bead-ring D, the 20 pattern B, and the catches $b b$, for the purpose described.

3. A metal bead-ring weakened at one or more points, for the purpose described.

FREDERICK SHICKLE.

Witnesses:

C. D. MOODY,

SAML. S. BOYD.