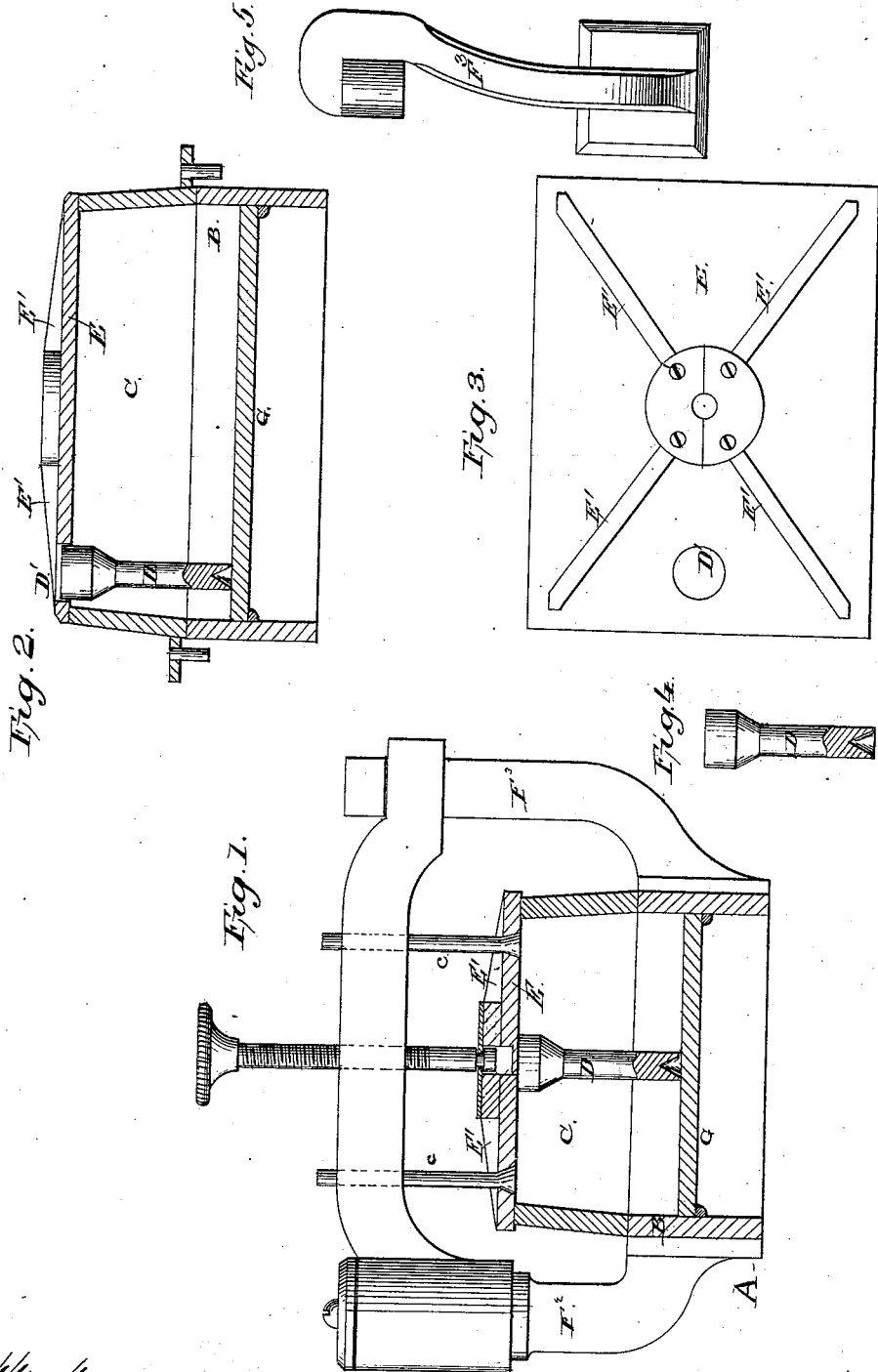


W. AIKIN & W. W. DRUMMOND.  
Machine for Molding in Sand.

No. 201,377.

Patented March 19, 1878.



Attest:  
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# UNITED STATES PATENT OFFICE.

WILLIAM AIKIN AND WILLIAM W. DRUMMOND, OF LOUISVILLE, KY.

## IMPROVEMENT IN MACHINES FOR MOLDING IN SAND.

Specification forming part of Letters Patent No. **201,377**, dated March 19, 1878; application filed December 14, 1877.

*To all whom it may concern:*

Be it known that we, WILLIAM AIKIN and WILLIAM WHYTE DRUMMOND, of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and useful Improvement in Machines for Molding in Sand; and we do hereby declare that the following is a full and exact description of the same.

In our several applications (filed March 9, 1877, May 7, 1877, June 20, 1877, and September 4, 1877) for Letters Patent for "new and useful improvements on machines for molding in sand," we omitted a description of the manner in which the sprue or gate holes were formed to receive the molten metal in the molds.

This invention relates to, and is intended to cover, said omission; and consists in one or more sprue or gate sticks being placed in such manner as to rest on the follower or templet-plate, and, during the compression of the sand, to form a mold. They are forced through suitable apertures made to receive them in the binder-plate.

The peculiar combination of mechanism employed will be clearly indicated in the following description and claims.

In the annexed drawings, making part of this specification, Figure 1 is a plan, showing a vertical section of the machine. Fig. 2 is a similar section of part of the machine on a plane at right angles to that of Fig. 1. Fig. 3 is a plan, showing top of binder-plate. Fig. 4 is the sprue or gate stick.

The same letters are employed in all the figures in the designation of identical parts.

A is part of the main frame, to which is attached the sand-box B. C is the flask, which rests on box B. D is the sprue or gate stick, which has its bearing on the follower or templet-plate G, and which passes up through the

flask and enters the binder-plate E. D' is the aperture in the binder-plate E, which passes through the plate between the ribs E', through which the sprue or gate stick passes out when the mold is formed.

In working the machines, the patterns and follower or templet-plate being in proper position, the flask C is placed on top of box B. The sprues or gate-sticks D are then placed in position, resting on the follower or templet-plates. The sand is then put into the flask C. The binder-plate E is then brought over and secures the flask and sand in place, having the apertures D' come directly over the sprue or gate sticks. The power is then applied to compress the sand to form the mold. While compressing the sand the sprue or gate sticks pass through the aperture D' in the binder-plate E, when it is taken out by the workman, thus leaving a perfect molded sprue or gate to pour the molten metal into. The molded flask is then removed, another flask put on, and the operation continued or repeated.

What we claim as new, and desire to secure by Letters Patent, is—

The combination of the movable compressor G, the sprue or gate sticks D set thereon, and a binder-plate, E, having aperture D', through which the gate-stick or sprues pass while sand is being compressed, for the purpose of forming sprue or gate holes in molds to receive molten metal, substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM AIKIN.  
WILLIAM WHYTE DRUMMOND.

Witnesses:  
WM. T. DRUMMOND,  
SAML. T. SHELLEY.