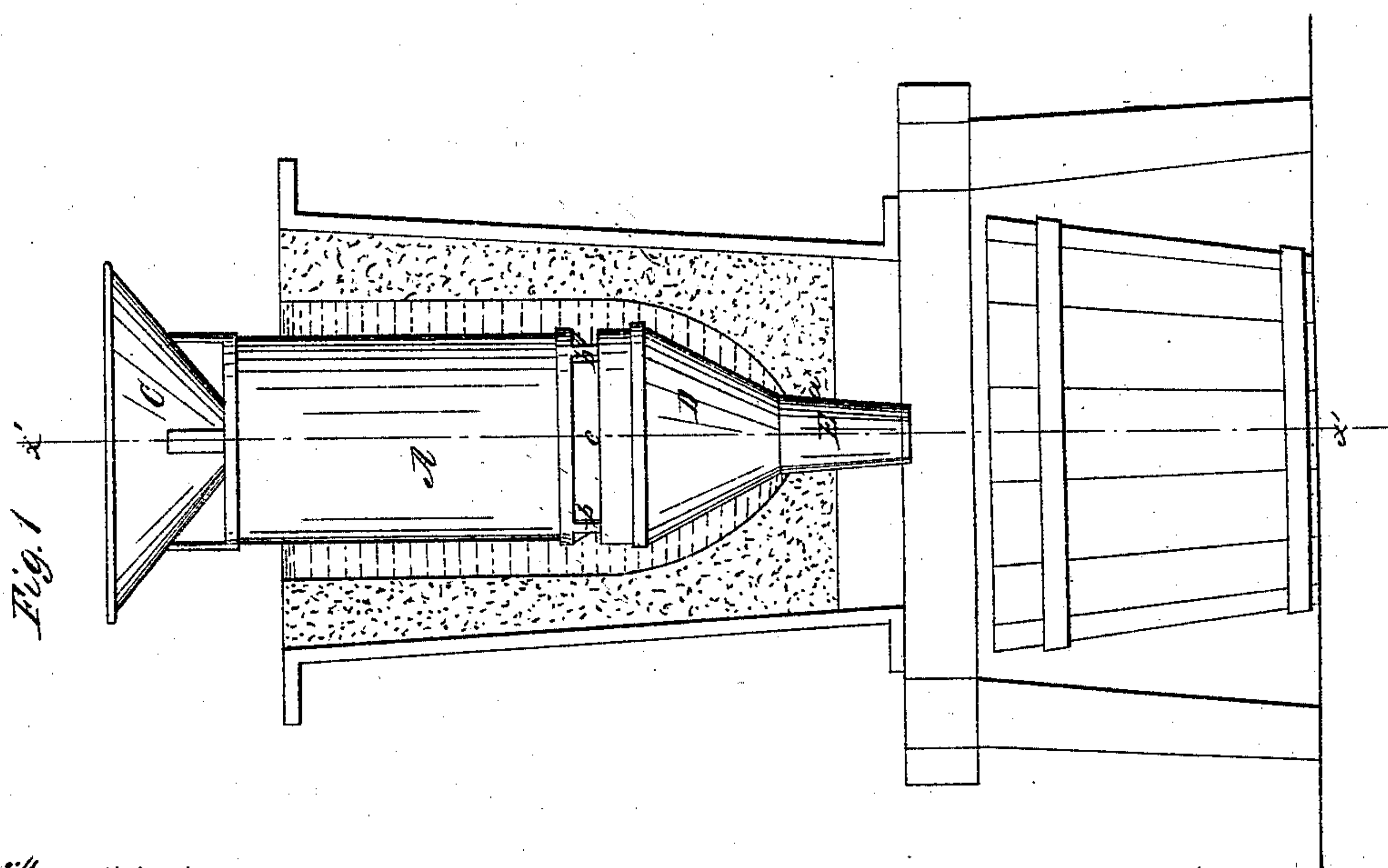
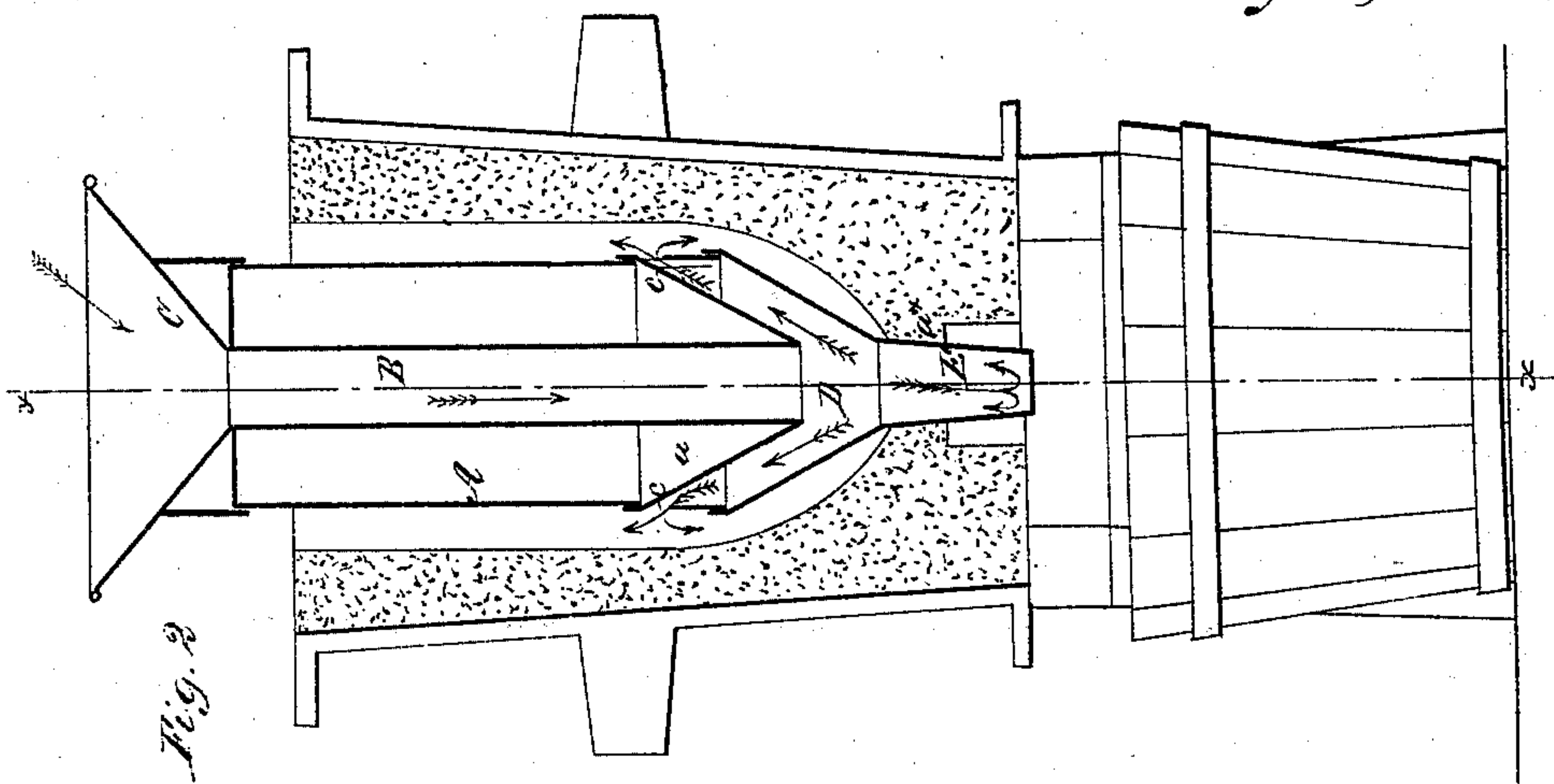


D. Robinson,
Molding Pipe.

N^o 39,589.

Patented Aug. 18, 1863.



Witnesses;
J. W. Cramb
W. Reed

Inventor;
Daniel Robinson
per Munn & Co
attys

UNITED STATES PATENT OFFICE.

DAVID ROBINSON, OF COLD SPRING, NEW YORK.

IMPROVEMENT IN APPLYING WASH TO SAND MOLDS.

Specification forming part of Letters Patent No. 39,589, dated August 18, 1863.

To all whom it may concern:

Be it known that I, DAVID ROBINSON, of Cold Spring, in the county of Putnam and State of New York, have invented a new and useful Improvement in Applying Wash to Sand Molds for Casting; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a longitudinal central section of a mold with my device fitted in it and the wash applied. *xx*, Fig. 2, indicate the line of section. Fig. 2 is also a longitudinal central section of a mold with my device bisected centrally, as indicated by the line *x'x'*, Fig. 1.

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

This invention consists in the employment or use of a cylinder provided with an internal tube, one end of which is provided with a hopper or funnel, and the other end fitted in a shell of conical or other form, which is attached to the cylinder in such a manner as to leave openings or spaces between the shell and cylinder, all being so arranged that the device may be fitted within the mold, and by pouring the wash into the former the latter will be coated with the wash, not only in a superior manner, but far more expeditiously.

The invention is more especially designed for applying wash to molds for casting projectiles for ordnance.

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

A represents a cylinder, which may be constructed of sheet metal—ordinary tinned plate will answer the purpose—and B is a tube of the same material, which is secured longitudinally and centrally in the cylinder A. The lower end of the cylinder A is of conical form, as shown at *a*, and the lower end of the tube B is attached to the lower end of *a*, as shown clearly in Fig. 2. The upper end of the tube B has a funnel, C, attached to it.

D is a shell of conical or an approximate form, which is attached to the lower end of the cylinder A by short bars *b*. The shell D encompasses the greater portion of the cone *a* at the lower end of the cylinder A, spaces or openings *c* being allowed between the upper end of the shell and the lower end of the cylinder, as shown in both figures. The shell

D is provided with a nozzle, E, which is closed at its end.

The device is used as follows: The mold is formed in the usual way, and is shown in section in both figures, the flask being shown in red outline, and the sand by the dotted space within the flask. This mold, it will be seen, is for casting projectiles for ordnance. The device is fitted within the mold, the nozzle E of the conical shell D being placed in the aperture *ax*, which is designed for holding the core. The wash, which may be the kind usually employed for such purpose—to wit, pulverized charcoal and clay mixed with water—is poured into the funnel C, and the wash passes down through the tube B, fills the shell D, and passes out through the openings *c*, as indicated by the red arrows in Fig. 2, and fills the space between the cylinder A, shell D, and the side of the mold, as will be seen by referring to Fig. 1, in which the wash is shown by black horizontal lines. The device is then withdrawn from the mold, and the superfluous wash passes out through the aperture *ax* into a vessel prepared to receive it, a requisite quantity adhering to the inner surface of the mold. The usual plan consists in applying the wash with a brush or swab, which consumes considerable time and labor. By my invention the wash is applied in such a manner as to insure a smooth casting, a result which cannot be attained in dry-sand molds when the wash is applied by a brush or swab. Therefore, I do not only economize in time, but produce a better result than can be obtained by the old plan of applying the wash, and it will be seen that by my improvement but a small quantity of wash is left in the mold when the device is withdrawn from it, and the superfluous wash soon passes out and leaves but a coating of requisite thickness adhering to the mold. It will be understood, of course, that the device must be of a diameter corresponding to that part of the mold.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The cylinder A, provided with an internal tube, B, and shell D, of conical or other form, all arranged and combined substantially as and for the purpose set forth.

DAVID ROBINSON.

Witnesses:

ELI GRIFFIN,
HARRISON TOWNSEND.