

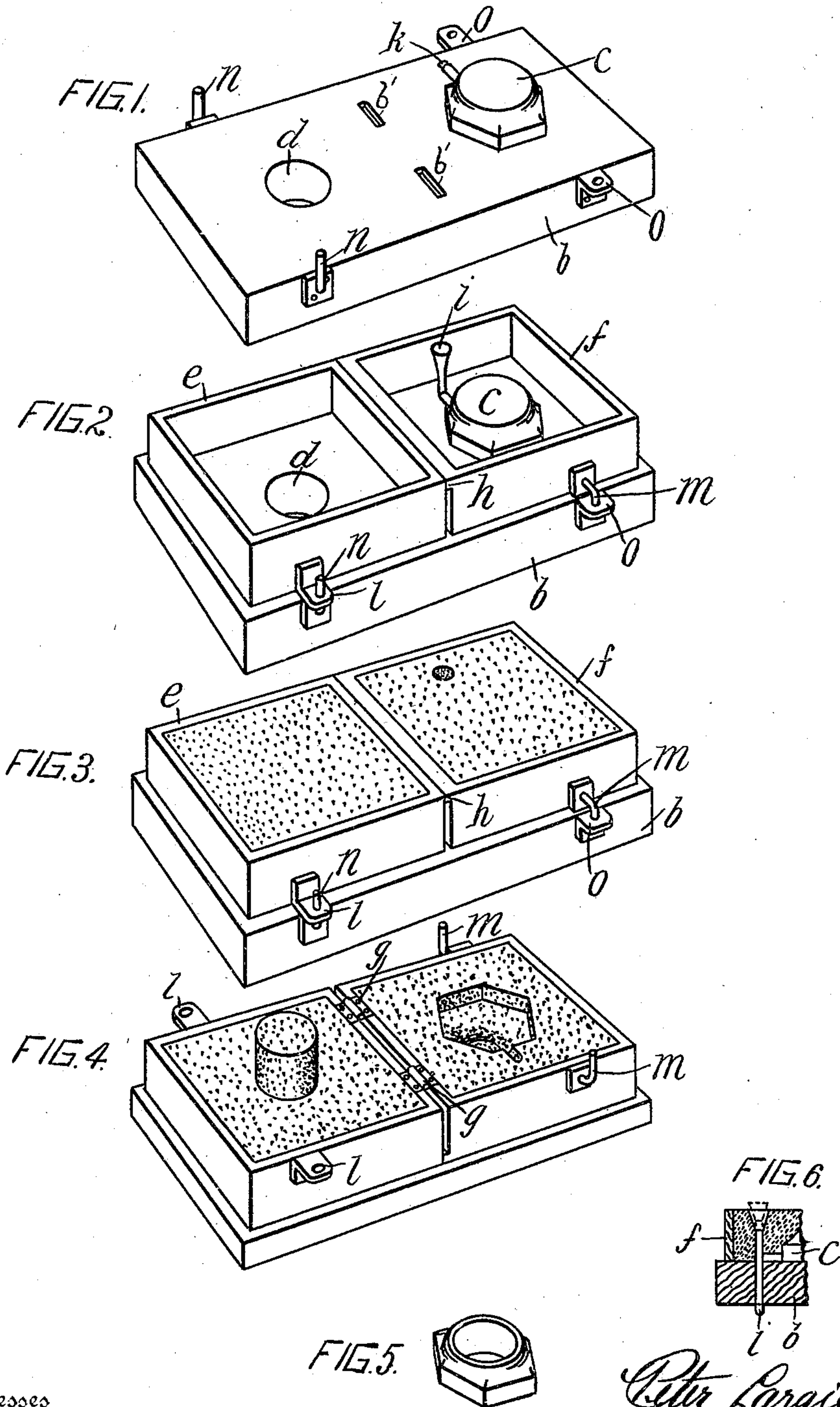
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PATENTED MAR. 22, 1904.

P. LARGIE.
MOLDING APPARATUS.

APPLICATION FILED JUNE 25, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

PETER LARGIE, OF GRANBY, CANADA.

MOLDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 755,574, dated March 22, 1904.

Application filed June 25, 1903. Serial No. 163,052. (No model.)

To all whom it may concern:

Be it known that I, PETER LARGIE, of Granby, Province of Quebec, Canada, have invented certain new and useful Improvements in Molding Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the same.

This invention has for its object to insure the production of a clean casting, to enable the ingate to be cleansed, and to facilitate the withdrawal of the sprue.

The invention may be said, briefly, to consist of a permanent hinged connection between the cope and the drag, a guard-strip to prevent sand or foreign substance falling into the space between the cope and drag when the latter are reversed for ramming purposes, and a combined pattern and follow board having a hole to receive and support the sprue, such hole extending completely through the board.

For full comprehension, however, of my invention reference must be had to the accompanying drawings, forming a part of this specification, in which similar reference characters indicate the same parts, and wherein—

Figure 1 is a perspective view of a combined pattern and follow board constructed according to my invention; Fig. 2, a similar view with the flask set in place; Fig. 3, a similar view to Fig. 2 with the flask filled and the filling rammed and the sprue drawn; Fig. 4, a perspective view illustrating my improved flask with the bottom board set in place, the whole turned over, and my combined pattern and follow board drawn. Fig. 5 is a perspective view of the completed casting, and Fig. 6 a detail vertical sectional view of the filled and rammed flask and illustrating particularly my improved manner of retaining and bracing the sprue.

The combined pattern and follow board consists of an oblong board *b*, having upon one side thereof and preferably about one-quarter way from one end a counterpart *c* of the matrix, from which the article to be cast will receive its exterior form. About a quarter-way from the opposite end of the board is located a counterpart *d* of the loam-core, from which

the interior of the article to be cast will receive its form. An aperture *k* is formed in the board near the counterpart *c* and according to my invention extends completely through the board, while a pair of recesses *b'*, transversely and midway of the length of the board, accommodate the hinges by which the halves of the flask are hinged together, as will be presently pointed out.

The flask *e f* is preferably made in two halves permanently hinged together, as at *g*, and the part *f* has a flange *h* extending along the side thereof opposite to that at which the hinges are located, the function of this flange being to prevent sand or foreign substance falling between the cope and drag, this being a feature of my invention, while the drag is provided with a pair of perforated lugs *l* according to my invention and the cope with pins *m*, adapted to project into the perforations in the lugs when the flask is closed, thus localizing the cope relatively to the drag. The lugs *l* fit over pins *n*, and the pins *m* fit into the lugs *o* upon my combined pattern and follow board, thereby localizing these parts relatively to one another when the flask is to be filled and rammed.

In molding according to my invention the entire flask is first placed on my combined pattern or follow board. (See Fig. 2.) The sprue *i* is then inserted in the aperture *k*, the foot of said sprue being formed to project a short distance through such aperture. This is also a feature of my invention. The flask is then filled with sand and rammed tight, after which the projecting end of the sprue beneath the follow-board is pushed up, thus causing its head to project a short distance above the mold and enabling it to be grasped and withdrawn without displacing any sand. The bottom board is then placed on top of the rammed flask and the whole turned over. The combined pattern and follow board is then drawn and the flask closed.

Any sand or foreign substance dropping into the sprue-hole may be blown through the duct in the follow-board, thus insuring a clean casting.

What I claim is as follows:

1. In a molding apparatus a pattern-board having an aperture extending completely therethrough for receiving and bracing a sprue.
2. In a molding apparatus a combined pattern and follow board having an aperture therethrough for receiving and bracing a sprue.
3. In a molding apparatus the combination with a combined pattern and follow board having an aperture therethrough for receiving and bracing a sprue, of a sprue having its foot of sufficient length to project a short distance through said aperture substantially as described and for the purpose set forth.
4. In a molding apparatus the combination with a pattern and the part of the flask above same of a sprue adapted to project from the pattern to the top of the part of the flask above same and means whereby said sprue is loosened from the ingate before being drawn.

5. In a molding apparatus, the combination with a pattern, a cope, and a drag, and means permanently hinging said cope and drag together, of means closing the space between the adjacent upper edges of said cope and drag when they lie upon the pattern ready to be rammed.

6. In a molding apparatus, the combination with a pattern, a cope, and a drag, and means permanently hinging said cope and drag together, of a flange carried by one of said hinged parts and extending across and closing the space between the adjacent upper edges of said hinged parts when they lie upon the pattern ready to be rammed.

In testimony whereof I have affixed my signature in presence of two witnesses.

PETER LARGIE.

Witnesses:

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