M. R. Chace,

Molasses-Gate Mold.

No. 27,969. Patented Apr. 24, 1860.

Fig. 7.

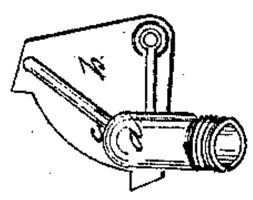


Fig. 8.

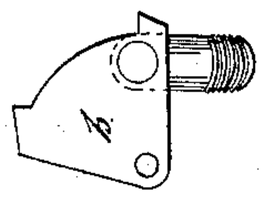


Fig. 9.

Fig. 6.

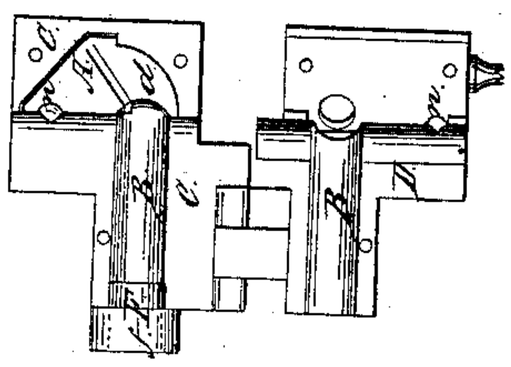


Fig. 4.

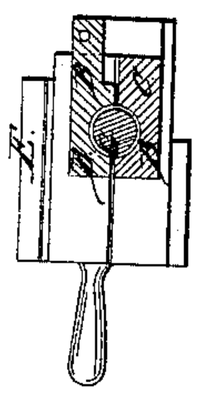


Fig. 5.

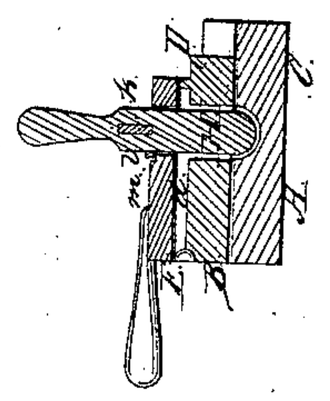


Fig. 1.

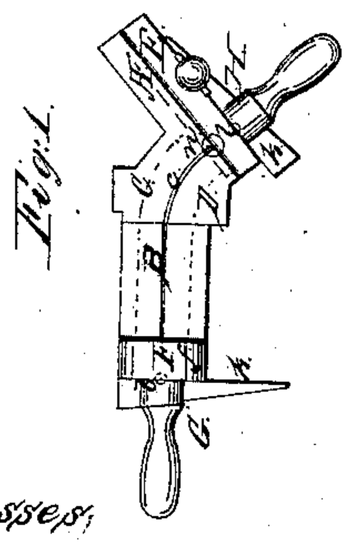


Fig. 2.

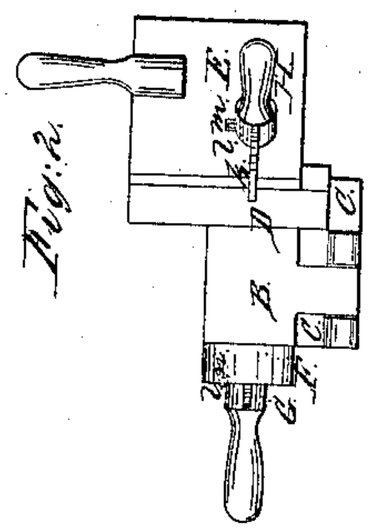
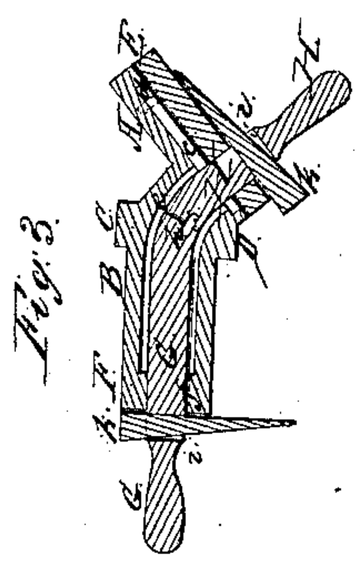


Fig. 3.



Witnesses;
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J. P. Creighton.

Inventor;
Mervin R. Chace.

UNITED STATES PATENT OFFICE.

MERVIN R. CHACE, OF FALL RIVER, MASSACHUSETTS.

IMPROVEMENT IN CASTING MOLASSES-GATES.

Specification forming part of Letters Patent No. **27,969**, dated April 24, 1860.

To all whom it may concern:

Be it known that I, MERVIN R. CHACE, of Fall River, in the county of Bristol and State of Massachusetts, have invented an Improved Mold for Casting the Valve-Seat and Conduit of a Molasses-Gate having an Angular Conduit; and I do hereby declare the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 is a top view, Fig. 2 a front elevation, Fig. 3 a longitudinal section, and Figs. 4 and 5 transverse sections, of such mold. Fig. 6 is a top view of it as open. Figs. 7, 8, and 9 are front, rear, and side views of the valve-seat plate and the bent or angular conduit to be cast or founded by such mold.

The principal object of my invention is to cast the body of a molasses-gate with its conduit or eduction tube formed with an angular bend, as shown at *a* in Figs. 7, 8, and 9, *b* being the valve-seat plate usually applied to the said conduit. By so making the conduit the valve-seat plate, when the gate is in use, becomes so inclined with respect to a horizontal plane as to prevent, in a great measure, if not entirely, any dripping of the molasses from the seat while the valve may be closed.

In the drawings, A and B are the valve-seat and conduit-matrices which open into one another, the latter being formed with an angular bend or flexure, as shown at *c*. One half of the conduit-matrix is formed within a metallic block, C, the other half being made in another metallic block, D, hinged to the first-named block. The seat-plate matrix has a cavity, *d*, made in the block C, and by a plate, E, covering such cavity and so applied to the block C as to be either easily removed from the said cavity or applied thereto, as circumstances may require. At the rear end of the conduit-matrix a head or cap, F, is affixed to the lower part of such matrix, and is made with a passage, *f*, for the reception of and to support in place a core or mandrel, G, which passes through and abuts against a shorter core or mandrel, H, as shown in the drawings. The latter core passes through the cap-plate E, and is provided with a small tenon, *g*, to enter a corresponding mortise, *h*, made in the longer core. Each core, also, has a mortise or slot, *i*, made transversely through it and to receive a wedge, *k*, that rests against the outer surface of the mold, and when driven inward serves to start the core backward. Each core should be made a little tapering, its diameter being smallest at the angle of junction of it with the other core. Furthermore, each core should be provided with a small stud or projection, *l*, to enter a corresponding socket or recess, *m*, made in the mold and in a suitable position to effect the proper adjustment of the inner end of the core with respect to that of the other core, in order that the planes of the two ends may coincide in a manner to prevent the molten metal, when in the mold, from passing directly between the two cores. The mold has a hole or entrance-passage, *n*, arranged as shown in the drawings. After a casting has been made in the mold the two mandrels or cores are to be withdrawn from it, which having been accomplished, the casting may be removed from its matrix or matrices.

I claim—

Arrangement of the two sliding cores or mandrels, the valve-seat, and bent conduit-matrices.

MERVIN R. CHACE.

Witnesses:

L. S. MARING,

GEORGE B. DEAN.