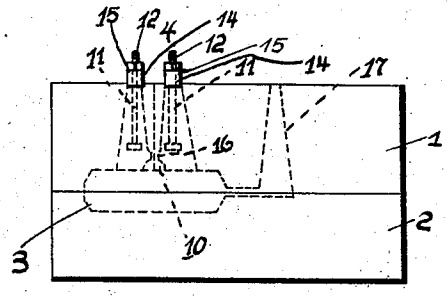
No. 840,153. PATENTED JAN. 1, 1907.

G. F. McKEE & W. F. SCHILLING.

CASTING APPARATUS.

APPLICATION FILED NOV. 8, 1905.

FIG. 1.



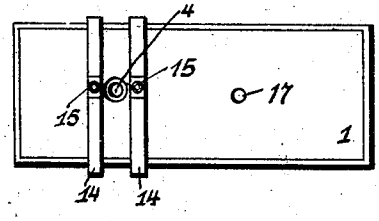


FIG. 2.

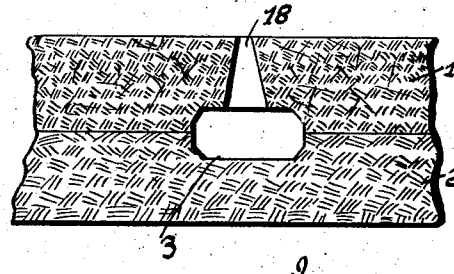


FIG. 3.

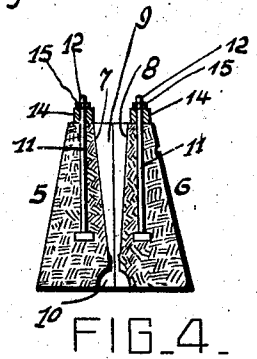


FIG. 4.

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CASTING APPARATUS.

No. 840,153. Specification of Letters Patent. Patented Jan. 1, 1907.

Application filed November 8, 1905. Serial No. 286,422.

To all whom it may concern:

Be it known that we, GEORGE F. McKEE and WILLIAM F. SCHILLING, citizens of the United States of America, residing at Aspinwall, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Casting Apparatus, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in a casting apparatus, and relates more particularly to a novel form of flask.

The primary object of the invention is to provide a two-part flask wherein novel means is provided for permitting of one part of the flask being removed without destroying the mold within said flask.

Another object of this invention is to provide a novel form of gate adapted to be used in connection with flasks.

A further object of our invention is to provide a gate for a flask which will permit of said flask being used for a plurality of castings, it being a well-known fact that heretofore the sand of the flask had to be repacked after each casting molded.

With the above and other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts to be hereinafter more fully described and claimed.

Referring to the drawings accompanying this application, like numerals of reference designate corresponding parts throughout the several views, in which—

Figure 1 is a side elevation of a two-part flask constructed in accordance with our invention. Fig. 2 is a plan of the same. Fig. 3 is a vertical sectional view of the flask, illustrating a modified form of gate. Fig. 4 is a side elevation of a two-part gate used in connection with the flask illustrated in Fig. 1 of the drawings.

In the accompanying drawings, we have illustrated a flask consisting of two parts 1 and 2, and in connection with the flask we employ a novel form of two-part gate. We will assume that a casting 3 is being formed in the flask, said casting conforming to the shape or dotted configuration illustrated in Fig. 1 of the drawings. In order that each part of the flask may be used again for forming another casting, we employ a gate 4, which is made of two parts 5 and 6, said parts when assembled being of a frusto-conical shape, and the confronting faces of said parts are provided with tapering recesses 7 and 8, forming a common gate-opening 9 and a sink 10. These parts of the gate and the two parts 1 2 of the flask are preferably formed of any suitable indestructible material, preferably the material described in an application filed by us January 29, 1906, Serial No. 298,541, and the parts of the gate are retained together by embedding in each part of the gate a headed bolt 11, having a screw-threaded end 12. The ends of the bolts protrude above the two-part gate, and in order to support said gate within the part 1 of the flask cross-bars 14 14 are employed. The screw-threaded ends of the bolts 11 are adapted to extend through said cross-bars, and nuts 15 15 are employed for retaining said bolts in engagement with said cross-bars, consequently supporting the parts 5 and 6 of the gate within the part 1 of the flask.

The form of gate illustrated permits of the part 1 of the flask being removed, permitting of the two-part gate remaining upon the casting, it of course being understood that the nuts 15 and the cross-bars 14 are first removed from the top of the flask 1. It is an extremely simple operation to separate the two parts of the gate after these bars have been removed, and the metal which has been formed in the gate can be severed from the casting 3 at the sink-head, said head being formed for this purpose by providing a contracted neck 16. A vent-opening 17 of a frusto-conical shape is also used in connection with the two-part flask, and the shape of this opening will not interfere with the removal of the part 1 of the flask.

In Fig. 3 of the drawings we have illustrated a gate 18, which permits of the part 1 of the flask being removed, this gate being similar to the vent-opening 17 of the flask illustrated in Figs. 1 and 2 of the drawings.

By the construction of our improved gate it will be observed that we have devised novel means whereby the two parts of the flask can be readily separated or the top part removed from the bottom part to permit of the casting being removed without in any way disfiguring the formation of material

contained within the flask, and in this connection we do not care to confine ourselves specifically to the type of flask used.

Such changes in the construction and operation of our improved flask as are permissible by the appended claims may be resorted without departing from the spirit and scope of the invention.

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

1. The combination with a flask, of a two-part gate, each part having a tapering recess formed therein adapted to form a common opening between said parts, bars mounted upon said flask, and means to suspend the parts of said gate from said bars, substantially as described.

2. A gate for flasks, consisting of two parts forming a frusto-conical-shaped gate, each part having a tapering recess formed therein adapted to form a common opening having a sink-head, means to detachably suspend said gate within one part of a flask, substantially as described.

3. The combination with a two-part flask adapted to contain a two-part mold of indestructible material, of a movable two-part gate of indestructible material, each part of the gate having a recess formed therein adapted to provide a common opening and means to support said gate in one part of the flask, substantially as described.

4. A gate for flasks consisting of two parts of a frusto-conical shape, said parts having coinciding recesses adapted to form a vertically-disposed opening in said gate, and means to support said gate in the flask, substantially as described.

5. A two-part flask, a mold of indestructible material arranged within said flask, an indestructible gate formed separately from and located in said mold, said gate having a tapering opening therein with the smaller end toward the bottom of the gate and said mold being provided with a vent-opening of frusto-conical form, the larger end of said vent-opening being toward the mold-cavity of the flask.

In testimony whereof we affix our signatures in the presence of two witnesses.

GEORGE F. McKEE.
WILLIAM F. SCHILLING.

Witnesses:
E. E. POTTER,
M. E. LAWSON.