H. H. FISHER.

FLASKS FOR CASTING.

No. 185,904. Patented Jan. 2, 1877.

Fig. 2.

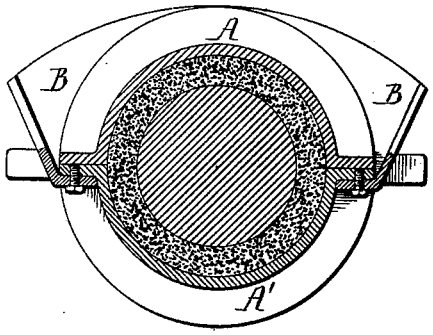


Fig. 1.

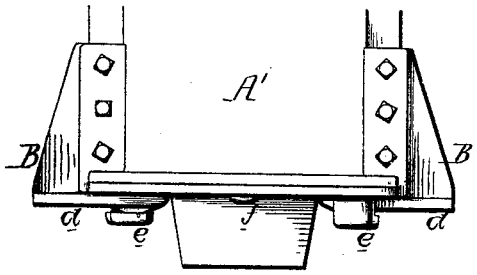


Fig. 5

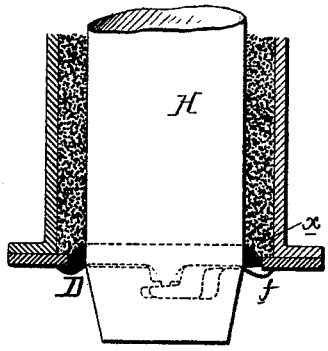


Fig. 3.

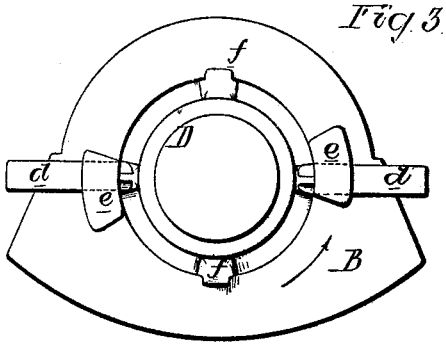
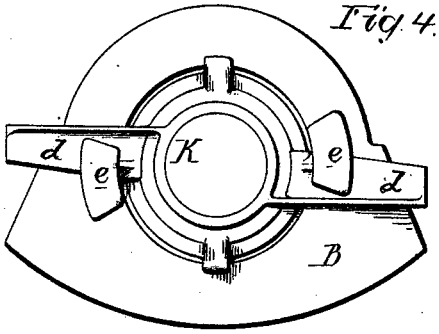


Fig. 6.

Fig. 4.



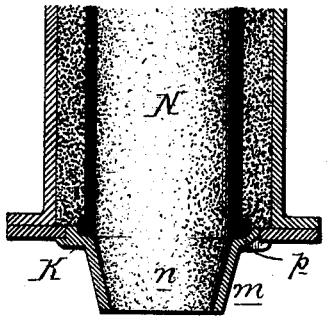
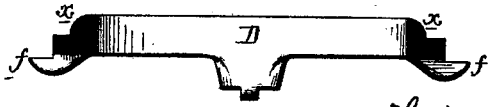


Fig. 7.



Witnesses.
Harry Howson Jr
Harry Smith

Hiram H. Fisher.
by his Attorneys,
Howson and Sons.

UNITED STATES PATENT OFFICE.

HIRAM H. FISHER, OF ALLENTOWN, PENNSYLVANIA.

IMPROVEMENT IN FLASKS FOR CASTING.

Specification forming part of Letters Patent No. **185,904**, dated January 2, 1877; application filed June 26, 1876.

To all whom it may concern:

Be it known that I, HIRAM H. FISHER, of Allentown, Lehigh county, Pennsylvania, have invented an Attachment for Pipe-Molds, of which the following is a specification:

The object of my invention is to provide a two-part pipe-flask with an attachment which can be readily adapted to the lower end of the pattern and as readily changed to receive the lower ends of the core, thereby facilitating the preparation of the mold for casting.

In the accompanying drawing, Figure 1 is a front view of the lower portion of a pipe-flask with the attachment; Fig. 2, a sectional plan, showing the manner of securing the attachment to a two-part flask; Figs. 3 and 4, inverted plan views; Fig. 5, a vertical section of Fig. 3, and Fig. 6 a vertical section of Fig. 4; Fig. 7, a side elevation of a supporting-ring, supporting the core when the mold is formed.

The pipe-flask to which my invention is applied is made, as usual, of two detachable parts, A and A′, secured together; and the attachment consists of a plate, B, and appliances described hereafter, the said plate being secured to the flanges of the flask, as shown in Fig. 2.

In preparing the flask for receiving the pattern H, a ring, D, is first fitted to the said plate in the manner shown in Figs. 3 and 5, this ring having arms *d d*, which are locked beneath inclined projections *e e* by turning the said ring and arms in the direction of the arrow, Fig. 3, the ring being steadied in its place by lugs *f*, underlapping the plate B.

The pattern H is placed within the flask and passed through the opening in the ring D, which serves to clutch the said pattern.

After the sand has been rammed into the space between the flask and the pattern, and the latter has been withdrawn, the ring D is detached from the plate B by simply turning the former in a direction contrary to that pointed out by the arrow, Fig. 3, and another ring, K, fitted and locked to the plate, in the manner which will be readily understood by reference to Fig. 4, this ring having a tapering socket, *m*, for receiving the lower tapering end *n* of the core N. The ring K has an annular depression, *p*, which, with the impression formed in the sand by the rib *x* of the plate D, constitutes the recess for the formation of the bead on the end of the pipe.

I claim as my invention—

1. The combination, with a two-part pipe flask, of a plate, B, having an opening for the reception of either of the rings D or K, and provisions, substantially as described, for locking the said rings to and detaching them from the said plate, as set forth.

2. The combination of the inclined projections *e* on the plate B with the arms *d* on the rings D and K.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HIRAM H. FISHER.

Witnesses:

HARRY HOWSON, Jr.,

HARRY SMITH.