W. R. JONES.
Ingot-Mold.

No. 208,605. Patented Oct. 1, 1878.

Fig. 1

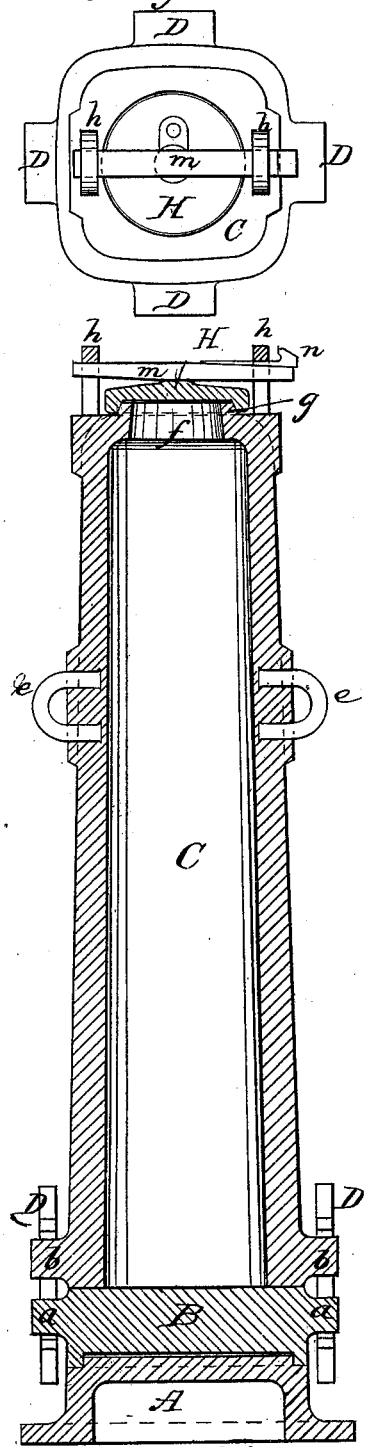


Fig. 2.

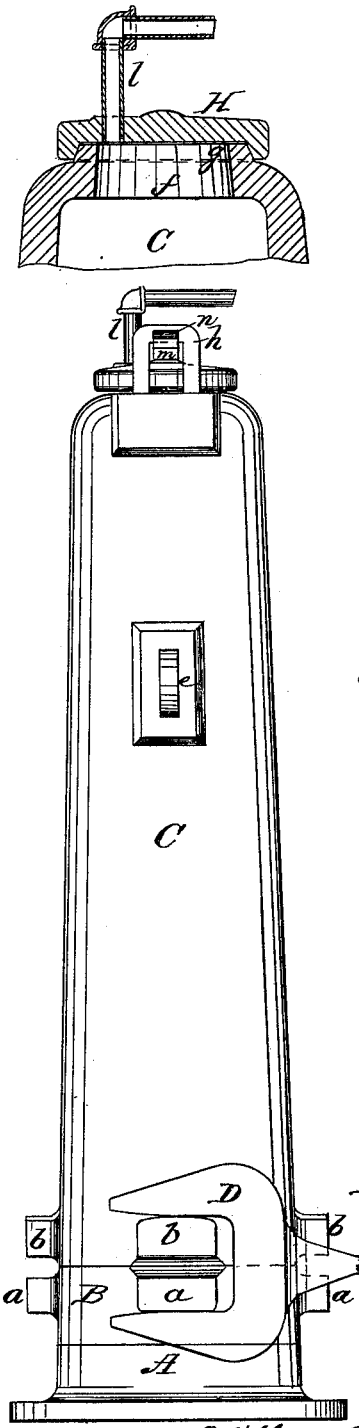
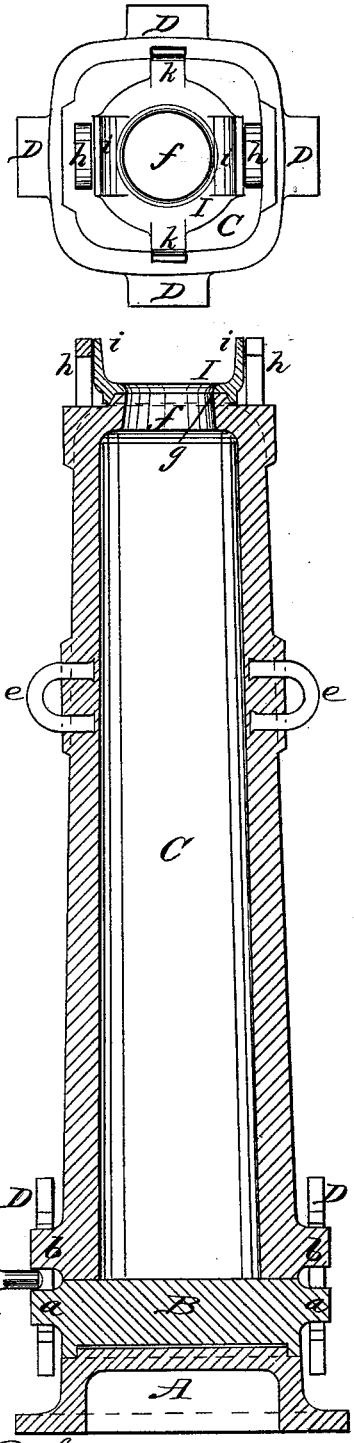


Fig. 3



Witnesses { Jos. B. Connolly
E. M. Drummond } by

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UNITED STATES PATENT OFFICE.

WILLIAM R. JONES, OF BRADDOCK'S, PENNSYLVANIA.

IMPROVEMENT IN INGOT-MOLDS.

Specification forming part of Letters Patent No. **208,605,** dated October 1, 1878; application filed May 28, 1878.

To all whom it may concern:

Be it known that I, WILLIAM R. JONES, of Braddock's, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Ingot-Molds; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 shows my invention in plan and vertical section, with the valve-cap in place and wedged down. Fig. 2 shows it in detail section and side elevation, exhibiting the position of inlet-pipe. Fig. 3 shows plan and transverse vertical section, with pouring-cup instead of valve-cap.

This invention relates to ingot-molds, particularly such as are to be used for compressing the ingot while fluid in the mold; and consists in the construction and combination of parts, substantially as hereinafter described and claimed.

In my Patent No. 186,576 I have shown and described a mold for bottom casting with substantially a closed top and an adjusting-screw for holding down the cover of the upright sprue.

My present invention is designed for top casting, whereby no more metal need be poured than what will nearly fill the mold itself, and this is poured into the top of the mold, so that but one opening is necessary in the mold.

I construct as follows: On a suitable base or pedestal, A, I lay a bed-plate, B, having two or more laterally-projecting lugs, *a*, on opposite edges. The upper surface of B is preferably planed true. On this I rest the mold C. The mold C consists of a single casting of the usual configuration, and has two or more lugs, *b*, laterally projecting near its base, corresponding in vertical position with the lugs *a* of the bed-plate B. The bottom of mold C is also preferably planed true. The upper surface of lugs *b* is sloped off from the middle of each toward the sides. The mold is then fixed to its bed-plate by two or more clamping-forks, D, which have their opening slightly divergent outwardly, so as to slip easily on the lugs *a b*. They are then driven firmly on, and hold the parts rigidly together.

Bails *e* are cast into the sides of the mold for crane purposes. A large opening, *f*, is made in the otherwise inclosed top of the mold, and around this, on the outside, is formed a circular cone-seat, *g*. Projecting upwardly from the top are the bails *h h*.

As described thus far, the mold is in position for pouring; but as, in practice, I have found that the metal is liable to splash or fall against the bails *h* and clog them, I provide a pouring-cup, I, which fits on seat *g*, and is provided with the bail-guards *i* and handling-lugs *k*. When the metal is now poured, the bails are protected from clogging and the seat *g* kept clean. After pouring to the required extent the cup I is removed and a cap, H, substituted, which also fits accurately on seat *g*, and has an inlet-pipe, *l*, for the admission of steam or other compressing medium.

When placed in position, cap H is clamped down by inserting the cross-bar *m* through the bails *h*, and keying it down by the wedge-key *n*, several of which may be used, if necessary, or a single straight wedge.

All these changes can be accomplished in a very short space of time, after which the contents are ready for compression.

After solidification has taken place a few strokes of a sledge suffice to loosen and remove bar *m*, cap H, and clamps D, upon which both ingot and mold are ready for the crane to remove them.

I claim—

1. The combination of the valve-faced cap H, mold A, having opening in its top, and corresponding valve-seat, bails *h*, and wedge-bar *m*, said wedge-bar bearing upon the cap at or about its center, substantially as described, and for the purpose specified.

2. The combination, with mold C and bails *h*, of the removable pouring-cup I, having bail-guards *i*, as described.

3. The combination of mold C, having lugs *b*, a removable bed having lugs *a*, and the bifurcated clamps D, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WILLIAM R. JONES.

Witnesses:
E. V. MCCANDLESS,
T. J. MCTIGHE.