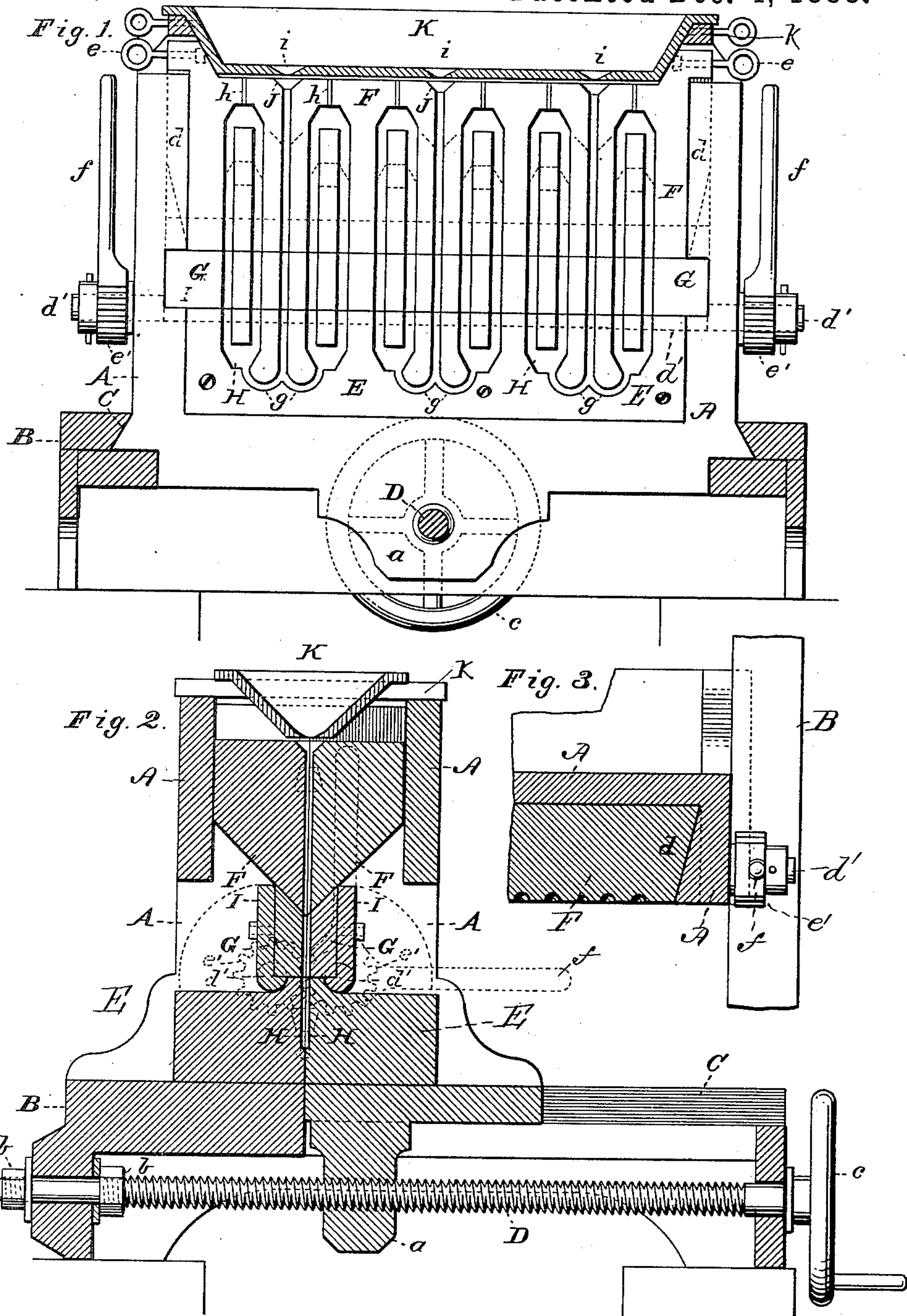


(No Model.)

T. W. VARE.
METAL MOLD.

No. 394,089.

Patented Dec. 4, 1888.



WITNESSES,
Villette Anderson,
Harry Boykin.

INVENTOR,
T. W. Vare.
by E. W. Anderson -
Attorney.

UNITED STATES PATENT OFFICE.

THOMAS W. VARE, OF TRENTON, NEW JERSEY.

METAL MOLD.

SPECIFICATION forming part of Letters Patent No. 394,089, dated December 4, 1888.

Application filed September 18, 1888. Serial No. 285,680. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. VARE, a citizen of the United States, and a resident of Trenton, in the county of Mercer and State of New Jersey, have invented certain new and useful Improvements in Metal Molds; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation
15 of this invention and is a vertical section between the two halves of the molds. Fig. 2 is a vertical section taken across the molds. Fig. 3 is a detail and a horizontal section.

The invention relates to improvements in
20 molds for casting turn-buckles and other articles of iron; and it consists in the construction and novel arrangement of parts, as hereinafter set forth.

In casting turn-buckles and the like great
25 difficulty is experienced in the fact that by shrinkage in an iron mold as ordinarily constructed the metal is liable to break, rendering the article cast of no use, and my object is to obviate this difficulty by so constructing
30 the mold that it will contract with the shrinkage of the casting.

Referring to the accompanying drawings, A designates two vertical frames or boxings, one of which may be rigidly secured to the base
35 B and the other may have its lower end seated and adapted to slide in the guideway C of the base and operated by means of the screw D, engaging a threaded opening in the depending lug *a*, and having its ends projecting
40 through openings in the base-frame, one of which ends is provided with stop-collars *b* and the other with a hand lever or wheel, *c*.

The base and operating screw, as above described, may be dispensed with, if so desired,
45 and the two frames A, having the mold therein, may be secured together by means of flask-clamps and dowels or by any other well-known means.

E designates the lower sections of the metal
50 mold, F the upper sections, and G the middle or intermediate sections. The sections E are

removably secured by bolts or otherwise within the boxings, and have the lower portion of the impressions H upon their face. The upper sections, F, are transversely beveled at *d* 55 on their edges, so as to slide vertically in the boxings, and the converging sides of the boxings, by engaging the beveled sides *d*, hold the sections in a vertical position.

The sections F are provided with handles *e* 60 for convenience in lifting them out of the boxing when a new mold is to be placed therein.

The sections G are removably secured to plates I, which have journals *d'* at the bottom of their ends projecting through bearings in 65 the boxing, as shown, so that when the gearings *e'* on the ends of the respective journals are operated by means of a lever, *f*, extending from one set of gearing, the plates I, bearing the sections G, may be turned outward and 70 downward to allow the upper sections of the mold to fall with the contraction of the metal.

The bottoms of the sections F and the tops of the sections G are beveled in a reversed direction, so that the fall of the upper sections 75 commences at the first movement of the lever.

It may be here stated that the metal chills very quickly in iron molds, and that the intermediate sections should be turned down immediately after the molten metal is poured. 80

As shown in the drawings, the impressions H for the turn-buckles have the shank portions in the sections G and the ends in the top and bottom sections, and each pair are connected by branches *g* from the gate J, and 85 vent-openings *h* extend upward and outward from the top of each impression.

It is necessary to fill all the molds or impressions at one pouring. I therefore provide the V-shaped gate, which rests upon trans- 90 verse bars K and has the openings *i* in its bottom, which register with their respective molds.

Having described my invention, what I claim is— 95

1. A metal mold for turn-buckles and other castings, comprising the lower sections, the vertically-movable upper sections, and the intermediate sections mounted to turn on journals, the said sections being arranged in suitable boxings, substantially as specified. 100

2. The combination, with the boxings, of

the lower mold-sections removably secured therein, the upper vertically-movable sections having the beveled edges, the plates having the journal-bearing in the boxing, and the intermediate mold-sections having upper edges removably secured therein, substantially as specified.

3. In a sectional mold for turn-buckles and other castings, the combination, with the mold-sections and the boxings, of the plates having the journal-bearings through the boxings, the gearing thereon, and the levers, substantially as specified.

4. In a metal mold, the combination, with

the fixed vertical boxing and its removable upper and lower mold-sections, the plate provided with journals at its ends projecting through bearings in the boxing, and the intermediate mold-sections, of the movable boxing carrying similar plates and mold-sections, and the operating mechanism, substantially as specified.

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

THOMAS W. VARE.

Witnesses:

WM. H. BAKER,

THOS. C. LONGTON.