

(No Model.)

H. B. COX.
APPARATUS FOR CASTING.

No. 531,362.

Patented Dec. 25, 1894.

Fig. 1.

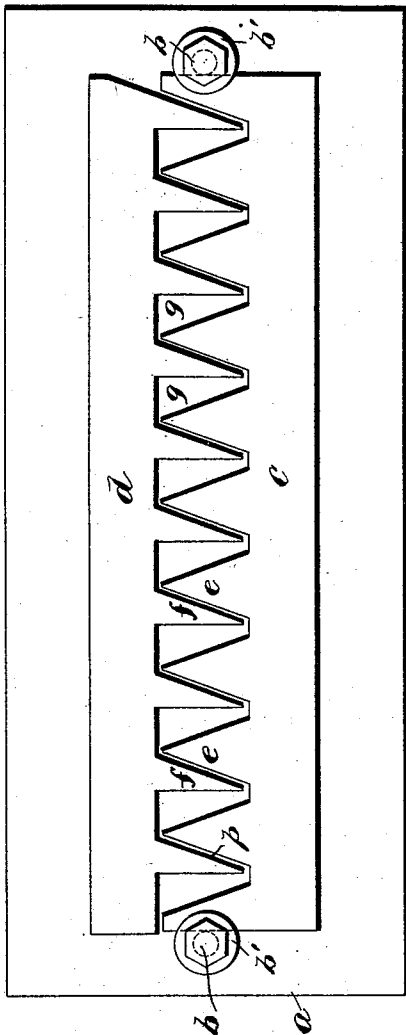
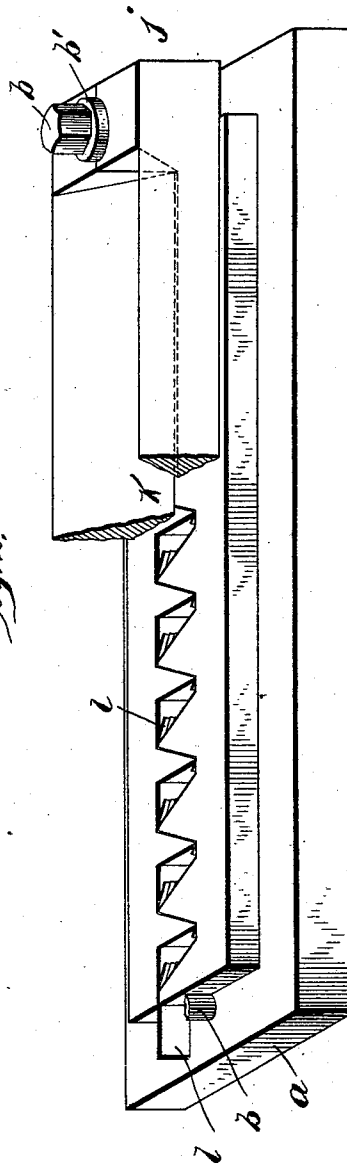


Fig. 2.



Witnesses:

E. C. Duff
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UNITED STATES PATENT OFFICE.

HARRY BARRINGER COX, OF HARTFORD, CONNECTICUT.

APPARATUS FOR CASTING.

SPECIFICATION forming part of Letters Patent No. 531,362, dated December 25, 1894.

Application filed January 31, 1894. Serial No. 498,659. (No model.)

To all whom it may concern:

Be it known that I, HARRY BARRINGER COX, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Casting Apparatus; and I do hereby declare that the following is a full, clear, and exact description of the invention, 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 the letters of reference marked thereon, which form part of this specification.

This invention relates to certain improvements in molding apparatus for casting thermo-electric generators.

The object of the invention is to provide the casting or molding apparatus exceedingly strong, simple and durable in construction and composed of a minimum number of parts and so arranged that after the cast has been made the molds can be easily and quickly separated to remove the cast articles therefrom.

The invention consists in certain novel features of construction and in combination of parts more fully and particularly pointed out and described hereinafter.

Referring to the accompanying drawings:—
Figure 1, is a plan view with the trough removed. Fig. 2, is a perspective view with a portion of the trough broken away showing the thin metal strips inserted in the molds.

In the drawings the reference letter *a*, indicates a flat metal base plate having central screw threaded apertures in the ends thereof.

It is well understood that thermo-electric generators consist of a series of blocks of one metal forming one element in each thermo couple and a series of thin strips of different metal forming the opposite element of the thermo couple and uniting opposite ends of the adjacent blocks. A series of molds are provided with narrow grooves running from one end of one mold to the opposite end of the adjacent mold to receive the thin metal strips so that their ends will project into the molds. The molds proper are formed by two separate plates *c, d*, resting longitudinally on the base *a*. The inner adjoining edges of these plates are provided with oppositely projecting intermeshing projections *e, f*,

which so intermesh and extend between each other as to form the molds *g*, for the blocks of the thermo electric generator and leave the narrow slits *h*, for the strips opening at their ends into the molds as shown. The plates *c, d*, are formed of a thickness which it is desired the completed generator shall have.

It should be observed that the projections *f*, of the plates *d*, are arranged a suitable distance apart and that one edge of each projection *f*, is inclined preferably from its base to its outer end. The series of projections *e*, of the plate *c*, are arranged opposite the spaces between the opposite projections *f*, so as to alternate therewith. Each projection *e*, has an inclined edge arranged parallel with the inclined edge of the adjacent projection *f*, so that the width of the space or slot between said inclined edges varies as the two plates approach or recede from each other.

j, indicates the feed trough made in two longitudinal sections and having the longitudinal depression *k*, opening into all the molds preferably at or near one end of each mold. The depression of this trough usually has the downwardly inclined sides and the trough is longitudinally divided centrally through said depression and the central opening.

In operation the bolts *b*, extending into the base blocks are loosened and the mold sections are placed thereon with the metal strips *l*, of the generator clamped between them. The trough is then placed over the molds and the sections thereof together, and the bolts *b*, are tightened so that the washers *b'*, thereof tightly clamp the sections of the trough together and the sections of the mold together and in place. The molten liquid to form the blocks of the generator is then poured into the trough and thereby simultaneously casts all the block elements and unites the same by the strips. The bolts *b*, are then loosened and the trough divided and the sections thereof removed laterally. The two sections of the molds are then separated laterally and you have the complete generator therein.

This device is operated quickly and easily and is exceedingly simple and durable.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent of the United States, is—

The casting apparatus for the manufacture of thermo-electric piles which comprises
5 a base, the two parallel plates arranged on said base, one at least, of said plates being movable, said plates having the inwardly extending projections from their inner edges arranged to alternate and extend between
10 each other to form the mold cavities, each pair of opposite projections having their ad-

jacent edges formed to leave the slots connecting the mold cavities, substantially as described.

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

HARRY BARRINGER COX.

Witnesses:

O. E. DUFFY,
C. M. WERLE.