(No Model.)

G. W. SURGUY.

MOLD FOR CASTING SLUGS AND LEADS FOR PRINTERS' USE.

No. 299,438. Patented May 27, 1884.

Fig. 1.

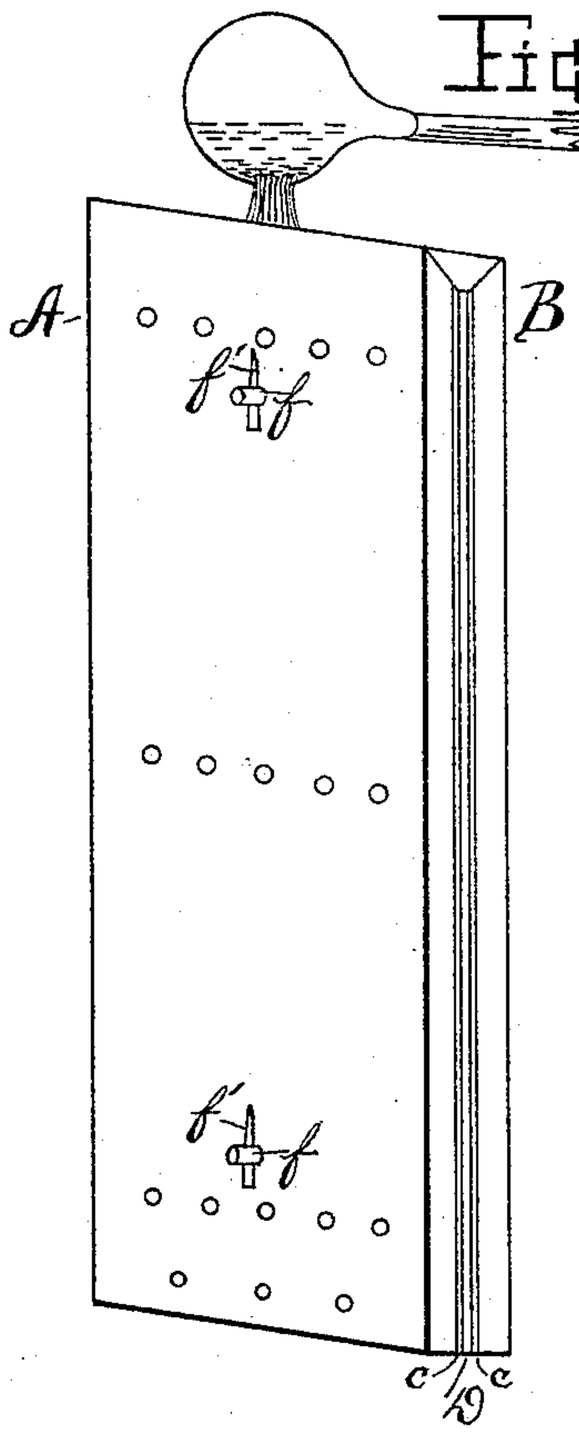


Fig. 2.

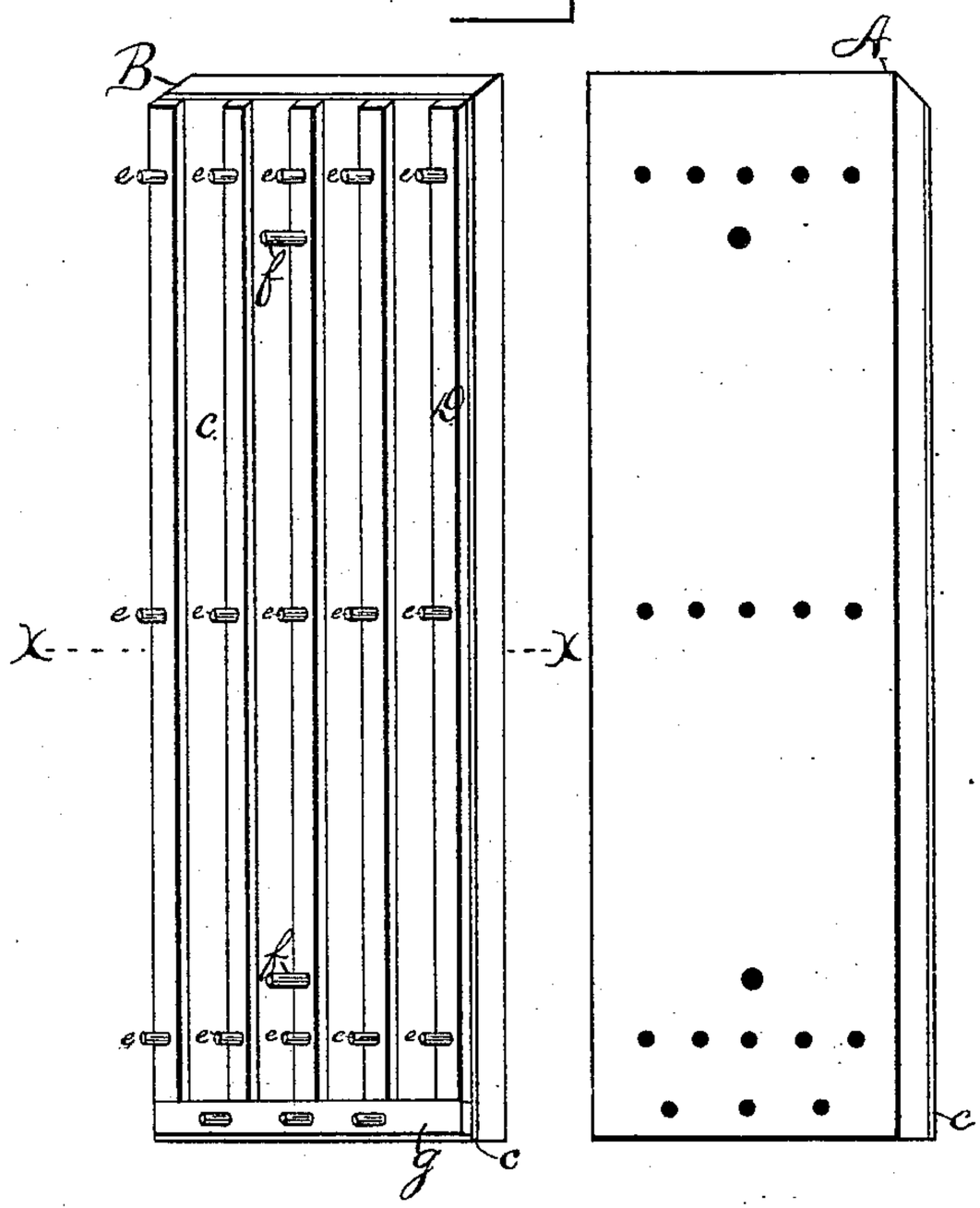


Fig. 3.

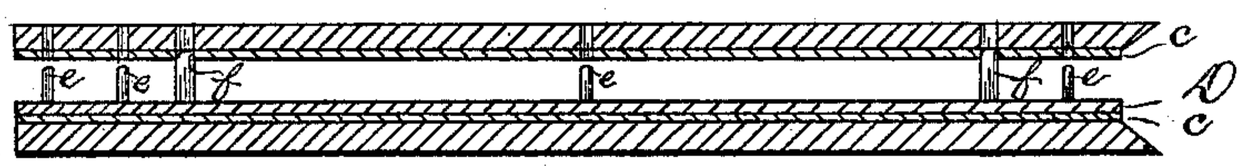
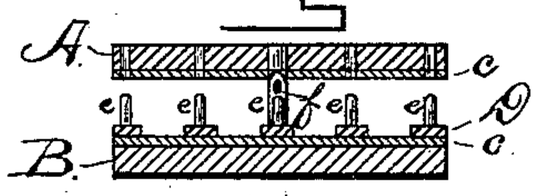


Fig. 4.



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UNITED STATES PATENT OFFICE.

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MOLD FOR CASTING SLUGS AND LEADS FOR PRINTERS' USE.

SPECIFICATION forming part of Letters Patent No. 299,438, dated May 27, 1884.

Application filed November 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. SURGUY, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Molds for Casting Slugs and Leads for Printers' Use; and I do hereby 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 appertains to make and use the same.

The various processes that have been heretofore employed for casting slugs and leads have generally proven unsatisfactory and tedious in operation, resulting in the production of uneven surfaces, flaws, air-holes, and blotches, &c., mainly due to the sudden cooling of the molten metal. For this reason, also, it has been impossible by the usual methods to cast such articles of more than a few inches in length. By the use of my improved device slugs and leads are cast perfectly smooth and even and free from air-holes and blotches, uniform in size, and standard in measure, and a hundred or more can be cast in an hour, while the mold itself is simple in construction, easily operated, and is cheap and durable. By my improvement one or more molds can be combined in the same machine. I preferably have four molds, which are operated at the same time as easily as one can be.

My improvement is illustrated in the accompanying drawings, in which Figure 1 is a perspective exterior view of the mold and melting-pot; Fig. 2, an interior view, with one of the plates removed; Fig. 3, a vertical sectional view; and Fig. 4 is a view on line *x x* of Fig. 2 of the device.

As I construct the molds, they consist of two metal plates, A B, of any desired width, the plates when joined forming the sides of the mold. These plates are lined with card-board, paper, or other non-conducting substance—such as glass or porcelain—and on one of the plates strips of wood, D, or other similar non-conducting substance are placed lengthwise of the plate, and corresponding in length to the length of the plate or the mold and at such distance apart to correspond to the size of the slugs and leads to be cast. These strips of wood I preferably make of holly or other similar wood, as it is fine-grained and hard and will not shrink or warp, and gives a smooth finish to the slugs or leads. They may be of any desired width and secured to the plate by means of pins *e* or other suitable device, and they form a ledge on two sides of the mold, while the plates form the two other sides. A bottom wooden cross-piece or ledge, *g*, is also employed. The two plates thus formed are then fastened together by means of pins *f*, or other similar device, and the mold is then complete and ready for operation. The upper plate may be countersunk where it comes in contact with the pins which fasten the strip to the lower plate. The pin *f* is provided with a slot for receiving a key, *f'*, which fastening presses the plates together and holds them rigidly in place. I preferably combine four molds in one machine and cast four leads or slugs at the same time. Card-board or other cheap paper may be used for the lining of the sides of the plates. I have also found that glass is an excellent lining for the mold, and by its use a finer finish is produced than by card-board. One of the good results produced by the use of a non-conducting lining is due to the fact that thereby the lead is prevented from cooling too rapidly when poured into the molds. The strips of wood I preferably make three-fourths to three-eighths of an inch wide and in thickness corresponding to the gage of the slugs or leads desired for use.

When the device is required for casting two or more slugs or leads at the same time, the center wooden strip is made three-fourths of an inch wide, so as to admit of a hole large enough to pass a bolt or pin, *f*, through, which fastens the plates together, and the other strips are made three-eighths of an inch wide.

The molds can be made of any desired length. I preferably make them about sixteen inches long, so that the slugs and leads cast are fifteen inches long, that being the most desirable length for practical use. The plates are made flaring at the top, so as to form a mouth for receiving the molten lead. The lead is heated and then turned into the mold thus formed, and the paper and wood be-

ing non-conductors the lead will run to the bottom and gradually fill up the mold. The key is then removed from the bolts, the bolts taken out, the upper plate removed, and the slugs or leads are then taken out and are ready for use. The mold may be then again closed, and the operation repeated.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A mold for casting slugs or leads, provided with inner strips of wood, or of similar non-conducting material, substantially as and for the purposes herein described.

2. A mold for casting slugs or leads, comprising two plates lined with a non-conducting substance, in combination with inner strips of wood or similar non-conducting material, substantially as described.

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

GEORGE W. SURGUY.

Witnesses:
THOS. N. SURGUY,
J. W. FIRESTONE.