

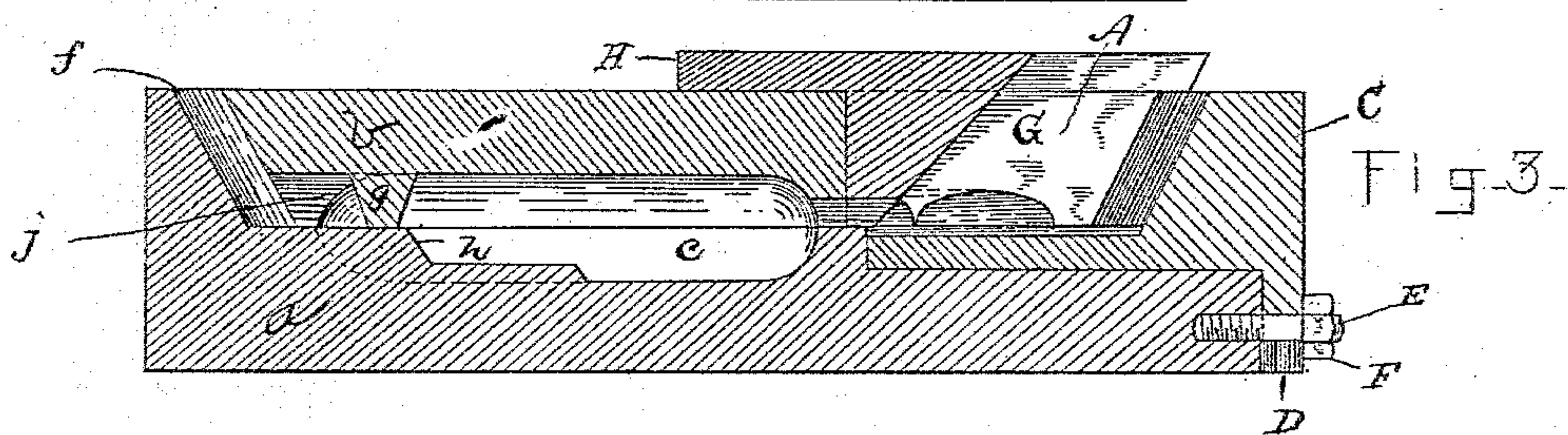
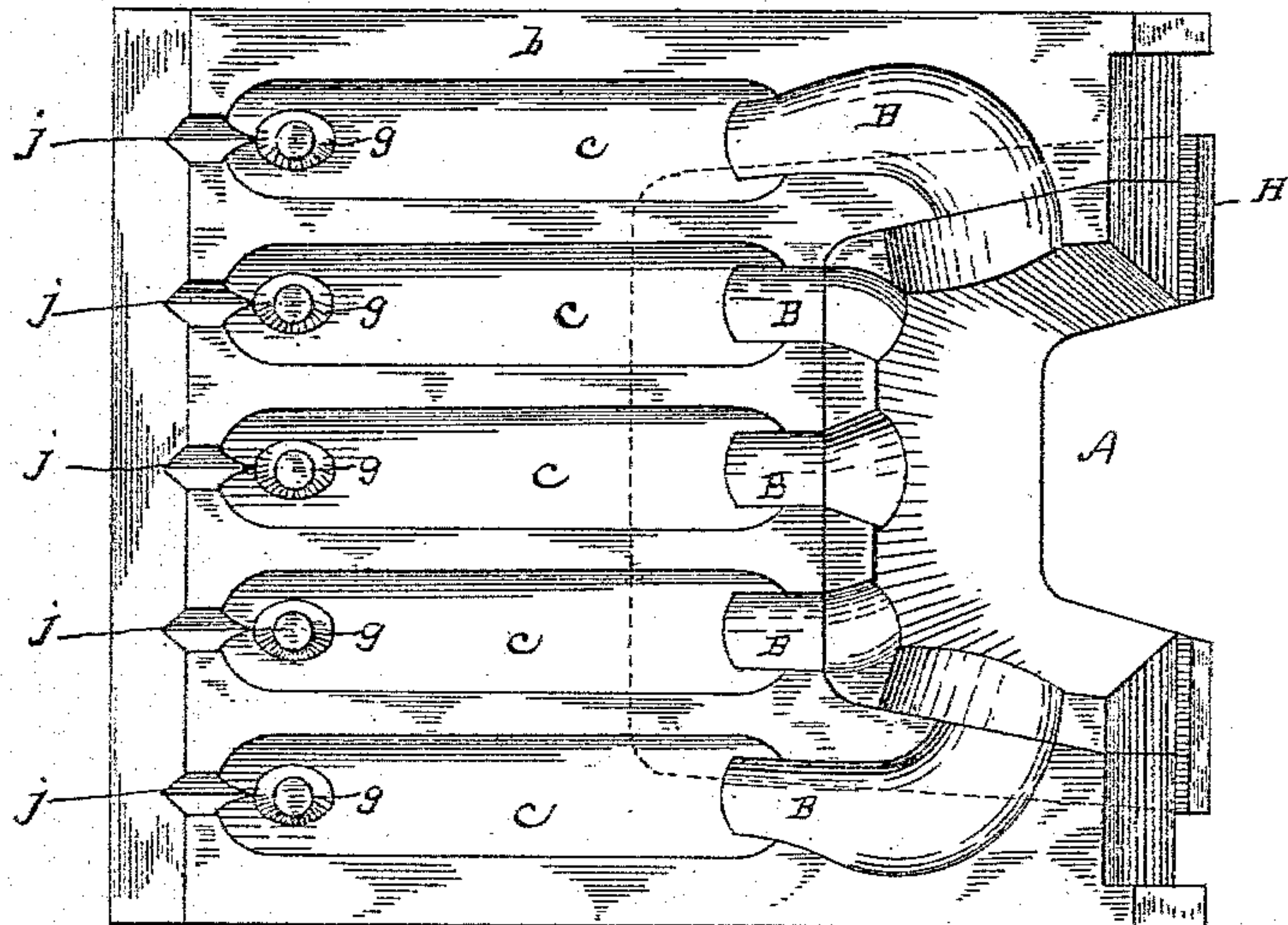
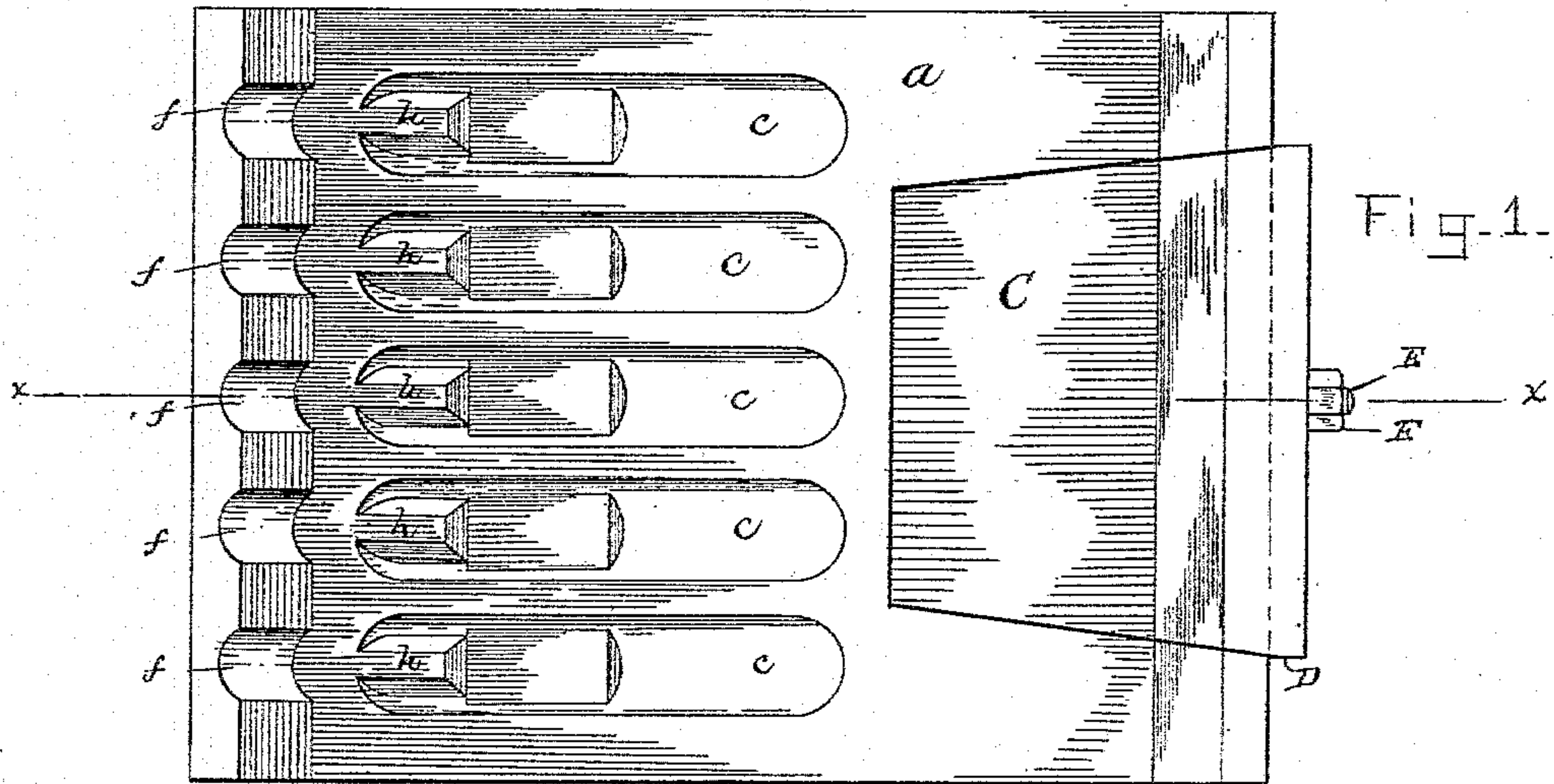
(No Model.)

C. E. STEVENS.

METAL MOLD FOR SASH WEIGHTS.

No. 356,736.

Patented Jan. 25, 1887.



WITNESSES:
H. Brown.
A. H. Brown.

INVENTOR:
Charles E. Stevens
by Micht, Brown & Corailey
Attys.

UNITED STATES PATENT OFFICE.

CHARLES E. STEVENS, OF EAST SOMERVILLE, MASSACHUSETTS.

METAL MOLD FOR SASH-WEIGHTS.

SPECIFICATION forming part of Letters Patent No. 356,736, dated January 25, 1887.

Application filed March 26, 1886. Serial No. 196,613. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. STEVENS, of East Somerville, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Metallic Molds, of which the following is a specification.

My invention relates to molds or mold-boxes for casting metal, and particularly to such articles designed for casting window and sash balance-weights, and has for its object to so improve the construction of such mold or mold-boxes as to render them more serviceable and to enable the parts most quickly destroyed or cut away by the molten metal to be readily removed and replaced by a new part, thus greatly prolonging the life of the mold and saving considerable expense to the user thereof.

My present invention is an improvement on the mold shown and described in the application filed by me in the United States Patent Office on the 7th day of December, 1885, to which application reference may be had, said improvements consisting in constructing each mold or pattern-cavity of the box so as to give it direct communication with the pouring-gate, and in a construction whereby the parts at the pouring-gate first met by the molten metal are made readily removable, so that they can be taken out and replaced by new parts after having become damaged by use, as they quickly will be, thus obviating the necessity of frequently making an entirely new mold or mold-box, as would be the case without such provision as is made in my invention.

In the drawings hereto annexed, and forming a part of this specification, Figure 1 represents a top plan view of the lower half or section of the mold-box. Fig. 2 represents a bottom plan view of the upper half of the box. Fig. 3 is a longitudinal vertical section of the entire box on the line *x x* of Fig. 1.

Similar letters of reference indicate corresponding parts in all the figures.

a designates the upper section of my mold-box, and *b* the lower section. Each of said sections is provided with substantially one-half of the molds or pattern-cavities *c*, so that when the two parts are placed together and properly "centered" a series of complete pat-

tern-cavities will be formed. In the present instance I have represented five such pattern-cavities, though my invention is not limited to any particular number in a single mold or mold-box.

As shown, my invention, as here disclosed, is designed for the casting of window and sash balance-weights. The same is described in my said application, and where the parts and features of the present invention are similar to those of the mold described in the said application they are designated by the same letters of reference.

h represents ribs formed on the lower section of the box, designed for forming a slot in the weight leading from the eye to the top thereof, forming a slot in which the suspending-cord of the weight may rest to protect it from wear or abrasion.

f represents air vents or exhausts at the lower end of the box—one for each mold or pattern-cavity. The ribs *h* and air-vents *f* are both features of the lower section, *b*.

g represents studs formed on the upper section, and adapted, when the two sections are placed together, to rest on the upper or forward end of rib *h*, for the purpose of forming the eye in the weight.

j represents passages formed in the upper section, *a*, and communicating with the pattern-cavities *c* and air-vents *f*, thereby providing each cavity or mold with a vent.

The parts and features just described are similar to those shown and described in my before-mentioned application.

A represents the pouring hole or gate for the entrance of the molten metal, which gate communicates directly, by means of passages *B*, with each pattern-cavity or mold *c*.

The parts or surfaces immediately at the pouring-hole are made removable from the main or body portion. The removable portion *C* in the lower section, *b*, is wedge-shaped in form, as viewed from the top, and the side edges thereof are inclined, so as to fit correspondingly-inclined or dovetail groove formed in said last-mentioned section. The forward end of said removable portion *C* is provided with a flange, *D*, resting against the forward end of the mold. Projecting from the lower edge of the forward end of lower section, *b*, is

a bolt, E, projecting through a hole or slot in the lower edge of flange D, upon which is a nut, F, to hold said removable portion C in place of the lower section.

5 G represents the removable portion of the gate connected with the upper section, *a*. Said portion G includes that portion of section *a* immediately surrounding the pouring hole or gate A, and is formed as though a portion of
10 said section around said hole were sawed or cut out and again set or affixed therein by being provided with a laterally-extending flange, H, resting upon the upper surface of upper section, *a*.

15 By my improvements the portions C and G of the mold can readily be removed when they become impaired from use, and new and perfect parts can readily be secured in their places.

20 Having thus described my improvements, I claim—

1. A metallic mold for casting window and sash balance-weights, consisting of the lower section, *b*, provided with a wedge-shaped
25 dovetail groove, the removable portion C, having a wedge-shaped dovetail form to fit the groove formed in said section and provided with a flange, D, adapted to rest against the forward part of the mold, devices for securing
30 said flange to the mold, the upper section, *a*,

provided with a recess, and the removable portion G, formed to fit said recess and provided with the flange H, as set forth.

2. A metallic mold for casting window and sash balance-weights, consisting of the sections
35 *a b*, provided with a plurality of pattern-cavities, each provided at one end with an air-vent, *f*, the removable pouring-gate at the opposite end consisting of the parts C G, the pouring-gate communicating directly with
40 each pattern-cavity, as set forth.

3. A metallic mold for casting window and sash balance-weights, consisting of the sections *a b*, provided with a plurality of pattern-cavities, the removable pouring-gate com-
45 prising the parts C G, the former provided with the flange D and the latter with the flange H, devices for securing the flange D to the forward part of the mold, passages B, connecting the pouring-gate with each pattern-cavity,
50 and each pattern-cavity being provided at the end opposite the pouring-gate with an individual air-vent, *f*, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two sub-
55 scribing witnesses, this 23d day of March, 1886.

CHARLES E. STEVENS.

Witnesses:

ARTHUR W. CROSSLEY,
C. F. BROWN.