

No. 840,826.

PATENTED JAN. 8, 1907.

E. A. COLBY.
CRUCIBLE.

APPLICATION FILED NOV. 23, 1905. RENEWED OCT. 9, 1906.

Fig. 1.

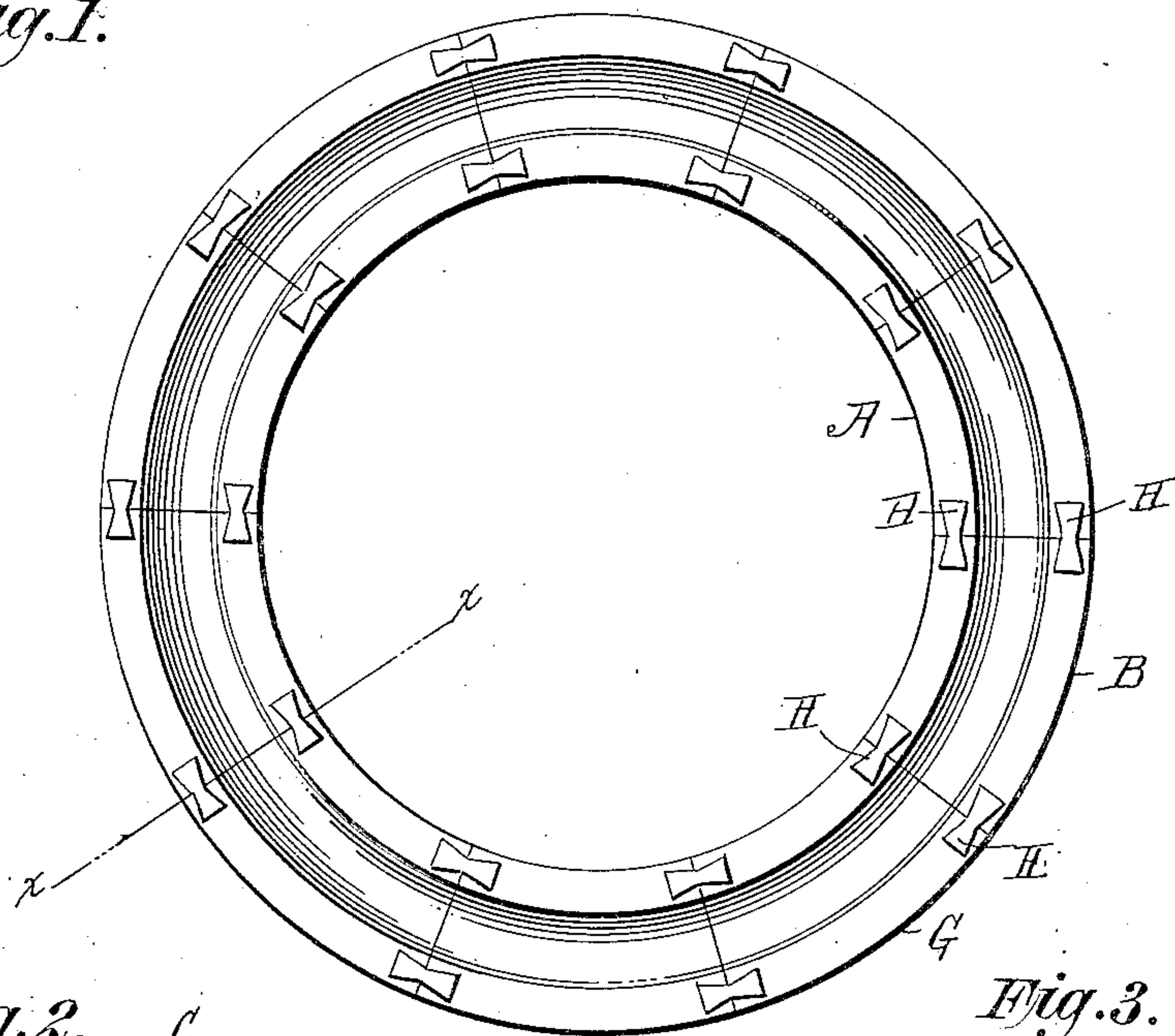


Fig. 2.

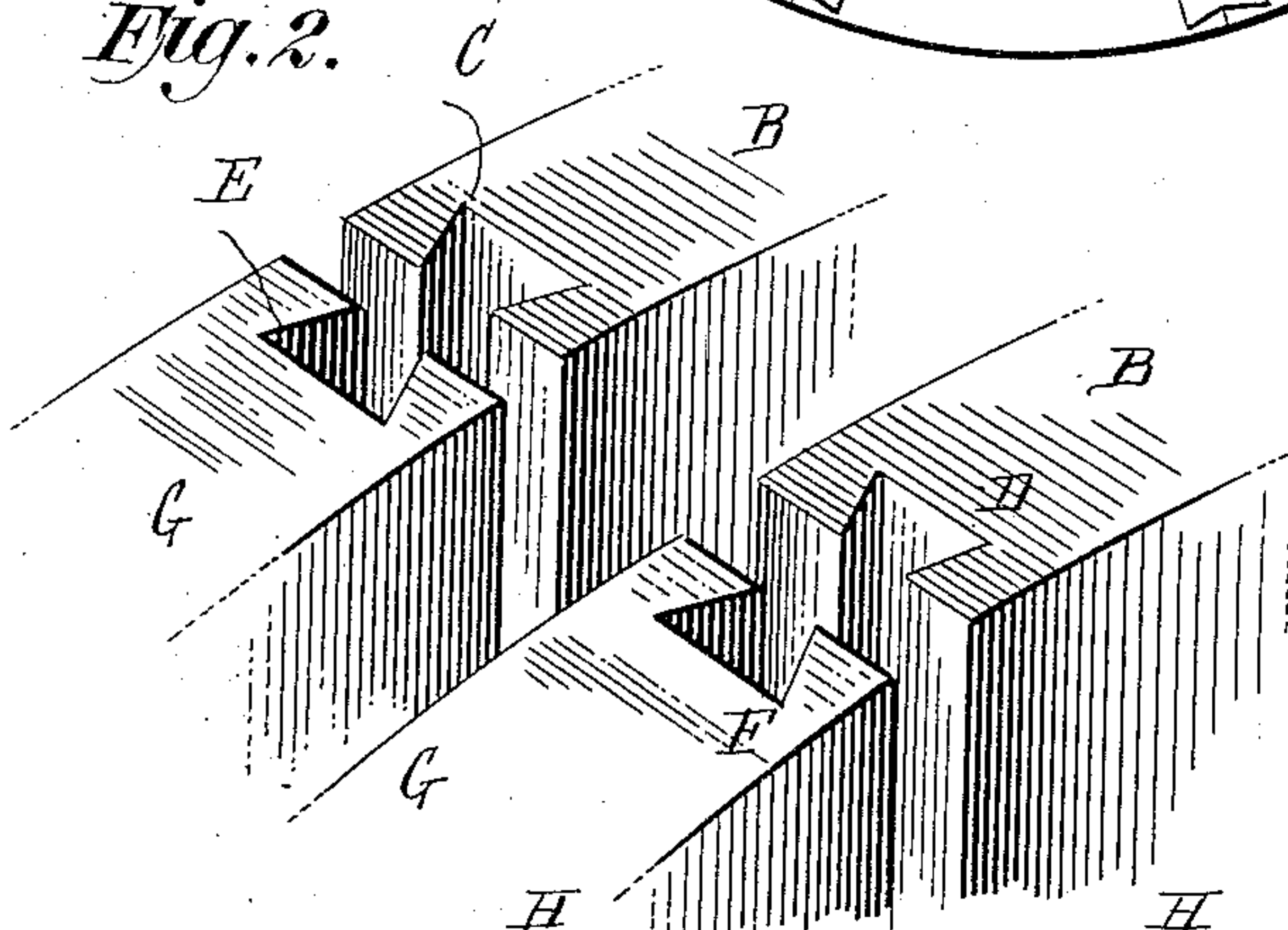


Fig. 3.

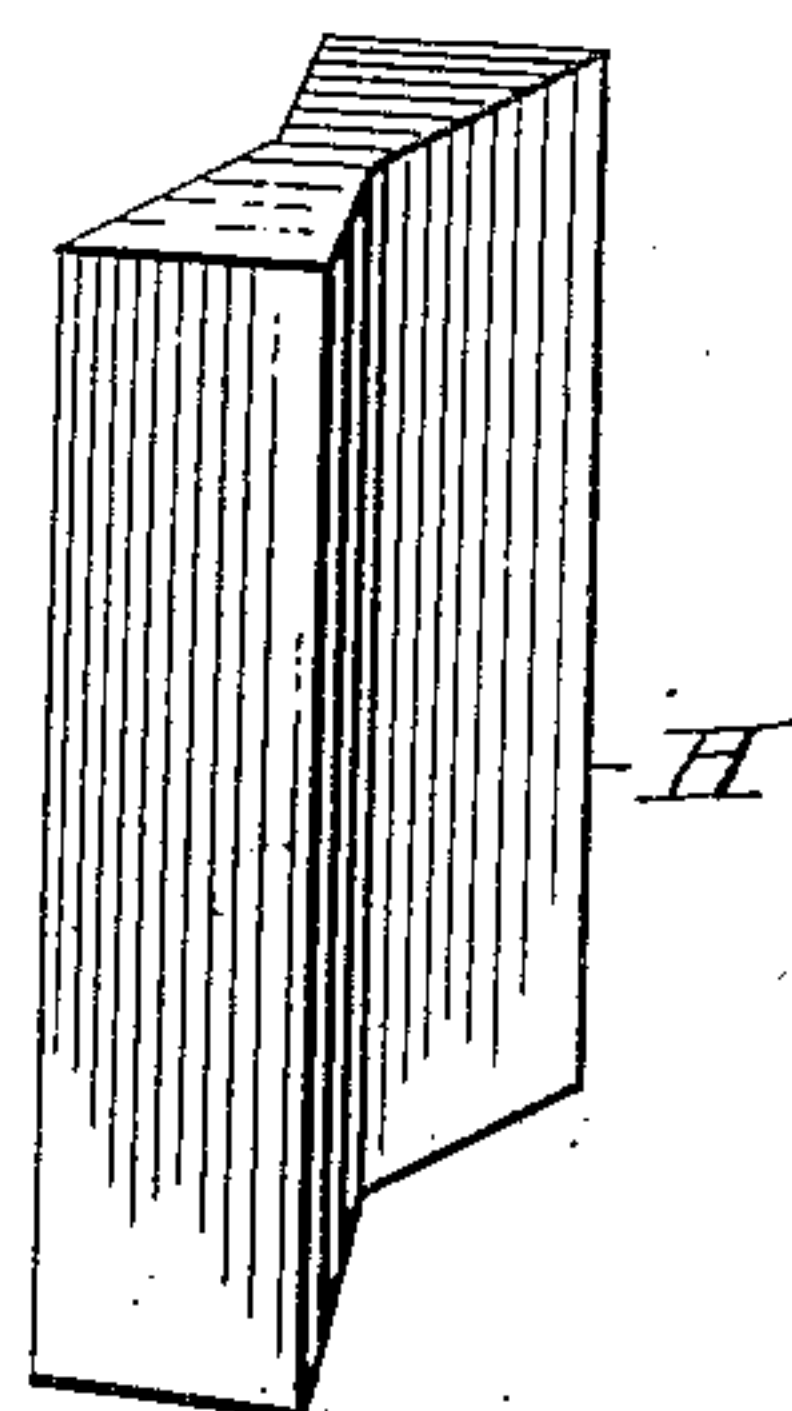


Fig. 4.

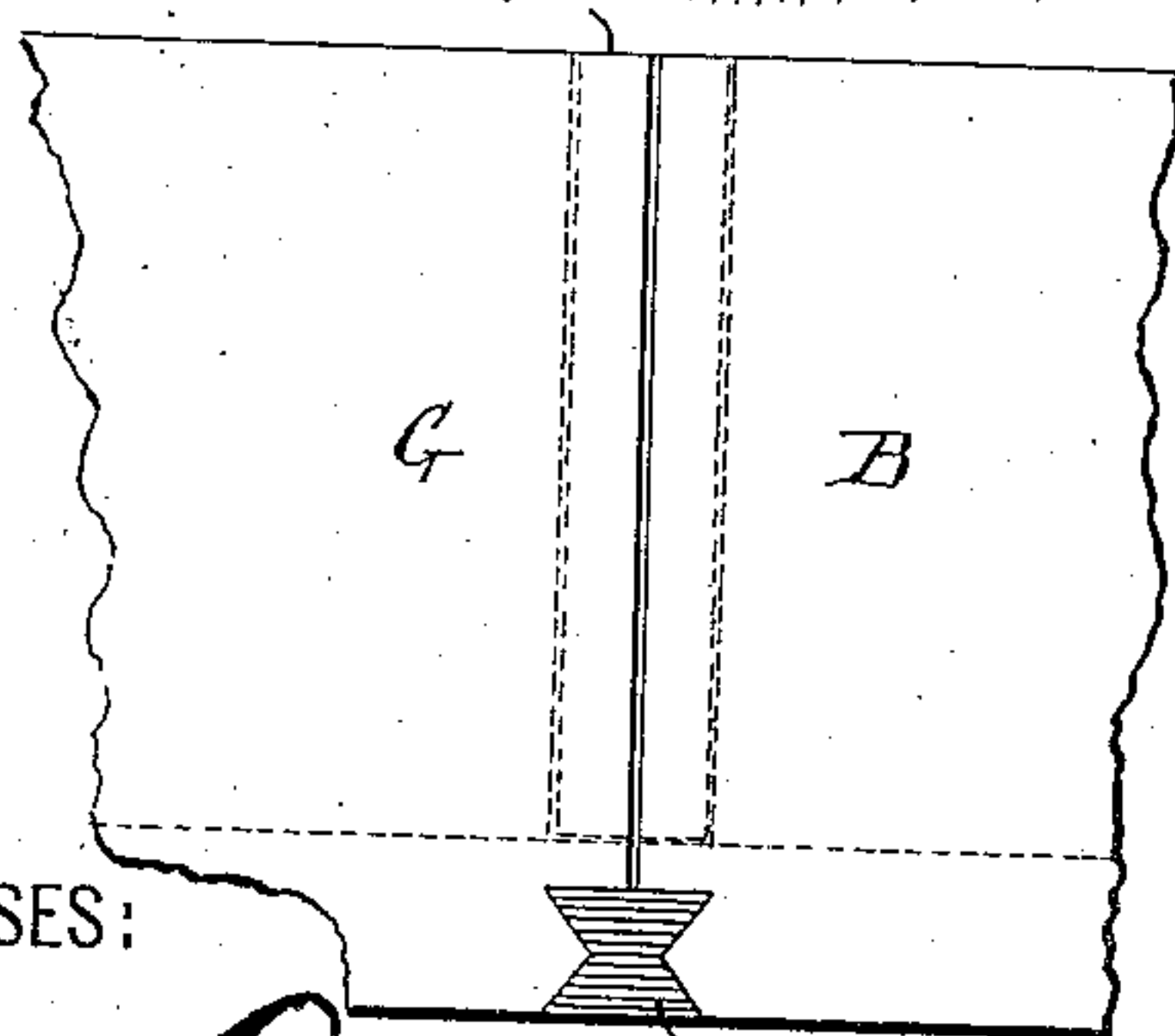
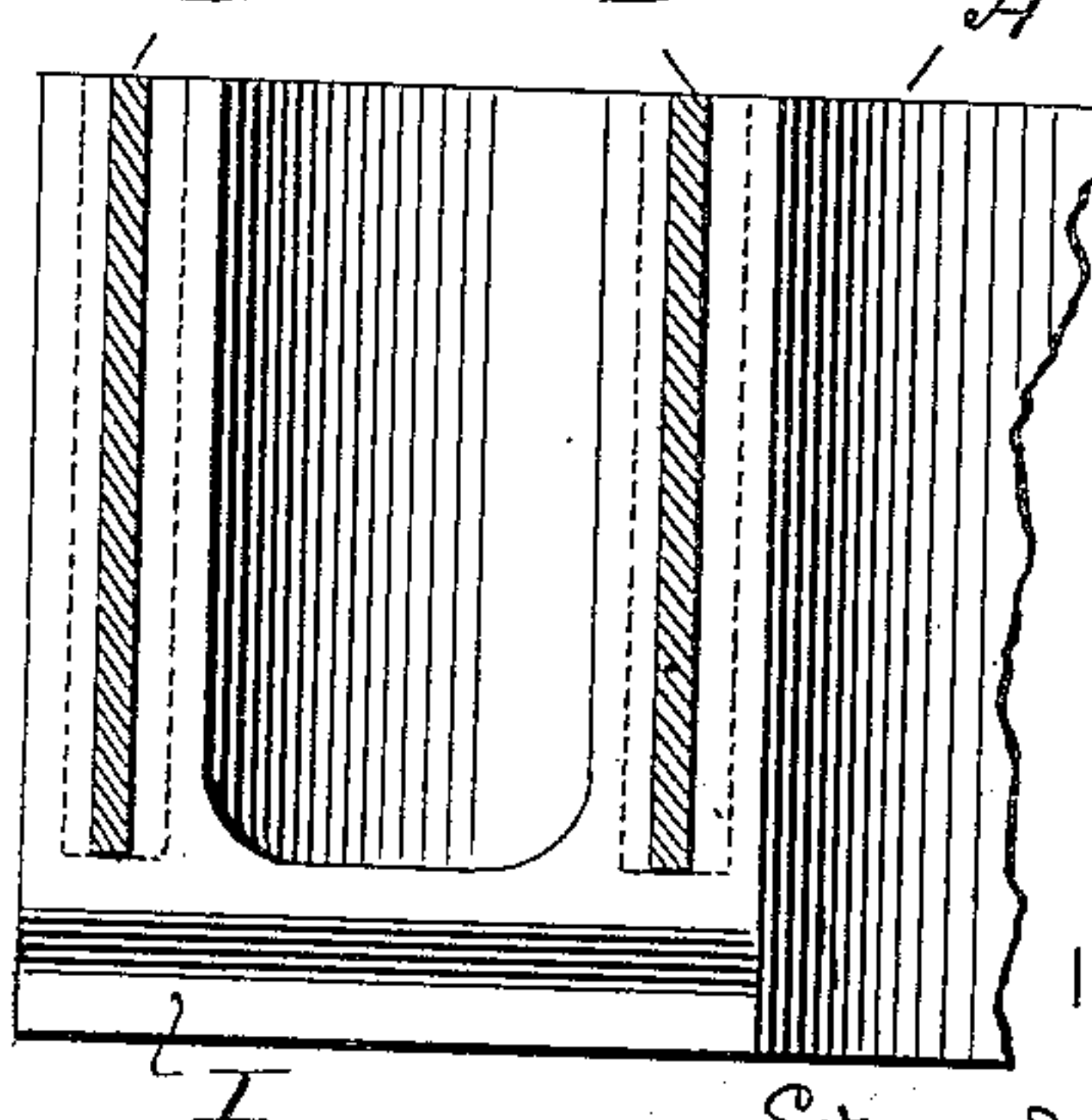


Fig. 5.



WITNESSES:

Gustav Dietrich
Edwin H. Dietrich

INVENTOR

Edward A. Colby
BY *Lawrence Benjamin*
his
ATTORNEY

UNITED STATES PATENT OFFICE.

EDWARD A. COLBY, OF NEWARK, NEW JERSEY.

CRUCIBLE.

No. 840,826.

Specification of Letters Patent.

Patented Jan. 8, 1907.

Application filed November 23, 1905. Renewed October 9, 1906. Serial No. 338,170.

To all whom it may concern:

Be it known that I, EDWARD A. COLBY, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented a certain new and useful Improvement in Crucibles, of which the following is a specification.

The invention relates to electrical induction-furnaces for melting metals, wherein the charge forms a closed secondary circuit which is disposed in inductive relation to a primary coil, so that the currents induced in said charge operate to melt the same.

The invention consists in a crucible formed of sections connected by keys; also, in the various combinations set forth in the claims.

In the accompanying drawings, Figure 1 is a top view of the crucible. Fig. 2 is a perspective view of a portion of the upper rim, showing the keyways. Fig. 3 shows one of the keys separately. Fig. 4 is a face view of one of the joints between the crucible-sections. Fig. 5 is an enlarged cross-section on the line *xx* of Fig. 1.

Similar letters of reference indicate like parts.

The crucible A is annular in form and is composed of a number of arc-shaped sections, as B, which are placed together. In order to connect the sections, I provide in the vertical edge of each section keyways, as C and D, of dovetail form. When the sections are brought together edge to edge, the keyway C D of one section, as B, Fig. 2, meet the keyways E F of the next section G, thus forming double dovetail keyways, in which fit keys H, of refractory material. The keys H thus hold the sections closely together at their approximating vertical edges. In order to prevent vertical displacement of the sections, I also form in each section a transverse keyway I, extending at right angles to the keyways C D. When the sections are brought together, the meeting keyways I form a keyway of double dovetail form, the dovetails being one above the other. Into the double dovetail keyway thus made is inserted a key J, similar to H, as shown in Fig. 4. I thus construct a

crucible of sections without the use of any cement or like binding material. In case of injury to any section or sections it or they can be removed and a new section or sections substituted, so that the whole crucible need not be thrown aside. After the sections have been put together any suitable material may be used to cover the joints. Attention is called to the fact that each section is complete in itself and may be made and sold as a separate article of manufacture.

I claim—

1. A crucible formed of arc-shaped sections having dovetailed keyways in their approximating edges and keys constructed to fit in said keyways.

2. A crucible formed of arc-shaped sections having dovetail keyways parallel to the central axis of said crucible in their approximating edges and keys constructed to fit in said keyways.

3. A crucible formed of arc-shaped sections having dovetailed keyways at right angles to the central axis of said crucible, in their approximating edges and keys constructed to fit in said keyways.

4. A crucible formed of arc-shaped sections having in their approximating edges dovetail keyways parallel to the axis of said crucible and dovetail keyways at right angles to said first-named keyways and keys constructed to fit in said keyways.

5. An annular crucible formed of sections having in their approximating edges dovetail keyways and keys constructed to fit in said keyways.

6. As a new article of manufacture and sale, an arc-shaped crucible-section having two parallel walls and in the edges of said walls dovetail keyways disposed relatively at right angles.

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

EDWARD A. COLBY.

Witnesses:

PARK BENJAMIN, Jr.,
WM. H. SIEGMAN.