

Draper & Glover.

Fire-Proof Safe.

N^o 73309

Patented Jan. 14, 1868.

Fig. 3.

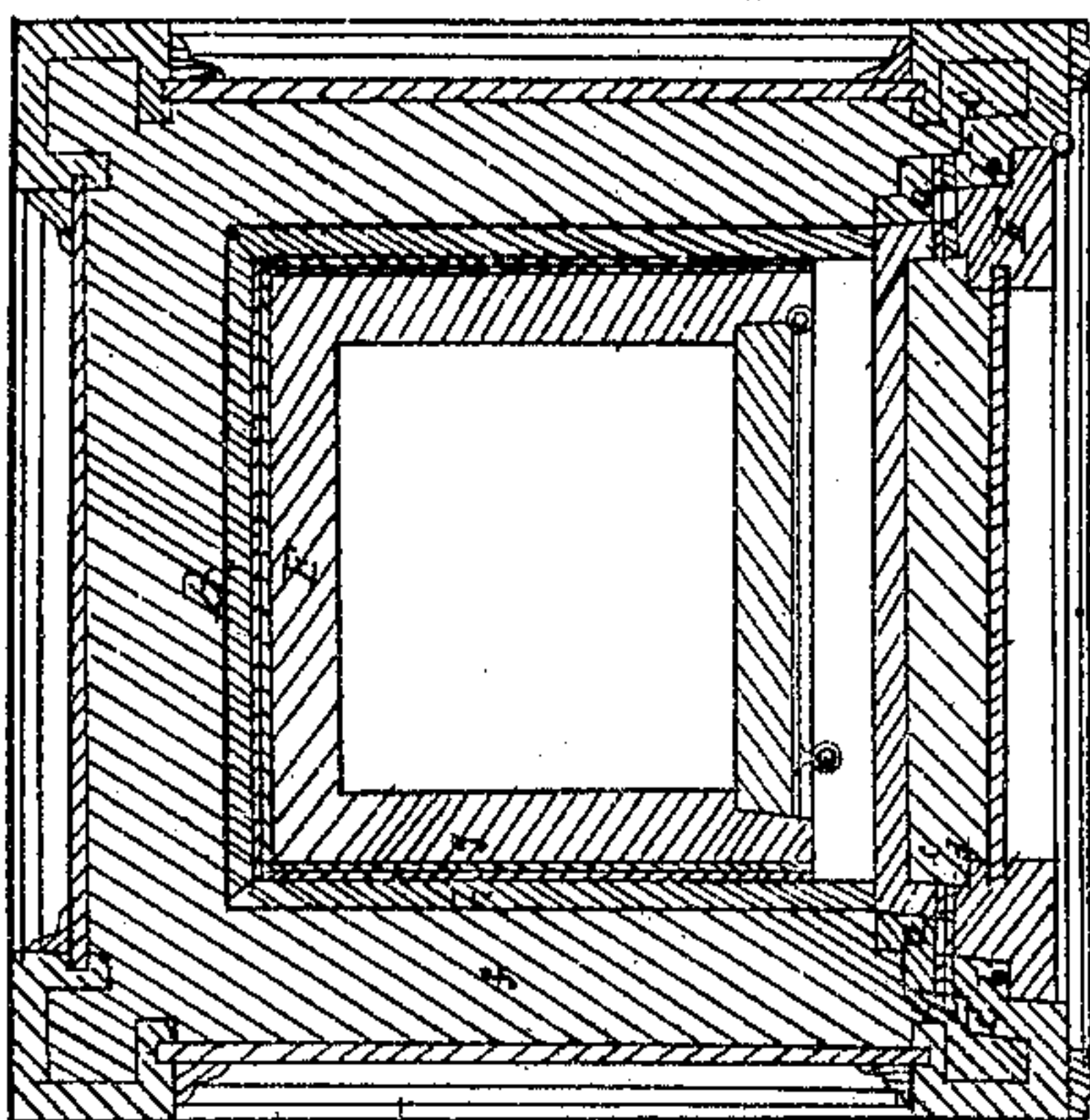


Fig. 2.

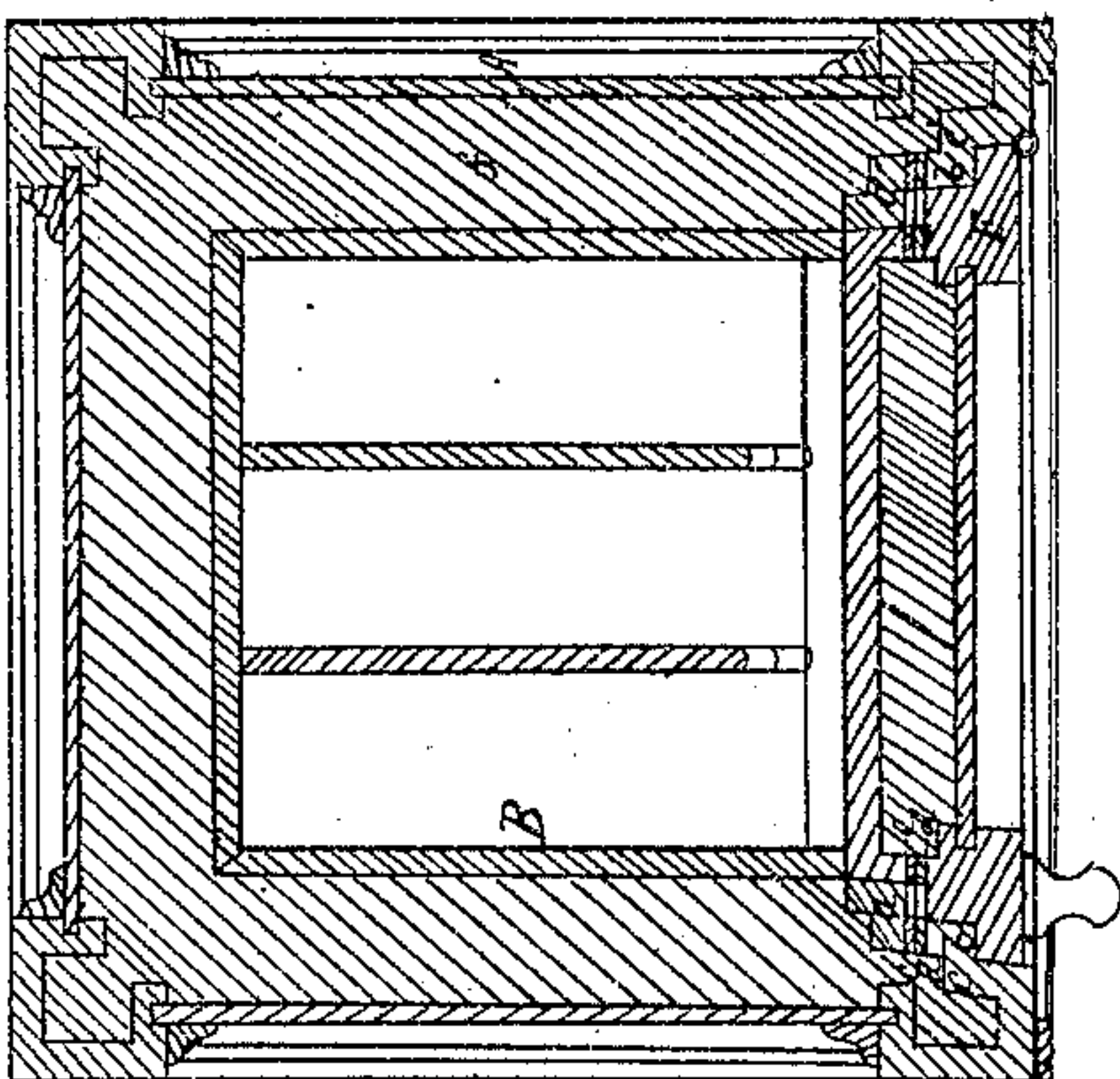
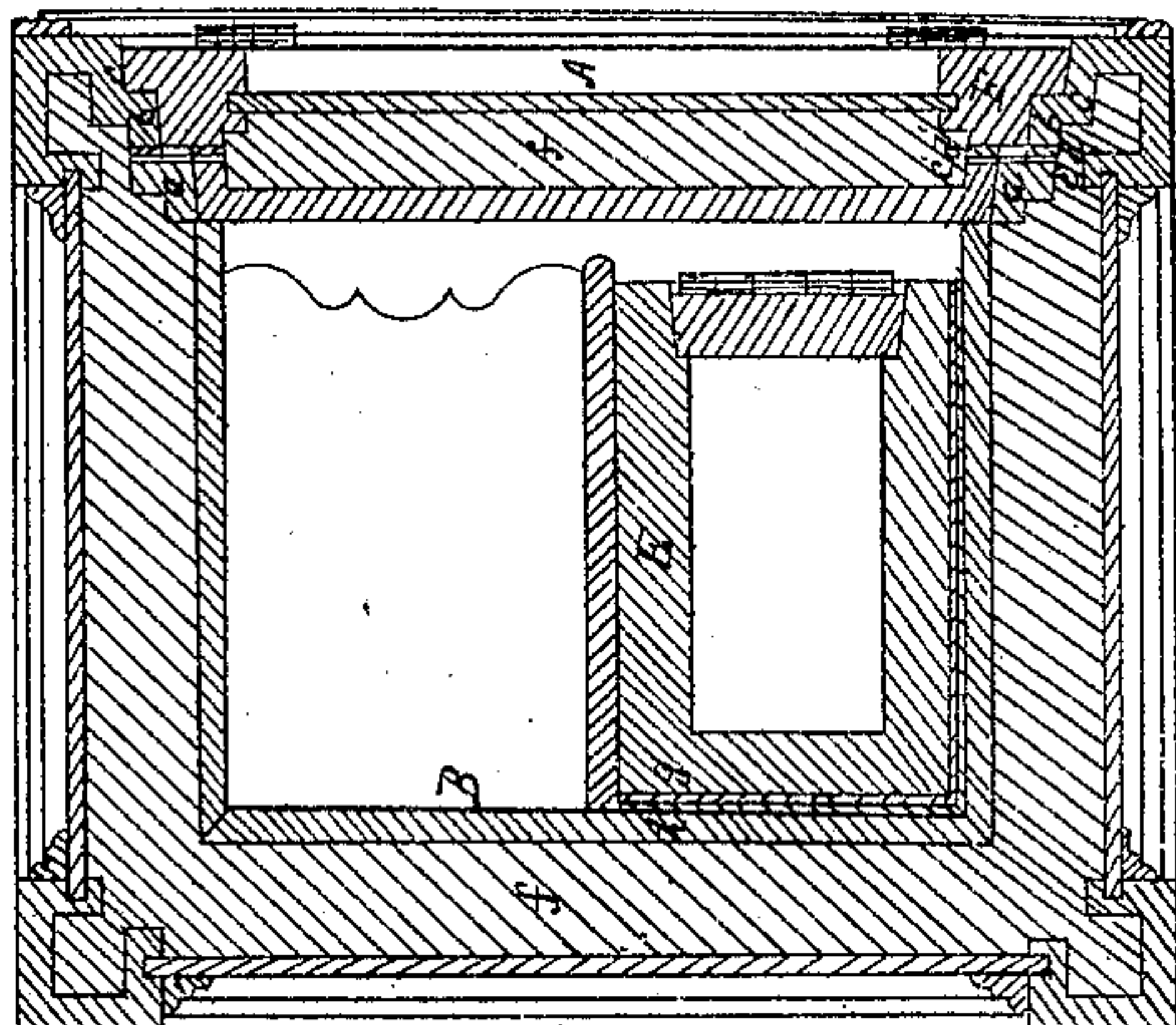


Fig. 1.



Witnesses

*S. N. Piper.
Lauritz Moller*

*Inventor
E. D. Draper
and
E. W. Glover
by their attorney
R. W. Eddy.*

United States Patent Office.

EBENEZER D. DRAPER, OF HOPEDALE, AND EDWARD W. GLOVER, OF
MEDFORD, MASSACHUSETTS.

Letters Patent No. 73,309, dated January 14, 1868.

IMPROVEMENT IN FIRE-PROOF SAFE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL PERSONS TO WHOM THESE PRESENTS MAY COME:

Be it known that we, EBENEZER D. DRAPER, of Hopedale, in the county of Worcester, and EDWARD W. GLOVER, of Medford, in the county of Middlesex, and State of Massachusetts, have invented a new and useful Improvement in Fire-Proof Safes; and we do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a vertical section, and

Figures 2 and 3 are horizontal sections, of a safe provided with our invention.

In such drawings, A denotes the outer case of the safe, as formed of plate-iron. B is the inner case, which may be of either wood or iron. C C are the jambs or frame of the door-opening. E is an inner safe or iron box, usually made of steel, and termed a "burglar-proof." F is the door, hinged to one of the jambs, in the ordinary way.

We have found that when a safe is exposed in a fire, the heat and flame are more liable to gain access to the interior through and about the joint and jambs of the door than in any other portion or parts of the safe, the jambs being a means of conducting the heat from the external to the internal casing.

The main object of our invention is to prevent this passage of heat through the jambs and door, and, for this purpose, we insert within the jambs a stratum of mica or its equivalent, and also a stratum of fusible metal. We also insert in the door-frame such strata of mica and fusible metal.

For this purpose, we form the jambs in two separate frames or parts, *a b*, or with a groove between the two, to receive the strip or stratum, *c*, of mica, and the stratum, *d*, of lead or fusible metal. In other words, we insulate one-half or portion of each of the jambs from the rest of it, by means of one or more plates or strata of mica and fusible metal placed between the two, and reaching to the heat-resisting stuffing of the safe.

The mica in the door is shown at *c'*, and the fusible metal at *d'*. The stratum of fusible metal is laid alongside of the stratum of mica, and should be a metal or composition which will melt at a temperature of about 212° Fahrenheit. The stuffing or filling of the door, and between the inner and outer cases of the body of the safe, is shown at *f*.

The purpose of the fusible metal is to melt when the temperature may reach 212° Fahrenheit, or thereabouts, and, by running out of the space or spaces containing it, leave it or them open or containing air, which may operate as an additional means of preventing the heat from passing from one part of the jamb or door to the other part.

The mica may be employed without the fusible metal, but we prefer to use the latter, on account of making a better finish with it, and of its being advantageous in other respects.

We also insulate the burglar-proof, or inner safe, from the outer one, by a stratum of mica, or by strata of mica and fusible metal, arranged between its external surfaces and the adjacent internal surfaces of the inner case of the safe, the same being as shown at *g* and *h*, the mica being exhibited at *g*, and the fusible metal at *h*.

We cut off or break the passage of heat into the safe by means of a material which is a very slow conductor of heat, and almost, if not entirely, indestructible by heat, and thus we overcome the difficulties to which most iron safes are liable, viz, the passage of heat through the door-frame and the jambs, or those parts which are not insulated by the cement or fire-proof lining, filling, or stuffing.

We are aware that, in the construction of a safe, a lining of soapstone has been arranged between the internal and external plates of both the safe and the door; also, that the door has been made of a plate of iron lined with soapstone, and that the jambs of the door-opening have been made of soapstone. We do not claim such, as our invention differs materially therefrom, and has reference more particularly to safes made with metallic jambs, and with doors chambered, and containing a filling or stuffing of cement.

What, therefore, we claim, as our invention or improvement in a safe, is—

The combination and arrangement of a heat non-conductor, *c*, of mica or its equivalent, with each or either of the metallic jambs or sides of the door-frame, and the filling thereof, the whole being substantially as and for the purpose specified.

And we claim the combination and arrangement of one or more strata of fusible metal, *d*, with the mica or heat non-conductor *c*, arranged in a safe, substantially in manner and for the purpose specified.

We also claim the combination and arrangement of mica or its equivalent, or of mica and fusible metal, with the sides of the burglar-proof and the next adjacent internal surfaces of the safe, the whole being substantially as specified.

E. D. DRAPER,
EDWARD W. GLOVER.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.