

*Holmes & Butler,
Burglar-Proof Safe.*

No 16,087.

Patented Nov. 18, 1856.

Fig. 1

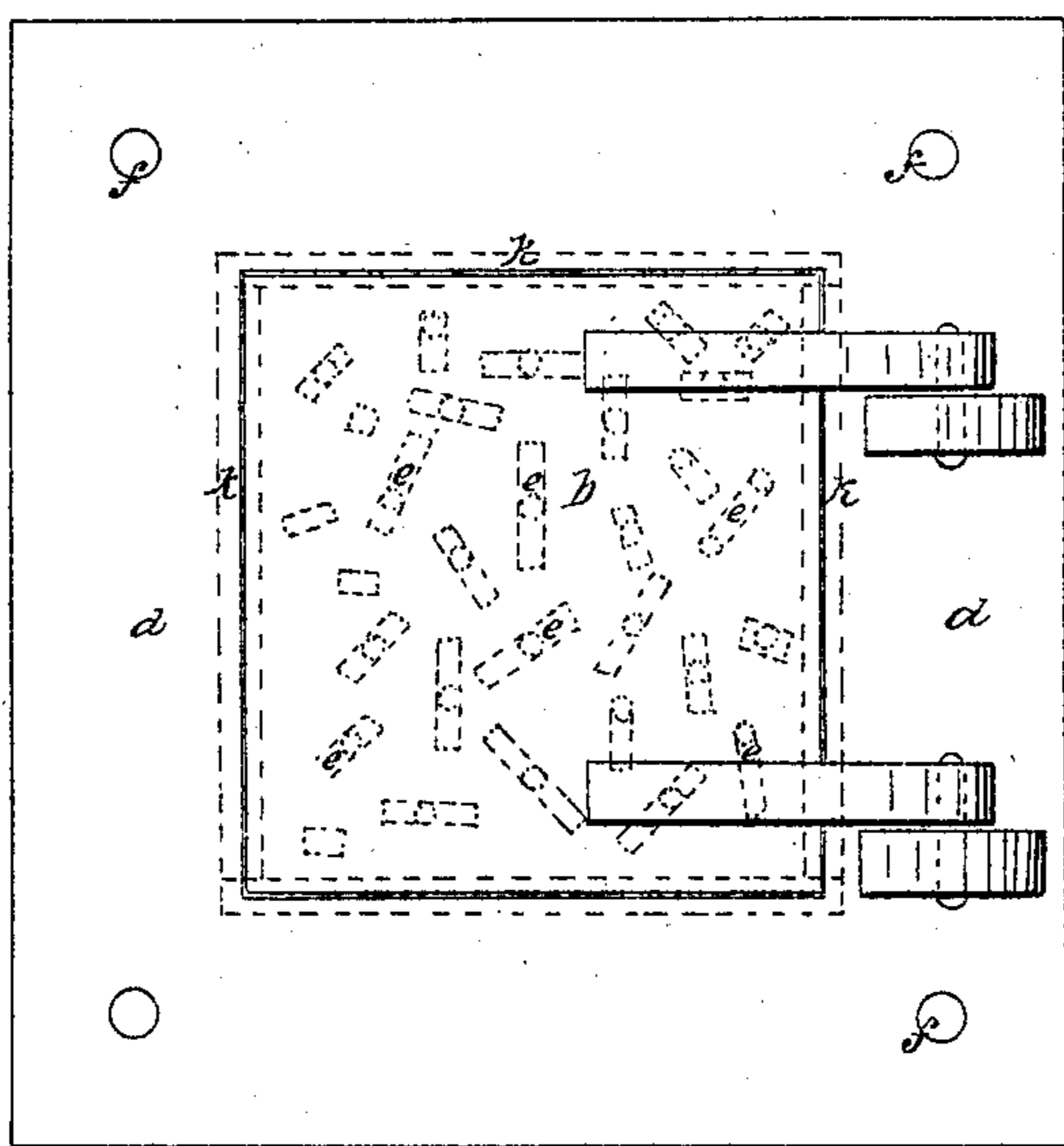


Fig. 2

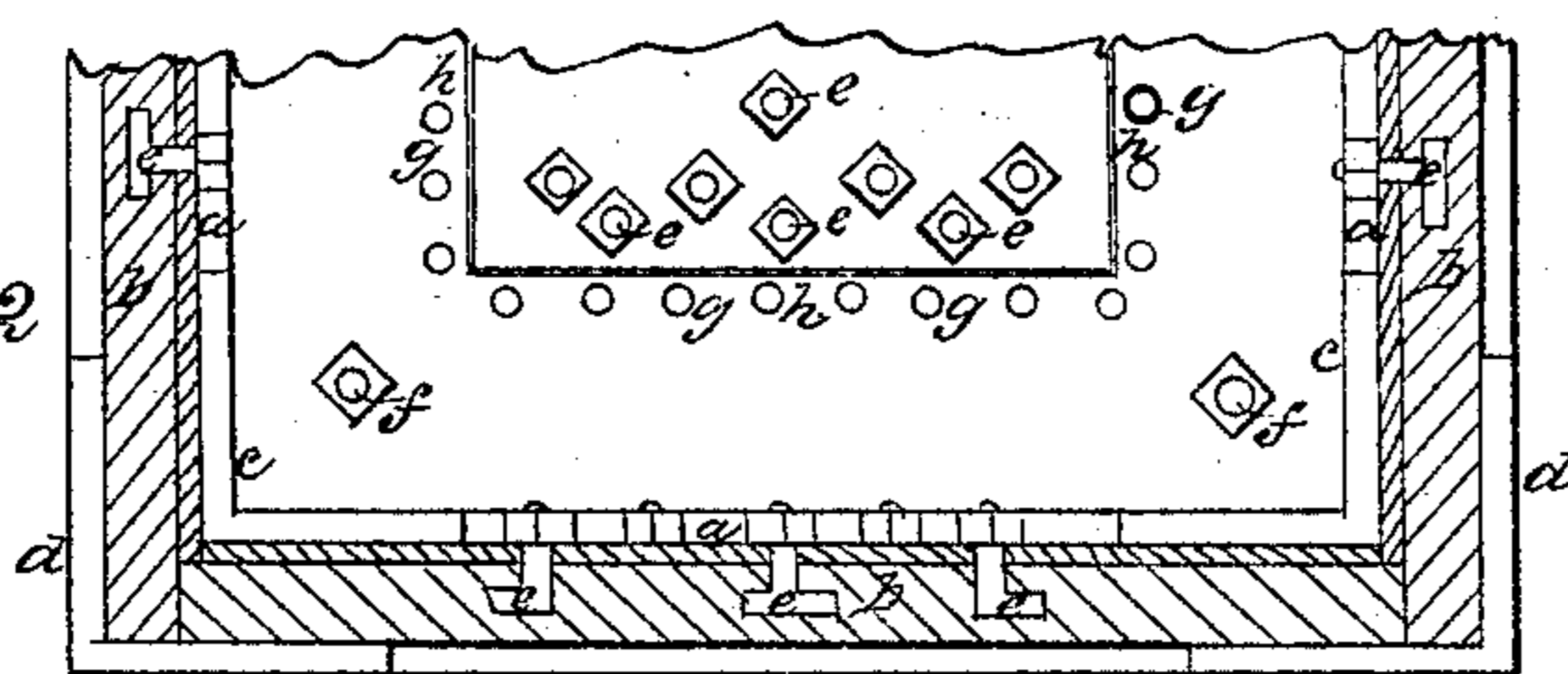
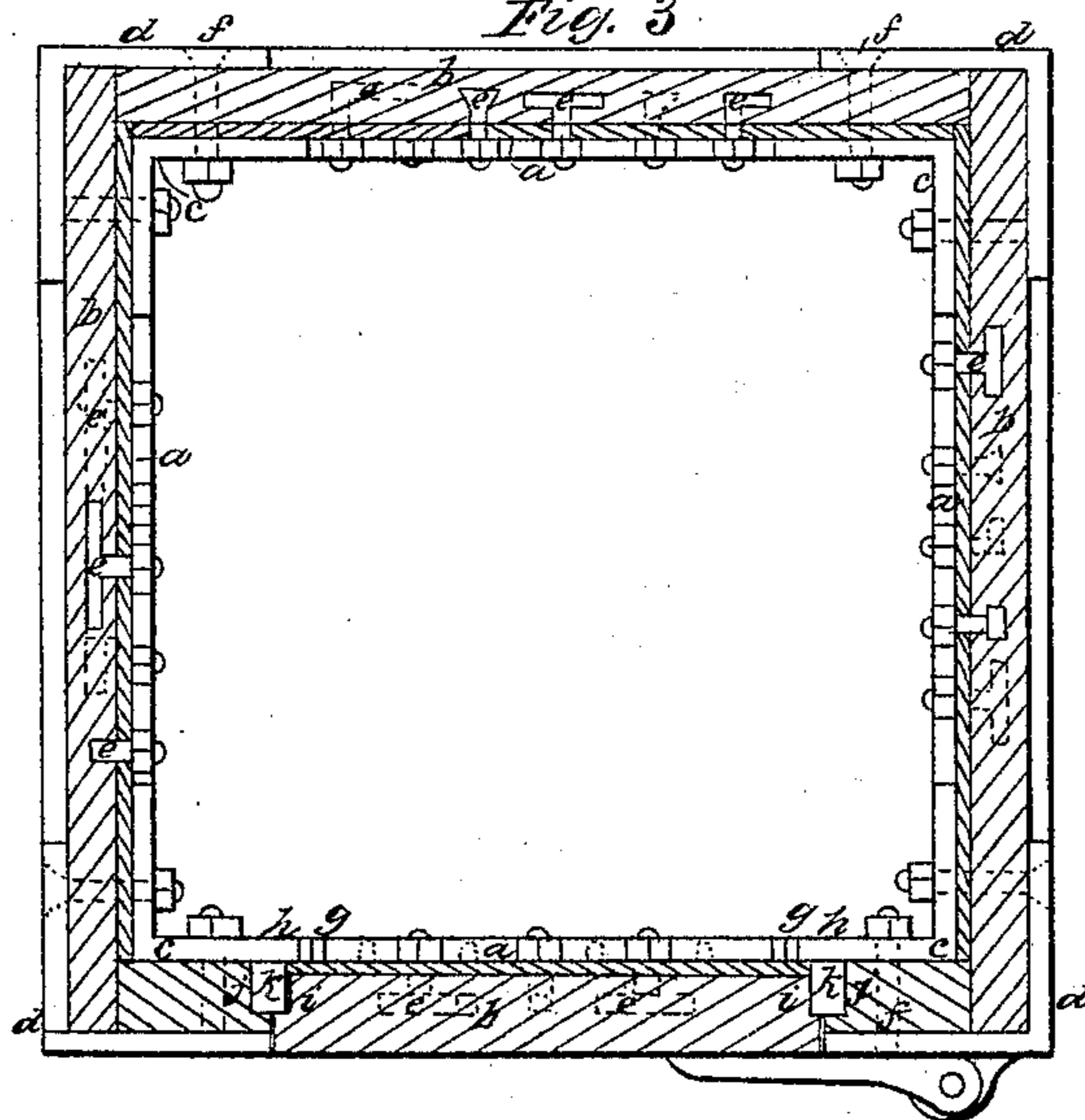


Fig. 3



UNITED STATES PATENT OFFICE.

RICHARD G. HOLMES AND W. H. BUTLER, OF NEW YORK, N. Y.

BURGLAR-PROOF SAFE.

Specification of Letters Patent No. 16,087, dated November 18, 1856.

To all whom it may concern:

Be it known that we, RICHARD G. HOLMES and W. H. BUTLER, of the city, county, and State of New York, have invented certain new and useful Improvements in Burglar-Proof Safes and Doors; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, is a front elevation of a burglar-proof safe constructed according to our invention, and Fig. 2, is a vertical section of the lower part of the same showing the interior of its door. Fig. 3, is a horizontal section of the same.

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

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

The walls of safes constructed according to this invention are composed of an interior box or lining *a, a*, constructed of wrought iron plates, and an exterior box *b, b*, constructed of cast iron plates chilled externally, the wrought and cast iron plates being bolted securely together, and strengthened by angle irons *c*, and *d*, applied internally and externally to all the corners of the safe. The doors are composed of cast and wrought plates like the walls, with the exception of the angle irons. The cast iron plates are connected with the wrought iron plates to give the former such a degree of strength as to prevent them being broken by hammering, by means of wrought iron screw bolts *e, e*, which are cast into them and pass through holes in the wrought iron plates inside of which they are secured by nuts. The angle irons are secured by hardened steel or case hardened iron bolts *f, f*, which pass through the plates *a*, and *b*, and both angle irons the heads of the said bolts being conical and countersunk into the external angle iron.

An important feature in the construction of the walls and door consists in making the bolts *e, e*, which are cast in the plates *b, b*, with heads of the form of a letter T, as shown in Figs. 1, and 2, or of a cross or such other shape that will serve not only to hold the bolts secure in the plates but will form a series of long wrought iron ties within

the cast iron. By arranging these heads in various directions, as shown in Fig. 1, the cast plate is tied and strengthened against fracture in a more effective manner than by any method before adopted, such as by casting straight wrought iron rods in the walls or woven iron work, both of which methods present long continuous straight lines of thin metal in which fractures may be easily produced till the exterior of the casting can be shelled off, and in the latter method it is extremely rare that a solid casting is produced owing to the metal not running freely into all the interstices of the wire work; but in casting the bolts there is comparatively little difficulty, and their heads forming the ties can be arranged to tie the cast iron in all directions without producing long lines of thin metal and therefore they tie it more effectively than straight wrought iron bars or wire work. By uniting the cast and wrought plates in this way there is also a great advantage over the casting of the cast iron directly upon the wrought iron lining of the same as in the latter process it frequently happens that large cavities are formed by the collection of gases between the cast and wrought iron which there is no facility for detecting, and which leave the casting so thin in some places as to be easily broken.

Our method of constructing the safe combines all the advantages of the several methods above referred to without their disadvantages and makes a safe which can neither be drilled nor fractured by hammering.

The principal provision against wedging the door consists in furnishing the inner face of the door all around near its edge with pins or projections *g, g*, see Figs. 2, and 3, to enter holes or recesses in a wrought iron flange *h*, which is formed around the opening for the door by the inner angle irons *c, c*, or by the wrought iron lining of the safe or in any other convenient manner. These pins when the door is closed form an effectual means of security in all directions against the forcing of the door by wedging. The pins or projections should be of wrought iron and may be secured or riveted into the inner plate *a*, of the door.

The fitting of the door is provided for by making a rabbet *i*, all around the inner face of the door, and a groove *j*, all around the inside of the door frame of the same

width as the rabbet *i*, so that straight fitting
pieces *k*, see Fig. 1, of wrought iron or other
suitable metal, may be received partly in the
groove and partly in the rabbet. The labor
5 of fitting the door in its place without fit-
ting pieces would be very great as the
chilled cast iron can only be reduced by
grinding, but these fitting pieces of wrought
iron being loose can be tried in their places
10 and taken out and filed or planed as often
as may be necessary to secure a perfect fit.
By using these fitting pieces another advan-
tage is obtained viz, the depth of the out-
wardly open joint between the door and its
15 frame is made so little that wedges cannot

be driven in very far before they come in
contact with the fitting pieces and are there-
by arrested.

What we claim as new and useful herein,
and desire to secure by Letters Patent, is— 20

The loose fitting pieces *k*, applied, sub-
stantially as described, to be received partly
in a rabbet in the door, and partly in a
groove in the door frame, substantially as
and for the purpose set forth.

RICHARD G. HOLMES.

W. H. BUTLER.

Witnesses:

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WM. TUSCH.