

No. 679,376.

Patented July 30, 1901.

H. D. HIBBARD.
SAFE OR VAULT FRONT.

(Application filed Oct. 31, 1900.)

(No Model.)

Fig. 1.

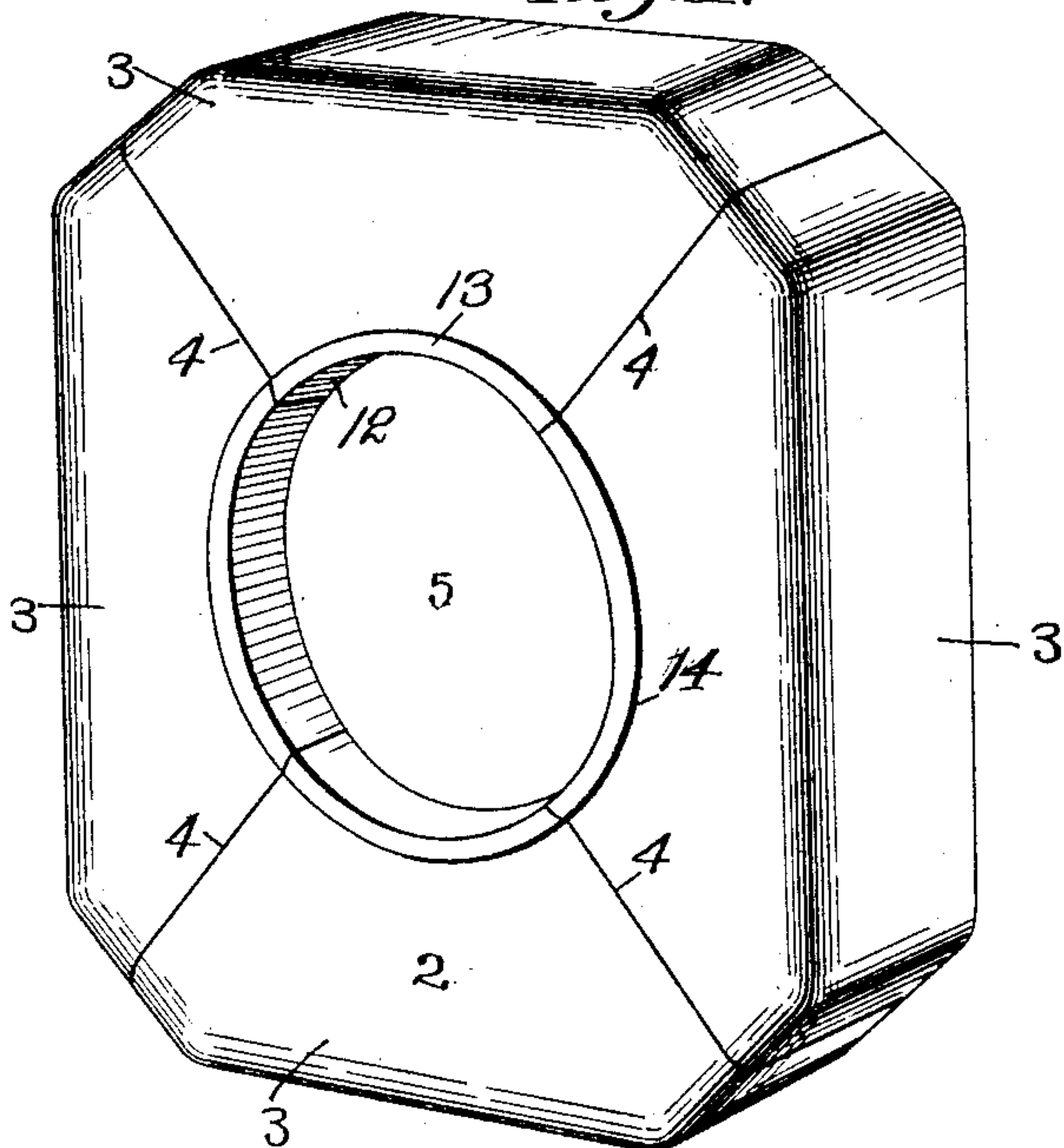


Fig. 4.

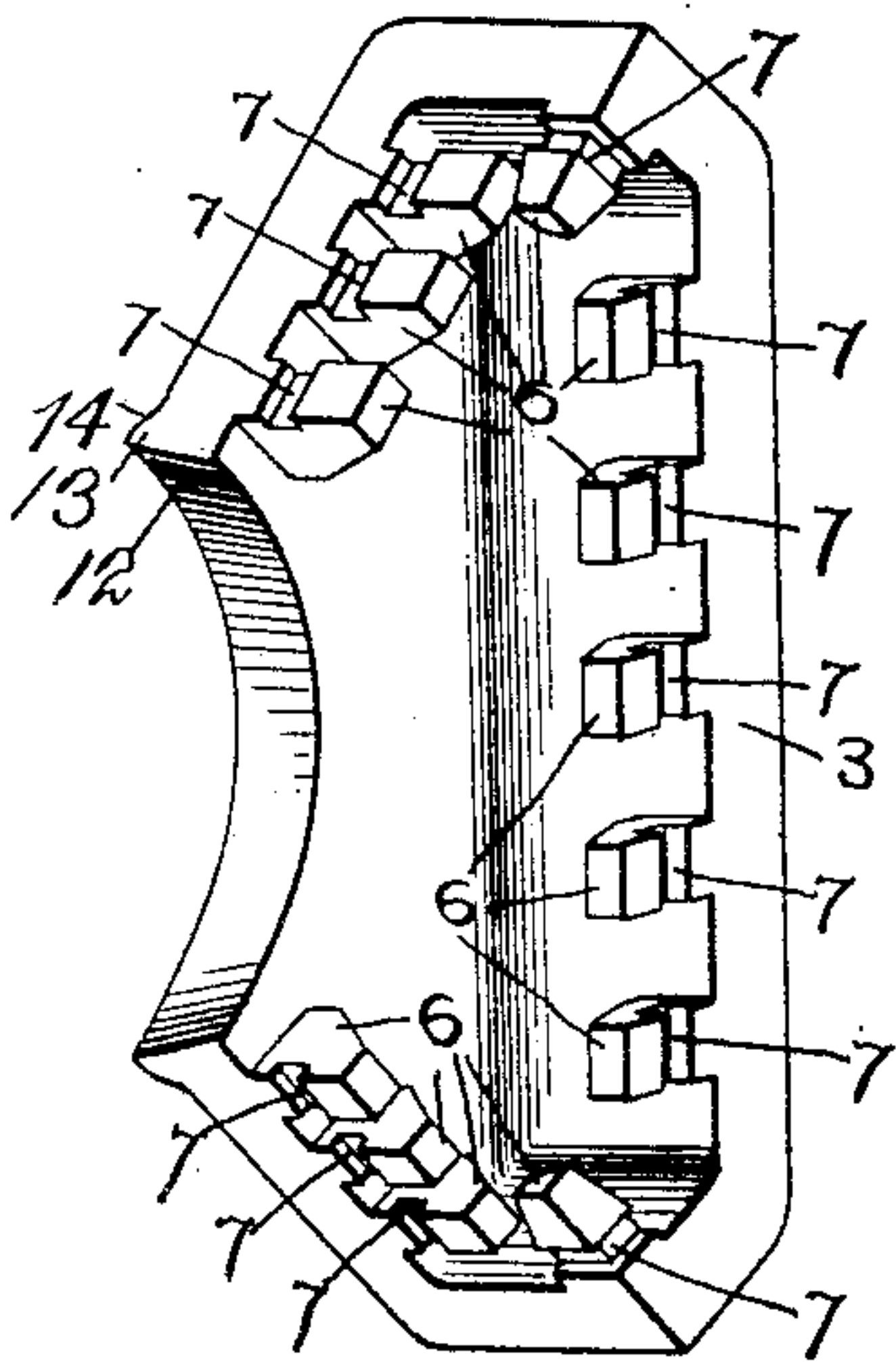


Fig. 2.

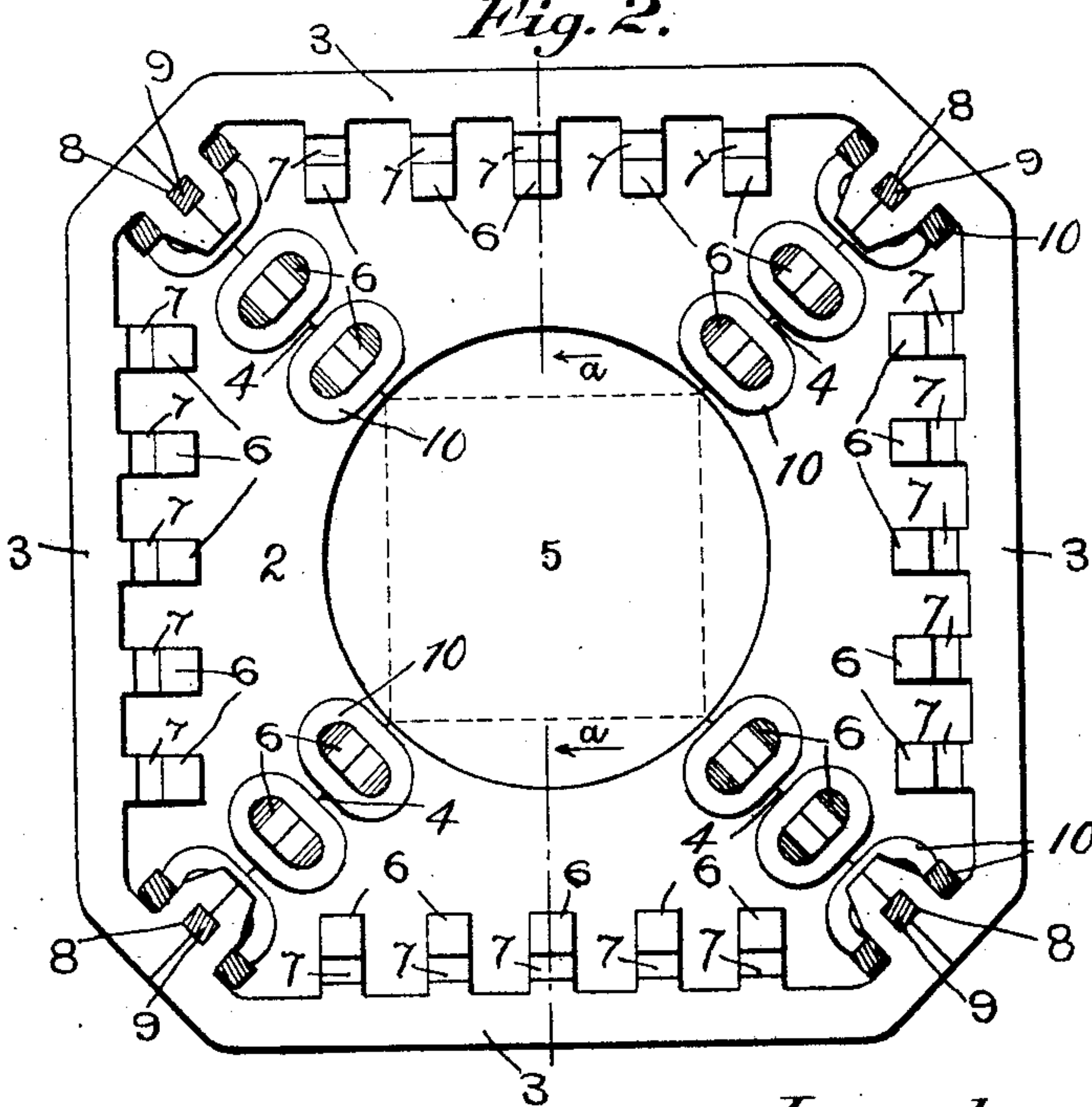
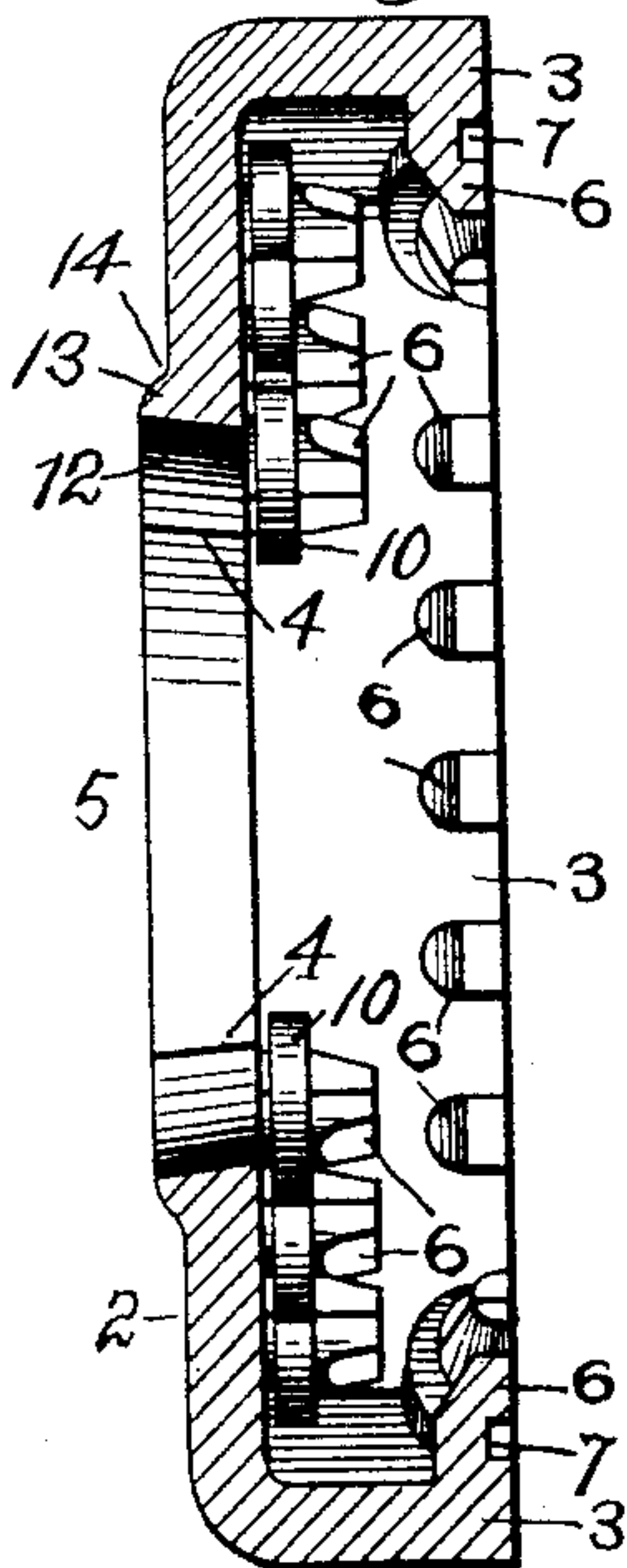


Fig. 3.



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UNITED STATES PATENT OFFICE.

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SAFE OR VAULT FRONT.

SPECIFICATION forming part of Letters Patent No. 679,376, dated July 30, 1901.

Application filed October 31, 1900. Serial No. 34,993. (No model.)

To all whom it may concern:

Be it known that I, HENRY D. HIBBARD, a citizen of the United States, residing in Plainfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Safe or Vault Fronts, of which the following is a specification.

This invention relates to sectional safes or vaults; and it more particularly relates to the plates or components thereof, one object of the invention being to provide an improved plate or section adapted, when assembled, to form an improved safe or vault front the members of which may be clamped together in the manner shown and described in my contemporaneously-pending applications, Serial Nos. 7,967, 7,968, and 7,969, filed March 9, 1900, and Serial No. 10,471, filed March 28, 1900, and which applications have eventuated in Letters Patent Nos. 662,430, 662,431, 662,432, and 662,433, respectively, dated November 27, 1900.

A further object of the invention is to provide a safe-front having a doorway and formed of a plurality of sections the joints of which are diagonally located, whereby longer bearing-surfaces are secured at each joint, and consequently an increased length of joint, to permit the use of an increased number of clamping devices as compared with the number which could be used were the joints located at right angles to the top, bottom, and sides.

A further object of the invention is to provide a triangularly-shaped wall component or plate adapted to be assembled with similar companion sections in a safe or vault.

In the drawings accompanying and forming part of this specification, Figure 1 is a perspective view of four of these improved wall components or plates assembled to form this improved safe or vault front. Fig. 2 is an interior view of such front. Fig. 3 is a sectional view of such front, taken in line *a a*, Fig. 2; and Fig. 4 is a perspective view of one of the plates or components.

Similar characters of reference indicate corresponding parts in the different figures of the drawings.

In practice it is not always practicable to

make the front of a large safe or vault as an integral member, since at the present time the size of an integral casting is limited by the conditions under which it must be cast, it not being practicable to make integral castings larger than a certain size, or otherwise they are apt to be defective. In forming a structure of sections, however, it is necessary that such sections shall be clamped together so that the joint will resist burglarious attacks and prevent the insertion of nitroglycerin, and to accomplish this object it is not only necessary that clamping devices be used which will draw the edge surfaces of the components together with such force that they are maintained under high tension, but that comparatively long joints be provided in order to permit the use of a number of such clamping devices. The provision of long joints is not, however, practicable when such joints are located parallel to the top and sides, since the surfaces between the doorway and the sides of the front are comparatively short; but by locating the joints diagonally a comparatively long joint is secured, even without the provision of sharp corners at the juncture of the sides with the top and bottom—that is to say, even when the front is formed as an octagon the diagonally-located joint is materially longer than the straight one, as will be readily seen by an inspection of Fig. 2. This increased length of joint, however, is not possible when the sections or plates are formed as right-angled members, but is obtained when such sections are of triangular shape.

The present improvement therefore comprises a safe-front 2, (although it is to be understood that other parts or even the whole safe or vault may be constructed in a similar manner, if desired,) having a doorway, shown herein as circular, (although a square door, see dotted lines, Fig. 2, permits the same results to be accomplished,) and formed of a plurality of (shown herein as four) triangular-shaped sections or members 3, whereby the joints 4 are diagonally located and terminate at their inner ends in the doorway 5. Each of these sections is provided along each of its free edges, excepting that which forms

the jamb of the doorway, with a plurality of inwardly-extending angularly-located projections 6, each having in the form shown a key slot or recess 7, whereby when the sections are assembled each plurality of registering slots or recesses form a keyway 8 for the reception of a suitable key 9, whereby the sections are located in fixed alinement relatively to each other. If preferred, the keyways may be formed dovetailed for the reception of similar-shaped keys, whereby such keys will assist the links in preventing separation of the sections or plates as well as locating the sections in fixed alinement. For clamping or securing the sections together suitable retaining devices or couplings are used, each of which in the present instance is shown comprising a link 10, shrunk on each plurality of contiguous projections of a pair of plates, whereby the edge surfaces of each pair of plates are drawn or clamped together under high pressure, so that such faces are brought together with great force, thereby giving a high initial resistance which must be first overcome before the plates can be separated at all. Each of the plates is provided on its exterior at that edge thereof which forms a part of the doorway-jamb 12 with an increased portion or flange 13, forming with the increased portions or flanges of its companion plates a yielding bead or projection 14, located around the doorway and adapted to yield with the metal located at the periphery of the door when subjected to the effects of an explosive charge, thereby to prevent the opening of the joint around the door and the consequent insertion of nitroglycerin, as more particularly set forth in my contemporaneously-pending applications, Serial No. 679,976, filed May 7, 1898, and Serial No. 696,394, filed November 14, 1898, and which applications have now eventuated in Letters Patents Nos. 662,428 and 662,429, dated November 27, 1900.

The safe-front may be connected with other parts of the body in a similar manner to that in which the triangular sections are connected together and as shown, for instance, in my said contemporaneously-pending application, Serial No. 7,969, now Patent No. 662,432.

I claim as my invention—

1. A plurality of separately-formed safe or vault sections or plates assembled with diagonally-located joints to form one side of a safe or vault, and means for securing such sections together.

2. A safe-front having a doorway and formed of a plurality of separately-formed sections having diagonally-located joint-surfaces, each of said sections having projections located at one side thereof, and means connecting the projections of one section with those of another.

3. A safe-front having a doorway and formed of a plurality of triangularly-shaped

sections, each having projections located at one side thereof, and a retaining device located around the projections of a plurality of sections for securing such sections together.

4. A safe-front having a doorway and formed of a plurality of triangularly-shaped sections, each having projections located at one side thereof, and a retaining device connecting the projections of a plurality of sections, and comprising shrunk-on links.

5. An octagonally-shaped front having a doorway and formed of four triangularly-shaped sections, each having projections located at one side thereof, and retaining devices connecting the projections of one section with those of another.

6. A plurality of triangularly-shaped safe or vault sections; means for locating said sections in fixed alinement; and means for securing said sections together.

7. A safe or vault front having a doorway and formed of separately-formed sections having joint-surfaces of greater length than the distance between the jamb of such doorway and the side faces of such front; and means connecting such sections together.

8. A safe or vault front having a doorway and formed of sections having joint-surfaces of greater length than the distance between the jamb of such doorway and the side faces of such front; and means shrunk onto parts of such sections for connecting them together.

9. A safe or vault having a doorway and formed of sections having joint-surfaces of greater length than the distance between the jamb of such doorway and the side faces of such front; means for connecting such sections together; and means for locating said sections in fixed alinement.

10. A triangularly-shaped safe or vault plate or component having a plurality of projections located at one side thereof.

11. A triangularly-shaped safe or vault plate or component having a plurality of projections located at one side thereof, each of said projections having a slot or recess therein.

12. A triangularly-shaped safe or vault plate or component having one of its edges forming part of a doorway-jamb, and having located around said jamb portion, on the exterior of said plate, an increased portion or flange adapted to form, when such section is assembled with others of its kind, a bead of yielding metal.

13. A triangularly-shaped safe or vault plate or component having one of its edges forming part of a doorway-jamb, and having located around said jamb portion, on the exterior of said plate, an increased portion or flange adapted to form, when such section is assembled with others of its kind, a bead of yielding metal, said section having a plurality of projections located at one side thereof.

14. A triangularly-shaped safe or vault plate or component having a rearwardly-ex-

tending flange and adapted to be assembled with others of its kind to form one side of a safe or vault.

5 15. A triangularly-shaped safe or vault plate or component having a rearwardly-extending flange and adapted to be assembled with others of its kind to form one side of a

safe or vault, the free edges of such plate having projections located at one side thereof.

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