J. E. CASSERLY.

SAFE.

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1,018,606.

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Fig. 2.

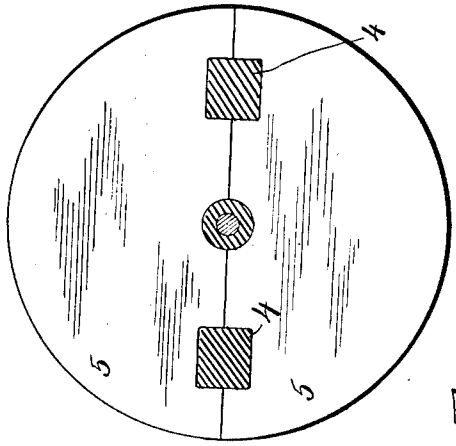


Fig. 4.

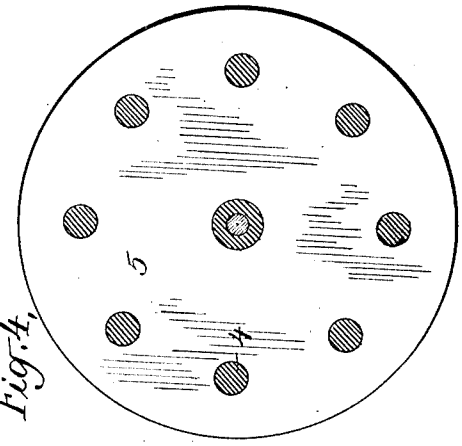


Fig. 1.

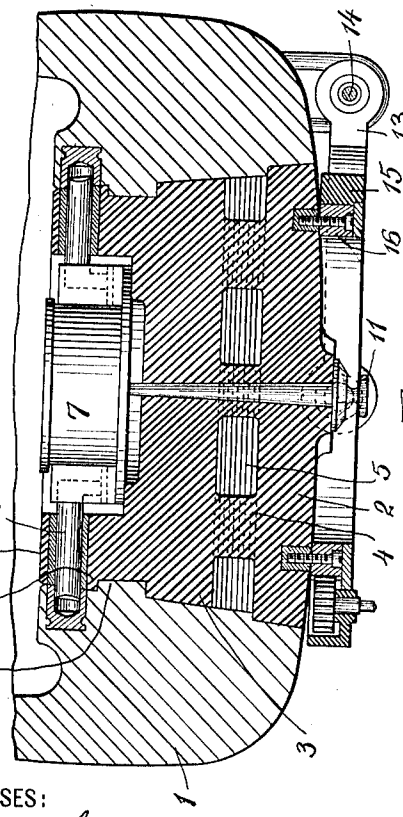
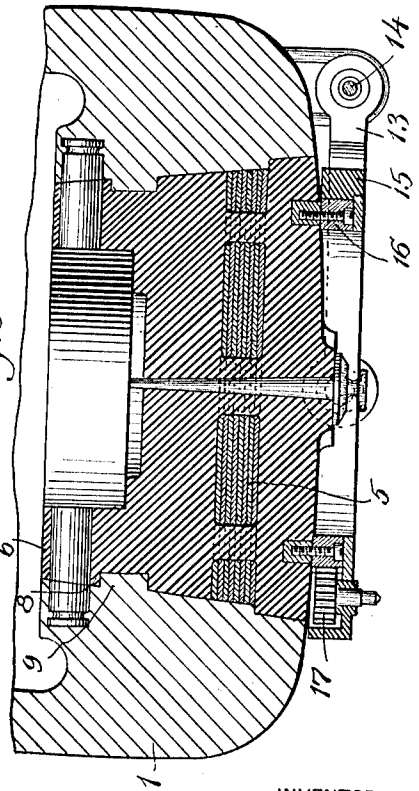


Fig. 3.



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UNITED STATES PATENT OFFICE.

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SAFE.

1,018,606. Specification of Letters Patent. **Patented Feb. 27, 1912.**

Original application filed November 2, 1909, Serial No. 525,855. Divided and this application filed June 27, 1911. Serial No. 635,573.

To all whom it may concern:

Be it known that I, JOSEPH E. CASSERLY, a citizen of the United States, residing in the borough of Brooklyn, in the county of Kings, city and State of New York, have invented certain new and useful Improvements in Safes, of which the following is a specification.

This invention is directed to the provision of a door for a safe or vault constructed in an improved manner, such that great security is afforded against burglarious entrance to the safe, the invention being of special utility in safes of the type known as "burglarproof safes."

The invention involves the provision of a door for a safe or vault consisting of two or more door-sections of unmachineable metal, each fitting tightly within the door-opening, these sections having a suitable filling in the space between them, extending out to the periphery of the door.

In the preferred form, the two or more sections of the door are cast integrally, these sections being connected by webs, so that a chamber is formed between the two sections of the door to receive the filling material. In the present instance, the filling material consists of a metal which is softer than the metal employed in the body of the door, and this softer metal is preferably in the form of thin sheets or laminæ.

The preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view through the door; Fig. 2 is a section of the door shown in Fig. 1, on a plane transverse to the section of Fig. 1; and Figs. 3 and 4 are views corresponding to Figs. 1 and 2 respectively and illustrating a modification of the construction shown in Figs. 1 and 2.

Referring to these drawings, 1 indicates the wall of a safe or vault, having an opening therein to receive the door. The door consists of two separated sections 2 and 3, of unmachineable metal, these being either cast integrally or formed separately and afterward secured together. In the drawings, the two sections of the door are shown as formed integral, there being a plurality of integral webs 4 joining them. It will be seen that each door-section is of frustoconical shape and of such size that it fits as closely as possible in its portion of the door-opening. In the space between the two sections 2 and 3 is the filling 5, which is of metal, like the door proper, but metal which is considerably softer than that from which the door proper is made. The filling 5 occupies substantially all the space between the two door-sections 2 and 3 and around the webs 4. It extends out to the periphery of the door, and there its exposed surface lies close to the corresponding surface of the door-jamb when the door is closed. The filling 5 consists of a plurality of sheet-metal plates lying side by side and parallel to the sections of the door. As shown in Figs. 1 and 2, each layer of the filling 5 is divided into two or more parts and the abutting edges of these parts are cut to lie closely around the webs 4 joining the door-sections.

Figs. 3 and 4 show a laminated metallic filling 5, similar to that shown in Figs. 1 and 2, but in this case the several plates of the filling are not divided into two or more parts. The plates for the filling 5 are provided with openings therethrough and are assembled with these openings registering; the plates are then placed in the mold in which the door is cast, and when the metal is poured in it flows around the plates and into the openings therethrough, the metal in these openings forming the webs 4 which unite the two door-sections.

The mechanism for locking the door in the closed position may be of any desired character. In the drawings, I have shown the rear section 3 of the door provided with an integral flange 6 on the rear side thereof and a lock 7 mounted on the rear face of the door within this flange. On the flange 6 are a plurality of integral radial lugs 8 adapted to coact with similar lugs 9 on the door-jamb, to preclude movement of the door outward from its opening without first rotating the door to carry the lugs 8 opposite the spaces between the lugs 9. Such rotation of the door is permitted or precluded by bolts 10, which are radially movable in openings formed in the flange 6. The movement of the bolts 10 is controlled by the lock 7, which may be either a time-lock, or a combination-lock, or both combined in a single structure and controlling the same bolts. A spindle is shown at 11, passing through the door and having a

handle or dial 12 at its outer end, whereby the combination-lock may be operated.

The door is mounted for movement into and out of its opening on a crane 13, which is hinged at 14 to the wall of the safe. The crane 13 carries a ring 15 which receives a ring 16 secured to the door, and gearing 17 is provided, operated by a suitable handle, to turn the door within the ring 15 and thus carry the lugs 8 and 9 into and out of coaction.

Having now described my invention, what I claim as new therein and desire to secure by Letters Patent is as follows:—

1. The combination of a safe or vault having a door-opening, and a door adapted to close said opening consisting of a plurality of door-sections of unmachineable metal spaced apart but rigidly connected so as to form a unitary structure, and a filling of metal which is softer than that of said sections in the space between the sections and extending out to the periphery of the door, substantially as set forth.

2. The combination of a safe or vault having a door-opening, and a door adapted to close said opening consisting of a plurality of door-sections of unmachineable metal spaced apart but rigidly connected so as to form a unitary structure, and a plurality of sheet-metal plates lying side by side parallel to the door-sections, extending out to the periphery of the door and filling the space between the door-sections, substantially as set forth.

This specification signed and witnessed this 23 day of June, 1911.

JOSEPH E. CASSERLY.

Witnesses:
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