Dec. 14, 1926. 1,610,945

G. M. GOLDSMITH ET AL

CONSTRUCTION OF COMPOSITE PLATES FOR SAFES

Filed August 18, 1923 2 Sheets-Sheet 1

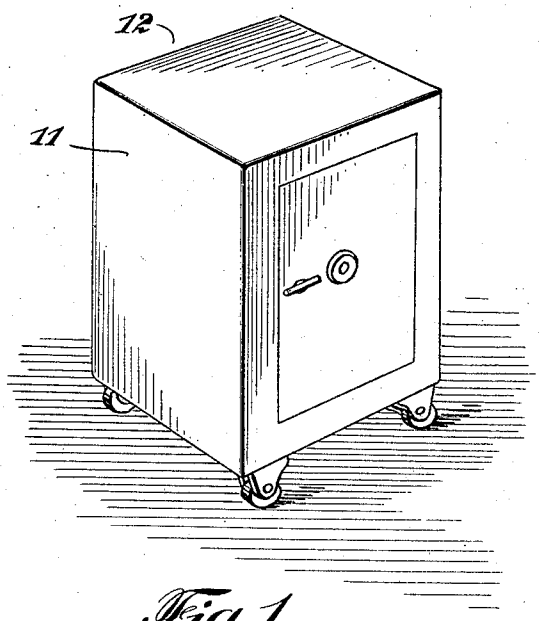


Fig. 1.

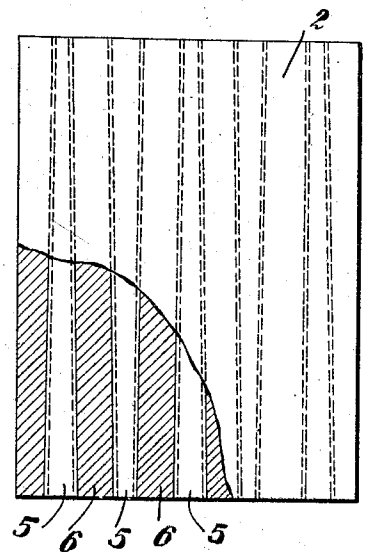


Fig. 3.

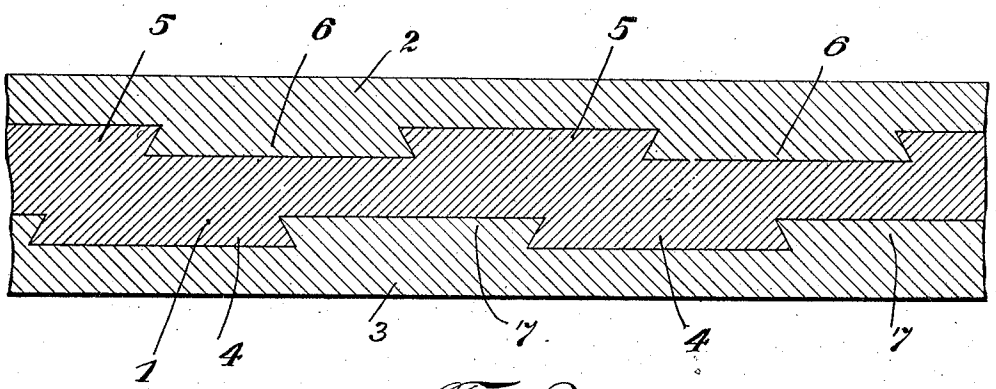


Fig. 2.

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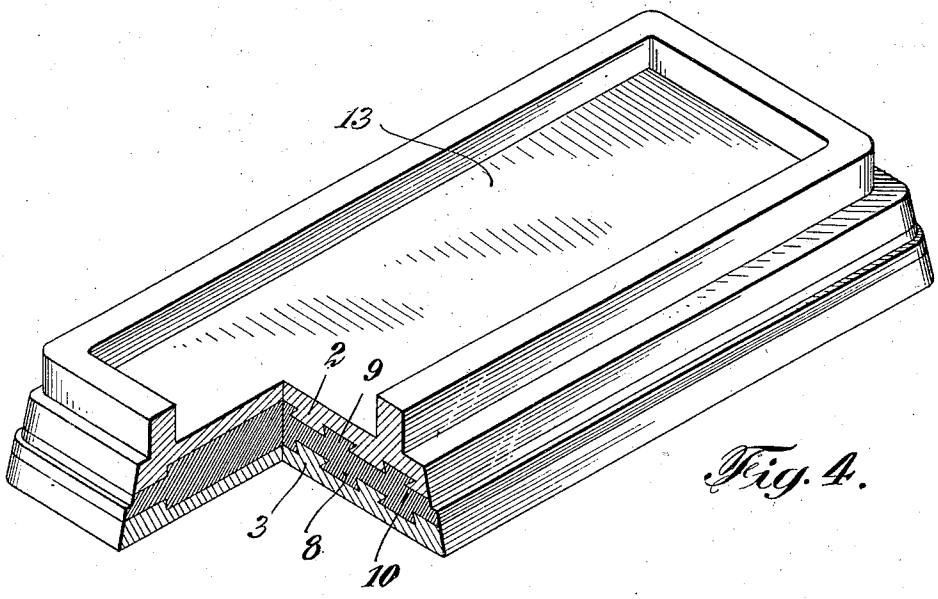


Fig. 4.

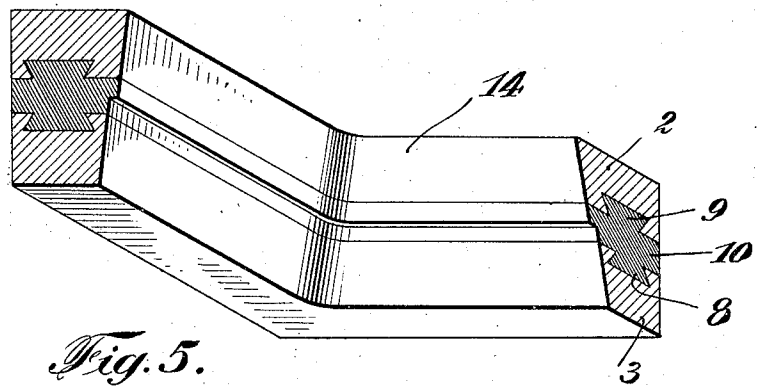


Fig. 5.

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UNITED STATES PATENT OFFICE.

GUSTAVE M. GOLDSMITH AND CARL BARTELS, OF HAMILTON, OHIO, ASSIGNORS TO THE MOSLER SAFE COMPANY, OF HAMILTON, OHIO, A CORPORATION OF NEW YORK.

CONSTRUCTION OF COMPOSITE PLATES FOR SAFES.

Application filed August 18, 1923. Serial No. 658,003.

This invention relates to the construction of composite plates for safes, vaults and the like.

The principal aim of our invention is to produce plates suitable for use in the construction of safes, vaults and the like.

Another object of our invention is to provide a plate comprising a plurality of layers or sections which are so joined together that they may not be separated.

Other objects will be in part obvious and in part pointed out hereinafter.

In order that a clearer understanding of our invention may be had, attention is hereby directed to the accompanying drawings, forming a part of this application and illustrating certain possible embodiments of our invention.

Referring to the drawings:

Fig. 1 is a perspective view of a safe having a door constructed in accordance with our invention;

Fig. 2 is a transverse sectional view through a lining plate for a vault or safe and embodying our invention;

Fig. 3 is a plan view of the lining plate, a portion being shown broken away to more clearly show the construction;

Fig. 4 is a perspective view of a door embodying our invention, a corner of the door being shown in section to more clearly show the construction; and

Fig. 5 is a perspective view of a corner portion of a vestibule frame for a safe or vault.

Similar reference characters refer to similar parts throughout the several views of the drawings.

Referring to the drawings, in Fig. 2 is shown a lining constructed in accordance with our invention, and consists of three layers or sections, designated respectively by the numerals 1, 2 and 3. On one side, section 1 is formed with tongues 4 having intermediate groooves or recesses, and, on its other side, section 1 is formed with tongues or projections 5 and with grooves or recesses intermediate these tongues. Preferably, the tongues 4 and 5 are in staggered relation to each other. The section 2 of the plate is formed with tongues 6 and intermediate recesses interlocking with the tongues 5 and intermediate recesses on the adjacent side of section 1. Similarly, the section 3 is formed with tongues 7 and intermediate recesses interlocking with the tongues 4 and recesses formed on the side of section 1 which is adjacent to section 3. In order to prevent the separation of any of the sections from another by moving or sliding a section in the direction of the tongues, the tongues 4, 5, 6 and 7 preferably are extended longitudinally for a considerable distance, such as for the whole length of the plate, and are longitudinally tapering, some in one direction and others in another direction, as clearly seen by reference to Fig. 3. In order to unite the sections together even more securely, the opposite surfaces of the section 1 are preferably fused to the surfaces of the sections 2 and 3 which contact therewith.

The constructions illustrated in Figs. 4 and 5 are similar to the construction described above, except that the dovetailed tongues 8 and 9 formed on opposite sides of the central layer of section 10 are not in staggered relation to each other.

Obviously, a plate constructed in accordance with our invention may comprise as many or as few sections or layers as desired. Also, the material of the layers may be varied. However, we have found that alternate layers of drill-proof metal, such as chrome steel, and burn-resisting material, that is, metal alloy which may not be penetrated by means of an oxy-acetylene flame or the like, is very satisfactory where it is desired to provide a plate which is extremely burglar-proof.

A plate constructed according to our invention may be employed as one or more of the walls, such as 11, of a safe 12. Such a plate, formed to proper shape, may also be used for a vault door, such as 13, or for a vestibule frame, such as 14.

The advantages to be derived from a plate structure of the character described will be obvious to those skilled in the art.

Moreover, as many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

A preferred method of producing the

composite plates above referred to consists in forming one of the sections to shape, as by means of a casting operation, and then casting another section upon the first section, preferably using a sufficient degree of heat to cause the contacting portions of said sections to fuse together. The first section having been formed with its tongues and intermediate recesses, the material of the second section will, during the casting operation, flow into the recesses, and thus the two sections will be brought into interlocking engagement. Obviously, when a three-layer plate is desired, material may be cast upon both sides of a central section separately or simultaneously, or the central section may be cast between two properly positioned outside sections which have been previously formed. In carrying out this process, when the sections are to comprise material having different points of fusion, it is preferable to cast the material having the lower fusing point upon a completed section of the material having the higher fusing point.

As many changes could be made in carrying out the above method without departing from the scope of the invention, it is intended that all matter in the above description relating thereto shall be interpreted as illustrative and not in a limiting sense.

What we claim is:—

1. In a composite plate for safes, the combination of a plurality of metallic sections having interlocking dovetailed and longitudinally tapered tongues and recesses, one of said sections consisting of material highly resistant to penetration by means of the drill, and an adjacent section consisting of material highly resistant to penetration by means of the torch.

2. In a composite plate for safes, the combination of a plurality of metallic sections having interlocking dovetailed and longitudinally tapered tongues and recesses.

3. In a composite plate for safes, the combination of a metallic section having dovetailed and longitudinally tapered tongues on its two opposite sides, the tongues on one side being staggered relative to the tongues on the other side, and other metallic sections, one on each side of said section first mentioned, in interlocking engagement with said tongues, the middle section consisting of material highly resistant to penetration by means of the drill and the outer sections consisting of material highly resistant to penetration by means of the torch.

4. In a composite plate for safes, the combination of a plurality of metallic sections having longitudinally tapering interlocking tongues and recesses, said sections having adjacent surfaces fused together.

This specification signed this 31st day of July, 1923.

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