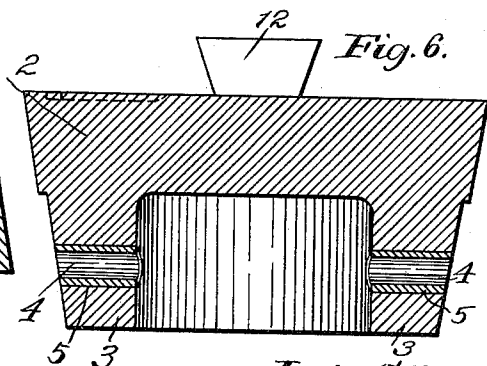
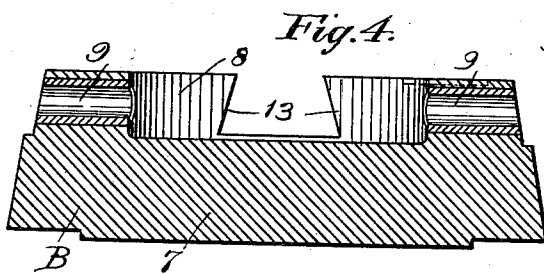
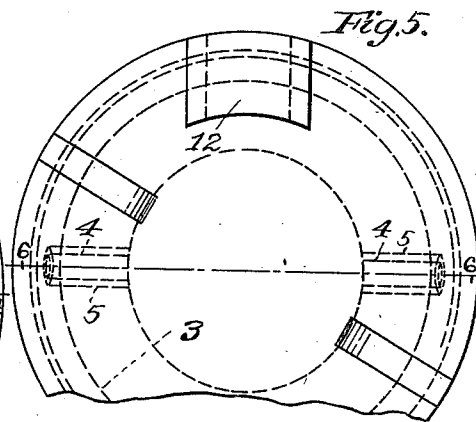
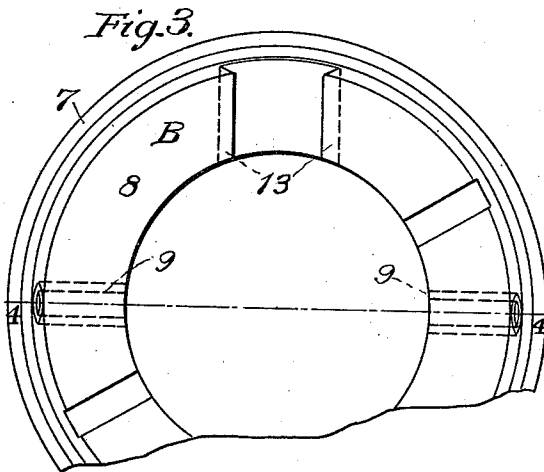
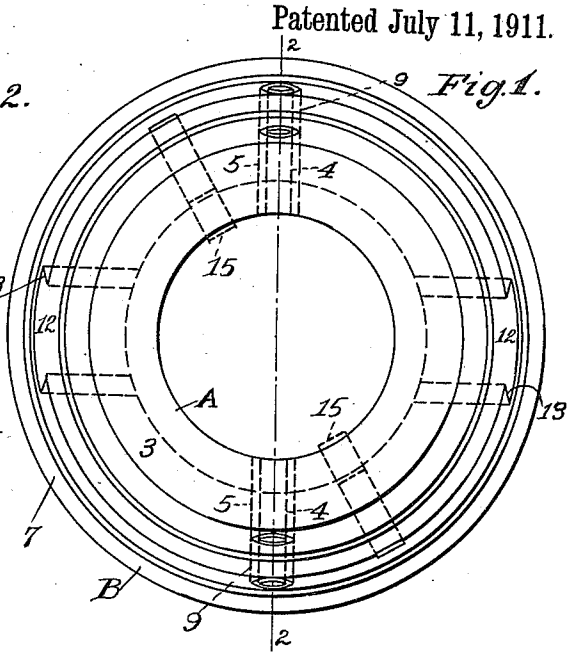
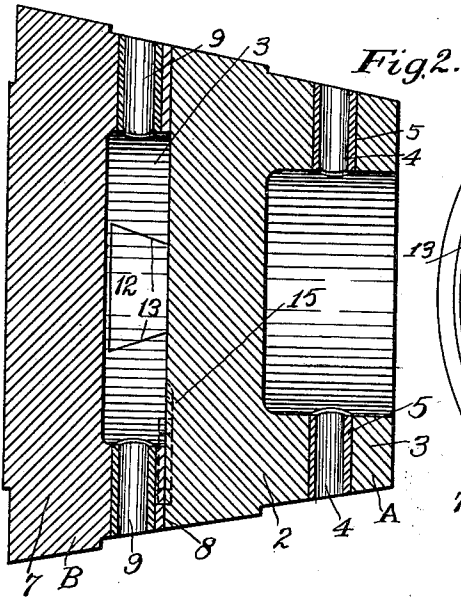


S. W. FISH.
 COMPOUND SAFE OR VAULT DOOR.
 APPLICATION FILED NOV. 10, 1909.

997,774.

Patented July 11, 1911.



Witnesses
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UNITED STATES PATENT OFFICE.

SAMUEL W. FISH, OF PLAINFIELD, NEW JERSEY, ASSIGNOR TO TAYLOR IRON & STEEL COMPANY, OF HIGH BRIDGE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

COMPOUND SAFE OR VAULT DOOR.

997,774.

Specification of Letters Patent. Patented July 11, 1911.

Application filed November 10, 1909. Serial No. 527,128.

To all whom it may concern:

Be it known that I, SAMUEL W. FISH, a citizen of the United States, and a resident of Plainfield, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Compound Safe or Vault Doors, of which the following is a specification.

The present invention relates to safe or vault doors, the object of the invention being to provide an improved compound door made up of a plurality of doors rigidly secured together in an improved manner for movement as a single structure, each of said doors being a complete door in itself, however, so that the separation of one door from the other will not only require the rupturing of the holding means between the doors, but also the locking means between the outer door and the jamb of the safe body, the present improvement being an improvement in part on that shown and described in my contemporaneously pending application, Serial No. 492,869, filed April 29, 1909, and in my other co-pending applications, Serial No. 526,486, filed November 6, 1909, Serial No. 527,125, filed November 10, 1909, and Serial No. 527,126, filed November 10, 1909.

In the drawings accompanying and forming part of this specification, Figure 1 is a rear view of this improved door; Fig. 2 is a cross-sectional view thereof, taken in line 2—2, Fig. 1; Fig. 3 is a rear view, partly broken away, of the front door; Fig. 4 is a cross-sectional view taken in line 4—4, Fig. 3; Fig. 5 is a front view, partly broken away, of the rear door; and Fig. 6 is a cross-sectional view taken in line 6—6, Fig. 5.

Similar characters of reference indicate corresponding parts throughout the figures of the drawings.

The present improvement comprises a pair of doors, each preferably of an integral structure and each a complete door in itself, one, or the rear door, designated in a general way by A and the other, or the front door, designated generally by B.

The rear door comprises a body 2 and a rearwardly extending flange 3 having bolt openings 4 provided therein, which openings, when the door is made of unmachineable metal, such as manganese steel, are provided with soft metal inserts 5 to facilitate

the machining of the bolt openings for the reception of the bolts which may be used for locking the door against rotation when the door is made as a rotary door and to lock it against withdrawal when the door is made other than as a rotary door. The front door B also comprises a body 7 having a rearwardly extending flange 8 likewise provided with similar bolt openings 9, the locking means for securing the door in the jamb thus being in duplicate.

For securing the doors rigidly together an improved means is provided, this being shown in the present instance as of dovetail formation, so that one door is united to the other door by the sliding movement of one relatively to the other transversely of the axis thereof. In the present instance the rear door is provided with a pair of dovetail-formed projections 12 located on the front thereof adjacent to the periphery, while the rear face of the front door is provided with similarly formed recesses 13 for engagement with the dovetail projections of the rear door, the two doors being thus united by sliding one door cross-wise of the face of the other, that is, transversely of the axis thereof, so that the doors are very firmly and securely united for movement together as a single structure.

For preventing the displacement or movement of one door relatively to the other suitable keys 15 may be provided fitting slots formed in the front face of the rear door and the rear face of the flange of the front door. The two doors thus united have a continuous joint surface coned or tapered for engagement with the jamb surface of the body, and by reason of the flange of the front door having a chamber therebetween for the reception of suitable means for operating the bolts adapted to be projected through the bolt openings in such flange these bolts may be operated by a straight spindle similar to that shown and described in my co-pending application Serial No. 527,125, filed November 10, 1909.

By the provision of a compound door of the character set forth I am thus enabled to use a straight spindle instead of a tapered one, since the same can be inserted in position from the rear face of the front door prior to the doors being united by their dovetail locking means. The bolts of the rear door may be operated by an automatic

or any other suitable form of bolt retracting and protracting means, as may be found most desirable in practice.

It will thus be observed that, in order to effect an entrance into the safe, not only must the outer or front door be removed, but also the inner door, and as each is secured in position by its own locking means this improved structure provides a safe or vault door which is practically impregnable, since even though the front door should be removed by a burglarious attack the inner door is still securely locked and forms therefore a safe which has all the strength and resisting qualities of the ordinary safe provided with a single door.

I claim as my invention:

1. A safe or vault door comprising a rear door and a front door rigidly connected for movement as a unitary structure by dovetail interlocking means a part integral with each door and extending partway only across the doors.

2. A safe or vault door comprising a rear door and a front door rigidly connected for movement as a unitary structure by dovetail interlocking means a part integral with each door and extending partway only across the doors, and means for preventing the displacement of one door relative to the other when so united.

3. A safe or vault door comprising a rear door and a front door united on shifting one door transversely of the other by wedge-shaped interlocking means extending partway only across the doors and a part thereof integral with each of the doors, and means for preventing the displacement of one door relative to the other when so united.

4. A safe or vault door comprising a pair of doors having a chamber therebetween and united for movement as a unitary structure on shifting one door transversely of the other by dovetail interlocking means a part integral with each of the doors.

5. A safe or vault door comprising a pair of doors having a chamber therebetween and united for movement as a unitary structure on shifting one door transversely of the other by dovetail interlocking means a part integral with each of the doors, and each of said doors having door holding means.

6. A safe or vault door comprising a pair of doors, the front door having a rearwardly extending flange, said flange and the rear door being interlocked on the shifting of one door transversely across the other by dovetail interlocking means.

7. A compound safe or vault door comprising a pair of doors rigidly and permanently united by dovetail locking means for movement as a single structure and each comprising a body and a rearwardly extending flange, the rearwardly extending flange of the front door being united to the

front face of the rear door by said dovetail locking means.

8. A safe or vault door comprising a pair of doors rigidly united for movement as a single structure, the front door having a rear face thereof rigidly united to a front face of the rear door by coöperating means a part integral with each of said doors and extending partway only across the doors.

9. A compound safe or vault door comprising a pair of doors rigidly united for movement as a single structure, the front door having a rear face thereof rigidly united to the front face of the rear door by wedge-shaped interlocking means a part integral with each of the doors and extending only partway across the doors.

10. A compound safe or vault door comprising a pair of doors rigidly united for movement as a single structure, the front door having the rear face thereof rigidly united to the front face of the rear door by wedge-shaped interlocking means, and keys for preventing the displacement of one door relatively to the other.

11. A safe or vault door comprising a rear door and a front door having interlocking means and rigidly united with each other for movement as a unitary structure by shifting one door transversely of the axis of the other and partway only across the door.

12. A safe or vault door comprising a rear door and a front door having rigid interlocking means and rigidly united with each other for movement as a unitary structure by shifting one door transversely of the axis of the other and partway only across the same, said doors having a chamber therebetween.

13. A safe or vault door comprising a rear door and a front door having interlocking means united with each other by shifting one door transversely of the axis of the other door and partway only across the same, and one or both of said doors constructed to carry door holding means.

14. A safe or vault door comprising a rear door and a front door having interlocking means united with each other by sliding one door transversely of the axis of the other and partway only across the same, one or both of said doors constructed to carry door holding means and said doors having a chamber therebetween.

15. A compound safe or vault door comprising a rear door and a front door having interlocking means united with each other by sliding one door transversely of the axis of the other, one or both of said doors having means for the reception of bolts and said doors having a chamber therebetween, and each of said doors having a rearwardly extending flange.

16. A compound safe or vault door com-

prising a rear door and a front door, each comprising a body having a rearwardly extending flange provided with one or more bolt openings for the reception of bolts, the flange of the front door and body of the rear door having interlocking means.

17. A compound safe or vault door comprising a rear door and a front door, each comprising a body having a rearwardly extending flange provided with one or more bolt openings for the reception of bolts, the flange of the front door and body of the rear door having dovetail interlocking means.

18. A compound safe or vault door comprising a rear door and a front door, each comprising a body having a rearwardly extending flange provided with one or more bolt openings for the reception of bolts, the flange of the front door and body of the rear door having dovetail interlocking means, said doors having a chamber therebetween.

19. A compound safe or vault door comprising a rear door and a front door, each comprising a body and the front door having a rearwardly extending flange forming a chamber between said doors, the flange of the front door and the body of the rear door having interlocking means united by shifting one door crosswise of the axis of said doors.

20. A compound safe or vault door comprising a rear door and a front door, each comprising a body and the front door having a rearwardly extending flange forming a chamber between said doors, the flange of the front door and the body of the rear door having dovetail interlocking means united by shifting one door crosswise of the axis of the other door.

21. A compound safe or vault door comprising a rear door and a front door, each comprising a body and the front door hav-

ing a rearwardly extending flange forming a chamber between said doors, the flange of the front door and the body of the rear door being united by dovetail locking means and by sliding one door crosswise of the axis of the other door, and means for securing said doors in position against separation one from the other after they are rigidly united.

22. A compound safe or vault door comprising a rear door and a front door, each comprising a body and the front door having a rearwardly extending flange forming a chamber between said doors, the flange of the front door and the body of the rear door being united by dovetail locking means and by sliding one door crosswise of the axis of the other door, and means for securing said doors in position against separation one from the other after they are rigidly united, said means comprising keys located in the front face of the rear door and the rear face of the flange of the front door.

23. A compound safe or vault door comprising a pair of doors rigidly and permanently united by interlocking means for movement as a single structure, each of said doors comprising a body, and one of said doors having a flange, said flange being united with the body of the other door by said locking means.

24. A compound safe or vault door comprising a pair of doors rigidly and permanently united by dovetail locking means for movement as a single structure, each of said doors comprising a body, and one of said doors having a flange, said flange being united with the body of the other door by said dovetail locking means on the shifting of one door transversely of the other.

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