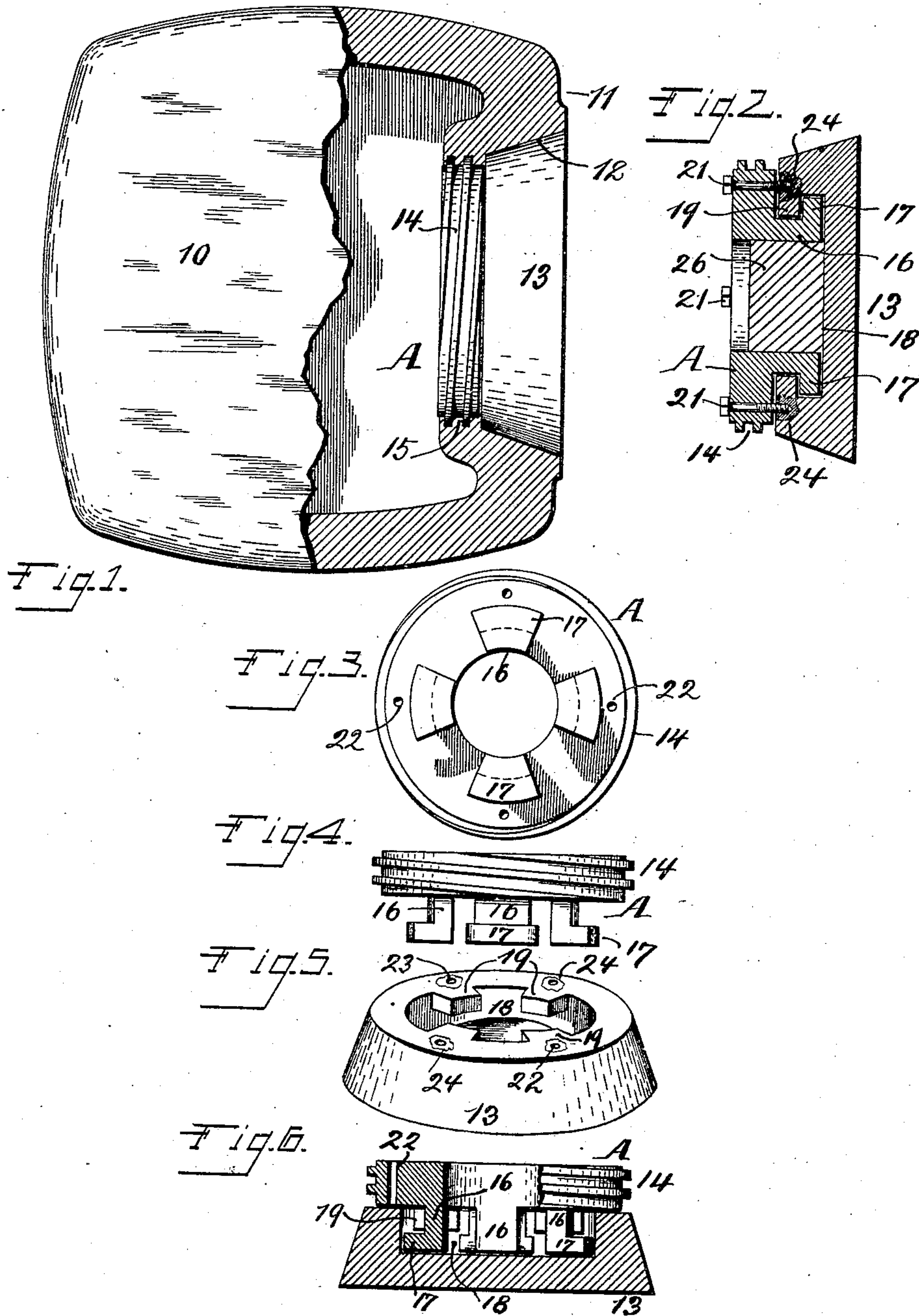


No. 855,706.

PATENTED JUNE 4, 1907.

W. C. HATTERSLEY.  
SAFE DOOR.

APPLICATION FILED FEB. 6, 1907.



Witnesses.  
Homer Bradford.  
T. Le Beau.

Inventor.  
Will C. Hattersley  
by C. Spengel atty



# UNITED STATES PATENT OFFICE.

WILL C. HATTERSLEY, OF NORWOOD, OHIO, ASSIGNOR TO VICTOR SAFE & LOCK CO., OF CINCINNATI, OHIO, A CORPORATION OF OHIO.

## SAFE-DOOR.

No. 855,706.

Specification of Letters Patent.

Patented June 4, 1907.

Application filed February 6, 1907. Serial No. 356,110.

*To all whom it may concern:*

Be it known that I, WILL C. HATTERSLEY, a citizen of the United States, and residing at Norwood, Hamilton county, State of Ohio, have invented certain new and useful Improvements in the Construction of Safe-Doors; and I do declare the following to be a clear, full, and exact description of the invention, attention being called to the accompanying drawing, with the reference characters marked thereon, which forms also a part of this specification.

This invention relates to improvements in the construction of doors for safes of the kind where a circular, rotary door is held in place within a corresponding opening for it in the body of the safe, by closing means constituting a screw-connection and of the two complementary parts of which connection one is provided on the door and the other within the opening for it in the safe-body.

It relates further to such doors where the complementary part of the screw-connection provided thereon is of a metal different from the metal of the door proper, as for instance in safes where this door is of a non-machinable metal, and for which reason the screw-part on it must necessarily be of a metal workable by tools in order to permit its formation and construction.

The invention consists particularly of the means and manner whereby the closing means provided for the door are connected to the body of the same.

The invention is illustrated in connection with a safe having a circular door which is made of non-machinable metal, like manganese case-steel for instance and which is provided with the complementary part of a screw-connection, which part is of workable metal.

In the following specification and particularly pointed out in the claims at the end thereof, is found a full description of my invention, together with its parts and manner of construction, which latter is also illustrated in the accompanying drawing, in which:—

Figure 1, is a side-elevation of a safe-body partly in section, the line of section being taken through the door-opening therein, the door, appearing in edge-view, is shown in position within this opening in which it is

held by means of a screw-connection. Fig. 2, shows a central, vertical section of the detached door. Fig. 3, illustrates that one of the complementary parts of the screw-connection which is attached to the door and forms a constituent part of the same, its side which comes against the door being shown. Fig. 4, is a side-view of this part shown in the preceding figure. Fig. 5, is a perspective view of the door-body, showing that side of it which receives the screw-part shown in Figs. 3, and 4. Fig. 6, shows in a central section both these parts placed together ready for final connection.

In the drawing 10, indicates the safe-body of conventional shape, the front 11 of which is provided with the door-opening 12.

13, is the body of the door, assumed to be of non-machinable metal like manganese-steel for instance. This door is held in place within opening 12 provided for it, by means of a screw-connection comprising two complementary parts and of which one part, designated by 14, is connected to door 13, in a manner that after such connection, which remains permanent, it forms substantially a constituent part thereof. This screw-part 14, being the male-screw of the screw-connection, is fitted to be received by the other complementary screw-part 15, which contains the female screw-thread and is provided within door-opening 12. The particular manner of providing this screw-part 15 is immaterial for present purposes and does not concern this invention.

The manipulation and treatment for forming and constructing parts 13 and 14 which constitute the door, being different for each, it becomes necessary that each be produced separately, after which they are firmly and permanently connected to each other, to form the door complete. This final connection of these two parts 13 and 14 to each other forms the substance of my invention.

Part 14, which contains the male-screw, consists substantially of a circular member or ring A, around the outside of which said screw is formed. On one of its flat sides and disposed at right angles thereto, there are a number of equally spaced projections 16, all of equal extent and provided at their free ends with lugs 17 arranged at right angles to these projections from which they extend outwardly in radial directions. The door-



body 13 has a recess 18 on its inner side which is of a depth sufficient to receive projections 16 on screw-part A, and of a size diametrically, to admit also lugs 17 which  
 5 extend laterally from these projections. From the wall of this recess 18, there project inwardly, that is into it, lugs 19, corresponding in number to lugs 17 and spaced similar to these latter so that lugs 17 may pass in be-  
 10 tween these lugs 19. Part A, after having screw-thread 14 cut into its outer side, is now placed in a position, with reference to door 13, as shown in Figs. 4, and 5, after which the two are brought together as shown in Fig. 6,  
 15 so that the lugs on one pass in and through the spaces between the lugs of the other, after which part A, is given a limited rotary shift, sufficient to cause lugs 17 on it to pass under lugs 19 in the door-recess as shown in  
 20 Fig. 2, whereby these two parts, which constitute the door, become firmly interlocked. It is now only necessary to provide means to hold these two parts in such engaged position and to prevent them from turning one on the  
 25 other in a manner which might cause the interlocked lugs to become disengaged. For such purpose bolts 21 are used, which pass through openings 22 in part A, and enter tapped holes 23 in door-body 13. The drill-  
 30 ing and tapping of these holes is made possible by inserts 24, of soft, that is machinable metal and which are provided for during the casting of door-body 13. Any interstices between the engaged lugs may be closed and  
 35 filled out by molten metal 26 as shown in Fig. 2 applied through a suitable opening in member A. This manner of connecting that part of the closing means of a safe, which is provided on the door, while illustrated as ap-  
 40 plied to a round safe-door, and to one which is held closed by means of a screw-connection, is of course also applicable to doors held

closed by other means, as for instance by a mutilated thread, or by interlocking, complementary lugs similar to those illustrated. 45

Having described my invention, I claim as new:

1. A door for a screw-door safe which has on its inner side a circular recess and equally spaced lugs which project into this recess, a screw-member which has spaced projections  
 50 extending from its flat side which have outwardly extending lugs at their ends and are adapted to enter the recess in the side of the door when door and screw-member are placed  
 55 against each other, the spaces between these projections being such that the lugs which they carry on their ends are adapted to pass through the spaces between the lugs in the door-recess and also under them when one of  
 60 the placed parts is rotatively shifted on the other part and means to hold the lugs in this position.

2. A door for a screw-door safe which has on its inner side a recess and spaced lugs  
 65 which project into the same, a screw-member which has projections on its side adapted to enter the recess in the door mentioned when placed against this latter, and outwardly projecting lugs on these projections  
 70 adapted to pass through the spaces between the lugs in the door-recess and also under them when one of the placed parts is rotatively shifted with reference to the other part, and bolts seated in the screw-member  
 75 and in the door to hold the lugs in the interlocking position mentioned.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

WILL C. HATTERSLEY.

Witnesses:

T. LE BEAU,  
 C. SPENGEL.

It is hereby certified that in Letters Patent No. 855,706, granted June 4, 1907, upon the application of Will C. Hattersley, of Norwood, Ohio, for an improvement in "Safe-Doors," an error appears in the printed specification requiring correction, as follows: In line 39, page 1, the compound word "case-steel" should read *cast-steel*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 18th day of June, A. D., 1907.

[SEAL.]

C. C. BILLINGS,  
*Acting Commissioner of Patents.*