

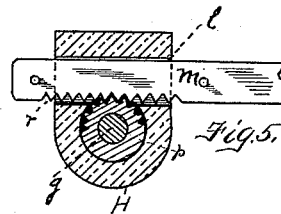
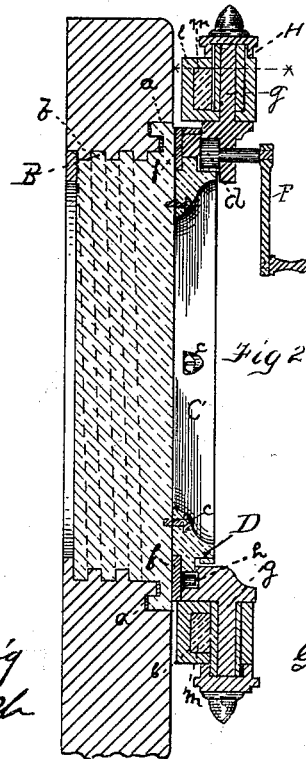
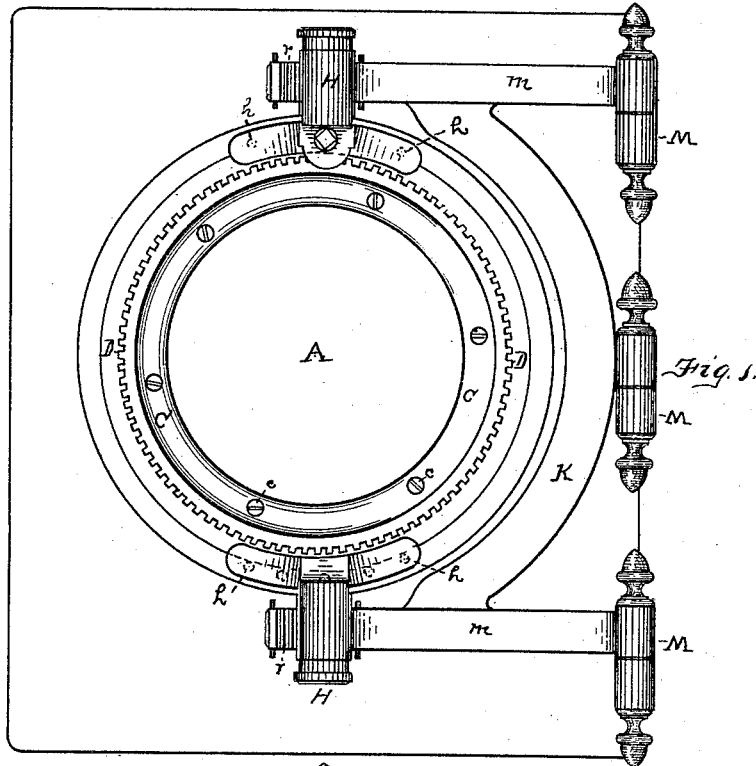
(No Model.)

2 Sheets—Sheet 1.

G. J. H. GOEHLER.
SAFE OR VAULT.

No. 419,658.

Patented Jan. 21, 1890.



WITNESSES:
Wesley I. Boonig
Chas. Apfelbach

INVENTOR
George J. H. Goehler
BY

ATTORNEY

(No Model.)

2 Sheets—Sheet 2.

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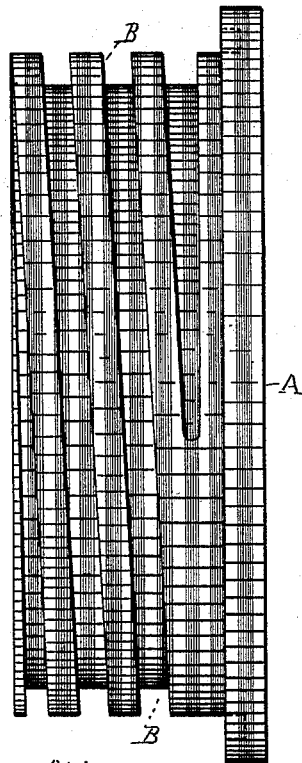


Fig. 4.

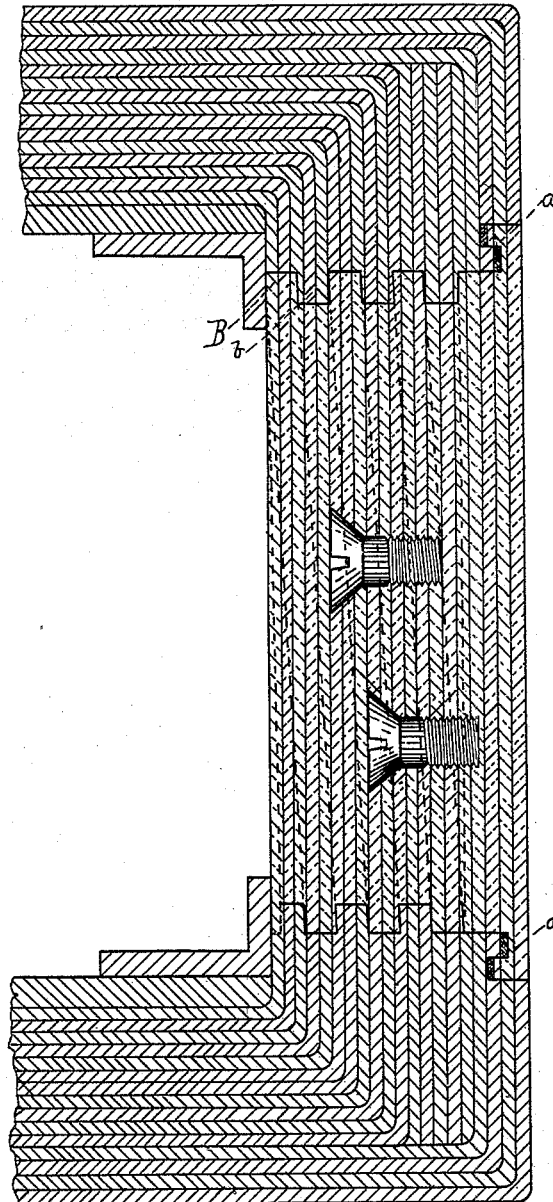


Fig. 5.

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UNITED STATES PATENT OFFICE.

GEORGE J. H. GOEHLER, OF PITTSBURG, PENNSYLVANIA.

SAFE AND VAULT.

SPECIFICATION forming part of Letters Patent No. 419,658, dated January 21, 1890.

Application filed July 19, 1889. Serial No. 318,051. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. H. GOEHLER, of the city of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Doors for Burglar-Proof Safes and Vaults, of which the following is a full, clear, and exact description.

My invention relates to doors for burglar-proof safes and vaults, its object being to provide a burglar-proof screw-door which is connected with the safe-body by means of hinges, and which can be easily screwed directly to its seat in the safe-body and unscrewed in the same manner. It comprises a circular threaded door, a swinging crane supporting the door and connected thereto by a sliding joint, and also other improvements leading to that end.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a view of the front part of the safe with the door closed or screwed to its place, showing hinges and crane upon which the door is swung. Fig. 2 is a vertical central section through the door. Fig. 3 is a horizontal cross-section of a burglar-proof safe with door screwed to its seat, showing its construction. Fig. 4 is a side view of a screw-door without attachments. Fig. 5 is a detail view illustrating the sliding block.

Similar letters refer to similar parts throughout the several views.

A represents the circular screw-door, constructed of alternate plates of welded steel and iron or other material. The door may be of any thickness or size corresponding to the size of the safe.

B represents a continuous thread cut around the entire circular surface of the door, corresponding to the thread *b*; cut around the circular door frame or opening of the safe, by means of which the door is screwed to its place. The threads B and *b* may be as coarse or fine as desirable.

a is a circular tongue-groove cut around the outer edge of the door, as shown in Fig. 2, which, when the door is screwed to its place, fits closely in a corresponding circular tongue-groove cut around the outer edge of the safe-

opening. Attached to the door A by means of screws *c* is the flange C, which has a circular cog-rack D, which engages the pinion *d* 55 and by which the door is turned, screwing it shut or open by means of crank F, which is adjusted to pinion *d*.

In a circular groove between the door A and the flange C is the ring *f*, which is made of 60 steel or other material, and is fastened firmly by means of screws to the pivot-pins *g*, which revolve in the blocks H. The purpose of the ring *f* is to hold the door A in place, and at the same time to permit the door A to be turned 65 around, sliding on the ring *f*.

h h are rollers above and beneath the door A, upon which it turns easily, the annular shoulder of the flange C running on said rollers.

The blocks H, in which the pivot-pins *g* revolve, permitting the door A and its attachments to be turned horizontally in either direction, so that the thread of the door may be easily adjusted to the thread of the safe-opening, connect the door A and its attachments 75 with the hinges M by means of the arms *m*, which pass through the slots *l*, made in the blocks H. The hinges M are attached to the outer part of the safe, and, together with the arms *m* and the brace K, form a crane for the 80 purpose of sustaining and swinging the door A and its attachments. Now it is evident that as the door A is shut and opened or screwed and unscrewed it goes in and comes out in a straight line, and therefore that the 85 distance between the block H and the pivot-point of the hinge M must diminish and increase accordingly. This is provided for by the block H, through which the arm *m* of the crane passes by means of slot *l*, as described. 90 The arm *m* has a rack-face *r*, which engages with the small pinion *p*, revolving on the pin *g*, and so permits the arms of crane and the door A to accommodate themselves to the different movements the one with the other. The 95 safe or vault is locked and unlocked automatically by a time-lock, which is attached inside of the door and has no communication with the outside.

Having described my invention, what I 100 claim, and desire to secure by Letters Patent, is—

1. In a safe, the combination of a safe-body, a circular door having a thread on its outer

surface and screwing into said body, a swinging crane supporting the door and connected thereto by a sliding joint, substantially in the manner shown and described.

- 5 2. In a safe, the combination of a safe-body, a swinging crane thereon, sliding blocks on the crane having slots therein, through which the arms of the crane pass, and a door pivoted in said sliding blocks, substantially as and for
10 the purposes set forth.

3. In a safe, the combination of a safe-body,

a swinging crane thereon having arms provided with rack-faces, blocks sliding on said arms and having a pinion therein engaging with said rack-faces, and a door pivoted in 15 said sliding blocks.

In testimony whereof I have hereunto set my hand this 18th day of July, A. D. 1889.

GEORGE J. H. GOEHLER.

Witnesses:

CHAS. APFELBACK,
WESLEY I. CRAIG.