

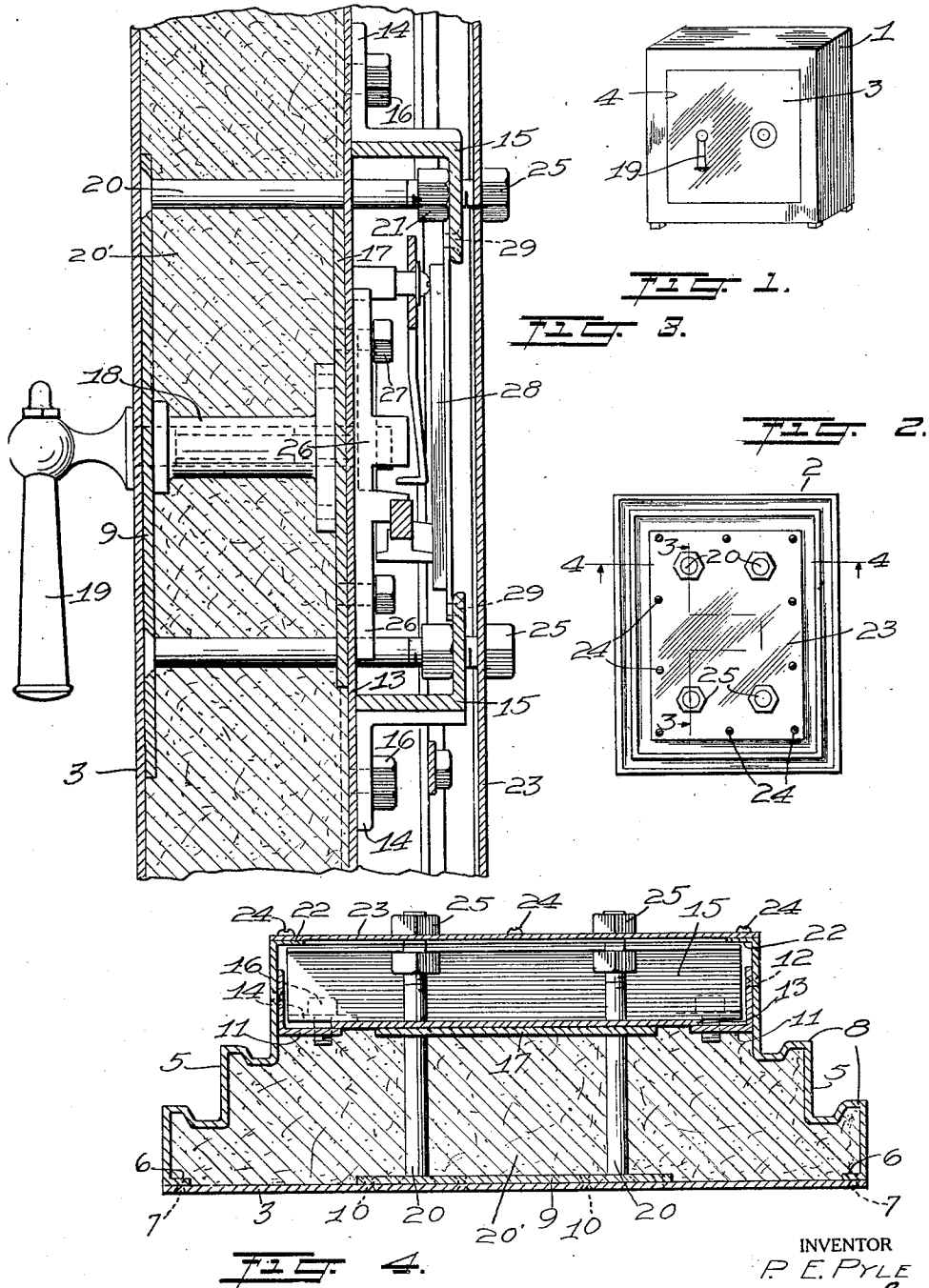
May 15, 1928.

1,669,486

P. E. PYLE

SAFE CONSTRUCTION

Filed May 20, 1927



INVENTOR
P. E. PYLE
BY *Munroe*
ATTORNEYS

UNITED STATES PATENT OFFICE.

PAUL EDWARDS PYLE, OF LA FAYETTE, INDIANA, ASSIGNOR TO SCHWAB SAFE CO., OF
LA FAYETTE, INDIANA.

SAFE CONSTRUCTION.

Application filed May 20, 1927. Serial No. 192,981.

My invention relates to improvements in safe constructions, and it consists in the combinations, constructions, and arrangements herein described and claimed.

5 An object of my invention is to provide a safe construction having an outer face plate which is held in such a way as to render the removal of the plate by a burglar so difficult that the time required to remove
10 it would be such as to preclude the possibility of successfully breaking into the safe before an alarm is given.

A further object is to provide a locking mechanism which is removed from the door
15 so that even if the face plate should be forced, the locking mechanism will still hold the safe locked and will not be removed with the face plate.

A further object is to provide a relatively simple construction for accomplishing the objects enumerated above.

Other objects and advantages will appear in the following specification, and the novel features of the invention will be particularly
25 pointed out in the appended claims.

My invention is illustrated in the accompanying drawings, forming part of this application, in which

30 Figure 1 is a perspective view of a safe embodying my invention,

Figure 2 is an elevation of the inside face of the safe door shown in Figure 1,

35 Figure 3 is an enlarged detail view taken substantially along the line 3—3 of Figure 2, and

Figure 4 is an enlarged sectional detail view taken along the line 4—4 of Figure 2.

40 In carrying out my invention, I make use of a safe 1 having a door 2. Referring to Figures 3 and 4, it will be observed that the door is provided with an outer face plate 3. This plate closes an opening 4 in the front of the safe, as shown in Figure 1.

45 A casing 5 is provided with flange portions 6 to which the outer face plate 3 is secured by means of rivets 7. The casing, as will be noted from Figure 4, is stepped, as at 8. This of course forms no part of the present invention. On the inner surface
50 of the face plate 3 is secured a reinforcing plate 9, the purpose of which will be described later. This plate is secured to the face plate 3 by any suitable means, such as counter-sunk rivets 10.

An angle iron 11 is secured to two sides of
55 the casing 5, see Figure 4. The angle irons 11 are secured to the casing 5 by means of counter-sunk rivets 12. An inner supporting plate 13 is carried by the angle irons 11. Referring to Figure 3, it will be seen
60 that the inner supporting plate 13 is placed between the angle irons 11 and the flanges 14 of the angle irons 15. Bolts 16 passing through the flanges 14 and into the angle
65 irons 11 firmly hold the inner supporting plate 13.

A second reinforcing plate 17 is rigidly secured to the inner supporting plate 13. The reinforcing plate 17 and the supporting
70 plate 13 are spaced away from the face plate 3 and the reinforcing plate 9 and held in spaced relation by means of a sleeve 18. The sleeve 18 also supports a handle 19. Bolts 20 having their heads counter-sunk in the reinforcing plate 9 pass through the
75 inner supporting plate 13 and the angle irons 15. These bolts are threaded and a nut 21 is arranged to support the angle iron 15.

Referring to Figure 4, it will be noted
80 that the casing 5 is provided with a flange 22. The purpose of this flange is to support a cover plate 23. The cover plate 23 is secured to the flange 22 by means of screws 24. The cover plate 23 is further supported
85 by the bolts 20 which pass through the cover plate and have nuts 25 arranged to bear against the cover plate.

Referring to Figure 3, it will be noted
90 that the locking mechanism, a part of which is indicated at 26, is mounted upon the inner supporting plate 13. A part of this mechanism is secured to the plate 13 by means of cap screws 27. It will also be noted that
95 these screws pass through the plate 13 and into the reinforcing plate 17. The locking mechanism in the present instance forms no part of the invention. The invention in the present instance lies primarily in the
100 provision of the inner supporting plate 13 spaced away from the outer face plate 3 and the mounting of the locking mechanism upon the inner face plate 13. The locking mechanism is protected against displacement by means of a supporting member 28.
105 This supporting member is secured to the angle irons 15 by means of counter-sunk screws 29.

The space between the outer face plate 3 and the inner supporting plate 13 is filled with an insulating compound 20' having a base of asbestos, natural hydraulic cement, and diatomaceous earth.

From the foregoing description of the various parts of the device, the operation thereof may be readily understood. It is a common practice among burglars when opening a safe to cut away one corner of the face plate and thereby providing an opening which gives them access to the locking device which is mounted upon the inner side of the face plate 3. Thus it will be seen that when once an opening has been cut in the face plate, it is a relatively easy matter to break and force the locking mechanism. In the present invention however the face plate 3 is not only secured to the casing 5 by means of the usual counter-sunk rivets 7, but is further supported by means of the bolts 20. Since the counter-sunk heads of the bolts 20 are firmly secured between the reinforcing plate 9 and the face plate 3, it will be seen that the face plate is firmly reinforced by these bolts, and that it will be a relatively difficult matter to tear the face plate 3 away from the casing.

Should however a portion of the face plate 3 be successfully removed, the locking mechanism of the safe is further protected behind the inner supporting plate 17. Thus it will be seen that the locking mechanism is not only protected by means of the reinforced face plate 3, but also by reason of the fact that it is mounted on the inner side of the supporting plate 13. Since the supporting plate 13 is firmly secured to the angle irons 11 and the angle irons are further secured to the casing 5, it will be seen that it would be a difficult matter to gain access to the locking mechanism of the safe.

Some of the working parts of the locking mechanism are further protected by reason of the supporting member 28 which is arranged to bear against them. It will also be seen that since the sleeve 18 is secured to the reinforcing plate 17, it forms a rigid supporting member for the inner supporting plate 13, which in turn protects the locking mechanism.

I claim:

1. In a safe construction, a door having an outer face plate and an inner supporting plate spaced away from said face plate, means projecting through said supporting plate for retaining said face plate rigidly in position, means for holding said outer face plate and said inner supporting plate in spaced relation, angle irons in the rear of said supporting plate for rigidly securing said face plate retaining means, a door locking mechanism carried by said inner supporting plate, and a cover plate arranged to enclose said door locking means.

2. In a safe construction, a door having a casing, an outer face plate secured to said casing, an inner supporting plate spaced away from said outer face plate, angle irons secured to said casing and arranged to rigidly secure said inner supporting plate in position, a door locking mechanism carried by said inner supporting plate, a cover plate secured to said casing and arranged to enclose said door locking mechanism, and bolts secured to said outer face plate and passing through said inner supporting plate, said angle irons and said cover plate for rigidly securing said outer face plate.

3. In a safe construction, a door having a casing, an outer face plate secured to said casing, a reinforcing plate secured to said outer face plate, an inner supporting plate spaced away from said outer face plate, a reinforcing plate secured to said inner supporting plate, insulating means disposed between said outer face plate and said inner supporting plate, angle irons secured to said casing and arranged to rigidly secure said inner supporting plate, bolts secured to said first named reinforcing means and passing through said angle irons for rigidly securing said first named reinforcing plate and said outer face plate in position, and a cover plate secured to said casing and further secured by means of said bolts.

4. In a safe construction, a door having a casing, an outer face plate secured to said casing, a reinforcing plate secured to said outer face plate, an inner supporting plate spaced away from said outer face plate, a reinforcing plate secured to said inner supporting plate, insulating means disposed between said outer face plate and said inner supporting plate, angle irons secured to said casing and arranged to rigidly secure said inner supporting plate, a locking mechanism carried by said inner supporting plate, bolts secured to said first named reinforcing means and passing through said angle irons for rigidly securing said first named reinforcing plate and said outer face plate in position, a cover plate secured to said casing and further secured by means of said bolts, and a supporting member carried by said angle irons for supporting said locking mechanism.

5. In a safe construction, a door having an outer face plate and an inner supporting plate spaced away from said face plate, a reinforcing plate secured to the inner side of the face plate, a reinforcing plate secured to said inner supporting plate, and a plurality of means secured to said first named reinforcing plate and passing through the inner supporting plate and said second named reinforcing plate for rigidly securing said face plate and said inner supporting plate in position.

6. In a safe construction, a door having an outer face plate and an inner supporting

plate spaced away from said face plate, a reinforcing plate secured to the inner side of the face plate, a reinforcing plate secured to said inner supporting plate, a plurality of means secured to said first named reinforcing plate and passing through the inner supporting plate and said second named reinforcing plate for rigidly securing said face plate and said inner supporting plate in position, and means in the rear of said supporting plate for securing said first named means.

PAUL E. PYLE.