A. F. BLECKSMITH.

SAFE.

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1,384,509. Patented July 12, 1921.

Fig. 1.

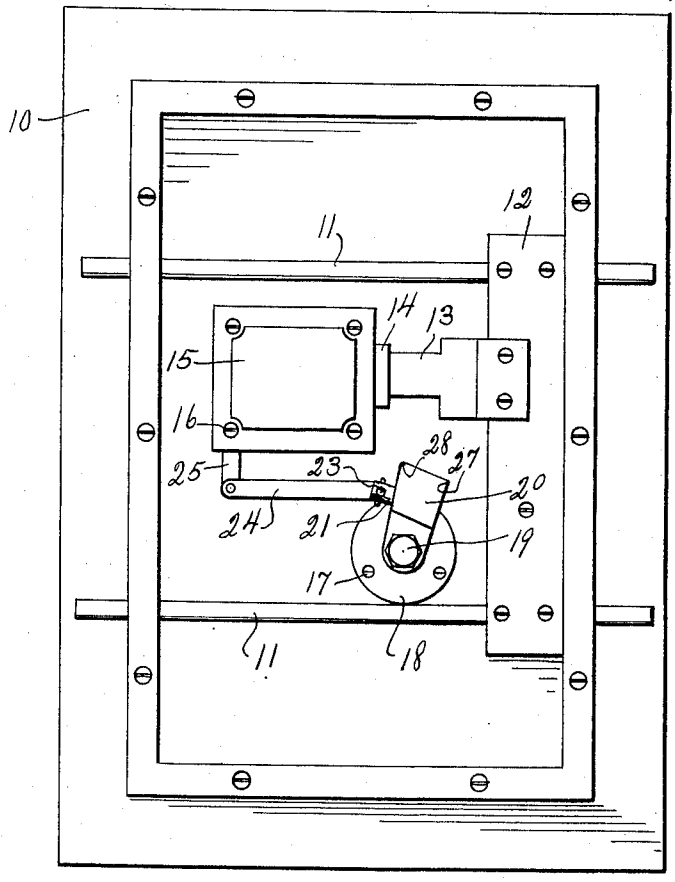
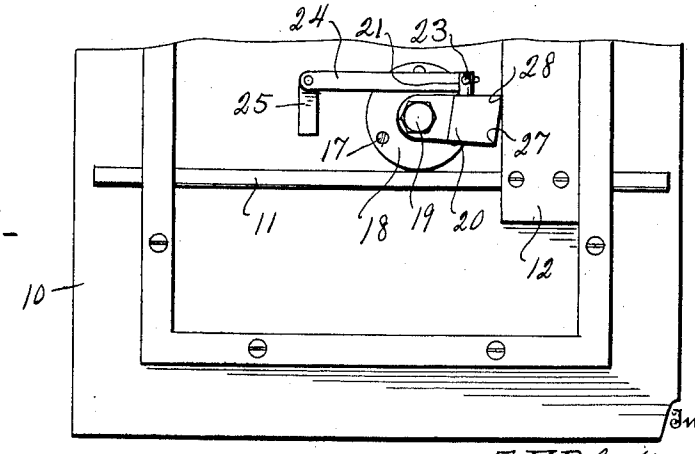


Fig. 2.



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To all whom it may concern:

Be it known that I, ARTHUR FRED BLECKSMITH, a citizen of the United States, residing at Dayton, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Safes, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to improvements in vault and safe doors.

An important object of the invention is to provide means whereby the locking bolts of the door may be automatically locked in the locking position in event of breaking away of the combination.

Further, an important object of the invention is to provide a device of this character which may be readily applied to the usual vault and safe door construction without materially altering the same.

A still further object is to provide a device of this character which is extremely simple in construction and operation and which may be applied to vault and safe doors now in use with a minimum loss of time and a minimum expenditure.

Further objects and advantages of the invention will become apparent throughout the course of the following description.

In the accompanying drawings wherein for the purpose of illustration is shown a preferred embodiment of my invention and wherein like reference characters designate like parts throughout:

Figure 1 is a rear elevation of a vault or safe door constructed in accordance with my invention showing the automatic counter weight in inoperative position.

Fig. 2 is a fragmentary rear elevation of the vault or safe door showing the position assumed by the counter weight when the combination lock is broken and the connecting links released.

Referring now more particularly to the drawings, the numeral 10 indicates a vault or safe door, and the numeral 11 the locking bolts thereof, which are connected by means of a bolt bar 12 secured to the bolts 11 and to a handle having portions projecting exteriorly of the door by means of which the bar may be operated to shift the bolts. As this handle forms no portion of my invention and is of the construction usually employed in vault and safe doors, the same is not shown or claimed by me.

The numeral 13 indicates the usual bolt stopper, which is secured to the bolt bar and which operates either into the tumblers of the combination lock or butts against the bolt 14 of the combination lock 15, the latter construction being illustrated in the present instance. The combination lock 15 is held in position upon the door by means of machine screws 16 having their headed portions disposed interiorly of the door to prevent access thereto for removal of the combination when the door is closed. The above construction is that commonly employed in all ordinary types of safes. While the mechanism employed may differentiate in mechanical detail from that illustrated in the accompanying drawings, yet the essential features of the construction and operation are not materially altered.

Secured to the inner face of the door 10 by means of screw 17 is a plate 18 having extending outwardly therefrom pivot pin 19 of any desired construction. This pin has pivotally mounted thereon a member 20 constituting a counter-weight which is provided upon one side thereof with deep slotted screw 21. In the slot of the screw 21 a link 24 or connecting rod is disposed and is pivotally connected to the arm 21 by means of a cotter pin 23. This link has pivotally secured thereto a securing arm 25.

When applied to the door of the safe the counter weight 20 is positioned so that it lies slightly to that side of the vertical center of the pivot pin 19 lying toward the bolt bar 12 and is maintained in this position by placing the end of the securing arm 25 beneath the combination lock and clamping the same firmly in position. It will be obvious that this construction in no way interferes with the normal operation of the combination and may be applied thereto with a minimum loss of time. It will likewise be obvious that the normal operation of the bolt bar 12 is in no wise interfered with so long as the combination lock is not tampered with. If, however, the lock is loosened or removed from the face of the door, which method of operation is a common one resorted to in effecting illegal entry to vaults and safes, the lock will be released or sufficiently loosened to permit release of the arm 25 therefrom, and the counter weight being positioned as described falls toward the bolt bar. The leading shoulder 27 of the weight 20 or that portion of the free end

thereof which is in advance when the weight falls is so designed that it will clear the bolt bar while in the locking position, the bolt bar being engaged by the following shoulder 28. This shoulder will maintain the locking bolt in such position that the bolts may not be withdrawn, thus preventing opening of the door.

It will be obvious that my device by reason of its simplicity, the readiness of its attachment, and the ease with which it may be manufactured is particularly adapted for use and it will likewise be obvious that the specific structure hereinbefore set forth is capable of some obvious changes. I, therefore, do not limit myself to such specific structure but may make any such changes without departing from the spirit of the invention or the scope of the subjoined claims.

Having now described my invention, what I claim is:

1. The combination with a door of the class described embodying the usual shiftable locking bolts adapted to be shifted to locked and unlocked positions, and a combination lock controlling the shifting of said bolts, of a bar secured to said bolts to be shifted thereby, a plate secured to said door adjacent said bar and embodying a pivot pin, a counterweight pivotally mounted upon said pivot pin and inclining toward said bar, said counter weight being adapted when released to fall toward and engage said bar and prevent shifting thereof, the upper end of said counter weight being squared and having the leading shoulder thereof adapted to clear said bar during pivotal movement of the counter weight and the following shoulder adapted to engage directly with said bar and means for holding said counterweight against movement connecting said counter weight with the lock.

2. The combination with a door of the class described embodying the usual shiftable locking bolts adapted to be shifted to locked and unlocked positions and a combination lock controlling the shifting of said bolts, of a bar secured to said bolts to be shifted thereby, a plate secured to said door adjacent said bar and embodying a pivot pin, a counter weight pivotally mounted upon said pivot pin and inclining toward said bar, said counterweight being adapted when released to fall toward and engage directly with said bar and prevent shifting thereof, the upper end of said counterweight being squared and having the leading shoulder thereof adapted to clear said bar during pivotal movement of the counterweight and the following shoulder adapted to engage said bar and means for holding said counterweight against movement connected with said counter weight with the securing means for said lock, comprising a link pivotally connected at one end of said counterweight and a securing arm pivotally connected to said link and adapted to be held by said lock against shifting when the lock is in normal positions.

In testimony whereof I hereunto affix my signature.

ARTHUR FRED BLECKSMITH.