Dec. 18, 1928.

1,695,686

S. B. HESS

DOOR SECURER

Filed April 2, 1926

Fig. 1.

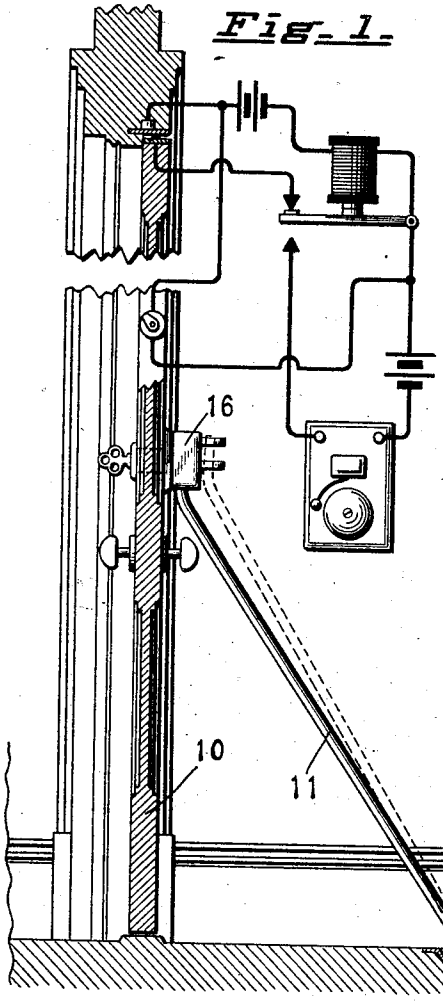


Fig. 2.

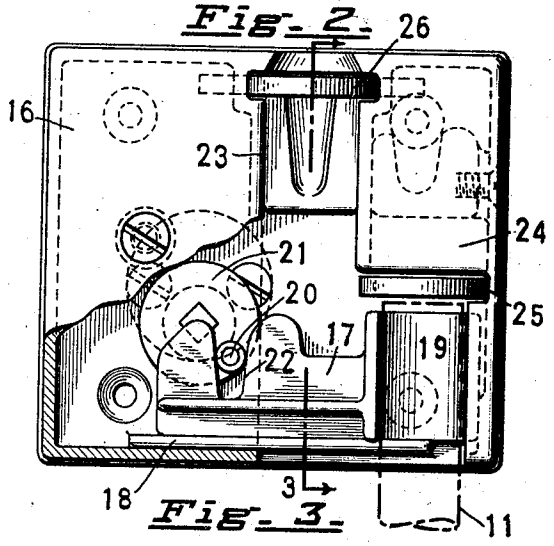


Fig. 3.

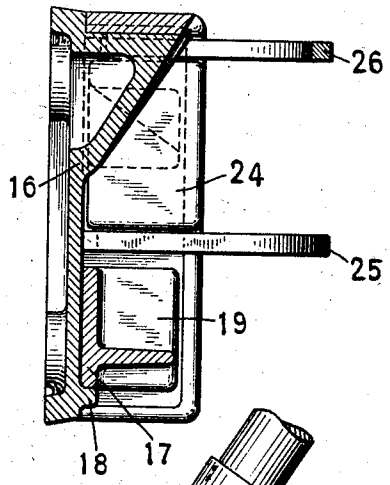


Fig. 4.

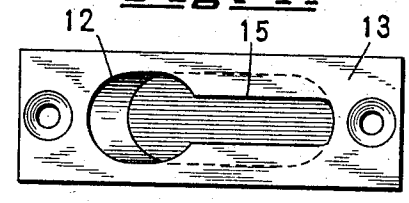


Fig. 5.

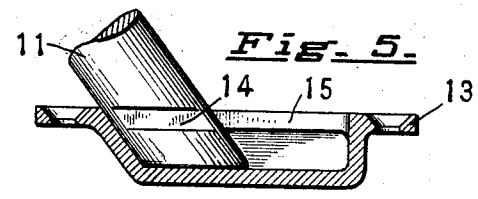
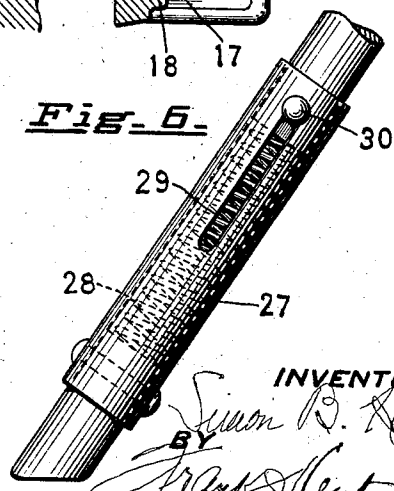


Fig. 6.



INVENTOR

Simeon B. Hess

BY

Frank Hunt

ATTORNEY

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UNITED STATES PATENT OFFICE.

SIMON B. HESS, OF NEW YORK, N. Y.

DOOR SECURER.

Original application filed September 7, 1922, Serial No. 586,573. Divided and this application filed April 2, 1926. Serial No. 99,202.

The object of this invention is to provide a door securer in the form of a rigid prop that will act as a supplemental holding means, or second line of defense, in case the main door lock, or first line of defense, has been broken or outflanked.

A special object of the invention is to provide a supplemental door securer that will allow the door to move a limited distance after the main securing means has been overcome and will then come into operation to rigidly hold the door against further movement. The door is permitted to have this limited amount of lost motion in order to permit the operation of a burglar alarm system as fully set forth in my application Serial No. 586,573, filed on September 7, 1922, of which this is a division.

On the chief features of this invention is the fact that the brace rod forming the supplemental stop is concealed and protected behind the door even when the door is in its second protective position.

While I have disclosed a preferred embodiment of the invention for purposes of illustration, it should be understood that various modifications could be made without departure from the spirit and scope of the invention as hereinafter defined and claimed.

In the drawings:

Fig. 1 is an elevation partly in section showing the invention applied to a door;

Fig. 2 is a plan view partly broken away showing the means for locking the upper end of the brace rod;

Fig. 3 is a section on line 3—3 of Fig. 2;

Fig. 4 is a plan view of the floor plate;

Fig. 5 is a detailed view showing the cooperation of the brace rod with the floor plate;

Fig. 6 is a detail of a modified brace rod.

In the drawings the door 10 is provided with a supplemental holding means including the brace rod 11. The lower end of this rod fits into an opening 12 formed in the floor plate 13 and is slotted at 14 to enable the rod to ride into the key-hole slot 15 formed in the floor plate.

The upper end of the brace rod extends into the lock casing 16 secured to the door. A sliding bolt 17 is mounted in the casing and is supported by a shoulder 18 of the casing. One end of the bolt is provided with a cradle 19 adapted to receive and guide the upper end of the brace rod 11.

The sliding bolt is oscillated by a crank pin 20 carried by a conventional lock barrel 21, and cooperating with a notch 22 formed in the upper surface of the bolt.

The casing 16 is formed with a guideway 23 near its center, and carries a rigid abutment 24 on one side of the guideway. A guard yoke 25 is located just below the abutment 24, while a similar yoke 26 is located at the upper end of the guideway 23.

When the brace rod is engaged in the floor plate, and the sliding bolt 17 holds the upper end of the rod under the abutment 24, as shown in Fig. 2, the parts are in protective position. If an intruder should force the main lock of the door and attempt to push the door open, the brace rod would contact with the abutment 24 after allowing the door to move a slight distance to take up the space normally left between the rod and the abutment as seen in Fig. 2. The brace rod would then form a positive stop to prevent further opening of the door.

When an authorized person wishes to open the door, he operates the lock barrel to move the rod into registry with the guideway 23. As the door is opened the rod will slide into the guideway to the dotted line position of Fig. 1, permititng the person to enter.

In the modification shown in Fig. 6 the lower end of the rod is provided with a sleeve 27 housing a spring 28 and guided by a slot 29 moving over a pin 30 carried by the rod. This means may be used to provide additional lost motion at the lower end of the rod.

It will be clear that this supplemental door holding means permits a limited opening of the door before it comes into play to positively hold the door. The holding means comprises a rod that is concealed and protected at all times, and hence an intruder cannot gain access to cut or remove it.

What I claim is:

1. In apparatus of the character disclosed, securing means operatively connected to a door, lock-controlled means for moving said securing means to protective position, said securing means being arranged to allow a limited opening of the closeure before becoming operative.

2. In apparatus of the character disclosed,

a brace rod adapted to engage an abutment secured to the floor, a lock casing carried on the door and adapted to receive the brace rod, and means to allow a limited opening of the door before the rod becomes operative to secure the door.

3. In apparatus of the character disclosed, a brace rod adapted to engage an abutment secured to the floor, a lock casing carried on the door and adapted to receive the brace rod, a guideway in the casing and an abutment in the casing, and a sliding bolt for moving the upper end of the brace rod from alinement with the guideway into alinement with the abutment.

4. In apparatus of the character disclosed, a brace rod adapted to engage an abutment secured to the floor, a lock casing carried on the door and adapted to receive the brace rod, a guideway in the casing and an abutment in the casing, and a lock-controlled bolt for moving the upper end of the brace rod from alinement with the guideway into alinement with the abutment.

5. In apparatus of the character disclosed, a brace rod adapted to engage an abutment secured to the floor, a lock casing carried on the door and adapted to receive the brace rod, a guide way in the casing adapted to permit the rod to slide therein to allow opening of the door by an authorized person, a stop in the casing, and a lock-controlled bolt slidably mounted in the casing and having a part receiving the rod, the bolt being adapted to move the upper end of the rod from alinement with the guideway to alinement with the stop, the parts being arranged to provide an appreciable space between the end of the rod and the stop when the rod is in position alined with the stop.

In testimony whereof I affix my signature.

SIMON B. HESS.