To all whom it may concern:  

Be it known that I, JOSEPH GRÜNINGER, a citizen of the United States of America, and a resident of New York, county and State of New York, have invented certain new and useful Improvements in Safety Devices for Doors, of which the following is a specification.

This invention has reference to a novel doorcheck and alarm, to be used in place of the safety chains heretofore employed.

It is the special object of this invention to produce a safety device for doors which cannot not be made inoperative nor injured from the outside.

The device may also be combined with an alarm bell constituting then a safety device and alarm.

This invention is illustrated in the accompanying drawing in which:

Figure 1 represents in horizontal section on line 1—1 of Fig. 4 a safety device for doors which embodies in desirable form the present improvements. Fig. 2, is a like view of a slightly modified form of the device with electric contact for day service. Fig. 3, is a like view as Fig. 2 showing the device with electric contact for night service. Fig. 4, is an elevation of the device seen from the inside, and Fig. 5, is a sectional view on line 5—5 of Fig. 4 illustrating the catch.

Similar characters of reference denote like parts in all the figures.

In the drawing a represents the door and b is the door jamb. A molding c is provided on the jamb to which the safety device is shown to be secured.

The door a is provided with a horizontal socket d as shown in Figs. 1, 2, and 3. A small metal plate e is secured above the socket in the door having an opening in the center registering with the socket.

The safety device proper consists essentially of an L shaped arm f which is attached to a hinge g. The hinge is secured to a metal plate h as shown in Fig. 4 which is screwed on to the door jamb. The short portion f' of the L shaped member f supports a metal rod i which is of uniform diameter throughout and riveted to the said portion f' as shown in Fig. 1. The end portion of the member f which is located within the hinge has formed thereon a projection j on either side. The two hinge members g' g' are each provided with a small indentation g' g' adapted to receive each a projection j when the L shaped arm f has been adjusted for operation.

When it is not desired to make use of the device, say during the day time when a number of people are at home the L shaped member f is placed into the position shown in dotted lines on Fig. 1 so as to be out of the way.

For placing the device in position for use the L shaped member f is turned around as shown in full lines in Figs. 1, 2, and 3. The small projections of the L shaped member will then lodge in the indentation of the hinge members g' g' and secure the L shaped member permanently. Assuming the door is closed and someone opens same then the metal rod i will enter the socket d in the door until the plate of the door strikes against the portion f' of the L shaped member f. Thus the door may be opened but a limited distance, just far enough to look at the person standing outside. The catch is provided for the purpose of preventing a person who has knowledge of the device to turn same back into the position shown in Fig. 1 by dotted lines before the member i has entered the opening in the door.

A slightly modified form of this safety device is illustrated in Figs. 2 and 3. The socket in the door, the hinge, and the L shaped member are of the same construction as those shown in Fig. 1. The part i however has been modified and replaced by a part k which consists of a metal rod having a thick portion k', a short reduced portion k'', and a long reduced portion k'''. The part k is not riveted to the front portion f' of the L shaped member f but is merely inserted therein. During the daytime the long reduced portion k''' is passed through the opening in the portion f' of the L shaped member f leaving the thick portion k and the short reduced portion k'' in a position to enter the socket in the door when one attempts to open it. In the interior of the socket d of the door there is provided in its modified form an electric contact l with wire p which leads to one pole of the battery. During the daytime however an alarm bell is unnecessary and as shown in Fig. 2 the short reduced portion k'' of the rod k is not long enough to reach the electric contact l. An electric wire p leads from the hinge to the second pole of the battery. Thus no alarm can be given during the day time. In this instance as well as in
the device shown in Fig. 1 the door may be opened sufficiently to look at the person. To set the alarm at night the rod $k$ is taken out of the portion $f^1$ of the L shaped arm $f$ and again inserted so that the short reduced portion $k^2$ is located within the portion $f^1$ of the arm $f$ and the long reduced portion $k^2$ in the position to enter the socket in the door. If an attempt is made to open the door in a very cautious way without setting off the alarm no one can injure the device because the distances are so calculated that it is impossible to reach any part of the device even with a very narrow tool. If the door is opened slightly further the alarm will go off and still no one can injure the device because the door can be opened but a very short distance as shown in Fig. 3.

It is evident from the above that this safety device is very simple and therefore very cheap but affords greater safety than a safety chain because it cannot be cut or damaged as a chain may be and during the night time when the rod entering the socket in the door has been mounted as shown in Fig. 3 the device cannot be reached at all.

The safety device is usually attached to the middle portion of the door and jamb where it may be conveniently reached. In stores and the like it may be mounted higher up where children cannot reach it.

Having thus described my invention I claim as new and desire to secure by Letters Patent.

1. A safety device for doors comprising essentially a hinge with base plate secured to the door jamb, an L shaped arm movably mounted on said hinge and having an opening in its short portion, and a metal rod secured in said opening, in combination with a door having an opening and metal plate with coinciding opening adapted to lodge said rod when an attempt is made to open the door.

2. A safety device for doors comprising essentially a hinge with base plate secured to the door jamb and having formed thereon two indentations, an L shaped arm with opening in its short portion movably mounted on said hinge and having two small projections adapted to lodge in the indentations of the hinge, and a metal rod secured in the opening of the L shaped arm, in combination with a door having an opening and metal plate with coinciding opening adapted to lodge the metal rod when an attempt is made to open the door.

3. A safety device for doors comprising essentially a hinge with base plate secured to the door jamb, an L shaped arm with opening in its short portion movably mounted on said hinge, a catch consisting of two indentations in the hinge and two small projections on said L shaped arm, a metal rod having a short reduced portion and a long reduced portion, both being adapted to be inserted in the opening of the short arm portion, in combination with a door having an opening with metal plate and coinciding opening adapted to lodge the metal rod, an electric contact within the opening in the door, and an electric connection on the base plate of the hinge.

Signed at New York, N. Y., this 16th day of December, 1907.

JOSEPH GRÜNINGER.

Witnesses:

LUDWIG KARL BORM,
JAMES H. GOGGIN.