Sept. 22, 1931. F. D. DE MUNBRUN 1,824,663

BURGLAR ALARM

Filed May 10, 1929

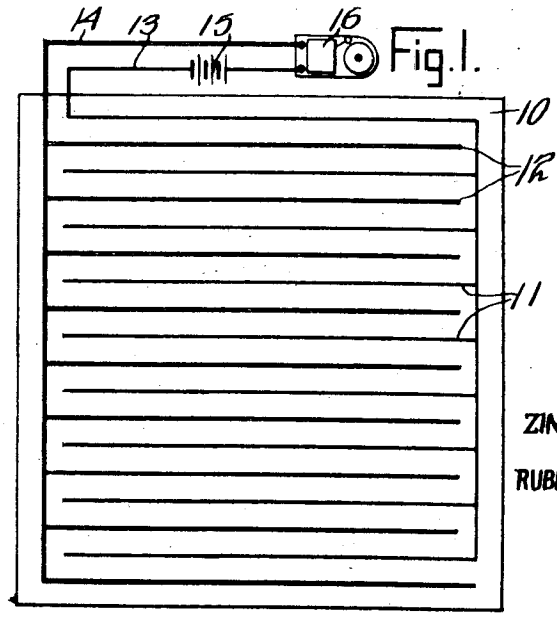


Fig. 1.

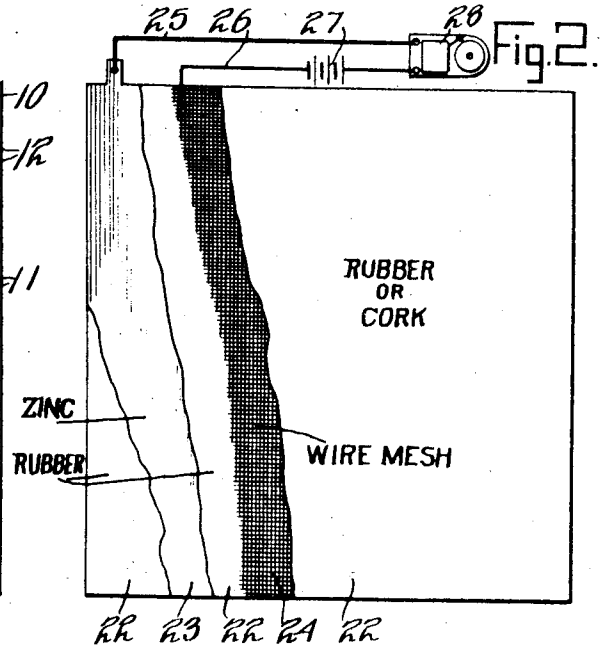


Fig. 2.

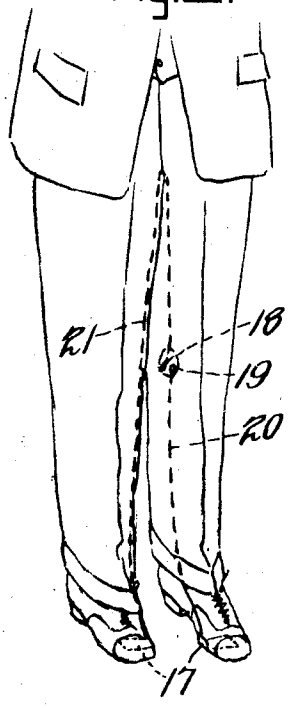


Fig. 3.

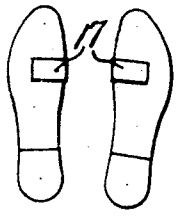


Fig. 4.

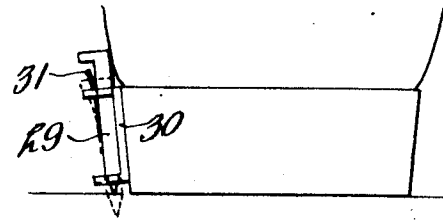


Fig. 5.

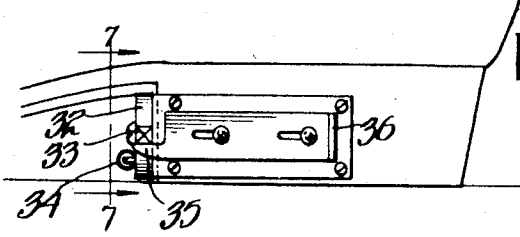


Fig. 6.

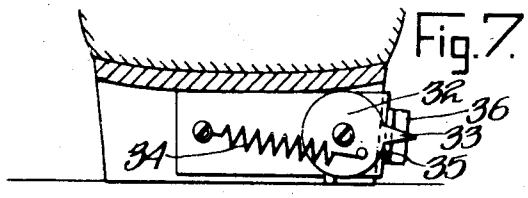


Fig. 7.

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By

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Patented Sept. 22, 1931

1,824,663

UNITED STATES PATENT OFFICE

FERDINAND D. DE MUNBRUN, OF INDIANAPOLIS, INDIANA

BURGLAR ALARM

Application filed May 10, 1929. Serial No. 361,961.

My invention relates to burglar alarms adapted to be used in banks and other business houses where it is desired to give an alarm in case of a hold-up, and it is an object of the invention to provide a device of this character by means of which an alarm may be given when the arms are in an upright position, by a light movement of the lower members of the body; all as will be hereinafter more particularly specified and claimed.

Referring to the accompanying drawings, which are made a part hereof and on which similar reference characters indicate similar parts,

Figure 1 is a plan view of a mat upon which a person is adapted to stand in order to give an alarm,

Figure 2, a similar view of a mat of a different construction,

Figure 3, a front elevation of the lower portion of a person, illustrating the method of completing the circuit,

Figure 4, a view of shoe soles having contact plates for completing the circuit through the mat of Fig. 1,

Figure 5, a view of a shoe having a piercing element for use with the mat of Fig. 2,

Figure 6, a similar view with a different form of piercing element, and

Figure 7, a view taken on the line 7—7 of Fig. 6.

In the drawings, reference character 10 indicates a mat or rug provided with spaced parallel contact members 11 and 12 connected by leads 13 and 14 with a source of power 15, and a bell or other alarm 16. The parallel members 11 and 12 are adapted to be electrically bridged for completing the circuit to cause operation of the bell, and in order to complete the circuit, I provide each shoe with a metal plate 17 of copper or the like, which plate is of insufficient length to reach from one member 11 to one member 12, but which when combined with the contact plate on the bottom of the other shoe is sufficient to bridge the gap between the members 11 and 12 and complete the circuit, thereby causing the alarm to be given.

In order to afford means for closing the circuit by moving the knees or to cause the alarm to operate automatically, I provide a pair of spaced contacts 18 and 19 on the side of the knee, and connect one of the contacts by means of a conductor 20 with the plate 17 on the bottom of the adjacent shoe, and connect the other contact by means of a conductor 21 which extends up over the crotch in the trousers and down the opposite leg to the plate 17 on the other shoe. With these contacts so spaced, when a person is held up the alarm may be voluntarily given.

Instead of having a mat or rug with spaced wires or contact members in the same, a mat may be provided which consists of a bottom layer 22 of rubber or other insulating material, a second layer 23 of metal or the like as for example zinc, a third layer 22 of insulating material, a fourth layer 24 of wire mesh, and a covering 22 or fifth layer, of insulating material. The zinc layer and wire mesh layer are connected by conductors 25 and 26 with a battery or other source of electricity 27, and an alarm 28.

It will be understood from the above that the metal members 23 and 24 are insulated from each other by means of the intermediate layer 22 of insulating material, and in order to complete the circuit it is necessary for some connection to be made between these members.

In order to complete the circuit between these members, I provide a piercing element or spike 29 mounted in a bracket 30 on the shoe heel. The member 29 is normally held above the plane of the bottom of the heel by means of a leaf spring 31 fastened to the side of the member 30, and which engages the under side of the supporting bracket 30 when the device is in operative position, and holds the pin projected, whereupon the pin will pierce the mat or rug and the metal will complete the circuit between the layers 23 and 24 of the mat.

Instead of the piercing element shown in Figure 5, the piercing element shown in Figs. 6 and 7 may be employed which comprises a rotary disc 32 having a projection or tooth 33 on the same, urged toward depending position by means of a spring 34. A latch 35 normally maintains the disc with its tooth in

inoperative position. The latch 35 has its rear end extended outwardly in an operating projection 36 for engagement by the other foot of the operator, so that the latch may be slid endwise to permit the disc to be released to cause it to project its pin downwardly by means of which pressure may be brought to bear for causing it to pierce the respective layers of the mat and complete the circuit between the wire sheets 23 and 24.

It will be obvious to those skilled in the art that various changes may be made in my device without departing from the spirit of the invention, and I, therefore, do not limit myself to what is shown in the drawings and described in the specification, but only as set forth in the appended claims.

Having thus fully described my said invention, what I claim as new and desire to secure by Letters Patent, is:

1. In a burglar alarm system, a manually operable contact making device comprising a rotary disk adapted to be mounted upon the heel of a person, said disk having a projecting tooth on its edge, resilient means tending to rotate the disk to pull the tooth to a depending position, and a manually releasable latch for holding the disk to position the tooth in an elevated position substantially parallel to the floor, substantially as set forth.

2. In a burglar alarm, a contact device comprising a switch element movably mounted on the heel of a person, means for holding the contact device so that its end will be above the plane of the bottom of the heel of the shoe, and an operating projection adapted to permit lowering of the contact device, substantially as set forth.

In witness whereof, I have hereunto set my hand at Indianapolis, Indiana, this 8th day of May, A. D. nineteen hundred and twenty-nine.

FERDINAND D. DE MUNBRUN.