

UNITED STATES PATENT OFFICE

2,187,928

BURGLAR ALARM AND TRAP

William G. Barcroft, Boulder, Colo.

Application January 19, 1938, Serial No. 185,673

2 Claims. (Cl. 43-59)

This invention relates generally to burglar alarms and traps.

The main object of the invention is to provide an arrangement of conductors or strips on a floor or mat, together with means for energizing these conductors with high tension electrical energy in such manner that a burglar or robber standing on the conductors when they are energized, will be so shocked and rendered harmless that his nefarious purpose will be foiled and his capture made easy.

Another object is to provide a method of preparing a floor or mat for the above purpose which comprises the placing of parallel strips of thin metal foil on the floor connecting alternate sets of strips to the two sides of the energizing circuit, coating the strips and adjacent floor surfaces with a metallic conductive paint to increase the energized area of the floor, filling in the intervening spaces on the floor surface with a non-conductive paint and finally, painting the entire surface of the floor with a non-conductive paint to conceal the strips.

The foregoing and other objects, together with means whereby the same may be carried into effect, will best be understood from the following detailed specification in which reference is had to the accompanying drawing, wherein:

Figure 1 is a plan view of a section of a floor or mat with the conductors or strips in place and showing the energizing circuit.

Figure 2 is a similar view but showing the strips coated with the conductive paint.

Referring now with more particularity to the drawing, in preparing a section of the floor F for my purpose I provide the floor with spaced parallel strips or conductors 5 which are connected alternately together by the lateral runners or bus-strips 6 and 7, so that both sides of the energizing circuit will be present between any two adjacent strips. It may here be pointed out that the invention may be applied to any desired area of the floor and to any desired flat surface whether it be a floor, wall, panel, mat or the like, or even to the doors of safes and the like. The strips 5 and bus-strips 6 and 7 are formed of thin metal foil which is applied and held to the floor by shellac or other adhesive and so that the strips present very little projection from the floor.

A high tension induction coil 3 is connected by wires 9 and 10 to the strips 6 and 7 and is energized by a battery 11 or other source of electrical energy under control of a switch 12. When this switch is closed, it will thus be understood

that the strips 5 will be charged with a very high tension voltage, and a burglar or robber standing on the floor will be shocked and rendered harmless by the resulting high tension discharge between the strips which the robber's feet bridge or cross. The energy of course is of sufficient magnitude to overcome the resistance offered by the robber's shoes and so pass through his body. For this purpose too it may be stated that the strips 5 are so spaced that the robber's feet will necessarily bridge at least an adjacent pair of the strips, no matter in what position he may be standing on the floor.

To conceal the strips 5, 6 and 7 and so prevent the robber being warned of their presence, I provide a covering for the strips as will now be described.

The strips are first coated with a metallic electrically conductive paint and this is allowed to spread over the strips out onto the floor F surrounding the strips without, however, forming a continuous surface such as would effectively short the strips. This coating of conductive paint is designated at 13 in Figure 2 and the uncoated spaces between the strips are designated at 14. This coating 13 not only protects the strips 5, 6 and 7, but also, making electrical contact therewith, extends the effective energized area of the floor, as will be understood. The spaces 14 are then filled in with a non-conducting paint such as shellac, to insulate between the strips and to build up or fill in the spaces up to a level with the painted strips 13. This prevents any tell-tale ridges in the finished surface such as might give warning that the floor is protected. A final coating (not shown) of paint or other covering is then applied to conceal the floor and give it the desired color and finish.

With the floor prepared in this manner the strips 5, 6 and 7 are entirely concealed and it will thus be readily understood that any desired area of the floor or any other surface may be protected at very little expense. Then when a robber contacts or steps upon the protected area, closing of the circuit will cause an arc or discharge between strips and through the robber's body as and for the purposes described.

As an illustrative compound for the metallic paint used on the strips 5, 6 and 7 at 13 I have successfully employed a mixture of one pound of powdered copper, one pound of powdered zinc, one-quarter pound of powdered carbon, one percent of powdered sugar and one and one-half percent of liquid vehicle. This is mixed to pro-

Jan. 23, 1940.

F. MOORE

2,187,948

DEVELOPING TANK
Filed July 27, 1939



