

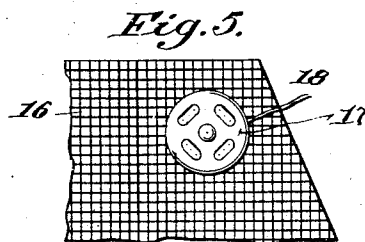
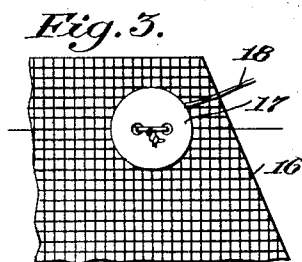
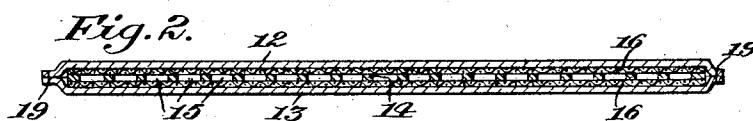
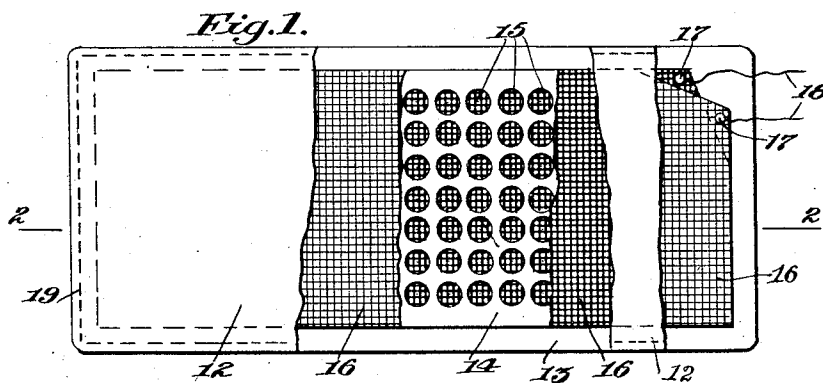
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R. H. BROCKMAN

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ELECTRIC MAT SWITCH

Filed Dec. 5, 1927



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UNITED STATES PATENT OFFICE

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ELECTRIC MAT SWITCH

Application filed December 5, 1927. Serial No. 237,895.

This invention relates to an electric mat adapted to serve as a circuit closer and thus operate an alarm or signal of any sort, as a burglar alarm; and has for its object to provide a circuit closing mat which will be of simple construction and effective in operation.

To this end the improved electric mat, which is of laminated construction, comprises upper and lower plies or layers of insulating or non-conducting material, and, contiguous with said layers, are layers of conducting material preferably consisting of woven wire. Interposed between these conducting layers is a central layer of non-conducting material which is provided with numerous openings of any suitable shape or size so that when the mat is stepped upon the conducting layers will be pressed into contact with each other through one or more of said openings, and thus close the electric circuit in which the mat is arranged, all as will hereinafter more fully appear.

In the accompanying drawing Fig. 1 is a partly broken out plan view of one form of the improved electric mat and Fig. 2 is a longitudinal section thereof. Figs. 3, 4, 5 and 6 are detail views showing different forms of the electric connections.

Referring to Figs. 1 and 2 of the drawings, 12 and 13 denote upper and lower layers of insulating or non-conducting material and 14 a central layer of non-conducting material provided throughout or all over with numerous openings 15 of any suitable shape or size. These non-conducting layers or plies may be of thick paper or thin card board, or any other suitable material. Above and below the central layer and between the same and the said upper and lower layers are layers or plies 16 of conducting material, preferably woven wire, such as is used in window screens, and of about 9 or 10 mesh to the inch.

Attached to the woven wire layers, either by plates or washers 17 affixed thereto, or otherwise, are conductors 18 connected with any suitable source of electricity. The conducting layers or plies 16 are sufficiently elastic so that when pressure on the mat is released they will quickly spring back away

from each other and thus open the electric circuit.

The five layers above referred to may be connected or held together in any suitable manner to form the mat, and this may be effected, as shown in Figs. 1 and 2, by lines of stitching 19 around the edge of the mat, these lines of stitching joining the upper and lower non-conducting layers or plies 12 and 13 together, forming a bag or envelope enclosing the conducting layers or plies 16 and the interposed non-conducting layer or ply 14. In this form of the invention the upper and lower or outer layers or plies may be of any suitable textile carpet or rug material, thus providing a mat of attractive appearance. This form of mat is easily assembled, as the bag or envelope consisting of the outer non-conducting layers or plies may be previously made and left open at one side, or end, and the other three layers or plies may be inserted therein before the open side or end is closed.

To prevent short circuiting the conducting plates or washers 17 are arranged in staggered or non-registering relation to each other on or electrically connected with the conducting layers or plies 16, each of the opposite conducting layers or plies being, in the construction shown in Fig. 1, cut away, so that these conducting layers or plies cannot be pressed into contact with each other at the points where the electric current enters and leaves the mat.

As shown in Figs. 1 and 2 of the drawings the conducting woven wire layers 16 and the central thick paper or thin cardboard open-work non-conducting layer 14 are all practically of the same size or extent and are enclosed in a paper bag or envelope afforded by the upper and lower or outer layers 12 and 13 which are only slightly larger than the other layers.

From the foregoing it will be understood that the invention provides a mat of simple construction which will serve as a circuit closer, so that any person stepping thereon will cause the layers of conducting material to be pressed together through the openings in the central layer of non-conducting mate-

rial, and thus close an electric circuit to sound an alarm or signal bell.

Having thus described my invention, I claim and desire to secure by Letters Patent:—

5 A circuit closing electric mat consisting of two layers of woven wire fabric, an open-work non-conducting layer of thick paper stock material interposed between said woven
10 wire layers, a non-conducting paper envelope enclosing said woven wire and non-conducting layers, and conducting plates or washers electrically connected with said woven wire layers.

15 In testimony whereof I affix my signature.
ROBERT H. BROCKMAN.

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