G. DZERMA.

BURGLAR ALARM PLATES.

APPLICATION FILED NOV. 4, 1909.

987,220.

Patented Mar. 21, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

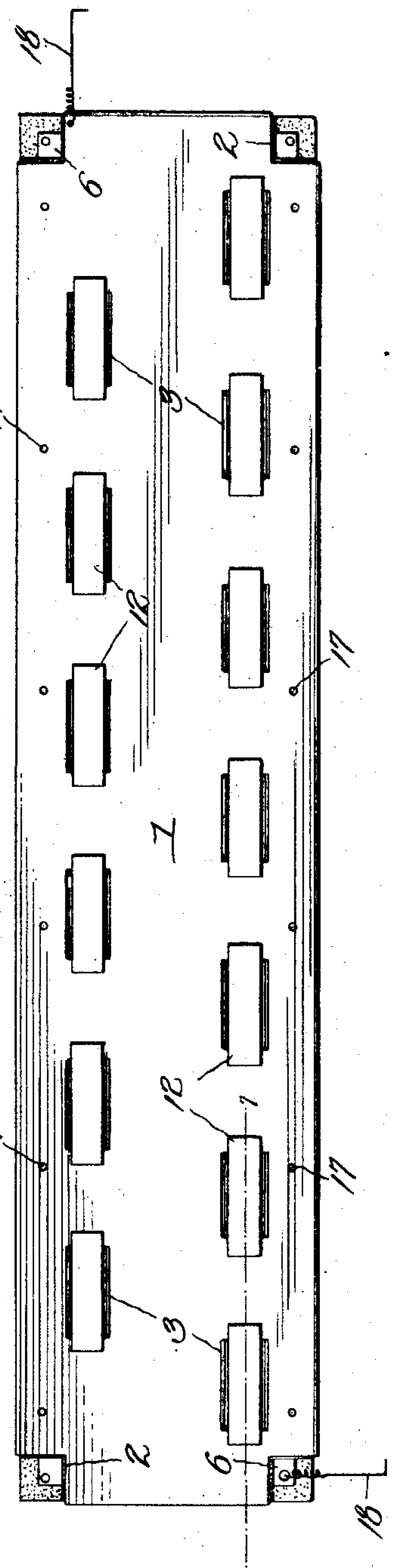


Fig. 3.

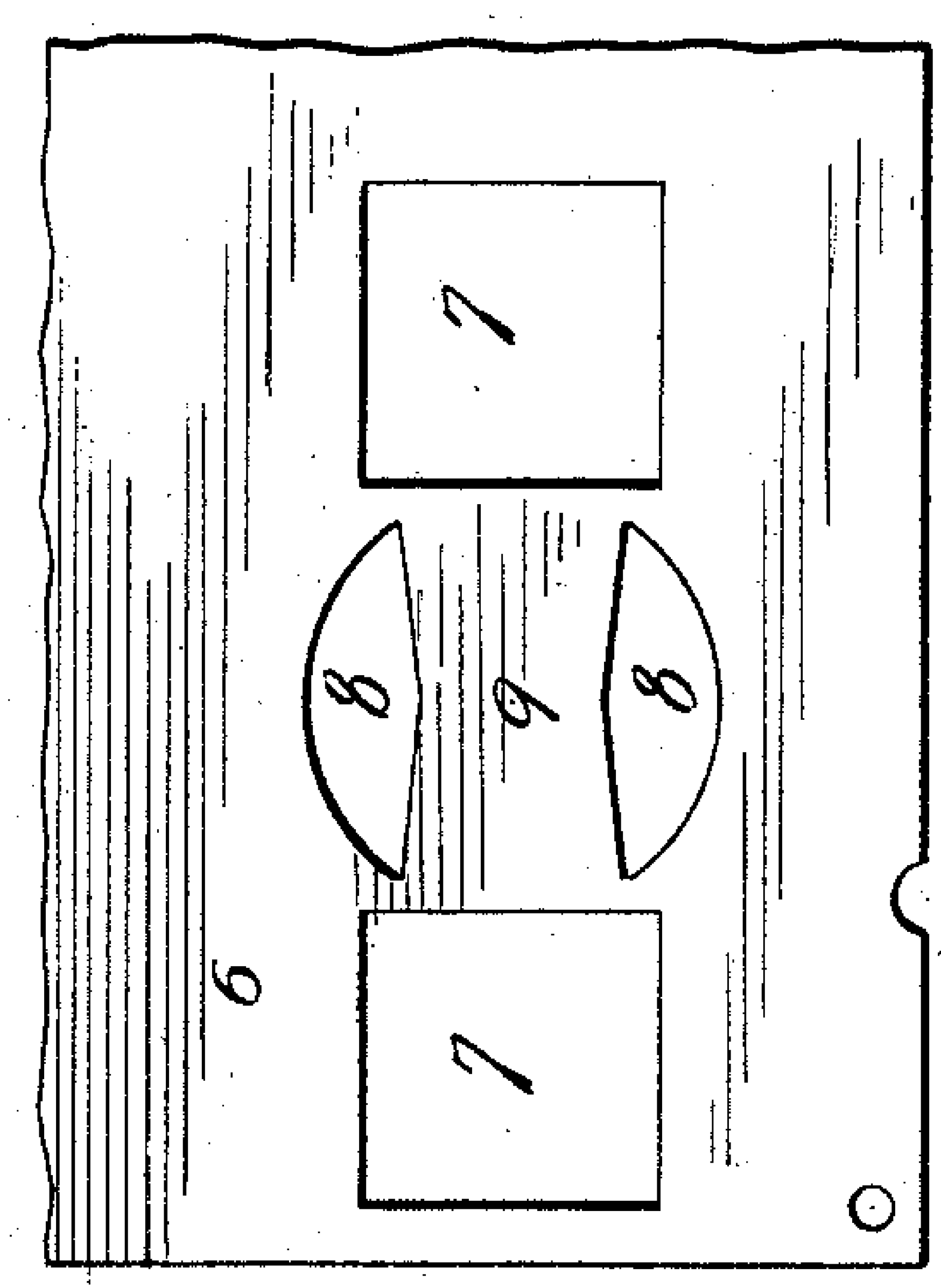
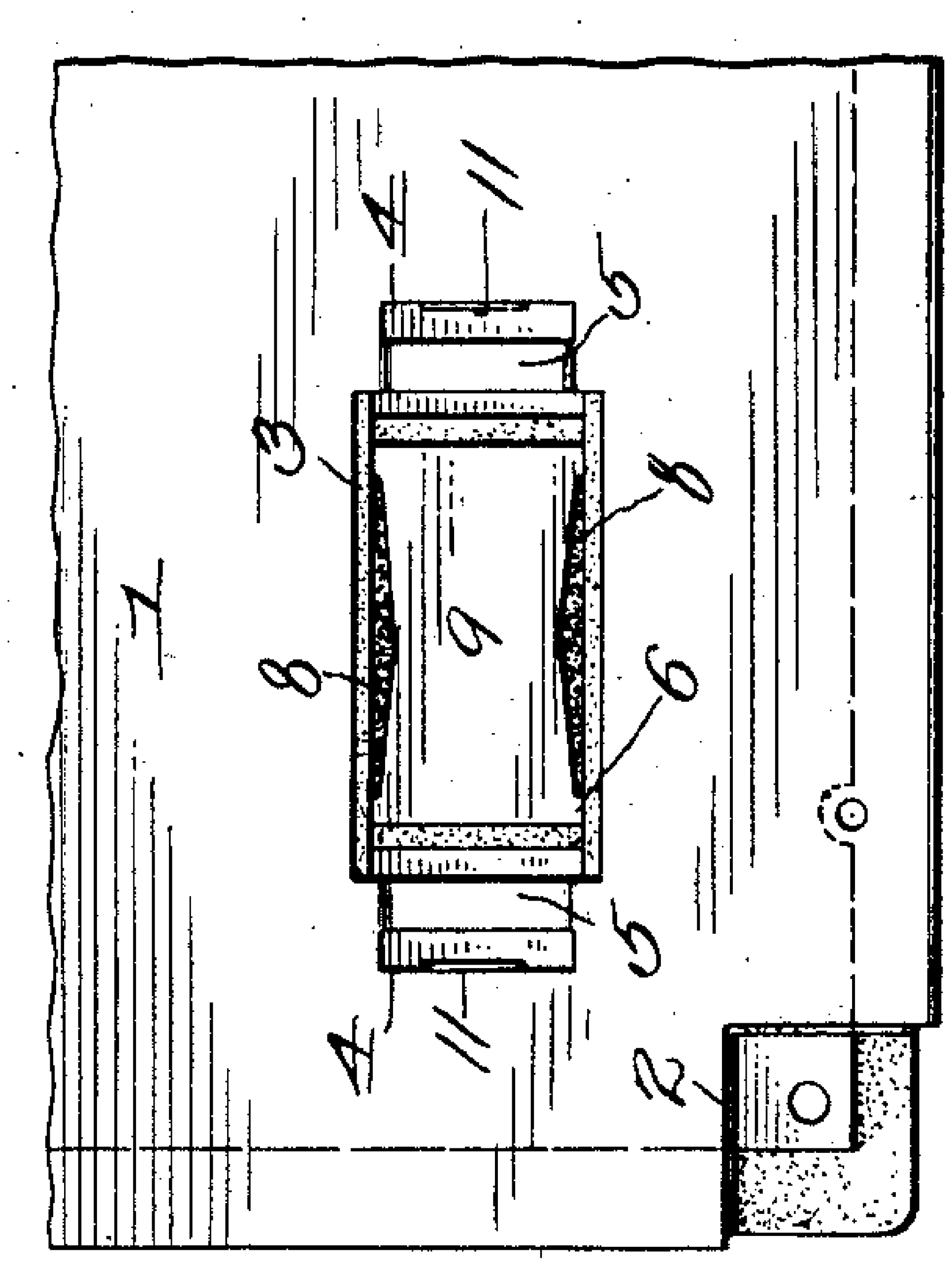


Fig. 2.



Witnesses

Olive H. Holmes

E. B. McBath

Inventor

Gustav Dzerma

By

Attorney

THE NORRIS PETERS CO., WASHINGTON, D. C.

G. DZERMA.

BURGLAR ALARM PLATES.

APPLICATION FILED NOV. 4, 1909.

987,220. Patented Mar. 21, 1911.

2 SHEETS—SHEET 2.

Fig. 4.

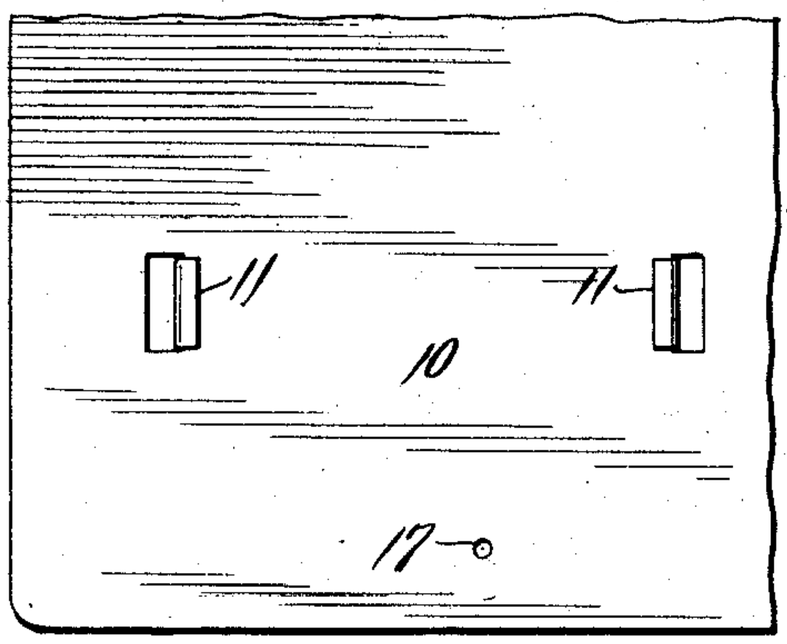


Fig. 5.

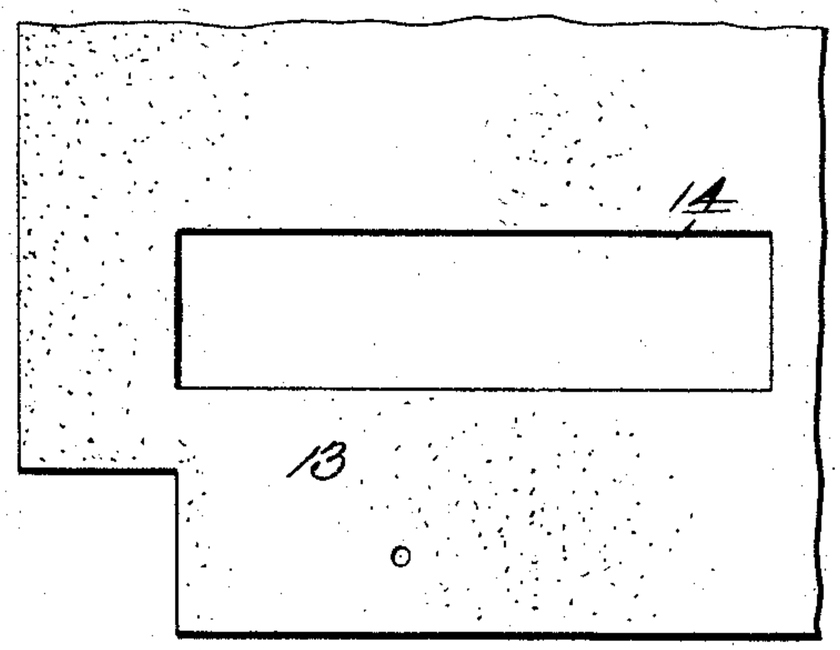


Fig. 6.

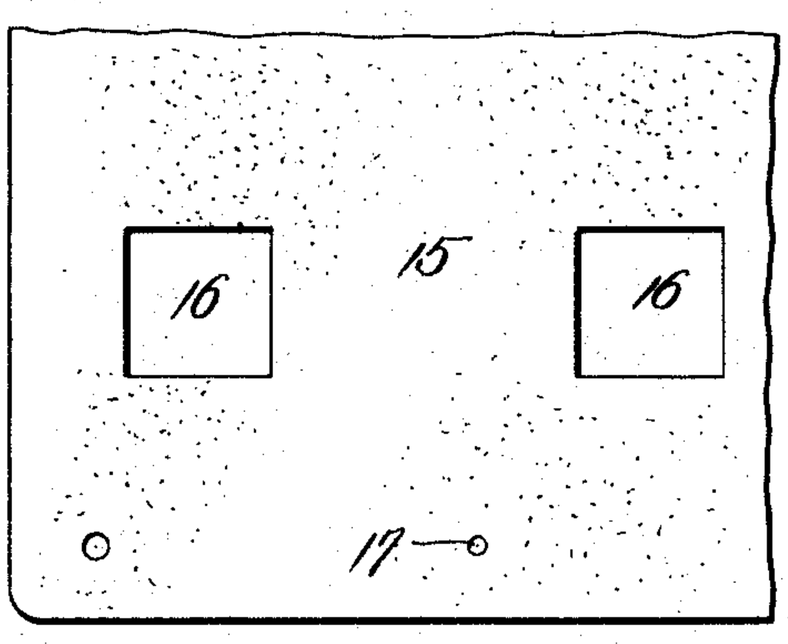
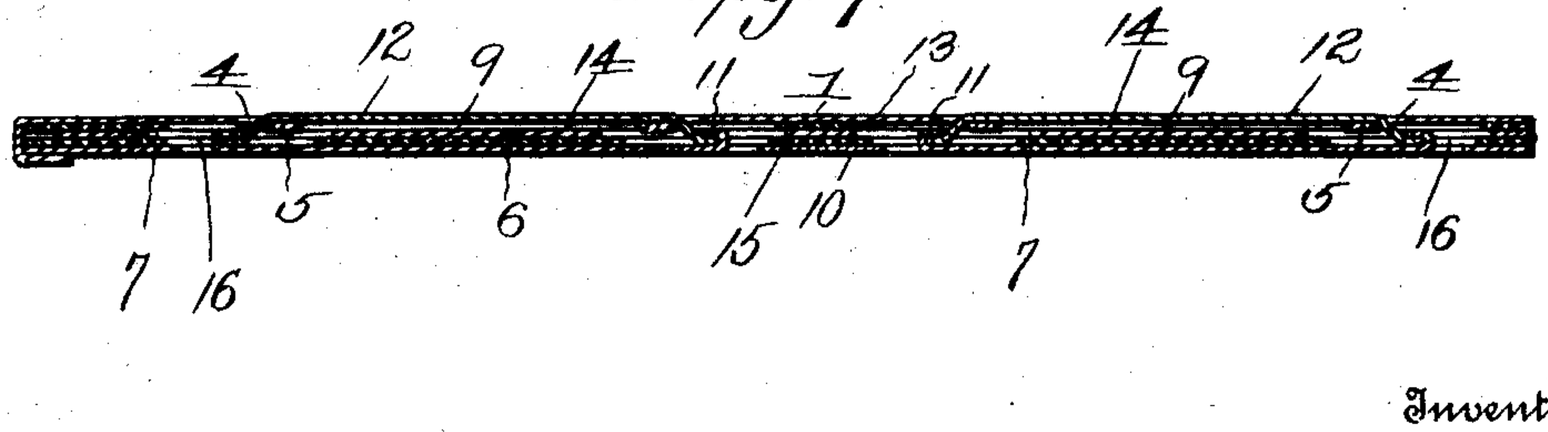


Fig. 7.



Witnesses

Oliver W. Holmes.

E. B. McGrath

Inventor

Gustav Dzerma

By O'Meara & Brock

Attorneys

UNITED STATES PATENT OFFICE.

GUSTAV DZERMA, OF BELLEFONTAINE, OHIO.

BURGLAR-ALARM PLATES.

987,220. Specification of Letters Patent. Patented Mar. 21, 1911.

Application filed November 4, 1909. Serial No. 526,264.

To all whom it may concern:

Be it known that I, GUSTAV DZERMA, a citizen of the United States, residing at Bellefontaine, in the county of Logan and State of Ohio, have invented a new and useful Improvement in Burglar-Alarm Plates, of which the following is a specification.

This invention relates to a burglar alarm and more especially to contact plates constructed, arranged and insulated in a particular manner, thereby adapting them for use in a particular manner.

The object of the invention is to provide means for sounding an alarm in case any one ascends a stairway, or walks upon or across any predetermined floor or space.

The invention consists of a plurality of metal plates spaced apart, two of said plates being connected in an electric circuit, said plates being suitably cut out and carrying a plurality of spring plates arranged in parallel rows, or otherwise as may be desired, an electric circuit being completed by pressure of the foot upon any one of the spring plates.

In the accompanying drawings, Figure 1 is a plan view of one of my devices. Fig. 2 is an enlarged plan view of a corner portion, a spring plate being omitted. Fig. 3 is a plan view of a corner portion of an inner metal plate. Fig. 4 is a plan view of a corner portion of a bottom plate. Figs. 5 and 6 are plan views of corner portions of sheets of insulation. Fig. 7 is an enlarged sectional view upon the line 7—7 of Fig. 1.

The invention can be employed in a number of different ways but consists essentially of a metal plate 1 of any desired size which plate has its corner portions cut out as shown at 2. This plate is provided with a plurality of longitudinally extending openings 3 arranged preferably in parallel rows, the openings in one row being staggered with respect to those in an adjacent row, and for this reason I prefer to place an even number of openings in one row and an odd number in the adjacent row, as shown in Fig. 1. Transverse slots 4 are formed in the plate at opposite ends of the openings 3, and the metal separating said slots from the openings is slightly depressed, thus forming a series of bridges 5 which are slightly below the plane of the upper face of the plate 1. A second plate 6 also of metal is employed and this plate is of less size than the plate 1, and its corner portions project from beneath the plate 1, owing to the corners of said plate 1 being cut away as shown at 2.

The plate 6 is provided with openings 7 which aline with and are larger than the slots 4. The openings 7 are arranged in pairs and between each pair of openings are cut segmental slots 8, a metal portion 9 being left between the slots 8 and extending between the openings 7 of each pair of openings, said portions 9 of the plate 6 lying immediately beneath the openings 3 of the plate 1.

A base plate 10 substantially of the same size as the plate 1 but with its corner portions intact has tongues 11 punched upwardly from it, said tongues being arranged in pairs, the tongues of each pair extending toward each other. Slightly curved spring plates 12 extend longitudinally across the openings 3 of the plate 1 and have their end portions passed through the slots 4, resting upon the bridges 5, said end portions passing through the openings 7, and owing to the size of said openings being spaced from the plate 6, and the end portions of each spring are held by a pair of the tongues 11 of the plate 10. To insulate the plates from each other I place a sheet of insulating material 13 between plates 1 and 6 said sheet of insulating material being cut out as shown at 14, and the cut out portions registering with the openings 3 of plate 1 and also with the openings 7 of plate 6. The plate 10 is also insulated from plate 6 by a sheet of insulating material 15 which is provided with cut out portions 16 which register with the openings 7, but are slightly smaller, and through which the tongues 11 project to receive the ends of the springs 12. These parts are secured firmly together by binding over one or more edges of the plate 1, as shown in Fig. 7 and the various plates are provided with suitable openings 17 through which nails, screws, or thread may be passed in order to secure the completed plate in position.

If desired the entire device may be inclosed in any suitable fabric. To connect the plate in an electric circuit, which circuit may also include any form of electric alarm device, wires 18 are secured respectively to an end portion of the plate 1 and to a corner portion of the plate 6, the wires being connected at opposite ends of the complete device, and it will be obvious that upon pres-

sure of any of the springs 12 they will be brought into contact through the openings 3 and 14 with the metal portion 9 of plate 3, thus electrically connecting the two plates together and completing the electric circuit. Plates as shown in Fig. 1 may be secured by nails, or screws upon the steps of a stairway, being of such size as to practically cover a step, and may or may not be covered by a stair carpet. Such plates may also be placed beneath portions of a carpet in a room, either in front of a door, or a window or in front of some article of furniture or plates of this design may be sewn upon the undersides of rugs and thereby rendered capable of ready removal from one part of a room to another, or from one portion of a building to another.

What I claim is:—

1. A device of the kind described comprising an upper, a base and an intermediate plate, the upper plate having an opening therein, the intermediate plate having openings therein, and a spring plate having its ends in contact with the base plate and said spring plate being in electrical contact with the upper plate, and bridging the opening of the upper plate, said spring plate passing through the openings in the intermediate plate, the said upper and intermediate plates being connected respectively to branches of an electric circuit and the intermediate plate being insulated from the two other plates.

2. A device of the kind described comprising an upper, an intermediate, and a base plate, the intermediate plate being insulated from the upper plate and from the base plate and having openings therein, and the upper and intermediate plates being connected respectively to parts of an electric circuit, the upper plate having a plurality of openings formed therein, and a plurality of spring plates passing loosely through the intermediate and the upper plates and in electrical contact with the upper plate, each spring plate bridging one of the openings formed in the upper plate and being depressible therethrough into contact with the intermediate plate.

3. A device of the kind described comprising two superimposed plates insulated from each other, the upper plate having a plurality of openings arranged in parallel rows, the openings of one row being staggered with respect to those of the other, spring plates, each of said spring plates bridging one of the openings and in electrical contact with said upper plate, and being depressible by the foot into engagement with the other plate, and an electric circuit including said plates.

4. A device of the kind described comprising a base plate having tongues punched therein, an upper plate, an intermediate plate, openings being formed in the intermediate plate to receive said tongues, the upper plate having an opening with slots formed adjacent the ends of the opening, a spring plate bridging the last mentioned opening, the end portions of the spring plate passing through the slots and the openings in the intermediate plate and engaging the tongues of the base plate, and an electric circuit in which the said upper and intermediate plates are included, the intermediate plate being insulated from the upper and from the lower plate.

5. A device of the kind described comprising an upper plate having a plurality of longitudinally extending openings formed therein in parallel rows, the openings in one row being staggered with respect to those in an adjacent row, transverse slots being formed in said plate adjacent opposite ends of each of said openings, and the strips spacing said slots from the adjacent opening being depressed, a base plate, tongues arranged in pairs and carried by said base plate, an intermediate plate, said plate being provided with openings adapted to register with the slots of the upper plate and with the tongues of the base, and spring plates having their ends in engagement with said tongues, said spring plates passing through the slots of the upper and the openings of the intermediate plates and extending longitudinally across the openings of the upper plate, the intermediate plate being insulated from the upper and base plates, said upper and intermediate plates being adapted to form parts of an electric circuit.

GUSTAV DZERMA.

Witnesses:
A. T. Cook,
Nannie S. Cassidy.