

No. 683,341.

Patented Sept. 24, 1901.

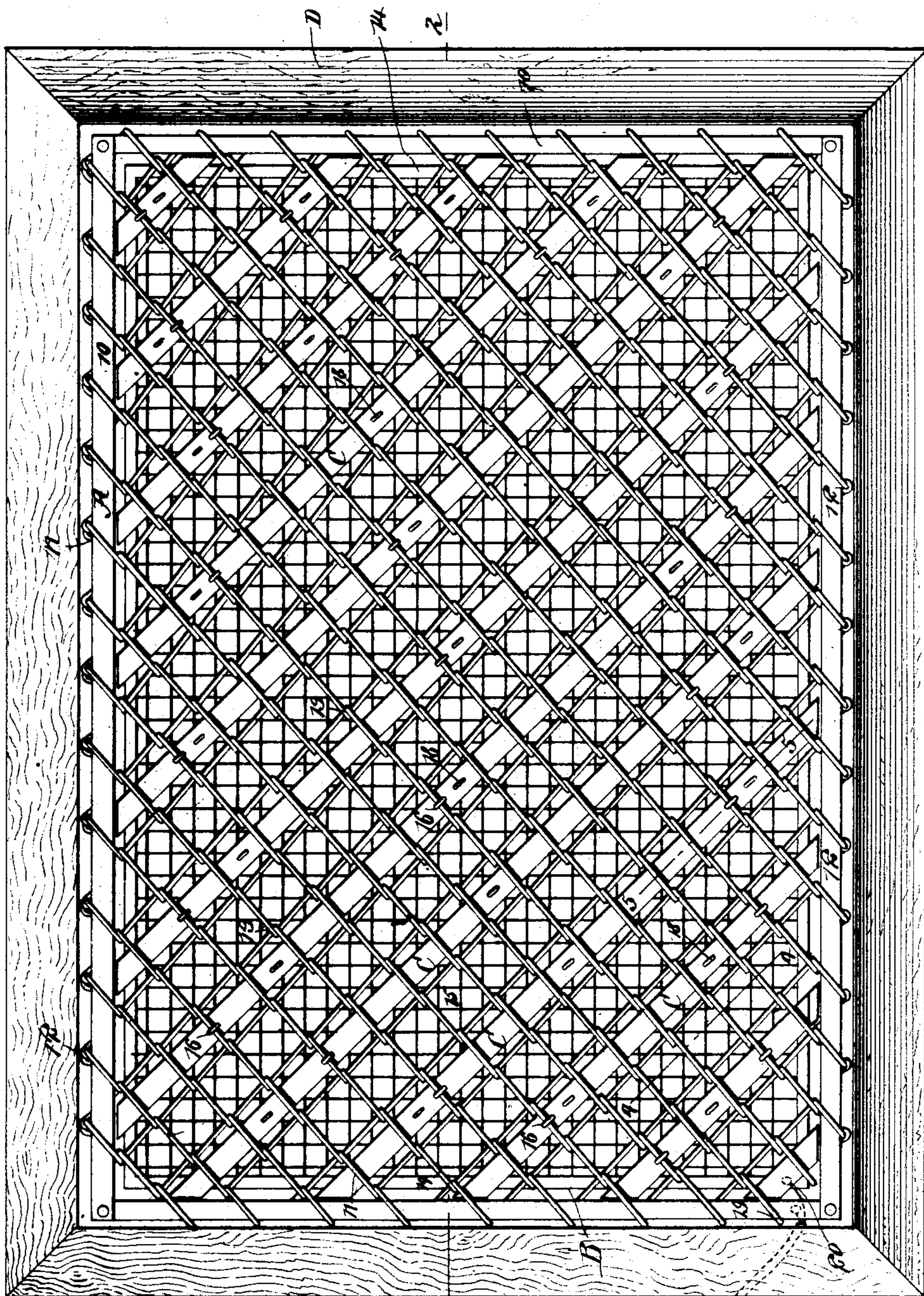
A. D. SHAW.  
ELECTRIC ALARM MAT.

(Application filed June 25, 1901.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.



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2 Sheets—Sheet 2.

Fig. 2.

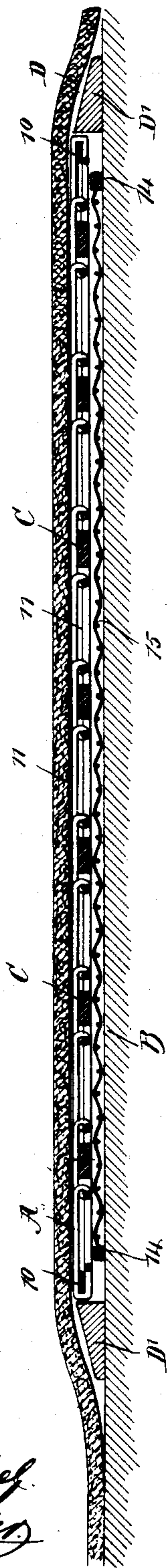


Fig. 4.



Fig. 5.

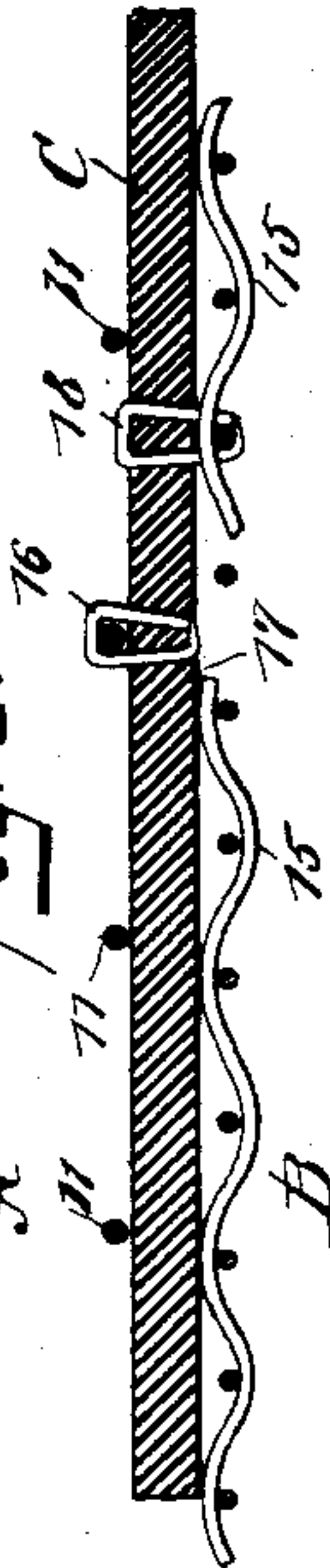
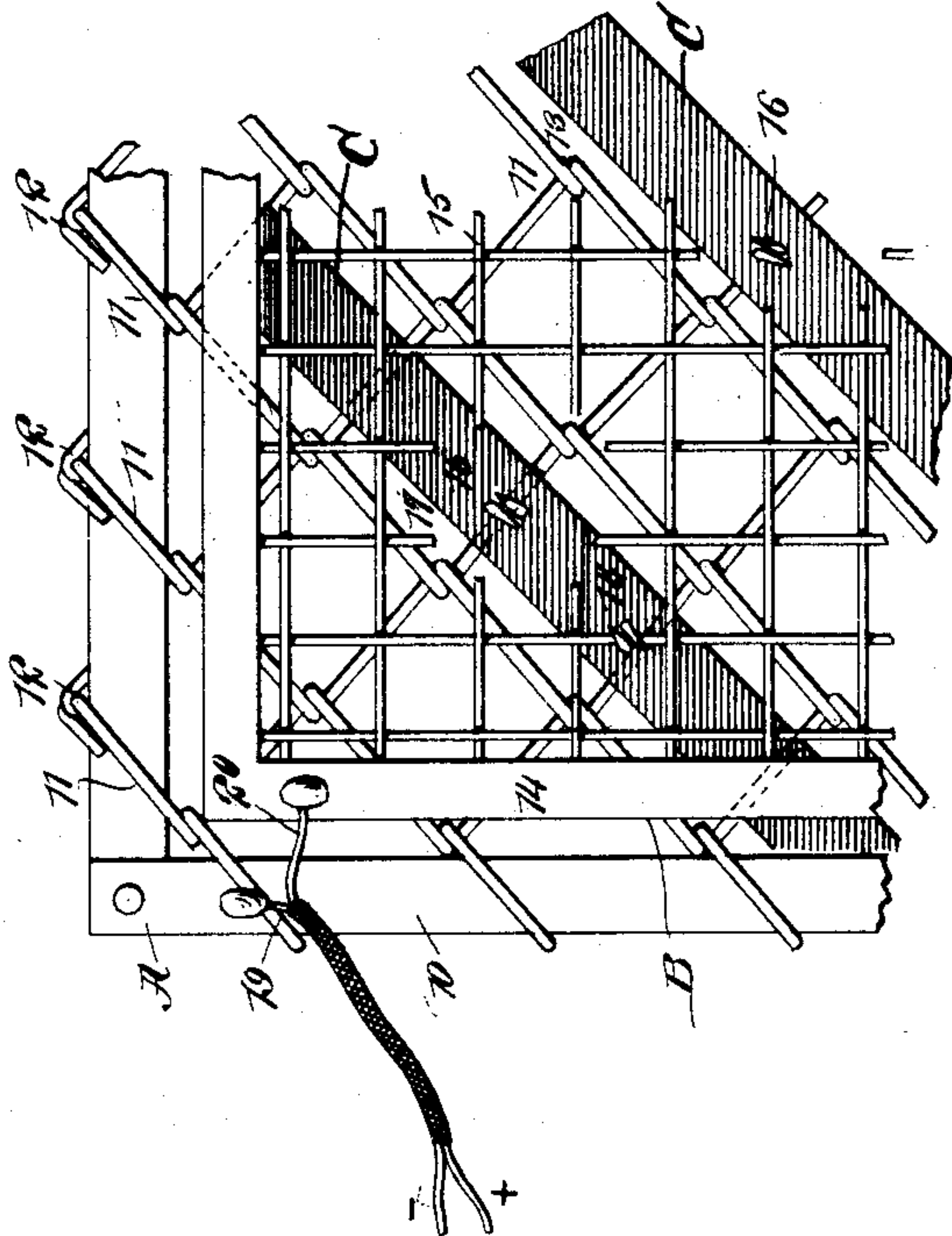


Fig. 3.



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# UNITED STATES PATENT OFFICE.

ALBERT DAVIDSON SHAW, OF NEW YORK, N. Y.

## ELECTRIC ALARM-MAT.

SPECIFICATION forming part of Letters Patent No. 683,341, dated September 24, 1901.

Application filed June 25, 1901. Serial No. 65,934. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT DAVIDSON SHAW, a citizen of the United States, and a resident of the city of New York, Richmond Hill, borough of Queens, in the county of Queens and State of New York, have invented a new and Improved Electric Alarm-Mat, of which the following is a full, clear, and exact description.

My invention relates to a mat adapted to be placed on the floor or above or below a carpet, linoleum, or other covering for the floor, which mat is provided with suitable connections for attachment to an electric alarm device of any description.

The purpose of the invention is to provide a mat of the character described, which will be exceedingly simple, durable, and economic in its construction, and, furthermore, to so construct the mat that upper and lower metallic elements in circuit connection with an alarm device are normally held out of contact by interposed strips of a yielding and non-conducting material, such as rubber, and whereby the weight of a person upon the mat will be sufficient to produce a contact of the upper and lower elements and complete the circuit connection with the alarm device when the circuit is not interrupted by an interposed switch.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improved mat. Fig 2 is a longitudinal section taken practically on the line 2 2 of Fig. 1. Fig. 3 is a bottom plan view of one corner of the mat, parts being broken away. Fig. 4 is a diagonal section through a portion of the mat, illustrating the normal position of the upper and lower elements with reference to each other and one of the interposed springs or elastic strips, which latter appears in side elevation; and Fig. 5 is a section through a portion of the upper and lower elements and a longitudinal section through a part of one of the elastic or spring strips, showing the

manner in which the upper and lower elements are connected with the interposed elastic or spring strips.

The mat consists practically of three elements—namely, an upper element A, a lower element B, and interposed elements C, which latter act as cushions between the upper and lower elements. The upper and lower elements A and B are constructed of metal, and the upper element A consists of a marginal frame 10 and a body made up of series of strands 11 of wire of suitable gage, the strands of wire extending diagonally of the said frame, and adjacent strands of wire are connected by loops 12 or other means at the outer edge of the frame 10, as shown in Figs. 1 and 3. These strands of wire cross one another in a zigzag or stepped direction, and where one strand of wire passes another the two strands are connected by loops or eyes 13. Under this construction of the upper element a wire mesh is formed which is exceedingly strong and may be woven expeditiously and conveniently. The lower element B consists of a marginal frame 14, which is of less dimensions than the frame 10 of the upper element A, one frame practically fitting within the other, as is shown in Fig. 3. The frame 14 of the lower element B carries a wire mesh 15, secured thereto in any approved manner, and usually the strands of this mesh 15 cross one another at right angles, as is also shown in Fig. 3. The strands of said mesh 15 are interlaced in the customary manner. The intermediate or interposed element C consists of a series of strips, preferably of rubber, which are placed in parallel order and diagonally of the upper and lower frames. These strips of the interposed or cushion element C are connected with the wires of the mesh of the upper element A through the medium of staples 16, as shown in Figs. 1, 3, and 5, and where the staples 16 pass through the elastic or cushion strips the mesh of the bottom element B is broken away, so that a contact cannot take place between the staples and the lower element to short-circuit the current. The wire mesh of the lower element B is likewise secured to the elastic or cushion strips by means of staples 18, and these staples appear at the top of the said strips of the interposing element



Cat suitable points within the squares formed by the mesh of the upper element.

Wires 19 and 20 are attached to the frames 10 and 14 of the upper and lower elements A and B, and these wires are suitably connected with the positive and negative poles of any approved form of battery.

It will be understood that a switch may be located in the circuit thus made, so as to render the device inoperative when desired—that is to say, the switch may be so adjusted as to prevent an alarm being sounded, as an alarm device of suitable character is also located within the said circuit.

In operation when the circuit is in working order should a person step on the mat the wire mesh of the upper element wherever pressed downward by the foot will make contact with the mesh 15 of the lower element B, and thus close the circuit and cause the alarm device to be rung, as the strips composing the interposed or cushion element C will yield to permit such contact to take place. When the person steps off the mat, the interposed cushion-strips will automatically carry the upper and lower wire meshes out of contact, thus breaking the circuit and causing the alarm to cease.

This mat may be placed upon the floor or upon a carpet or other floor-covering, or it may be placed beneath the floor-covering D, as shown in Fig. 2, and when the mat is to be so placed a border D' is provided, having its upper face more or less beveled, as is shown in Fig. 2, so that the rise between the floor and the top of the mat will be hardly perceptible.

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

1. A mat adapted for connection with an electric alarm device, which mat consists of an upper frame, a wire mesh carried by the said frame, a lower frame, a wire mesh carried by said lower frame, and interposed strips of elastic material attached to both the upper and lower meshes, the attachment between the elastic strips and the upper and lower meshes being such that the fastening devices connected with one mesh will be out of engagement with the opposing mesh, as set forth.

2. In a mat adapted for connection with an electric alarm device, the combination, with an upper and a lower element, the upper element consisting of a frame and wire strands interwoven to form a mesh, which strands

extend diagonally of the frame across one another in zigzag or stepped direction, the strands being secured to each other where they contact and adjacent strands being connected with each other at the margin of the frame, the lower element consisting of a frame of lesser dimensions and a wire mesh secured to said frame, of an interposed element consisting of a series of diagonally-located elastic strips, metal fastening devices securing the upper strands of wire to the said strips, the lower strands of wire being cut away where the said fastening devices penetrate the said strips, the lower strands of wire having likewise a metallic connection with the elastic strips, the said connections occurring in the spaces formed by the crossing wires of the upper element of the mat, substantially as described.

3. In a mat adapted for connection with an electric alarm device, the combination, with an upper and a lower element, the upper element consisting of a frame and wire strands interwoven to form a mesh, which strands extend diagonally of the frame across one another in zigzag or stepped direction, the strands being secured to each other where they contact and adjacent strands being connected with each other at the margin of the frame, the lower element consisting of a frame of lesser dimensions and a wire mesh secured to said frame, of an interposed element consisting of a series of diagonally-located elastic strips, metal fastening devices securing the upper strands of wire to the said strips, the lower strands of wire being cut away where the said fastening devices penetrate the said strips, the lower strands of wire having likewise a metallic connection with the elastic strips, said connections occurring in the spaces formed by the crossing wires of the upper element of the mat, a marginal auxiliary frame in which the body of the mat is inclosed, and wires connected with the frames of the upper and lower elements, which wires are adapted for circuit connection with a battery and an alarm device, as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALBERT DAVIDSON SHAW.

Witnesses:

CHARLES ELTING RICKERSON,  
GEO. A. VICTOR.