(No Model.)

O. H. HICKS.

ELECTRIC MAT.

No. 564,485. Patented July 21, 1896.

Fig. 1.

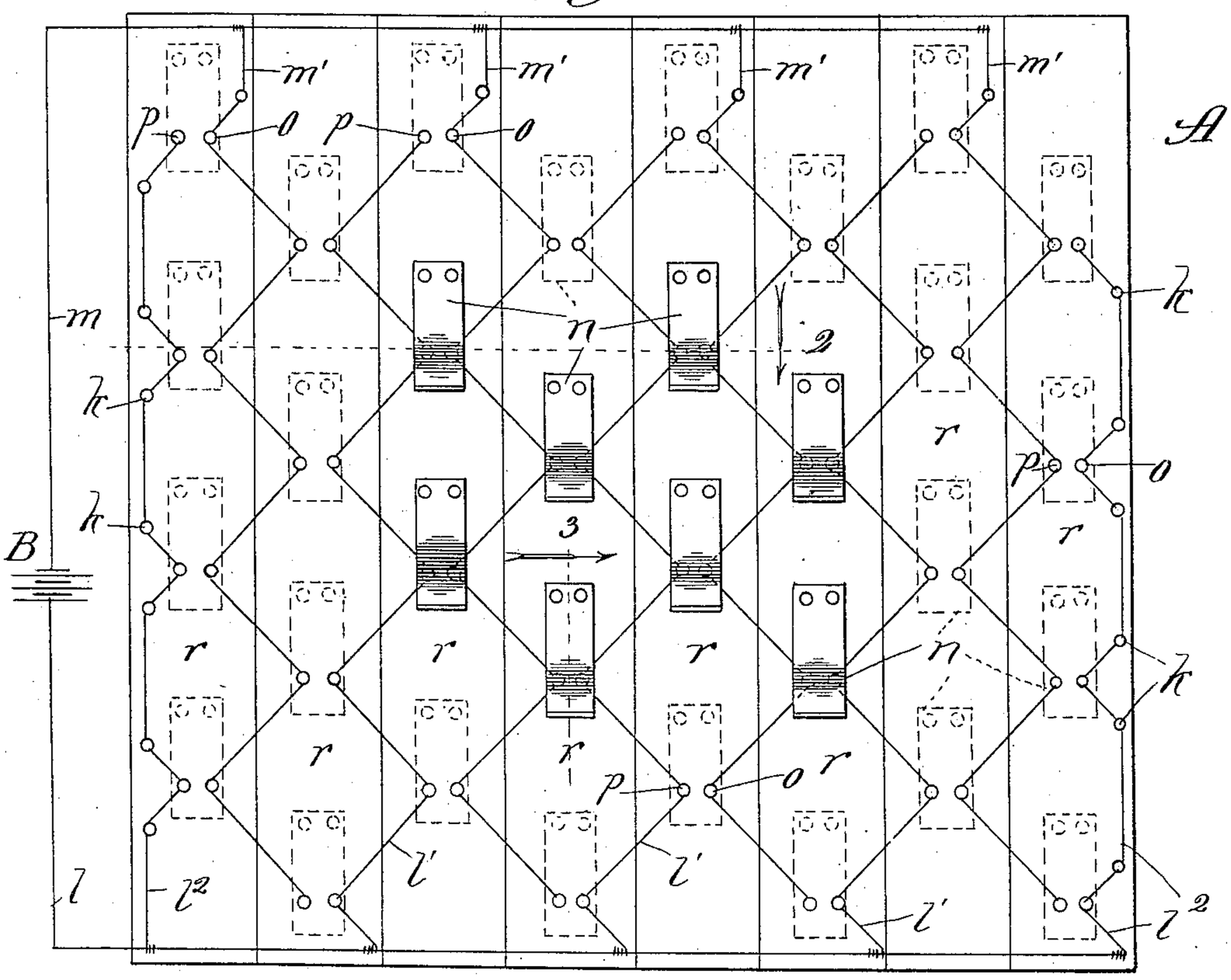


Fig. 2.

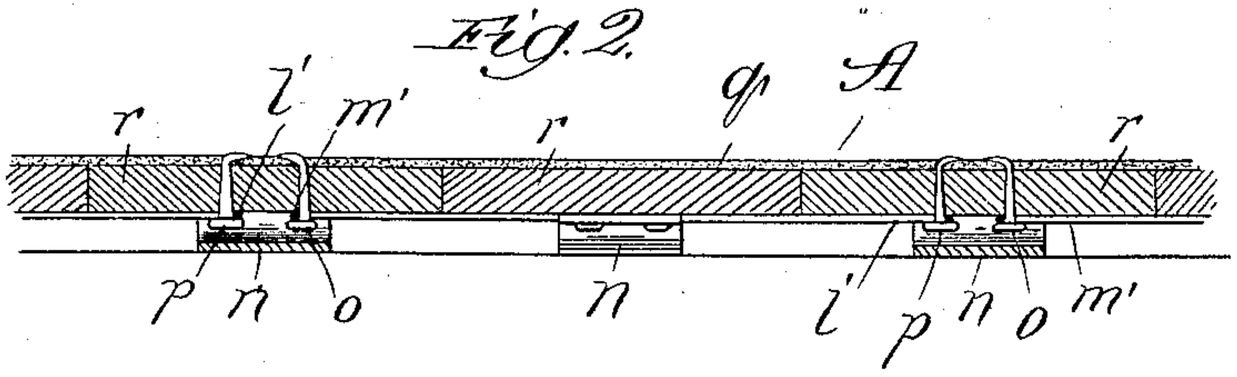


Fig. 3.

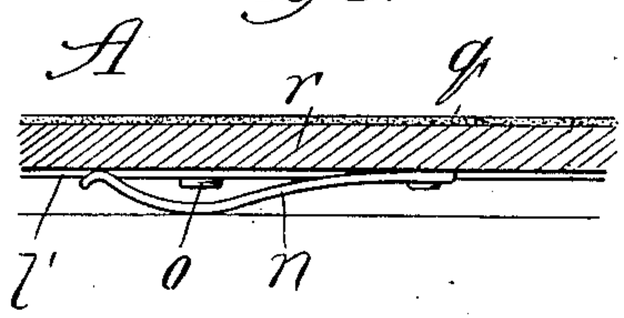
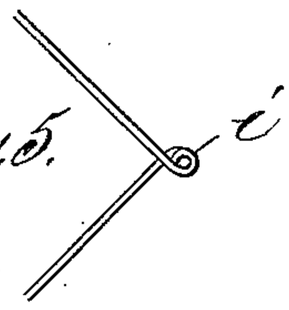


Fig. 4.

Fig. 5.



Witnesses:
Chas. E. Gaylord.
Lulu J. Miller.

Inventor:
Oliver H. Hicks.
By Dyrenforth and Dyrenforth,
Attys.

UNITED STATES PATENT OFFICE.

OLIVER H. HICKS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE HICKS-TROY ELECTRIC DOOR COMPANY, OF SAME PLACE.

ELECTRIC MAT.

SPECIFICATION forming part of Letters Patent No. 564,485, dated July 21, 1896.

Application filed November 29, 1895. Serial No. 570,486. (No model.)

To all whom it may concern:

Be it known that I, OLIVER H. HICKS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Electric Mats, of which the following is a specification.

My invention relates to an improvement in the construction of electric mats in which the springs are not themselves terminals, but afford mere bridges for connecting the terminals when pressure is exerted upon the mat.

Referring to the accompanying drawings, Figure 1 is a bottom plan view of an electric mat constructed in accordance with my improvement; Fig. 2, an enlarged section taken at the line 2 on Fig. 1 and viewed in the direction of the arrow; Fig. 3, an enlarged section taken at the line 3 on Fig. 1 and viewed in the direction of the arrow; Fig. 4, a broken view of a detail, and Fig. 5 a similar view of a modified form of the same detail.

A is a mat of any suitable general construction adapting it for use as an electric mat, the construction shown comprising slats *r r*, of wood, flexibly held together by a cover *q*, of pliable material, such as cloth. At intervals on the slats are the contacts *p* and *o*, provided in pairs, those shown being headed metal pins driven through the slats with their heads on the bottom of the mat and fastened in place by bending over the projecting pointed ends of the pins. For each pair of the contacts *r* there is provided a metal spring *n*, affording a circuit-closer, which, as shown, is like the spring-terminal usually provided in electric mats. In my improved construction, however, it is not a terminal, but is normally without the circuit, being riveted at one end in place adjacent to the pair of contacts *r* it is designed to control and extends as a spring-bridge across them to maintain them normally out of electrical connection and connect them by pressure exerted on the mat sufficient to bring the contacts and bridge together. I prefer to arrange the springs *n* and contacts in parallel rows, with the members in one row alternating with those in the next, as represented.

A generator is indicated at B in Fig. 1 in the conventional manner of representing an electric battery, though, of course, any other suitable form of electric-current generator may be employed. From one pole of the generator there leads the conducting-wire *m*, which is extended into branches *m'*. One of these branches is passed in zigzag manner about the adjacent contacts *o p* on each of the two rows thereof; and the similar branches *l'* of the wire *l*, which leads from the opposite pole of the generator, are passed in the same zigzag manner about the contacts *o p* at the opposite sides of the rows thereof, while one extreme branch *l²* of the wire *l* passes over guide-studs *k* about the rows of contacts *p* near one edge of the mat. and the other extreme branch *l²* of the same wire passes over similar guide-studs *k* about the row of contacts *o* near the opposite edge of the mat.

The manner of applying the connecting-wires to the contacts incidentally reinforces the mat structure by tying with them the slats *r* flexibly and firmly together. The wires may be merely bent about the respective contacts, as indicated in Fig. 4, or they may be looped about them, as indicated in Fig. 5, where the loop is represented at *i*.

What I claim as new, and desire to secure by Letters Patent, is—

1. In an electric mat, the slats on a covering of pliable material, contacts *p* and *o*, provided on the slats in pairs with their members normally disconnected, conducting-wires *m'*, *l'*, on which said contacts form terminals, said wires tying the slats flexibly together one to the other, and spring circuit-closers *n*, one for each pair of contacts *p*, *o*, supported on the slats to bridge said contacts and normally out of contact therewith, substantially as and for the purpose set forth.

2. In an electric mat, the contact-terminals provided in pairs with their members normally disconnected, spring circuit-closers bridging the pairs of contacts and normally out of contact therewith, and the conducting-wires passed in zigzag manner about members of the pairs of contacts in adjacent rows thereof, substantially as and for the purpose set forth.

3. In an electric mat, the contact-terminals provided in pairs with their members normally disconnected, said pairs alternating

with each other in adjacent rows thereof, spring circuit-closers bridging the pairs of terminals and normally out of contact therewith, and the conducting-wires passed in zigzag manner about the adjacent members of the pairs of contacts in adjacent rows thereof, substantially as and for the purpose set forth.

4. In an electric mat, the contact-terminals provided on covered slats in pairs with their members normally disconnected, said pairs alternating with each other in adjacent rows thereof, spring circuit-closers bridging the pairs of terminals and normally out of contact therewith, the connecting-wires m and l having branches m' and l' passed in zigzag manner about the adjacent respective members of the pairs of contacts in adjacent rows thereof, and branches l^2 of the wire l passed in like manner about guides and about the extreme contacts in the outer rows thereof, substantially as and for the purpose set forth.

OLIVER H. HICKS.

In presence of—
M. J. FROST,
J. H. LEE.