

(No Model.)

T. W. LANE.
TELEPHONE SWITCH BOARD.

No. 245,515.

Patented Aug. 9, 1881.

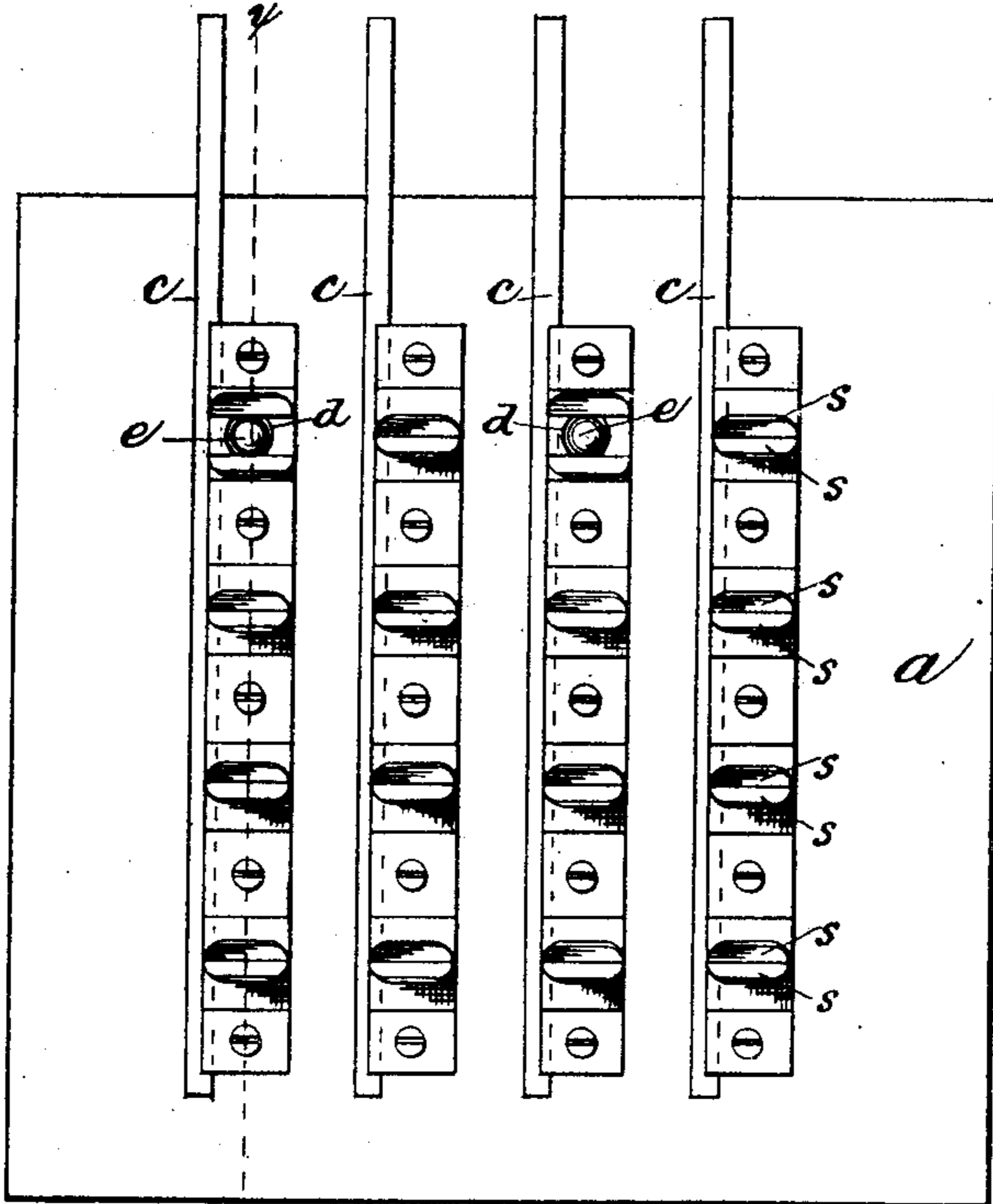


Fig. 1.

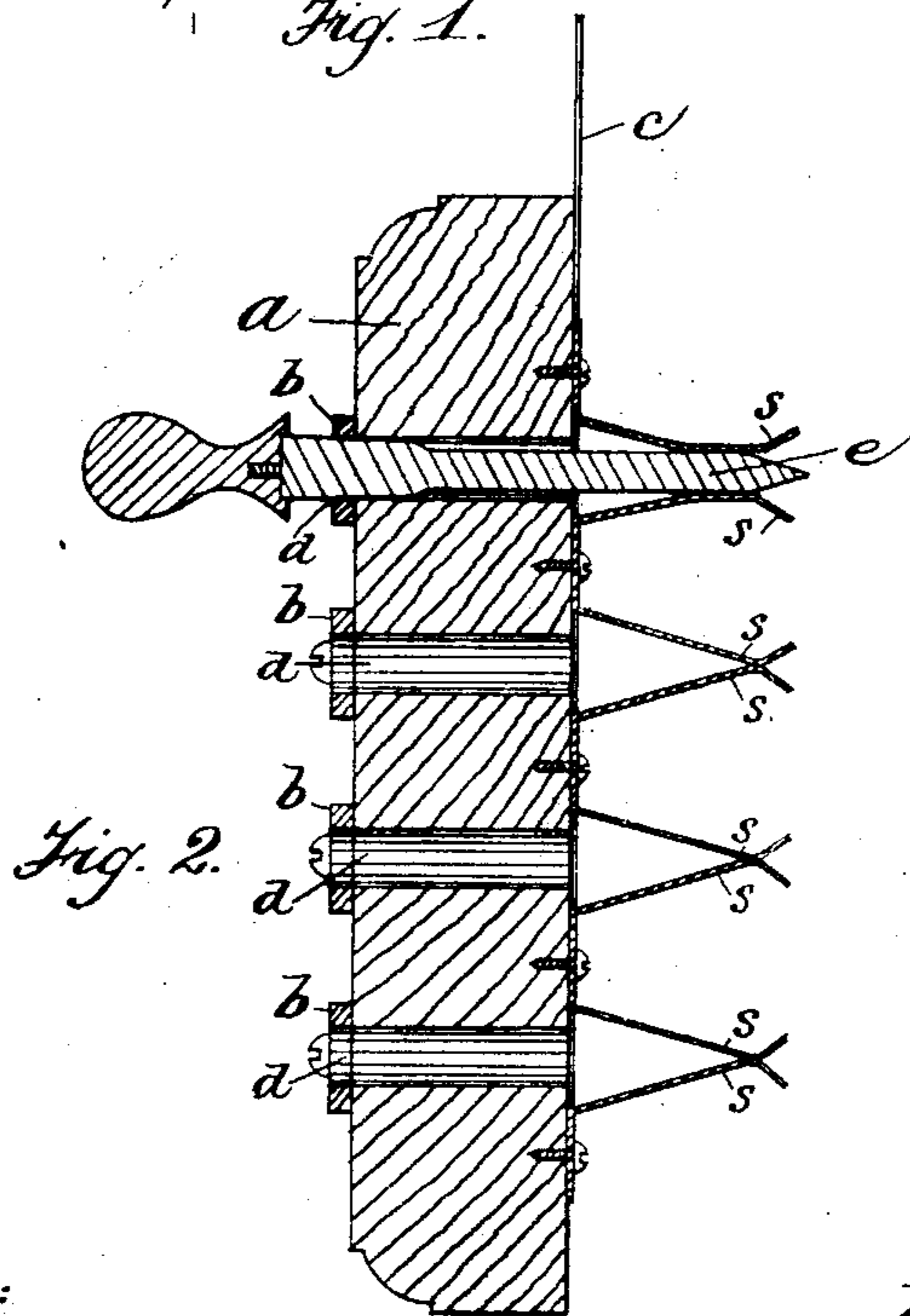


Fig. 2.

Witnesses:
H. G. Hadlin.
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UNITED STATES PATENT OFFICE.

THOMAS W. LANE, OF BOSTON, ASSIGNOR TO HIMSELF AND CHARLES WILLIAMS, JR., OF SOMERVILLE, MASSACHUSETTS.

TELEPHONE SWITCH-BOARD.

SPECIFICATION forming part of Letters Patent No. 245,515, dated August 9, 1881.

Application filed June 27, 1881. (No model.)

To all whom it may concern:

Be it known that I, THOMAS W. LANE, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain Improve-
5 ments in Telephone Switch-Boards, of which the following is a specification.

This invention relates to that class of telephone switch-boards in which the line-circuit strips are provided with springs adapted to
10 bear with a yielding pressure against plugs inserted through perforations in the insulated connecting-strips which cross the board at right angles with the line-circuit strips.

Heretofore in this class of switch-boards the
15 springs of the line-circuit strips have been so arranged that each plug receives the pressure of but one spring directed against one side of the plug.

My invention has for its object to so arrange
20 said springs that each plug shall receive the pressure of two springs bearing on opposite sides, so that a more reliable and positive contact will be maintained, and one less liable to be accidentally broken than in switch-boards
25 heretofore used.

To this end my invention consists in the arrangement of springs, which I will now proceed to describe and claim.

Of the accompanying drawings, forming part
30 of this specification, Figure 1 represents a view of the back side of a switch-board embodying my invention. Fig. 2 represents a section on line *x x*, Fig. 1.

The same letters indicate the same parts in
35 all the figures.

In the drawings, *a* represents a switch-board, having on its front side the parallel connecting-strips *b b*, and on its opposite side the line-circuit strips *c c*, arranged substantially at
40 right angles with the line-circuit strips *b*.

d d are perforations in the connecting-strips *b*, extending also through the board, and adapted to receive movable plugs *e*.

s s represent contact-springs attached to the
45 back of the switch-board *a*, arranged in pairs, and connected with the line-circuit strips *c*, as shown, the springs of each pair being connected with the same line-circuit strip. The springs of each pair are arranged to normally

bear against each other at their outer ends, 50 and to coincide with the perforations *d*, so that a plug, *e*, inserted in either of the perforations will also be inserted between the springs of one of the pairs, and displace said springs in opposite directions. The springs will therefore 55 press against opposite sides of the plug, and each will neutralize the tendency of the other to push the plug toward one side. It will be observed that the springs thus arranged insure an effectual connection between the line- 60 circuit and the connecting-strip through the medium of the plugs, the latter being so supported by the springs that they cannot readily be displaced. In case either spring of a pair becomes broken, the other spring, being con- 65 nected to the same line-circuit strip, maintains the desired connection.

I prefer to connect each spring with the adjacent spring of the next pair by forming the two springs from a single piece of metal, as 70 shown, or otherwise, so that all the springs of each line-circuit strip will be connected independently of the line-circuit strip. The line-circuit strips are normally connected to a ground-strip, as usual, and the operation of 75 connecting any two of the line-circuits is performed in the usual manner.

Having thus described my invention, I claim—

In a switch-board having line-circuit strips, 80 connecting-strips, and perforations extending through said strips and the board, for the connecting-plugs, all arranged as described, the contact-springs *s s*, connected with the line-circuit strips, and arranged in pairs, each pair 85 coinciding with one of said perforations, and adapted to grasp a plug inserted therein, the springs of each pair pressing against opposite sides of the plug, as set forth.

In testimony whereof I have signed my 90 name to this specification, in the presence of two subscribing witnesses, this 23d day of June, A. D. 1881.

THOMAS W. LANE.

Witnesses:

C. F. BROWN,
H. G. WADLIN.