

O. F. FORSBERG.  
 TERMINAL BANK,  
 APPLICATION FILED MAR. 29, 1916.

1,298,321.

Patented Mar. 25, 1919.

Fig. 1.

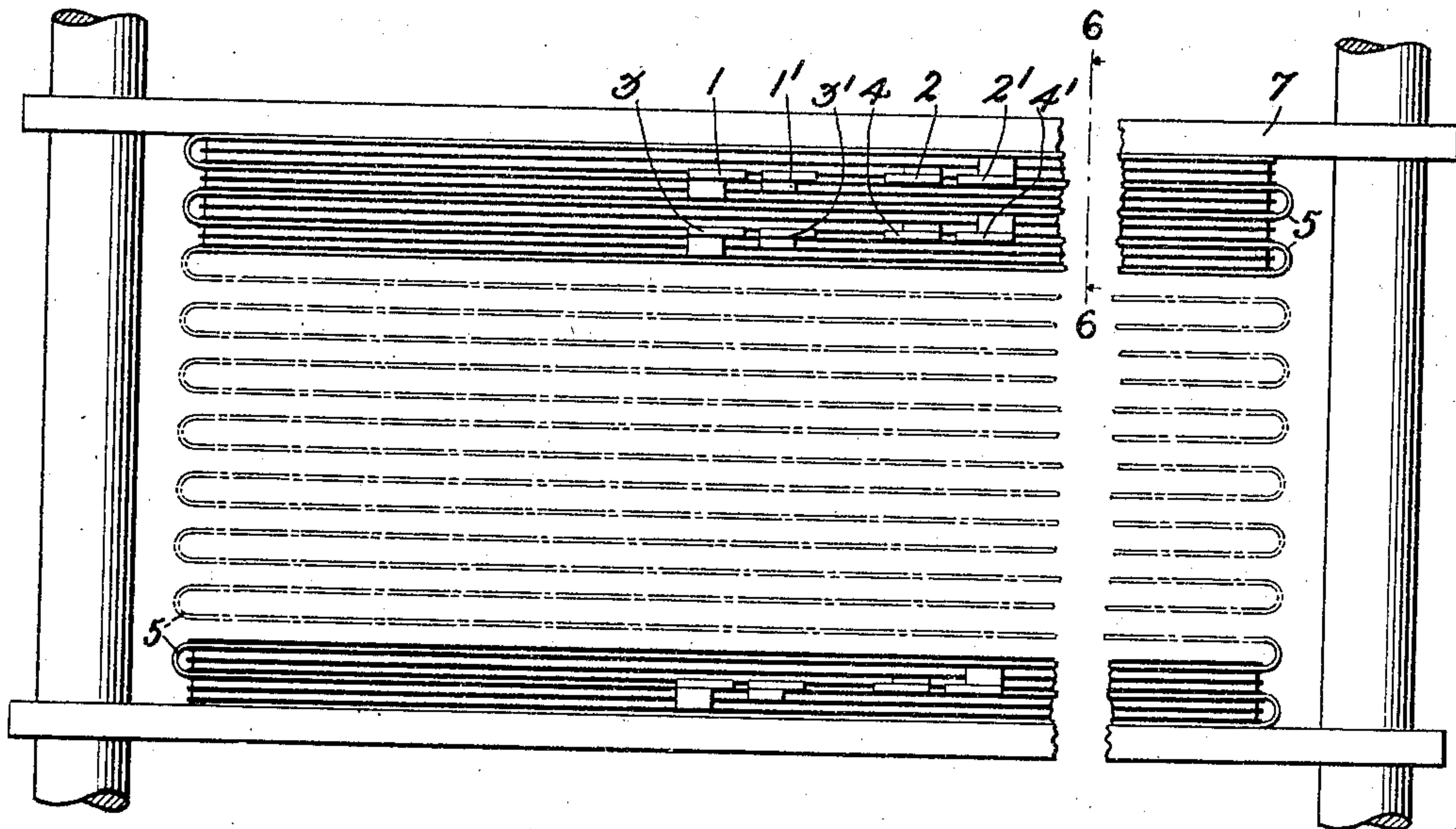
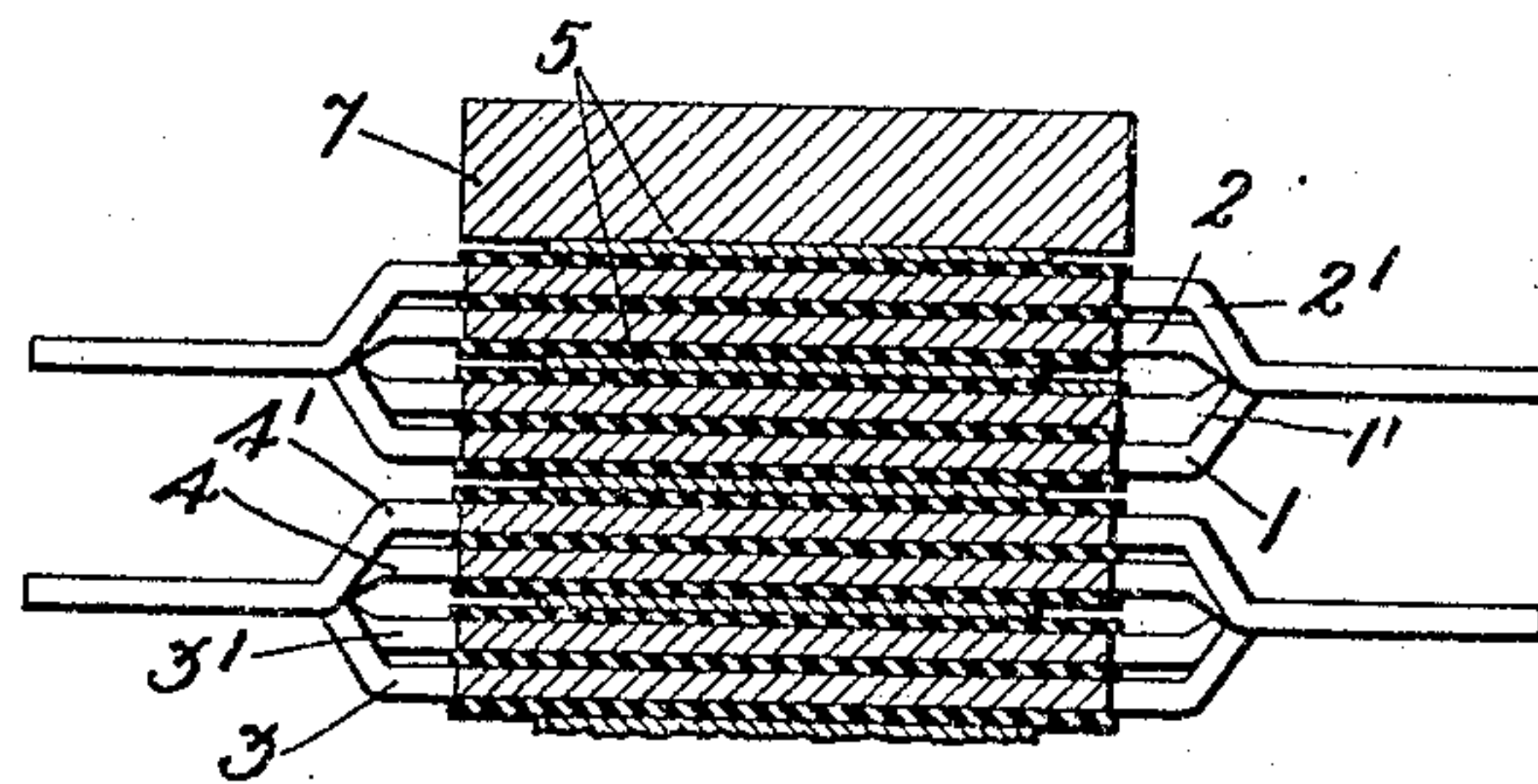


Fig. 2.



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 by *J. T. Johnson*, Atty



# UNITED STATES PATENT OFFICE.

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## TERMINAL BANK.

1,298,321.

Specification of Letters Patent.

Patented Mar. 25, 1919.

Application filed March 29, 1916. Serial No. 87,581.

*To all whom it may concern:*

Be it known that I, OSCAR FERDINAND FORSBERG, a citizen of the United States, residing at Yonkers, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Terminal Banks, of which the following is a full, clear, concise, and exact description.

This invention relates to contact banks for use with automatic switches and more particularly to contact banks of the well-known panel type.

The object of the present invention is to provide a simple and effective means for preventing cross-talk between adjacent groups of terminal sets, such means consisting of a single flexible conducting strip capable of carrying the induced currents off to ground.

The construction of terminal banks of the panel type is shown in a patent to A. F. Dixon, No. 1,127,741. Each line terminating in this bank has a group of three strips, of which the third or test strip acts as a shield against crosstalk. In a system in which each line terminates in the bank in only two strips, some special means must be provided for preventing crosstalk. If a metal ribbon having a connection to ground is placed between each group of strips and the adjacent groups, the currents induced by the talking current flowing in any line will be led off to ground and crosstalk will be eliminated.

The invention as shown in the accompanying drawings illustrates its use in connection with a panel switch such as is described in a patent to H. F. Dobbin, No. 1,172,585, issued February 22, 1916. It may obviously be used with other forms of panel contact banks and is therefore not restricted to use with a terminal bank of the particular structure shown here.

The invention will be better understood from the following description, reference being made to the accompanying drawings, of which Figure 1 is a side elevation of a terminal bank and Fig. 2 is a sectional view of the same on the line 6—6 of Fig. 1.

In Fig. 1 is shown a section of bank containing the terminals of twenty lines, the terminal sets of each pair of lines lying in the same horizontal plane, as set forth in the above mentioned Dobbin patent. In the arrangement as shown, 1—1' and 2—2' des-

ignate the terminal contacts of one pair of lines, while 3—3' and 4—4' constitute the terminals of a second pair, etc. A flexible strip 5, made of conducting material, is inserted between a supporting member 7 and the multiple strip, one of whose contacts is shown at 2', being separated from strip 2' by suitable insulating material. It extends horizontally the width of the section and is there bent back on itself so as to lie between multiple strips 1' and 2, being, however, again suitably insulated from each. This position of the strip or shield 5 with respect to the multiple strip may be more clearly seen by referring to Fig. 2. On arriving at the right-hand extremity of the section, it is again bent back on itself and is run between multiple strips 1 and 4'. This process of lacing in the shield is continued throughout the bank, each pair of multiple strips being guarded from the pairs of multiple strips adjacent to it. The shield must be connected to ground at any convenient point. In a preferred form of the invention, the flexible strip is made of metallized paper. This paper may be prepared in any well-known manner, one way being merely to paint the paper with a metallic paint.

What is claimed is:

1. In a terminal bank, superimposed strips of metal separated from one another by insulation, integral contact portions projecting from said metal strips, groups of said strips constituting the terminals of lines, and means for preventing crosstalk between such groups of strips, said means consisting of a strip continuously woven between adjacent groups of strips.

2. In a terminal bank, superimposed strips of metal separated from one another by insulation, integral contact portions projecting from said metal strips, pairs of said strips comprising the multiple terminal sets of lines, and a flexible strip continuously woven between said pairs of strips for the purpose of eliminating crosstalk.

3. In a terminal bank, superimposed metal strips separated from one another by insulating material, integral contact portions projecting from said metal strips, pairs of said strips comprising the terminal sets of lines, the contact portions of a terminal set being offset so as to lie in the same plane, terminal sets arranged in pairs, the contact portions of a pair of sets being offset so as



to lie in the same plane, and a flexible strip woven continuously between said pairs of strips for the purpose of eliminating cross-talk.

- 5 4. In a terminal bank, superimposed strips of metal separated from one another by insulation, integral contact portions projecting from said metal strips, groups of said strips constituting the terminals of lines, and  
10 means for preventing cross-talk between such groups of strips, said means consisting of a strip of metallized paper positioned successively between adjacent groups of strips.

5. In a terminal bank, superimposed strips of metal separated from one another by insulation, integral contact portions projecting from said metal strips, groups of said strips constituting the terminals of lines, and means for preventing cross-talk between such groups of strips, said means consisting of a strip of conducting material continuously woven between adjacent groups of strips. 15 20

In witness whereof I hereunto subscribe my name this 28th day of March, A. D. 1916. 25  
OSCAR F. FORSBERG.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."