

(No Model.)

J. L. FULKERSON.  
ELECTRIC PIANO.

No. 589,347.

Patented Aug. 31, 1897.

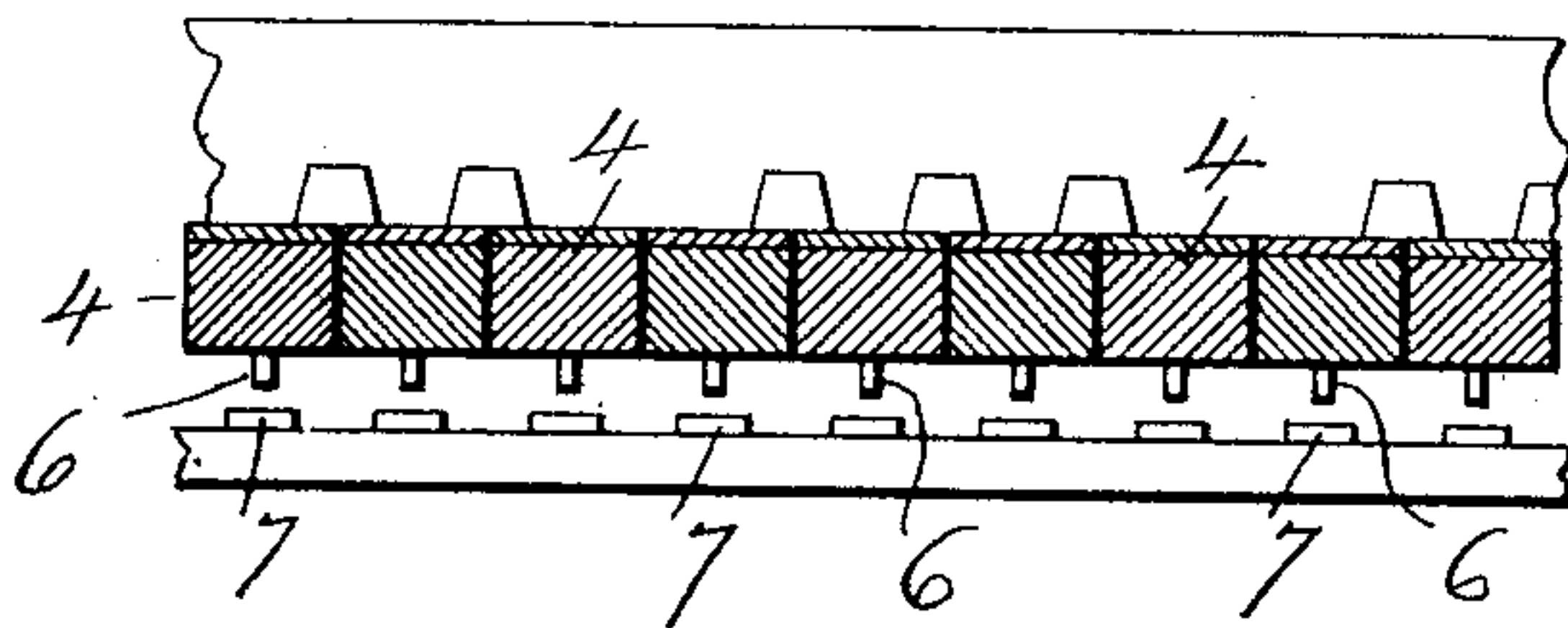
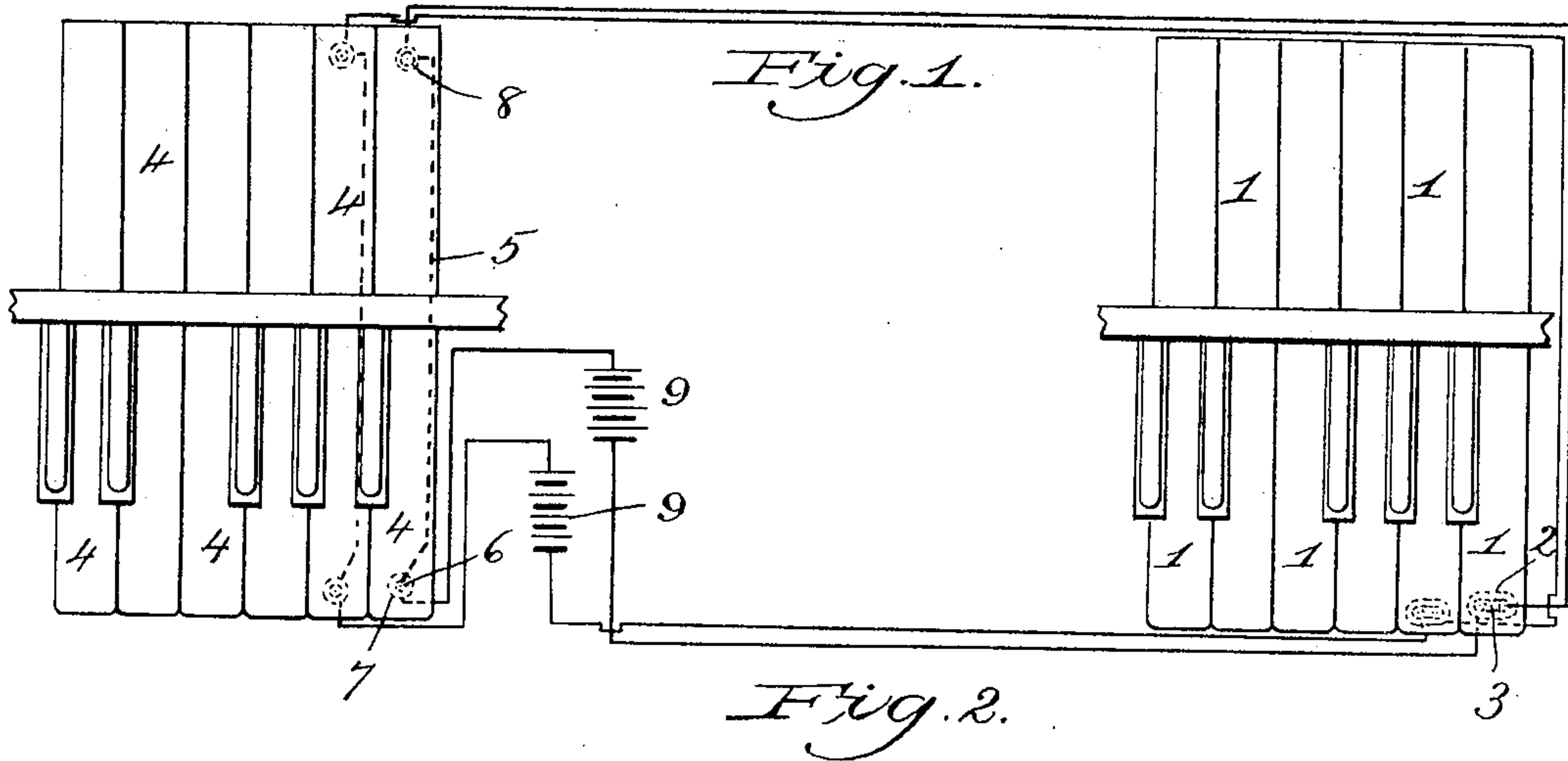


Fig. 3.

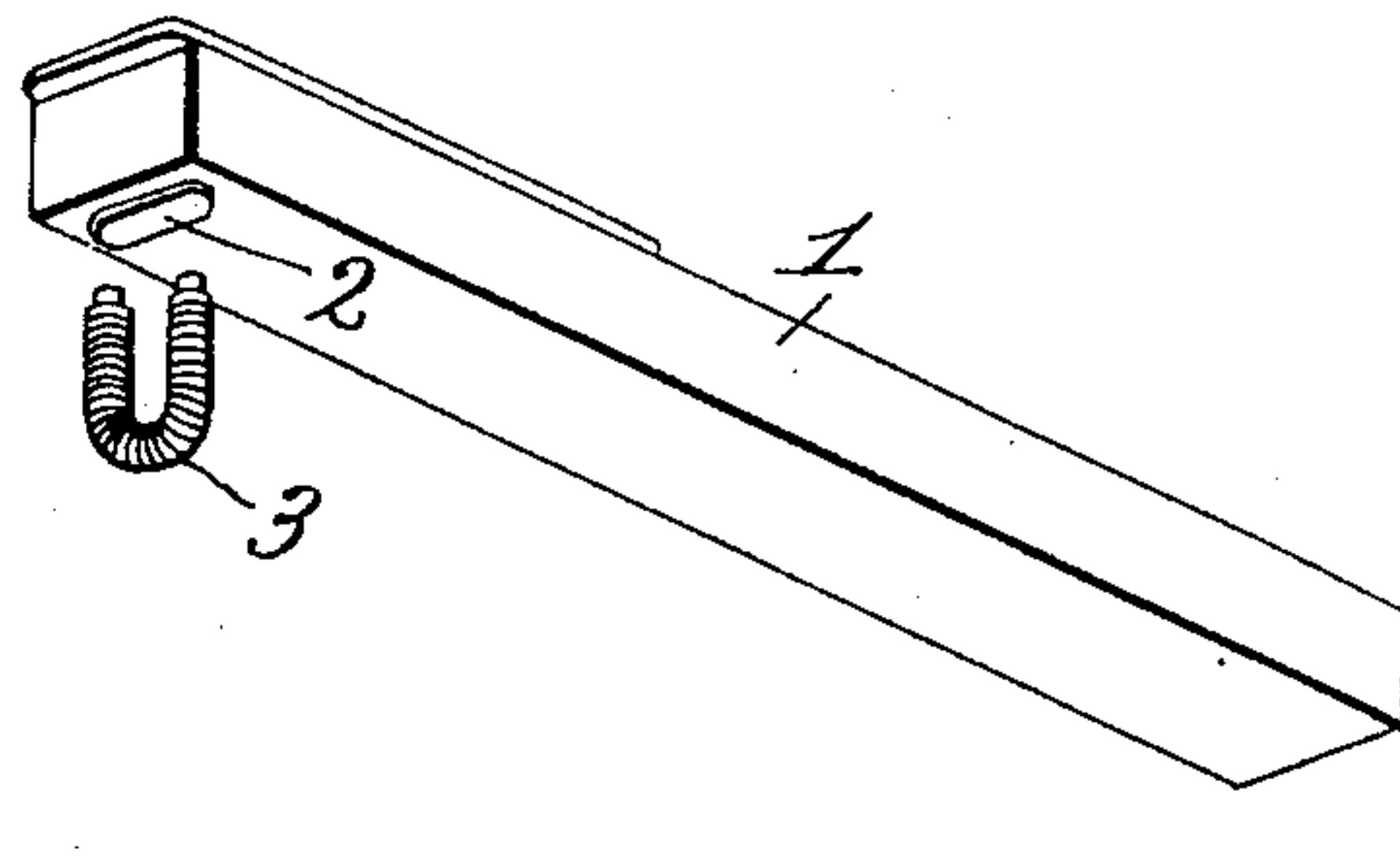


Fig. 4.

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# UNITED STATES PATENT OFFICE.

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## ELECTRIC PIANO.

SPECIFICATION forming part of Letters Patent No. 589,347, dated August 31, 1897.

Application filed December 4, 1896. Serial No. 614,476. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES L. FULKERSON, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Electric Pianos; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to electrical pianos, and has for its object to provide means whereby a piano may be operated from any desired point and at any desired distance.

To this end the invention consists in certain novel features, details of construction, and arrangements of parts, as hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a diagrammatic plan view showing a portion of the keys of the transmitting and receiving pianos, showing also the electrical connection and manner of establishing the circuit between the two keyboards. Fig. 2 is a detail section, through the keyboard, of the transmitting-piano, showing the manner of completing the electrical circuit by depressing the keys. Fig. 3 is a detail perspective view of one of the transmitting-keys. Fig. 4 is a detail perspective view of one of the receiving-keys, showing also the magnet for attracting the same.

Similar numerals designate corresponding parts in the several figures of the drawings.

For the purpose of carrying out the present invention each of the keys 1 of the receiving-piano is provided at its outer end and upon its under side with an armature 2, secured thereto in any convenient manner. Located between each key and immediately under its respective armature 2 is an electromagnet 3, which is mounted in such manner as to be capable of vertical adjustment, so that it can be moved in the desired proximity to the key.

Each of the keys 4 of the transmitting-piano is provided with an insulated wire 5, extending longitudinally thereof and connected at the front end of the key with a platinum point 6, which projects from the under side of the key, so as to contact with a button 7 on the keyboard when the key is de-

pressed. The wire 5 at its other end is electrically connected to a platinum spring 8, which serves to normally depress the inner end of the key and elevate the outer end thereof.

From the spring 8 of one key a wire extends to the magnet under the corresponding key of the receiving-piano. The upper terminal of this wire after leaving the magnet connects with the battery 9, and from the other pole of the battery a wire extends to the button 7 of the first-named key on the transmitting-piano. The battery is preferably located in the transmitting-piano.

It will be understood that the several keys of the transmitting-piano have electrical connection through the battery with the corresponding keys of the receiving-piano.

The particular manner of connecting up the several keys of the two pianos is clearly illustrated in Fig. 1, where it will be seen a separate battery, which may be very small, is employed for each circuit, so that the depression of one key so as to complete the circuit will not interfere with or affect any of the other keys.

The apparatus above described is very simple, may be applied at small expense, and any number of receiving-pianos may be connected in the same circuit, one transmitting-piano being adapted to operate all of the receiving instruments simultaneously.

The principle above described is also applicable to organs, melodions, and other musical instruments.

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

1. In an electrically-operated piano, a transmitting-key provided with a wire extending longitudinally thereof, a contact-point at the front end of the key extending downward, a contact-plate arranged beneath said contact-point, and a spring arranged at the rear end of the key and electrically connecting the longitudinal wire of the key and the circuit-wire, whereby the circuit is normally broken but adapted to be completed when the key is depressed, substantially as described.

2. In an electrically-operated piano, a pivoted key provided with a longitudinal slot, a



wire extending within said slot, a contact-  
point arranged at the front end of the key and  
connected to said wire, a platinum spring at  
the opposite end of the key having connection  
5 with said wire and maintained in electrical  
contact with the circuit-wire, and a contact-  
plate arranged under the front end of the key,  
substantially as described.

In testimony whereof I have signed this  
specification in the presence of two subscrib- 10  
ing witnesses.

JAMES I. FULKERSON.

Witnesses:

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