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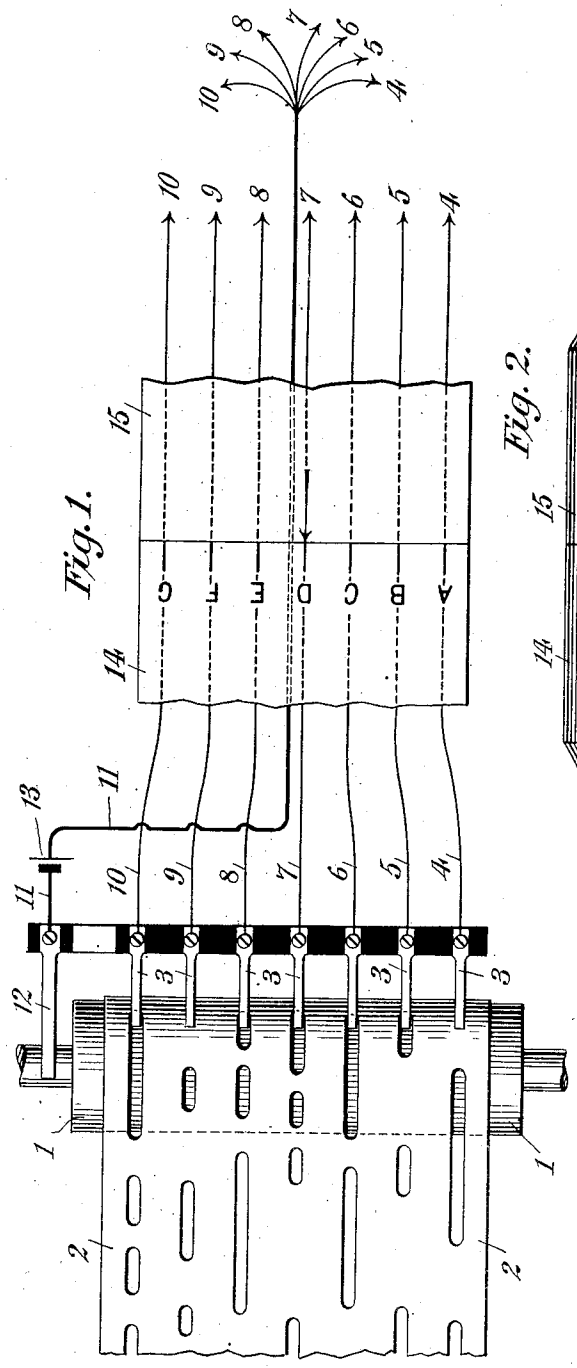
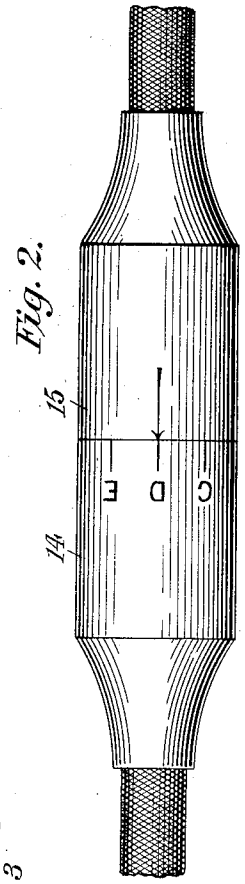
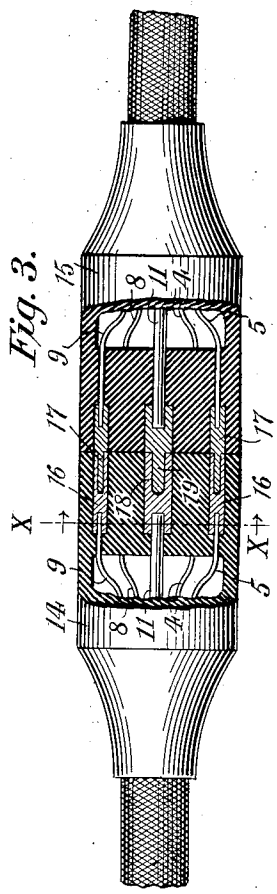
T. W. KLOMAN.

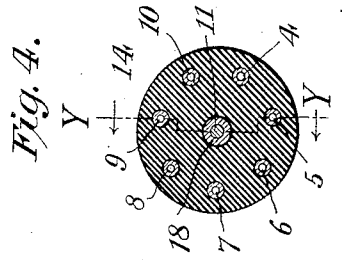
TRANSPOSER FOR MUSICAL INSTRUMENTS.

APPLICATION FILED MAR. 22, 1905.









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TRANSPOSER FOR MUSICAL INSTRUMENTS.

No. 810,949. Specification of Letters Patent. Patented Jan. 30, 1906.

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To all whom it may concern:

Be it known that I, THEODORE W. KLOMAN, a citizen of the United States, residing in New York, borough of Brooklyn, county of Kings, and State of New York, have made a new and useful Invention in Transposers for Musical Instruments, of which the following is a specification.

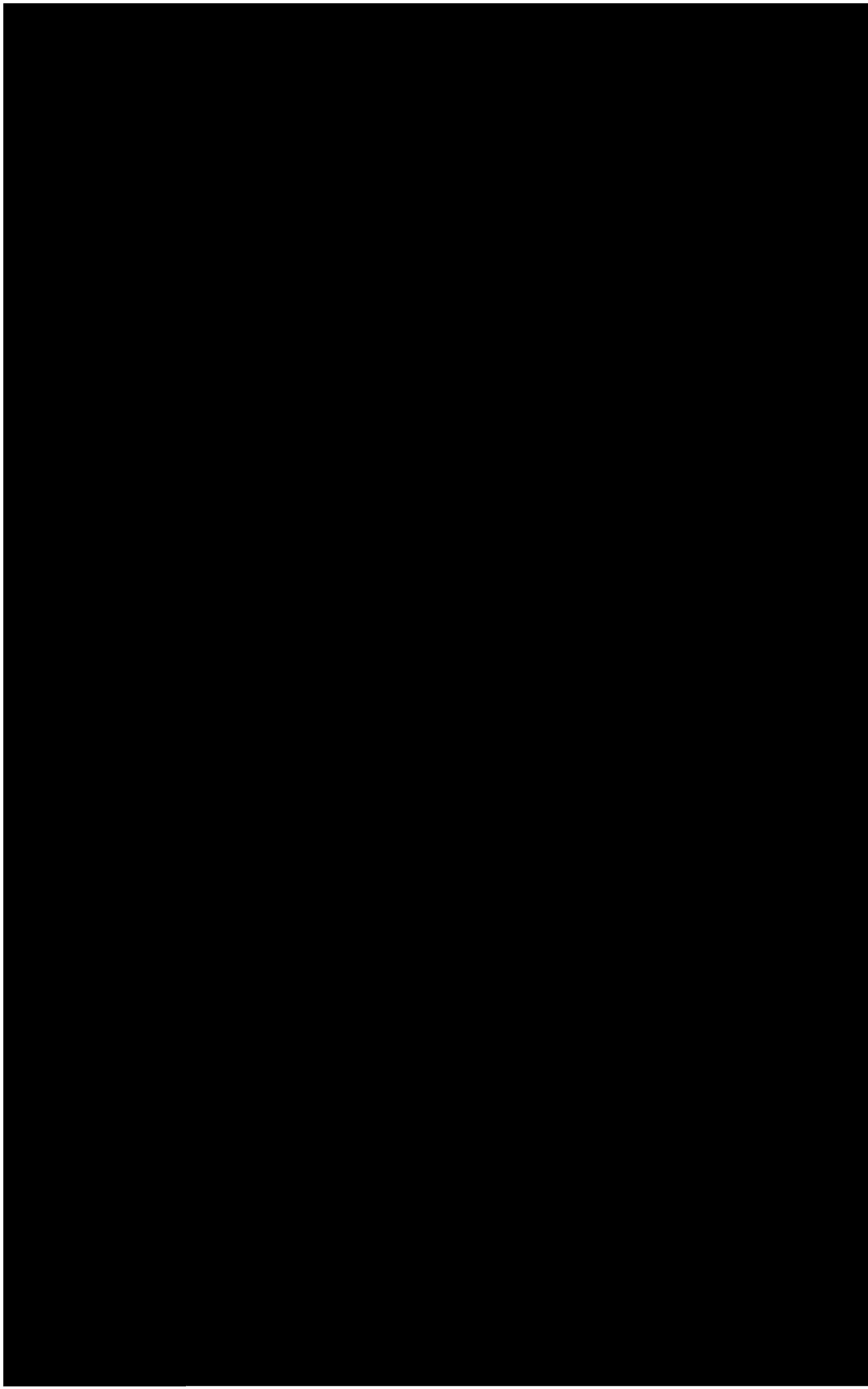
My invention is directed particularly to means in the nature of double sets of electrical conductors provided with interconnecting ends symmetrically disposed for effecting a change of the pitch or tone of an electrically-operated or electrically-controlled instrument—such as a piano, organ, or the like—whereby any piece of music may be played upon said instrument in any desired key; and it has for its objects, first, the bringing about of this result by simply shifting the electrical connections of the conductors which convey the current to and through the electromagnets which operate or control the individual parts of the musical instrument in either direction and to such an extent as to cause a piece of music prepared for transmission to be played in any desired key, the limitation of such key-changers being dependent upon the number of individual keys in the instrument itself; second, to effect this result in the simplest possible manner and without materially varying the conditions of such conductors as are now used in connection with types of electrically operated or controlled music-playing instruments, such as pianos, organs, &c.

My invention will be fully understood by referring to the accompanying drawings, in which—

Figure 1 is a part plan, part diagrammatic, part developed view illustrating its application and use, the musical instrument to be operated or controlled, however, not being shown. Fig. 2 is a side elevational view of the exterior of my improved means with which the results referred to are effected; and Fig. 3 is a similar view illustrating also in broken sectional view, the essential connecting parts of the device, said sectional view being taken on the broken line Y Y, Fig. 4, and as seen looking thereat from right to left in the direction of the arrows.

In existing types of electrically-operated or controlled pianos, organs, or the like it is customary to connect the electrical transmitting or controlling part of the apparatus, usually in the nature of a rotating conducting-drum and perforated insulated music-sheet, by a series of electrical conductors with a series of electromagnets having their armatures operatively connected to the keys of a piano when the instrument is a piano or with the valves which control the movement of the air to the pipes or reeds when the instrument is an organ, said conductors being bound up or confined together in cable form and interconnected at some intermediate point by a series of plug-switch connections, the arrangement being such that the transmitter part of the instrument may be separated from the music-playing part.

My invention embraces novel means for effecting connection between the two sets of said electrical conductors and in such manner that the adjoining ends thereof have the same relative positions, so that they may be shifted by rotating them in either direction through a complete circle, a common return-conductor being provided and having interconnecting means centrally located with relation to the aforesaid electrical conductors such that the connections may be effected in any of the entire series of positions.

Referring now to the drawings in detail and first to Fig. 1, I will describe my improvement and the method of using the same. 1 represents a drum of conducting material, upon which rests a non-conducting perforated music-sheet of well-known form, 3 3 3 being conducting-fingers sustained by an insulating-bar and electrically connected by conductors 4, 5, 6, 7, 8, 9, and 10, running to operating or controlling electromagnets of the instrument to be actuated, 11 being a common return-circuit conductor connected to a conducting contact-finger 12, resting upon the conducting-axle of the drum, and 13 is an operating-battery.

The parts so far described are of well-known construction and are only shown here for the purpose of illustrating the simplest application of my improvement, which will now be described. The insulated conductors 4 to 10, inclusive, are inclosed in a two-part cable provided with hard rubber or other non-conducting sleeves 14 15, and their adjoining ends are secured, respectively, to male and female parts 17 16, symmetrically or circularly disposed and firmly secured in