

(No Model.)

H. C. REICHARDT.

TRACKER FOR MECHANICAL MUSICAL INSTRUMENTS.

No. 544,322.

Patented Aug. 13, 1895.

Fig. 1.

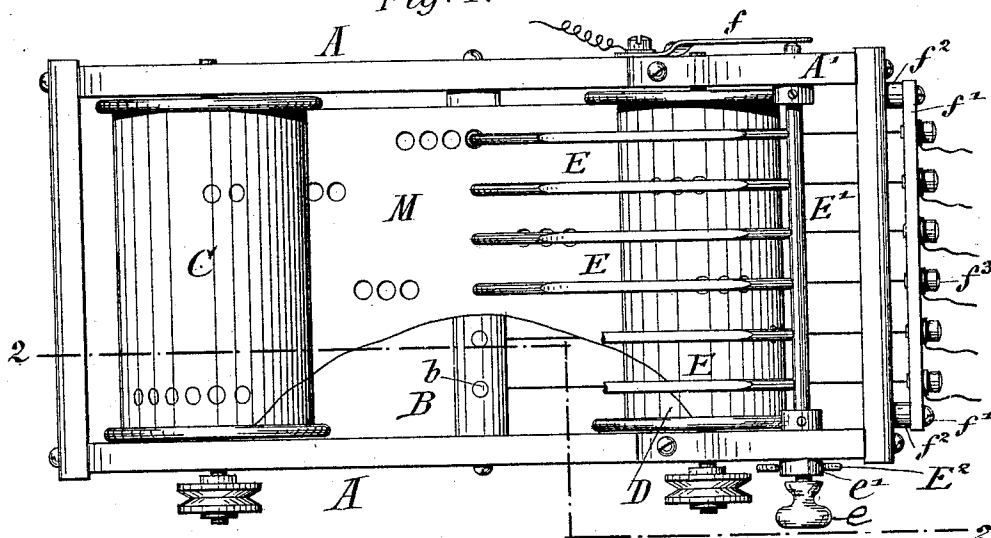


Fig. 2.

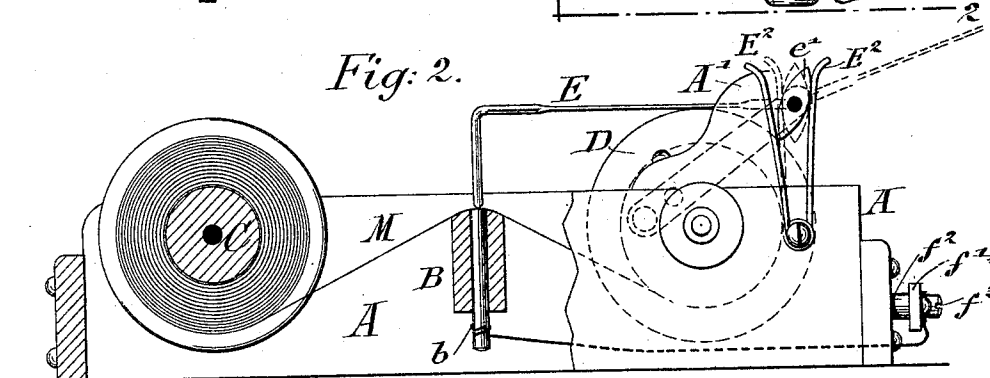
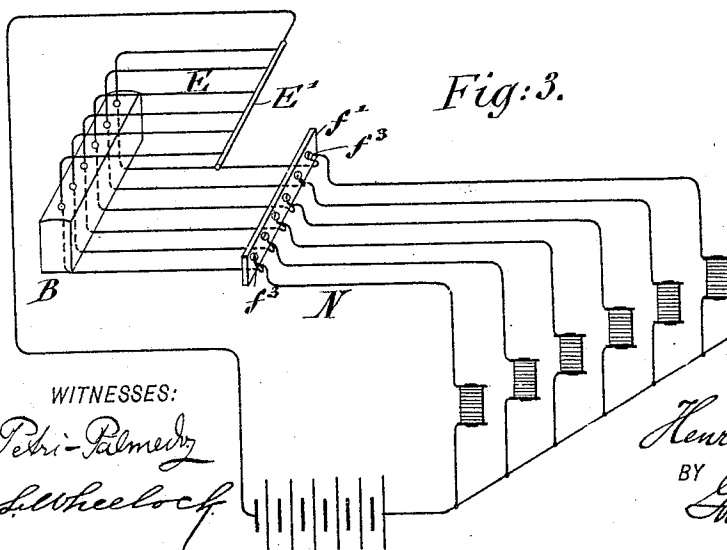


Fig. 3.



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TRACKER FOR MECHANICAL MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 544,322, dated August 13, 1895.

Application filed December 18, 1894. Serial No. 532,187. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. REICHARDT, a citizen of the United States, residing at Pottsville, in the county of Schuylkill and State of Pennsylvania, have invented certain new and useful Improvements in Trackers for Mechanical Musical Instruments, of which the following is a specification.

The object of this invention is to furnish an improved tracker for mechanical musical instruments, in which, in place of the pneumatically-operated actions, the different valve mechanisms are operated by electrical means by the passage of the perforated music-sheet across the tracker, so that for some purposes a more effective operation of the actuating mechanism is obtained, whereby the electrically-operated tracker is adapted especially for operating such parts of orchestrions which require either a greater motive power or which are located at a greater distance from the tracker, where they could be reached pneumatically only with certain difficulties.

The invention consists of an electric tracker for mechanical musical instruments, which comprises a tracker for the perforated music-sheet, provided with metallic pins, metallic fingers, corresponding to the number of pins in the tracker and resting on the same, said fingers having rounded-off ends, so that the music-sheet can readily pass the same, means for lowering said fingers, and means for supplying current to said fingers and through the metallic pins to suitable electromagnets, by which the various actions are operated, as will be fully described hereinafter, and finally pointed out in the claims.

In the accompanying drawings, Figure 1 represents a plan view of my improved electric tracker for mechanical musical instruments. Fig. 2 is a side elevation, partly in vertical longitudinal section, on line 2 2, Fig. 1; and Fig. 3 is a perspective view of a diagram, showing the connection of the tracker with the electromagnets and the current supplied from the battery.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents the supporting-frame, and B the tracker, which extends transversely in said frame and

is rigidly supported on the same. At one end of the frame A is arranged a roller C, on which the perforated music-sheet M is wound up, and a roller D is arranged at the opposite end of the frame A, which serves to wind up the perforated music-sheet, said rollers C D receiving rotary motion by means of suitable pulley and belt transmissions. The music-sheet M passes from the roller C over the upper rounded-off end of the tracker B to the roller D. The tracker is provided with a number of metallic pins *b*, which extend vertically through the same, and which are electrically connected at their lower ends with a suitable battery-circuit N. On the pins *b* rest a corresponding number of fingers E, the ends of which are rounded off, so that the music-sheet passes readily between the upper rounded-off ends of the fingers E.

The fingers are made angular, the horizontal portions of the same being made thinner and flat, so as to have a certain spring action, which permits the ready passage of the perforated music-sheet. The shanks of the fingers E are attached to a transverse rod E', which is supported in bearings of brackets A', extending in upward direction from the supporting-frame A.

To one end of the transverse rod E' is applied a button *e* for turning the same and adjacent to the button a flattened cam *e'*, which is arranged between and engaged by upwardly-extending wire contact-springs E², that exert a certain spring action on the cam *e'*, so as to hold thereby the fingers E in contact with the upper ends of the metallic pins *b* of the tracker.

When it is desired to throw the tracker out of operation, the button *e* and transverse rod E' are turned until the fingers are over toward the outside of the supporting-frame A, as indicated in dotted lines in Fig. 2, in which case the cam is likewise turned on its axis and again retained by springs E². In this position the ends of the pins can be readily cleared of any adhering corrosion and any needed repairs made, and also the music-sheet readily removed with the rollers from the supporting-frame and a new one placed in the same.

To the opposite end of the transverse rod E' is connected a metallic contact-spring *f*,

which is electrically connected with one pole of the battery from which the current is supplied. The lower ends of the tracker-pins *b* are likewise electrically connected with a bar *f'*, that is supported by insulating-studs *f*² at the rear part of the supporting-frame A, the bar *f'* being provided with as many binding-posts *f*³ as there are tracker-pins, these being connected with the electromagnets by which the various actions are operated, as shown in Fig. 3.

When the music-sheet M is in position for being operated and the fingers E placed in contact with the same, a metallic contact takes place between the metallic tracker-pins and the fingers whenever a perforation in the music-sheet passes over a tracker-pin. As long as the metallic contact between the tracker-pins and the fingers is made so long is the circuit closed and the armature of the electromagnet attracted, so that the reeds or other instrumentalities can be operated.

As before stated, the electric tracker permits the easy working of such instruments as are arranged at a great distance from the music-sheet, and is especially useful when made a part of a pneumatic tracker, as thereby the advantages of both systems can be readily combined, the pneumatic action being used for operating the reeds, while the electric action is used when it is desired to call into action such instruments as require greater mechanical power in their operation.

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

1. An electric tracker for mechanical musical-instruments, comprising a tracker provided with a number of metallic tracker-pins passing through the same, metallic fingers each forming contact with one end of each of

said tracker-pins, a perforated music-sheet passing across the tracker, and electric connections between the tracker-pins and fingers, for actuating the operating parts, substantially as set forth.

2. An electric tracker for mechanical musical instruments, consisting of a tracker provided with a number of metallic pins, a music-sheet passing across said tracker, means for moving said music-sheet across the same, metallic fingers forming contact with the tracker-pins, means for moving all the fingers simultaneously in outward direction so as to give access to the music-sheet, and electric connections between the tracker-pins and fingers, so as to produce the operation of the actuating-mechanisms, substantially as set forth.

3. The combination of a tracker provided with a number of metallic tracker-pins passing through the same, a perforated music-sheet passing across said tracker, means for moving said music-sheet across the same, metallic fingers forming contact with the tracker-pins, a transverse supporting-bar to which said contact fingers are attached, means for turning the finger-supporting bar so as to remove the fingers and return the same into position, a contact-plate applied to the finger-supporting bar, a transverse metallic bar electrically connected with the tracker-pins, and electric connections between said contact fingers and the transverse metallic bar, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

HENRY C. REICHARDT.

Witnesses:

BAIRD SNYDER,
FRANK LITTLE.