

M. F. HOLDERMAN.
 UNIVERSALLY MOVABLE TRACKER BOARD.
 APPLICATION FILED MAY 18, 1909.

957,676.

Patented May 10, 1910.

Fig. 1.

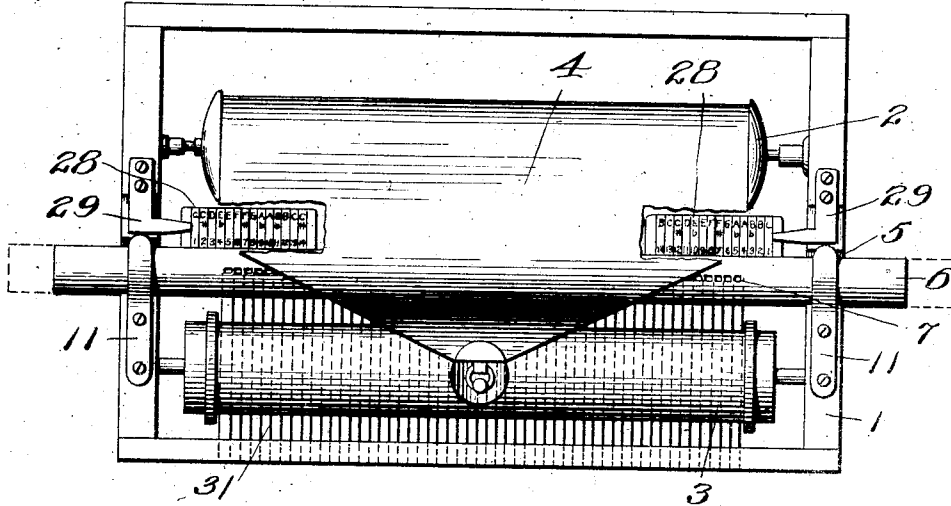


Fig. 2.

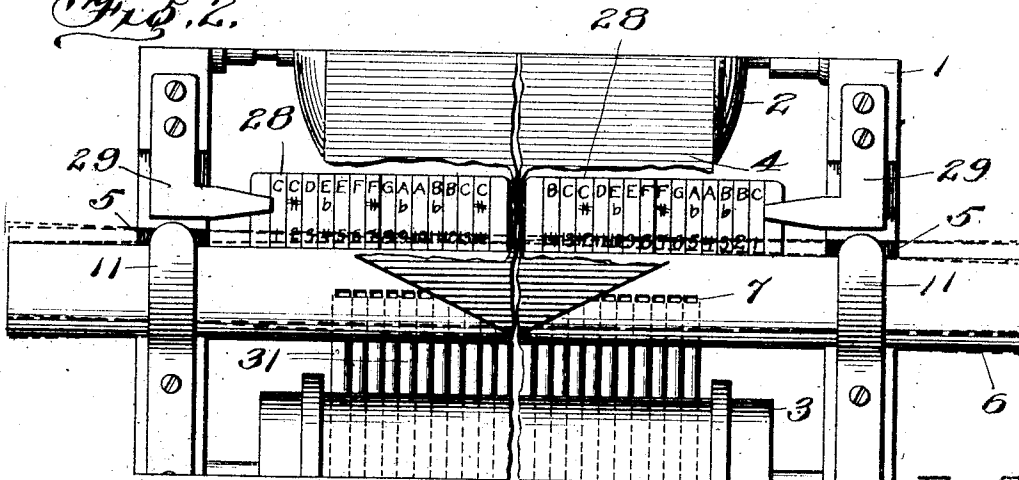


Fig. 4.

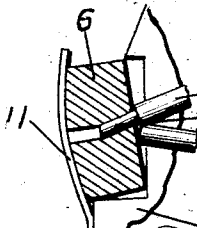


Fig. 3.

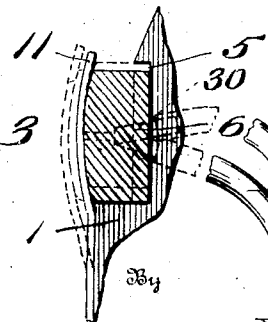
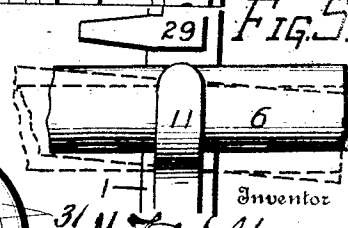


Fig. 5.



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UNITED STATES PATENT OFFICE.

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UNIVERSALLY-MOVABLE TRACKER-BOARD.

957,676.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, MARION F. HOLDERMAN, a citizen of the United States, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Universally-Movable Tracker-Boards; 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in trackerboards for mechanical musical players and for various other instruments and comprises essentially a trackerboard so arranged as to have a longitudinal movement in opposite directions as well as a tilting or backward and forward movement or upward and downward movement, affording means whereby pieces of music may be played in any key, and the trackerboard moved to adapt the same to irregularities in perforated sheets, etc.

The invention relates further to a universally movable trackerboard adapted for use upon apparatus controlled by perforated sheets or rolls and contemplates a trackerboard which may be moved at any position independent of any operating mechanism and for various purposes which will be hereinafter fully described and then specifically defined in the appended claims.

My invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a front elevation showing the application of my invention to the well of a piano player. Fig. 2 is an enlarged elevation of a portion of the well and showing in dotted lines the trackerboard in different adjusted positions, and Fig. 3 is a detail showing the trackerboard in end elevation. Figs. 4 and 5 are detail views showing the manner of tilting one end or the other of the trackerboard.

Reference now being had to the details of the drawings by numeral, 1 designates the well of a piano playing apparatus which is of the usual shape and construction commonly employed for holding the trackerboard and spools, and 2 and 3 designate the

spools upon which the perforated strip 4 is adapted to wind. The upright pieces of said well are recessed as at 5 at positions opposite each other and adapted to receive a universally movable trackerboard 6 without any operating means whatever. Said trackerboard, which is preferably of the standard make, is provided with the usual apertures 7 in which nipples 30 are placed and to each nipple a flexible tube 31 is connected which communicates with a pneumatic in the usual manner.

The recesses formed in the edges of the upright pieces of the well are slightly wider than the width of the trackerboard in order to allow one end or the other thereof to have a tilting movement, to assume the positions shown in Fig. 2 of the drawings, or a longitudinal or an up and down movement, or a forward and backward movement, accordingly as may be desired for various purposes for which the invention may be adapted. The ends of the trackerboard project beyond the ends of the well, as shown, to allow for different longitudinal movements. In order to hold the trackerboard within said recesses, I provide springs 11 which are fastened to the ends of the well and bear yieldingly against the outer convex face of the trackerboard in the manner shown clearly in Fig. 3 of the drawings, said spring bearing with sufficient frictional force against the trackerboard to hold the latter in an adjusted position. Leading from the trackerboard is a series of flexible pipes 31 serving as means for communicating between the trackerboard and pneumatics and said pipes being flexible will allow the trackerboard to be moved in different positions.

In order to indicate the different adjustments for playing in different keys, an indicating card, suitably graduated and designated by numeral 28, is mounted upon the trackerboard and movable therewith and stationary indicating pointers 29 are fixed to the opposite ends of the well and one adapted to indicate adjacent to the face of each indicating card.

In operation, it will be understood that the apertures of the trackerboard communicate preferably through flexible tubes with the pneumatics of the apparatus, but which tubes are not shown in the present application. As the ducts or tubes of a trackerboard com-

municate with pneumatic devices for given notes or tones of the instrument, the shifting of the trackerboard across the line of travel of the sheet of music will change the key of the music, for instance, a movement to the left having the effect to expose to the perforated music sheet a range of notes higher up and raising the key, while a movement to the right for a like reason will lower the key in which the music will be played.

In the musical art, it is well known that in pneumatic players as commonly constructed they are adapted to play music in the key in which the music is made only and it often happens that the music is not perforated or made in the best key or to the one most pleasing to the operator and hence it is desired to change the key instantly and which may be accomplished by moving the trackerboard to the right or left, thus allowing the music to be played in any number of keys from the one perforated sheet, this adjustment being adapted to be made instantly when the music is running over the trackerboard. The indicator cards are graduated to correspond to the size of the apertures in the trackerboard and register the movement of the trackerboard to the right or left. The figures upon the cards, it will be understood, show how many semitones the trackerboard is to be or is moved to the right or left from the key desired and the letters show the key. By this arrangement of the letters in conjunction with the figures, any transposition desired may be made, while the pointers show how far the trackerboard has been moved and also the key.

In the drawings, I have illustrated a sheet of music perforated in the key of C, in which event the pointer would normally indicate in the manner shown in Figs. 1 and 2 of the drawings but, in the event of a piece of music perforated in a different key being utilized, for instance if it were F, the indicating card would be moved so that the indicating pointers would be opposite the line adjacent to the letter F, thus adapting the apparatus being moved from such normal position to change to play in different keys.

As it frequently happens that musical records for various reasons become distorted from exposure to atmospheric influences, one edge or the other of the sheet will shrink and expand, thus making it impossible to operate the instrument with such defective record strip but, by the provision of a universally movable trackerboard or one which will allow the trackerboard to move without any mechanism, either backward or forward longitudinally, or allow one end or the other to tilt up or move horizontally, or down, or backward, or forward, by the operator simply taking hold of said trackerboard and manipulating the same, not only will it be possible to play the piece in any key but the

operator may raise or lower the trackerboard to allow the same to conform to irregularities due to shrinkage or other causes in the opposite edges of the perforated strip and also move the trackerboard toward or away from the perforated strip, thus allowing the same to wind truly upon the spools and with as little friction as possible.

What I claim to be new is:—

1. In combination with the frame of a piano player, a trackerboard mounted for universal movement thereon relative to a perforated music sheet movable against the trackerboard.

2. In combination with the frame of a piano player, a trackerboard mounted for universal movement thereon relative to a perforated music sheet movable against the trackerboard, and yielding means for holding the trackerboard on an adjusted position in the frame.

3. In combination with the frame of a piano player having openings in the opposite sides thereof, a trackerboard mounted in said openings and adapted to have a universal movement relative to a perforated music sheet movable against the trackerboard, and springs fastened to the edges of the frame and adapted to hold the trackerboard in adjusted positions.

4. In combination with the frame of a piano player having open recesses in the opposite sides thereof, a trackerboard mounted in said recesses and adapted to have a universal movement relative to a perforated music sheet movable against the trackerboard.

5. In combination with the frame of a piano player having open recesses in the opposite sides thereof, a trackerboard mounted in said recesses and adapted to have a universal movement relative to a perforated music sheet movable against the trackerboard, and means secured to the edges of the frame and designed to hold the trackerboard in said recesses.

6. In combination with the frame of a piano player having open recesses in the opposite sides thereof, a trackerboard mounted in said recesses and adapted to have a universal movement relative to a perforated music sheet movable against the trackerboard, springs fastened to the edges of the frame and designed to hold the trackerboard in said recesses.

7. In combination with the frame of a piano player, a trackerboard mounted therein and adapted to have a universal movement relative to the perforated music sheet movable against said board, a graduated indicating card positioned adjacent to the trackerboard, and a pointer cooperating with the graduations upon said card to indicate the adjustments of the trackerboard.

8. In combination with a well of a piano

player, a universally movable trackerboard mounted therein, an indicating card movable with the trackerboard, and a fixed pointer cooperating with said card to indicate the adjustments of the trackerboard.

9. In combination with the well of a piano player, a universally movable trackerboard mounted therein, means for holding the same in adjusted positions, a graduated indicating card positioned adjacent to said board, and a pointer cooperating with the graduations upon said card to indicate the adjustment of the trackerboard.

10. In combination with the well of a piano player having recesses therein, a longitudinally movable trackerboard narrower than the width of said recesses in which the same is positioned, and means for holding said trackerboard in different positions within said recesses.

11. In combination with the well of a piano player having recesses therein, a longitudinally movable trackerboard narrower than the width of said recesses in which the trackerboard is positioned and friction means bearing against the trackerboard and adapted to hold the same in adjusted positions within the recesses.

12. In combination with the well of a piano player having recesses therein, a longitudinally movable trackerboard narrower than the width of said recesses in which the same is positioned, springs fastened to the ends of the well and bearing yieldingly against the trackerboard and adapted to

hold the same in adjusted positions in said recesses.

13. In combination with a frame having openings in the opposite sides thereof, a trackerboard movable longitudinally and laterally within said openings, and flexible tubes connected to the trackerboard.

14. In combination with a frame having openings in the opposite sides thereof, a trackerboard movable longitudinally and laterally within said openings, means bearing against the trackerboard for holding same in said frame, and flexible tubes connected to said trackerboard.

15. In combination with the well of a piano player having openings in the opposite sides thereof, a universally movable trackerboard mounted in said openings, springs fastened to the well and adapted to confine the trackerboard within said openings.

16. In combination with the frame of a piano player, a trackerboard mounted for universal movement thereon relative to a perforated music sheet movable against the trackerboard, and means for holding the trackerboard in an adjusted position upon said frame.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

MARION F. HOLDERMAN.

Witnesses:

E. R. LEVY,

FRANKLIN H. HOUGH.