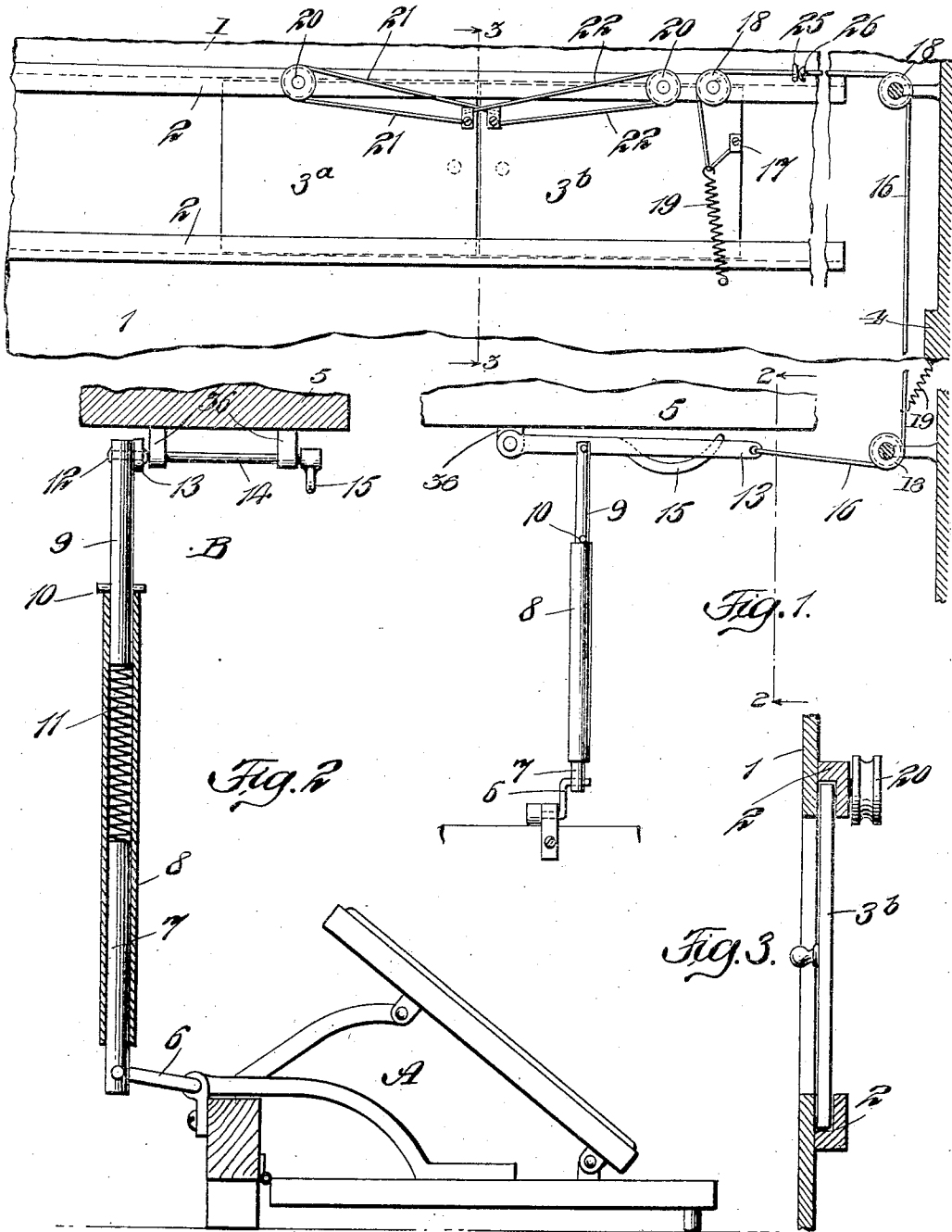


J. A. WESER.
 AUTOMATIC PLAYER.
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To all whom it may concern:

Be it known that I, JOHN A. WESER, a citizen of the United States, and a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Automatic Players, of which the following is a specification.

My present invention relates to an automatic player and more particularly to improved means for operating the doors which cover and uncover the tracker-box for the insertion and removal of the music roll; and secondly, to a feature in which said doors are combined with means for elevating the pedal mechanism, whereby as said mechanism is elevated, the said doors if open will automatically close. These and other features and advantages of the invention will appear from an understanding of the specification.

In the drawings which show only one of the forms which my improvements may take, Figure 1 is a more or less diagrammatic view in rear-elevation of my improvements as applied to say an upright self-playing piano, immaterial portions being shown broken away and detached in order to bring the drawings within the compass of the sheet; Fig. 2 is a side elevation partly in section on the line 2-2 in Fig. 1, Fig. 2 differing however in being on an enlarged scale and in showing more of the pedals and related parts; and Fig. 3 is a view partly in vertical section and partly in elevation on the line 3-3 in Fig. 1, the cord not being shown.

Describing now my invention with particular reference to the devices of the drawings, it will be understood that the view in Fig. 1 is supposed to be looking at the parts shown from their rear. In other words, the front of the piano is behind the plane of the drawing and its interior above said plane.

My improvements in the particular form shown are illustrated in connection with an upright piano in which the tracker-box is located above the key-board in an opening through the front board of the piano. Thus in the drawings 1 designates said front board, 2 are guides above and below the opening to the tracker-box, while 3^a and 3^b are doors sliding in said guides and adapted to control said opening.

4 designates a portion of the interior of

the piano case or frame, in this instance part of the end board of the case of the instrument and 5 that portion of the piano case which is under the keys or key-board.

The pedal mechanism includes pedals A and pedal operating mechanism B. The pedals A may be of well known form needing no description here, suffice it to say that swinging the crank 6 in one direction or the other acts to elevate or lower the pedals as desired. The pedal operating mechanism shown comprises a rod 7 pivotally connected to crank 6, a tube 8 within whose lower end the rod 7 is fixed; another rod 9 sliding loosely in the upper end of said tube, said rod 9 having projecting pins 10 adapted on occasion to abut against the top of the tube, said rod being engaged below by a spiral spring 11 within the tube and above being pivoted to pin 12 on a bar 13 secured at right angles to a rock-shaft 14 having at its other end a handle 15 which extends in the same directions as said bar in convenient reach of the operator at the front of the piano, said rock-shaft being suitably supported in bearings 35 on the underside 5 of the piano keyboard.

The described pedal operating mechanism is such that pushing the handle 15 down causes the elevation of the pedals back into the piano.

A cord 16 connects the end of bar 13 with door 3^b at 17, said cord running over grooved pulleys 18 rotatably supported in the piano interior and located so that the downward motion of the bar 13 is transmitted to door 3^b to slide said door from its open to its closed position in Fig. 1. In other words, the described mechanism is such that pressing downwardly on handle 15 when the pedals are in down position (as in Fig. 2) causes not only the elevation of the pedals back into the piano, but also the shutting of the door 3^b, if it be open, through the cord 16. If on the contrary the door 3^b be already closed, no effect will be had thereon from the elevation of the pedals. However in the latter contingency, the cord 16 would be loose on the pulleys 18 and consequently would tend upon this and similar occasions to work off the pulleys. To avoid this, the means adopted in the improvements shown comprise spiral springs 19 connecting some fixed part inside the instrument to the cord 16, whereby said cord

is maintained at all times taut on the pulleys irrespective of the relative positions of the pedals and doors.

Having now described the mechanism whereby elevating the pedals automatically closes the door 3^b, it remains to describe the mechanism by which the door 3^b is interconnected with the door 3^a to simultaneously close said door also, in fact to cause the simultaneous operation of said doors whether in closing or opening. This mechanism comprises a pair of pulleys 20 shown on the upper door-guide and located respectively toward the rear end of the doors 3^a and 3^b when in closed position. Cords 21 and 22 are looped about the pulleys 20 with the free ends of each cord connected one end to each door near its front edge. The shown arrangement of cords and pulleys comprises what amounts to a crossed-belt, made up of the cords working on pulleys 20, each ply of said belt being connected with one of the doors 3^a and 3^b.

The result of the construction is that moving either door in either direction, opening or closing, creates a pull in the given direction on the ply of one of the cords, which pull is converted due to the pulley 20 over which said cord passes into a pull in the opposite direction on the other ply of the same cord, which being attached to the opposite door moves said door in the opposite direction from that in which the first named door happens to be moving. Thus opening the door 3^b moves 3^a in the opposite direction, that is to say, opens it also, similarly closing the door 3^b likewise closes 3^a. The same thing is obviously true if the door 3^a is the one which is primarily actuated by the operator. Accordingly when as heretofore explained the handle 15 is operated to elevate the pedals and to simultaneously close the door 3^b through the cord 16, it follows that it will at the same time cause the closing of the door 3^a.

Obviously the present improvements are of great convenience to the users of pianoplayers, since it makes it possible to close the pedals and tracker-box doors in one operation, whereas heretofore two independent operations have been necessary. Moreover both actions are effected from a handle 15 within convenient reach of the operator and requiring no stooping.

It may be said by way of further explanation that 25 is a screw-eye projecting from a suitable support and receiving through it the cord 16, said cord having a button 26 adapted to contact with the screw-eye when the spring 19 takes up on the cord to keep it taut on the pulley.

Having thus described my invention, what I claim is:

1. In an automatic player, the combination of pedals; a pedal-elevating member acting to elevate the pedals by the operation of the member; a sliding tracker-box door; and cord and pulley means consisting of a pulley-guided cord connecting the door and the pedal-elevating member and operating to actuate the door in closing direction from the operation of said pedal-elevating member.

2. In an automatic player, the combination of pedals, pedal operating mechanism comprising a member adapted to be operated to elevate the pedals, tracker-box doors having an interconnection adapted from the closing and opening of either door to correspondingly operate the other door; and a cord and pulley connection between one of said doors and the member which elevates the pedals, adapted from the operation of said member to move said door from open to closed position.

3. In an automatic player, the combination of pedals, pedal operating mechanism comprising a member adapted to be operated to elevate the pedals, tracker-box doors having an interconnection adapted from the closing and opening of either door to correspondingly operate the other door; a cord and pulley connection between one of said doors and the member which elevates the pedals, adapted from the operation of said member to move said door from open to closed position; and cord tightening means comprising an elastic connection with said cord, adapted to keep it at all times taut over the pulley.

4. In an automatic player, the combination of pedals; movable parts consisting of a tracker-box door and a pedal-operating lever; cord and pulley means consisting of a pulley-guided cord connecting said door with said lever to operate one from the other; and cord-tightening means consisting of an elastic connection between the frame of the player and the cord, taking up any slack thereof at the pulley.

5. In an automatic player, the combination of movable parts; cord and pulley means consisting of a pulley-guided cord connecting the movable parts to operate one of them from the movement of the other; and cord-tightening means consisting of an elastic connection between the frame of the player and the cord, taking up any slack thereof at the pulley.

In witness whereof, I have signed my name to the foregoing specification in the presence of two subscribing witnesses.

JOHN A. WESER.

Witnesses:

ROBERT LEVI,
E. W. SCHERR, Jr.