

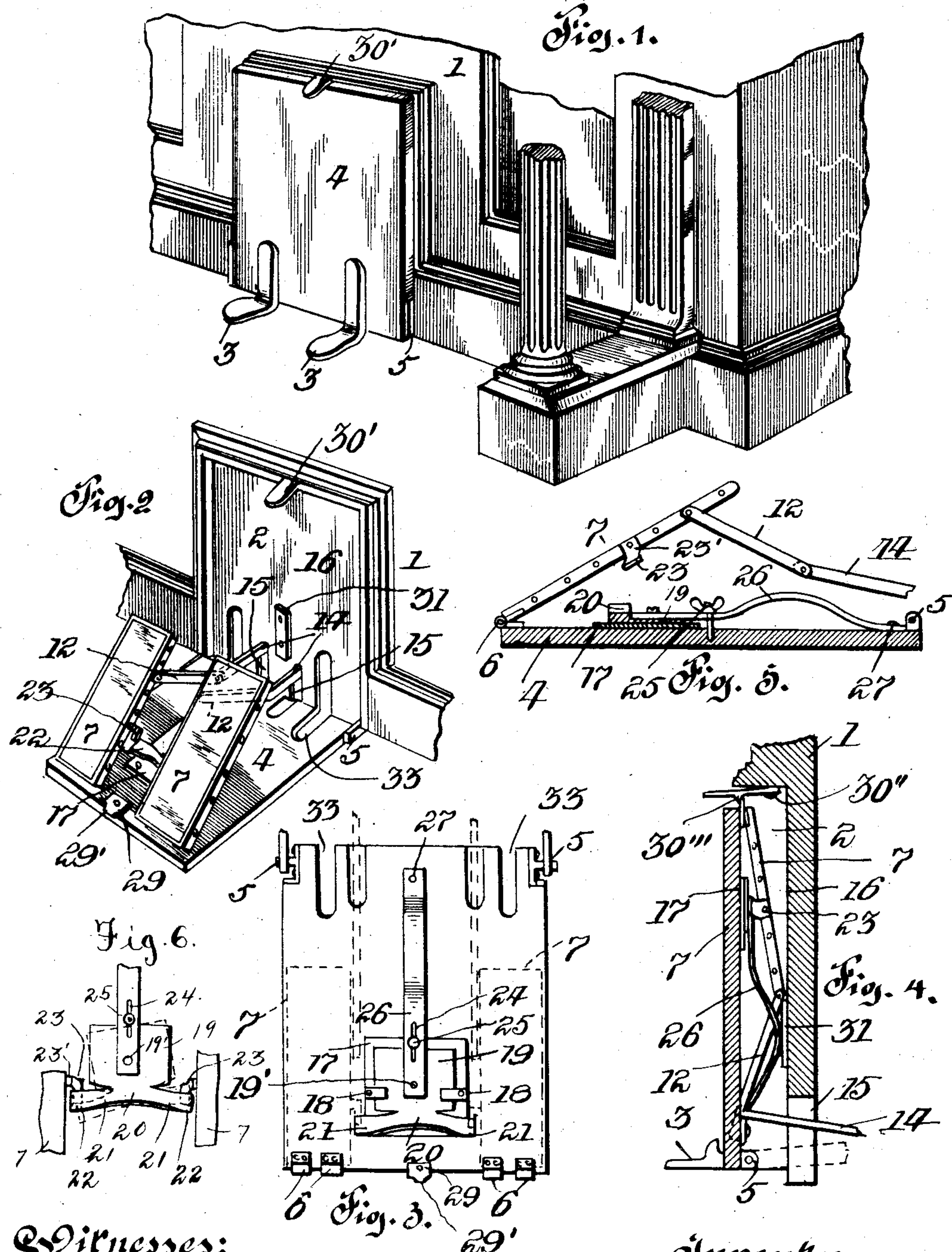
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W. F. COOPER.

PEDAL BOARD AND PEDAL FOR SELF PLAYING PIANOS OR
MUSICAL INSTRUMENTS.

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Witnesses:

C. Kostermann

W. F. Cooper

Inventor.
William F. Cooper.

by J. C. Ewert & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

WILLIAM F. COOPER, OF NORWALK, OHIO, ASSIGNOR OF ONE-HALF TO THE
A. B. CHASE CO., OF NORWALK, OHIO, A CORPORATION OF OHIO.

PEDAL-BOARD AND PEDAL FOR SELF-PLAYING PIANOS OR MUSICAL INSTRUMENTS.

No. 830,823.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM F. COOPER, a citizen of the United States of America, residing at Norwalk, in the county of Huron and State of Ohio, have invented certain new and useful Improvements in Pedal-Boards and Pedals for Self-Playing Pianos or Musical Instruments, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in pedal-boards and pedals for musical instruments, and relates more particularly to pedals adapted to be used in connection with bellows for mechanically operating a piano or other musical instrument.

The invention has for one of its objects to provide a novel form of pedal board or frame to which the pedals, or treads are hinged, novel means being employed in connection with the pedal board or frame to lock the pedals in close proximity to the same, whereby said board or frame can be turned upwardly and seated in the front of a piano. In this connection my improved pedal board or frame and pedals are particularly adapted for self-playing pianos. In such types of pianos it has been sometimes the custom to embody the self-playing attachment or feature in connection with an ordinary instrument, whereby either may be used and independently present a neat and attractive appearance. To employ pedals in connection with pianos of this type various means have been suggested to construct the pedals within the instrument in such a manner that easy access may be had to the same when it is desired to operate the instrument as a self-player. I have devised suitable means for folding the pedal board or frame and pedals in such a manner as to present a neat and attractive appearance, it being impossible to detect this feature of a self-playing instrument when embodied in an ordinary piano-case.

With these and many other objects in view, which will more readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts, which will be more fully described, illustrated, and claimed hereinafter.

The essential features of the present invention involved in carrying out the objects above specified are necessarily susceptible to structural change without departing from the scope of the invention; but the preferred embodiments are shown in the accompanying drawings, in which—

Figure 1 is a fragmentary perspective view of a piano, illustrating my improved pedal-board in a closed position. Fig. 2 is a similar view illustrating the board in an open position, the pedals thereof being positioned for operation. Fig. 3 is a plan view of a pedal-board constructed in accordance with my invention, the pedals thereof being illustrated in dotted lines. Fig. 4 is a vertical sectional view of a portion of the front board of a piano, illustrating my improved pedal-board attached thereto in a closed position; and Fig. 5 is a longitudinal sectional view of the pedal-board, showing one of the pedals in edge view. Fig. 6 is a fragmentary view of a portion of the pedals and pedal-locking devices, showing the pedals in their depressed position.

Like reference-numerals designate corresponding parts in the several views of the drawings.

To put my invention into practice, I have illustrated a portion of a piano—namely, the lower front board 1—to which my improved pedal board or frame and its appurtenant parts are attached. The piano in connection with which my improved pedals and pedal board or frame are adapted to be used embodies a self-playing attachment or instrument comprising pneumatics, bellows, a duct-board, a tracker-box, and the numerous appurtenances common to self-playing instruments.

My invention resides in a pedal board or frame and pedals that are adapted to operate the bellows of a self-playing instrument. In order that my improved pedal board or frame and pedals can be conveniently folded and seated in the front board 1 of a piano, I have provided said front board with a recess or concavity 2, which is preferably located adjacent to the ordinary pedals 3 3 of a piano, and I pivotally mount a pedal board or frame 4, by means of suitable hinges 5 5, in front of the front board 1. The pedal board or frame is substantially rectangular in top

plan view and corresponds approximately to the size or contour of the recess 2. The outer or topmost edge of the board or frame 4 is provided with hinges 6 6, carrying pedals 5 7 7. The pedals 7 7 are preferably arranged upon each side of the board or frame 4, and connected to the same near the ends are pivotally-mounted rods 12 12, which have their ends pivotally connected to rods 14 14, extending through vertically-disposed slots 15 15, formed in the backing or rear wall 16. These rods 14 14 are adapted to be connected to the main bellows of a self-playing instrument, and the pedals are adapted to be operated by the feet of the player.

In order that the pedal board or frame 4 may be folded upwardly into the recess 2 of the front board, it is necessary that means be employed for retaining the pedals 7 7 in close engagement with the board or frame 4, and I have employed novel means to accomplish this, said means also serving to facilitate the closing and opening of the board or frame 4. Centrally upon the board or frame 4 I secure a locking mechanism consisting of a stationary plate 17, carrying guides 18 18, between which is slidably mounted a plate 19, carrying a spring-latching member 20. The outwardly-extending arms 21 21 of the member 20 are inclined, as indicated at 22, to engage clips or lugs 23' 23', secured to the inner sides of the pedals 7 7, each lug being formed with a stud 23 to limit the movement of the ends of the spring-latching member 20.

The plate 19 is loosely mounted between the guides 18 18, so as to permit of a slight rocking movement as well as a longitudinal movement and is pivotally attached at 19' to a spring 26, that has one end fastened at 27 to the pedal board or frame 4, the pivotal attachment of the plate 19 to the spring permitting of the rocking movement of the plate above referred to. The spring 26 is curved near the point of attachment 27 and is formed with a slot 24, through which slot a screw 25 passes, this screw seating in the pedal board or frame 4 and serving as a guide for the spring.

Under normal working conditions the pedals are depressed alternately by the feet of the operator, and as each pedal approaches the termination of its downward stroke the lug or clip 23 contacts with the inclined end 22 of the member 20 and rocks the plate 19, which is integral with or rigidly attached to member 20 on its pivotal point 19', so as to throw the inclined end out of locking position. When the board 4 is to be closed, the pedals 7 are pressed down simultaneously by the operator until the lugs or clips 23 both engage the inclined ends of the arms 21 21 of the member 20. The lugs or clips, both engaging the inclined ends of the member 20, cause the plate 19 to move forwardly a slight distance until the lugs or clips have reached

such a position as to permit of the lower edges of the ends 21 of the member 20 engaging the top surface of said lugs or clips. The board or frame 4 can then be swung upwardly upon the hinges 5 5 into the recess 2, the rods 12 12 swinging downwardly to the position illustrated in dotted lines in Fig. 4 of the drawings.

To retain the pedal board or frame 4 in a closed position, I have provided the outer and upper edge of said board with a plate 29, carrying an outwardly-extending lug 29', adapted to be engaged by a resilient strip or latch 30', which is secured, as indicated at 30'', to the piano-board. This resilient latch is provided with a depending lug or tooth 30''', having a beveled surface. When the pedal board or frame is moved upwardly, the lug 29' engages the beveled surface of the tooth or lug 30''' and elevates the latch until the pedal board or frame has moved inwardly sufficient to release the lug or tooth 30''' and permit of the latch returning to its normal position, firmly and positively retaining the pedal board or frame in its closed position.

The rear wall or back of the recess 16 is provided with a plate 31, against which the curved portion of the spring 26 is adapted to engage. The closing of the board or frame 4 causes the curved portion of the spring 26 to engage the plate 31 and move the spring 26 and the plate 19 and its latching member 20 sufficiently to release the pedals 7 7. This is done in order that the pedals 7 7 will assume a position ready to be operated when the board or frame 4 is opened by releasing the latch 30.

To prevent my improved pedal-board from in any manner interfering with the construction or operativeness of the ordinary foot-pedals 3 3, I have provided the board 4 with slots 33 33, through which said pedals extend when the board 4 is in a closed position, as illustrated in Fig. 1 of the drawings.

From the foregoing it will be observed that I have devised a novel form of pedal board or frame and pedals for self-playing pianos or other musical instruments that can be opened and closed by the feet alone. The construction which I have employed in connection with my improved pedal board or frame permits of the pedals and their appurtenant parts being completely hidden from view while the piano is being played in the ordinary manner and also presents a neat and attractive appearance when the piano is not in use.

While I have depended upon the bellows of a self-playing piano to retain the pedals 7 in an operative position, it will of course be understood that suitable means may be devised for assisting the bellows in maintaining the pedals in such position.

It is thought that the construction, operation, and advantages of the herein-described

pedal-board will be apparent without further description, and it will be understood that various changes in the form, proportion, and minor details of construction may be made without departing from the spirit and scope of the invention or sacrificing any of the advantages thereof.

What I claim, and desire to secure by Letters Patent, is—

1. The combination of the lower front board of a musical instrument having a recess therein, of a pedal board, or frame, hinged at the bottom of said recess and adapted to fold upwardly into said recess, pedals hinged to the upper inner edge of said pedal-board, links pivotally connected to said pedals, a latching member carried by said pedal-board and adapted to retain said pedals in a locked position, means to release said pedals from said latching member when said board is closed, and means to lock said board within said recess, substantially as described.

2. The combination with the lower front board of a musical instrument, said front board having a recess formed therein, of a pedal board, or frame, hinged at the lower edge of said recess and adapted to fold upwardly into said recess, pedals hinged to the upper inner edge of said board, links connected to said pedals and extending within the instrument, means to hold said pedals in engagement with said board until the said board is closed, means to release the pedals when the board is closed and means to lock said board within said recess.

3. The combination with the front board of a piano, said front board having a recess formed therein, of a pedal board or frame hinged at the bottom of said recess, pedals hinged to the upper edge of said board and adapted to operate mechanism contained within the instrument, means to temporarily hold said pedals in engagement with said board, means to release said pedals, and means to retain said board within said recess, substantially as described.

4. The combination with the front board of a self-playing instrument, said front board having a recess formed therein, of a pedal board, or frame, hinged to said front board and adapted to fold upwardly into said recess, pedals hinged to said board and adapted to operate playing mechanism contained within the instrument, means to temporarily hold said pedals in engagement with said

board, means to hold said board within said recess, substantially as described.

5. The combination of a piano-case, said case having a recess formed therein, of a board or frame hinged to the case and adapted to fold upwardly into said recess, pedals hinged to said board, locking mechanism carried by said board and consisting of a spring-pressed locking member adapted to engage the confronting edges of said pedals and temporarily hold said pedals in engagement with said board, and means to hold said board within said recess.

6. The combination with a musical instrument, of a board adapted to fold upwardly into engagement with said instrument, pedals hinged to said board, a locking mechanism carried by said board and consisting of a resilient member engaging the pedals when the latter are depressed and holding said pedals in engagement with said board when both pedals are depressed simultaneously.

7. The combination with a musical instrument, of a pedal-board adapted to fold against said instrument, pedals hinged to said board, locking mechanism carried by said board and adapted to temporarily hold said pedals in engagement with said board.

8. The combination of a musical instrument, a pivotally mounted pedal board, or frame, pedals carried by said board, and means to temporarily hold said pedals in engagement with said board.

9. The combination with a piano, of a pedal board, or frame, hinged to said piano and adapted to swing outwardly into approximately a horizontal plane in respect to said piano, pedals carried by said board, a locking mechanism adapted to temporarily hold said pedals in engagement with said board, when both pedals are simultaneously depressed, means to retain said board in a substantially vertical position, and means to release said pedals when said board is so positioned.

10. The combination of a pedal-board, pedals hinged to said board, and means to lock said pedals in engagement with said board.

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

WILLIAM F. COOPER.

Witnesses:

JOS. B. CONNOLLY,
L. L. DOUD.