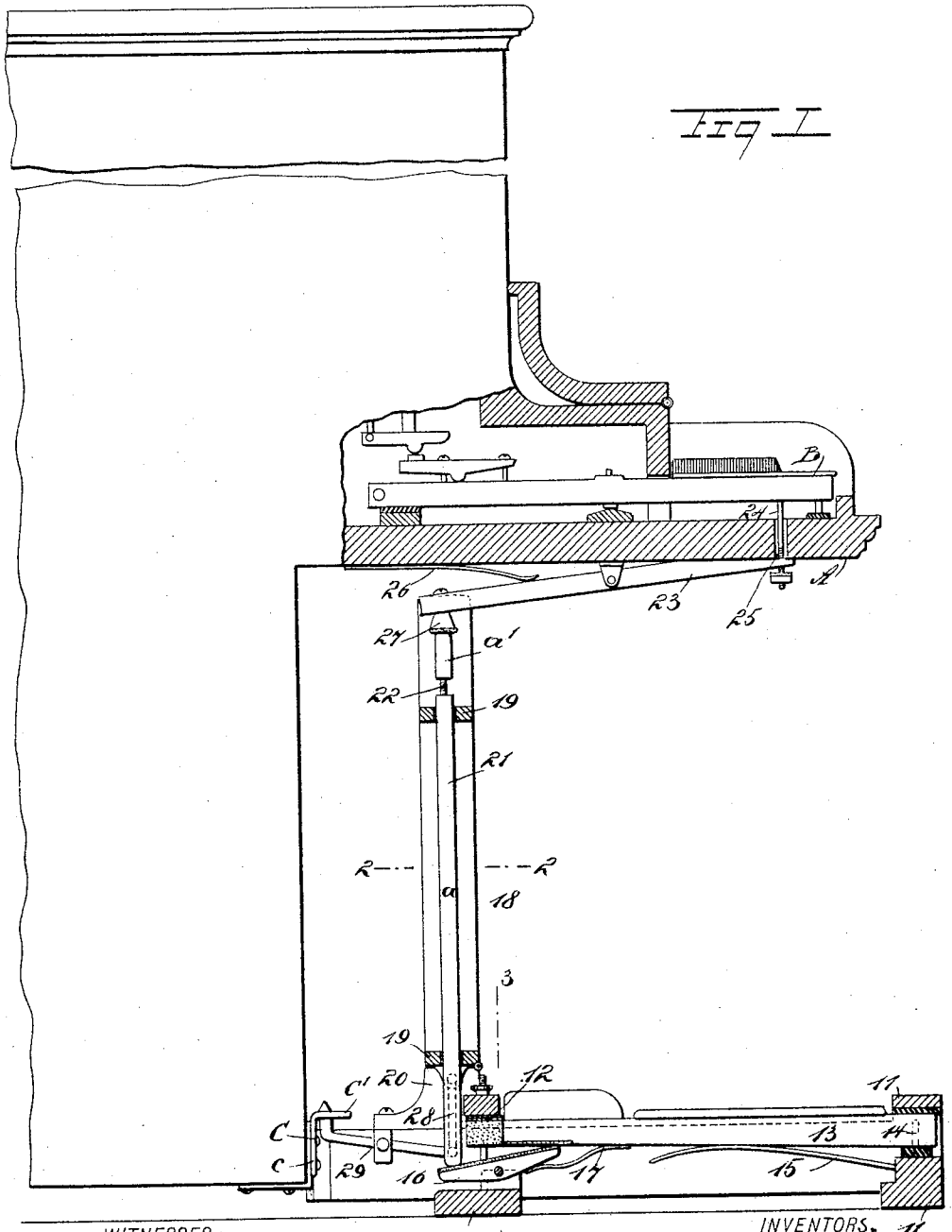
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F. H. DERNELL & P. H. BREHMER.

DETACHABLE PEDAL FOR MUSICAL INSTRUMENTS.

No. 589,644. Patented Sept. 7, 1897.

Fig 1



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(No Model.) 2 Sheets—Sheet 2.

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DETACHABLE PEDAL FOR MUSICAL INSTRUMENTS.

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Fig 2

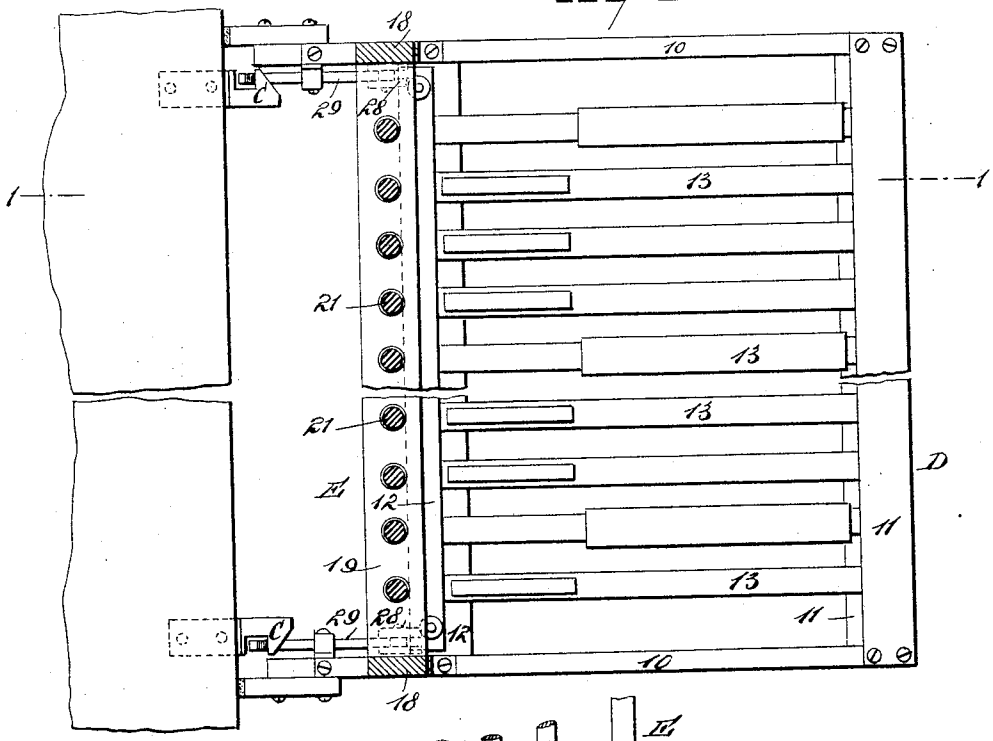


Fig 3

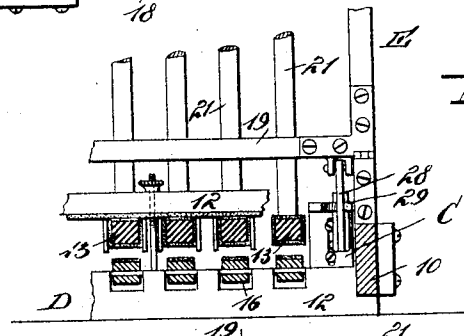


Fig 5

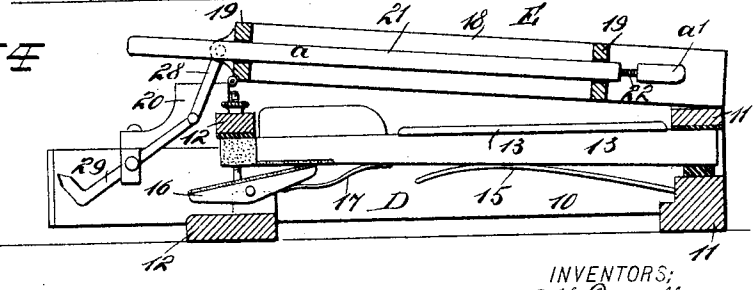
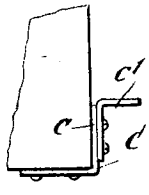


Fig 4



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UNITED STATES PATENT OFFICE.

FRANK H. DERNELL AND PHILLIP H. BREHMER, OF RUTLAND, VERMONT; SAID BREHMER ASSIGNOR TO LILLIAN E. BREHMER, OF SAME PLACE.

DETACHABLE PEDAL FOR MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 589,644, dated September 7, 1897.

Application filed March 30, 1897. Serial No. 629,914. (No model.)

To all whom it may concern:

Be it known that we, FRANK H. DERNELL and PHILLIP H. BREHMER, of Rutland, in the county of Rutland and State of Vermont, have invented a new and useful Improvement in Detachable Pedals for Musical Instruments, of which the following is a full, clear, and exact description.

The object of our invention is to provide an organ-pedal attachment for pianos, which will enable a person to secure church-organ practice at home.

A further object of the invention is to so construct the organ-pedal attachment to pianos that the attachment may be disconnected from a piano in an expeditious and convenient manner and the attachment folded together so as to occupy but a minimum of space.

Another object of the invention is to provide an attachment of the character above set forth which may be quickly and readily attached to the piano, the attachment being so made as not to detract in the least from the appearance of the instrument, and whereby, further, the detachable pedals may be constructed in a simple, durable, and economic manner.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a partial end view of an upright piano, the key-board being in section, and also a vertical section through the pedal attachment, the section being taken substantially on the line 1 1 of Fig. 2. Fig. 2 is a section through the attachment, taken substantially on the line 2 2 of Fig. 1. Fig. 3 is a section on the line 3 3 of Fig. 1. Fig. 4 is a detail view of a keeper adapted for attachment to the piano and to be engaged by a lock on the pedal attachment; and Fig. 5 is a section through the attachment, taken practically on the line 1 1 of Fig. 2, showing the said attachment folded.

The letter A represents the key-supporting board of an upright piano; B, one of the keys, which is fulcrumed upon the board in the usual manner; and C represents keepers which are secured in an upright piano to the bottom, extending up at the front, and the said keepers are preferably made in two sections c and c', as shown in Fig. 4, the section c' being adjustable upon the section c, and the upper section c' of each keeper is provided with a suitable opening to receive the latch, to be hereinafter described.

In the construction of the organ-pedal attachment two frames D and E are employed, one being hinged to the other. The lower frame D is the base-frame and the upper frame E the action-frame. The lower frame D is substantially rectangular in cross-section, and consists of side pieces 10, front cross-bars 11, and rear cross-bars 12, the front and rear cross-bars each being spaced a predetermined distance apart. The pedals 13 are pivoted between the two front cross-bars 11 by means of pivot-pins 14, as shown in Fig. 1, and are held normally in a horizontal position by means of springs 15. The rear ends of the pedals extend between the rear cross-bars 12 of the base-frame, and beneath the rear end of each pedal 13 a lever 16 is located, the levers being centrally fulcrumed, as shown in Figs. 1 and 5. The levers extend beyond the rear ends of the pedals, and their forward ends are normally held in engagement with the pedals by means of springs 17, attached to the pedals and engaging with the under faces of the levers at or near their forward ends, as is also shown in Figs. 1 and 5.

The action-frame E consists, usually, of side pieces 18 and cross-bars 19, connecting the side pieces, the lower cross-bar or that which is to be at the rear of the base-frame having a hinged connection with said base-frame at a point preferably over the rear cross-bars 12, and the hinges of the action-frame are usually attached to extensions 20 from the rear portion of the base-frame, as shown in Fig. 5.

The cross-bars 19 of the action-frame are provided with apertures or openings suitably alined, the apertures in the upper cross-bar being in alinement with apertures in the lower bar or the bar near the hinged portion of the action-frame. Tracker-rods 21 are

passed loosely through alining apertures in the action-frame, their end movement being limited in any desired manner—as, for example, by passing pins through the tracker-rods above the lower cross-bar and below the upper cross-bar 19 of the action-frame. Each tracker-rod 21 consists, preferably, of a long section *a* and a short cap-section *a'*, adjustably connected with the body-section *a* through the medium of a screw 22, whereby the tracker-rods may be lengthened or shortened according to the height of the keyboard of the instrument, in connection with which they are to be employed.

Levers 23 are fulcrumed beneath the key-supporting board A, the levers corresponding in number and arrangement to the number and arrangement of the tracker-rods 21. Each lever 23 is connected by a rod 24 with a key B of the instrument, the said connecting-rods 24 passing through openings 25 made in the key-supporting board A of the instrument. The rear ends of the levers 23 carried by the instrument are held in a downwardly-inclined position by means of springs 26, so that the keys B of said instrument are normally in their usual position. At the rear end of each lever 23 a buffer-block 27 is preferably secured, as is particularly shown in Fig. 1, and these buffer-blocks are adapted to engage with the cap-sections *a'* of the tracker-rods 21. A link 28 is pivotally attached to the under or hinged portion of the action-frame at each side, and each of the links 28 is pivotally connected with an angle-lever 29, the angle-levers being adapted to enter the openings in the upper or adjustable sections of the keepers C, as shown in Figs. 1 and 2.

When the attachment is not in use, the action-frame is folded down upon the base-frame, as shown in Fig. 5. When the attachment is to be brought into requisition, the base-frame is carried beneath the key-supporting board A and brought to such a position that the lock levers or latches 29 may engage with the keepers C. The action-frame is then carried to a vertical position, whereupon the latches or levers 29 will be automatically carried upward to an engagement with the keepers C, locking the attachment to the instrument, while at the same time the cap-sections *a'* of the tracker-rods 21 will be brought in engagement with the buffer-blocks 27 on the levers 23, carried by the instrument. It is therefore obvious that when a pedal is pressed downward by the foot the lever 23, corresponding to that pedal, will be forced upward against the spring 26 and the key connected with that lever will be drawn downward, producing the same action as though the key were struck by a finger, and the moment that the pedal is released from the pressure of the foot the key is restored to its normal position.

The act of dropping the action-frame upon the base-frame disconnects the latches or levers 29 from the keepers, and the attachment may then be removed from the instrument and placed wherever desired, the only addition to the instrument then remaining being the levers 23, connected with the keys.

Through the medium of an attachment such as has been described pedal or church-organ practice may be brought within the reach of any person possessing a piano, and the attachment will not mar the instrument and when not needed may be quickly disconnected from said instrument and removed.

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

1. An organ-pedal attachment for pianos, and a locking device for detachably connecting said pedal attachment with the instrument, the said locking device being operated by the movement of the pedal attachment, as and for the purpose set forth.

2. In an organ-pedal attachment for pianos, pedals, tracker-bars operated by the pedals and arranged to be carried parallel with the pedals or at an angle thereto, and a locking device operated by raising and lowering the tracker-bars, as and for the purpose set forth.

3. In an organ-pedal attachment for pianos, a base-frame carrying pedals, an action-frame having a hinged connection with the base-frame, and locking devices operated by the movement of the action-frame, as and for the purpose specified.

4. In an organ-pedal attachment for pianos, the combination with the base-frame, pedals carried thereby, and levers operated by the pedals, of an action-frame having a hinged connection with the base-frame, tracker-bars carried by said action-frame and operated by the said levers, and locking devices operated by the movement of the action-frame, as and for the purpose set forth.

5. In an organ-pedal attachment for pianos, a base-frame, an action-frame having a hinged connection with the base-frame, pedals carried by the base-frame, tracker-bars operated by the said pedals, and locking devices operated by the movement of the action-frame, as and for the purpose set forth.

6. In an organ-pedal attachment for pianos, the combination, with the key-supporting board of the instrument, its keys, levers connected with said keys and keepers attached to the instrument, of a base-frame, pedals carried by the base-frame, an action-frame having a hinged connection with the base-frame, tracker-bars carried by the action-frame, operated from the said pedals and arranged for engagement with the said levers, and locking devices adapted for engagement with the keepers, as and for the purpose specified.

7. In an organ-pedal attachment for pianos, the combination, with the key-supporting board of the instrument, its keys, levers connected with said keys, and keepers attached to the instrument, of a base-frame, pedals

carried by the base-frame, an action-frame having a hinged connection with the base-frame, tracker-rods carried by the action-frame, operated from the said pedals and arranged for engagement with the said levers, means, substantially as shown and described, for increasing or decreasing the length of the tracker-rods, and locking devices carried by the base-frame and operated by the movement of the action-frame, substantially as described.

8. The combination with a piano having keepers attached thereto, of an organ-pedal attachment provided with locking devices adapted for engagement with said keepers, the said locking devices being automatically operated by the movement of the pedal attachment, substantially as described.

9. The combination with a piano, and keepers attached thereto, of an organ-pedal attachment comprising a base-frame, pedals carried by the base-frame, an action-frame having a hinged connection with the base-frame, tracker-bars carried by the action-frame, said bars being operated by the said pedals, and locking devices adapted for engagement with the keepers, as and for the purpose specified.

10. A pedal attachment, comprising a base-frame carrying pedals, an action-frame having a hinged connection with the base-frame, links pivotally connected with the action-frame, and angle-levers pivotally connected with the said links, as and for the purpose set forth.

11. In a pedal attachment, the combination with the base-frame, pedals carried thereby, and levers operated by the pedals, of an action-frame having a hinged connection with the base-frame and adapted to be folded thereon, tracker-bars carried by the action-frame and provided with adjustable cap-sections, the said tracker-bars being operated by the said levers, and locking devices, comprising angle-levers connected by links with the said action-frame, substantially as shown and described.

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PHILLIP H. BREHMER.

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M. B. TAYLOR.