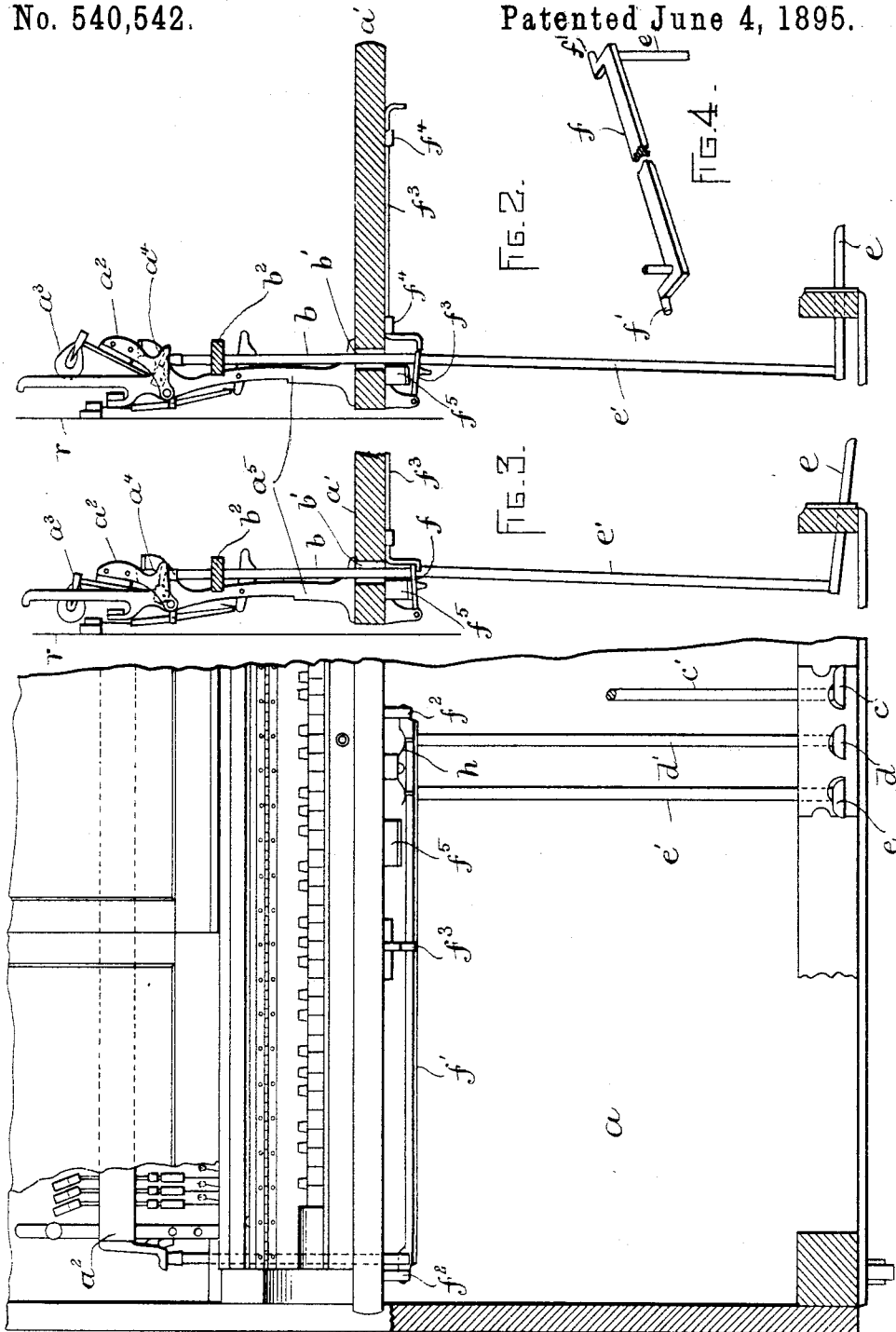


(No Model.)

B. F. DUNBAR.
PIANISSIMO DEVICE.

No. 540,542.

Patented June 4, 1895.



WITNESSES:

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UNITED STATES PATENT OFFICE.

BARNABAS F. DUNBAR, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE
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PIANISSIMO DEVICE.

SPECIFICATION forming part of Letters Patent No. 540,542, dated June 4, 1895.

Application filed March 12, 1895. Serial No. 541,469. (No model.)

To all whom it may concern:

Be it known that I, BARNABAS F. DUNBAR, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Piano-Pedal Attachments, of which the following is a specification.

This invention relates to an improvement in piano-pedal attachments and consists in the novel features of construction fully described in the specification, clearly illustrated in the drawings, and particularly pointed out in the claims.

Reference is to be had to the accompanying onesheet of drawings, in which like characters indicate like parts in all the figures wherever they occur.

In the drawings, Figure 1 represents a front elevation of a portion of a pianoforte provided with my invention. Fig. 2 represents a vertical cross-section of a pianoforte provided with my invention, showing the hammer-rail in its normal position. Fig. 3 is a view similar to Fig. 2, showing the hammer-rail tilted toward the strings. Fig. 4 is a detail view of the rock-rod.

In the use of piano-fortes it is often found desirable, especially when the player is practicing, to maintain for any desired length of time the piano effect. This could be done with the ordinary piano-pedal, but it would be necessary for the player to keep the pedal depressed with the foot during the entire time during which it was desired to maintain the piano effect. In the case of children, however, this is frequently not possible. By my invention these difficulties are overcome, and the piano mechanism may be operated to produce the piano effect, and when once operated requires no further effort or attention to maintain said effect. I accomplish this by a separate piano-pedal mechanism whereby I am enabled to produce the desired result without interfering with the ordinary use of the usual pedals.

While my invention may be applied to piano-fortes of any kind, I have shown it as applied to the "McPhail" style of upright piano-fortes. The drawings illustrate only a portion of a piano-forte proper and such parts

thereof as are directly connected in structure or operation with my invention.

(a) represents the usual casing or framework of a piano-forte, and (a') the usual support for the key-board, &c. (a²) represents the hammer-rail provided with hammers (a³) and pivoted to suitable standards (a⁵). All these parts may be of the usual construction and arrangement.

The piano-forte casing is provided with three pedals, (c), (d) and (e), of which the pedal (c) is the usual forte pedal, the pedal (d) the usual piano pedal, and (e) the additional piano-pedal. The pedals (c) and (d) are connected by rods (c') and (d') in the usual way with the respective parts that they operate.

A rock-bar (f) having offset pintles (f') is secured to the under side of the support (a') by having its pintles inserted in apertures, not shown, in the lugs (f²) projecting from the under side of the support. A rod (e') connected in the usual way with the pedal (e) has its upper end arranged to engage the underside of the bar (f), the upward movement of the rod (e') rocking the bar (f). A rod (b) loosely supported in a bar (b²) and passing through an aperture (b') in the support (a') has its lower end arranged to be engaged by the bar (f) when the same is moved upward by the pedal and rod (e) (e'). At its upper end this bar engages the under side of a lug (a⁴) on the hammer-rail.

From the foregoing it will be evident that when the front end of the pedal (e) is depressed, the hammer-rail (a²) will be thrown toward the strings (r) a distance corresponding to the throw of the pedal.

In Fig. 2 the hammer-rail and the parts just described are shown in their normal position.

In Fig. 3 the pedal (e) is represented as depressed and the hammer-rail moved toward the strings (r), thereby lessening the distance the hammer travels in striking the string and consequently the force of the blow delivered and the loudness of the tone produced. A buffer (f⁵) secured to the under side of the support (a') over the bar (f) limits the upward movement of the said bar, while a spring (h) similarly secured to the under side of the said support bears against the upper side of the

bar (*f*) and tends to maintain the parts in the position shown in Fig. 2. A catch (*f*³) slidingly secured on the under side of the support (*a'*) by lugs (*f*⁴) has its inner end arranged to engage the under side of the bar (*f*), when the latter is thrown up to operate the hammer-rail, and thus retain the parts in the position shown in Fig. 3. When it is desired to return the hammer-rail to its normal position, as shown in Fig. 2, the catch is pulled away from the bar (*f*) and the parts assume their normal position by their own weight.

The structure of the several parts heretofore described can be variously modified or changed without departing from the scope of my invention, which comprises a pivoted hammer-rail, a pivoted rock-bar, means for operating these parts, and a catch for retaining them in their operative position.

Having thus explained the nature of my invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, what I claim, and desire to secure by Letters Patent, is—

1. In a piano-forte, in combination, a pivoted hammer-rail provided with a lug, a pivoted rock-bar arranged beneath said rail, a movable rod interposed between said bar and rail, a pedal attachment for operating said bar, and a catch for engaging the under side of said bar to retain the parts in their operative position, substantially as and for the purpose set forth.

2. In a piano-forte, in combination, a pivoted hammer-rail, a pivoted rock-bar arranged below said rail, a rod resting upon said bar and engaging a lug on said rail, a spring arranged to bear on the upper side of said bar, a pedal attachment for operating said bar, and a catch for engaging said bar to retain the parts in their normal position, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 8th day of March, A. D. 1895.

BARNABAS F. DUNBAR.

Witnesses:

G. F. BLAK,
JOHN J. CLARK.