July 13, 1943. F. C. SOCIN 2,324,037

PIANO ACTION

Filed Feb. 19, 1942

FIG. 1

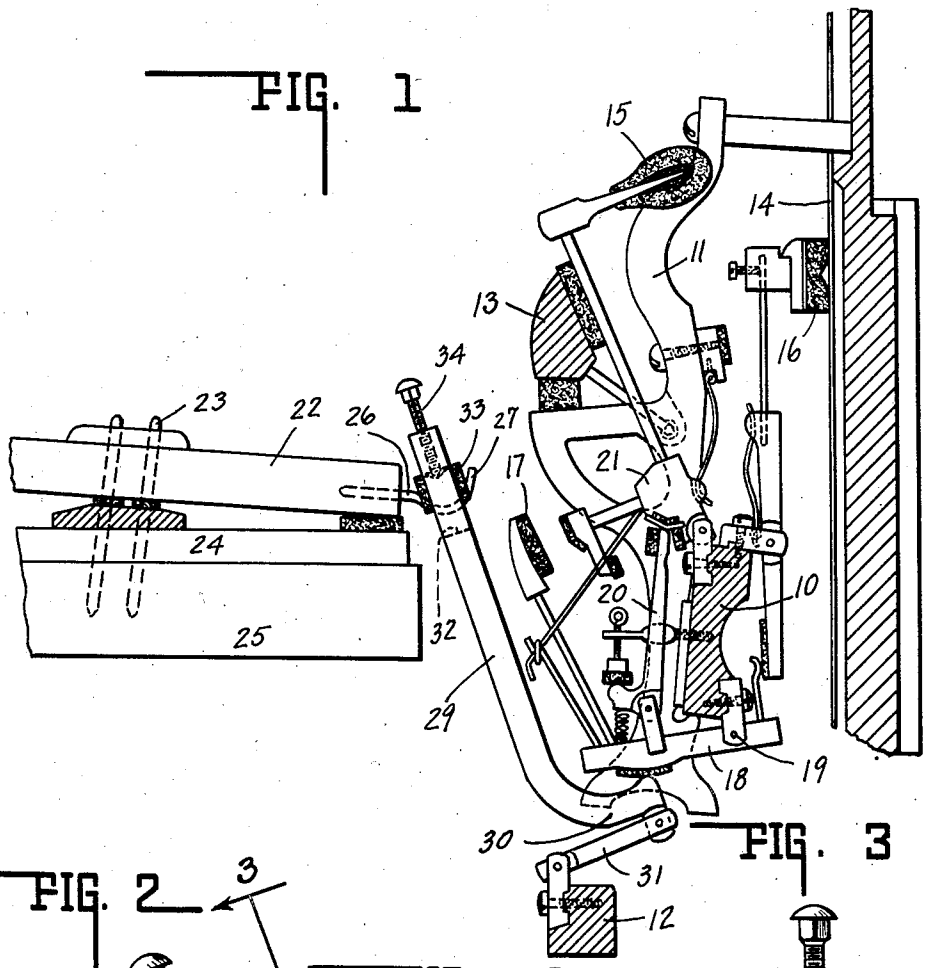


FIG. 2

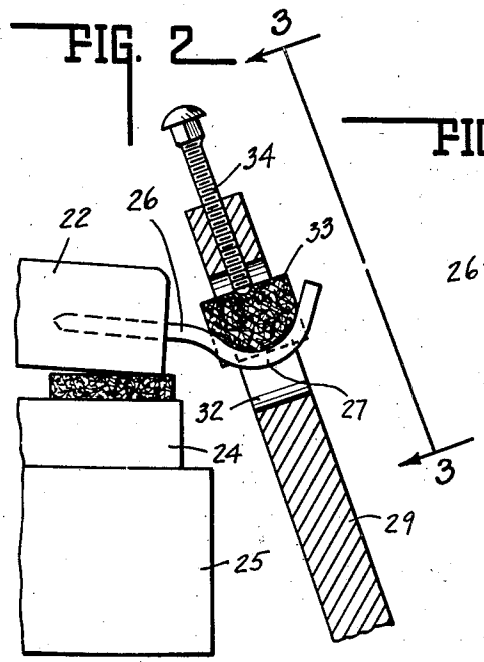


FIG. 4

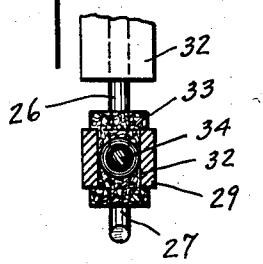
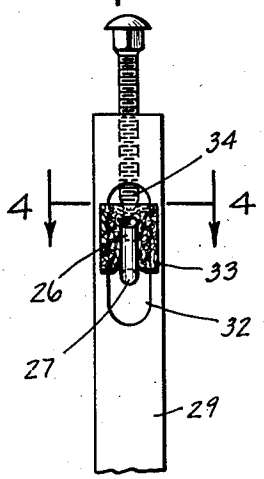


FIG. 3



INVENTOR.
FRANCIS C. SOCIN.

BY Lockwood, Goldsmith & Galt.
ATTORNEYS.

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PIANO ACTION

Francis C. Socin, St. Charles, Ill., assignor to The Rudolph Wurlitzer Company, Chicago, Ill., a corporation

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3 Claims. (Cl. 84—240)

This invention relates to a piano action, particularly of the drop action type applicable to the small or spinet type of upright pianos, reference being had to my Letters Patent No. 2,239,204, issued April 22, 1941 for "Upright piano."

The feature of the invention resides in the operative connection between the piano key and the wippen actuating the sticker or drop lever through which movement is transmitted from the key to the action. More particularly, the invention resides in the provision of a metal hook-like extension secured to the actuating end of the key so arranged as to be received in an elongated opening provided therefor in the upper end of the sticker for actuating engagement with a cushion member slidably adjusted therein.

By means of this arrangement, a simple and inexpensive actuating connection is made between the key and the sticker which readily permits of connection and disconnection therebetween, as well as complete adjustability, wherefore this type of drop action is materially simplified.

The full nature of the invention will be understood from the accompanying drawing and the following description and claims.

Fig. 1 is a sectional view through a piano action showing a unit thereof with a portion of its associated actuating piano key. Fig. 2 is an enlarged view showing the sticker in vertical section. Fig. 3 is a view taken on the line 3—3 of Fig. 2. Fig. 4 is a sectional view taken on the line 4—4 of Fig. 3.

In the drawing there is shown a unit of a piano action including an action rail 10, frame structure 11, lower supporting rail 12 and upper rail 13, all associated and arranged in the usual manner with respect to the piano strings 14.

The action is of the usual character embodying the hammer 15 with dampers 16 and back check 17 supported on a wippen 18. The wippen is fulcrumed at 19 on the rail 10 by the usual flange, and has pivotally mounted thereon the usual jack 20 for driving the hammer butt 21.

Associated with said piano action there is provided the usual piano key 22 which is fulcrumed about the hinged pins 23 intermediate its ends upon the keyboard 24 mounted on the key bed 25.

The actuating end of said key 22 is provided with an extension shown herein in the form of a metal hook-like member 26. Said member may conveniently be formed with a sharp end or screw-like portion which will permit its being readily entered and secured in the end of the key so as to project directly outward therefrom toward the action. Its hook-like shape provides a curved seat portion as indicated at 27.

Motion is transmitted between the action end of the key 22 and the wippen 18 through the medium of a rigid sticker or drop lever 29, some time referred to as an "abstract." Said sticker extends downwardly from substantially the level of the key to the level of the wippen. The lower end of said sticker is fastened with the foot 30 extending forwardly thereof under and in alignment with the wippen for operative engagement with the underside thereof. The lower and forward end of the foot is pivotally connected through the link 31 with a flange secured to the lower supporting rail 12.

The upper end of the sticker is provided with an elongated opening therein indicated at 32 formed to receive the seat portion 27 of the key extension 26. This arrangement is such that the sticker may be readily hooked over said extension or removed by unhooking the same therefrom. As a bearing between said extension 26 and the sticker there is provided a felt block 33 slidably mounted in the opening 32 and recessed along its bottom to receive and conform with the curvature of said extension.

For adjusting the position of the sticker in respect to the wippen and the key, the slidable felt bearing block 33 is engaged by an adjusting screw 34 threaded longitudinally of the sticker and extending downwardly through the top thereof with its lower end in engagement with the upper surface of the bearing block. The bearing block is adjustably positioned intermediate the adjusting screw 34 and the extension 26 to provide a cushion between the key and sticker to maintain the desired operative relation.

By means of this arrangement, the depression of the piano key imparts movement to the action, causing the extension 26 to be elevated which in turn bears upwardly against the cushioning bearing block 33, which movement is received by the adjusting screw 34 and transmitted thereby to the sticker 29. The foot 30 of said sticker is thus raised against the wippen 18 to effect the desired action of the hammer. The weight of the hammer, wippen and sticker operates to normally maintain engaging relation between the extension 26 and the bearing block 33, acting to return the key to inoperative position after it has been actuated while at the same time permitting ready and convenient connection and disconnection by the key and the action.

The invention claimed is:

1. In an upright piano having a keyboard and string, a hammer action mounted in front of said string with a wippen disposed below the

level of the keyboard, a key fulcrumed on said keyboard, a rigid drop lever sticker extending downwardly from adjacent the operative end of said key with its lower end positioned to impart movement to said wippen, said sticker being provided adjacent its upper end with an opening normally in alignment with the operative end of the key, and a hook-like metal extension member having one end extending into the operative end of said key and the other end extending toward said action through the opening in said sticker and in operative engagement therewith for transmitting movement from the key to said sticker.

2. In an upright piano, a hammer action mounted in front of a piano string with a wippen disposed below the level of the keyboard, and a key fulcrumed on said keyboard, a rigid drop lever sticker extending downwardly from adjacent the operative end of said key with its lower end positioned to impart movement to said wippen, said sticker being provided adjacent its upper end with an elongated opening normally in alignment with the operative end of the key, an extension secured to the operative end of said key extending toward the action and through the opening in said sticker, and a bearing block adjustably mounted in said opening for engagement by said extension through which motion is transmitted to the sticker by said key.

3. In an upright piano, a hammer action mounted in front of a piano string with a wippen disposed below the level of the keyboard, and a key fulcrumed on said keyboard, a rigid drop lever sticker extending downwardly from adjacent the operative end of said key with its lower end positioned to impart movement to said wippen, said sticker being provided adjacent its upper end with an elongated opening normally in alignment with the operative end of the key, an extension secured to the operative end of said key extending toward the action and through the opening in said sticker, a bearing block adjustably mounted in said opening for engagement by said extension through which motion is transmitted to the sticker by said key, and an adjusting screw extending into said opening with its lower end in engagement with said bearing block for adjusting its position longitudinally of said sticker and thereby effecting adjustment of the sticker in relation to the key and wippen.

FRANCIS C. SOCIN.