(No Model.)

E. McCAMMON.

Action Hanger for Upright Piano Fortes.

No. 235,370. Patented Dec. 14, 1880.

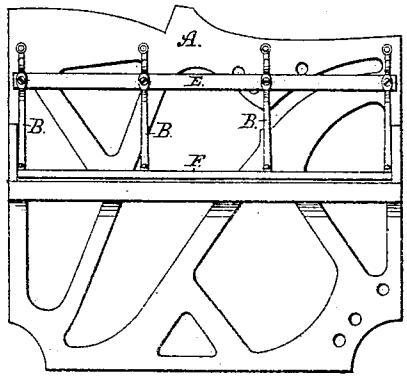


FIG. 1.

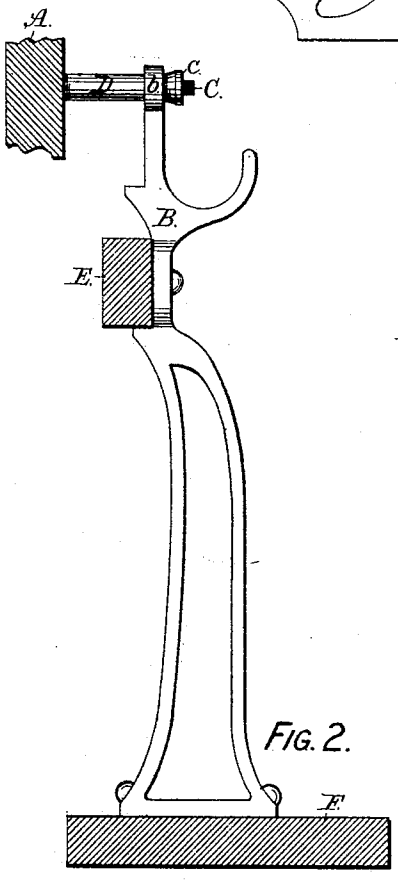


FIG. 2.

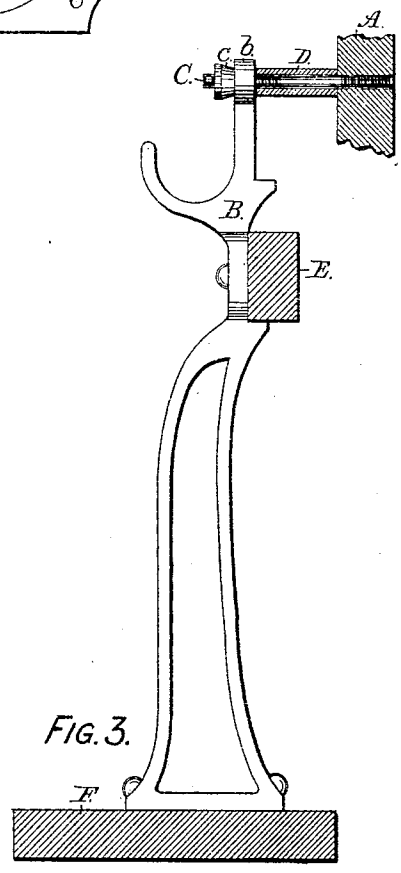


FIG. 3.

Witnesses,

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UNITED STATES PATENT OFFICE.

EDWARD McCAMMON, OF ALBANY, NEW YORK.

ACTION-HANGER FOR UPRIGHT PIANO-FORTES.

SPECIFICATION forming part of Letters Patent No. 235,370, dated December 14, 1880.

Application filed July 6, 1880. (No model.)

To all whom it may concern:

Be it known that I, EDWARD McCAMMON, of the city and county of Albany, and State of New York, have invented certain new and useful Improvements in Upright Piano-Fortes, of which the following is a full and exact description, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a front elevation of the piano-plate with the hangers for carrying the "action" attached; Fig. 2, a side elevation of one of said hangers; and Fig. 3, the same, showing the bolt-sleeve in section.

My invention relates to the mode of fastening the action-hangers; and the nature of my said invention will be fully understood from the following specification.

As shown in the drawings, A is the metallic plate commonly used for holding the strings; B, hangers for carrying the action; C, bolts fixed in the plate A for attaching the hangers thereto; D, sleeves or sockets surrounding the bolts C and interposed between the plate A and hangers B; E, strips secured to the hangers; F, the key-board attached to the bottom of the hangers.

The plate A is secured to the frame of the piano in the usual manner, and to it are attached, in the customary mode, the strings of the instrument.

The hangers B, for the purpose of obtaining the greatest strength with the least weight of material, are made of metal, substantially in the open ornamental form shown in the drawings. At the upper end of each hanger there is an eye, *b*, for receiving the bolt by which the hanger is secured to the plate A. The bolts C, of the kind commonly known as "stud" or "standing" bolts, may be either screwed into holes that are tapped in the plate A, or they may be secured in said plate by casting them in—that is to say, by placing the bolts in their required positions in the mold for the plate and then allowing the molten metal to involve them in the process of casting.

The socket or sleeve D may be made of metal, wood, hard rubber, or other suitable material. It should fit the bolt close enough to prevent any jarring or rattling sound, and its length will be determined by the distance required between the plate A and eye *b* of the hanger.

A nut, *c*, on the outer end of the bolt C binds the eye of the hanger against the end of the sleeve D, and secures the hanger firmly to its required place on the plate A. The lower end, *b'*, of the hanger is secured to the key-board F, to which and to the strip E the several parts of the action may be fixed in the customary manner.

When desired, either a greater or lesser number of hangers B than is shown in Fig. 1 may be used for securing the action to the plate A.

I am aware that upright piano-fortes have heretofore been constructed with hangers for carrying the action, secured in place by means of adjustable screws; but in that earlier construction the screws were inserted in the wooden wrest-plank, and the adjustment was effected by turning the screws into or out of the wrest-plank, as occasion required.

I claim as my invention—

1. The combination, with the metallic plate A and hangers B, each provided with an eye, *b*, as described, of the stud-bolts C, rigidly fixed in the plate A, and the sleeves D, as and for the purpose herein specified.

2. In an upright piano-forte, the metallic plate A, provided with fixed stud-bolts C, the hangers B, and sleeves D, all combined and arranged as herein specified.

EDWARD McCAMMON.

Witnesses:
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