J. D. ELLIOT.

PIANO-ACTIONS.

No. 193,495. Patented July 24, 1877.

fig. 1

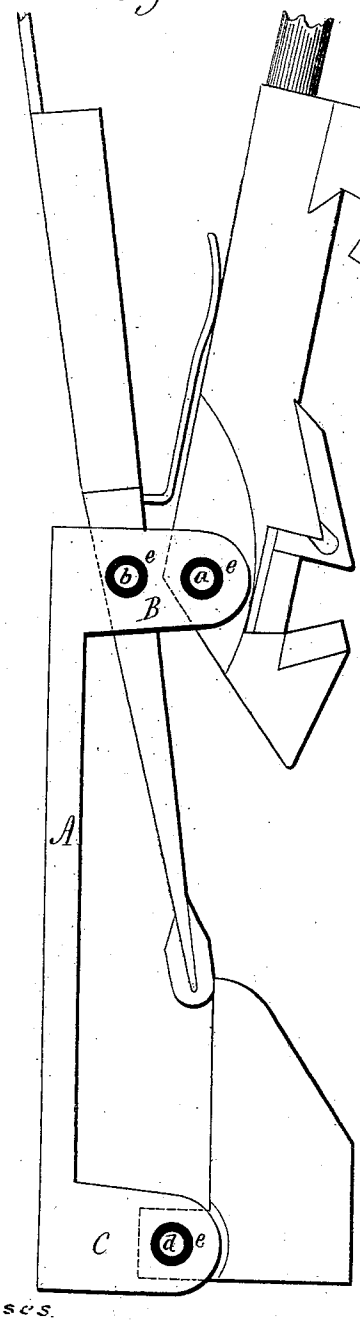
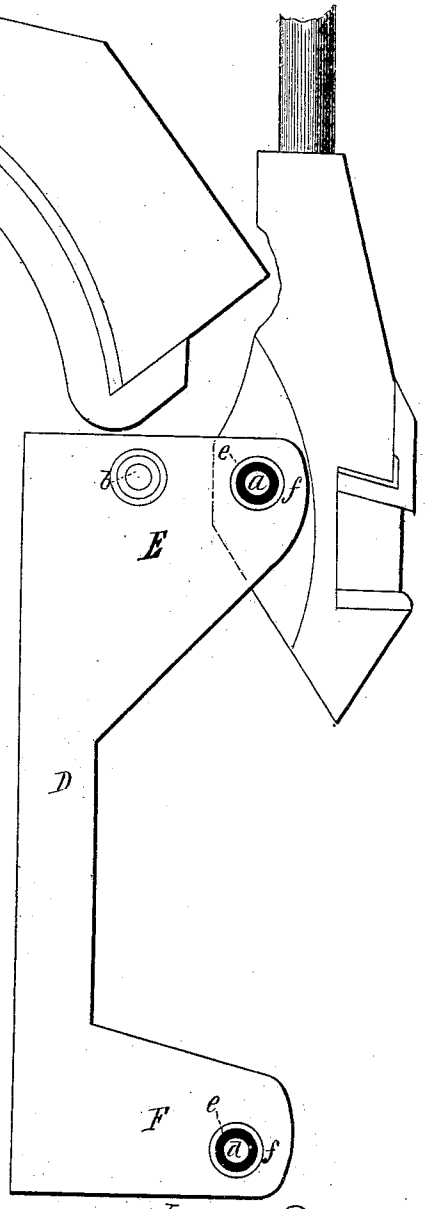


fig. 2



Witnesses.

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Clara Broughton.

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UNITED STATES PATENT OFFICE.

JOSEPH D. ELLIOT, OF NEWTON, ASSIGNOR TO THE ROGERS UPRIGHT PIANO COMPANY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN PIANO-ACTIONS.

Specification forming part of Letters Patent No. **193,495**, dated July 24, 1877; application filed February 28, 1877.

To all whom it may concern:

Be it known that I, JOSEPH D. ELLIOT, of Newton, in the county of Middlesex and State of Massachusetts, have invented a new Improvement in Piano-Action; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent a side view, as arranged on a wood block.

This invention relates to an improvement in the method of mounting the action of pianos. This has heretofore been done in wood stands. The bearing for the pivots wears away after a time, and so loosens the action as to practically injure the instrument. Again, the wood is liable to shrink and swell or twist by the action of the atmosphere, and thereby bind the pivots, and prevent the free movement of the parts.

The object of this invention is to provide a metallic bearing for the pivots of the action; and it consists in a metal bearing of larger diameter than the pivot, combined with a bushing of soft or flexible material, such as felt, &c., as more fully hereinafter described.

D represents the stand, provided with ears E F, and in which the action is supported in the usual manner. The pivot-holes are bored considerably larger than the pivots, and the holes are first bushed with metal, as represented at *f*, and within this metal bushing *f* the flexible or soft bushing *e* is arranged around the pivot. This metal bushing is of sufficient strength to prevent the expansion or contraction of the wood binding the pivot, and the flexible material prevents the contact of the metal pivot with the metal bushing.

I claim—

In a piano-action, the combination of the metallic bushing *f* with the bushing *e* of flexible material, within which the pivots of the parts of the action are arranged, substantially as specified.

JOS. D. ELLIOT.

Witnesses:
A. E. MANNING,
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