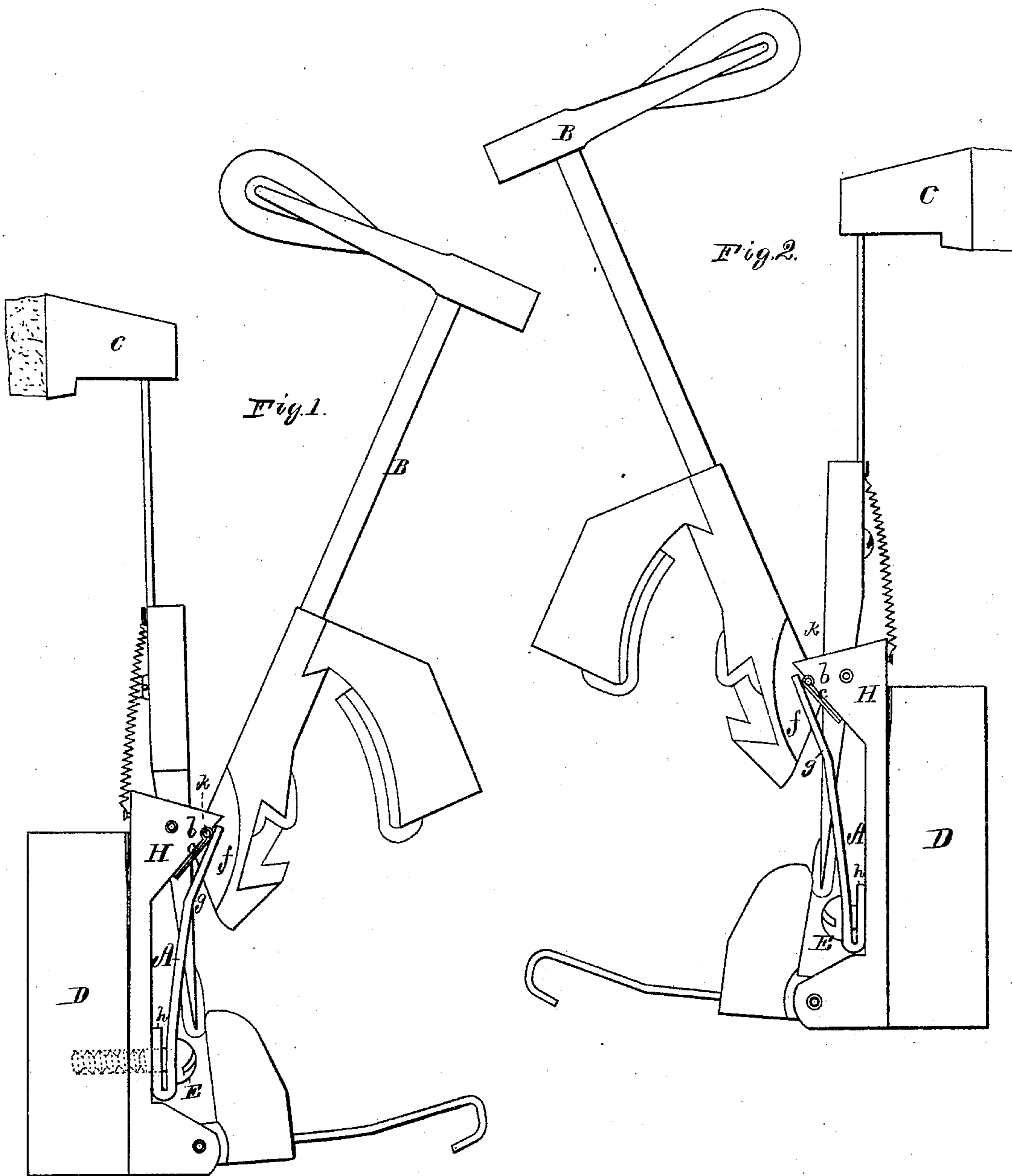


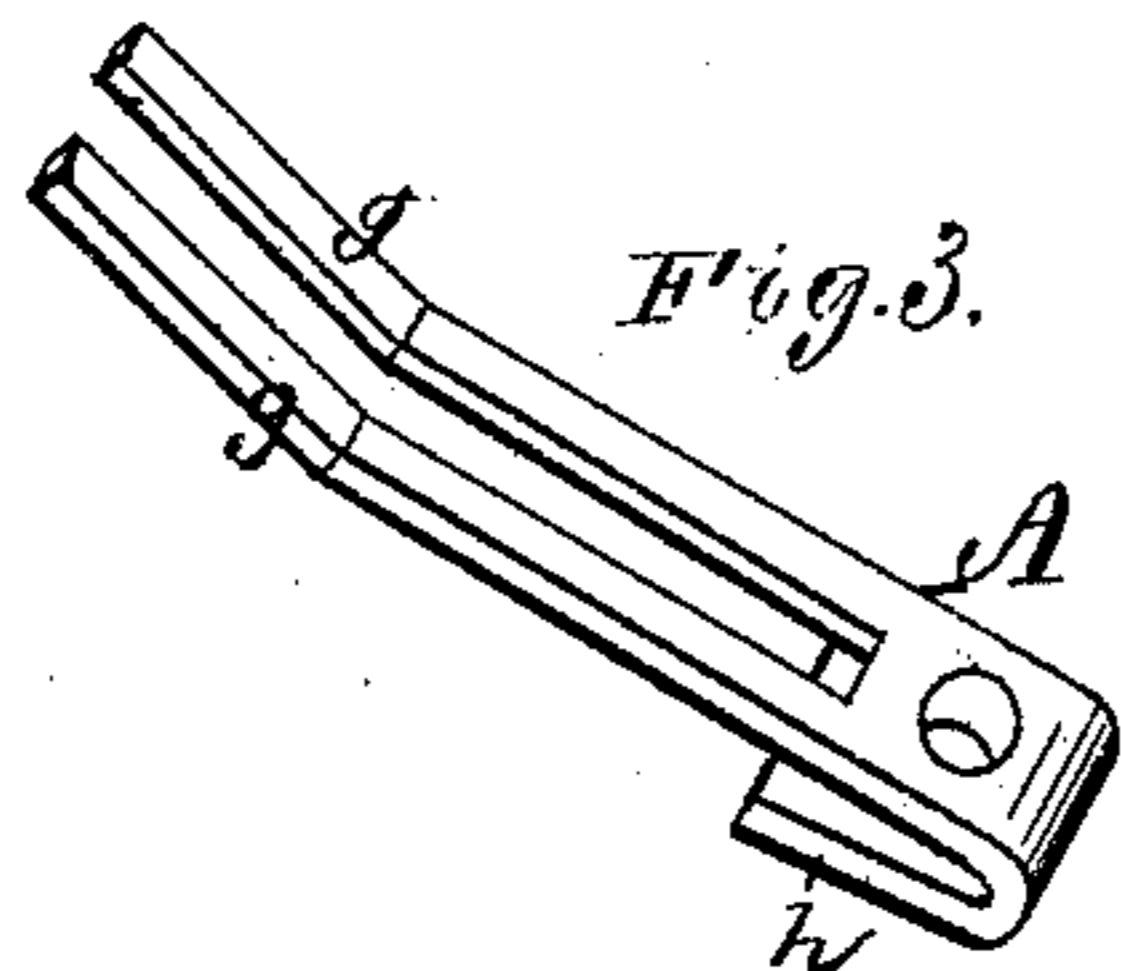
C. E. ROGERS.
UPRIGHT-PIANO ACTION.

No. 171,046.

Patented Dec. 14, 1875.



Witnesses:
S. W. Piper
L. W. Mallett



Charles E. Rogers
by his attorney
R. H. Ledy

UNITED STATES PATENT OFFICE.

CHARLES E. ROGERS, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO THE
ROGERS UPRIGHT-PIANO COMPANY, OF SAME PLACE.

IMPROVEMENT IN UPRIGHT-PIANO ACTIONS.

Specification forming part of Letters Patent No. **171,046**, dated December 14, 1875; application filed
October 28, 1875.

To all whom it may concern:

Be it known that I, CHARLES E. ROGERS, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Upright Piano-Forte Actions; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawings, of which—

Figures 1 and 2 are opposite side elevations of an action with my improvement. Fig. 3 is a perspective view of the hammer-pivot forked metallic spring, to be hereinafter described.

My invention relates to a device for preventing the pivot-pin of the hammer from being pinched or bound in its bearings, by reason of expansion of its wooden supporter during atmospheric or by hygrometric changes, such being very liable to take place and impede the correct and easy operation of the hammer, as the pivoted pin thereof has heretofore been variably supported.

My invention may be said to consist in the combination of two elastic springs, or a furcated elastic spring or bearer, or such and an auxiliary spring and a screw, as hereinafter explained, with the hammer and its support-piece, such springs or furcated elastic spring, with the said support-piece, being to sustain the pivot under expansion or contraction of the latter.

In Fig. 1 of the drawings, B denotes the hammer; C, the damper; D, the support-rail or bar; *f*, the tail-block of the hammer; and H, the support-piece of the hammer and its pivot *b*. The pivot-pin *b* of the hammer is, as usual, fastened in the tail piece *f*, and projects therefrom in opposite directions, and turns with the hammer. Each of the journals of such pivot-pin, covered with a strip of cloth, carried around it in manner as represented at *c* in Figs. 1 and 2, rests in a semi-circular or arcal bearing, *k*, in the part H, and is kept therein by the elastic prongs *g g* of a forked spring, A, arranged with it in manner as represented. The spring A, at its base or lower part, is bent up, or has an auxiliary

spring, as shown at *h*, and it has a screw, E, going through it and the part *h*, and into the parts H and D. The screw E serves to confine the forked spring A to the support-piece H, while the spring and the screw confine the said part H to the rail D.

By screwing up the screw E the elastic prongs *g g* may be borne against the coverings of the journals of the pivot-pin of the hammer, with any desirable degree of force. In case of expansion of the support-piece H, the pivot-pin and the elastic prongs *g g* will give way, either in one direction or the other, and, as a consequence, the journals of the pin will not be bound in their bearings, so as to impede the hammer in its action.

The spring being bent up, as shown at *h*, it can contract and expand at its base part under the action of the clamp-screw E, and, therefore, it will hold the support-piece firmly against the rail D, or keep the said support-piece in place, while the said screw may be turned to vary the pressure of the prongs *g g* on the journals of the pivot *b*.

As the cloth covers or strips *c c* may become worn or compacted by the journals of the pivot, the screw E may, from time to time, be set up, as may be required, in order to compress the said covers on the journals, so as to keep the hammer from swaying out of its normal or proper course, while the said hammer may be in movement toward its string.

Separate springs may be used in the place of the forked spring A, or one to each journal of the pivot; and may be confined to the piece H by one or more screws in each; but I prefer the forked spring constructed as described and shown, and particularly with the bent part or auxiliary spring *h*, the latter being productive of advantage, as hereinbefore stated.

I claim as my invention or improvement in the piano action as follows, viz:

1. The springs *g g*, in combination with the hammer pivot-pin *b* and pivot-supporter H, provided with the arcal bearings *k*, all constructed and arranged as set forth.

2. The forked spring A, provided with the prongs *g g* and the bent part or auxiliary spring *h* extended from the base portion, all in manner as represented.

3. The combination of the said forked spring A, its spring *h*, and fastening-screw E, with the rail D, and with the pivot-supporter H,

provided with the bearings *k* for reception of the pivot-pin *b* of the hammer B, all being substantially as specified.

CHARLES E. ROGERS.

Witnesses:

R. H. EDDY,
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