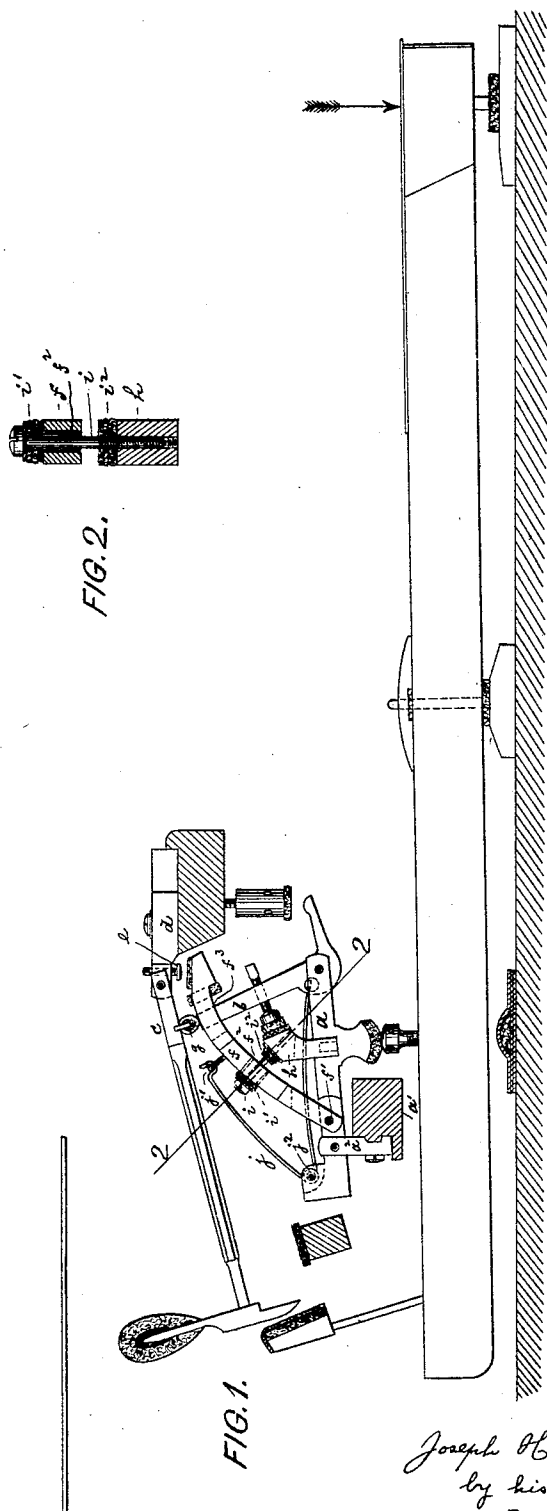


(No Model.)

J. HERRBURGER.
GRAND PIANO.

No. 571,163.

Patented Nov. 10, 1896.



Witnesses:
John Becker
Willie Miller.

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UNITED STATES PATENT OFFICE.

JOSEPH HERRBURGER, OF PARIS, FRANCE.

GRAND PIANO.

SPECIFICATION forming part of Letters Patent No. 571,163, dated November 10, 1896.

Application filed August 15, 1896. Serial No. 602,848. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH HERRBURGER, of Paris, France, have invented an Improved Action for Grand Pianos, of which the following is a specification.

This invention relates to an action for grand pianos which embraces various features of novelty, and has for its object to avoid friction between the repeating-lever and the hammer-butt-regulating screw, to provide a guide for the repeating-lever, and to obtain a superior spring action for such lever and the jack.

In the accompanying drawings, Figure 1 is a side elevation of my improved action for grand pianos. Fig. 2 is a cross-section on line 2 2, Fig. 1.

The letter *a* represents the rider of a grand-piano action pivotally connected to rail *a'* by flange *a*².

b is the jack; *c*, the hammer-shank; *d*, the hammer-butt, and *e* the butt-regulating screw.

The repeating-lever *f* is pivoted directly to the rider *a*, as at *f'*, and is not made straight as heretofore, but is curved or bulged outwardly, so that its convex upper side reaches beneath the hammer. By means of this curved shape of the lever *f* I obtain, moreover, a space for a post *h*, that projects upwardly from the rider *a* between the lever and the jack. This

post is provided with a screw-hole that receives the end of a regulating-screw *i*, which extends through a bushed slot *f*² of lever *f* and carries the punchings or washers *i'* *i*². The screw *i* is used not only as a regulating

device to adjust the position of the lever *f*, but it also constitutes a guide for such lever, keeping it always in a true position under the knuckle *g*. That is to say, the screw will prevent the lever from turning or twisting to either side either by the warping of the wood or by imperfect or worn-out centers, and thus avoids frictional contact between the jack and the inner sides of the slot *f*², through which it passes.

j is a bent spring that engages both the lever *f* and the jack *b*. This spring is connected at *j'* to the lever *f*, thence passes along the upper side of such lever around a pin *j*² of rider *a*, and thence along the upper side of the rider to the jack. Thus it will be seen that the spring is readily accessible and can be regulated with great facility. Moreover, the spring is of such a great length that it is of superior resiliency, is not apt to strain or wear out, and that it imparts a superior elasticity to the touch.

What I claim is—

1. In an action for grand pianos, the combination of a rider with an outwardly-bulged repeating-lever pivotally connected to said rider, substantially as specified.

2. In an action for grand pianos, the combination of a rider with an outwardly-bulged and slotted repeating-lever, and with a regulating-screw that extends through said lever, substantially as specified.

3. In an action for grand pianos, the combination of a rider with a post projecting upwardly therefrom, a screw engaging said post, and an outwardly-bulged repeating-lever engaged by the screw, substantially as specified.

4. In an action for grand pianos, the combination of a jack and rider with an outwardly-bulged repeating-lever pivoted to the rider, and with a bent spring engaging the repeating-lever and the jack, substantially as specified.

5. In an action for grand pianos, the combination of a jack and rider, with an outwardly-bulged repeating-lever, a regulating-screw engaging said lever, and a spring engaging both said lever and the jack substantially as specified.

JOSEPH HERRBURGER.

Witnesses:

A. WYK,
A. GERVais.