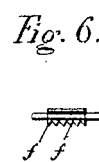
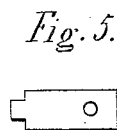
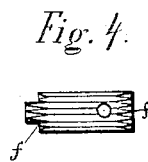
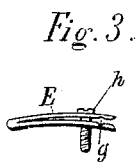
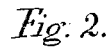


(No Model.)
E. & C. KELLER & G. E. BAUHAHN.

PIANO ACTION.

Patented Aug. 3, 1886.



Jas S. Ewbank
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UNITED STATES PATENT OFFICE.

EMANUEL KELLER, CONSTANTINE KELLER, AND GUSTAV E. BAUHAHN, OF
NEW YORK, N. Y.

PIANO-ACTION.

SPECIFICATION forming part of Letters Patent No. 346,753, dated August 3, 1886.

Application filed June 27, 1885. Serial No. 170,050. (No model.)

To all whom it may concern:

Be it known that we, EMANUEL KELLER, CONSTANTINE KELLER, and GUSTAV E. BAUHAHN, citizens of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Piano-Actions, of which the following is a specification, reference being had therein to the accompanying drawings.

Our invention relates to certain improvements appertaining to the device known as the "hammer-butt."

The invention is more particularly adapted to the action of an upright piano, but is also applicable to square or other pianos.

The invention consists in a novel construction of an attachment to the hammer-butt, whereby certain advantages are obtained, as hereinafter more particularly described, and represented in the accompanying drawings, in which—

Figure 1 is a side view of our invention; Fig. 2, an edge view; and Figs. 3, 4, 5, and 6, detail views.

The hammer-butt A and devices connected therewith are of the usual form and construction. The link B is connected to the hammer-butt A by a hinge-pivot, *c*. Heretofore the seat for this pivot has been a simple notch in the edge of the hammer-butt, covered by a plate secured by a screw.

In this invention we employ a double-acting spring-plate, E, which may be formed either by doubling a piece of metal or by splitting it for a portion of its length, or welding two pieces together at one end, so as to form two tongues or branches, and this plate is secured to the hammer-butt by a screw, *h*. The seat for

the pivot may be a single groove, *g*, in one end of the branches, or two grooves, one in each branch. The outer surface of the branch of the plate next to the butt is provided with sharp teeth or longitudinal ridges *f*, as shown in Figs. 4 and 6. When the plate is secured to the butt, the teeth *f* take hold of the wood with sufficient firmness to prevent it from slipping or turning on the wood.

The plate E may be made of metal or any other suitable elastic material. By making it in the forked or branched form the screw can be tightened, so as to cause the pivot and its seat to fit with exact nicety, and the elasticity of the spring prevents the screw from becoming loose.

What we claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a piano-forte action, with the hammer-butt, of a forked or branched spring-plate applied directly to the hammer-butt, and provided with a groove or grooves forming the seat for the pivot, arranged and operating substantially as herein shown and described.

2. The combination, in a piano-forte action, with the hammer-butt, and applied thereto, of the plate E, provided with longitudinal ridges or teeth *f*, substantially as and for the purpose herein described.

In testimony whereof we affix our signatures in presence of two witnesses.

EMANUEL KELLER.
CONSTANTINE KELLER.
GUSTAV E. BAUHAHN.

Witnesses:

FRANCIS C. BOWEN,
SAM'L. L. THOMAS.