

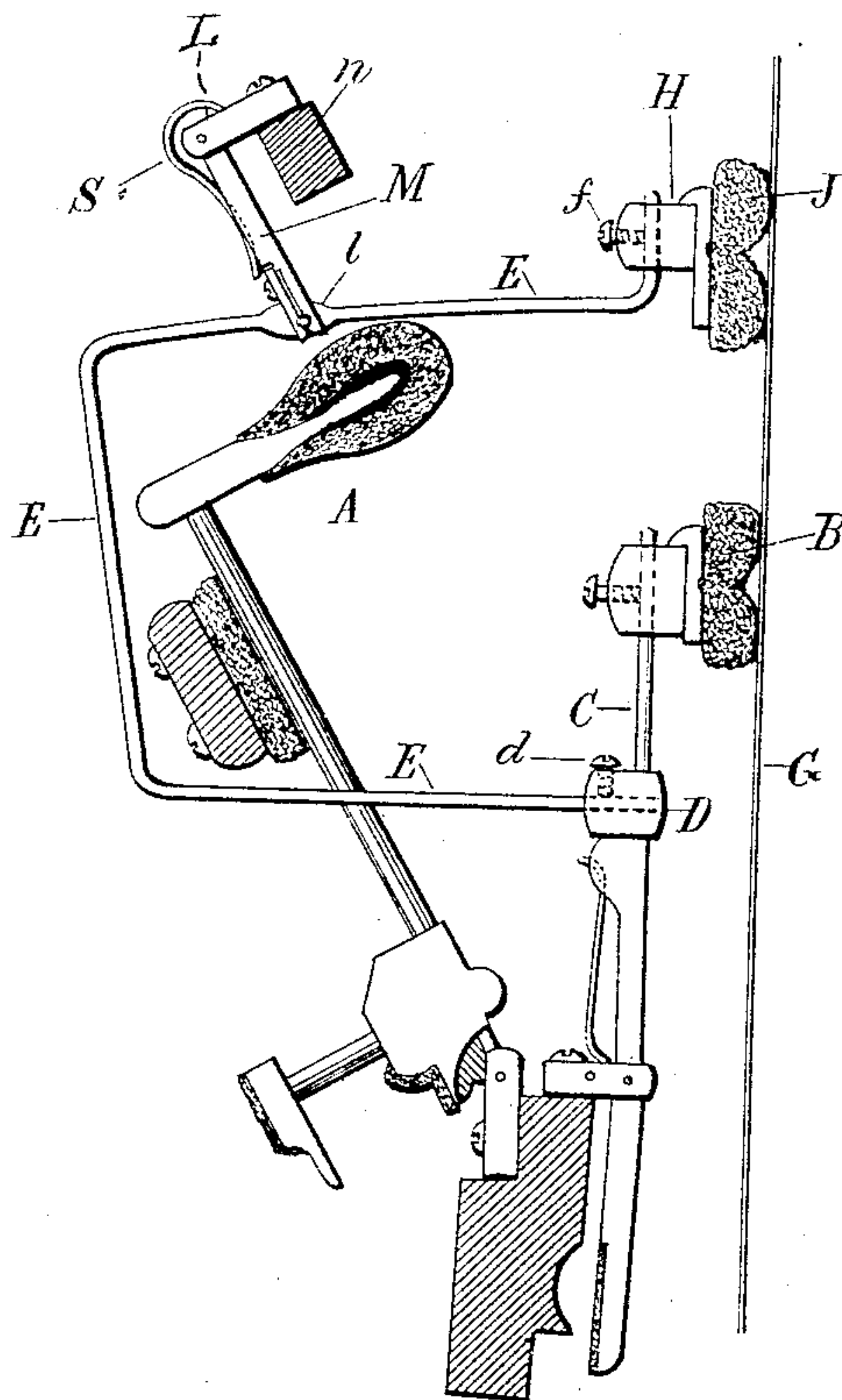
(No Model.)

E. & C. KELLER & G. E. BAUHAHN.

PIANO DAMPER.

No. 348,676.

Patented Sept. 7, 1886.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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

## PIANO-DAMPER.

SPECIFICATION forming part of Letters Patent No. 348,676, dated September 7, 1886.

Application filed August 14, 1885. Serial No. 174,450. (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 drawing.

Our invention relates to the arrangement of two or more dampers in connection with devices for operating the same, as hereinafter fully described.

The accompanying drawing represents an elevation of my invention as applied to an upright piano.

The hammer A and the primary damper B and their connections are of the usual construction, and their arrangement is the same as that which is usually employed in upright pianos.

To the rod C, which carries the damper B, is attached by a block, D, and a screw, *d*, one end of a wire rod, E, which extends horizontally toward the left-hand side of the figure, thence upward, and thence horizontally toward the right-hand side of the figure to a point near the piano string G, where it is bent upward and has attached to it by a block, H, and screw *f* the secondary or auxiliary damper J.

By the arrangement here shown the two dampers B and J are above and below the point where the hammer A strikes the strings G, both dampers being carried practically by one and the same support and being on one and the same side of the piano-string, the hammer striking the string midway between the dampers. By this arrangement the vibration of the string is arrested and the sound is deadened more effectually than where only one damper is used.

At a suitable point in the upper horizontal

portion of the wire rod E, between the upright portion and the end which carries the secondary damper, the rod E is flattened vertically, and to this flattened portion is pivoted the lower end of a swinging bar or rod, M, the upper end of which is pivoted to an arm, L, carried by a bar, *n*, which extends the entire length of the action-frame.

To the arm L is attached one end of a curved spring, S, the other of which bears against the rod M above the pivot. This spring tends to keep the upper damper, J, against the string G by its action on the wire E, through the bar M, and thus insure more effectually the deadening of the sound by arresting the vibrations of the string, while the pivoted condition of the bar M permits it, together with the spring S, to accommodate itself to the withdrawal of said damper.

We are aware that two dampers to each hammer are old in piano-actions, and we do not claim such, broadly, as our invention.

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

1. In a piano-action, the combination, with a secondary or auxiliary damper, of rod E, the swinging bar M, acting on said rod, and spring S, acting on said bar M, substantially as and for the purpose herein described.

2. The combination, with hammer A and primary damper B, of the auxiliary damper J, the bent rod E, connecting said auxiliary damper to the primary damper, the swinging bar M, connected to said rod to act thereon, and the spring S, acting on said bar, substantially as and for the purpose described.

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

EMANUEL KELLER.  
CONSTANTINE KELLER.  
GUSTAV E. BAUHAHN.

Witnesses:

FRANCIS C. BOWEN,  
JAS. S. EWBANK.