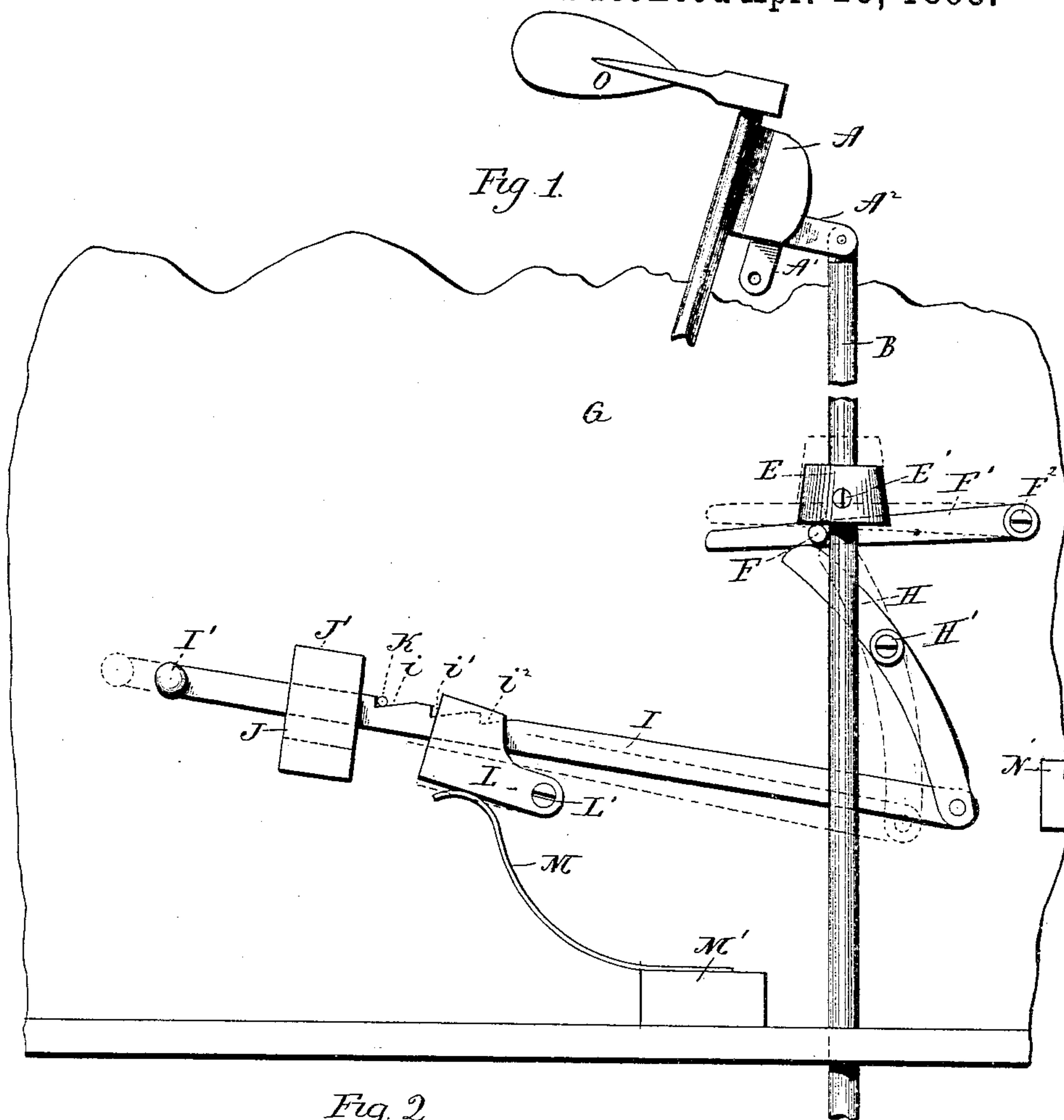


(No Model.)

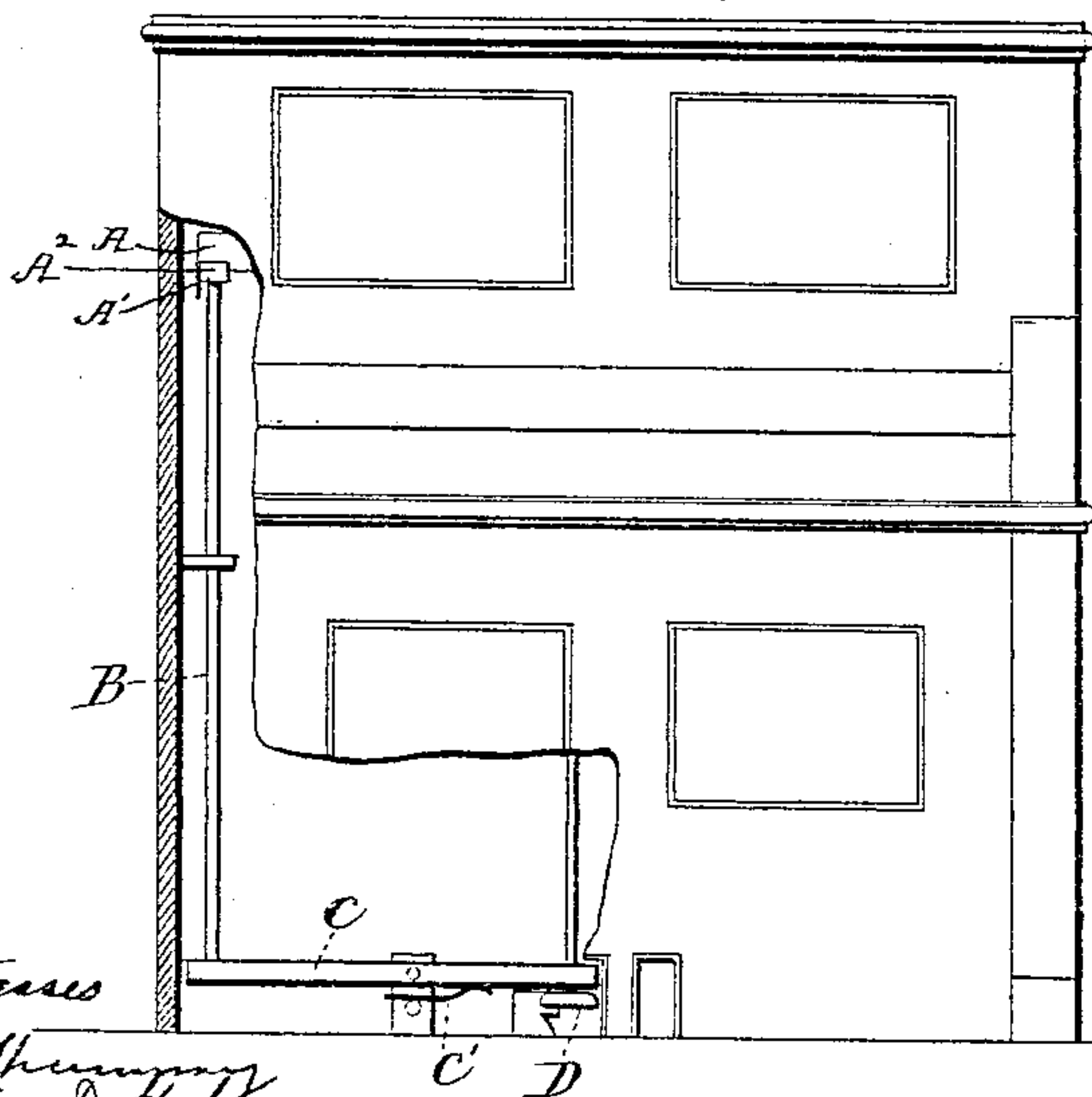
E. SANDNER.  
TONE REGULATOR FOR PIANOS.

No. 496,171.

Patented Apr. 25, 1893.



*Fig. 2*



Witnesses

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J. C. Kelly & Seymour



# UNITED STATES PATENT OFFICE.

EMIL SANDNER, OF WEST HAVEN, CONNECTICUT.

## TONE-REGULATOR FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 496,171, dated April 25, 1893.

Application filed January 16, 1893. Serial No. 458,450. (No model.)

*To all whom it may concern:*

Be it known that I, EMIL SANDNER, of West Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Tone-Regulators for Pianos; and I do hereby declare the following, when taken in connection with 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, in—

Figure 1, a view partly in side elevation and partly in section of a tone-regulator constructed in accordance with my invention; Fig. 2, a view in front elevation on a reduced scale of an upright piano, portions of which are broken away to show the connection between its soft-pedal and rest-rail.

My invention relates to an improvement in tone-regulators for piano-fortes, the object being to produce a simple, convenient and durable device, not liable to derangement, and adapted to be set to produce soft, medium, and very soft tones, and particularly designed to be used in practicing.

With these ends in view, my invention consists in the combination with a rest-rail and action-rod, of a lifting-lever arranged to lift the said rod, an operating-lever located below the lifting-lever which rests upon its upper end, a handle-lever connected with the lower end of the operating-lever and constructed with notches, and a pin located in the piano-frame for engagement with the notches of the piano-lever.

My invention further consists in certain details of construction and combinations of parts as will be hereinafter described and pointed out in the claims.

In carrying out my invention, I employ a rest-rail A, provided at its opposite ends with depending ears A', by means of which it is hung in the piano-frame, so as to be swung forward and back toward and away from the strings thereof. At one end this rail is provided with an operating-arm A<sup>2</sup>, which normally engages with the upper end of a vertically movable action-rod B, the lower end of which is connected with the outer end of a horizontal pedal-lever C, the inner end of which is engaged by the soft pedal D, of the

piano-forte. The construction thus far described is old and well known. With it I associate my mechanism. Thereto I provide the action-rod with a vertically movable lifting-block E, which is secured in place by a screw E'. The lower face of the said block is engaged by a horizontal lifting-pin F, mounted in the outer end of a horizontal lifting-lever F', hung to the piano-frame G, by means of a screw F<sup>2</sup>. The outer end of the said lifting-lever rests upon the beveled upper end of an operating-lever H, hung between its ends on a horizontal screw H', which enters the piano-frame G. A handle-lever I, connected at its inner end with the lower end of the operating-lever H, is provided at its outer end with a handle I', by means of which it is operated. As herein shown, the said lever passes through a recess J, formed in the end of the key-slip J', the said recess being adapted to permit the said lever to be moved up and down within narrow limits. Three notches i i' i<sup>2</sup> formed in the upper edge of the lever, adapt the same to be locked in three different positions, for producing three different tones, by engagement with a pin K, mounted in the piano-frame G. A dog L, having the upper portion of its inner face cut away, is adapted to engage with the lower edge of the lever I, for which it forms a guide, the said dog being hung on a screw L', entered into the piano-frame G, and constantly lifted against the lever by means of a spring M, engaging with the lower face thereof, and attached at its lower end to a block M', secured to the piano-frame. A stop N, secured to the piano-frame in line with the inner end of the handle lever I, limits the inward movement thereof.

The rail A, is hung so that its natural tendency is to tip away from the strings, whereby its operating-finger A<sup>2</sup>, is normally engaged with the upper end of the action-rod B, the same being sustained in a normally depressed position by its own weight, and by the action of a small spring C', upon the pedal-lever C. When the rest-rail is thus tipped back, the hammers O, of the instrument make their full stroke, and produce the ordinary tones of the piano. At this time the notches of the handle-lever will be disengaged from the pin K, and the inner end of the said lever engaged with the stop N. If now it is desired



to reduce the tone of the piano, the handle lever is drawn outward, and one of its three notches  $i^1$  or  $i^2$ , engaged with the pin K, according as it is desired to make the tone of the instrument soft, medium, or very soft. 5 As soon as the notch representing the tone desired is brought under the pin, the lever is allowed to rise under the action of the spring M, so that the notch and pin will coact to lock 10 the lever against inward movement, the lever being sustained in this locked position until it is manually depressed to clear the notch from the pin. When the lever is pulled out, the operating-lever H, is turned on its pivot, 15 with the effect of lifting the lever F', the lifting-pin F, whereof presses against the under face of the lifting-block E, which in turn lifts the action-rod B, against the operating-finger A<sup>2</sup> of the rest-rail, which is thus thrown forward more or less, according to the outward 20 movement of the handle-lever. When the said handle-lever is allowed to move inward, the operating-lever permits the lifting-lever to drop down a little, whereby the action-rod is permitted to descend, and let the rest-rail 25 gravitate away from the strings.

It will thus be seen that by means of my invention I may set the piano so to speak, to produce a soft, medium, or very soft tone. 30 If there were any need of it, I could produce still more degrees of tone by adding to the number of notches. At the same time, my improvement does not interfere with the ordinary operation of the action-rod and rest-rail in combination with the pedal in producing soft-pedal effects, for when the handle-lever of my improved device is allowed to 35 move inward until its inner end abuts against the stop, it is virtually retired and cut out of operation, and no more affects the action of 40 the piano than if it were not present.

Obviously in carrying out my invention, I

may make some slight changes in the construction and arrangement of parts herein shown and described, and I would therefore have it 45 understood that I do not limit myself to the same, but hold myself at liberty to make such alterations therein as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what 50 I claim as new, and desire to secure by Letters Patent, is—

1. In a tone-regulator for pianos, the combination with a rest-rail and action-rod, of a lifting-lever arranged to lift the said rod, an 55 operating-lever located below the lifting-lever which rests upon its upper end, a handle-lever connected with the lower end of the operating-lever and constructed with notches, and a pin located in the piano-frame for engagement 60 with the notches of the piano-lever, substantially as described.

2. In a tone-regulator for pianos, the combination with a pivotal rail and an upright action-rod, of a lifting-lever connected with 65 the said rod for lifting the same, an operating-lever upon the upper end of which the said lifting-lever rests, a handle-lever connected with the lower end of the operating-lever, and having its upper edge constructed 70 with notches, a fixed pin arranged for engagement by the said notches, and a spring-actuated dog located below the handle-lever for lifting the same for the engagement of the said notches with the said pin, substantially 75 as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

EMIL SANDNER.

Witnesses:

GEO. D. SEYMOUR,  
FRED. C. EARLE.