(No Model.)

A. H. STUART.

TONE MODIFYING ATTACHMENT FOR PIANOS.

No. 568,050. Patented Sept. 22, 1896.

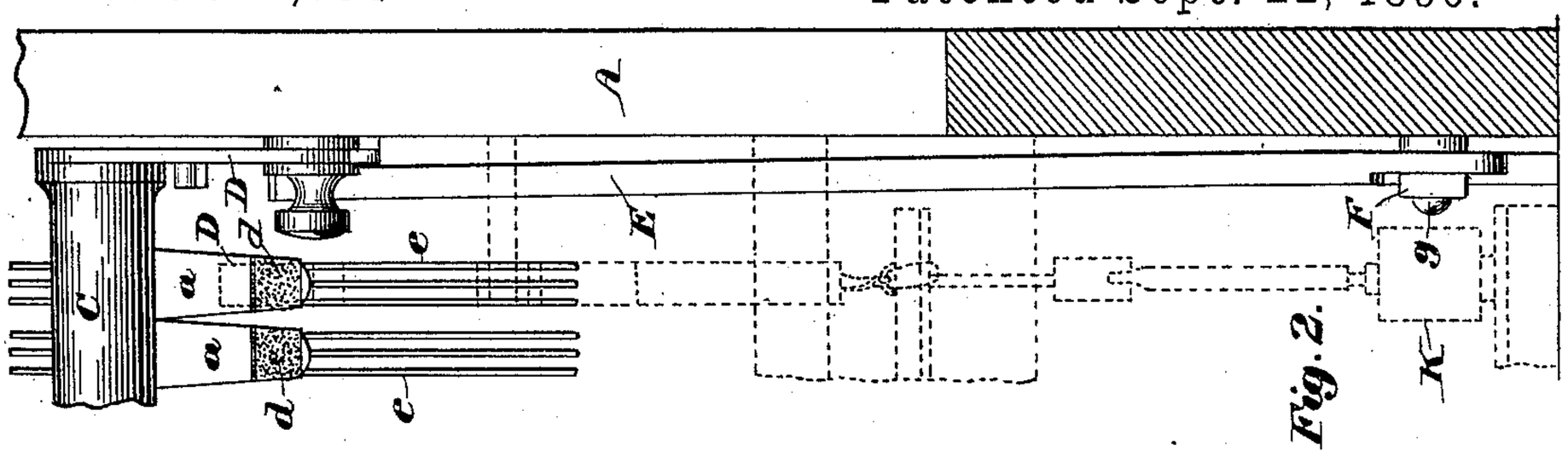

Fig. 2.

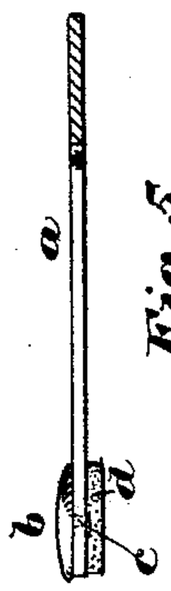

Fig. 5.

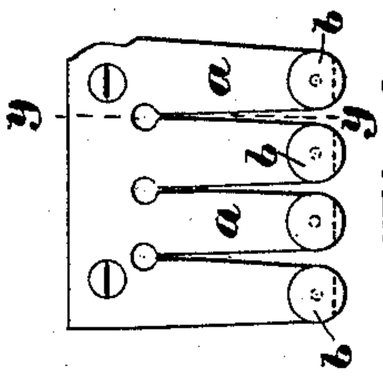

Fig. 4.

Fig. 3.

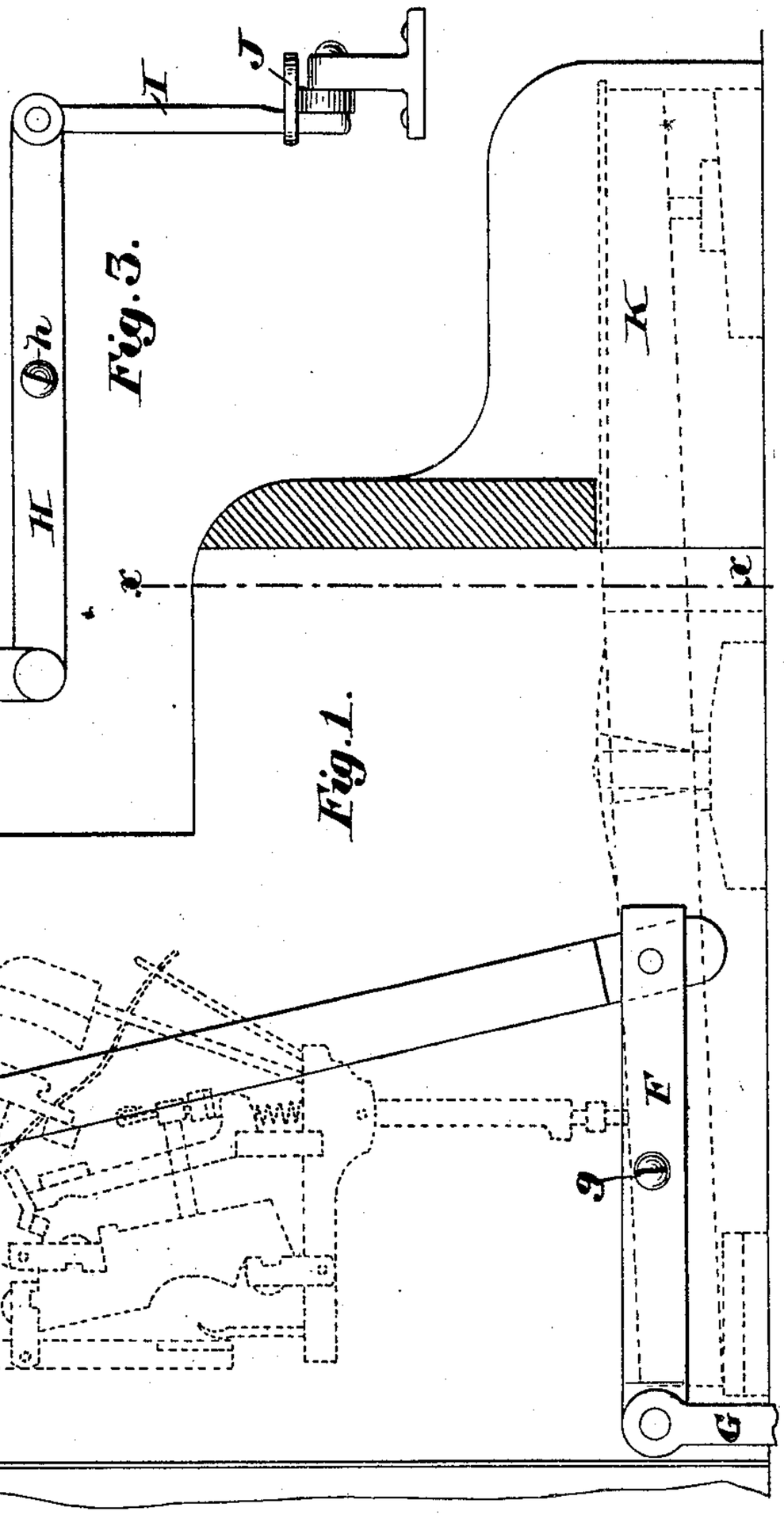

Fig. 6.

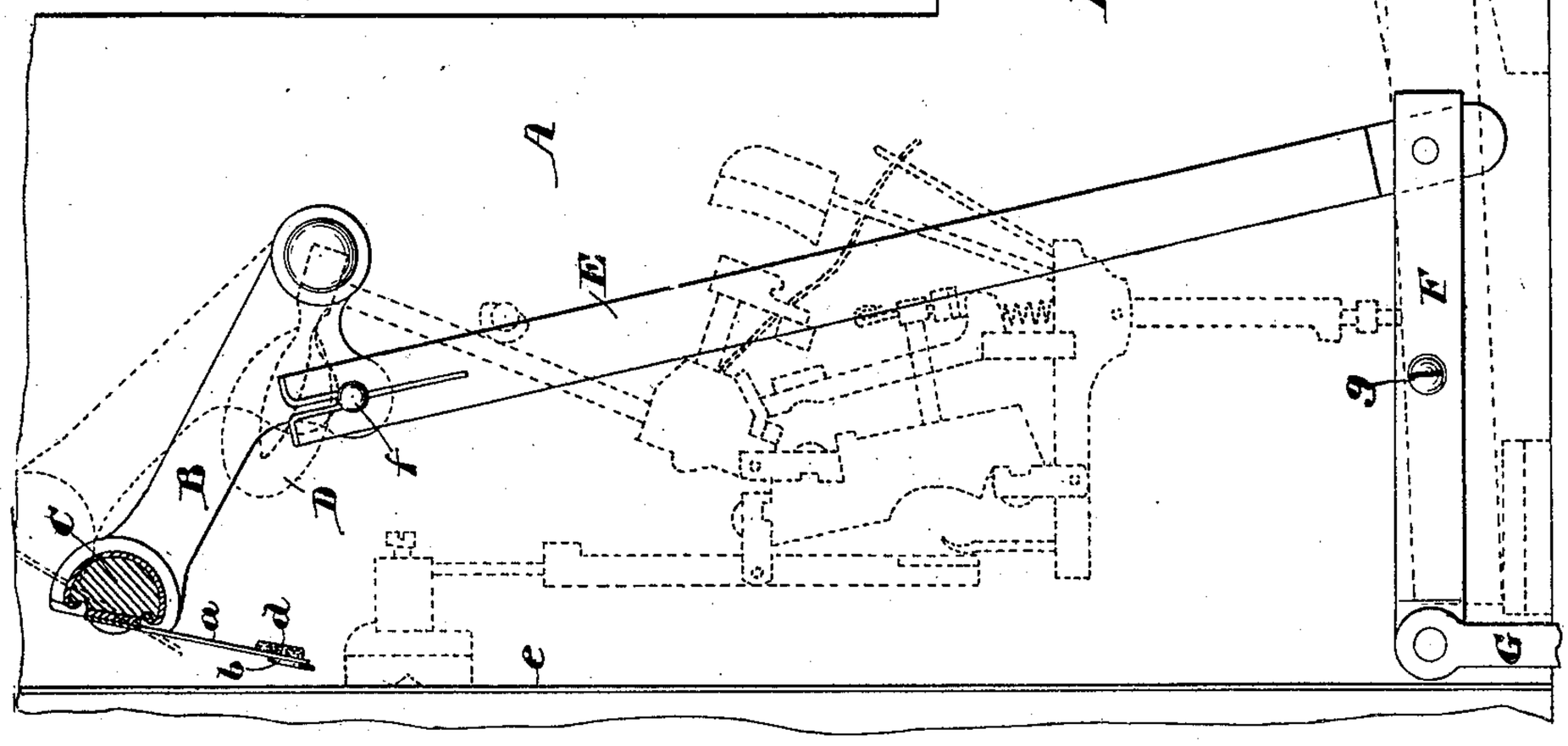

Fig. 1.

Witnesses:
Walter E. Lombard
Geo. L. Cooke.

Inventor:
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UNITED STATES PATENT OFFICE.

ALBERT H. STUART, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO ABBIE H. STUART, OF SAME PLACE.

TONE-MODIFYING ATTACHMENT FOR PIANOS.

SPECIFICATION forming part of Letters Patent No. 568,050, dated September 22, 1896.

Application filed June 26, 1896. Serial No. 597,067. (No model.)

To all whom it may concern:

Be it known that I, ALBERT H. STUART, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Tone-Modifying Attachments for Pianos, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to tone-modifying attachments for pianos; and it consists in certain novel features of construction, arrangement, and combination of parts, which will be readily understood by reference to the description of the accompanying drawings, and to the claims hereto appended, and in which my invention is clearly pointed out.

Figure 1 of the drawings is a sectional elevation of a portion of the end wall of a piano-case and my tone-modifying attachment drawn in full lines with one key and its action shown in dotted lines. Fig. 2 is a sectional elevation of the same parts, the cutting-plane being on line *x x* on Fig. 1 and showing the piano key and action in dotted lines and a portion of the attachment in full lines. Fig. 3 is an elevation of the pedal and the parts connecting it to the attachment. Fig. 4 is an elevation of a group of the attachment-tongues as constructed from a single piece of material. Fig. 5 is a section of one of said tongues on line *y y* on Fig. 4 drawn to an enlarged scale, and Fig. 6 is an elevation of the button or thumb-tack to be secured to the celluloid tongues.

In the drawings, A is the end wall of the piano-case, to which is pivoted the lever B, to the free or movable end of which is secured one end of the rail C, the opposite end of which is secured to the free or movable end of another lever similar to B, which is in like manner pivoted to the opposite wall of the piano-case, but not shown in the drawings.

The rail C may be of any well-known construction and any suitable material, and has secured to its rear or inner side a series of pendent tongues *a a*, of celluloid, preferably connected at their upper ends or formed integral from a single piece of sheet-celluloid, as shown in Fig. 4. Each tongue *a* has secured to the rear side of its lower end the metal button or thumb-tack *b*, provided with the central spur *c*, (see Fig. 6,) said spur being passed through a perforation in said tongue and clenched thereto upon its front side, and said tongue has secured to its front side, directly opposite said metal button and so as to cover the clench of said spur, a pad of felt *d* or other soft cushioning material, against which the action-hammer D strikes when said tongue is depressed, so as to be interposed between said hammer and the string *e*.

The lever B is provided with the stud *f*, upon which is mounted one end of the rod E, the lower end of which is pivoted to one end of the lever F, fulcrumed at *g*, and having pivoted to its other end the upper end of the link G, the lower end of which is pivoted to one end of the lever H, fulcrumed at *h* beneath the keyboard and having its other end connected by the rod I to the pedal J, all constructed and arranged so that normally the lever B, rail C, and tongues *a a* will be in the positions indicated by dotted lines in Fig. 1, in which position they will be held by the reaction of a spring connected with the pedal, but not shown.

When the parts are in the positions above stated, if the key K be struck the hammer D will strike the string *e* direct and the normal tone will be produced, but when it is desired to modify the tone of the string the operator places his foot upon the pedal, thereby depressing the rail C, so as to interpose the tongues *a* between the hammers D and the string *e*, when if the key K be struck the hammer D will impinge upon the felt *d* on the tongue *a* and force the metal button *b* into contact with the string *e*, thereby producing a very agreeable modification of the tone of said string. This construction of the tongues *a* from celluloid and applying to their operating ends the metal buttons *b* and the felt cushions *d* to receive the blow of the hammer is very effective in producing a very desirable modification of the tone of the instrument, is comparatively inexpensive, and very durable.

The tone produced by the interposition of the celluloid tongues with the metal contact-buttons is very much preferable to that pro-

duced by all-metal tongues and the elasticity of the celluloid renders it equally serviceable.

The forming of a series of said tongues in one piece is quite a saving over the use of separate and independent tongues in that a less number of clamping-screws are required to secure them to the rail and a considerable saving of time is made in properly securing them in properly-adjusted position and when so secured cannot be easily displaced.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a tone-modifying attachment for pianos, a pendent tongue, to be interposed between the string and hammer, comprising a celluloid body a metal contact-button having a central spur inserted through and clenched to the free end of said body; and a pad of felt or other soft cushioning material secured to the opposite side of said free end of the pendent tongue and covering said clench.

2. In a tone-modifying attachment for pianos the combination with the strings, the action and a laterally-movable rail extending across the instrument in front of the strings and above the action-hammers, of a series of celluloid tongues formed integral or in one piece secured to and pendent from said rail; a metal contact-button secured to the rear side of the free end of each of said tongues by a central spur passing through said tongue and clenched thereto; and a cushion of soft material secured to the front side of the free end of each of said tongues and covering said clenched spur.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 25th day of June, A. D. 1896.

ALBERT H. STUART.

Witnesses:
N. C. LOMBARD,
L. C. GREENLEAF.