(No Model.)

C. C. POLK.

PIANO ATTACHMENT.

No. 589,751. Patented Sept. 7, 1897.

Fig. 6.

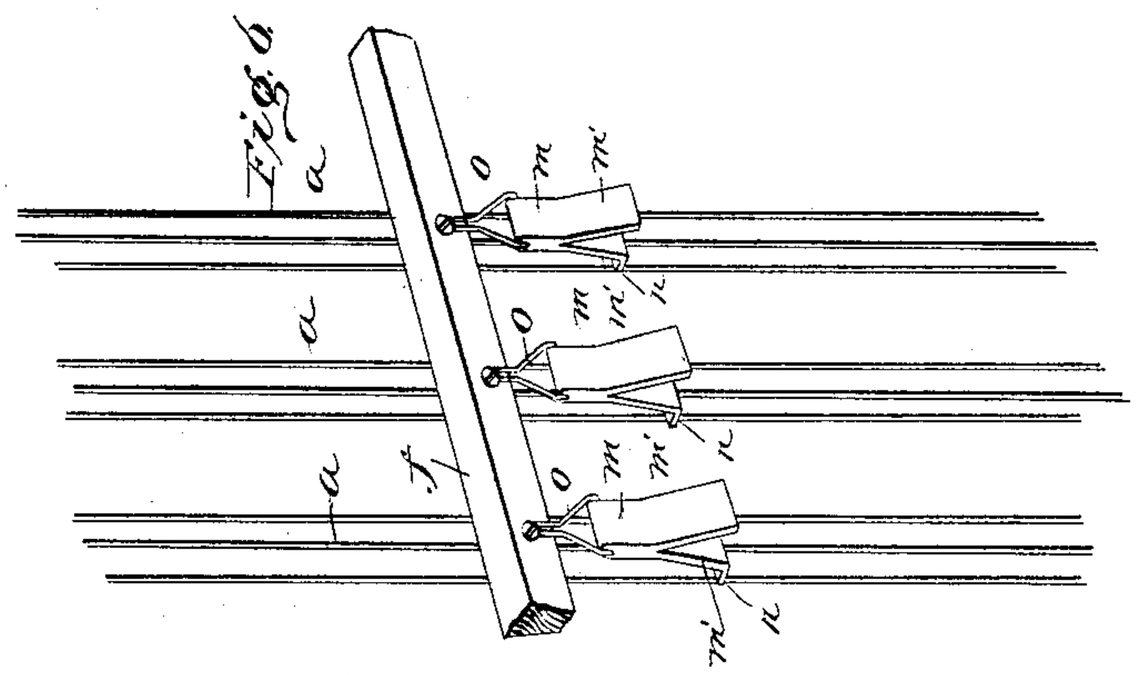


Fig. 3.

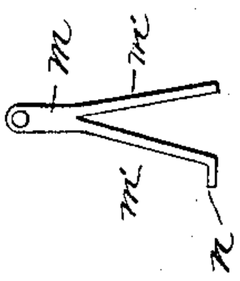


Fig. 4.

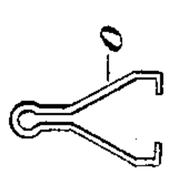


Fig. 5.

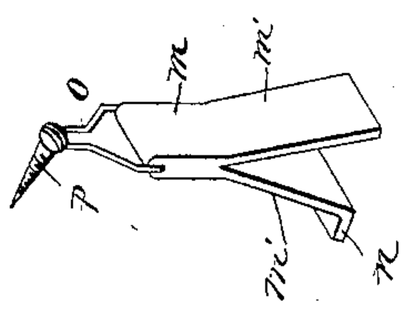


Fig. 2.

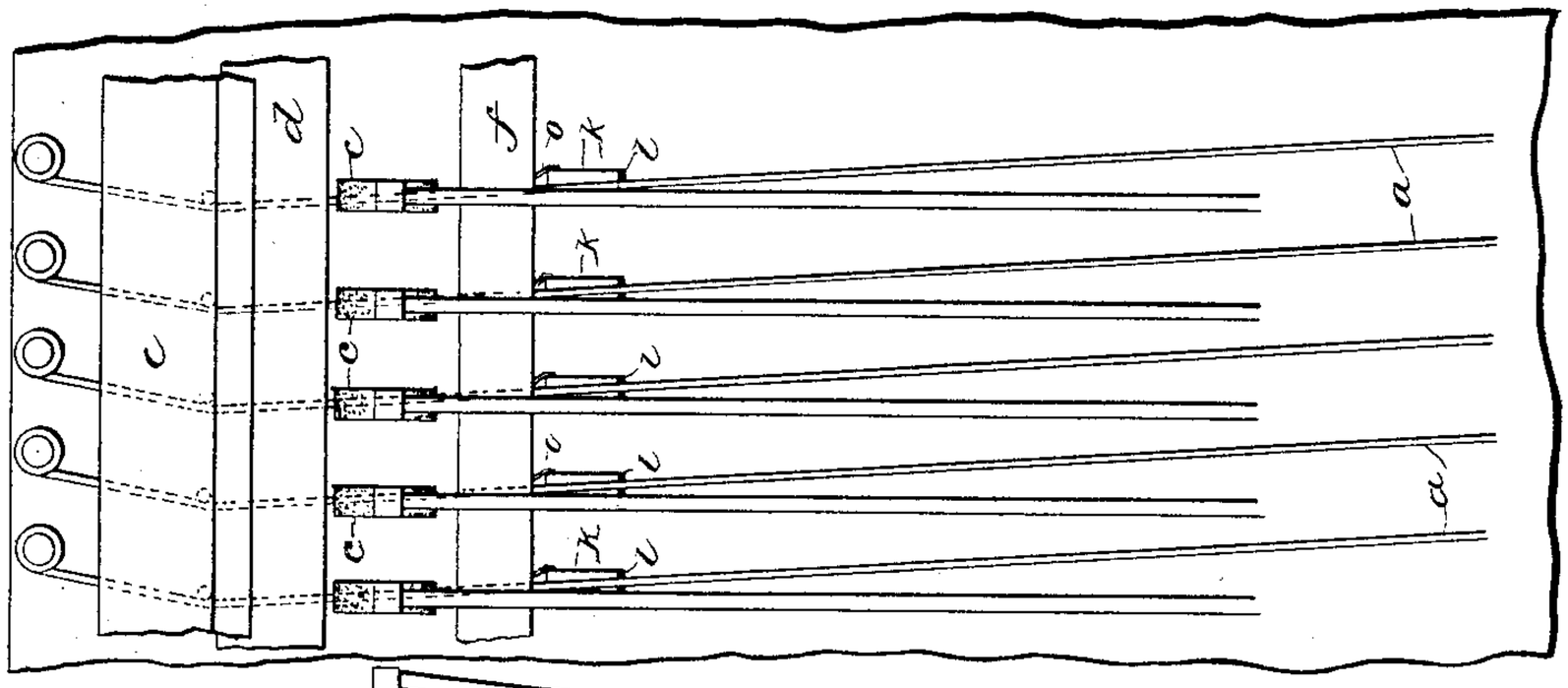
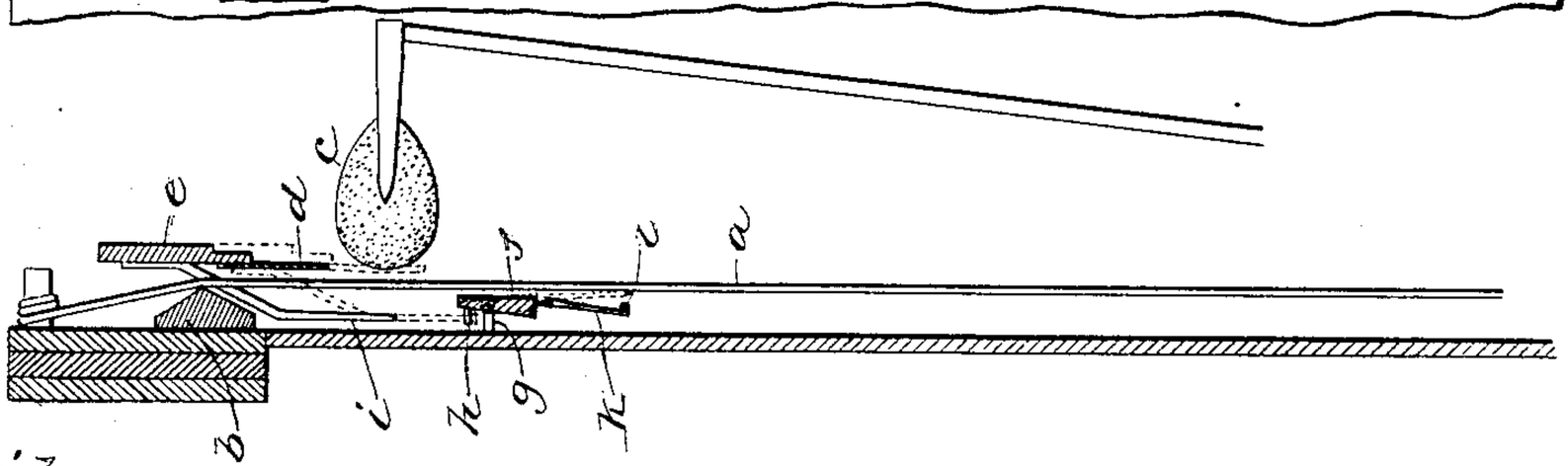


Fig. 1.



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UNITED STATES PATENT OFFICE.

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PIANO ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 589,751, dated September 7, 1897.

Application filed December 13, 1894. Serial No. 531,681. (No model.)

To all whom it may concern:

Be it known that I, CALEB C. POLK, of Valparaiso, in the county of Porter and State of Indiana, have invented certain new and useful Improvements in Piano Attachments; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

My invention has for its object to provide an attachment for pianos which when thrown into operation will cause the instrument to give forth tones having the peculiar quality of the tones of a mandolin; and it consists in a novel combination and arrangement of parts going to make up the attachment, which I will now proceed to describe.

Referring to the accompanying drawings, Figure 1 represents a sectional elevation of my invention, showing its application to the strings of a piano. Fig. 2 is a front view of the same. Fig. 3 is a detail view of the form of striker or pendant which I prefer to employ. Fig. 4 is a view of the hanger or support for the striker or pendant; Fig. 5, a perspective view of the striker or pendant, its hanger, and the screw for securing the hanger to the rock-shaft. Fig. 6 is a perspective view illustrating a series of strikers coöperating with the strings of an upright grand piano.

Similar letters of reference in the several figures indicate the same parts.

The letter *a* represents the strings of an upright piano, *b* the bridge over which the strings are stretched, and *c* the hammers of the key-action.

e represents a bar extending across the strings in front of the same and susceptible of adjustment longitudinally of the strings by means of a pedal and connections in the usual manner. Secured to this bar near its lower edge is a pendent strip *d* of some soft material that is adapted when the bar *e* is shifted to its lowest position to be interposed between the hammer and the strings for the purpose of reducing the blow of the hammer and changing, in a measure, the quality of the tone.

In proximity to the strings, and preferably behind them, are located one or more bars or rock-shafts *f*, the same being supported in lugs or brackets *g*, so as to be capable of being vibrated freely. To this rock-shaft *f*, or to each of the several rock-shafts *f*, if there be more than one, is secured a projecting arm *h*, which is adapted to be engaged by an arm *i*, projecting down from the movable bar *e*. When the said bar *e* is lowered, the arm *i* bears upon the arm *h* and turns the rock-shaft into the position shown by dotted lines, Fig. 1.

Secured to the rock-shaft *f* are a series of strikers or pendants which, as shown in Figs. 1 and 2, may consist of a series of non-resonant soft flexible strips *k*, having metal buttons or contact-faces *l*, secured at or near their lower ends, or, as shown in Figs. 3, 5, and 6, may consist each of a piece of metal having the body portion *m* and its lower portions formed into two legs or branches *m' m'*, forming an angle with the body portion, one of the legs having a straight contact edge *n* at its lower end and the body portion provided with perforations to enable the pendant to be hung in a wire support or hanger *o*, Fig. 4, that is fastened by a screw *p* to the rock-shaft *f*, as shown in Fig. 6. I prefer to use this form of pendant especially when the attachment is applied to the strings of upright grand pianos, because each of them presents a straight striking-surface long enough to extend across the several strings, as shown in Fig. 6.

The pendants or strikers of whichever form are so arranged with respect to the rock-shaft *f* that when the latter is rocked by the downward motion given to the bar *e* they are caused to swing up against the strings, so that when the latter are struck by the hammer through the interposed pendent strip *d* the strings will give forth tones of the peculiar quality emitted by a mandolin.

I have illustrated the rock-shaft with the pendants or strikers behind the strings, but it is evident that these parts might be located in front of the strings below the heads of the hammers with the same effect, though their location behind the strings will probably be found most convenient.

Having thus described my invention, what I claim as new is—

1. The combination with the vertically-

movable bar and its arm, of the rock-shaft and the series of pendants or strikers depending from the rock-shaft and adapted to be brought against the adjacent piano-strings when the vertical movable bar is operated; substantially as described.

2. The combination with the strings, the bar movable longitudinally of the strings, the rock-shaft operated from said movable bar, the pendants or strikers hung to the rock-shaft and having the hard contact-surfaces for engaging the strings, the strip of soft material depending from the movable bar and the hammers of the key action, substantially as described.

3. The combination with the strings, of the bar movable longitudinally of the strings, the arm extending from said bar for engaging the arm of the rock-shaft, the rock-shaft and its arm and the pendants or strikers hung to the rock-shaft and having the hard contact-surfaces for engaging the strings; substantially as described.

4. The combination with the strings, of the bar movable longitudinally of the strings, the arm extending from said bar for operating the arm of the rock-shaft, the rock-shaft and its arm, the swinging pendants or strikers hung to the rock-shaft and having the hard contact-surfaces for engaging the strings, the dependent strip of soft material secured to the movable bar and the hammers of the key action; substantially as described.

5. A metallic pendant or striker formed with a body portion with two arms or branches forming an angle with the body portion, one of said branches having a straight contact edge at its lower end, substantially as described.

6. The combination with the rock-shaft of the support or hangers secured thereto and the pendants or strikers hung upon said hangers so as to swing freely thereon; substantially as described.

7. In a piano, the combination with the strings and means for putting the same in vibration, of a series of suspended strikers thrown into vibration by the vibration of the strings; substantially as described.

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