

A. STEINWAY.
Piano Attachments.

No. 164,052.

Patented June 1, 1875.

Fig. 1.

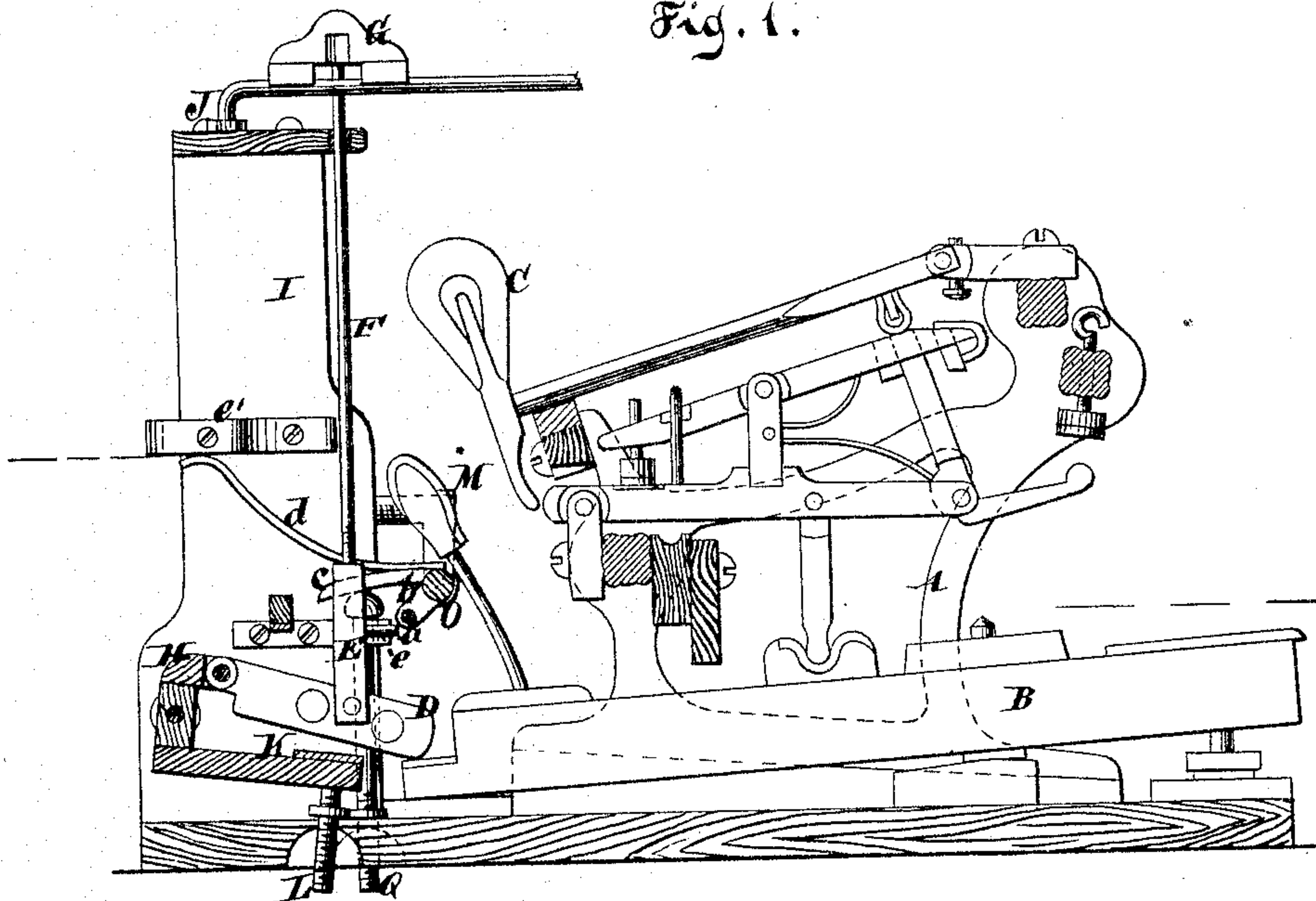
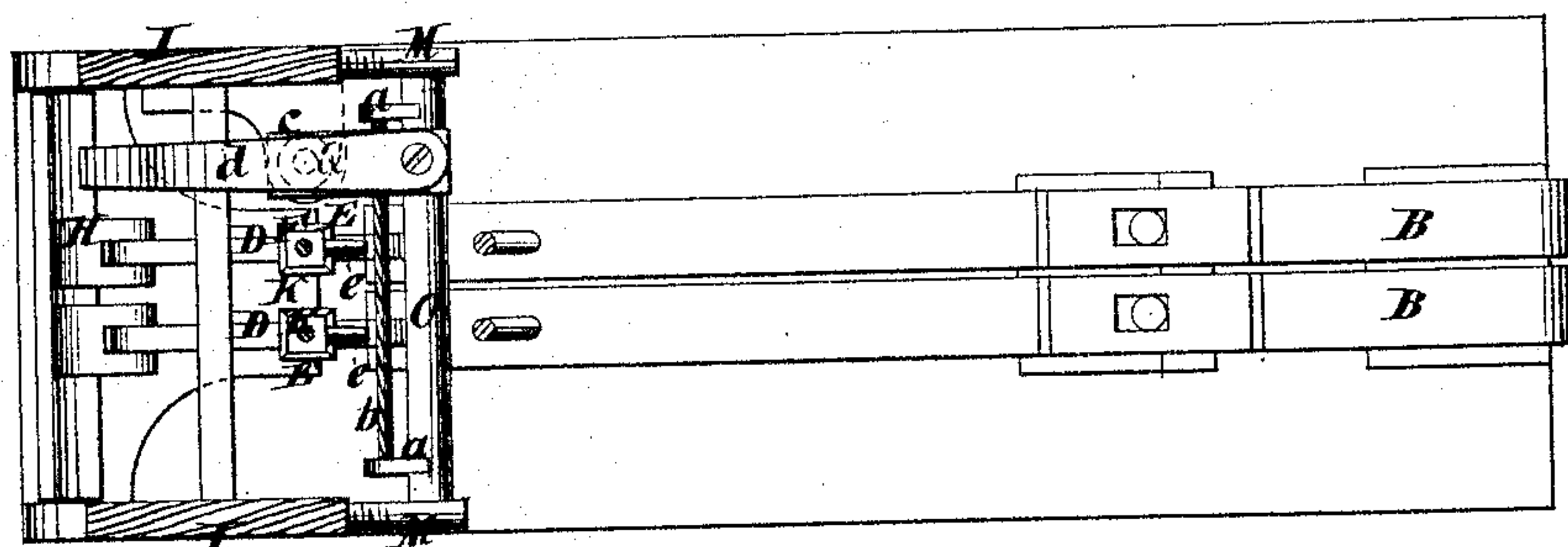


Fig. 2.



Witnesses.

Otto Hufeland

Chas. Wablers.

Inventor.

Albert Steinway

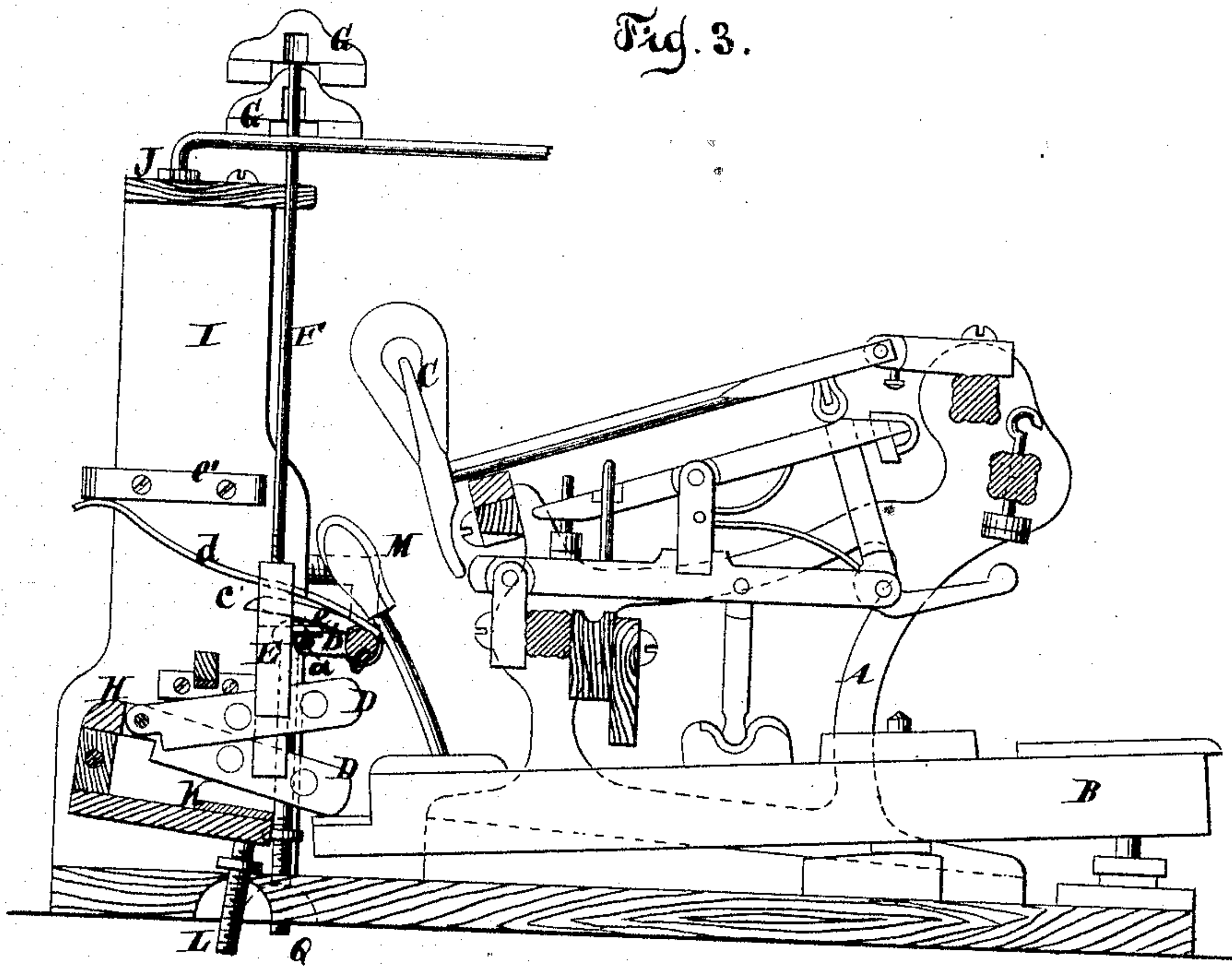
Van Santvoord & Hauff
attys

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Fig. 3.



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Chas. Wahlen.

Inventor.
Albert Steinway
per
Van Santvoord & Hauff
Attors

UNITED STATES PATENT OFFICE.

ALBERT STEINWAY, OF NEW YORK, N. Y.

IMPROVEMENT IN PIANO ATTACHMENTS.

Specification forming part of Letters Patent No. **164,052**, dated June 1, 1875; application filed May 15, 1875.

To all whom it may concern:

Be it known that I, ALBERT STEINWAY, of the city, county, and State of New York, have invented a new and Improved Attachment to Grand Piano-Fortes, which invention is fully set forth in the following specification, reference being had to the accompanying drawing, in which—

Figure 1 represents a transverse vertical section when the action is at rest. Fig. 2 is a plan or top view of the same. Fig. 3 is a transverse vertical section when one of the dampers is sustained by my attachment.

Similar letters indicate corresponding parts.

This invention relates to an improvement in that class of piano-forte attachments which I have described in Letters Patent No. 156,388, granted to me October 27, 1874, and which consists essentially of a movable frame supporting either a wire, cord, or strip of flexible or rigid material running parallel to the ends of the damper-levers, in combination with a pedal, which serves to operate said frame, so that when one or more dampers have been raised, and the frame is caused to move in the proper direction, said damper or dampers are caught and upheld by the wire or strip of the frame after the corresponding key or keys have returned to their position of rest.

The object of my present invention is to adapt this attachment to the action of a grand piano. For this purpose the damper-feet are provided with pins or noses, and a rock-shaft, which has its bearings in brackets secured to standards beneath the wrest-plank, and from which extend two or more arms, which support a cord, wire, or strip of flexible or rigid material, is secured in such a position that when one of the dampers is raised and the rock-shaft is turned in the proper direction, the cord, wire, or strip supported by the arms of said rock-shaft catches beneath the pin or nose of the foot of said damper and presses the damper up and retains it off from its string after the appropriate key has returned to its position of rest.

One or more of the dampers can be caught and held up from their strings by the cord, wire, or strip, and while this is done the performer is enabled to play with one or both hands, as may be desirable. A pedal provid-

ed for this purpose serves to impart to the rock-shaft the required motion, the whole being so arranged that it does not interfere with any portion of the action of the piano-forte.

In the drawing, the letter A designates the action-frame of a grand piano, in which are secured the keys B and the hammers C, said keys and hammers being connected by any suitable intermediate mechanism. Over the inner ends of the keys B are situated the under damper-levers D, which connect by means of feet E and rods F with the damper-heads G. Said under damper-levers are pivoted to a rail, H, which is secured between blocks or standards I, situated beneath and supporting the wrest-plank J, and beneath these, under damper-levers, extends a rail, K, which is exposed to the action of the ordinary damper-pedal acting on a rod, L. On the front edges of the blocks I are secured brackets M, being retained in position by means of screw-threads or other equivalent means, so that they can be readily shortened or elongated, and these brackets form the bearings for a rock-shaft, O. From this rock-shaft extend a series of arms, *a a*, in which is secured a cord, *b*; or, if desired, a wire or strip of flexible or rigid material may be substituted for said cord. On the rock-shaft O is secured an arm, *c*, which rests on a vertical rod, Q, being held in contact therewith by a spring, *d*, which may be riveted to the rock-shaft O, and made to bear against a strip, *e'*, fastened to one of the blocks I, or which may be arranged in any other desirable manner. The vertical rod Q is exposed to the action of a pedal, which forms part of my attachment, and which I usually arrange in the lyre between the two pedals generally used in every grand piano. In the feet E are secured pins *e*, which project toward the action-frame, and which are so situated that when a damper is raised by the action of its key the pin projecting from the foot of this damper will be raised above the cord or strip *b* in the arms of the rock-shaft O, and if the rod Q is raised by the action of its pedal, and said rock-shaft is caused to turn toward the damper-feet E, (see Fig. 3,) the cord or strip *b* catches beneath the pin of the damper which has been raised, and said damper is upheld after the appropriate key has fallen back, as

long as the rod Q is kept in its elevated position.

The motion of the rock-shaft O is so adjusted that, by the action of the cord or strip *b*, the damper, which had been raised by the action of its key, is carried up to a position somewhat higher than that to which it had been raised by its key, and that the pins *e* of such dampers, which may be lifted afterward by their keys, will not come in contact with the cord or strip *b*.

It will be seen from this description that the motion of the rock-shaft O must be adjusted with great nicety, and for this reason it is essential that the brackets which form the bearings for the rock-shaft shall be so constructed that their position can be regulated after they have been attached to the blocks I. For this purpose the brackets are secured in the blocks by screw-threads, so that they can be shortened or lengthened.

It is obvious that the pins *e*, instead of being fastened to the damper-feet E, might be fastened to the rods F, or suitable recesses might be formed in said feet for the cord or strip *b* to catch in, or any other projection might be formed on said feet E or rods F, against which the cord or strip can catch, when the rock-shaft O is turned toward the dampers.

I disclaim distinctly the combination of a

pedal or equivalent device, and the dampers of a piano with a swinging bar or intermediate mechanism to uphold the dampers, so that while the pedal is pressed, only those dampers are upheld which correspond with the keys pressed by the performer, since such combination of parts is already well known; and I further disclaim everything shown and described in my Patent No. 156,388.

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

The rock-shaft O, mounted in brackets M, secured in blocks I, situated beneath the wrest-plank of a grand piano, said rock-shaft being provided with two or more arms, which support a wire, cord, or strip of flexible or rigid material, in combination with pins or shoulders formed on the feet or rods which connect the under damper-levers with the damper-heads, said rock-shaft O being subjected to the action of a pedal, when said parts are constructed and arranged substantially as and for the purpose shown and described.

In testimony that I claim the foregoing, I have hereunto set my hand and seal this 12th day of May, 1875.

ALBERT STEINWAY. [L. S.]

Witnesses:

W. HAUFF,
E. F. KASTENHUBER.