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E. WERNER.

DEVICE FOR LEVELING THE KEYS OF PIANOFORTES.

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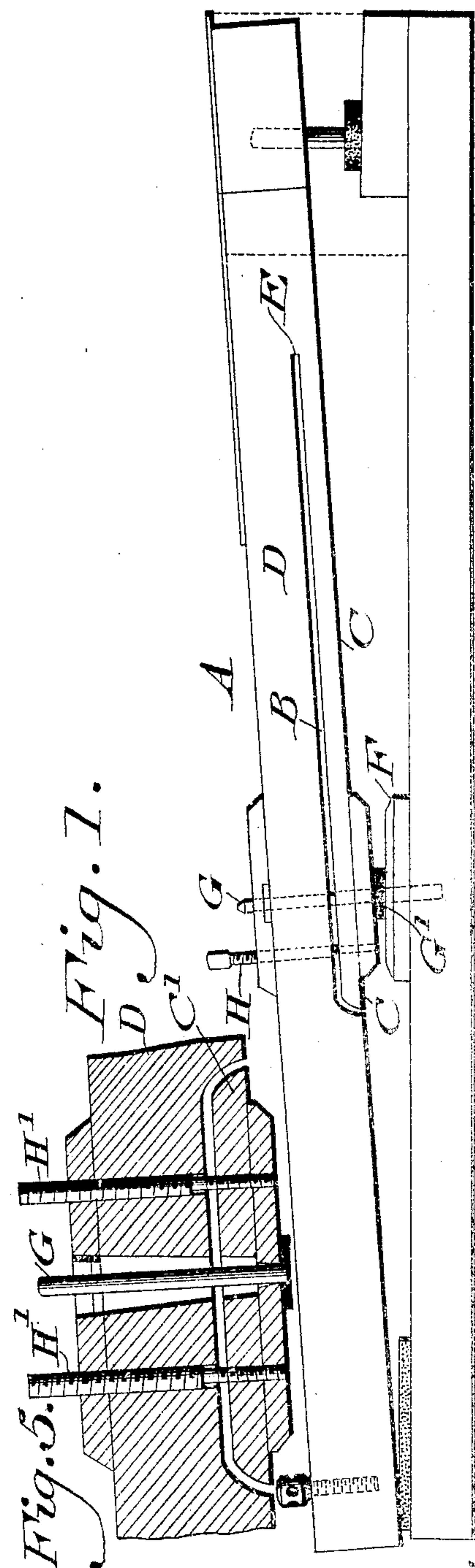


Fig. 1.
Witnesses
P. F. Nagle.
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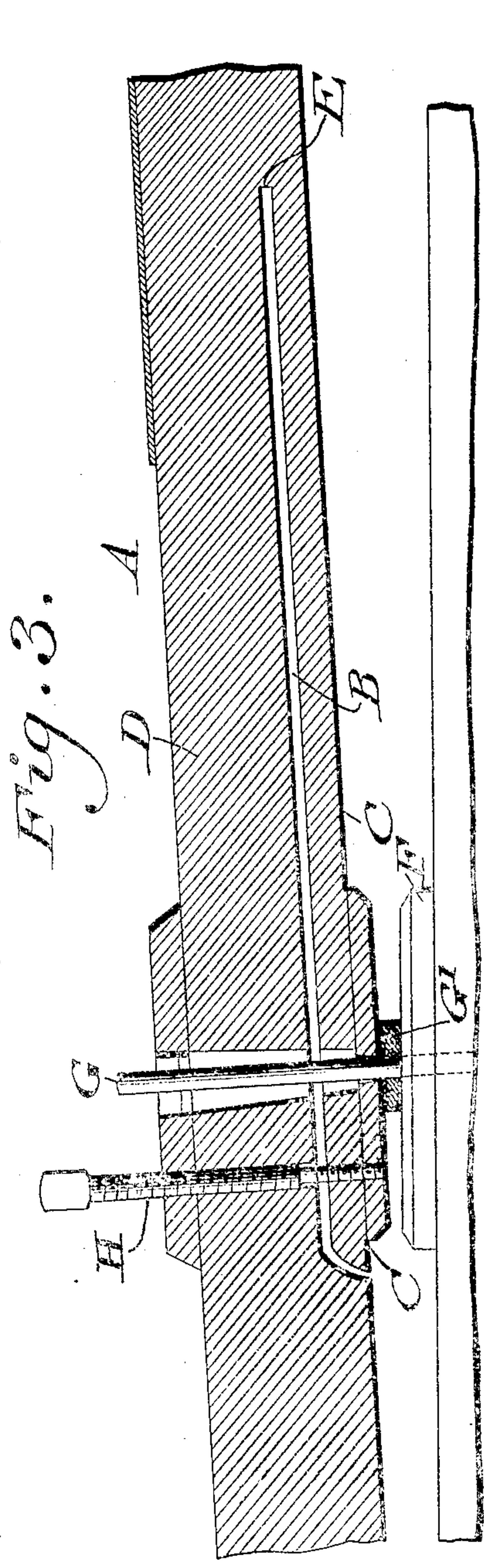


Fig. 3.
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DEVICE FOR LEVELING THE KEYS OF PIANOFORTES.

No. 803,946.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EMIL WERNER, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Device for Leveling the Keys of Pianofortes, of which the following is a specification.

My invention consists of a device for leveling the keys of a pianoforte, the same embodying means for raising and lowering the finger portions of the same, while preserving the comparative solidity of the key, and thus avoiding any possible looseness and rattling of the same when in use. To this end the body of the key is provided with a separate member which is engaged in part by a screw which entering the same also enters and engages in part with said body, the threads of the respective parts being of different pitch, so that said member is positively in threaded engagement with the respective portion of said screw, and thus said member is so held by the screw that it is constantly under control of the same, and so is never loose, the effect of which is to prevent any possible rattling of the key when in use, as above stated.

Figure 1 represents a side elevation of a device for leveling the keys of a pianoforte embodying my invention. Fig. 2 represents a bottom plan view thereof. Fig. 3 represents a longitudinal section of a portion thereof on an enlarged scale. Fig. 4 represents a top view of a portion thereof. Fig. 5 represents a vertical section of a portion of a modification.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates the key of a pianoforte or other musical instrument. In the body of the same there is the longitudinally-extending kerf or incision B, which forms a section C, which is separated from said body, except at one end, as at E, and forms a block or tongue permitting the body to move from and toward the same.

G designates the pivot or pin which rises from the key-rail F and passes freely through said section and body, and G' designates the punch on which the key rests.

H designates a screw having right and left threads, the same passing through the key, it being noticed that one thread engages with the thread in the body D and the other with the thread in the section C, it being evident that when the screw is rotated in one direc-

tion said body, and consequently the finger portion of the key, is raised, and that by the operation of the screw in reverse direction the body is lowered, and with it said finger portion, by which means the finger portion of the key may be leveled, the means employed being simple, convenient, and inexpensive in their nature, while the section or member C is always positively in threaded engagement with the respective portion of the screw, and so is never free of itself, but remains positively under control of the screw, thus avoiding any lost motion of said member and any looseness of the same, whereby the key retains its comparative solid nature, and so the instrument may be played without any rattling or jingling on the part of the key. In Figs. 1, 2, and 3 the section C is integral or connected with the body D as one.

In Fig. 5 I show a section C', which is separate from the body D, and in said figure I also show two right-and-left threaded screws H', the same being on opposite sides of the pivot-pin G, and designed for raising the body to effect the raising and lowering of the finger portion of the key and the leveling of the same as in the previous case.

Various changes may be made in the details of construction shown without departing from the general spirit of my invention, and I do not, therefore, desire to be limited in each case to the same.

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

1. A key of the character stated having a body and a member separate therefrom and a screw engaging said body and member for operating said body in opposite directions, whereby the key proper may be leveled, said screw having threads of different pitch, the portion having one pitch being in threaded engagement with said body and the portion having the other pitch being in threaded engagement with said member.

2. A key of the character stated having its body composed of separate members and a right-and-left threaded screw respectively entering and engaging said members to effect the leveling of the key.

3. A key of the character stated having a body and a section connected therewith and a right-and-left threaded screw engaging respectively said section and the body of the key, and entering said section and being in thread-

ed engagement therewith whereby said body may be vertically moved to effect the leveling of the key.

4. A key of the character stated composed
5 of a body and a separate member and a screw for leveling purposes, said screw having threads of different pitch, the portion having one pitch being in engagement with said body

and the portion having the other pitch being in engagement with said member within the 10 same.

EMIL WERNER.

Witnesses:

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