

(No Model.)

2 Sheets—Sheet 1.

C. L. WESER.
UPRIGHT PIANO.

No. 465,506.

Patented Dec. 22, 1891.

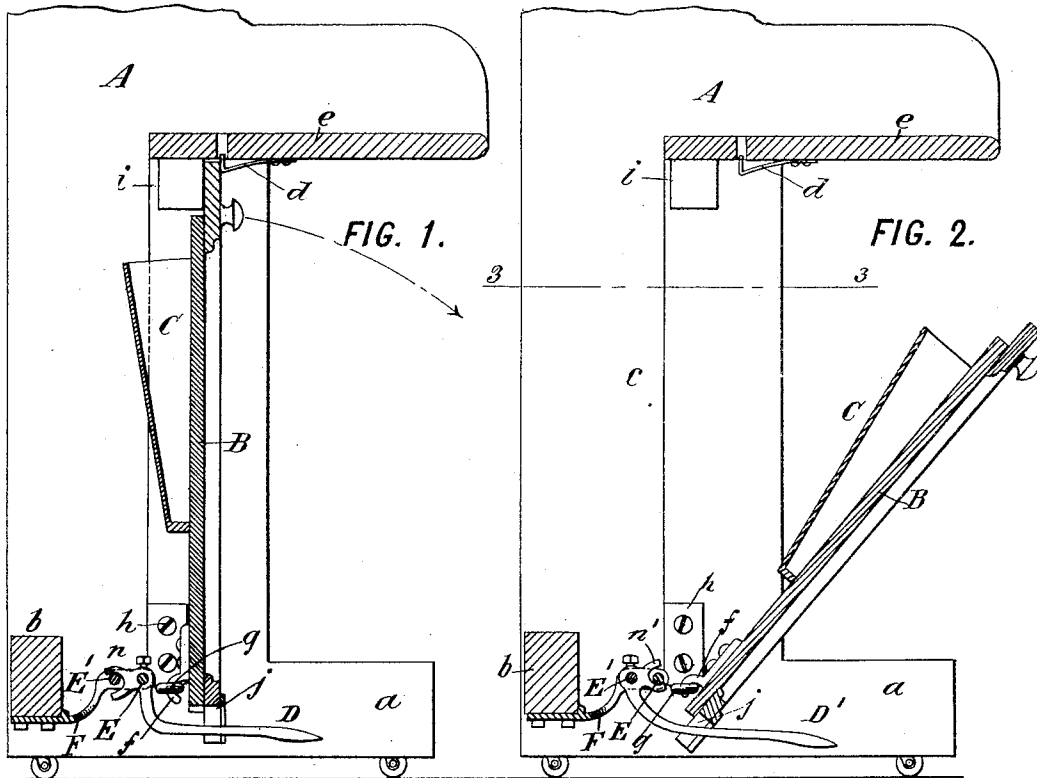


FIG. 3.

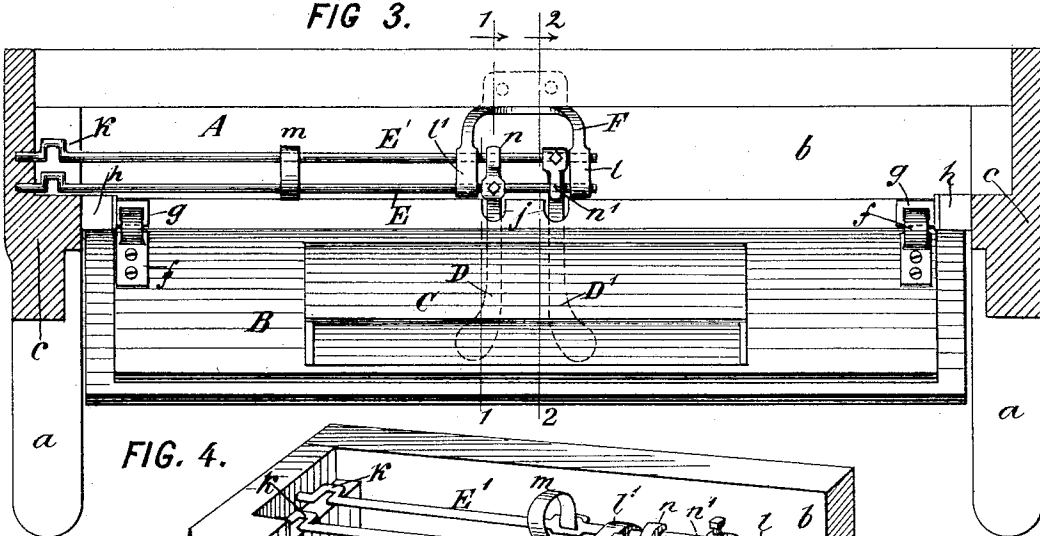


FIG. 4.

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INVENTOR:

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By his Attorneys,

Arthur C. Tracer & Co.

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2 Sheets—Sheet 2.

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FIG. 5.

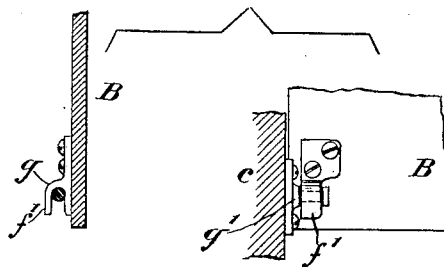
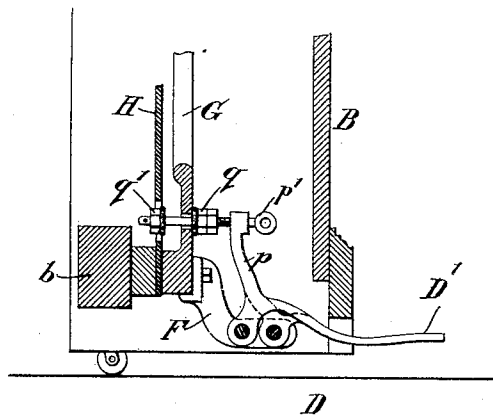


FIG. 6.



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UNITED STATES PATENT OFFICE.

CALVIN L. WESER, OF NEW YORK, N. Y.

UPRIGHT PIANO.

SPECIFICATION forming part of Letters Patent No. 465,506, dated December 22, 1891.

Application filed July 23, 1891. Serial No. 400,411. (No model.)

To all whom it may concern:

Be it known that I, CALVIN L. WESER, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Upright Piano-Fortes, of which the following is a specification.

This invention provides certain improvements in the casing and pedal action of an upright piano-forte.

The improvements in the casing are designed to facilitate and cheapen its construction and to render the lower front portion of the interior of the casing more readily accessible than heretofore.

The improvements in the pedal-action are designed to perfect the construction of pedal-action claimed in my patents, No. 422,477, dated March 4, 1890, and No. 448,308, dated March 17, 1891.

Figure 1 of the accompanying drawings is a vertical transverse section of the lower portion of an upright-piano casing, the section being cut in the plane of the line 1 1 in Fig. 3. Fig. 2 is a similar view, except that the section is cut in the line 2 2 in Fig. 3, and the front board is shown tilted forward. Fig. 3 is a horizontal section on the line 3 3 in Fig. 2, showing the pedal-action in plan. Fig. 4 is a perspective view of the pedal-action. Fig. 5 shows in vertical section and rear elevation a slightly-modified construction of pivotal or hinge connection for the front board. Fig. 6 is a vertical transverse section, showing a modified pedal-mounting.

The piano-casing A is, in general, of usual construction, having end base-frames *a*, back beam *b*, ends *c c*, and front board or "lower front frame" B. This front board, instead of being a removable panel, as heretofore, is hinged at or near its bottom edge, so that it may be swung forward to the position shown in Fig. 2. On its back or inner side is formed a music pocket or rack C, consisting, simply, of a box or portfolio, suitable for holding sheet-music. When closed, as in the position shown in Fig. 1, it is held by a snap-spring *d*, applied to the board *e*, forming the under side of the key-board projection. This construction thus provides a very convenient means for storing sheet-music, where it is readily ac-

cessible when wanted, but is ordinarily out of sight and protected from dust. The pivotal or hinge connection for this front board is constructed, preferably, of two hooks *f f*, applied to the inner side of the front board near its opposite ends. These hooks engage supporting-pivots *g g*, applied to the ends *c* of the casing. These pivots are preferably constructed as elongated eyes, the opening in which is entered by the hooks, these eyes being formed on metal plates, screwed to blocks *h h*, fastened to the ends of the case. These blocks might be extended entirely up the ends of the case to form rests against which to turn in the board B, or separate blocks *i* may be provided as stops for the top of the board when in place. The board B may be constructed as a paneled front or according to any other design that may be desired.

My invention admits of constructing the pivoted board B as the only part of the casing crossing in front between the bases *a a* or ends *c c*, so that by removing this board, which may be done by tilting it forward and lifting it out, the entire interior of the lower part of the casing is exposed. Heretofore it has been customary to construct the casing with a fixed transverse foot-rail at *j*, Fig. 1, in order to form a strengthening-brace between the bases *a a*. Such transverse rail is liable to have its varnished surface scratched or marred during the operations of fly-finish-ing, regulating, tone-regulating, and setting up—a disadvantage which my invention wholly obviates. By my invention the front board B, with its pivotal connections, serves the function of such a transverse foot-rail, since the pivotal hooks *f f* engage in the eyes of the supporting-pivots *g g* in such manner as to form a lateral brace—that is to say, the sides of the hooks make a close working fit with the ends of the sockets in the eyes, so that by this construction abutting stops or shoulders are formed, through which and through the material of the board B any thrust is transmitted from one end of the casing to the other. This pivotal connection might be greatly varied in any manner which shall still provide these thrust-shoulders.

Fig. 5 shows a modified construction wherein the supporting-pivot (lettered *g'*) consists of a

pin projecting from a plate and having shoulders at its base and head closely engaging the opposite sides of the hook f' .

My invention also admits of polishing the case more perfectly than heretofore, since in the ordinary construction the polish is necessarily imperfect in the corners at the ends of the foot-rail; but by my invention the foot-board is removed bodily during the polishing, so that it can be polished to its edges, and its removal leaves the ends unobstructed, so that they can be readily polished.

The pedals or pedal-levers $D D'$ are formed with hubs or bosses, which are mounted, respectively, on two parallel horizontal shafts E and E' , extending longitudinally of the casing and formed at one end with cranks $k k$ to engage the respective upright-action rods (not shown) of the pedal-action. These shafts are pivoted at their cranked ends in one end of the casing and at their opposite ends in a bearing-block l , formed on a bracket F , which is attached to the lower back-beam b . The bracket F is bifurcated and supports two bearing-blocks l and l' , which come on opposite sides of the pedal-levers $D D'$, so that the shafts $E E'$ are firmly supported adjacent to the connection of each of the pedals. By this construction I am enabled to dispense with the pedal-action plank or bottom board heretofore used to support the pedal-actions of upright piano-fortes, as shown in Figs. 1 and 2 of my patent No. 422,477 and in my patent No. 448,308. I am thus enabled to leave the casing entirely open at the bottom whenever this construction is deemed preferable. A spring m , of any suitable kind, is applied to the two shafts $E E'$, to impart to them an oscillatory tendency in such direction as to lift the respective pedals $D D'$, as in my said previous patents.

My present invention provides a new stop for limiting the motion of the pedals. Each pedal-lever is provided with an arm or arms in such manner as to form stops or shoulders for loosely embracing and abutting against the opposite one of the two oscillatory shafts. These stops are preferably constructed as forks n and n' , applied to the respective pedal-levers with sufficient space between their bifurcations to allow for the diameter of the shaft and the desired free play, corresponding to the angular movement to which the pedal is limited. The piano-pedal lever D , which is fastened to the front shaft E , has its fork n projecting rearwardly from it, while the forte-pedal D' , which is fastened to the rear shaft E' , has its fork n' projecting forwardly so as to engage the front shaft. The levers may be fastened to the shafts by set-screws, as shown, or in any other convenient manner. Preferably the front board B is notched at its lower side to receive the pedals $D D'$, since the lower edge of the board should descend lower than the normal positions of the pedals. To prevent noise, the forks $n n'$ should be padded by applying to them or to

the shafts $E E'$, where they engage them, a layer of felt or other soft material.

Prior to my invention the stops for the pedal-levers had been provided upon the foot-rail or in connection therewith, either by causing the pedals to work through slots in the foot-rail and their play being limited by cushions of felt at the ends of the slots, or by arranging the pedals in notches in the bottom of the foot-rail and limiting their upward play by felt cushions at the upper ends of the notches and their downward play by such cushions on a bottom board back of the foot-rail and ordinarily fastened thereto. In lieu of these constructions, my invention provides stops for limiting the play of the pedal-levers, which are wholly independent of the foot-rail, so that the latter may be removed without affecting the action of the pedals. The preferred construction is that wherein the pedal-levers are provided each with a fork or shoulder engaging the shaft of the other lever, as already described; but my invention may be carried out in other ways. An example of one modification is shown in Fig. 6, where each of the pedals is formed with an upwardly-projecting arm p , having attached to it a screw-rod p' , formed with two stops q and q' , abutting against opposite sides of the string frame or plate G . The extent of motion of the pedal may be adjusted as desired by screwing the rod p forward or back to regulate the position of the back stop q' and by screwing in or out the nuts constituting the forward stop q .

The respective stops with which the pedal is provided may, according to my invention, be arranged to abut against any suitable part of the piano-forte, except the foot-rail or bottom-board, it being the principal object of this feature of my invention to enable a bottom-board and a fixed foot-rail to be dispensed with.

I have stated in this specification that the bracket F , which supports the pedal-shafts $E E'$, is attached to the lower back beam b . It must not be inferred from this that its attachment to the back beam is necessarily a direct attachment, as it might be otherwise attached so as to be supported by said beam. It will be understood that this feature of my invention is a substitute for the common method of supporting the fulcrum of the pedal-lever on standards projecting upwardly from the bottom-board, and hence that any support independent of the bottom-board and which will admit of dispensing with this board may be admissible.

In Fig. 6 the bracket F is attached to the plate or frame G , which in turn is attached, as usual in upright pianos, to the beam b . In this case the bracket F might be made in one piece with the plate G , or the bracket F might be attached to the sounding-board H , which is also attached to the beam b . The indirect attachment of the bracket F by either of the methods thus suggested I regard as the

equivalent of the direct attachment first described.

I claim as my invention the following defined novel features or combinations, substantially as hereinbefore specified, namely:

1. In an upright piano-forte, the casing made with a movable front board, pivotal hooks applied to the lower side of the front board near its opposite ends, and supporting-pivots on which said hooks may turn applied to the opposite ends of the casing.

2. In an upright piano-forte, the casing made with a movable front board, pivotal hooks applied to the lower side of the front board near its opposite ends, and supporting-pivots on which said hooks may turn, applied to the opposite ends of the casing and formed with shoulders or bearing-faces engaging the opposite sides of the hooks and adapted to transmit strains from one end of the casing to the other to the hooks and through the front board, whereby the lower part of the pivoted front board serves as a brace-board connecting the lower end portions of the casing, and by its removal the entire lower front portion of the interior of the casing is exposed.

3. In an upright piano-forte, the casing made with its front below the key-board projection, having a removable front board and without any fixed foot-rail, whereby by the removal of the front board the entire lower front portion of the interior of the casing is exposed.

4. In a pedal-action for upright piano-

fortes, the combination of a pedal-lever and opposite stops independent of the foot-rail for limiting its play.

5. In a pedal-action for upright piano-fortes, the combination of two parallel oscillatory shafts with pedal-levers fastened to the respective shafts, and opposite stops independent of the foot-rail for limiting the play of said levers.

6. In a pedal-action for upright piano-fortes, the combination of two parallel oscillatory shafts with a pedal-lever fastened to one of the shafts, and having opposite stop-shoulders for engaging the other shaft to limit the play of the pedal.

7. In a pedal-action for upright piano-fortes, the combination of two parallel oscillatory shafts with two pedal-levers fastened to the respective shafts, and each formed with a fork engaging the other shaft to limit the play of the pedals.

8. In a pedal-action for upright piano-fortes, the combination of two parallel oscillatory shafts with two pedal-levers fastened on the respective shafts, and a bearing-bracket fastened to the lower beam of the case and formed with bearings for the two shafts.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

CALVIN L. WESER.

Witnesses:

LOUIS BECKHARDT,
MAURICE W. BECKHARDT.