Dec. 8, 1936. G. H. DOWNING 2,063,796

MINIATURE UPRIGHT PIANO

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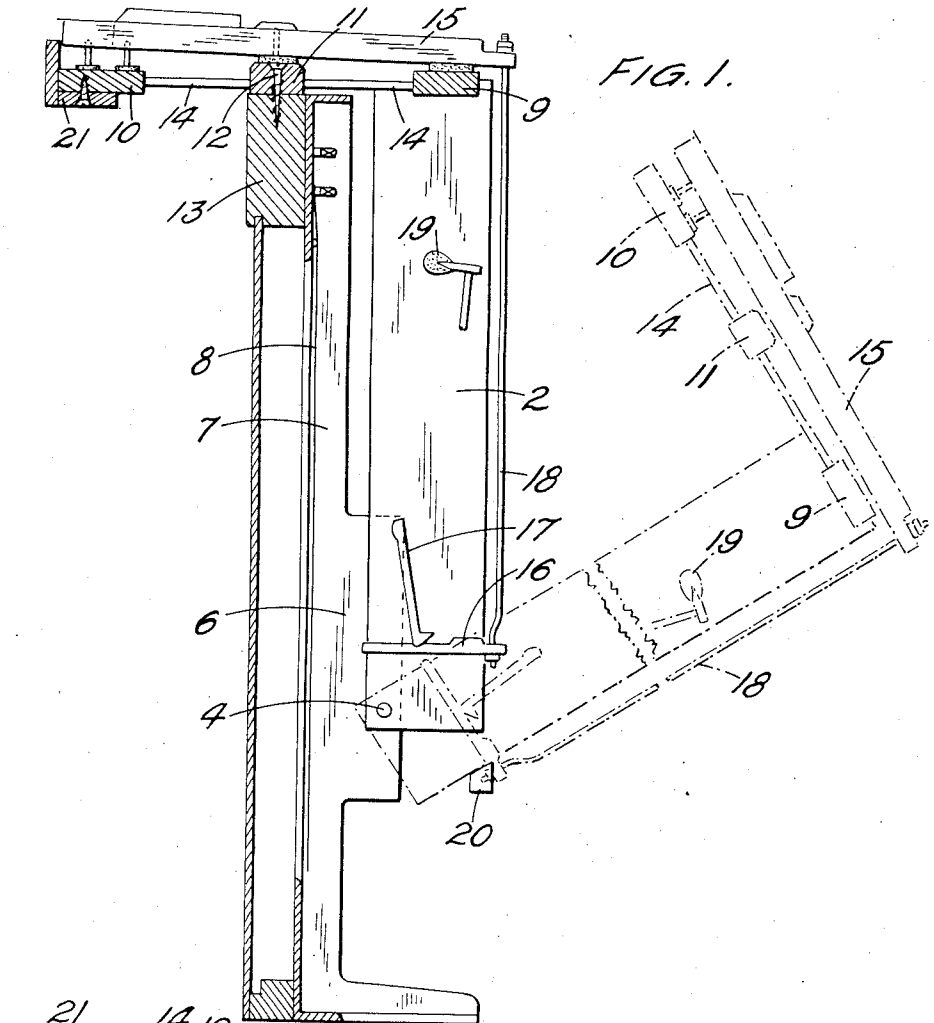


FIG. 1.

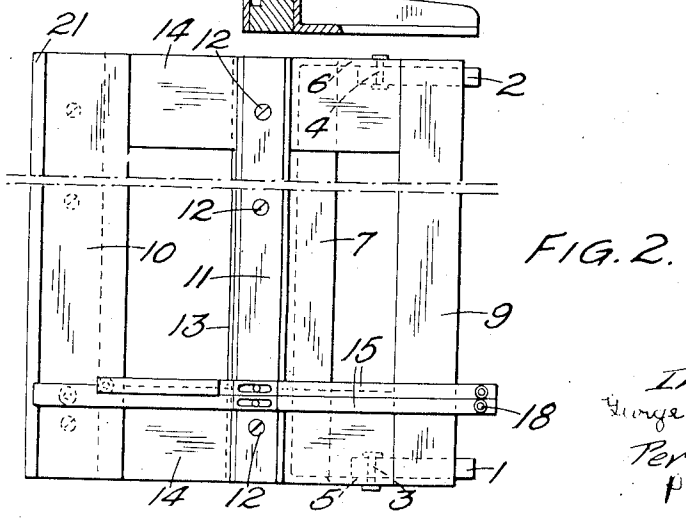


FIG. 2.

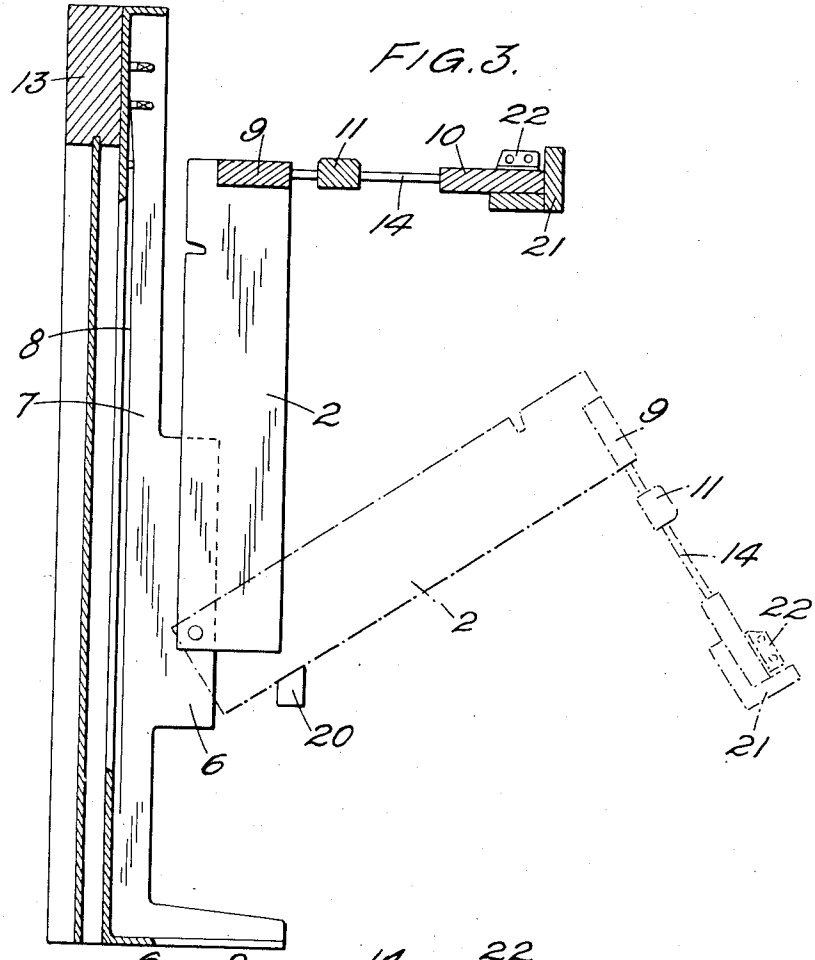
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FIG. 3.



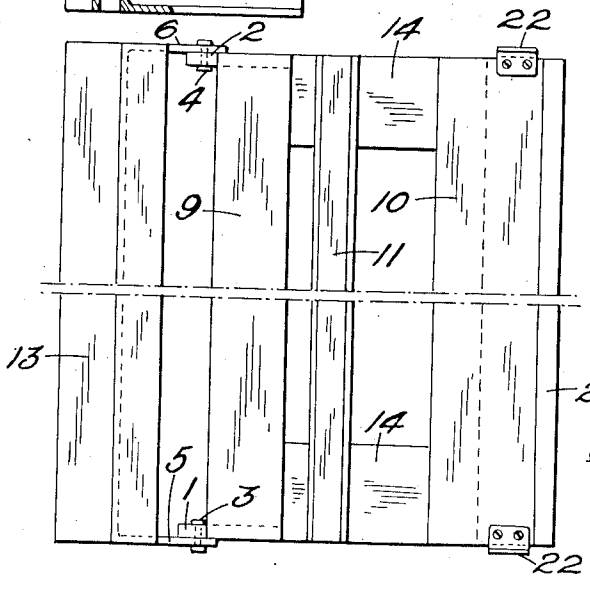


FIG. 4.

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UNITED STATES PATENT OFFICE

2,063,796

MINIATURE UPRIGHT PIANO

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In Great Britain October 16, 1934

6 Claims. (Cl. 84—174)

The present invention concerns improvements in or relating to miniature upright pianos of the type (hereinafter referred to as the type specified) which has the mechanism below the keyboard, and in which the mechanism is located either behind or in front of the iron frame.

In an ordinary upright piano the "action" is at the front of the strings and either partly or wholly above the keyboard, so that access to the strings is comparatively easy. In a piano of the type specified in which the height of the instrument is considerably reduced, the "action" largely interferes with convenient access to the strings.

It is an object of the present invention to overcome this disadvantage and to provide ease of access to the hammers for tuning purposes, and to the strings should repairs or replacements be required. This is done by making the action removable from its normal position so as to leave the iron frame and the strings carried thereby much more readily accessible.

According to the present invention a miniature upright piano of the type specified has the action and the key frame mounted to be rocked or swung together away from the frame and strings.

Preferably the action and the key frame are mounted to be rocked or swung together about a horizontal axis in the lower part of the piano approximately parallel with the general plane of the frame.

Forms of piano embodying the invention will now be described by way of example and with reference to the accompanying drawings wherein:—

Fig. 1 is a sectional end view of a rear action miniature piano with the casing removed in which in the normal position the mechanism is located behind the frame;

Fig. 2 a plan thereof with part broken away;

Fig. 3 a view corresponding to Fig. 1 of a front action miniature piano in which the mechanism is located in front of the frame; and

Fig. 4 a plan thereof with part broken away.

Like references indicate like parts throughout the drawings.

Referring to Figs. 1 and 2 the standards 1, 2 which support the "action" are pivotally mounted at their lower ends on pivot pins 3, 4 extending from flanges 5, 6, respectively extending rearwardly from the sides of the iron frame 7 which carries the strings 8. The rear rail 9 of the key frame is fixed at its ends to the tops of the standards 1, 2. The key frame also has a front rail 10 and an intermediate or balance rail 11 which in the normal position is secured by screws 12 to the top edge of the wrest plank 13. The several rails are connected at their ends by thin fillets 14. For clearness one key 15, wippen 16, jack 17, lift wire 18 from the key to the wippen and hammer 19 only of the action are indicated. The front rail 10 is secured, as by screws, to a rail 21 projecting rearwardly from part of the piano case. Thus the forward end of the action assembly is supported and held firmly, preventing undesired vibration and at the same time rendering the keys firmer when playing. When the screws 12 and other screws securing the key frame have been removed the key frame and the action may be rocked or swung rearwardly as a unit about the pivot pins 3, 4 to the position shown in chain lines in Fig. 1 until the rear edges of the standards engage stops or supports 20 carried on the instrument case. When the action and keys are thus swung rearwardly access may be had to the rear of the frame and strings, to the wrest pins for tuning and to the hammers.

In order to permit of the rocking or swinging movement of the action assembly the top of the piano case is made removable. It is of course to be understood that the back frame of the piano case is removable or can be opened to allow the action assembly to swing rearwardly and to permit of access to the interior.

By removing the pivot pins 3, 4 the action and key frame may be removed completely.

Referring now to Figs. 3 and 4 these show a front action piano. The standards 1, 2 which support the "action" are pivotally mounted on pivot pins 3, 4 extending from flanges 5, 6 extending forwardly from the sides of the iron frame 7. The rear rail 9 of the key frame is fixed at its ends to the tops of the standards 1, 2. The front rail 10 is secured to the rail 21 which is secured at its ends by brackets 22 to the piano case. This means to lock the action in its normal position prevents vibration. In this case when the securing screws have been removed the key frame and action may be rocked or swung forwardly as a unit about the pivot pins 3, 4 as shown in chain lines in Fig. 3. When thus swung forwardly access may be had to the front of the frame and strings and to the hammers. It will be seen in the form of the invention illustrated the wrest pins are above the key frame.

What I claim is:

1. A miniature upright piano, comprising a

main frame carrying the piano-strings, a unit consisting of a key-frame, an action located below the level thereof and supporting means for the said key-frame and action, and a pivotal mounting between the said main frame and the said unit whereby it can be swung bodily away from the main frame.

2. A miniature upright piano, comprising a main frame carrying the piano-strings, a unit consisting of a key-frame, an action located below the level thereof and supporting means for the said key-frame and action, and a pivotal connection between the said main frame and the said unit whereby the latter can be swung bodily away from the former.

3. A miniature upright piano, comprising a main frame carrying the piano-strings, a unit consisting of a key-frame, an action located below the level thereof and behind the main frame and supporting means for the said key-frame and action, and a pivotal connection between the back of the said main frame and the said unit whereby the latter can be swung bodily away from the back of the former.

4. A miniature upright piano, comprising a main frame carrying the piano-strings, a unit consisting of a key-frame, an action located below the level thereof and in front of the main frame and supporting means for the said key-frame and action and a pivotal connection between the front of the said main frame and the said unit whereby the latter can be swung bodily away from the front of the former.

5. A miniature upright piano, comprising a main frame supporting at its top the usual wrest-plank for the piano-strings, a unit consisting of a key-frame with a balance rail, an action located below the level of the key-frame, and supporting means for the said key-frame and action, a pivotal connection between the said main frame and the said support means and a releasable connection between the said balance rail and wrest plank.

6. A miniature upright piano, comprising a main frame carrying the piano-strings, a piano case, a front rail secured thereto, a unit consisting of a key-frame, an action located below the level thereof and action, a pivotal connection between the said main frame and the said unit, and a releasable connection between the said key-frame and the said rail.

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