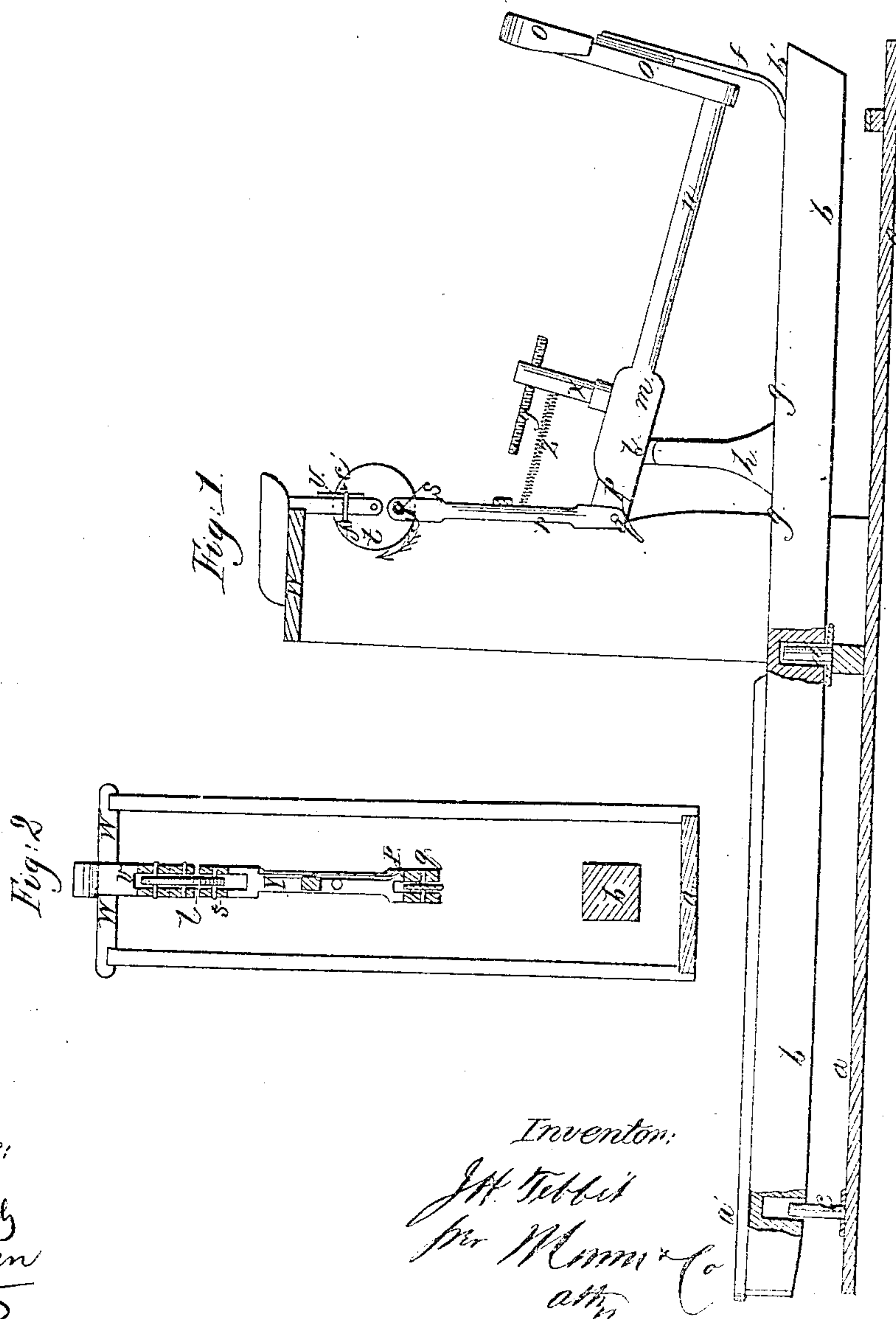


J. H. TIBBITS.
PIANOFORTE ACTION.

No. 48,741.

Patented July 11, 1865.



Witnesses:
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UNITED STATES PATENT OFFICE.

JONATHAN H. TIBBITS, OF OMAHA, NEBRASKA TERRITORY.

IMPROVEMENT IN PIANO-FORTE ACTIONS.

Specification forming part of Letters Patent No. 48,741, dated July 11, 1865.

To all whom it may concern:

Be it known that I, JONATHAN H. TIBBITS, of Omaha city, in the county of Douglas and Territory of Nebraska, have invented a new and useful Improvement in Piano-Forte Actions; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The present invention relates to a new and useful improvement in piano-forte actions, which consists in the use of a wheel so connected with the hammer through its stem that when the hammer has struck the strings it is sufficiently rotated as to instantly relieve the same therefrom, falling back to its original position, in readiness to be again impelled against the strings by the key. Heretofore this relief of the hammer has been accomplished by what is commonly denominated by piano-forte manufacturers as an "escapement"—that is, the pieces interposed between the key and the hammer-stem, and through which the hammer is impelled against the strings, are disconnected, the device in contact with hammer-stem sliding off or escaping therefrom—the great objections to which are that the parts soon wear out from the friction and constantly require repairing, and, besides, are uncertain in operation; but by my improvement there is no wear of the parts from friction, and consequently repairs are unnecessary, and a more free and perfect working action thus secured.

In the accompanying plate of drawings my improvement is represented, Figure 1 being a side view, and Fig. 2 a transverse vertical section.

a a in the accompanying drawings represent the key-board, made in the usual manner.

b b represent the key, moving on guide-pins *c* and *d*; *f*, the back catch on rear end of key *b*. To key *b*, at point *g*, is securely fastened in any proper manner a short upright standard, *h*, in upper end of which, turning on a pivot, *l*, is a lever, *m*, to the longer arm or stem *n* of which, at its outer end, the hammer *o* is secured, and to the outer end of shorter arm *p*, by a pivot, *q*, a vertical rod, *r*, is attached or

hung at its upper end by a pivot, *s*, to the vertical wheel or disk *t*, at or near its periphery, turning upon its axis in a short vertical standard, *v*, secured to the lower side of rail *w*.

On the hammer-stem *n*, at any suitable point between hammer *o* and fulcrum *l*, is a projecting upright, *x*, through which, in a direction toward the rod *r*, is passed a screw, *y*, susceptible of adjustment with regard to the said rod *r* at pleasure. Attached to rod *r*, and extending and fastened to the upright *x*, is a spiral spring, *z*.

Having thus described the parts composing the action and the manner in which the same are connected together, I will now proceed to describe their operation.

Striking and depressing the outer end, *a'*, of the key *b* with the finger, the inner end, *b'*, of the same is lifted, and through its standard *h*, to which the hammer-stem is hung, lifting the hammer and impelling it against the strings, and when it has struck the same relieving it therefrom by the abutment of the regulating-screw *y* against the connecting-rod *r*, turning on its lower pivot, *q*, and revolving the wheel or disk *t* in the direction represented by the arrow in Fig. 1. In the upward movements of the standard *h* by the key the wheel is prevented from being revolved by a pin, *c'*, bearing against the adjustable screw *f'* of the standard *v*, and there securely held until the action of the regulating screw above described by the tension of the spiral spring.

From the above description it is evident that I have produced an action in which there is no escapement, no friction of parts caused by one surface moving or sliding over another, which soon causes wear, and consequently a great expense in repairs, the disadvantages of which have long been evident to all conversant with piano-actions.

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

The use in piano forte actions of a rotating wheel arranged and operating substantially as and for the purpose specified.

JONATHAN H. TIBBITS.

Witnesses:

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