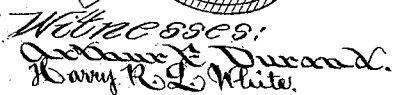


U. G. CLARK & C. MORGAN.
PIANO ACTION.

Patented Oct. 9, 1894.



Inventors
U.G. Clark.
C.M. Morgan.
By *W.E. Williams* *Att.*

UNITED STATES PATENT OFFICE.

ULYSSES GRANT CLARK AND CARLOS MORGAN, OF CHICAGO, ILLINOIS.

PIANO-ACTION.

SPECIFICATION forming part of Letters Patent No. 527,048, dated October 9, 1894.

Application filed December 8, 1893. Serial No. 493,083. (No model.)

To all whom it may concern:

Be it known that we, ULYSSES GRANT CLARK and CARLOS MORGAN, citizens of the United States, and residents of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Pianoforte-Actions, of which the following is a specification.

The objects of our invention are to simplify and cheapen the construction of the parts whereby also they may be made more accessible in time of repairs and not be as likely to wear out and need repairs as the same will be more fully explained herein; and the invention consists in the devices set forth in the claims hereof.

Reference will be had to the accompanying drawings, in which—

Figure 1 is a side view of a piano-forte action of any ordinary construction on which our invention is placed. Fig. 2 is a back view of Fig. 1 looking in the direction of the arrow "a" Fig. 1. Fig. 3 is a sectional plan view on line 3—3 Fig. 1. Fig. 4 is an enlarged transverse sectional view on line 4—4 Fig. 3.

In the drawings W. designates the sounding wires of the piano; D., the dampers thereof; H., the hammers; H', the hammer pivot block, and R the upright main rail, on the top of which we fasten a plate P by screws S at intervals of several hammers apart. The plate P. has projections P' for holding hammer pivots *h* and projections P² for holding the damper lever pivots *d*. The projections P² are set opposite the spaces between projections P' in order to locate the damper lever D' outside of the plane of hammer action in order that the spoon T may be a straight one but is set at an angle in its wippen G in order that the screws I may be put in past the spoon to hold the wippen flange J. To be able to use a straight spoon is a desideratum.

Into the projections P'—P² there are grooves *p* in which the hammer and damper pivots are held by means of caps P³ and P⁴ held down by screws *p'*—*p'*. In the plate P are pins *p*³ to which the ends of caps P³ and P⁴ are fitted to aid in holding caps in position. The cap P⁴ has upward extending

flanges *p*⁴ on its inner end which carry pivot *k* of spring K for holding the damper in place. The plate P is made in sections of the desired length and fastened on with screws at intervals which effects a great saving of screws over some other systems, and by having the projections on each side with an independent fastening for damper pivots *d* and hammer pivots *h* either may be taken off and repaired without disturbing the other which is not the case with some styles of this mechanism.

The plate P can be cheaply made and easily fitted to the main rail requiring no special form of main rail which is in any way difficult to make or place the parts upon.

The plate P may be made divided in two pieces as shown in the dotted line *b*—*b* Fig. 3 should it be desired.

What we claim is—

1. In a piano-forte action a main rail R, a horizontal plate P having projections P'—P² on each side thereof, said projections on one side set opposite the spaces of the other side as shown.

2. In a piano-forte action a main rail R.—a plate P— projections P'—P² spaced as described, a straight spoon T set at an angle in the wippen G, as and for the purpose shown and described.

3. In a piano-forte action, an upright main rail R, horizontal flanges fixed on said rail for holding hammer and damper pivots, said flanges having independent detachable caps for each pivot as shown, the caps for the damper pivot provided with a pivot for holding the damper spring.

4. In a piano-forte action, the damper lever recesses for the admission of its pivot flange, said flange having a detachable cap clamping rigidly the damper lever pivot within the recess, substantially as shown.

In witness whereof we have hereunto set our hands on this 27th day of November, 1893.

ULYSSES GRANT CLARK.
CARLOS MORGAN.

Witnesses:

ARTHUR F. DURAND,
L. W. MURPHY.