



# UNITED STATES PATENT OFFICE.

MARTIN C. KNABE, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN PIANO-ACTIONS.

Specification forming part of Letters Patent No. **183,308**, dated October 17, 1876; application filed August 23, 1876.

*To all whom it may concern:*

Be it known that I, MARTIN CHRISTOPHER KNABE, of the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Piano-Action, of which the following is a specification:

In the accompanying drawing, the figure is a sectional view of a piano-action illustrating my invention.

The object of this invention is to furnish an improved device for withdrawing the check from the butt-nose, to allow the hammer to drop quickly and freely from the string after striking a blow, and which shall be so constructed that it may be conveniently adjusted to withdraw the check at any desired point.

The invention consists in the combination of the regulating-rod and its nut and washer with the check and the regulating-rail, as hereinafter fully described.

In the drawing, A represents the balance-rail; B is the key; C is the back catcher; D is the hammer-head; E is the hammer-shank; F is the butt; G is the hammer-holder; H is the hammer-rail; I is the hammer-rest; J is the regulating-rail; K is the check-block; L is the check, and *l* is its spring, about the construction of all of which parts there is nothing new. To the upper part of the check L is attached the end of a wire or rod, M, the other

end of which passes through a hole in the regulating-rail J, and has a nut, N, screwed upon it, a yielding washer or cushion, O, being placed upon the rod M, between the nut N and the regulating-rail J, to prevent the said nut from making any sound by its contact with the said rail.

By this construction, as the key B is operated, the upper end of the check L strikes against the nose of the butt F and raises the hammer. As the hammer-head D approaches the string, the rod M draws the upper end of the check L away from the nose of the butt F, leaving the hammer free to drop back as soon as it has given its blow. By adjusting the nut N, the check L may be withdrawn from the nose of the butt F at any desired point.

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

The combination, in a piano-forte action, of the rod M, and its nut N and washer O, with the check L and the regulating-rail J, constructed and arranged to operate substantially as herein shown and described.

MARTIN C. KNABE.

Witnesses:

JAMES T. GRAHAM,  
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