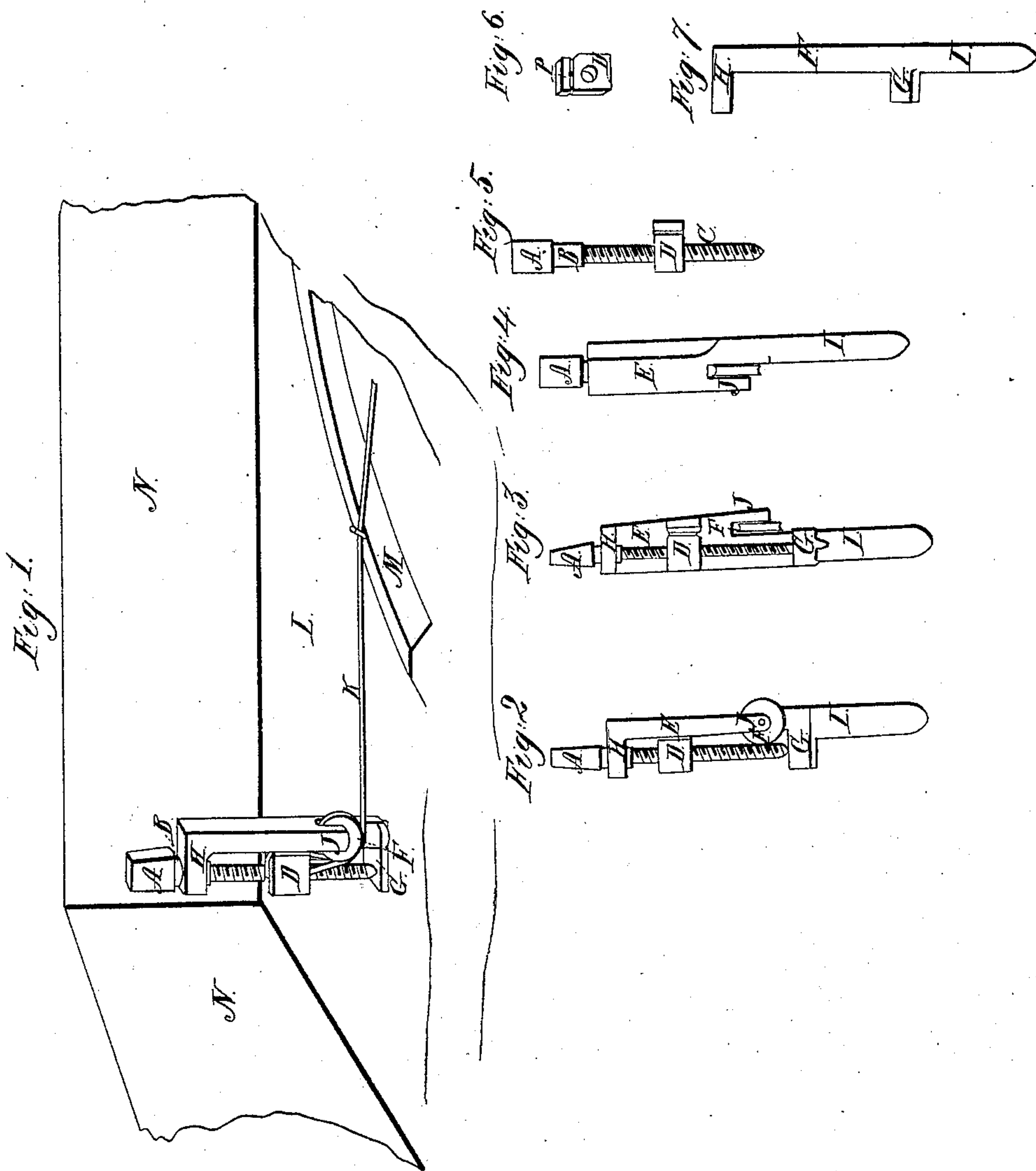


D. Walker,

Stringing Pianos.

N<sup>o</sup> 790.

Patented June 19/1838.



Witnesses:

Owen G. Warren  
S. F. Warren

Inventor:

Dan. Walker

# UNITED STATES PATENT OFFICE.

DANIEL WALKER, OF NEW YORK, N. Y.

IMPROVED MODE OF CONSTRUCTING THE WREST-PIN FOR FORTE PIANOS.

Specification forming part of Letters Patent No. 790, dated June 19, 1838.

*To all whom it may concern:*

Be it known that I, DANIEL WALKER, of the city, county, and State of New York, have invented a new and useful Improvement in Wrest-Pins of Piano-Fortes; and I do hereby declare that the following is a full and exact description.

This invention is called "Walker's Improved Wrest-Pin;" and its nature consists in applying a screw, nut, and pulley to tightening or turning each string of a piano-forte. Its object is to render extremely easy the mechanical operation of adjusting accurately the strings and to obviate the great difficulty heretofore existing of turning the pin inserted in the common manner.

To enable others skilled in the business to make and use my invention, I proceed to describe fully its construction and operation.

The stock or main support is set in a vertical position immovably in the block of the piano-forte. For a representation of this see the annexed drawing E, which makes a part of this specification. At the base of the stock, partially embedded in the block, is a small projection, called the "foot," (see G,) about of a quarter of an inch in depth and width, more or less, having upon its top an indentation or point, which serves as the cup or socket in which rests the lower point of a perpendicular screw. At the top of the stock and directly over this foot is a horizontal projection, through which is made a hole to support and guide the screw. (See H.) On the side of the stock is a projection running from the top nearly to the foot. For a profile of this see J, Figure 3. At the bottom of it is a notch or slot formed to receive a small grooved wheel or pulley, which is secured in the slot by a pin passing through it and forming a horizontal axis. This pulley is made to turn with very little friction. The stem of the stock, (see I,) or that part below the foot, is driven into the block of the piano-forte vertically. The foot is let in half its thickness into the block to prevent its turning.

The screw (see Fig. 5) has a fine thread cut upon it the whole distance from the lower point to within a quarter of an inch, or thereabout, of the head, which small portion is left smooth to work without much friction in the hole of the horizontal projection at the top of the stock. The head of the screw (see A) is made of a shape to fit a tuning-key.

The nut (see Fig. 6) to which the string is attached has a hole through it, which is tapped to receive the screw. In form it is a quadrangular block, one side of which slides against the inside back of the stock.

The string is attached to the nut by means of a small hole through it and a groove round it. The string is first passed through the hole, and then wound round the nut. The groove of the nut round which the string is wound is placed directly over the pulley.

In applying these wrest-pins to piano-fortes they are inserted in the same manner as the common pins—that is, driven into the block. The string is passed under the pulley, up through the small hole made for that purpose in the nut, and secured by being wound round it. The screw is then put into the nut and the string still more firmly secured from yielding by being pinched between the nut and the inside back of the stock. The string is then tightened and tuned by means of the tuning-key applied to the head.

In the annexed drawings the improved wrest-pin is represented of its regular and usual size, such as is commonly used in the ordinary horizontal piano-fortes.

What I claim as my invention, and desire to secure by Letters Patent, is—

The application to ordinary piano-fortes of the nut, screw, and pulley, as above described, as a substitute for the ordinary tuning-pin.

DANL. WALKER.

Witnesses:

OWEN G. WARREN,  
LORENZO F. WARREN.