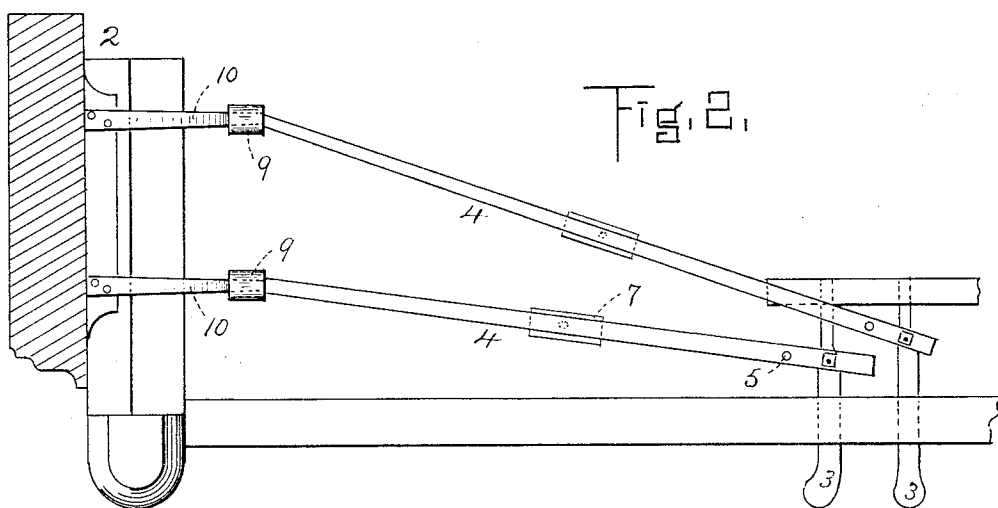
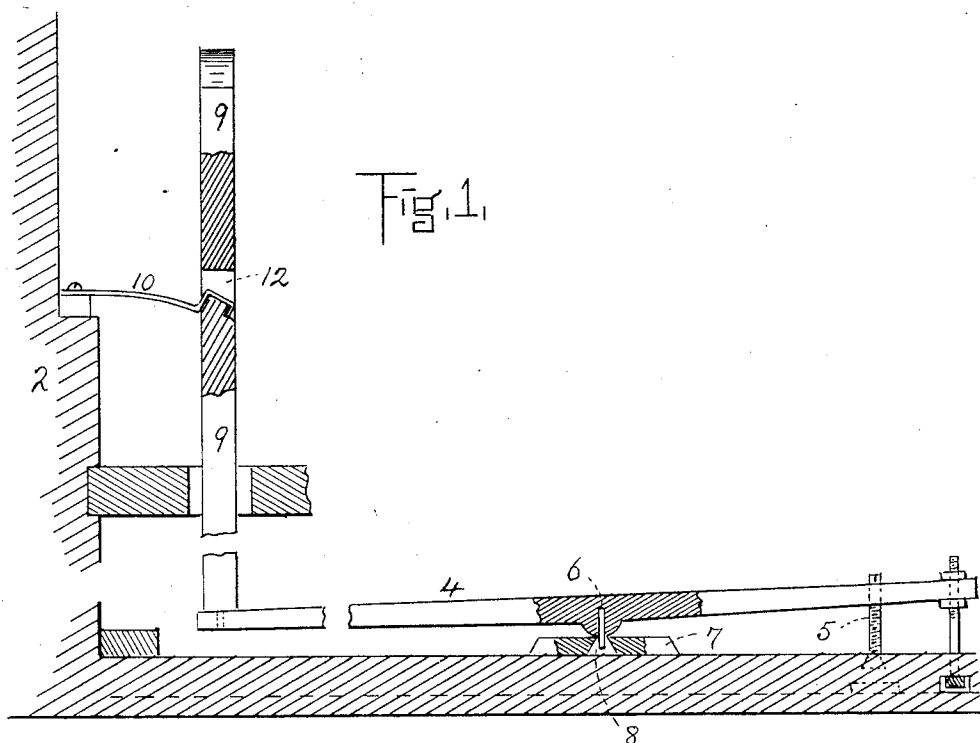


(No Model.)

W. H. IVERS.
PIANO PEDAL.

No. 484,500.

Patented Oct. 18, 1892.



Witnesses.

Gus. F. Wood
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UNITED STATES PATENT OFFICE.

WILLIAM H. IVERS, OF DEDHAM, ASSIGNOR TO THE IVERS & POND PIANO COMPANY, OF BOSTON, MASSACHUSETTS.

PIANO-PEDAL.

SPECIFICATION forming part of Letters Patent No. 484,500, dated October 18, 1892.

Application filed April 28, 1892. Serial No. 431,042. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. IVERS, a citizen of the United States, residing at Dedham, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Pedals for Pianofortes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to figures of reference marked thereon, which form a part of this specification.

This invention relates to improvements in the pedal mechanism for pianofortes whereby the several parts composing such shall be rendered completely noiseless.

The drawings represent, in Figure 1, a sectional view, in part, of a piano equipped with pedal mechanism embodying my invention. Fig. 2 is a plan of the same.

Hitherto under the construction and arrangement of the pedal movement of a pianoforte objectionable noises occur, arising from the friction of certain parts when the pedal-foot is operated. The object of my improvements is to obviate such and make the entire device noiseless at all times and under all circumstances.

In the drawings I have shown at 2 the end case in part of a pianoforte, to the base of which are pivotally attached the usual pedal-feet 3, while extending therefrom are the usual pedal-levers 4. These latter are adjustably connected with the pedal-feet and fitted with regulating-stops 5, to control their movement. Said levers are pivoted as shown—that is, in lieu of the usual horizontal pivot an upright pin 6 is firmly fastened in the pedal-lever and a tapered slot 8 cut in the block 7 or fulcrum-point. Hence the lever can oscillate without the least possibility of squeaking, and unpleasant noises are not liable to occur. At the free end of said pedal-lever is bored a hole to receive a metallic pin, which is fastened in the lower end of the pedal-stick 9. This latter has usually been supported in an upright position and guided

in its reciprocations by means of a rigid bracket apertured to receive said pedal-stick and affixed to the piano-case. Since there is nothing to support said pedal-stick and guide it properly but this apertured bracket, it has been necessary to have the pedal-stick fit said aperture closely, with the result that very frequently the friction of the parts whenever the pedal is operated occasions a sharp disagreeable noise. To obviate this trouble and render the reciprocations inaudible I have substituted in lieu of a rigid support through which the pedal-stick passes when operated a yielding arm or guide 10. One end of this arm I have fastened rigidly to the piano, while the free end is made fast to the pedal-stick. Preferably this yielding support or guide is a plate-spring so shaped at the free end as to hold the pedal-stick down and restore the entire pedal-action (not shown) to normal position quickly after using the pedal. In the present instance this support is shown as bent at its free end, while the pedal-stick is formed with a transverse opening 12, through which the guide 10 enters and is there interlocked with said stick. In this way the pedal-stick is easily removed, if desired. It is evident that the pedal-stick and guide move as an entirety, and rubbing or grating of the parts cannot occur. Further, this support, which is preferably a metallic spring, removes the necessity for the other spring usually employed beneath the pedal-foot or pedal-lever to cause the pedal-action to be carried back quickly to its normal position; but it likewise serves as a guide to maintain the pedal-stick vertically in its proper position while allowing it to move freely when it is so desired.

Other forms could be adopted in lieu of that shown; but I consider the gist of my invention consists in providing a yielding support or guide the fixed end of which is attached to the piano, while its free end is connected to the pedal-stick and moves therewith whenever the latter is reciprocated.

What I claim is—

1. The combination, with a piano and a reciprocating pedal-stick, of a yielding support

one end of which is stationary and fast to the piano, the other connected to and moving with the pedal-stick, substantially as described.

2. In combination with a piano, a pedal-
5 foot and a pedallever, a removable pedal-stick mounted at one end of the pedal-lever, and a yielding support or guide, as a plate-spring, adapted to have one end engage in and move with the pedal-stick and to have the opposite

end rigidly affixed to the piano, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. IVERS.

Witnesses:

H. E. LODGE,

NATHANIEL LOMBARD.