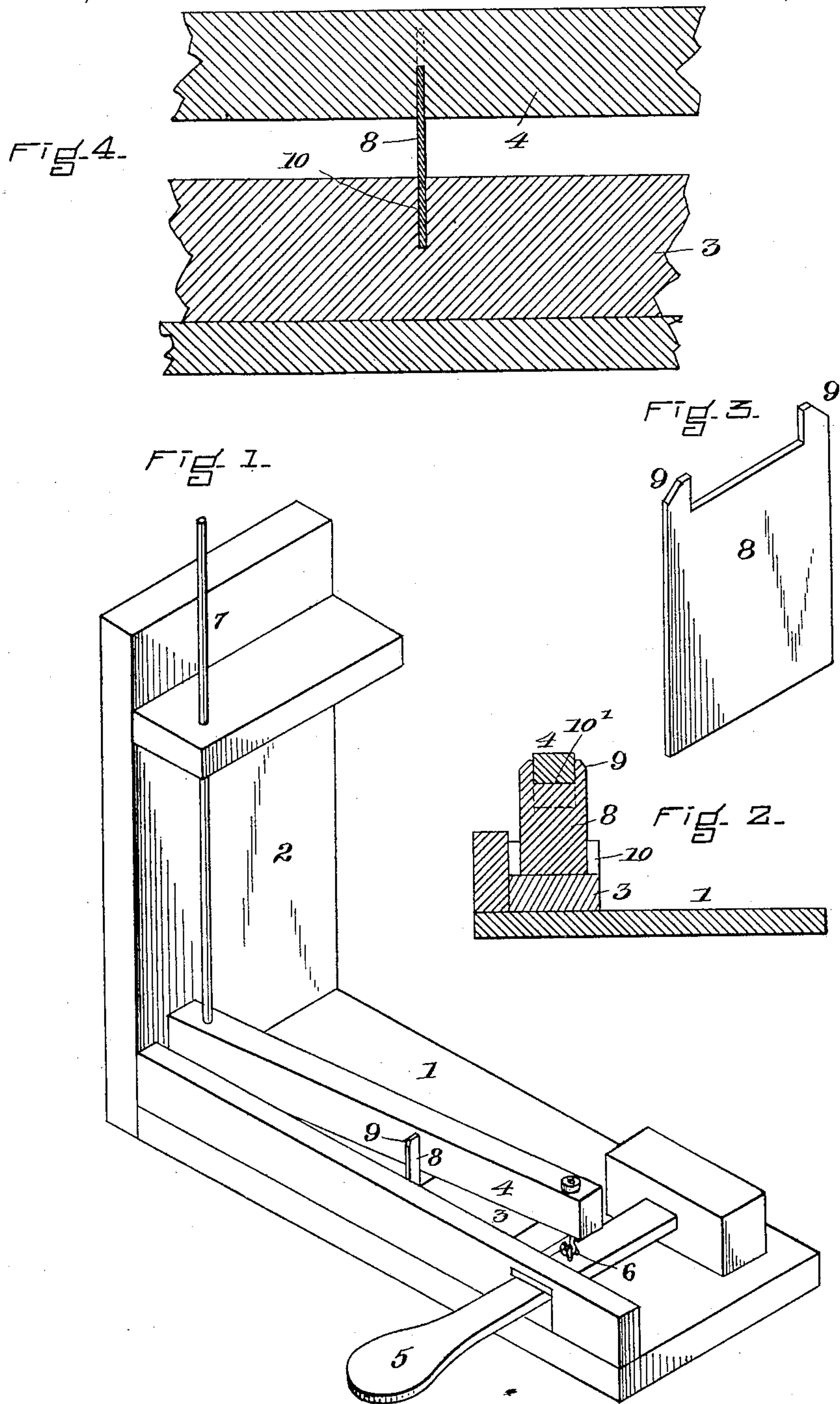


(No Model.)

W. H. IVERS.  
PEDAL ACTION.

No. 601,018.

Patented Mar. 22, 1898.



Witnesses.  
*H. A. Curtis*  
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# UNITED STATES PATENT OFFICE.

WILLIAM HENRY IVERS, OF DEDHAM, MASSACHUSETTS.

## PEDAL-ACTION.

SPECIFICATION forming part of Letters Patent No. 601,018, dated March 22, 1898.

Application filed July 1, 1897. Serial No. 643,072. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM HENRY IVERS, residing at Dedham, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Pedal-Actions, of which the following is a specification.

My improvement, while susceptible of various applications, is especially adapted to the pedal-actions of pianofortes and organs. Heretofore the pivot or hinge of the pedal-bar in these instruments has been a pin passing horizontally through the bar and its support, the bar being maintained in its normal position by a plate-spring located beneath it. The "squeak" incident to the use of the pin as a pivot is an annoyance and objection, and the primary object of my improvement is to do away with it, while at the same time I provide a simple, efficient, and durable connection between the pedal-bar and its support. I carry out my purpose by employing an elastic plate, which I secure at its bottom upright to the bed-piece, which supports the pedal-bar, the upper end of the elastic plate being secured in a proper manner to such bar. The inherent elasticity of the plate serves to maintain the pedal-bar in its normal—that is, highest—position and permits the bar to yield to the pressure of the user's foot in the act of lowering such bar.

The drawings accompanying this specification represent in Figure 1 an isometric elevation of portions of a pianoforte containing my improvement, while Fig. 2 represents a cross-section of the same, and Fig. 3 a view of the elastic plate or spring. Fig. 4 represents a vertical longitudinal section of portions of the pedal-bar and bed-piece connected by the plate-spring to be described.

Similar characters refer to similar parts throughout the several views.

In the drawings, 1 denotes the bottom of the case of a pianoforte, for instance, and 2 the side of the same.

3 is the bed-piece, upon which the pedal-bar is mounted.

4 is the pedal-bar, 5 the pedal, and 6 the swivel connection between the pedal and bar, while 7 denotes the damper-rod.

In carrying my improvement into effect I provide a thin flat plate 8, of steel or other suitable material, and I secure this plate rig-

idly at its bottom upright and transverse of the bed-piece 3 in a suitable manner. As shown in the present instance, the spring-plate 8 is secured in position by simply inserting its lower end tightly in a saw-kerf 10, cut in the top of the bed-piece. The upper end of the plate 8 is inserted in a saw-kerf 10', cut laterally in the under side of the pedal-bar 4, and I prefer to form upon the upper corners of such plate or spring ears 9 9 to overlap the sides of the bar to prevent lateral separation of the two. Ears may be formed in like manner and for a similar purpose upon the lower corners of the elastic plate; but in practice they will probably be found unnecessary.

From the above description it will be seen that the elastic or spring plate 8 constitutes in itself a support to the pedal-bar, a pivot upon which such bar may rock or tilt, and a spring medium to maintain the bar in its normal or idle position.

The spring-plate 8 is inexpensive to produce, may be quickly applied, and is effective and durable and obviates the squeak of the ordinary pin-pivot.

While I have shown and described my improvement as applied to pedal-actions of pianofortes or analogous musical instruments, and it is in this connection that I have made practical application of it, it will be obvious to good mechanics that it may be applied in various other instances where two objects are to be hinged or pivoted together in manner to permit of rocking or tilting motions between them or one upon the other.

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

A spring for pedal-actions composed of a flat plate, opposite ends of which enter the substance of the bed-piece and pedal-bar, respectively, and be thereby secured to such bed-piece and pedal-bar, and having ears to laterally clasp the pedal-bar, substantially as explained.

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

WILLIAM HENRY IVERS.

Witnesses:

F. CURTIS,

FRANCIS C. STANWOOD.