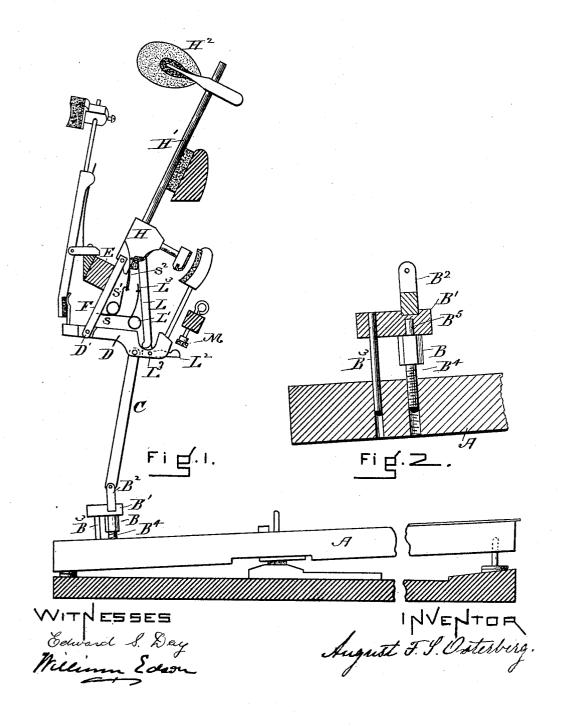
A. F. S. OSTERBERG. PIANO ACTION.

No. 453,603.

Patented June 2, 1891.



UNITED STATES PATENT OFFICE.

AUGUST F. S. OSTERBERG, OF BOSTON, MASSACHUSETTS, ASSIGNOR TO OSTERBERG & HUTCHINS, OF SAME PLACE.

PIANO-ACTION.

SPECIFICATION forming part of Letters Patent No. 453,603, dated June 2, 1891.

Application filed November 15, 1890. Serial No. 371,592. (No model.)

To all whom it may concern:

Be it known that I, AUGUST F. S. OSTER-BERG, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Piano-Forte Actions, of which the following, taken in connection with the accompanying drawings, is a specification.

The object of my invention is to so con-10 struct and arrange the parts which constitute the "action" of a piano-forte that the whole may form an organization much simpler, cheaper, more durable, and more easily ad-

justed than any now in use.

The nature of this invention may be best understood by reference to the drawings and

specification.

My improvements are illustrated in the ac-

companying drawings, in which—
Figure 1 represents in elevation a single action and its connected parts. Fig. 2 is a view, partly in section, showing the device for the adjusting movement of the key-lever.

In the drawings, A represents one of the 25 keys made and pivoted in the usual manner. The sticker C is mounted on an adjustable foot-piece B', being connected thereto by a short standard B². The foot-piece B' (see Fig. 2) is held in place partly by a dowel-pin 30 B³, which fits loosely into the key A, as shown, but its exact position is fixed by means of a screw-standard B. This screw-standard B is made preferably square or octagonal in crosssection, so that it may be turned by means of an ordinary wrench or spanner. The lower part of the standard B consists of a screwextension B4, which enters the key A and serves as an adjusting device for raising and lowering the foot-piece B'. The upper part 40 of the standard B consists of a dowel B⁵, which enters the foot-piece B', as shown, and serves, in connection with the dowel-pin B³, to hold it in place. The sticker C is connected to the foot-piece B' by the standard B2, and 45 serves to lift the fly-lever D in the usual man-

The fly L is pivoted to the jack at L³, and has an extension L2, adapted to come in contact with the fly-stop M, and thus have its 30 upper end thrown out from under the hub H of the hammer H' H². It will be observed

I that the fly-lever D and the hammer are both attached to the same flange-piece F, which is made fast to the rail E. By this arrangement I am enabled to dispense with one of the rails, 55 it being usual to have a separate rail for the hammer-flange. Thus by my arrangement I save the making of one rail.

By my construction and arrangement of the foot device B', I am enabled to do away 60 with the use of a sticker-rail altogether, which

is a saving of importance.

The two springs that are used for holding the hammer back and the fly L in place are both made fast to the flange F, as shown. The 65 hammer-spring S S' is formed into a coil and has a hook at its upper end by which it is connected to the hub of the hammer by a line S², as shown. The fly-spring L' has a coil the same as the spring SS' has, and, in addition, 70 a second coil L³. It also has a hook by means of which and a line at L4 it is put in working connection with the fly L. As the other parts of the action are common and well known, I will not describe them.

What I claim, and desire to secure by Let-

ters Patent, is-

1. In a piano-forte action, the combination of the key foot-piece B', adapted to hold the sticker and provided with an adjusting- 80 screw standard and a stay-dowel, whereby the foot-piece is held in place with the sticker C,

substantially as and for the purpose set forth.

2. In a piano-forte action, the combination of the fly-lever D, flange F, hammer-spring S 85 S', fly-spring L', and hammer, said flange F being fastened to the rail and adapted to form a support for the jack, the hammer, the hammer-spring S S', and the fly-spring L', substantially as and for the purpose set forth.

3. In a piano-forte action, the combination

of the flange-piece F and springs S, S', and L' with the hammer-hub H and fly L, substan-

tially as and for the purpose set forth.

In testimony whereof I have signed my 95 name to this specification, in the presence of two subscribing witnesses, on this 7th day of November, A. D. 1890.

AUGUST F. S. OSTERBERG.

Witnesses:

FRANK G. PARKER, WILLIAM EDSON.