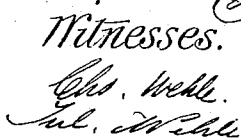


Patented Jan. 24, 1860.



^WInventor.
Jas. Krohaly

UNITED STATES PATENT OFFICE.

JOSEPH KOHNLE, OF NEW YORK, N. Y.

PIANOFORTE-ACTION.

Specification of Letters Patent No. 26,909, dated January 24, 1860.

To all whom it may concern:

Be it known that I, JOSEPH KOHNLE, of the city, county, and State of New York, have invented a new and Improved Piano-Action; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a longitudinal elevation of my improved piano action, Figs. 2, 3, 4 and 5 represent elevations of four different constructions of the second knuckle of the hammer butt of my improved piano action.

Fig. 6 is an elevation of my additional upright, Fig. 7 is a perspective view of the same.

The same letters of reference indicate the same parts in all the figures.

The nature of my invention consists in effecting the repeat of any of the usual actions by securing to the jack an additional upright containing a pivoted button and a spring, in such a manner, that the hammer butt when elevated (as shown by the red lines of Fig. 1,) should be mainly supported by the said spring, and thereby cause an instantaneous transmission of every vibration of the key to the hammer, as hereinafter described; and it also consists in regulating the catching of the hammer butt on the pivoted button by forming the second knuckle of the hammer butt with adjustable screw nuts as hereinafter described.

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

The black lines of Fig. 1, represent the piano action when at rest; the red lines of the same figure show the piano action when the hammer is elevated, and ready for repeat.

E represents the back jack, *r* the hammer, *h* the hammer rod, A the hammer butt, *a* the jack, *m* the jack bottom, *k* the key. All these parts are connected in the usual manner for forming a piano action, and do not constitute part of my invention. The additional upright C contains in its lower part an oblong slit *n* and terminates on its upper part in two cheeks *s, s*, between which a button or lever B is inserted and pivoted by means of a pin or pivot *i*. The back part of this button B is attached to the main body of the upright C by a spiral spring D, in such a manner that when the lever B is

pressed, however slight, it will turn on the pivot *i*, and strain the spring D; but when the pressure is released, the spring will quickly contract and thereby snap the button B into its original position. This additional upright, thus described, is attached to the jack *a* by means of screw *o* inserted through the oblong slit *n*. The particular point of the said slit, through which the screw is passed, will depend upon the elevation at which the button B is required when at rest.

The hammer butt A may consist of one piece as shown in Fig. 1, but in some instances it may be deemed desirable, to be capable of regulating the distance between the two knuckles, forming the said hammer butt, or the relative height of the second knuckle F of the said hammer butt, and in that case I construct this second knuckle F as a separate piece in the shape of a nut, which may be attached by a screw either to the first knuckle, as in Fig. 2, or to the hammer rod, as in Fig. 3, or to a projecting piece of the hammer butt, as in Fig. 4, or vertically to the end of the hammer butt, as in Fig. 5.

The constructions as represented in Figs. 2 and 4 permit a regulation of the distance of the two knuckles, and the constructions as represented in Figs. 3 and 5 permit a regulation of the height of the second knuckles.

The regulating of the knuckles may be applied for the purpose of effecting an easy working of the lever B, without necessitating any alteration in the size or shape of the said lever; or for the purpose of precisely fixing the time for catching the second knuckle on the lever B.

When the key *k* is depressed the jack *a* elevates the hammer *r* to the string and the hammer butt A falls on the lever B, which being supported by the string D and the pivot *i*, prevents the hammer from falling back, as shown by the red lines of Fig. 1. In this position the quickest repeat will be allowed, as the tremulating of the key is immediately transmitted to the hammer by means of the spiral spring D. When the depression of the key ceases, the button B is moved into the space between the two knuckles, and thereby the hammer is allowed to fall back to its original position. The spring D also causes the quick catching of the hammer by the back jack E, when the

key is strongly depressed, but the slightest release of the touch frees the hammer from the back jack, and makes the hammer ready for the repeat.

5 It will be observed, that the spring D is hidden and protected on all sides when the additional upright is fastened to the jack.

The advantages of this improved action are as follows: 1st, a quicker repeat than in
10 any other action, 2d, a more simple and durable repeat, 3d, a less costly repeat, 4th my improvement is applicable to every kind of pianos; the oblong slit *n* of the additional upright permits the application of
15 the same to a high or a low jack; square or grand pianos may be supplied with the additional upright in the manner described, and may be thereby easily transformed into repeating instruments; and every square pi-

ano may be changed into a concert instrument by the addition of my improvement. 20

What I claim as new and desire to secure by Letters Patent is—

1. The additional upright C, containing the pivoted button B and the spring D, attached to the jack of any of the usual actions, in the manner and for the purpose substantially as described. 25

2. The construction of the second knuckle F of the hammer butt consisting of separate and adjustable nuts and screws, substantially as represented in Figs. 2, 3, 4 and 5 for the purpose set forth. 30

Dated New York December 29, 1859.

JOS. KOHNLE.

Witnesses:

CHS. WEHLE,
JUL. WEHLE.