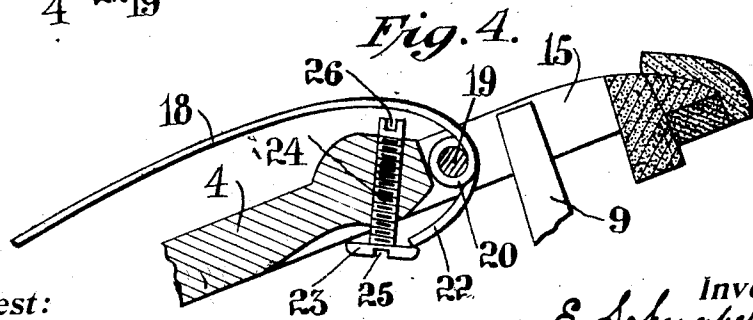
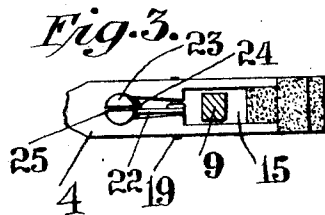
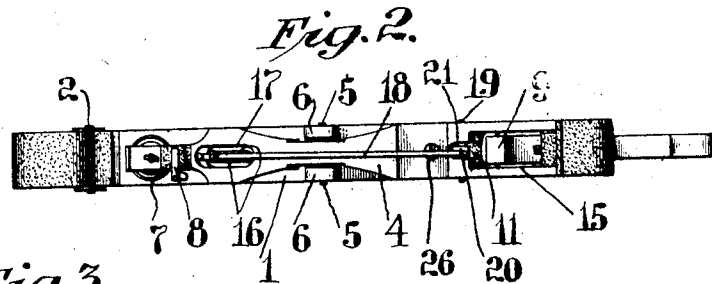
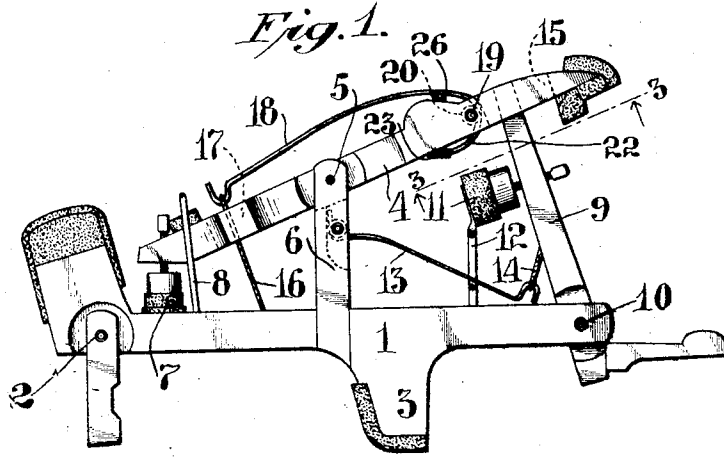


E. SCHNABEL.
ACTION FOR GRAND PIANOS.
APPLICATION FILED JUNE 25, 1909.

954,140.

Patented Apr. 5, 1910.



Attest:
B.S. Daniels

Inventor:
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by *Wm. F. Long* Att'y

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UNITED STATES PATENT OFFICE.

EDMUND SCHNABEL, OF NEW YORK, N. Y., ASSIGNOR TO THE AEOLIAN COMPANY, OF
NEW YORK, N. Y., A CORPORATION OF CONNECTICUT.

ACTION FOR GRAND PIANOS.

954,140.

Specification of Letters Patent.

Patented Apr. 5, 1910.

Application filed June 25, 1909. Serial No. 504,230.

To all whom it may concern:

Be it known that I, EDMUND SCHNABEL, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Actions for Grand Pianos, of which the following is a specification.

This invention relates to improvements in actions for grand pianos and particularly to the repeating lever.

The object of my invention is to provide a new and useful improved action for grand pianos which is simple in construction and in which the repeating lever is very quick, active and responsive and in which the sensitiveness and rapidity of action is increased and the power required for operating the repeating lever decreased.

In the accompanying drawings in which like numerals of reference indicate like parts in all the figures: Figure 1 is a side view of part of the action for one key of a grand piano, containing one embodiment of my invention. Fig. 2 is a plan view of the same. Fig. 3 is a detail view of part of the underside of the repeating lever. Fig. 4 is a vertical longitudinal sectional view, parts being broken away.

The support 1 is of conventional construction and is pivoted at 2 in the conventional manner. It is provided with a downwardly extending pilot or toe 3 on which the key can act to throw the support upward. The repeating lever 4 is pivoted at 5 to the standard 6 on the support and is provided at the inner end with the cushioned stop 7, the upward movement of the inner end of the repeating lever being checked by the L shaped check 8 on the support.

The hopper 9 of conventional shape and construction is pivoted at 10 to the support and carries an adjustable cushioned stop 11 which can rest against the check 12 projecting upward from the support. The spring 13 secured to the standard 6 engages the loop 14 on the hopper and draws the upwardly extending arm of the jack in the direction toward the check 12. The upper end of the jack extends through and can swing in a slot 15 in the outer end of the repeating lever.

A loop 16 is secured to the support and extends through the slot 17 in the repeating lever and is engaged by a wire spring 18

secured to the repeating lever and serving for the purpose of pulling the inner end of the repeating lever downward and the outer end provided with the slot 15 upward. The wire spring 18 extends to the inner end of the slot 15 where it is coiled around a transverse pin 19, the coil 20 being located within a notch 21 in the inner end of the slot 15. From the coil 20, the arm 22, formed of a continuation of the spring wire 18, extends in the direction toward the inner end of the repeating lever, preferably within a recess in the underside of the repeating lever, and the free end of this arm 22 rests upon the upper surface of the head 23 on the lower end of a screw 24, screwed from the underside of the repeating lever through this lever so as to project from the upper surface of the lever. The wire spring 18 is thus substantially U shaped, with a long leg above the top of the repeating lever and a short leg at the underside of the repeating lever. This screw 24 is provided with a groove 25 in its head 23 for applying an instrument for screwing the screw from the underside through the repeating lever and this screw is also provided in its upper end with a groove 26 to permit of applying a screw driver or other implement so as to permit of adjusting this screw from the top. By turning this screw so that it moves upward the lower arm 22 of the spring 18 is moved upward and the tension of the spring is thus increased and by turning the screw downward the tension of the spring is decreased. As the screw is provided with a groove in its upper end this adjustment of the tension of the spring can readily be made from above and without detaching any of the parts.

Having described my invention what I claim as new and desire to secure by Letters Patent is:—

1. In a piano action, the combination with a support and a repeating lever, of a spring mounted upon the repeating lever and having a long shank and a short shank, an adjusting means mounted on the repeating lever and engaging the short shank of said spring, said adjusting means being located on the repeating lever between the point at which the spring is mounted on the repeating lever, and that end of the repeating lever toward which the long shank of the spring extends and means connecting the end

of the long shank of the spring with the support, substantially as set forth.

2. In a piano action, the combination with a support and a repeating lever, of a jack 5 pivoted to the support, the repeating lever having a slot near one end, into which slot the upper end of the jack passes and said repeating lever also having a notch extending 10 from the inner end of this slot, a spring having a long shank and a short shank, said spring being secured to the repeating lever and part of the spring passing through the 15 above mentioned notch, an adjusting means engaging the short shank of the spring and means connecting the long shank of the spring with the support, substantially as set forth.

3. In a piano action, the combination with 20 a support and a repeating lever, of a jack pivoted to the support, the repeating lever having a slot into which the upper end of the jack passes and a notch in the inner end of this slot, a substantially U shaped 25 spring having a long shank and a short shank, secured on the repeating lever and passing through said notch, an adjusting means in the repeating lever engaging the short shank of the spring, said adjusting 30 means being located between the point of

connection between the spring and the repeating lever and that end of the repeating lever toward which the long shank of the spring extends, and means connecting the long shank of the spring with the support, substantially as set forth. 35

4. In a piano action, the combination with a support and a repeating lever, of a jack pivoted to the support, the repeating lever 40 having a slot into which the upper end of the jack passes, and a notch in the inner end of this slot, a substantially U shaped wire spring having a long shank and a short shank mounted on the repeating lever and passing through said notch, a screw in 45 the repeating lever adjacent to said notch and provided on the underside of the repeating lever with a head, the short shank of the spring resting against the inner surface of said head, and means connecting the 50 long shank of the spring with the support, substantially as set forth.

Signed at New York city in the county of New York and State of New York this 23d day of June A. D. 1909.

EDMUND SCHNABEL.

Witnesses:

F. H. HUGHES.

D. C. HEINS.