

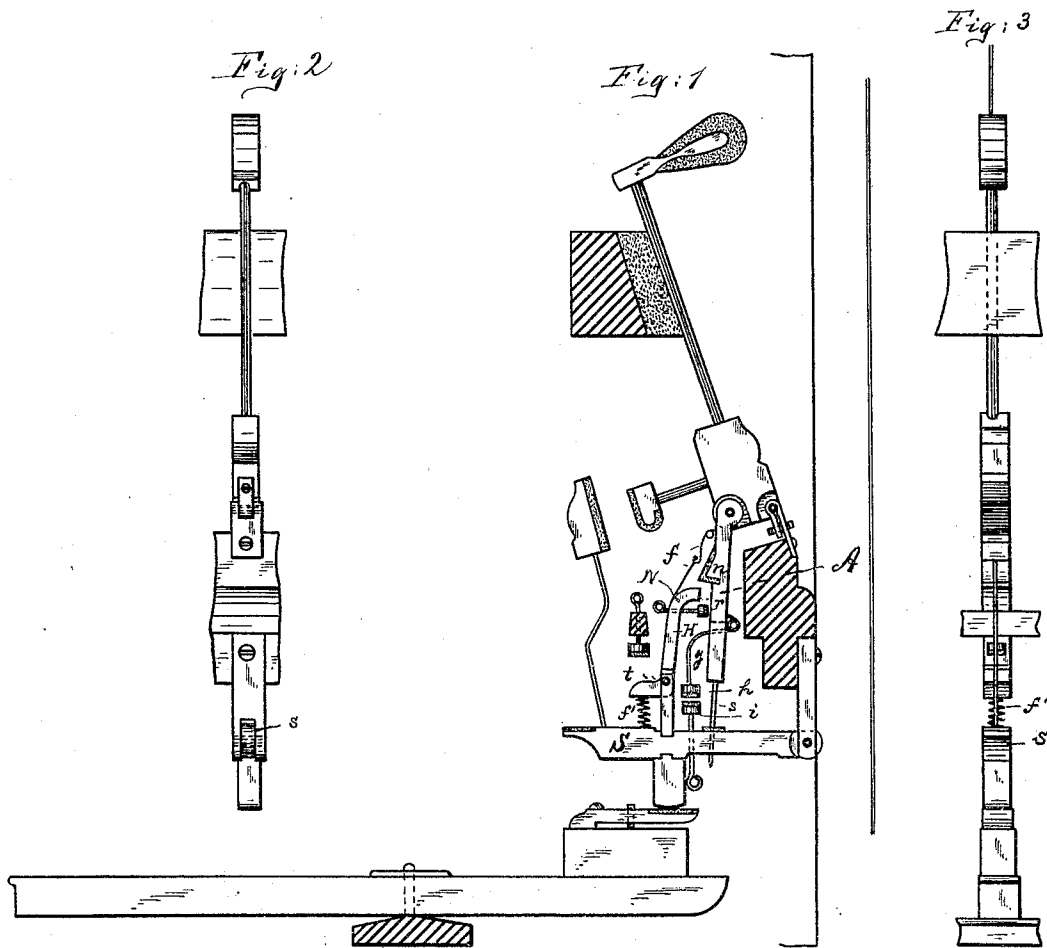
(No Model.)

2 Sheets—Sheet 1.

J. BLÜTHNER.
PIANO ACTION.

No. 543,371.

Patented July 23, 1895.



Witnesses:
Wm E. Scholl
E. Scholls.

Inventor:
Julius Blüthner
by his attorneys
Roeder & Briesen

UNITED STATES PATENT OFFICE.

JULIUS BLÜTHNER, OF LEIPSIC, GERMANY.

PIANO-ACTION.

SPECIFICATION forming part of Letters Patent No. 543,371, dated July 23, 1895.

Application filed March 7, 1895. Serial No. 540,838. (No model.)

To all whom it may concern:

Be it known that I, JULIUS BLÜTHNER, of Leipsic, in the Kingdom of Saxony, Germany, have invented a new and useful Improvement in Repeating-Actions for Upright Pianos, of which the following is a specification.

This invention relates to an improved repeating-action for upright pianos, which is provided with an abstract having a spring-arm that is adapted to make contact with a regulating-button and insures a full tone with even a partial or soft depression of the key.

In the accompanying drawings, Figure 1 is an elevation of my improved action, showing the key raised. Fig. 2 is a rear view of Fig. 1; Fig. 3, a front view thereof; Fig. 4, an elevation of the action, showing the key partly depressed; and Fig. 5, a similar elevation with the key fully depressed.

The letter A represents the abstract pivoted to the hammer-butt and terminating in a pin s, guided in the lever S. The fly or jack H is pivoted at t, and provided with a regulating-button r to regulate the degree of engagement between the jack and the nose n of the abstract. At its upper end the jack H is provided with a loop-spring f, which throws the curved neck N of the jack H under the nose n of the abstract. A spring f' beneath the lower bent end of the jack H serves for a like purpose. This spring, however, is not absolutely necessary, and if it should accidentally break the operativeness of the action would not be seriously impaired.

The loop-spring f does not alone cause the return of the jack beneath the nose n, but it also prevents the jack from receding to an undue extent from the same. To provide the abstract with a yielding attachment and to render it properly adjustable I secure to the abstract a spring g that passes through the same and terminates in a button h. This button

is adapted so bear upon a regulating-button i, which serves to accurately regulate the vibrations of the hammer. The parts h i prevent any abrupt motion of the abstract and also effect an easy and prompt engagement of the jack with the nose n, so that a reliable repeating-action is insured.

The principal feature of my invention is to be found in the spring-arm connected to the abstract, which causes a perfect action of the hammer for a soft as well as for a full depression of the key. Thus the engagement between the jack and abstract is such as to insure a reliable repeating-action for any depression of the key.

What I claim is—

1. In a repeating action, the combination of an abstract with a downwardly extending spring arm connected thereto at its upper end, a button secured to the free end of the spring arm, and a regulating button adapted to engage said button, substantially as specified.

2. The combination of an abstract having a nose, with a spring arm, a button adapted to be engaged thereby, a guide pin, a jack, and a spring adapted to throw the jack into engagement with the nose, substantially as specified.

3. The combination of an abstract having a nose, with a spring arm, a button secured thereto, a regulating button engaged thereby, a guide pin secured to the lower end of the abstract, an arched jack and a loop spring adapted to throw the jack into engagement with the nose, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JULIUS BLÜTHNER.

Witnesses:

MAX MATTHAI,
OTTO DOEDERLEIN.