

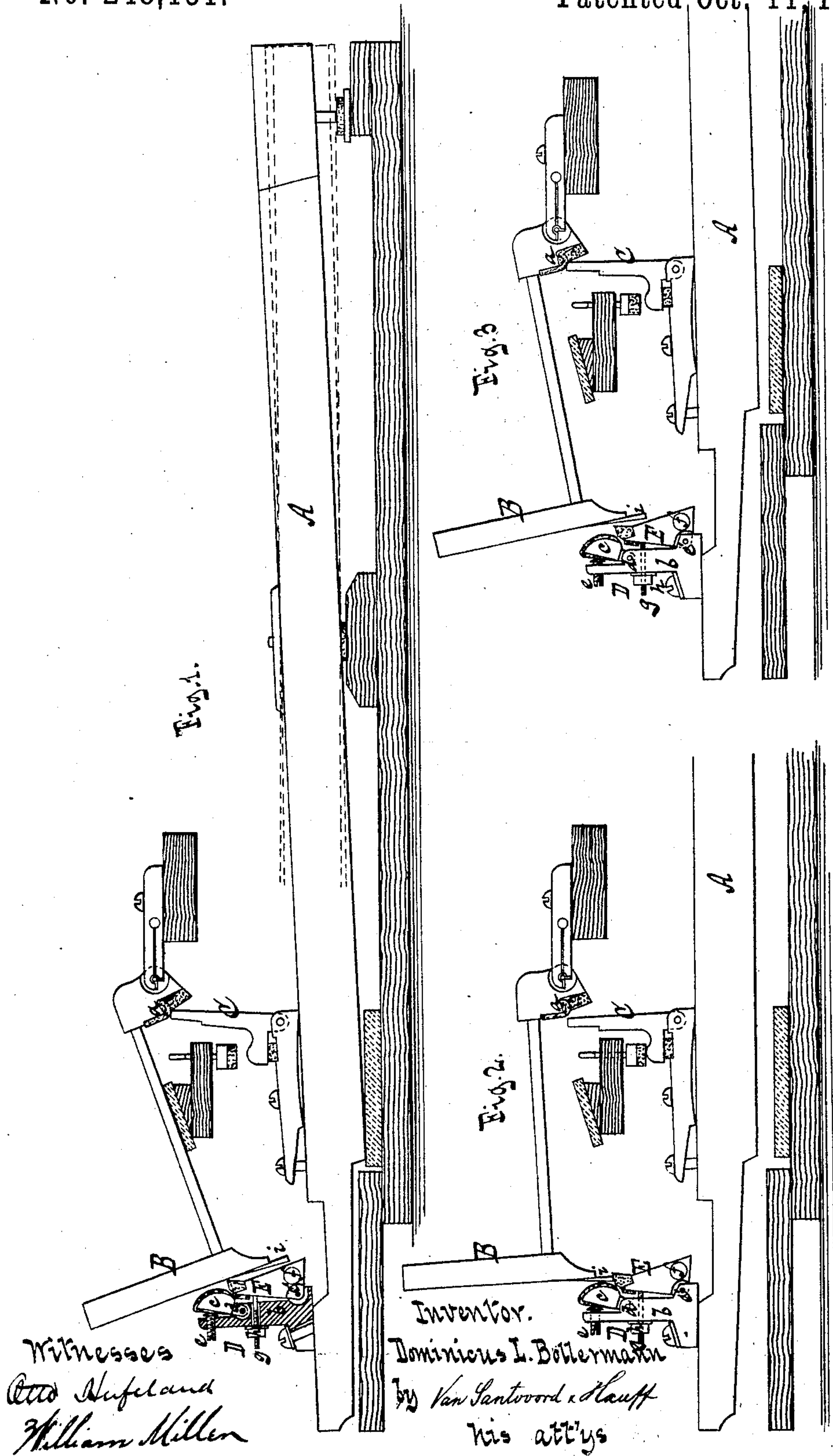
(No Model.)

D. L. BOLLERMANN.

REPEATING ACTION FOR PIANO FORTES.

No. 248,131.

Patented Oct. 11, 1881.



UNITED STATES PATENT OFFICE.

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REPEATING-ACTION FOR PIANO-FORTES.

SPECIFICATION forming part of Letters Patent No. 248,131, dated October 11, 1881.

Application filed August 15, 1881. (No model.)

To all whom it may concern:

Be it known that I, DOMINICUS L. BOLLERMANN, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Repeating-Actions for Piano-Fortes, of which the following is a specification.

This invention consists in the combination, with the hammer, the jack, and the back-check, of a repeating-step formed beneath the head of the back-check, so that the hammer on its descent is retained in a partly-raised position by said repeating-step, and the jack can be made to engage with the hammer in quick succession without taking the finger clear of the key. The repeating-step is pivoted to the back-check and loaded, so that it assumes the required position by its own gravity, while it is free to recede as the hammer rises. The head of the back-check is hinged to its shank, and its position is regulated by an adjusting-screw.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a sectional side elevation when the action is at rest. Fig. 2 is a similar view when the front of the hammer rests upon the repeating-step. Fig. 3 is a similar view when the hammer has left the repeating-step and is supported by the jack.

Similar letters indicate corresponding parts.

In these drawings the letter A designates the key of a piano-forte, and B is the hammer. On the key is secured the jack C, which is of the usual construction, and which, when the key is permitted to rise, engages with the shoulder *a* of the hammer-butt, so that when the key is depressed the hammer is thrown in contact with the strings. D is the back-check, which is secured on the tail end of the key in the usual position. This back-check is composed of a standard or shank, *b*, which is firmly secured to the tail of the key, and of a head, *c*, which is secured to the shank by a pivot, *d*, so that it can be thrown forward or moved back by means of an adjusting-screw, *e*. With this back-check is combined a repeating-step, E, the body of which is connected to the shank

of the back-check by a pivot, *e'*, and is loaded with a weight, *f*, so that it will have a tendency to drop forward, being retained in the required position by a screw-stud, *g*, which extends through the shank of the back-check, and is provided with a nut, *h*. By means of this nut the distance to which the repeating-step can fall forward can be regulated, and at the same time the repeating-step is free to move back a sufficient distance to allow the hammer to pass up while the same, after the hammer has passed up, falls forward, so that when the hammer descends its foot *i* is caught by said step and the hammer is retained in the position shown in Fig. 2. This position is reached when the key has been depressed, and by referring to Fig. 2 it will be seen that the jack does not engage with the shoulder of the hammer-butt but is in position to do so when the key is permitted to rise only very little. This rising motion of the key can be produced without removing the finger from said key, and as soon as the key has moved up the required small distance the jack engages with the shoulder of the hammer-butt while the foot of the hammer leaves the repeating-step, as shown in Fig. 3. By depressing the key the hammer is again thrown in contact with the strings, and on its descent it is caught by the repeating-step, and these motions of the hammer can be repeated in quick succession without removing the finger from the key.

The position of the repeating-step and that of the head of the back-check can be adjusted by the nut *h* of the screw-stud, and by the screw *e* respectively. No spring is required in my repeating-action.

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

1. In a piano-action, the back-check, arranged on the rear end of the key, and provided with an upright repeating-step, as described, in combination with the jack, also arranged on the key in front of the back-check and repeating-step, and the hammer pivoted in front of the jack and provided with a shoulder to engage the repeating-step, substantially as set forth.

2. The combination, substantially as hereinbefore described, of the key, the hammer, the jack, the pivoted head of the back-check, and the repeating-step.

5 3. The combination, substantially as hereinbefore described, of the key, the hammer, the jack, the pivoted head of the back-check, and the pivoted repeating-step.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

DOMINICUS L. BOLLERMANN. [L. S.]

Witnesses:

W. HAUFF,
E. F. KASTENHUBER.