(No Model.)

J. L. MÜLLER.

ACTION FOR MECHANICAL MUSICAL INSTRUMENTS.

No. 480,854. Patented Aug. 16, 1892.

Fig. 1

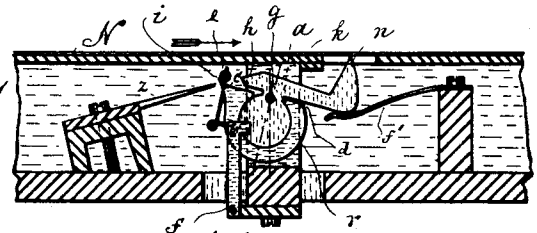


Fig. 2

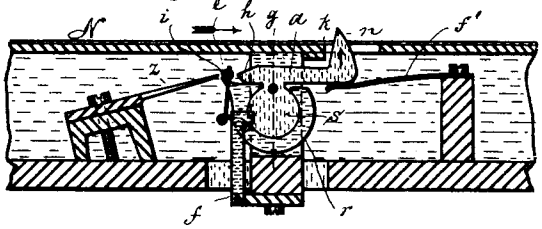


Fig. 3

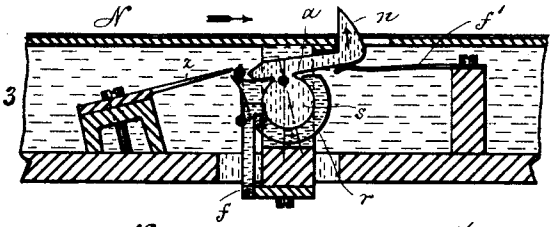


Fig. 4

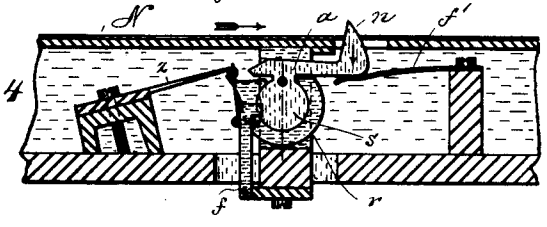


Fig. 5

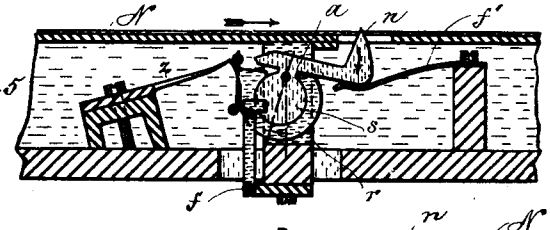


Fig. 6

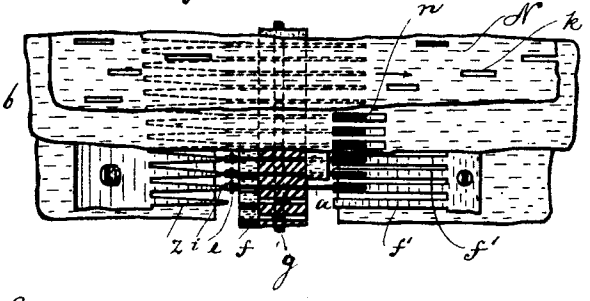


Fig. 7

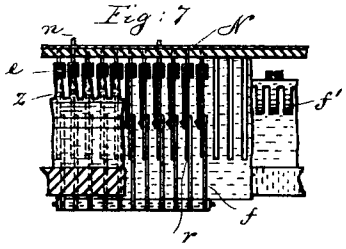


Fig. 8

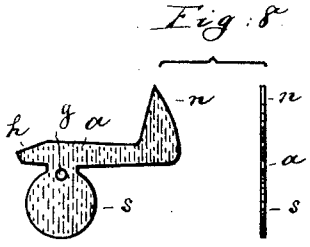
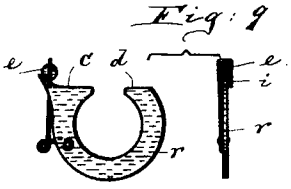


Fig. 9



Witnesses:
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A. Honglmann.

Inventor:
J. L. Müller
by his attorneys
Roeder & Briesen

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHANN L. MÜLLER, OF LEIPSIC, GERMANY.

ACTION FOR MECHANICAL MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 480,854, dated August 16, 1892.

Application filed December 23, 1891. Serial No. 415,950. (No model.)

To all whom it may concern:

Be it known that I, JOHANN L. MÜLLER, of Leipsic, Plagwitz, in the Kingdom of Saxony, Germany, have invented an Improved Action for Mechanical Musical Instruments, of which the following is a specification.

This invention relates to a novel mechanism for actuating the hammers in mechanical musical instruments; and it consists in the various features of improvement more fully pointed out in the claims.

In the accompanying drawings, Figures 1 to 5 are longitudinal sections through the action, showing the same in consecutive positions; Fig. 6, a plan, partly in section, of the action; Fig. 7, an end view thereof; Fig. 8, a side and end view of lever *a*, and Fig. 9 a side and end view of ring *r*.

The letter *a* represents the lever that is oscillated around a fixed pivot *g* by the perforated music-sheet N, that engages the nose *n* of the lever, as usual. The lever *a* is provided with a circular projection *s*, embraced by and turning in the open ring *r*. This open ring is provided at one end with the nose or hammer *i*, adapted to strike and sound the reed or tongue *z*. A spring-damper *e* is also secured to ring *r*. In order to hold the disk *s* within the ring *r*, I employ a laterally-bearing spring *f*. As the lever *a* is caused to swing around its pivot *g*, an eccentric oscillating motion is imparted to the nose *i*, which causes such nose to strike the reed in moving upward, but not in moving downward.

In Fig. 1 the nose *n* is held down by the music-sheet and the nose *i* is raised above the reed. When a perforation *k* comes in line with nose *n*, the lever-spring *f'* causes the lever to be revolved around the pivot *g*, Fig. 2. As the nose thus rises, the end *h* of lever *a* will press upon the edge *c* of ring *r* and cause the ring to be oscillated, so that the nose *i* clears the reed, Fig. 3. The nose *n* will now begin its descent and cause the lever *a* to turn back on pivot *g* at first without moving ring *r*, Fig. 4. When the lever has turned so far that it bears upon the edge *d* of ring *r*, it will carry the ring with it, and thus cause the nose *i* to strike and sound the reed, Fig. 5.

My improved action is simple, reliable, and noiseless.

What I claim is—

1. The combination of lever *a*, having nose *n* and disk *s*, with ring *r*, having nose *i*, and with reed *z*, substantially as specified.

2. The combination of lever *a*, having nose *n* and disk *s*, with ring *r*, having nose *i*, and with the reed *z*, springs *f f'*, and damper *e*, substantially as specified.

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

JOHANN L. MÜLLER.

Witnesses:
MAX MATTHAI,
CARL BORNQUACHER.