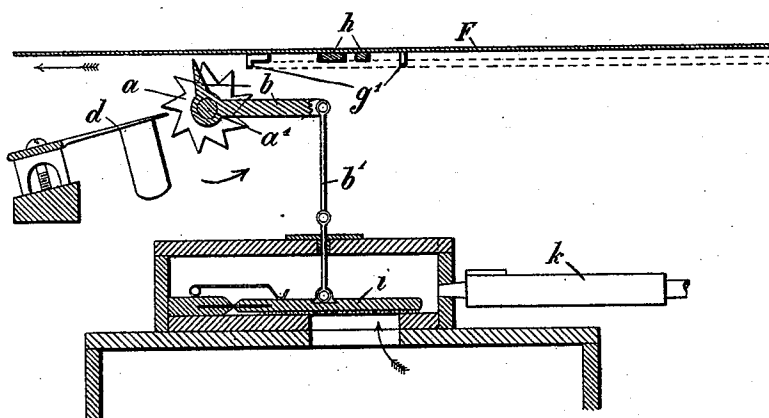


(No Model.)

P. EHRLICH.
MECHANICAL MUSIC BOX.

No. 594,236.

Patented Nov. 23, 1897.



Witnesses
Frederick Steuber
Ewell A. Dick

Inventor
Paul Ehrlich
by *Marshall Bailey*
his attorney

UNITED STATES PATENT OFFICE.

PAUL EHRLICH, OF LEIPSIC-GOHLIS, GERMANY.

MECHANICAL MUSIC-BOX.

SPECIFICATION forming part of Letters Patent No. 594,236, dated November 23, 1897.

Application filed December 23, 1895. Serial No. 572,997. (No model.) Patented in Germany June 10, 1893, No. 79,601.

To all whom it may concern:

Be it known that I, PAUL EHRLICH, a subject of the King of Saxony, residing at Gohlis, near Leipsic, in the Kingdom of Saxony, German Empire, have invented new and useful Improvements in Mechanical Music-Boxes, (for which I have obtained a patent in Germany, No. 79,601, bearing date June 10, 1893,) of which the following is a specification.

Mechanical music-boxes in which tongues are struck by star-wheels to make them vibrate and sound have a tiresome monotony of the sounds.

The present invention has for its object to provide music-boxes of the above-named type with means for avoiding this inconvenience of monotony. Said means consists in the combination of a star-wheel, a lever, and a sound-producing device, said star-wheel and lever being arranged alongside of each other and connected so as to simultaneously operate said tongue and sound-producing device, as will be hereinafter more fully described.

The manner in which my invention is or may be carried into effect can best be explained and understood by reference to the accompanying drawing, which represents a sectional face view of the actuating mechanism for a steel tongue and wind-reed mechanism.

In the accompanying drawing, *a* represents a star-wheel suitably disposed upon a shaft *a'*, alongside of which and upon the same shaft is placed lever *b*. The wheel being rotated in the direction shown by the arrow by the projection *g'* of the music-sheet *F* and the shorter arm of lever *b* by projections *h* thereof the long arm of the lever *b* lifts valve *i* by means of the hinged rod *b'*, connected with lever *b*, and causes the wind-reed *k* to sound. The tongue *d*, it will of course be seen, has been caused to vibrate and sound by one of the teeth of wheel *a* at the same time the valve *i* was lifted to cause reed *k* to sound. The longer projections *g'* of the music-sheet are

of course of such width and are so arranged that they arrest only the star-wheel and not the lever *b* alongside of that wheel.

It will be understood that a number of the wheels *a* and the levers *b* are arranged upon the shaft *a'*, the wheels and levers being arranged alternately, and each free to turn on the shaft; and also that a corresponding number of tongues and reeds or other sound-producing devices are employed.

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

1. In a music-box the combination of a plurality of steel tongues, a plurality of sound-producing devices, distinct from the tongues, star-wheels and levers arranged alongside of one another upon a shaft, and adapted to operate said tongue and sound-producing devices, substantially as shown and described.

2. In a music-box the combination of a plurality of steel tongues, a plurality of sound-producing devices, loosely-disposed star-wheels and levers arranged alongside of one another upon a shaft to operate said tongues and sound-producing devices respectively, and a music-sheet adapted to operate said wheels and levers, substantially as and for the purposes hereinbefore set forth.

3. In a music-box the combination of a plurality of steel tongues, a plurality of sound-producing devices, loosely-disposed star-wheels and levers arranged alongside of one another upon a shaft, and a music-sheet having projections in series to actuate the said star-wheels and levers, substantially as and for the purposes hereinbefore set forth.

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

PAUL EHRLICH.

Witnesses:

RUDOLPH FRICKE,
OTTO DOEDERLEIN.