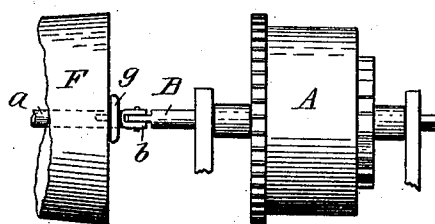
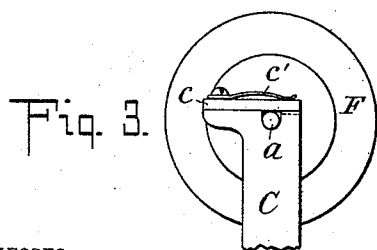
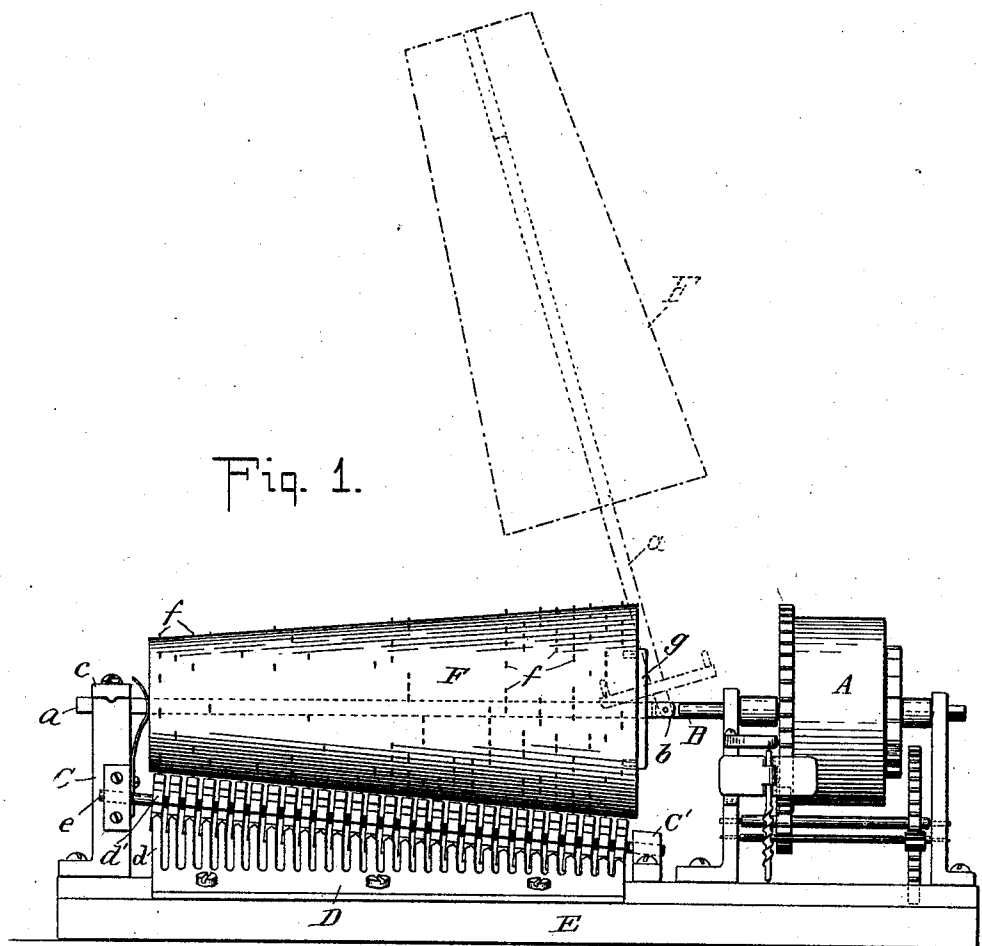


(No Model.)

H. LANGFELDER.
MUSICAL INSTRUMENT.

No. 519,816.

Patented May 15, 1894.



WITNESSES:

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HENRY LANGFELDER, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO
F. G. OTTO & SONS, OF JERSEY CITY, NEW JERSEY.

MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 519,816, dated May 15, 1894.

Application filed February 2, 1894. Serial No. 498,837. (No model.)

To all whom it may concern:

Be it known that I, HENRY LANGFELDER, a resident of the city, county, and State of New York, have invented certain new and useful Improvements in Musical Instruments, of which the following is a specification.

My invention relates to that class of musical instruments wherein the music is produced by the action of a rotating note barrel upon flexible tongues to vibrate the same, and has for its object to improve the construction of such instruments.

To this end my invention consists in providing instruments of this general class with a conical or substantially conical note barrel and in hinging or pivoting the main shaft of the mechanism of the instrument in such a manner as to facilitate the ready removal of the note barrel from the instrument and replacing the same.

Hitherto it has been customary in this class of instruments to employ a note barrel of cylindrical form, but by my invention the increased circumference of that portion of the note barrel nearest the base of the cone permits the placing of a greater number of note pins, thus greatly facilitating the actuating of the tongues forming the treble which, in most musical compositions, require to be actuated many more times than the tongues constituting the bass.

In the drawings, forming part hereof,—Figure 1 is an orthographic side elevation of the mechanism of a music box embodying my invention. Fig. 2 is a broken away detail plan view of a portion of the same; and Fig. 3 is a broken away detail end elevation of the note barrel showing a mode of securing the main shaft in its bearing.

In the drawings, A is any suitable or ordinary clock movement, and B is the main shaft of the same which serves to rotate the note barrel. This movement A may be mounted on a suitable base or bed-plate E, as shown. Mounted also upon this base is the comb D, having teeth or tongues *d* with which may cooperate star wheels *d'* in the usual manner. These star wheels *d'* may be mounted, as shown, on a suitable shaft *e* carried in bearings on the standards C C' mounted on the base E. In the standard C may also be formed

the bearing for the end of the main shaft farthest from the clock movement, which shaft may be secured in place in its bearing by the swinging cap *c* and the spring *c'* bearing thereon, and serving to hold the same firmly in engagement with the top of the standard. The shaft B is hinged or otherwise pivoted at *b* so that the section *a* carrying the note-barrel may be swung into various positions when desirable.

Upon the section *a* of the main shaft B is the note-barrel, which, as I have before mentioned, is of conical or substantially conical form; but for all practical purposes a note-barrel of the form of a truncated cone (frustum) will be found very efficient, the essential feature being that the surface of the note-barrel should be the surface of a cone. This note-barrel may be made solid or hollow, as desired, and preferably consists of a sheet metal barrel having note playing projections or depressions stamped, punched or bent up as desired. The form shown has upon its surface note-pins *f* which are adapted to co-operate with the tongues *d* (with or without intervening mechanism) to produce the music. This barrel is rigidly secured to the main shaft so as to rotate therewith by any suitable fastening, such for instance as the clutch *g*.

In the construction shown, when it is desirable to remove the barrel F, the cap *c* may be swung aside to free the end of the main shaft and the section *a* thereof may be swung upon its pivot as shown in dotted lines, when the barrel may be removed and another substituted, when the shaft may be again swung into place and secured as before.

I do not herein limit myself to the precise construction and arrangement shown, as the devices, their construction and their arrangement may be greatly varied without departing from the spirit of my invention; but

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

1. A note-barrel for musical instruments of substantially conical shape, as described.
2. A note-barrel for musical instruments smaller at one end than at the other and gradually tapering from the larger to the smaller end, substantially as described.
3. In a musical instrument of the class de-

scribed, the combination of motor mechanism, a two part jointed shaft, one of the shaft sections being connected to the motor mechanism, together with a note-barrel removably secured upon the other section of the shaft, substantially as described.

4. In a musical instrument of the class described, the combination of a hinged main shaft, with a frusto conical note-barrel mounted thereon, substantially as described.

5. In a musical instrument of the class described, the combination of a main shaft having a hinged section with a frusto conical note-barrel mounted upon said hinged section, substantially as described.

HENRY LANGFELDER.

Witnesses:

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