

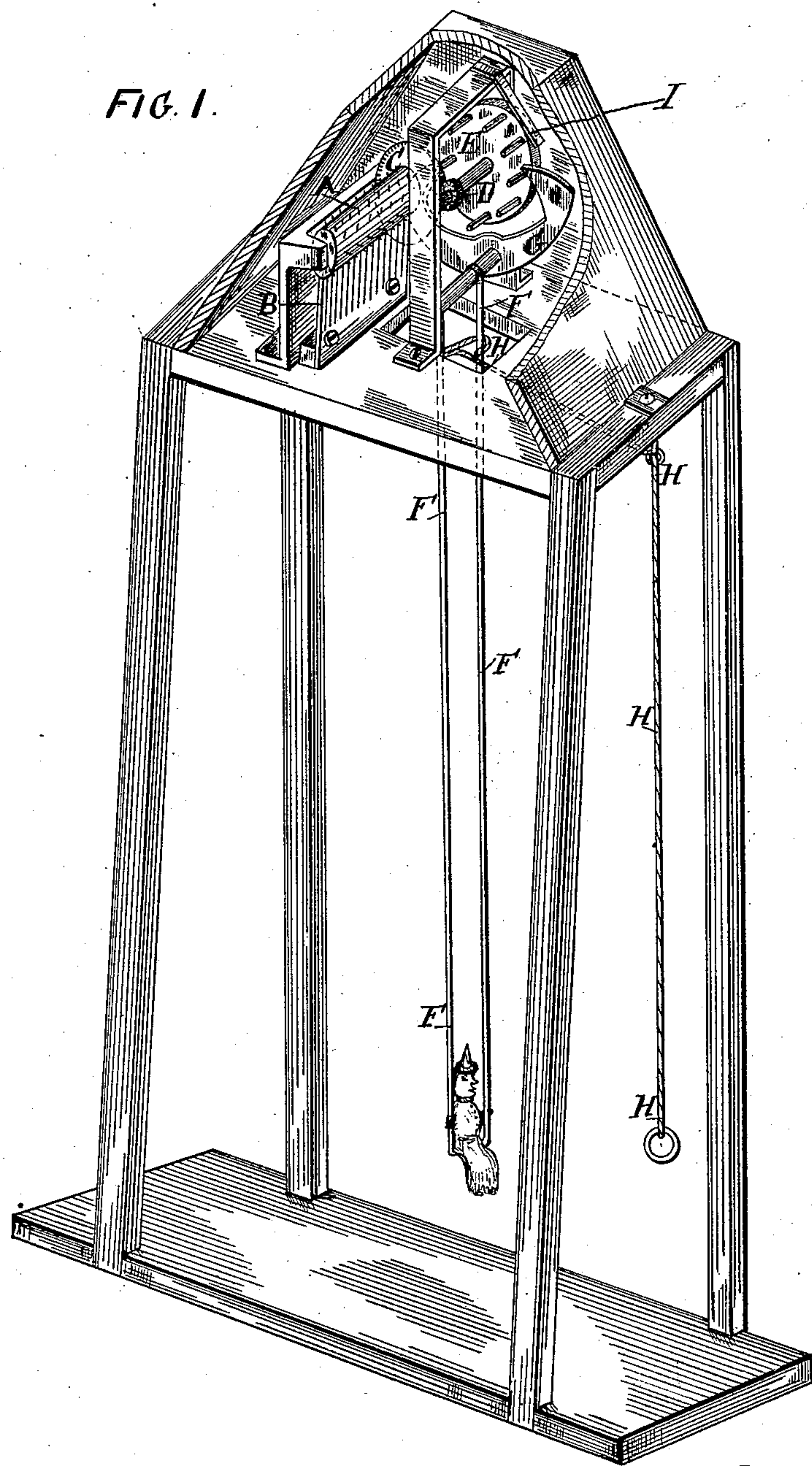
(No Model.)

2 Sheets—Sheet 1.

F. A. SOMMER.
SWING FIGURE MUSICAL TOY.

No. 407,697.

Patented July 23, 1889.



Witnesses:
J. A. Rutherford.
Dennis S. S. S.

Inventor:
Felix Alexander Sommer.
By James L. Norris
Attorney.

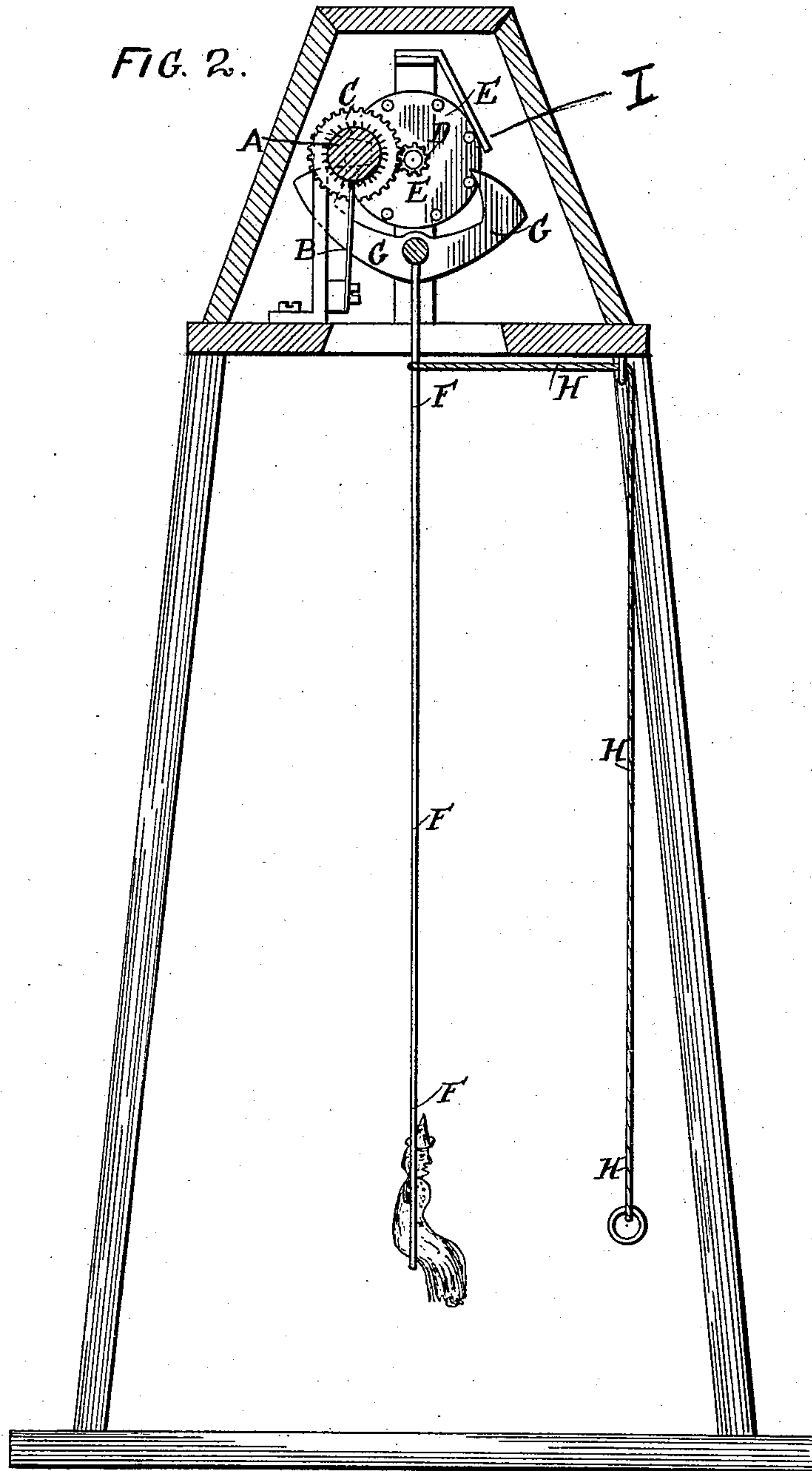
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UNITED STATES PATENT OFFICE.

FELIX ALEXANDER SOMMER, OF HAMMERSMITH, COUNTY OF MIDDLESEX,
ENGLAND.

SWING-FIGURE MUSICAL TOY.

SPECIFICATION forming part of Letters Patent No. 407,697, dated July 23, 1889.

Application filed April 13, 1889. Serial No. 307,080. (No model.) Patented in England September 11, 1888, No. 13,138.

To all whom it may concern:

Be it known that I, FELIX ALEXANDER SOMMER, a subject of the Queen of Great Britain, residing at 39 Chancellor's Road, Hammersmith, in the county of Middlesex, England, have invented a new and useful Swing-Figure Musical Toy, (patented in Great Britain, No. 13,138, dated September 11, 1888,) of which the following is a specification.

10 The object of this invention is to construct or arrange a frame-work within which a dummy-figure, weighted or otherwise, can be swung to and fro like a pendulum, and by the oscillations to cause an escapement-anchor or like
15 contrivance to move a crown or other wheel round in intermittent order, which wheel, through the connection of its axle and suitable gearing, will operate a pinned or studded barrel, which, as it rotates, strikes against
20 metal tongues and produces musical notes, so that snatches of songs or ballads or a few notes of opera or polka music can be heard while the figure—say that of a little girl—is swinging.

25 This invention is only intended to perform music of a simple character—such as is suited to a toy—as will be understood by the annexed drawings, in which—

30 Figure 1 is a broken perspective view of a toy embodying my invention, and Fig. 2 is a sectional side elevation of the same.

The pin-barrel A is preferably arranged to play sixteen bars (takten) of a polka or similar music from the metal tongues B, and representing a duration of exactly sixty-four quavers, (achtel töne.) The toothed wheel C on the barrel has sixty-four teeth, corresponding to the number of quavers in the melody, and it gears with the pinion D, having sixteen
40 teeth. The crown-wheel E has eight pins, requiring sixteen strokes of the pendulum F to make one revolution. (By "stroke" is meant the swing from one side to the other.) It is evident, therefore, that each stroke of the pendulum F moves one tooth of the wheel C on the pin-barrel A. It also plays one quaver of the melody, and as the music contains no notes of less duration than a quaver, it must necessarily always keep "time" (taktmass)
50 with the pendulum F when swung by the cord H.

I is a pressure-blade to prevent the wheel E moving except when actuated by the teeth of the escapement G at each stroke of the pendulum F.

55 It is usual in small musical boxes playing a single tune to allow a momentary pause after each repetition of the music. This is effected by placing the pins on the barrel A over a length of surface which is slightly less than
60 the entire circumference. Now, I purposely avoid this pause by placing the pins over the entire circumference of the barrel A, so that when the music has been played through the repetition begins in strict time with the next
65 following stroke of the pendulum F.

Melodies of less or longer duration than sixty-four quavers can be performed in the same way, and the number of pins in the crown-wheel E can also be varied, provided
70 that the number of teeth in the pinion D is double the number of pins in the crown-wheel E. I can also occasionally make the melody contain notes of a smaller duration than one stroke of the pendulum; but as the time of
75 any notes falling between two strokes would slightly vary, according to the force and uniformity with which the string H, actuating the pendulum F, is pulled, I would use such small notes very sparingly and only at such
80 points in the melody where a slight variation in time would not be musically unpleasant.

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

A musical toy consisting of a pin-barrel, 85 sound-producing tongues, a crown-wheel geared to and rotating the pin-barrel, and a pendulum operated by a cord attached thereto and having an escapement-anchor which intermittently rotates the crown-wheel, substantially as described. 90

In witness whereof I have hereto signed my name, in the presence of two subscribing witnesses, this 26th day of March, 1889.

FELIX ALEXANDER SOMMER.

Witnesses:

HENRY GARDNER,
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