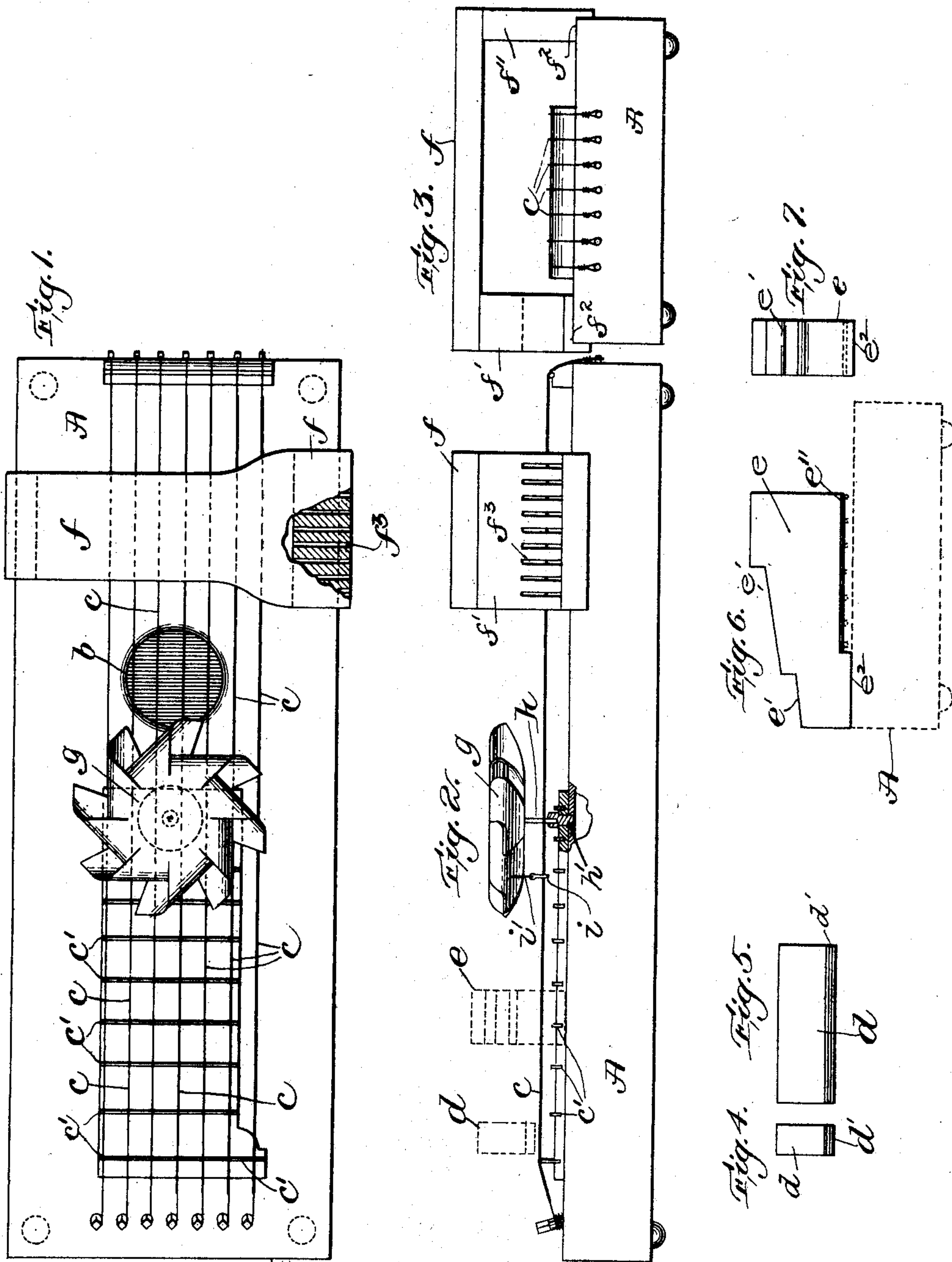


No. 666,710.

Patented Jan. 29, 1901.

W. SPENCE.
MUSICAL INSTRUMENT.
(Application filed Apr. 16, 1900.)

(No Model.)



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM SPENCE, OF KINGSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO FRED BRADFORD MAGLATHLIN, OF SAME PLACE.

MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 666,710, dated January 29, 1901.

Application filed April 16, 1900. Serial No. 13,027. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM SPENCE, of Kingston, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Musical Instruments, of which the following is a specification.

My invention relates to stringed musical instruments, and aims to provide one which can be played automatically by a current of air or manually by a person sufficiently skilled in its use.

A preferred form of embodiment of the invention is illustrated in the accompanying drawings, wherein I have shown in Figure 1 a top view of my instrument; in Fig. 2, a side view, partly broken away; in Fig. 3, an end view, looked at from the right-hand side of Fig. 1; in Figs. 4 and 5, end and side views of one form of capo tasto; and in Figs. 6 and 7, side and end views of another form of capo tasto.

In the drawings, the reference-letter A designates the body of the instrument constructed in the form of an oblong box, with a circular opening *b* therein, and of any suitable resonant material.

c designates the strings or wires, which are chorded—that is, tuned in harmony—and are also so graded (gradually lessened in size throughout the series from side to side) that a manually-operated capo tasto, hereinafter to be explained, may touch all the wires at the same time.

d designates one form of capo tasto consisting of a piece of wood of suitable length to extend across the wires and provided on its under side with a strip of rubber *d'* or other suitable material about one-eighth of an inch or a little more in thickness.

e designates a form of capo tasto (see Fig. 6) having one or more steps *e'* on the upper surface for the purpose of holding a window at different heights, and it is provided with a thin strip of rubber *e''* on its under side. This device is separate from the instrument, and when its base at *e²* rests against the instrument, as indicated in Figs. 2 and 6, the strip of rubber will press the strings against the frets. The capo tasto may be used on the instrument to change the chords when the

instrument is used as an accompaniment in singing, and also to change the chords when it is played automatically by the action of the wind, as hereinafter explained. It is also to be used as a window-support, in which case the window presses the strings down and holds them where required.

The reference-letter *f* designates a device designed either as a window-support, when the instrument is placed in an open window to be played automatically or as the support for the arm of a player. This device bridges over the strings, its legs *f'* *f''* resting on top of the instrument and being rabbeted, as at *f²*, to take over the sides of the same. One of said legs *f'* is formed with a series of vertical slots *f³*, through which currents of air may pass when the instrument is arranged to be automatically played by the action of the wind.

g designates a hollow turbinated metallic disk or wheel arranged to be turned or whirled by the wind, said disk being mounted upon a suitable stem *h*, which is stepped into a bearing *h'* in the instrument, the disk when turned acting upon the wires through the medium of a finger *i*, suspended by a flexible connection *i'* from the disk.

In operation the instrument is placed so that the wind may act upon the blades of the disk and rotate the latter, causing the finger *i* to successively strike the strings, first passing over them in one direction and then in the other direction. When the disk is used, the bridge *f* may be placed over it, with the end piece *f'* to windward, so that the effect of the wind on the wheel or disk may be controlled by the position of the bridge *f*, it being understood that the latter can be freely moved along the instrument and more or less of the series of slots brought opposite the wheel.

A reed-plate may be applied to or incorporated in the end piece *f'*, the reeds registering with the slots and sounding under the action of the wind, so as to contribute to a harmonious effect in the operation of the instrument.

Having thus described my invention, what I claim is—

1. A capo tasto for a stringed instrument

of the character described, the same consisting of a block of suitable material adapted to extend across the strings and faced with suitable material for contact with the strings, 5 said block being stepped on the upper surface to constitute a window-support, substantially as described.

2. A capo tasto for a stringed instrument of the character described, the same consisting of a block of suitable material adapted 10 to extend across the strings and having a base portion to rest against the instrument and a facing of suitable material for engagement with the strings, said block being stepped on 15 the upper surface to constitute a window-support, substantially as described.

3. In an instrument of the character described the combination with the body and strings; of a journal-bearing on the body, a

wind-wheel engaged with the bearing so as 20 to rotate in a plane parallel with that of the set of strings, said wheel occupying a position over the latter and having a yielding finger or projection to sweep over the same 25 under rotation of the wheel, substantially as described.

4. The combination with a stringed instrument of the character described, of a rotary disk or wind-wheel having an appendage to act upon the strings, and a bridge-piece 30 adapted to extend across over said wheel and having a series of slots in one end, substantially as and for the purpose described.

WILLIAM SPENCE.

Witnesses:

FRANKLIN M. HILL,
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