

No. 609,897.

Patented Aug. 30, 1898.

H. MÜLLER.

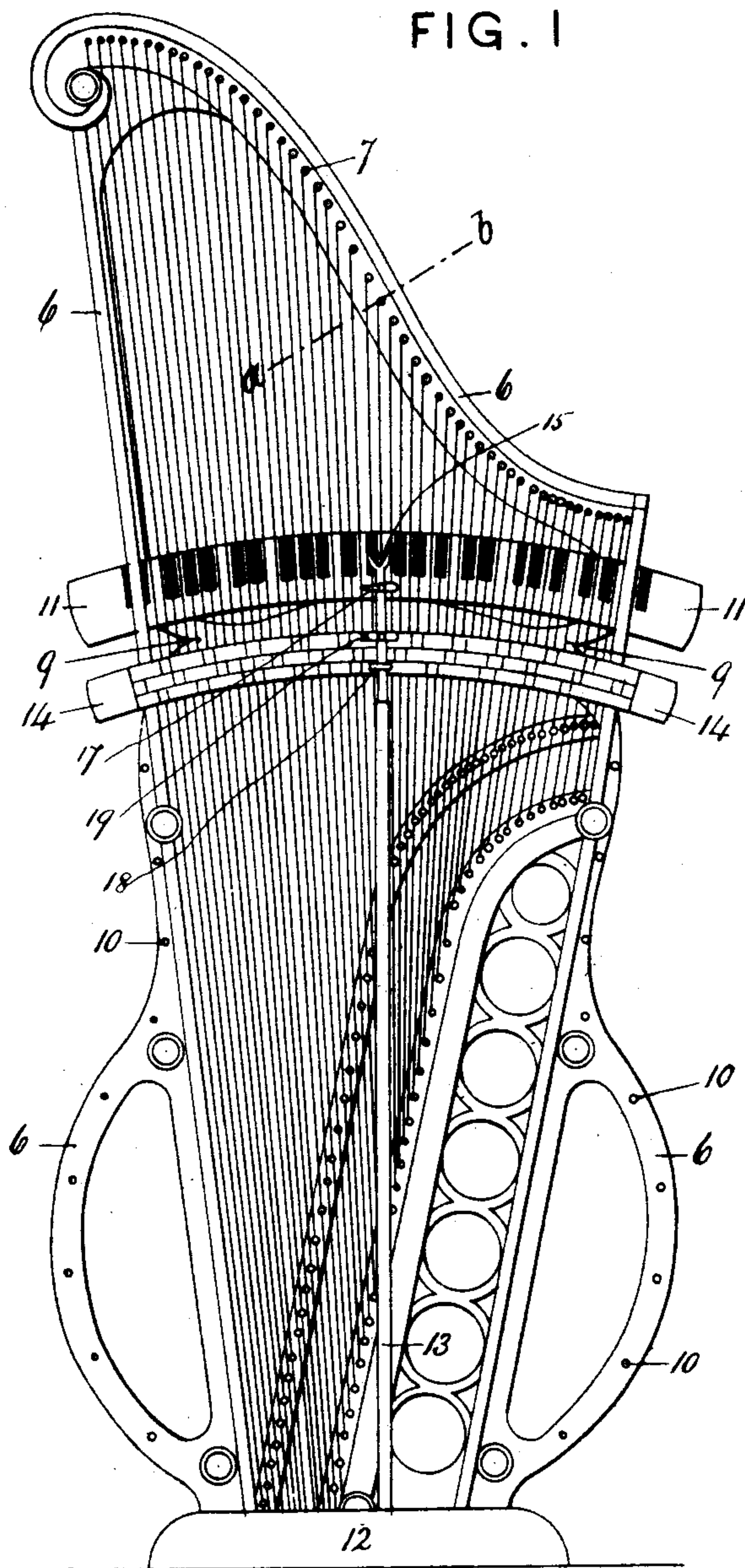
MUSICAL STRINGED INSTRUMENT.

(Application filed July 21, 1897.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1



Witnesses:
John Buckler,
Carrie Olsen.

Inventor:
Henry Müller,
By *Edgar Tate & Co.*
Attorneys.

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2 Sheets—Sheet 2.

FIG. 2

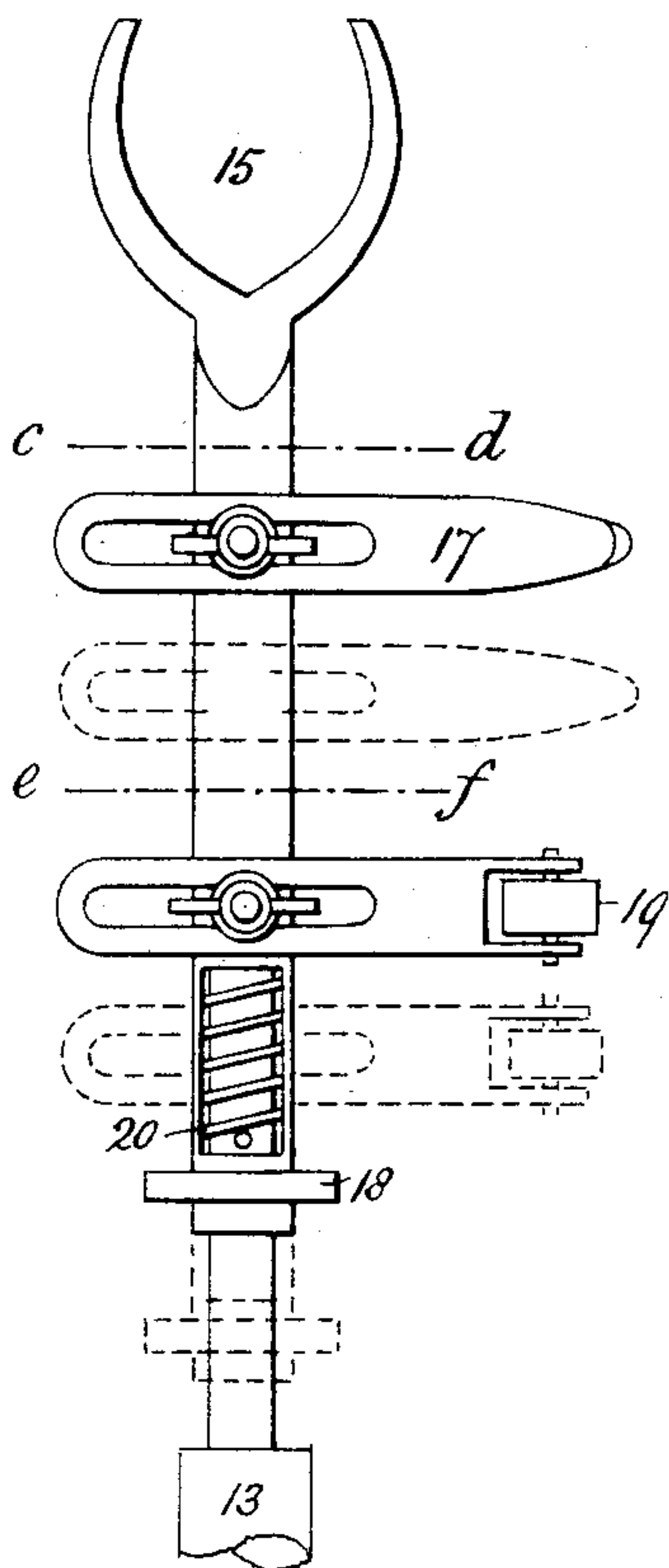


FIG. 3

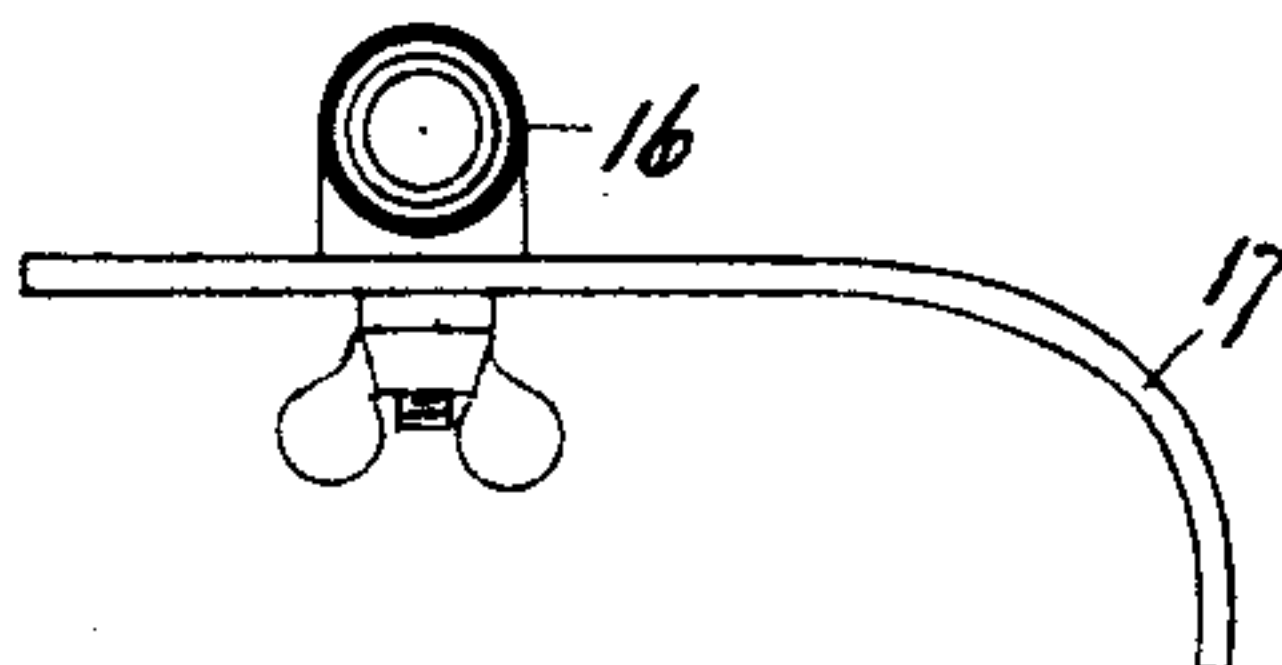


FIG. 4

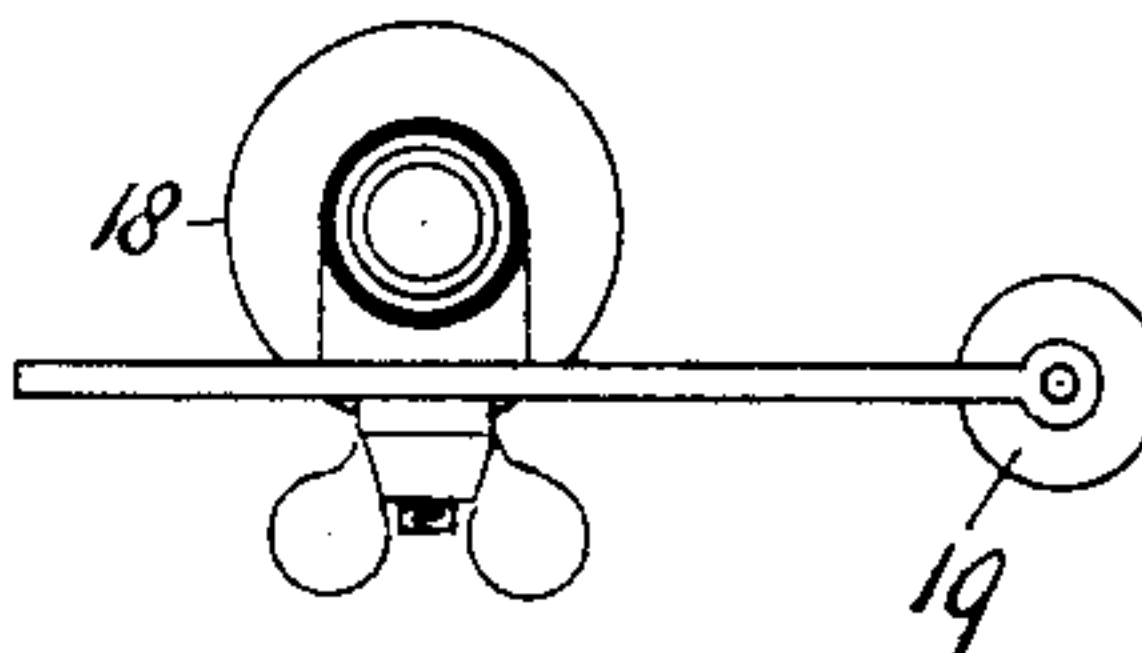


FIG. 5

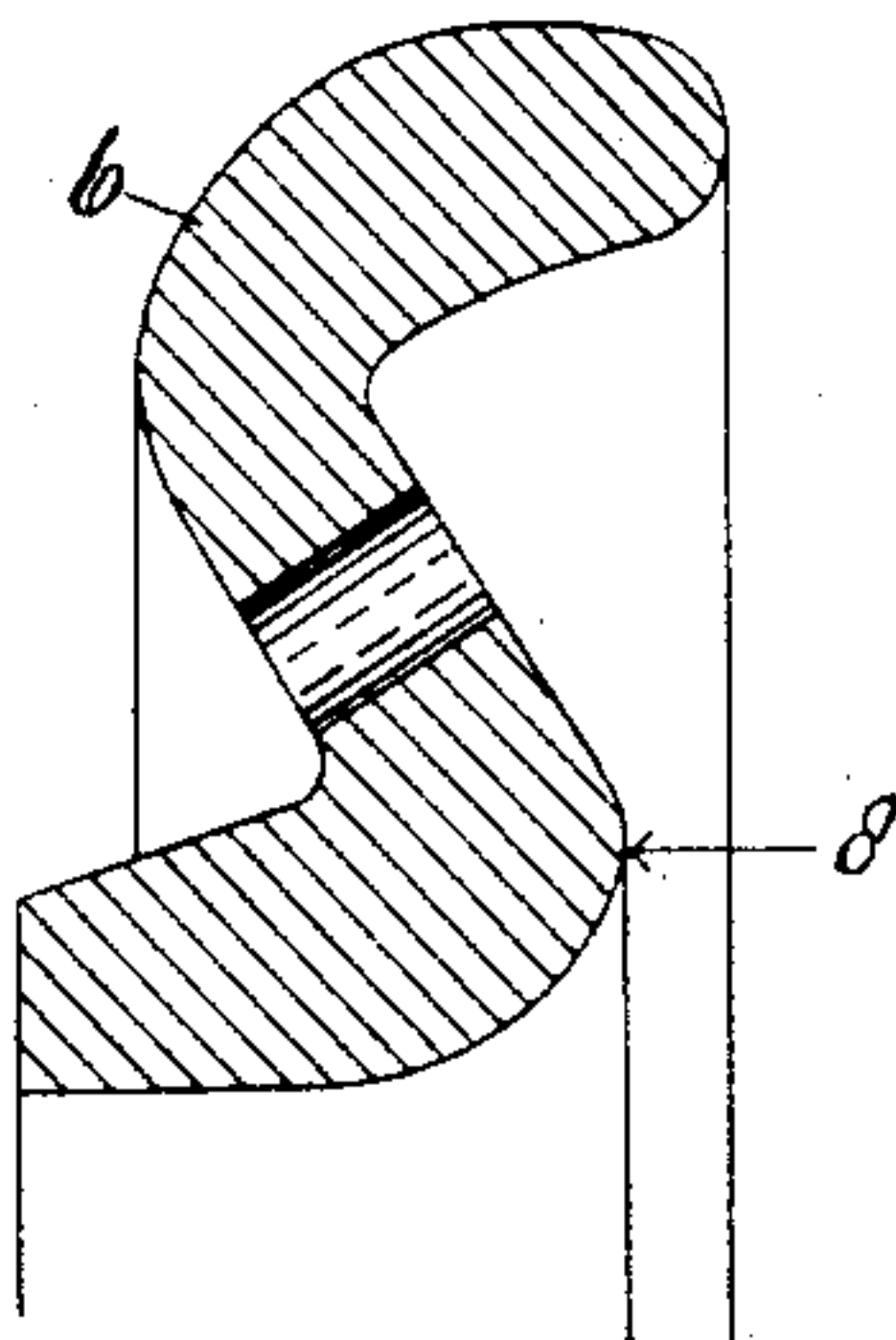


FIG. 6

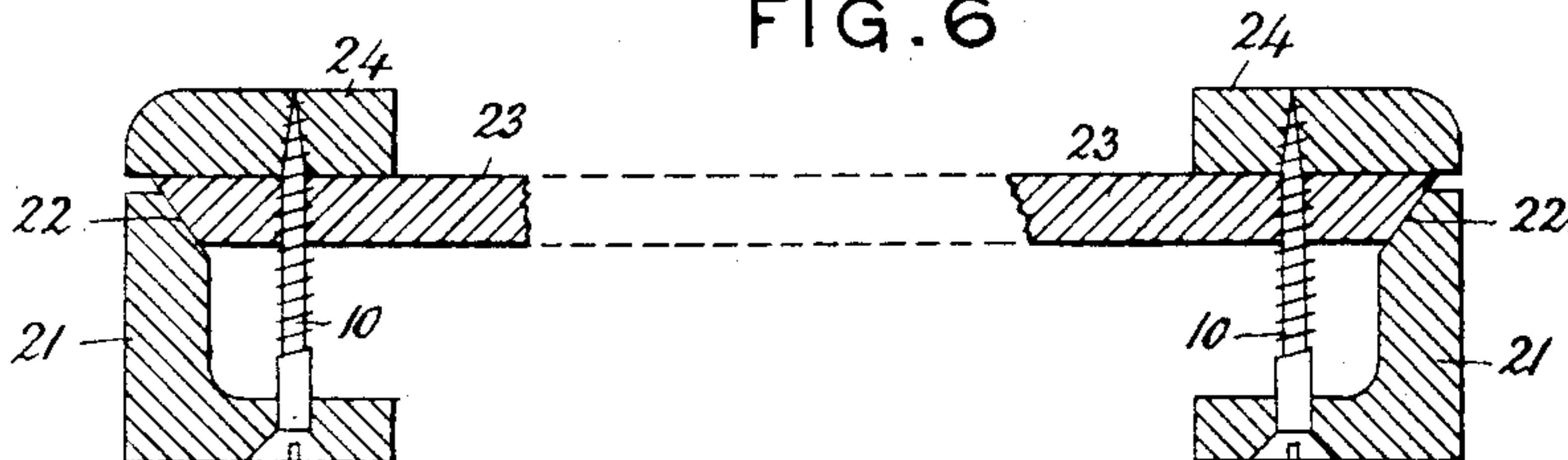
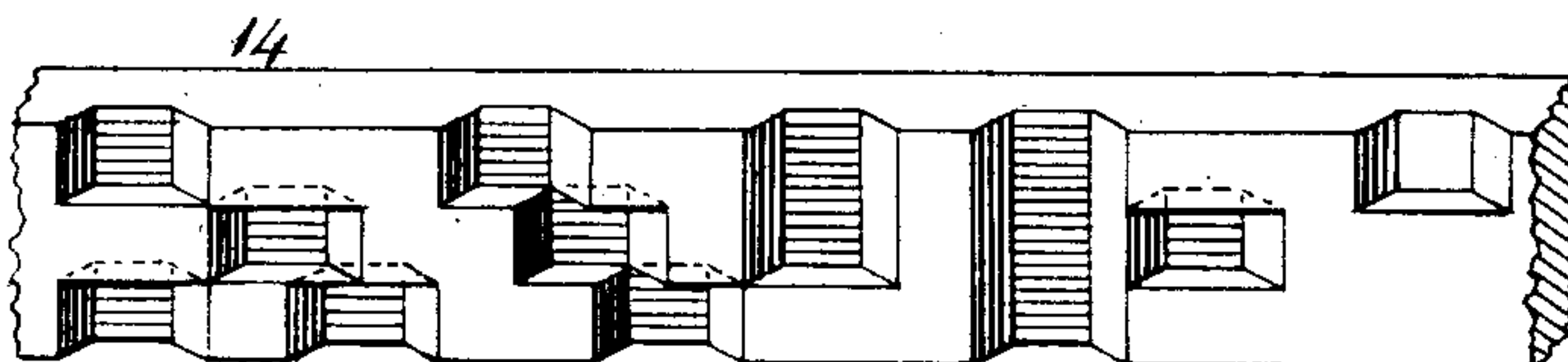


FIG. 7



Witnesses:
John Buckler,
Carrie Olson

Inventor:
Henry Müller,
By *Edgar D. Atch*
Attorneys

UNITED STATES PATENT OFFICE.

HENRY MÜLLER, OF LONDON, ENGLAND.

MUSICAL STRINGED INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 609,897, dated August 30, 1898.

Application filed July 21, 1897. Serial No. 645,366. (No model.) Patented in England October 30, 1896, No. 24,228, and May 6, 1897, No. 11,322.

To all whom it may concern:

Be it known that I, HENRY MÜLLER, musical-instrument maker, a subject of the Queen of Great Britain, residing at 20 Crawford street, Camberwell, London, S. E., England, have invented a new or Improved Musical Stringed Instrument, (for which I have obtained patents in Great Britain, No. 24,228, bearing date October 30, 1896, and No. 11,322, bearing date May 6, 1897,) of which the following is a specification.

The object of my invention is to construct a new or improved musical stringed instrument possessing the characteristic properties of a harp and a violoncello and which instrument is intended to be called a "cello-harp;" and in order that my said invention may be particularly described and ascertained reference is hereby made to the accompanying drawings, in which similar figures of reference indicate corresponding parts.

Figure 1 is an elevation of the instrument. Fig. 2 is an enlarged view of the upper end of the chord-picker rod 13. Fig. 3 is a section on the line *c d* of Fig. 2. Fig. 4 is a section on the line *e f* of Fig. 2. Fig. 5 is a section of the frame on the line *a b* of Fig. 1. Fig. 6 is a section showing the method of fitting the sounding-board. Fig. 7 is a perspective view of a part of a sliding board or plate which forms a part of my improved instrument.

6 is the metallic frame of the instrument, preferably formed of aluminium bronze or other suitable alloy of aluminium. Stud 7 are fitted to the upper part of the frame, to which the strings are attached and whereby they may be tuned. The frame is so formed that a bridge is provided at 8, Fig. 5, against which the upper ends of the strings impinge. The lower ends of the strings are fitted to studs, pegs, or pins, as usual in instruments of a similar nature. From the cross-frame 9 down to the lower end and extending across and covering the back from side to side of that portion of the frame a sounding-board is fitted. This sounding-board may be formed of any suitable material or combination of materials, either cellular or solid, and secured to the frame by screws 10 or in any other suitable manner.

11 is a sliding scale-board, upon which the

notes are shown in a manner analogous to the keys of a pianoforte. This scale-board is supported in slots at the back of the frame, whereby not only the normal scale of the strings may be indicated and the notes clearly seen by the performer, but also by shifting the scale-board 11 the key in which the music is played may be varied, the corresponding key-note being found as required.

12 is the base or socket upon which the frame is supported. This base is circular in plan and is provided with openings all around, in which pedals may be fitted for working dampers and otherwise as in ordinary harps. The method of fitting dampers is well known and need not be described.

Although wires have been hereinbefore referred to, it is obvious that catgut or analogous strings may be used.

In using the instrument the air, &c., may be played upon the upper parts of the strings with one hand, and a frictional instrument analogous to the violoncello-bow may be used to play an accompaniment with the other hand, or a picker-rod 13 may be used for sounding single notes or chords as an accompaniment. For this purpose a sliding board 14 is fitted in front of the frame, held in position by wires passing across the back of the frame and suitably supported. This board has one, two, three, or more rows of raised surfaces or projections, the spaces between which correspond with the notes of the chords to be sounded. One row of these surfaces only is shown in Fig. 1, from which it will be understood that others may be added, one corresponding with major chords, another with minor chords, and another with sevenths, or otherwise, according to the required harmony. The boards 11 and 14 are coupled together, so as to slide simultaneously.

The lower end of the picker-stick 13 is pivoted to the base 12 in any suitable manner. The upper part (see Figs. 2, 3, and 4) is fitted with a metallic tube 16, carrying a finger piece or fork 15, an adjustable picker or striker 17, rubber wheels 18 and 19, and a coiled spring 20. When manipulating the pickers by causing the wheels or rollers to traverse the board 14, the picker is held so that the wheel 18 governs the distance of the

picker from the board 14, and at the same time the wheel 19 is caused to press against the projections upon the same board, whereby the picker 17 is held away from the strings until the wheel 19 enters one of the spaces between the projections, whereupon a note is sounded by the contact of the picker 17 with one of the selected strings. The spaces are arranged so as to sound the several notes of a chord or otherwise, as required. The spring 20 presses the wheel 19 against the board 14. The spring 20 may be compressed longitudinally by the operator, whereby the wheel 19 is carried downward and caused to traverse another portion or other portions of the board 14, upon which other combinations of chords are or may be arranged.

The picker 17 and wheel 19 are carried by slotted levers, which may be adjusted by thumb-screws, as shown in Figs. 2, 3, and 4.

The lower part of the metallic frame 6 approximates generally to the sections shown at 21 in Fig. 6, the back edge 22 being made angular or dovetailed, as shown.

23 is the sounding-board, the edges of which are dovetailed to fit tightly into the corresponding back of the frame.

24 is a wooden frame fitted to the back of the sounding-board, so as to press the same into the metallic frame, whereby the sounding-board is forcibly compressed transversely, the screws 10 drawing the frame 24, together with the sounding-board, forward for that purpose. The sounding-board is sometimes constructed of hollow material or cellular formation.

In Fig. 7 I have shown a part of the sliding board 14, and though this board in practice

is curved, as shown in Fig. 1, that part of it which is shown in Fig. 7 is straight, and that part thereof shown in Fig. 7 also more clearly illustrates the three rows of recesses or spaces hereinbefore referred to, and the upper row of said spaces is intended to produce the major chords—such as G, C, E—and the middle row will produce in the operation of the device, as hereinbefore described, a minor seventh—such as A, C sharp, E, G, &c.—and the lower row will produce the minor chords, such as G, B \flat , D, &c. The finger-stick 13 can be depressed by one hand, so as to bring the wheel 19 in line with either of the rows of spaces in the board 14, as shown by the dotted lines in Fig. 2, while the air is being played by the fingers of the other hand.

I claim—

1. In a stringed musical instrument, a sliding board 14 having a line of projections and intervening spaces, in combination with the movable picker-stick 13, having coacting roller contacts with said board, substantially as and for the purpose set forth.

2. In a stringed musical instrument, the movable picker-stick having the end finger-piece, the adjustable picker 17, and adjustable rollers, substantially as set forth.

3. In a stringed musical instrument, the movable picker-stick having the end finger-piece, the adjustable picker 17, and the adjustable rollers and interposed springs, substantially as set forth.

Dated this 17th day of May, 1897.

HENRY MÜLLER.

Witnesses:

A. C. DOWNING,
JOSEPH LAKE.