

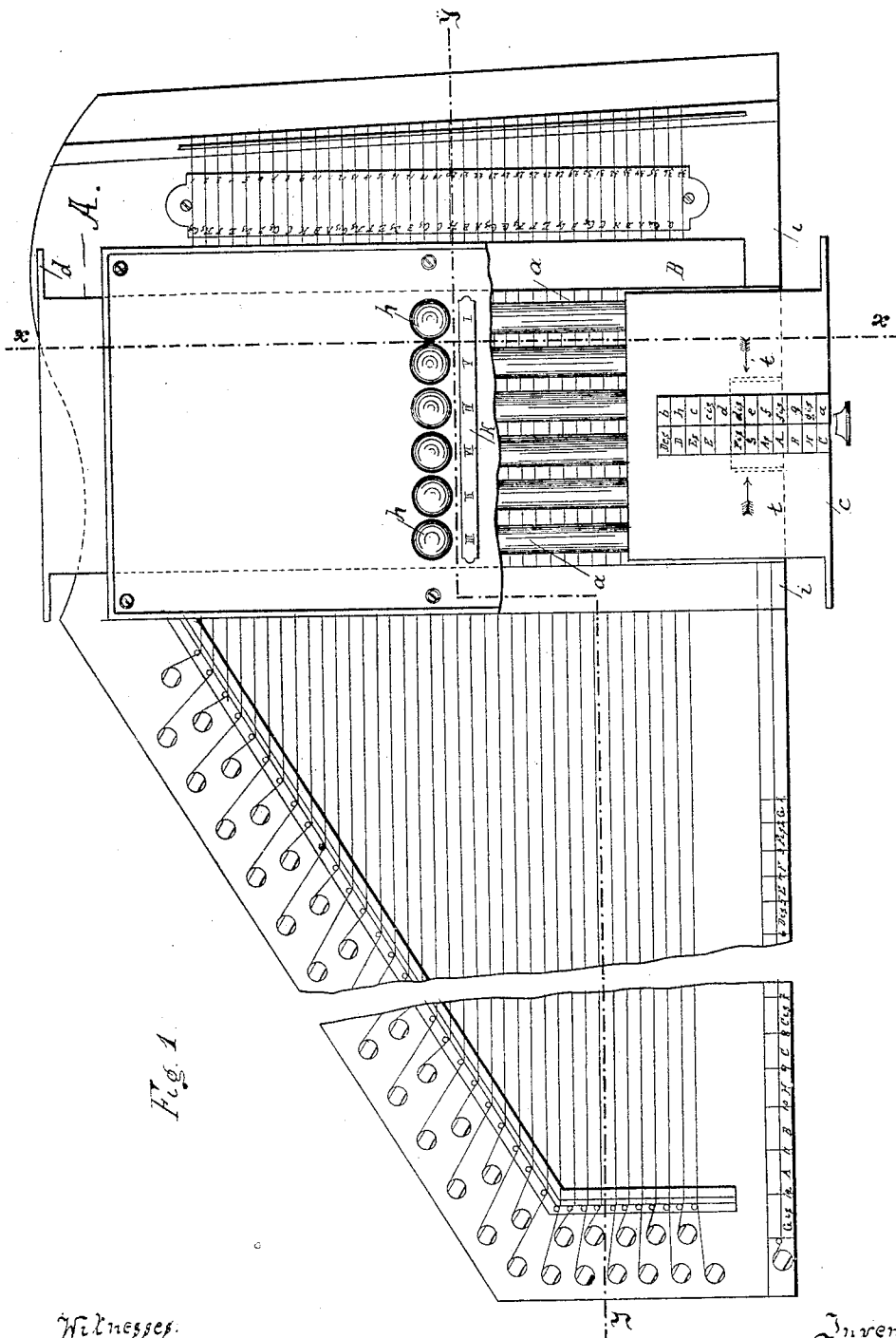
(No Model.)

2 Sheets—Sheet 1.

E. GLAESEL.
CITHERN.

No. 582,196.

Patented May 11, 1897.



Witnesses.
Rm. Franc
H. Bantze.

Inventor:
Ewald Glaesel
by W. Bantze
Attorney

(No Model.)

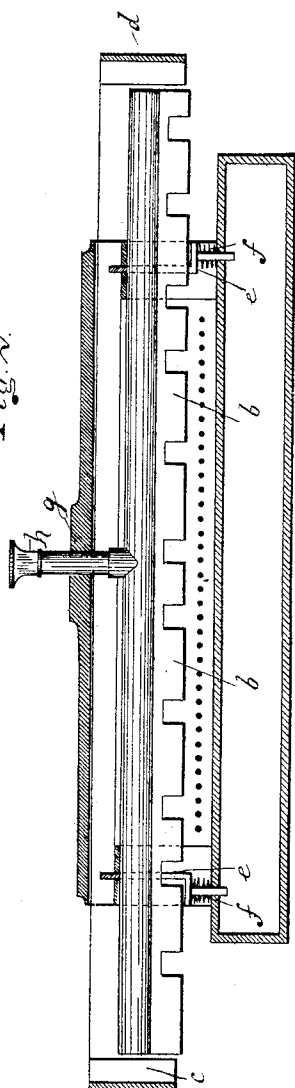
E. GLAESEL.
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2 Sheets—Sheet 2.

No. 582,196.

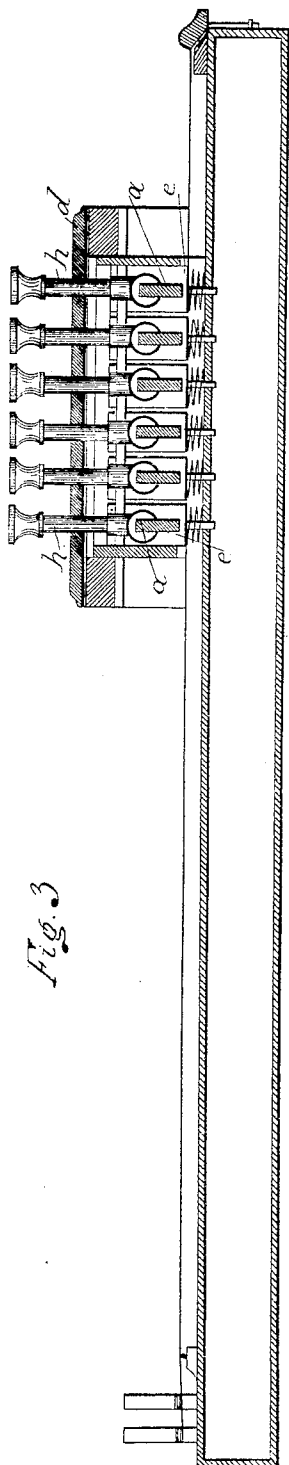
Patented May 11, 1897.

Fig. 2.



Witnesses:
Büro Kasse
H. Bantze.

Fig. 3.



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UNITED STATES PATENT OFFICE.

EWALD GLAESEL, OF MARKNEUKIRCHEN, GERMANY.

CITHERN.

SPECIFICATION forming part of Letters Patent No. 582,193, dated May 11, 1897.

Application filed May 2, 1896. Serial No. 590,057. (No model.) Patented in England May 20, 1895, No. 9,963.

To all whom it may concern:

Be it known that I, EWALD GLAESEL, a subject of the King of Saxony, and a resident of Markneukirchen, in the Kingdom of Saxony, Germany, have invented a certain new and useful Improved Chromatic Cithern for Melodies and Chords, (for which I have received a patent in Great Britain, dated May 20, 1895, No. 9,963,) of which the following is a full, clear, and exact description.

The present invention consists of a cithern by means of which both melodies and chords may be played. In contradistinction to the citherns hitherto employed the present system enables all major and minor keys and their respective chords to be played. This is accomplished by operating a slide mechanism by means of which the instrument is adjusted by a single operation to the desired key.

Citherns constructed according to the present invention may be played by persons having no knowledge of music, it only being necessary to make use of the instructions furnished with the instrument.

In order to make the present invention more easily intelligible, reference is had to the accompanying drawings, in which similar letters denote similar parts throughout the several views.

Figure 1 is a plan view; Fig. 2, a section on the line *x x* of Fig. 1, and Fig. 3 a section on the line *y y* of Fig. 1 of an instrument constructed according to the present invention.

The cithern is tuned to the chromatic scale and includes three octaves. At the left-hand side of the instrument beneath the A string or beneath a special string *s*, provided for the purpose, are arranged twelve raised bars or strips representing the tones of the chromatic scale.

To tune the instrument, the first octave is tuned to the marked notes of the special string and the other two octaves tuned to the first.

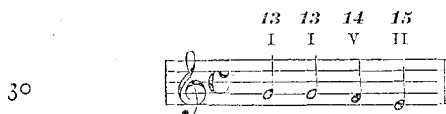
A is a slide by means of which all the dampers may be moved simultaneously. The slide mechanism consists of a frame A between the ends *c d*, of which the dampers *a* are supported in angle-pieces *e*, said dampers being capable of being depressed and being returned to their normal position after each

depression by means of the spiral springs *f*, arranged under the said angle-pieces *e*. Above the frame is arranged a bridge or cover *g*, in which six vertical stops *h* are loosely supported, each having its lower end resting on one of the dampers. A scale having Roman figures "I," "II," "III," &c., is provided in front of the stops, said numbers corresponding to the position of the stops and designating the chords as prescribed by the principle of harmony. The slide is further provided with a scale having the twelve major and minor keys, the major at the left-hand side and the minor at the right. The cover *g* is provided with arrows *t t*, with which the line of the key must correspond. Thus, for instance, if it is desired to play in C minor the slide must be pushed in until the line above C on the minor side is in line with the two arrows of the cover *g*. As soon as the instrument has been adjusted to the proper scale the same may be played in the usual manner, and if a chord happens it will only be necessary to depress the corresponding stop *h*, which by means of a felt cushion muffles or damps all the strings which are to be kept silent, allowing only the strings of the chord to speak.

I will now proceed to give a few instances showing that it is possible to play in any key on the present instrument. Thus it is possible to play five different chords in every major key without shifting the slide—first, the major chord in the first position, stop I; second, the major chord in the fifth position, stop V, with seventh; third, the major chord in the fourth position, stop IV; fourth, the minor chord in the sixth position, stop VI, and, fifth, the minor chord in the second position, stop II. That would make, therefore, in C major, first, C, E, G; second, B $\flat$, D, E; third, E, A, C; fourth, A, C, E; fifth, D, E, A, and with the aid of the strip III and by arranging the strips together in a suitable manner it is possible to use them to produce either the major or the minor key. Thus, for instance, the major chord in the third position by stop III is the same as the minor chord. For instance, supposing the instrument to be adjusted to the C-major key, it would also be possible to play four chords in A minor thus: the minor chord of the first position, A, C, E; second, the minor chord from the fourth position, D, F,

A; third, the major chord of the fifth position, E, G $\sharp$, B, and, fourth, the major chord in the sixth position, F, A, C. These chords would be played by depressing the stops VI,
 5 II, III, IV. The same result could be obtained, of course, in any one of the other keys.

The dampers *a a* consist advantageously of split brass tubes, in which a strip of felt *b* is clamped, as shown in Fig. 3, said strip being cut out at such points as correspond to
 10 the positions of the strings which are to be allowed to speak when the said manual is depressed, as may be clearly seen at Fig. 2. Dampers of this construction possess the advantage over those hitherto employed that
 15 they are elastic and will not warp, while at the same time they damp more effectually and without disturbing the harmony. The music written for citherns of this kind is provided at the top of each piece with a notice
 20 of the scale in which the piece is written and according to which the slide is adjusted, while above each note the number of the stop to be depressed for the corresponding chord is written and also the number of the strings to be
 25 struck thus:



The strings are all numbered at the rear of the slide from "1" to "37," comprising the

three octaves, and the number "13," "13," 35
 "14," &c., above each note means that after the stop has been depressed all the strings left free by the damper from "37" to "13" are to be struck. Each number means that all strings, always counting from "37" to the
 40 number, and if no number is written then all the free strings, should be struck.

Cord-citherns of the kind hitherto employed are more complicated and necessitate the adjustment of a number of stops before the
 45 piece can be played, while in the present case a single movement of the slide adjusts the whole instrument and the notes show which string is to be struck.

I claim as my invention—

50 In a cithern the combination of a frame mounted to slide transversely over the strings, and a cover to the same a series of dampers mounted therein consisting of drawn-metal tubes slotted along the under side and having
 55 notched felt strips confined in said slot, spring-bearings to said dampers to normally keep same off the strings means to depress said dampers, a scale on said slide having
 60 major and minor keys and a suitable mark on the slide-cover to enable adjustment substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

EWALD GLAESEL.

Witnesses:

W. BAUTZE,

H. HINTZPETER.