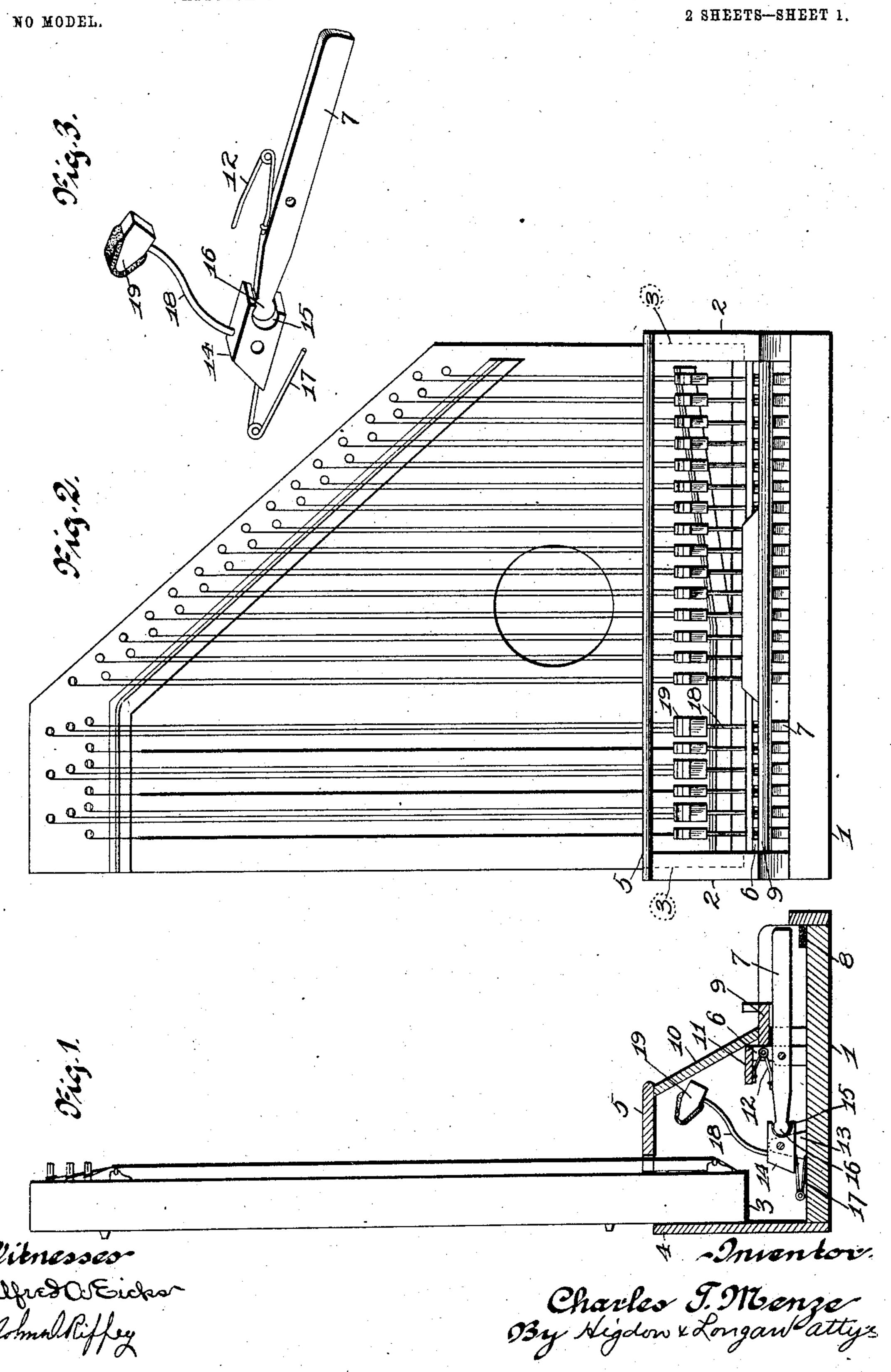
## C. T. MENZE. CITHERN.

APPLICATION FILED APR. 1. 1901. RENEWED FEB. 17, 1902.

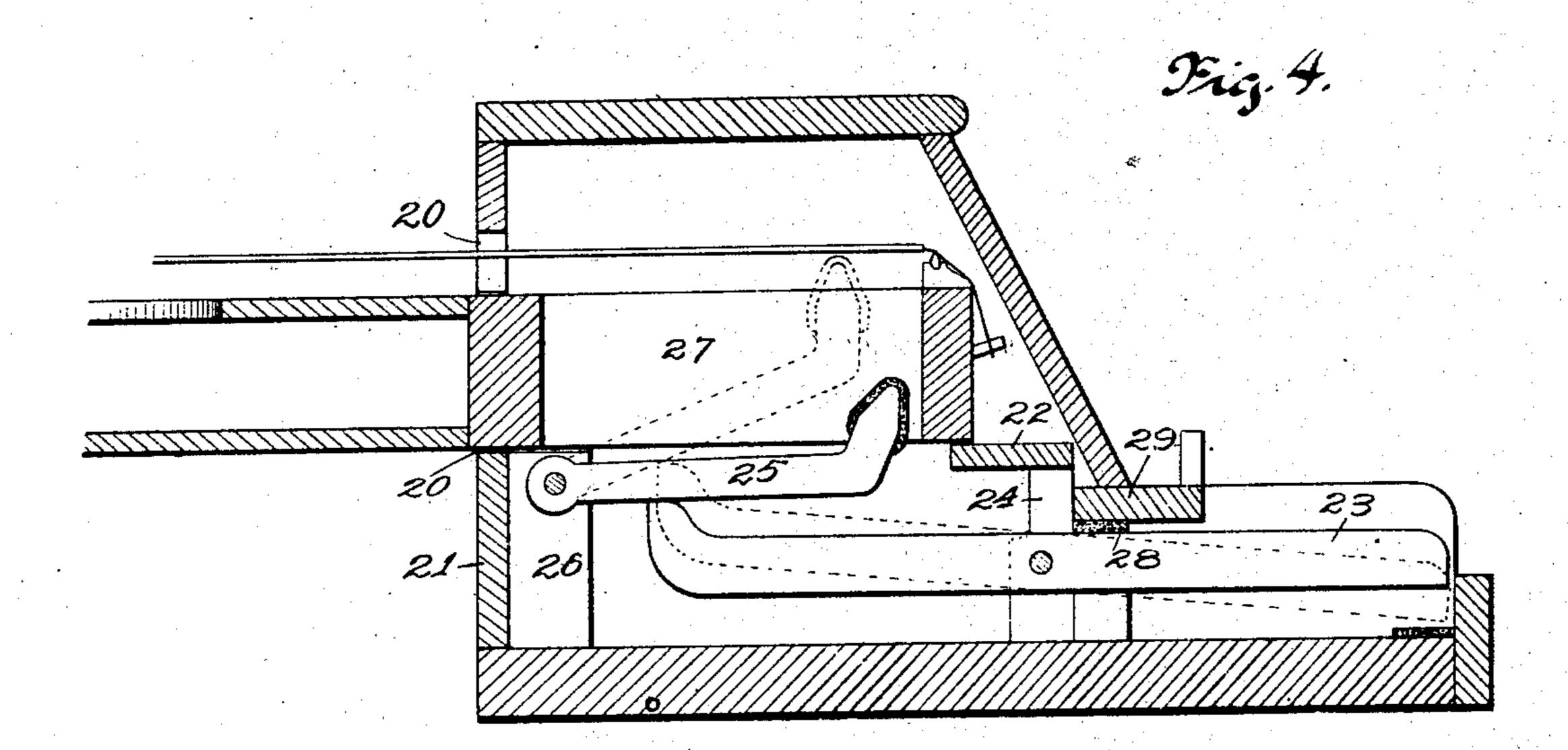


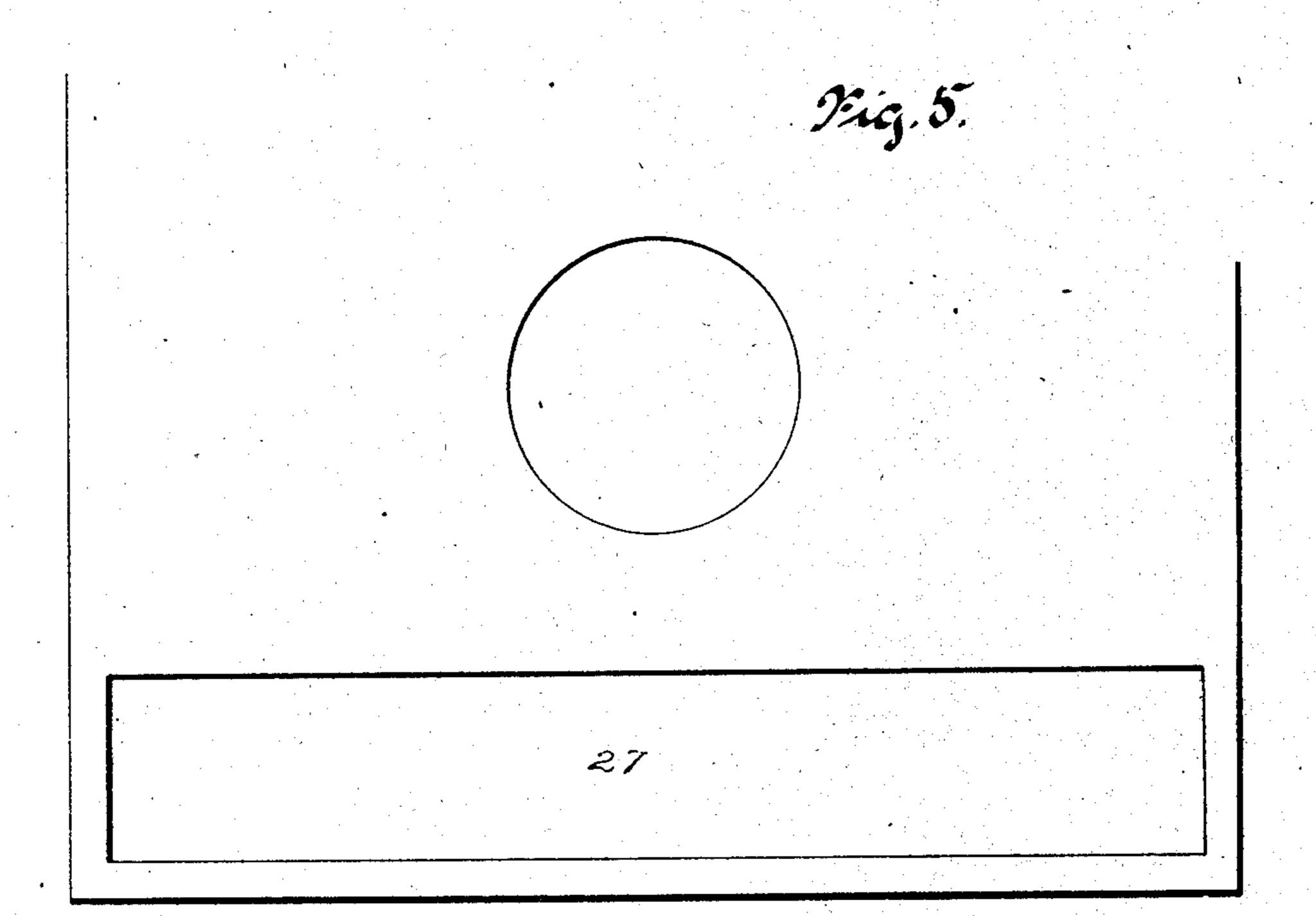
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NO MODEL.

2 SHEETS-SHEET 2.





Witnesses Offred O'Ericks Johnstliffey. Inventor.
Charles T. Moenze.
By Higdow Longan artys.

## United States Patent Office.

CHARLES T. MENZE, OF ST. LOUIS, MISSOURI.

## CITHERN.

SPECIFICATION forming part of Letters Patent No. 726,084, dated April 21, 1903.

Application filed April 1, 1901. Renewed February 17, 1902. Serial No. 94,520. (No model.)

To all whom it may concern:

Be it known that I, CHARLES T. MENZE, of the city of St. Louis, State of Missouri, have invented certain new and useful Improve-5 ments in Citherns, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to citherns; and it to consists of the novel construction, combination, and arrangement of parts hereinafter

shown, described, and claimed.

The object of this invention is to provide a support having a socket adapted to closely fit 15 and removably receive and support upon all sides the cithern and carrying common finger-keys connected to hammers mounted on pivots and adapted to directly strike the strings of the eithern when the keys are op-20 erated. The cithern is only movably located within the socket and may of course be played as a common eithern. The hammers are protected by a suitable ornamental frame and are spring-actuated and normally held away 25 from the strings, against which they are thrown by the depression of the keys.

Figure 1 is a side view of the cithern mounted in the socket, and the frame covering the hammers is shown in section. Fig. 2 is a 30 front view with the front of the frame or covering removed, showing the hammers. Fig. 3 is a perspective view showing the arrangement of the keys and hammers. Fig. 4 is an enlarged section showing a modified arrangement. Fig. 5 is a plan view of the same, the

details being omitted for convenience.

In the construction of the support for the cithern I provide a suitable base 1, fixed to each side of which is a vertical side piece 2. 40 The side pieces 2 are of suitable thickness to permit the formation of pockets 3 to support the cithern, and the said side pieces are rigidly fixed to the base 1 and are strengthened in their vertical position by means of the back 45 strip 4.

5 indicates the top piece, which covers the hammers and which is at a remove from the back piece 4 to permit the application of the cithern, the sides of which rest within the 50 pockets 3, whereby the cithern will be retained

in the vertical position shown.

the base 1 are vertical posts 6, and pivotally supported between the said posts 6 are the keys 7, which project toward the front side 55 of the base 1. A section 8, of felt or other soft material, is secured upon the base 1 under the forward ends of the keys 7, thereby preventing them from violent contact with the base when the instrument is played. A 60 transverse strip 9 is supported above the keys 7 in front of the posts 6, and an inclined strip 10 is placed between the said strip 9 and the member 5, thereby completing the case, within which the hammers and the rear 65 ends of the keys are located. A transverse strip 11 is supported above the posts 6, and springs 12 are located between the strip 11 and the keys, thereby actuating the rear ends of the keys downwardly and holding the front 70 ends thereof elevated. There is one of the springs 12 for each of the keys, so that each key may be operated independently of the others without interfering with their normal elevated position.

13 indicates a row of posts located within the case adjacent to the rear ends of the keys. The posts are arranged at suitable intervals and are in alinement with the posts 6 above mentioned. Blocks 14 are pivotally support-80 ed between the posts 13 and are provided in their forward ends with sockets 15. Balls 16 are formed on the rear ends of the keys 7, and the said balls are located within the sockets 15, thereby forming a ball-and-socket 85 joint. A spring 17 is located under the rear end of each of the blocks 14, thereby holding the rear ends of the said blocks elevated and assisting the springs 12 to retain them in their normal positions. A vertical rod or arm 18 90 is rigid with each of the blocks 14 and is provided on its upper end with a hammer 19 in alinement with the strings of the cithern when located as shown and described. When the forward ends of the keys are depressed 95 in opposition to the springs 12, the forward ends of the blocks 14 will be raised and the hammers 19 will be thrown against the strings of the cithern and cause the same to vibrate.

By constructing the supporting attachment 100 as described the cithern may be readily located within the pockets 3, and thereby retained in a vertical position, and it may be Fixed at intervals along the upper side of I played by operating the keys 7 to throw the

hammers against the strings of the cithern, as described, and when not in use the cithern may readily be removed from its vertical position and placed within a proper case for

5 better protection.

In Figs. 4 and 5 I have shown a modified arrangement of the keyboard and the supporting attachment for the cithern. In this construction the cithern is passed through a o slot 20, formed in the rear side 21 of the frame, and the ends of the cithern rest upon a transverse strip 22, corresponding to the strips 11 above mentioned. The keys 23 are pivotally supported between the posts 24, and 15 the rear ends of the keys are turned upwardly and bear against the hammer-arm 25, the same being pivoted to the projection 26, carried within the rear side of the case. A transverse slot 27 is formed in the front end 20 of the cithern, through which the hammers 25 pass when the keys are operated. The strings of the cithern are extended from the slot 27 and connected to the usual fastening devices at the end. The keys are held in their nor-25 mal horizontal position by gravity, the weight of the hammer-arms being sufficient to hold them in this position. A section 28 of felt or other soft material is carried by the transverse strip 29 above the keys, against which 30 they are permitted to rest when not in use. In this construction the cithern may also be removed when not in use.

I claim—

1. The combination, with a cithern having the usual strings, of a cithern-support comprising a suitable frame having a socket in which the cithern is closely fitted and supported upon all sides, a series of common keys mounted in said frame so that their ends project a distance to directly receive the blows of the operator's fingers, and hammers operated by direct contact therewith of said finger-keys and arranged to strike the strings of the said cithern when said finger-keys are struck by the fingers of the operator, substantially as specified.

2. In a cithern, a suitable support, a case having vertical sides, and pockets formed in said sides adapted to receive the cithern, hammers supported within the said case, and spring-held keys for operating said hammers

to strike against the strings of the cithern, substantially as specified.

3. A cithern, having a supporting-case provided with a vertical pocket adapted to resolve and support the cithern vertically, spring-held hammers mounted within the case, keys connected to said hammers for operating the same, and springs for holding the keys in horizontal position, substantially as 60 specified.

4. In a cithern, a case having vertical sides, pockets formed in said sides adapted to receive the cithern and support the same vertically, a series of posts mounted upon the 65 bottom of the case, blocks pivotally supported by said posts, hammers supported by said blocks, springs connected to the blocks for holding the hammers out of contact with the strings of the cithern, keys connected to said 70 blocks, and means for holding said keys in normal position, substantially as specified.

5. A cithern having a supporting-case provided with a slot adapted to receive the cithern and support the same, hammer-arms piv-75 otally supported within the case adjacent to the cithern-strings, horizontal keys pivotally supported within the case and having their rearends connected to the said hammer-arms, and a transverse strip above the forward ends 80 of the keys for holding them in their horizontal position, substantially as specified.

6. The combination with a cithern having the usual strings, of a cithern-support comprising a suitable frame having a socket in 85 which the cithern is closely fitted and supported upon all sides in a vertical position, a series of common keys mounted in said frame so that their ends project a distance to directly receive the blows of the operator's 90 fingers, and hammers operated by direct contact therewith of said finger-keys and arranged to strike the strings of the said cithern when said finger-keys are struck by the fingers of the operator, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES T. MENZE.

Witnesses:

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ALFRED A. EICKS, J. D. RIPPEY.