

No. 673,949.

Patented May 14, 1901.

J. A. GOULD.

ADJUSTABLE SOUND POST FOR STRINGED INSTRUMENTS.

(Application filed Nov. 30, 1900.)

(No Model.)

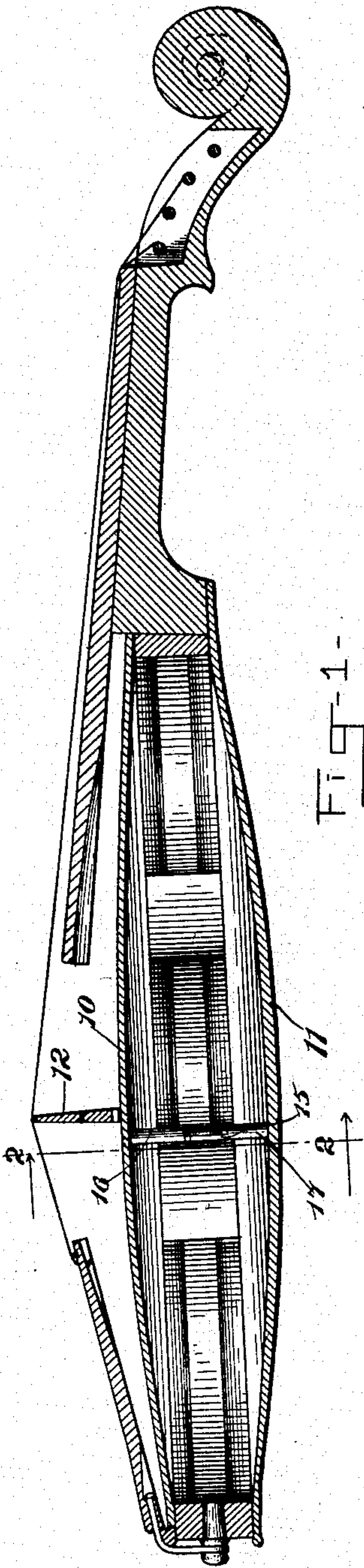


FIG-1-

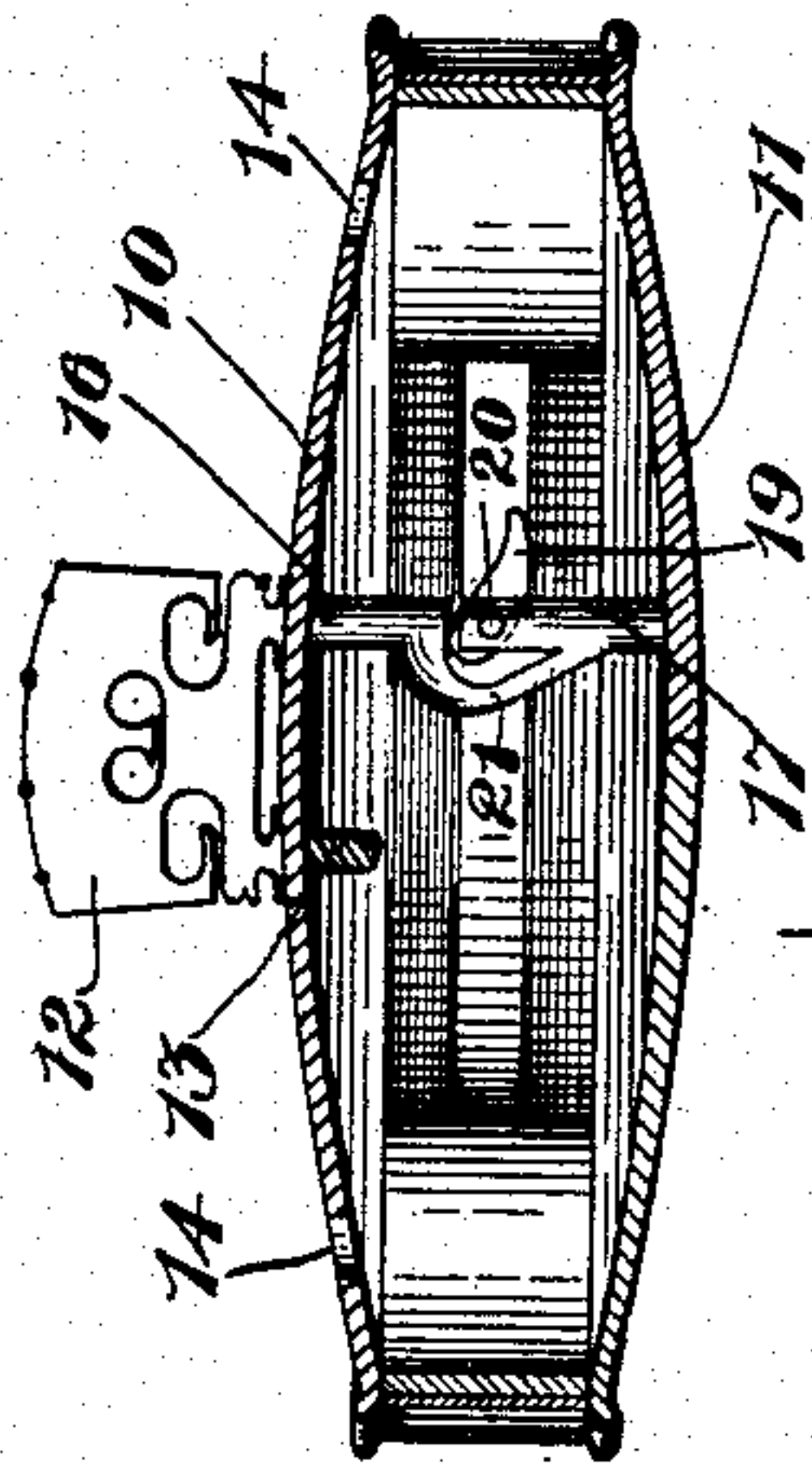


FIG-2-

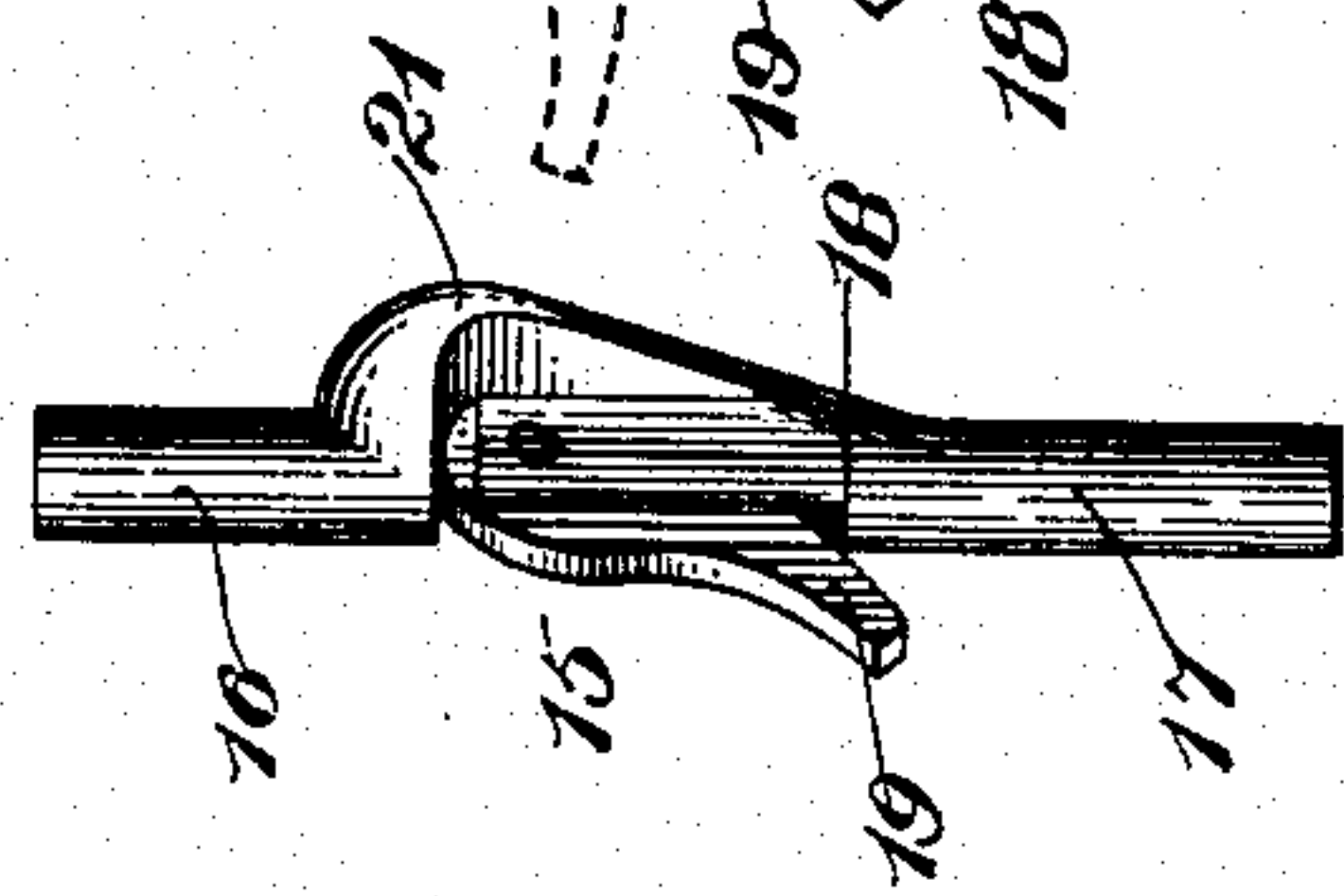


FIG-3-

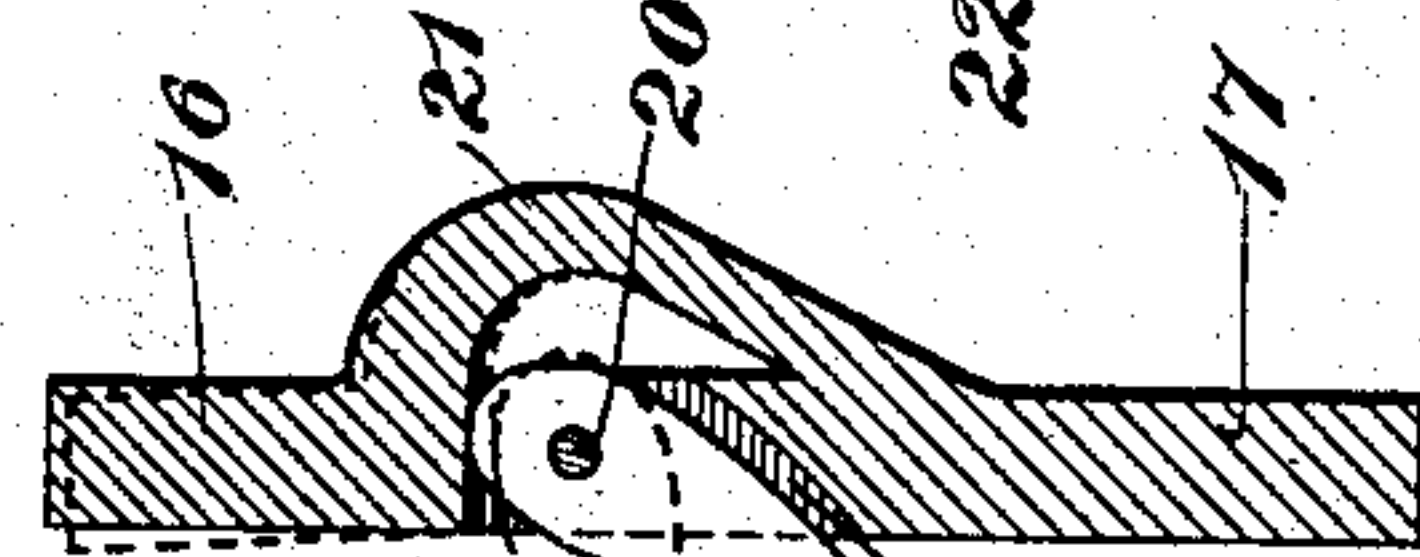


FIG-4-

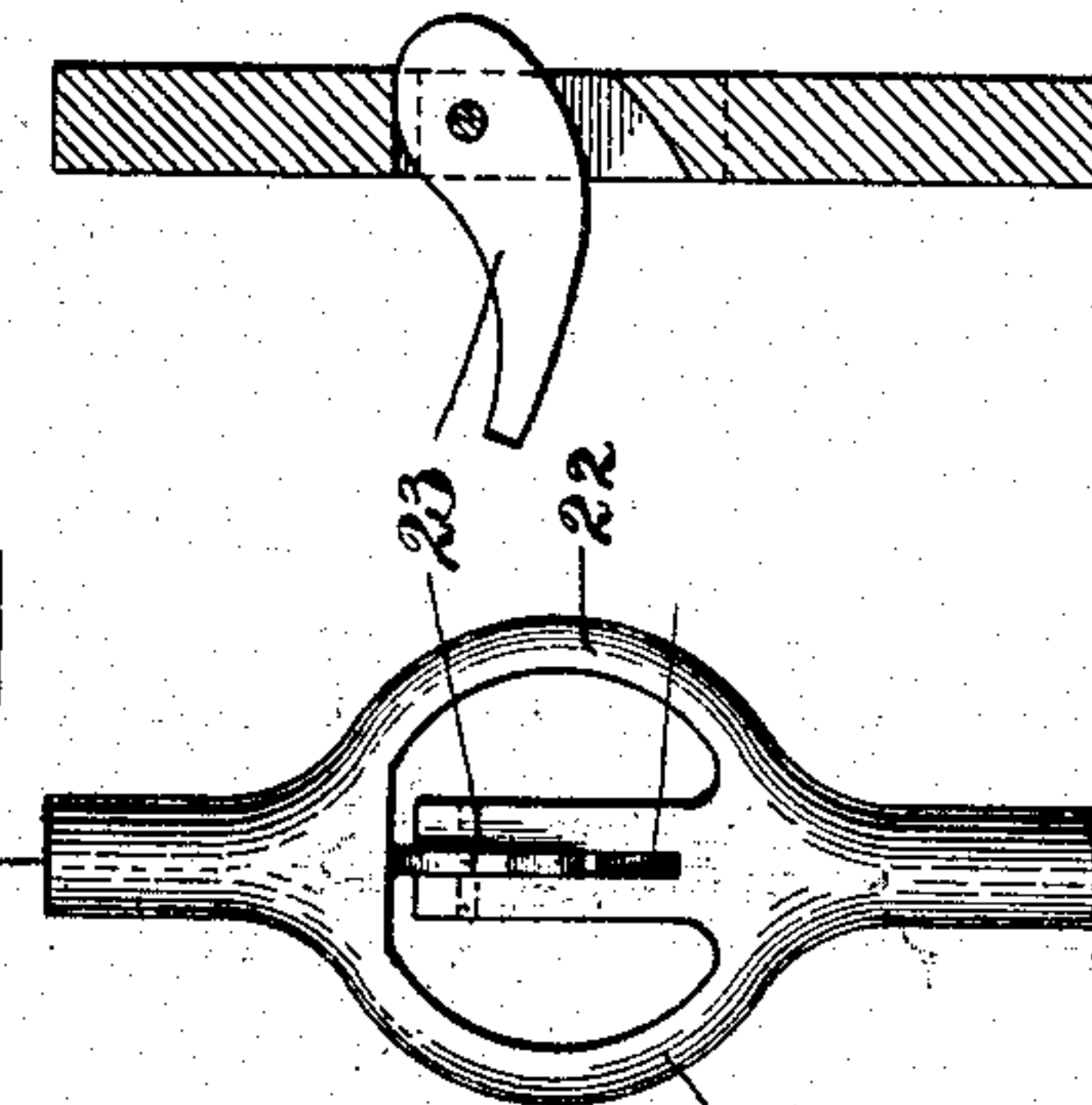


FIG-5-

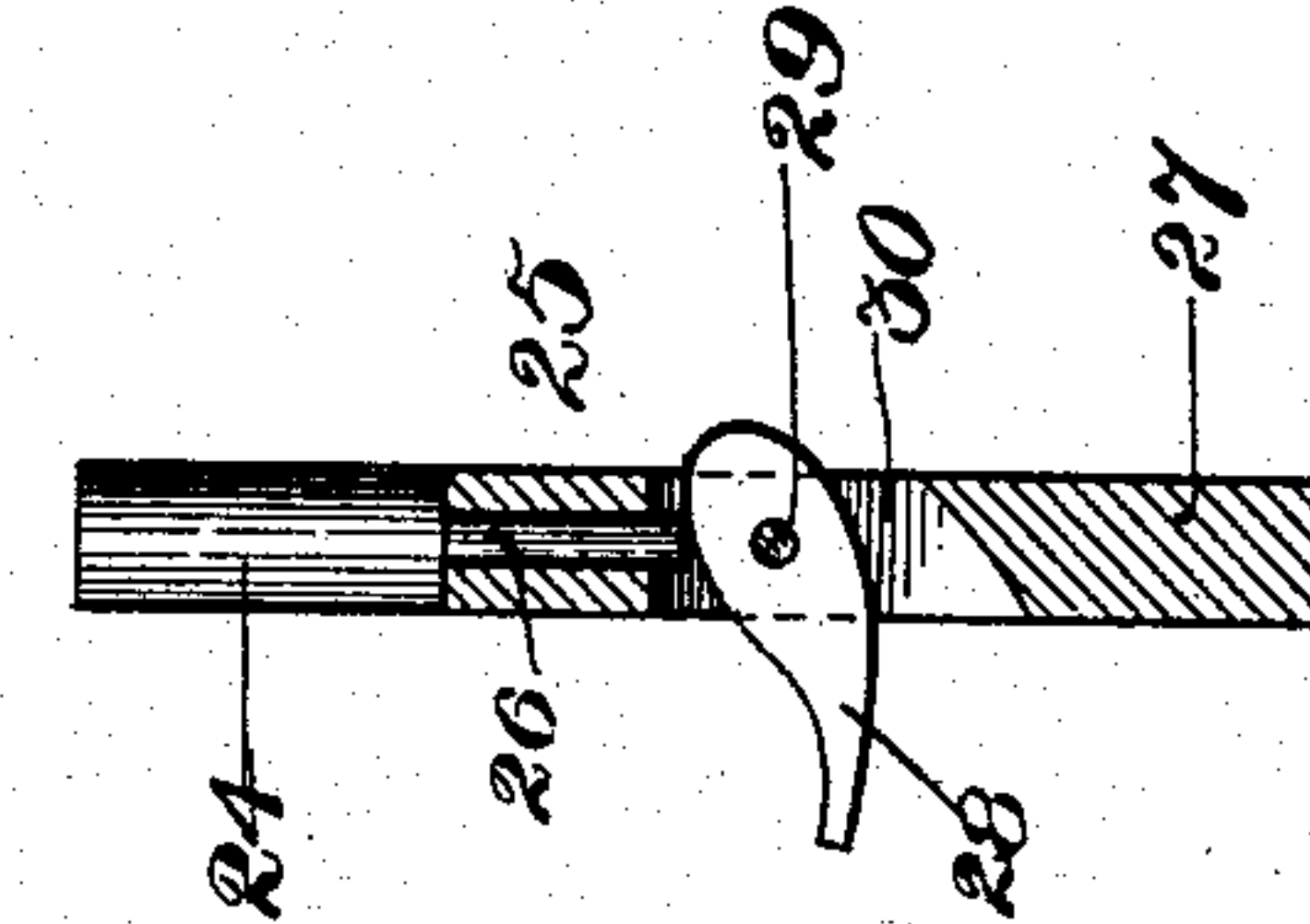


FIG-7-

WITNESSES,  
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# UNITED STATES PATENT OFFICE.

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## ADJUSTABLE SOUND-POST FOR STRINGED INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 673,949, dated May 14, 1901.

Application filed November 30, 1900. Serial No. 38,080. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN A. GOULD, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Adjustable Sound-Posts for String Instruments, of which the following is a specification.

It is well known to those skilled in the manufacture and use of stringed instruments, more especially the violin, cello, and bass viol, that the position and length of the sound-post of said instrument is a very delicate and important matter and that any change in position or length immediately affects, and to a very appreciable degree, the quality of the tone of the instrument. A change in the position of the sound-post of from one to two millimeters will make a decided difference in the tone of the instrument. If the sound-post be made one-half millimeter longer, it renders the tone comparatively sharper and thinner. If the sound-post be approached nearer the bridge in a violin, the tone becomes clearer and more acute. If moved more toward the center of the instrument, the G-string sounds clearer and firmer; but the E-string, on the other hand, grows slacker and softer. It will thus be seen that any variation, however slight, in length or position of the sound-post will make a decided difference in the quality of the tone of said instrument and for the reason that by either of said changes the strain upon either the belly or back of the violin, cello, or bass viol is increased or diminished.

The changing of the position of the sound-post in a violin is attained at present by reaching through the *f*-hole in the belly of the instrument with a specially-shaped tool and pushing the sound-post into different positions. This is a tedious and delicate piece of work, requiring skill and oftentimes necessitating the expenditure of a large amount of time before the desired result is obtained. The same remarks apply to the difficulty of obtaining a sound-post of the correct length.

The object of this invention is to produce a sound-post which shall obviate these difficulties, which shall be simple, light, and durable in construction, easily applied to an in-

strument without any danger of injuring the same, and capable of being readily adjusted to produce in the instrument to which it is applied the best quality of tone which said instrument is capable of producing.

The invention consists in a sound-post for stringed instruments in two parts, said parts connected together and one of said parts having mechanism fast thereto adapted to positively force said parts away from each other.

The invention further consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings, Figure 1 is a longitudinal section of a violin of the usual construction with my improved sound-post applied thereto. Fig. 2 is a transverse section taken on line 2 2, Fig. 1. Fig. 3 is a perspective view of my improved sound-post. Fig. 4 is a central longitudinal section thereof. Fig. 5 is a front elevation of a modified form of sound-post. Fig. 6 is a section taken on line 6 6, Fig. 5. Fig. 7 is a central longitudinal section of another modified form of sound-post.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 10 is the belly, 11 the back, 12 the bridge, 13 the bass-bar, and 14 the *f*-hole, of a violin of the usual construction.

15 is a sound-post constructed in accordance with the most approved form of my invention, consisting of a cylindrical post 16, adapted to bear against the belly of the violin, and another cylindrical post 17, adapted to bear against the back of the violin, the two joined together by a spring-arm 21, integral with both of said posts. The upper end of the post 17 is slotted at 18 to receive a cam-lever 19, pivoted upon a pin 20 fast to said post 17.

The cam-lever 19 bears against the lower end of the post 16, and as the said lever is depressed from the position shown in dotted lines, Fig. 4, to the position shown in full lines therein the post 16 will move upwardly from the position shown in dotted lines to that shown in full lines in said figure, and thus the distance between the two ends of



the post 15 may be increased or diminished at will, according to the position in which the cam-lever 19 is placed. The post 15 and the cam-lever 19 are preferably made entirely  
 5 of wood, and the cam-lever 19 is made to fit closely in the slot 18, so that said cam-lever will remain stationary in any position in which it may be placed.

In placing my improved sound-post in position the post is cut off about the right length and placed in the violin in the usual position—namely, under the outer edge of the E-string foot of the bridge and nearer the tailpiece of the violin than the bridge thereof by about  
 15 two and one-half millimeters. The post 15 is placed with the handle of the cam-lever 19 pointing toward the nearest *f*-hole, Fig. 2. The handle of the lever is then lowered or raised by means of a tool introduced through  
 20 the *f*-hole 14, and the length of the post is thus increased or diminished, and the tension upon the instrument correspondingly increased or diminished and the tone of the same varied.

It is evident that the length of a sound-post may be adjusted in different ways without departing from the spirit of my invention, and in Figs. 5 and 6 I have illustrated a modification in which the upper part of the  
 30 spring-post is joined to the lower part by two spring-arms 22, the cam-lever 23 being operated in the same manner as the cam-lever 19.

In Fig. 7 I have illustrated another manner of varying the length of the sound-post, in which the upper part 24 of the post 25 is  
 35 turned down at 26 to fit in a hole of corresponding diameter bored in the lower part 27 of said post. The cam-lever 28 is pivoted at 29 in a slot 30 to the lower part 27 of said  
 40 sound-post 25. The lower end of the portion 26 of the upper part 24 bears against the cam-lever 28, and when said lever is raised or lowered the cam-surface thereon raises and lowers the part 24, and thus varies the length of  
 45 said sound-post.

While I have illustrated and described my improved sound-post as particularly adapted to a violin, it is evident that the same may be applied to any string instrument wherein a difference in the tension upon the frame  
 50 and sounding-board produces a variation in the quality of the tone of the instrument—such as, for instance, the cello, bass viol, and piano.

Having thus described my invention, what I claim, and desire by Letters Patent to secure, is—

1. As an article of manufacture, a sound-post for string instruments, having an upper part and a lower part, a spring-arm connecting said upper and lower parts, and means  
 60 for forcing said parts away from each other against the action of said spring-arm.

2. As an article of manufacture, a sound-post for string instruments, having an upper  
 65 part and a lower part, a spring-arm connecting said upper and lower parts, and a cam-lever pivoted to one of said parts and adapted to force said parts away from each other against the action of said spring-arm. 70

3. As an article of manufacture, a sound-post for string instruments, having an upper part, a lower part, said upper part and lower part connected together and a cam-lever pivoted to one of said parts and adapted to force  
 75 said parts away from each other.

4. As an article of manufacture, a sound-post for string instruments, having an upper part, a lower part, said upper part and lower part connected together, and mechanism fast  
 80 to one of said parts adapted to positively force said parts away from each other.

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

JOHN A. GOULD.

Witnesses:

CHARLES S. GOODING,  
 LOUIS A. JONES.