

C. C. JADWIN.  
HORN FOR REPRODUCING NATURAL TONES.  
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903,575.

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Fig. 2.

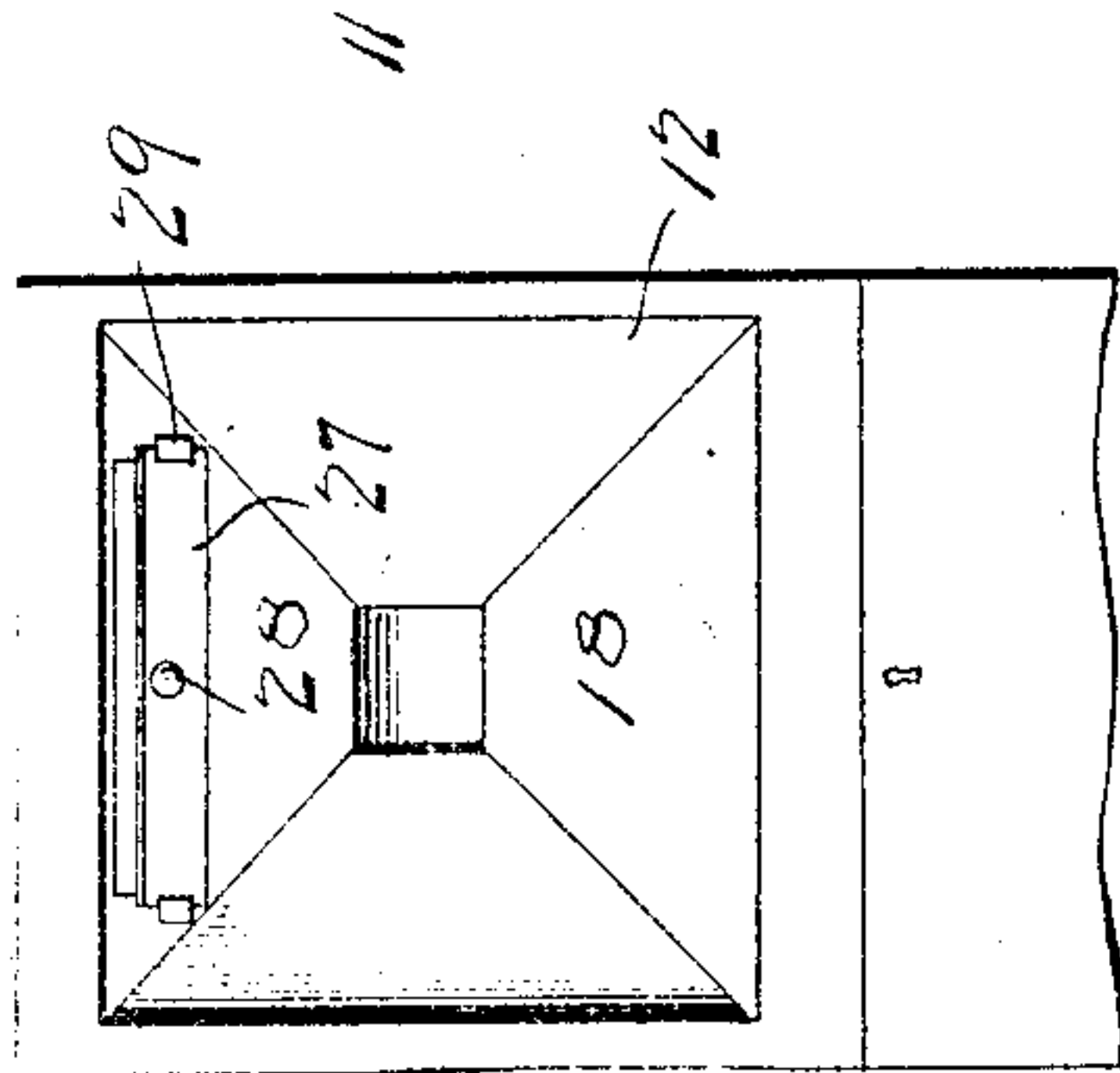


Fig. 3.

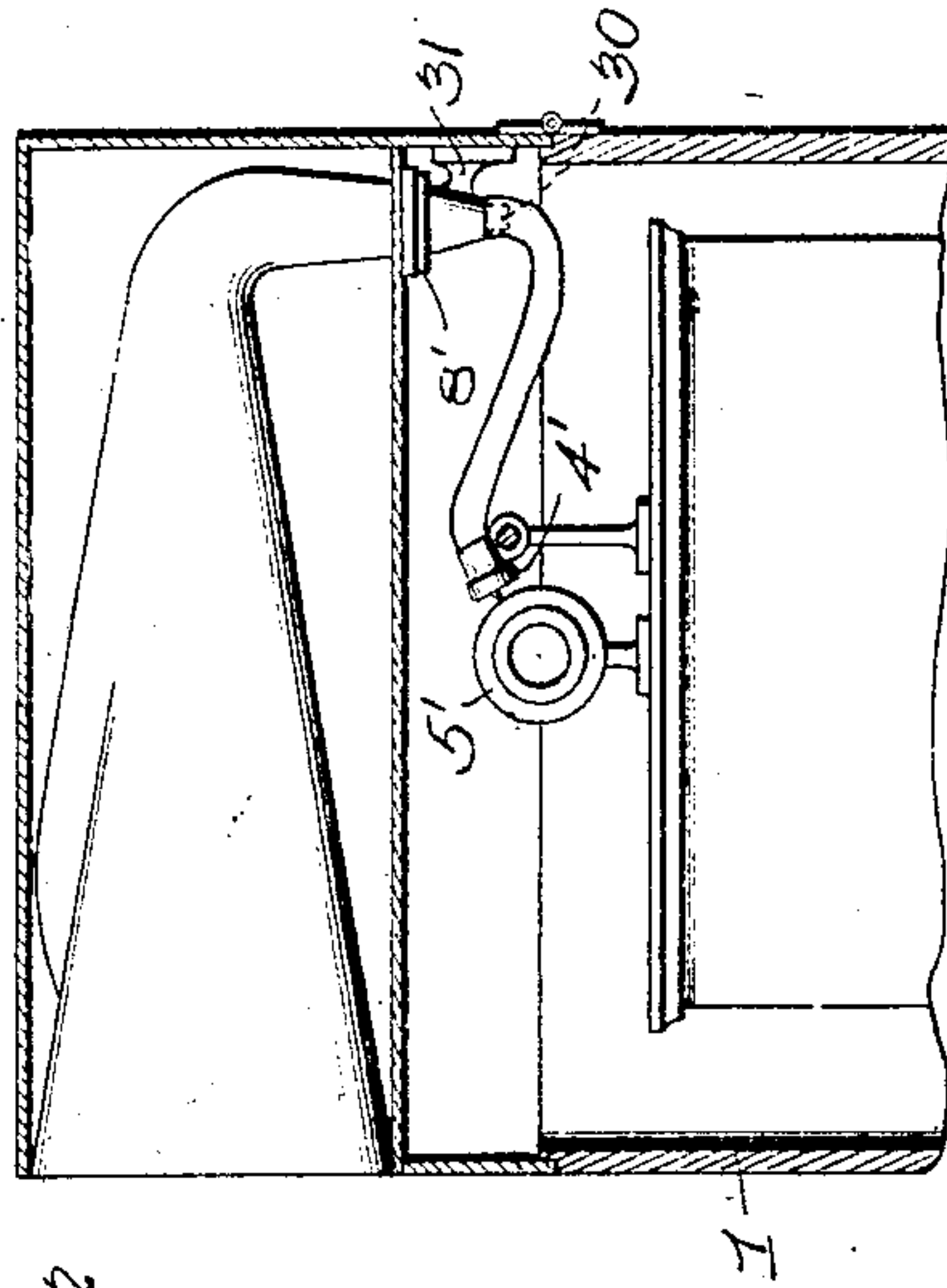
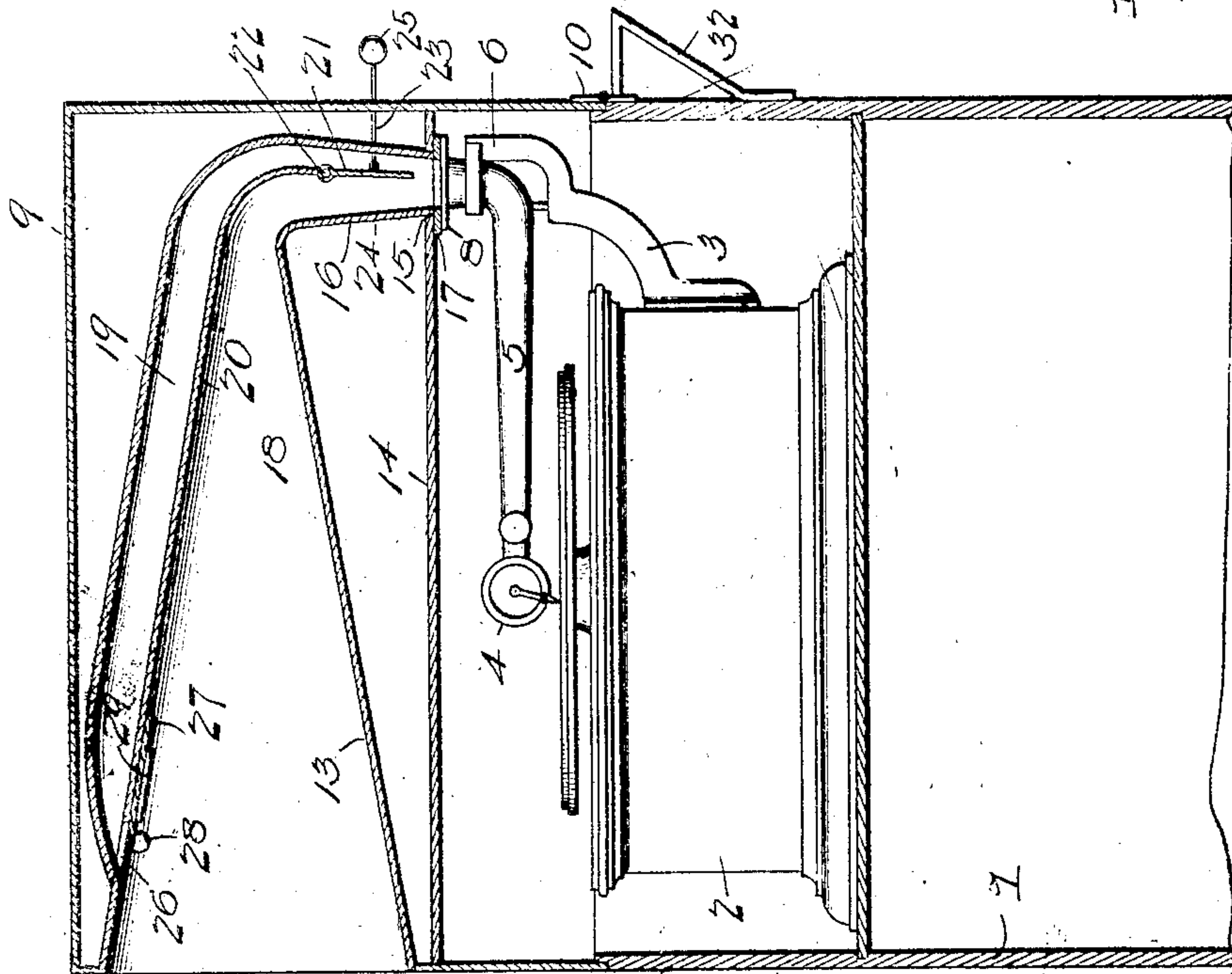


Fig. 1.



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## HORN FOR REPRODUCING NATURAL TONES.

No. 903,575.

Specification of Letters Patent.

Patented Nov. 10, 1908.

Application filed June 20, 1908. Serial No. 429,574.

*To all whom it may concern:*

Be it known that I, CORNELIUS C. JADWIN, a citizen of the United States, residing at Honesdale, in the county of Wayne and State of Pennsylvania, have invented a certain new and useful Horn for Reproducing Natural Tones, of which the following is a specification, reference being had therein to the accompanying drawing.

10 This invention relates to horns for reproducing natural tones the main object of the invention being to provide an article of the class described which is applicable to any of the sound reproducing machines now in com-  
15 mon use and adapted to be hinged to the cabinets containing the instrument to enable the records to be removed and replaced on the instrument and the necessary adjustments to be effected.

20 A further object of the invention is to provide a horn which embodies a plurality of sound passages combined with a common throat, and means for varying the volume of sound waves transmitted to the respective  
25 passages to vary the tones finally produced by the horn.

With the above and other objects in view, the nature of which will more fully appear as the description proceeds, the invention  
30 consists in the novel construction, combination and arrangement of parts as herein fully described, illustrated and claimed.

In the accompanying drawings:—Figure 1 is a vertical sectional view of a sound repro-  
35 ducing cabinet, showing a machine mounted therein and illustrating the improved horn also shown in longitudinal section. Fig. 2 is a front elevation of the cabinet section containing the horn. Fig. 3 is a reduced  
40 vertical section showing the horn applied to another type of instrument.

Referring to the drawings, 1 designates the main body or section of a cabinet in the upper portion of which is mounted a sound  
45 reproducing instrument 2, the instrument illustrated in Fig. 1 being of the type known as a graphophone and embodying an arm supporting bracket 3 a reproducer 4 and a sound-transmitting conduit 5 leading off  
50 from the reproducer.

In order to carry out the present invention, the conduit 5 is supported by the bracket 3 or an extension 6 thereof and is provided with an upturned portion 7 having  
55 a circumferential flange 8, the purpose of which will appear.

Mounted on the main section 1 of the cabinet is a superimposed section 9 the same being hinged at 10 to the main section so that it may be thrown back to give access to  
60 the instrument contained in the main section in order to permit the records to be changed and the other necessary adjustments to be effected. The cabinet section 9 is closed on all sides except at the front which is par-  
65 tially closed as shown at 11, the opening 12 in the front being commensurate in size with the mouth of the horn, illustrated at 13. The section 9 comprises in addition to a top wall, a bottom wall 14 which is provided with an  
70 opening 15 which receives the lower end of the down-turned throat 16 of the horn. This throat extends substantially in a vertical plane while the main body of the horn extends in a substantially horizontal plane as  
75 clearly shown in Fig. 1 and in order to effect a tight joint between the throat 16 and the upstanding portion 7 of the conduit 5, a gasket or packing washer 17 of some soft  
80 flexible material such as felt, leather or rubber is interposed between the flange 8 and the bottom 14 of the superimposed cabinet section, the part 17 being preferably secured to and carried by the cabinet section 9.

The horn embodies a plurality of sound  
85 passages, 18 designating the main passage and 19 an auxiliary passage which follows the general direction of the main passage as shown in Fig. 1 but is of relatively smaller capacity, being divided off from the main  
90 passage by an intervening wall or partition 20 which also divides the throat 16 into a corresponding number of passages.

21 designates a divider or pallet which is jointed at its upper end as shown at 22 to  
95 the corresponding extremity of the wall or partition 20 as clearly shown in Fig. 1, adapting the lower free end of said divider to be moved back and forth across the throat 16, this being accomplished by means of a  
100 suitable handle which is shown as embodying a stem or rod 23 jointed to the divider at 24 and preferably having a knob or button 25, the construction described enabling the divider or pallet to be moved or adjusted  
105 for the purpose of varying the relative volume of sound passing to the respective passages 18 and 19.

26 designates an opening or port leading from the discharge end of the auxiliary pas-  
110 sage 19 into the main passage 18 for again commingling the sound waves previously



separated by the divider or pallet 21. The opening 26 is controlled as to size by means of a damper 27 having a suitable operating knob or projection 28 and mounted to slide in suitable guides 29 whereby it may be manually moved across the opening 26 to vary the size of the opening to suit the nature or character of the sounds coming from the reproducing instrument.

Where the invention is to be used in connection with an Edison phonograph as shown in Fig. 3, the traveling reproducer 4' may have the flexible sound conduit 5' connected at one end to a nozzle 30 supported by a bracket 31 connected to one wall of the main cabinet section 1 as shown in Fig. 3, which nozzle will be provided with a flange 8' forming a seat for the gasket or packing washer 17 above described.

32 designates a stop or rest for supporting the hinged section of the cabinet when thrown back to give access to the instrument.

By means of the construction above described, the volume of sound transmitted through the horn is divided or split up after the manner of the ordinary human head, the part 16 corresponding with the throat, the part 21 representing the pallet, the passage 18 corresponding with the mouth and the auxiliary passage 19 corresponding with the nasal passage. As a result the tones are nicely blended and the disagreeable scratching noise so common to instruments of this kind is to a very large extent overcome, while metallic sounds are entirely overcome. The horn may be used in connection with the inclosing cabinet section, without the main lower section, or said horn may be used independently of both cabinet sections.

I claim:—

1. A horn for the purpose specified comprising a throat, main and auxiliary sound

passages leading therefrom, and means for varying the relative capacities of said passages.

2. A horn for the purpose specified comprising main and auxiliary passages, a throat common to both passages, and means for varying the relative area of communication between said passages and throat.

3. A horn for the purpose specified comprising main and auxiliary passages, a throat common to both passages, and a movable divider for regulating the volume of sound waves delivered to the respective passages.

4. A horn for the purpose specified comprising main and auxiliary passages, a throat common to both passages, a divider for regulating the volume of sound waves delivered to the respective passages, and means for adjusting said divider.

5. A horn for the purpose specified comprising main and auxiliary passages, a throat common to both passages, an adjustable divider for regulating the volume of sound waves delivered to the respective passages, and a damper controlling the communication between said passages where they reunite.

6. A horn for the purpose specified comprising a cabinet section, a throat, main and auxiliary sound passages leading from said throat, means for varying the relative area of communication between said passages and throat, and means on the horn for effecting a closed joint between said throat and the sound-transmitting conduit of a reproducing instrument.

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

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Witnesses:

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