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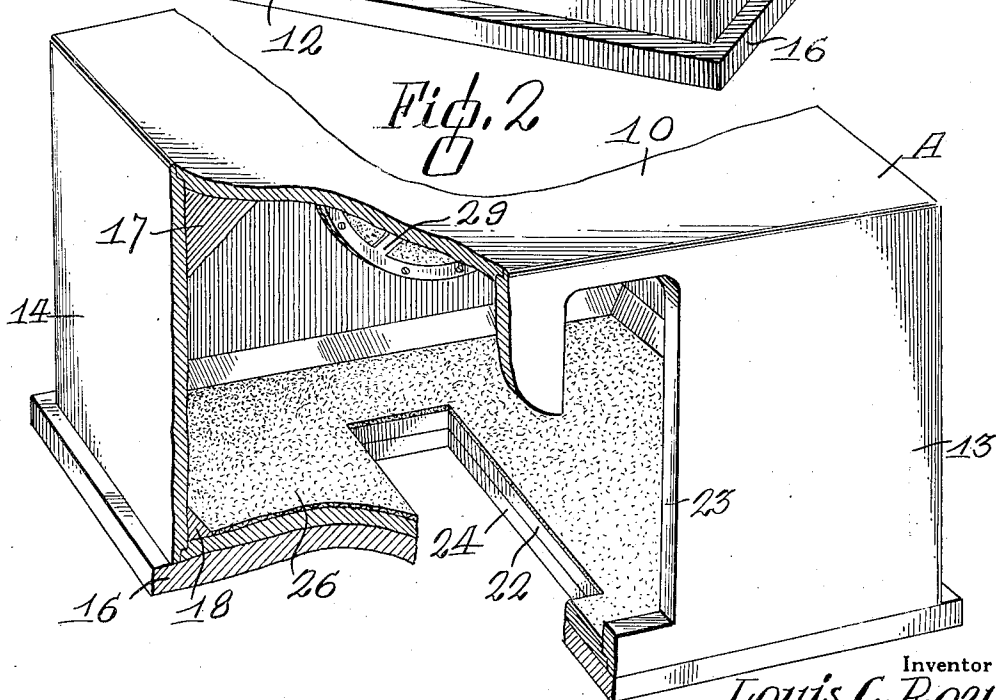
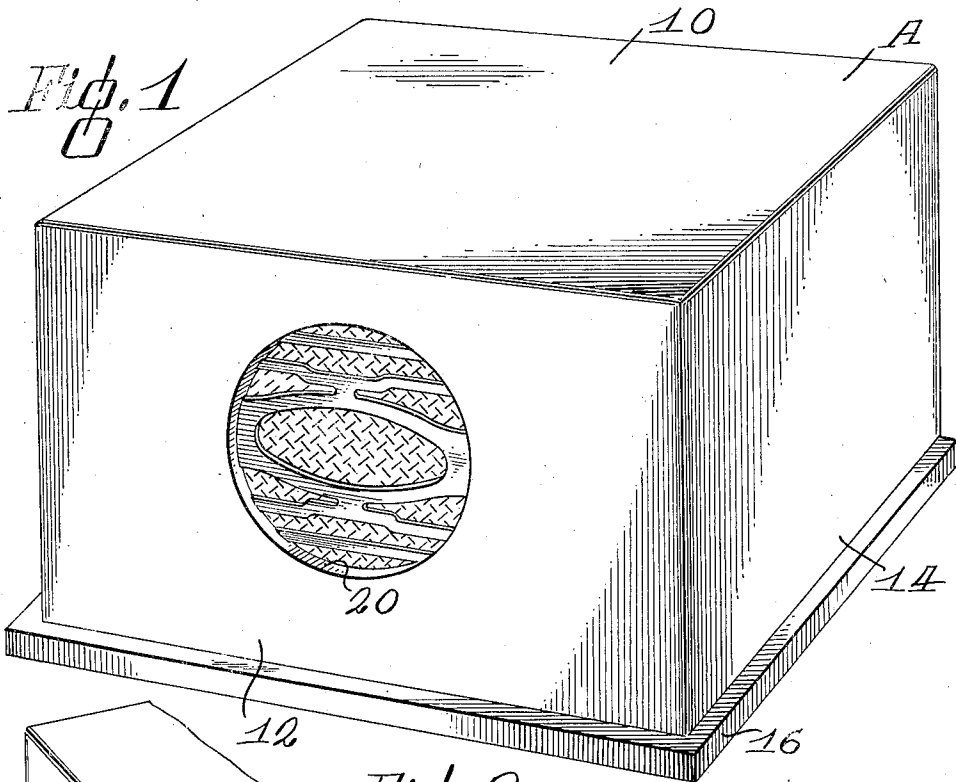
L. C. ROY

2,129,184

CABINET FOR LOUDSPEAKERS

Filed March 27, 1936

2 Sheets-Sheet 1



Inventor
Louis C. Roy
By *Raymond C. Davis*
Attorney

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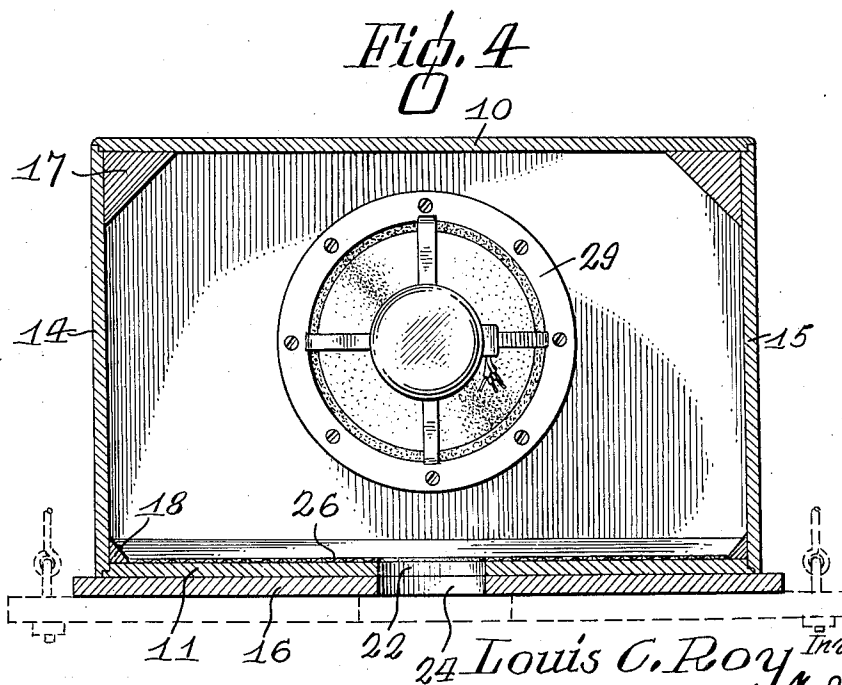
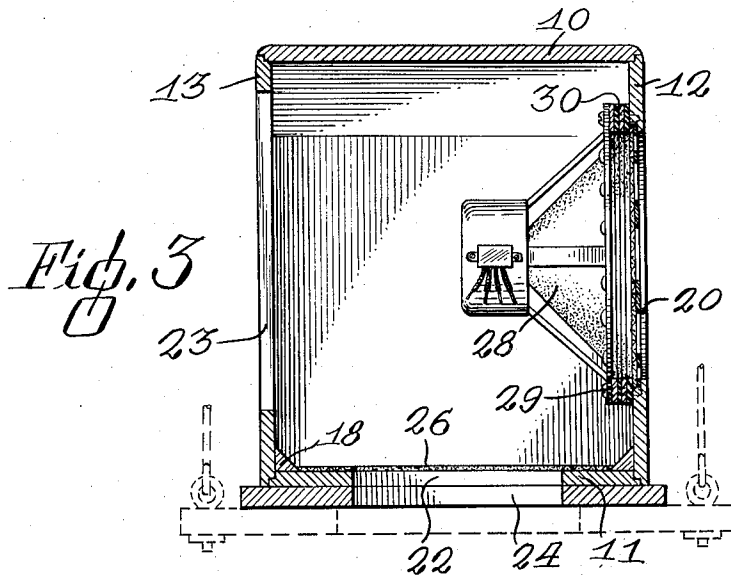
L. C. ROY

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CABINET FOR LOUDSPEAKERS

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2 Sheets-Sheet 2



Louis C. Roy *Inventor*
By *Raymond C. Rober* *Attorney*

UNITED STATES PATENT OFFICE

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CABINET FOR LOUDSPEAKERS

Louis C. Roy, Quebec, Quebec, Canada

Application March 27, 1936, Serial No. 71,163

1 Claim. (Cl. 181—31)

The present invention relates to improvements in cabinets for loud speakers.

An object of the invention is the provision of a cabinet for loud speakers designed to generally improve the sound reproduction.

Another object of the invention is the provision of a cabinet for loud speakers constructed so that fundamentals and overtones are reproduced with great efficiency with respect to the original proportions.

A further object of the invention is the provision of a cabinet for loud speakers which will improve the range of frequencies while reducing frequency distortion.

Still another object of the invention is the provision of a cabinet for loud speakers designed to enable output at a sufficient volume with a minimum of distortion due to overload.

A still further object of the invention is the provision of a loud speaker cabinet which will reduce sharp resonance and objectionable reverberations.

Still another object of the invention is the provision of a loud speaker cabinet of the above character which is rugged and durable in construction.

Other objects and advantages of the invention will become apparent as the description progresses.

In the accompanying drawings forming a part of this specification and in which like reference characters are employed to designate corresponding parts throughout the same:

Figure 1 is a front perspective view of the cabinet,

Figure 2 is a fragmentary rear perspective view partly broken away to illustrate the interior construction,

Figure 3 is a longitudinal vertical section through the same, and

Figure 4 is a transverse vertical section there-through.

Referring to the drawings, wherein for the purpose of illustration is shown a preferred embodiment of the invention, A generally designates the assembled cabinet which is in the form of a six-sided rectangular chamber embodying a top side 10, a bottom side 11, a front wall 12, a rear wall 13, and side walls 14 and 15. The bottom is secured upon a base board 16 having marginal projections at the front and side wall portions.

Five of the sides are of predetermined uniform thickness while the sixth, in the present example the bottom 11, is of increased thickness. Within the upper portion of the chamber are provided

relatively large corner fillets 17 while in the bottom are fitted smaller corner fillets 18.

In the front wall 12 is formed a circular loud speaker opening 20. In two adjacent sides of the chamber, in the present instance in the bottom and the rear wall, are provided apertures 22 and 23. The aperture 22 in the bottom 11 is of elongated form and extends longitudinally, terminating short of the front and rear walls. Therefore, the loud speaker must be so supported that at all times the said opening is free. Means suggested for this purpose are shown in dotted lines in Figures 3 and 4. The opening 23 in the rear wall is likewise elongated and terminates short of the top and bottom of the chamber. An aperture 24 corresponding to the aperture 22 in the bottom is also formed in the base board 16. As will be noted, the apertures 22 and 23 are disposed at right angular positions and proportioned so that the length is very substantially three times the width.

The exact theory at the base of the present invention is not definitely known to me at present. However, it may be stated that the purpose, and general function, of said apertures is one of "loading," since the proper proportioning of the same with respect to the speaker has a very marked effect.

Thus, it is felt that the apertures, when dimensioned as described and shown, prevent the formation of an air column having a natural period of its own while providing a sufficient load to avoid blasting of the speaker.

Within the chamber, in the present example upon the bottom 11, is provided a lining 26 of sound absorbing material such as felt intended to prevent possible vibration of the cabinet walls; said lining may be dispensed with in most cases, however.

To the front baffle forming wall 12 is connected a loud speaker 28. Between the rim 29 of the speaker and the marginal edge portion of the opening 20 are interposed a plurality of rings 30 of cushioning material also provided to prevent possible vibration between speaker and chamber walls. As illustrated at Figure 3, this assembly may embody two rings of rubber and two of fibre.

It is to be understood that the form of my invention herein shown and described is to be taken as a preferred example of the same, and that various changes as to the shape, size and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

Having thus described my invention, I claim:

In a loud speaker adapted to be supported in space, a speaker chamber formed of chamber-defining walls arranged along a horizontal longitudinal axis and a transverse vertical axis, the chamber being of rectangular section longitudinally and square section vertically at right angles to the longitudinal axis, one of the said walls on the longitudinal axis constituting the front of the chamber and having a circular opening, the parallel opposite wall comprising the rear of the

chamber being provided with a rectangular opening, the intermediate wall forming the bottom also having a similar rectangular opening, said rectangular openings being right-angularly disposed with respect to the longitudinal axis of the chamber and in planes at right angles to each other, said openings further having a ratio of approximately 3 to 1 between length and breadth respectively, and a loud speaking element mounted on the front wall over the circular opening.

LOUIS C. ROY.