June 23, 1942. E. SAS 2,287,138

XYLOPHONE

Filed Jan. 9, 1941 2 Sheets-Sheet 1

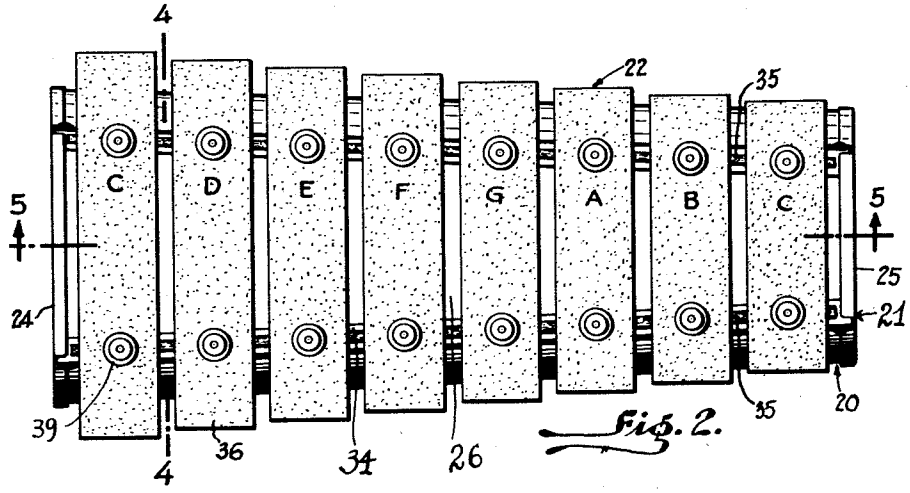


Fig. 2.

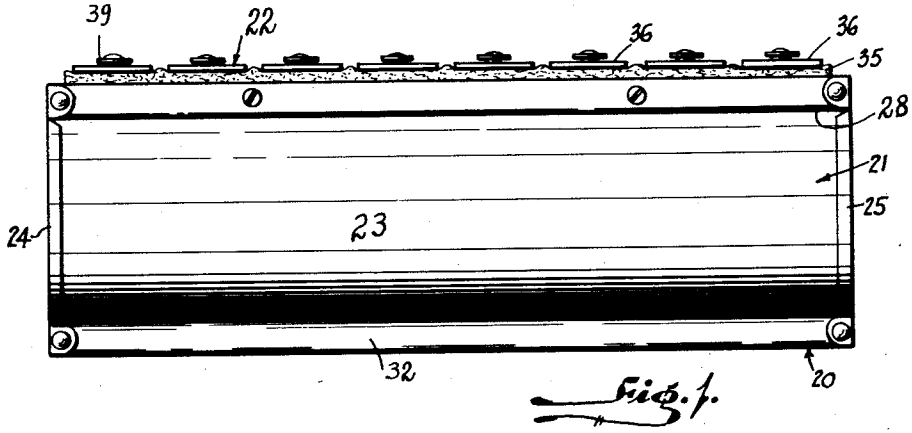


Fig. 1.

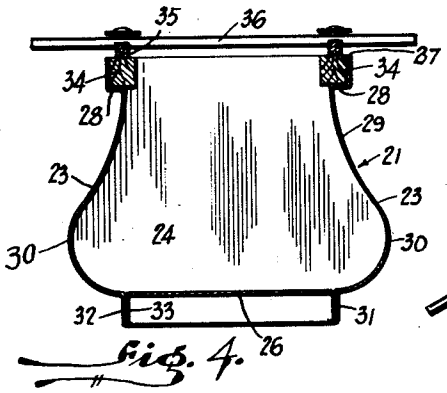


Fig. 4.

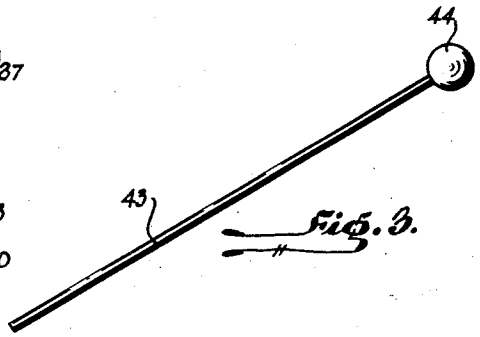


Fig. 3.

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XYLOPHONE

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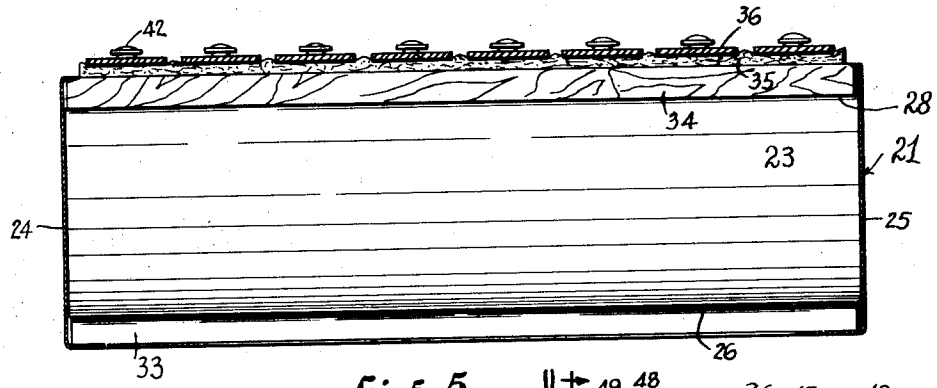


Fig. 5.

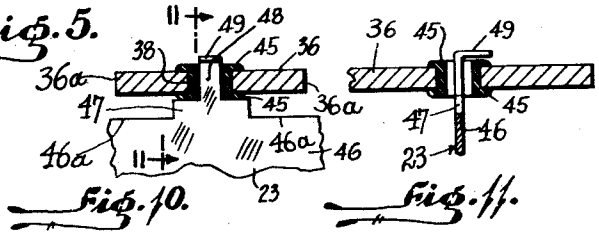


Fig. 10.

Fig. 11.

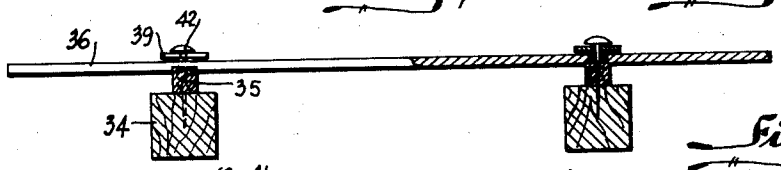


Fig. 6.

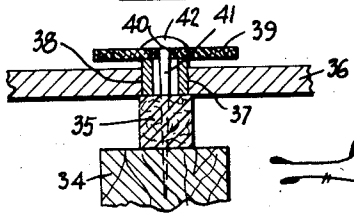


Fig. 7.

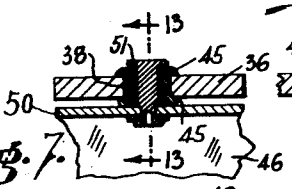


Fig. 12.

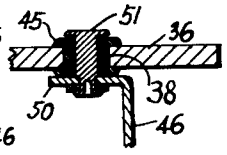


Fig. 13.

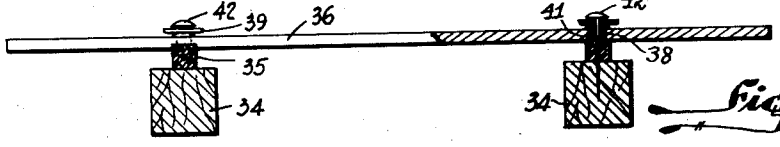


Fig. 8.

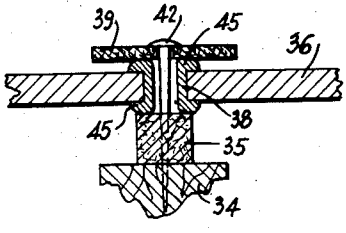


Fig. 9.

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UNITED STATES PATENT OFFICE

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XYLOPHONE

Elmer Sas, New York, N. Y.

Application January 9, 1941, Serial No. 373,721

7 Claims. (Cl. 84—410)

This invention relates to xylophones, and has for its main object to provide a musical instrument of this type, which has improved construction, and which is more simple and of better effect than the xylophones now in use.

Another object of my invention is to provide a xylophone as characterized hereinbefore which will have a better sound effect and will be more melodious than the present xylophones.

Still a further object of my invention is to provide a xylophone which will have a specifically constructed resonance chamber.

Further objects of my invention will be apparent as the specification of the same proceeds, and among others I may mention: to provide a xylophone which will have novel and simple means for securing the bars thereof in a sound insulated manner, and which will be easy and inexpensive to manufacture, making instruments of this type of high quality available at lower prices to the greatest mass of people.

In the drawings forming a part of this specification and accompanying the same,

Fig. 1 is a side elevational view of the preferred embodiment of my novel xylophone, and

Fig. 2 is a plan view thereof;

Fig. 3 shows the preferred form of a beater or hammer to be used for playing the instrument;

Fig. 4 is a sectional elevational view, the section being taken on the line 4—4 of Fig. 2;

Fig. 5 is a longitudinal sectional elevational view taken on the line 5—5;

Fig. 6 is a detail on a larger scale showing the securing means for the bars in this embodiment of my invention;

Fig. 7 is a sectional fragmentary detail on still a larger scale for illustrating the same form of securing and sound insulating the bars of my xylophone as shown in Fig. 6;

Fig. 8 is a partly sectional detail showing a modified form of the securing means for the bars of my xylophone, and

Fig. 9, again, is a fragmentary detail showing said modified form on a large scale;

Fig. 10 is a longitudinal sectional fragmentary view of a detail in a modified construction of my xylophone, and

Fig. 11 is a transverse sectional view thereof;

Fig. 12 is a longitudinal elevational fragmentary view of a detail of still another modification in the construction of my xylophone, and

Fig. 13 is a sectional elevational view thereof on the line 13—13 of Fig. 12.

Referring now to the drawings more in detail by characters of reference, my assembled xylophone is generally indicated by the numeral 20 and is mainly composed of an elongated hollow box or casing, generally indicated by the numeral 21, and a transverse upper construction of sound bars secured thereon, generally indicated by the numeral 22. Box or casing 21 preferably is made of pressed sheet metal and has two side walls 23, two end walls 24 and 25, and a bottom 26 constructed and assembled, as indicated in the drawings.

The casing 21 is open at the top, as indicated at 27, and its side walls 23 form shoulders 28 at a short distance below the open top, whereupon they are bulging outwardly in a curve 29 until they form the largest widths of the casing, as at 30, whereupon they are turned inwardly in a curved formation and secured to the bottom 26, as at 31.

Cooperating flanges 32 and 33, respectively, are formed at the lower ends of the sides 23 and the respective longitudinal sides of the bottom 26 to effect the securing of these parts together and to also separate the bottom 26 from any support on which the xylophone may rest, like from the top of a table.

It also will be observed that end wall 25 is materially smaller than end wall 24, so that the device is converging from end wall 24 towards end wall 25, its width being substantially larger at the end 24 and gradually narrowing towards the end wall 25. Two strips or bars of wood 34 are placed on the shoulders 28, and a strip of felt 35 is placed over each wooden bar 34. The sound bars 36 are placed across the open top of the device resting on the felt strips 35, each bar has a hole 37 (Fig. 7) over the respective felt strip 35 and a bushing or sleeve 38 is placed into each hole, said bushing being of felt, rubber, or any appropriate composition material, not metal, and having a sound insulating character.

A felt disc 39 with a hole 40 in its center is placed over every bushing 38 and a securing nail 41 is driven through the felt strip 35 into the wooden bar or strip 34 through the hole or opening in the bushing 38, the head 42 of the nail 41 resting on the felt disc 39. The bushing 38 may be of the same height as the thickness of the metal sound bar 36, or it may be higher, as indicated in Fig. 7.

Any desired number of metal sound bars 36 may be placed across the top of my device according to a pre-determined scale of sounds, as indicated in Fig. 2.

The manner of playing the device will be obvious; the hammer or beater stick is held in the

hand of the player by its handle 43 and the sound bars 36 will be struck with its globular head 44 in the desired manner and sequence.

It has been my experience that xylophones constructed as described herein have strikingly superior and improved sounds over the xylophones now in use and I attribute this novel, better effect to the use of the casing 23, particularly to the widened and outwardly bulging lower portion thereof which form a desirable resonance chamber for my xylophone and also to the novel improved sound insulated securing of the bars 36.

In Figs. 8 and 9 I illustrate a comparatively small modification of the securing means for the bars 36. This modification relates to the bushing 38, which in this form has upper and lower rounded flanges 45 by which the bar 36 is further separated from the felt strip 35 and the felt disc 39.

It is also to be understood that with this construction of the bushing 38, the felt strip 35, or the felt disc 39 may be entirely omitted, the lower flange 45 directly resting on the wooden bar 34 and the head 42 of the respective nail directly resting on the upper flange 45.

In Figs. 10 and 11 I indicate another modification in the securing means for my improved xylophone. In this modification no shoulders 26 are provided in the side walls 23, but their upper ends 46 will be a direct continuation in a generally vertical direction of the curve 29.

At the places where it is desired to secure the sound bars 36, raised portions 47 are provided in the top edges of the side walls 23, and a projection 48 is further provided in the center of each raised portion 47. Bushing 38 will be slipped over the projection 48 and the upper end 49 of the projection will be bent over the upper flange 45 of the bushing, thereby providing a securing means for the respective bar 36, as will be obvious.

The projection 48 may be directly arranged on the upper end 46 of the respective side walls 23 without the raised portion 47 but then the lower flange 45 of the bushing is preferably made heavier, as otherwise the outer ends 39*a* of the bar 36 may contact the upper end 46*a* of the wall 23 when the device is played, and may cause disturbing sound effects.

In Figs. 12 and 13 I indicate still another modification in the securing means of the sound bars in my novel xylophone. In this case, again, the shoulders 28 are omitted from the upper portions of the side walls 23 and the upper end of the side wall will point vertically upwardly, as again indicated at 46. An upper marginal portion 50 of each wall will be bent inwardly to form a longitudinal ledge or flange at the top of each wall. Rivets 51 are secured in the flange 50 at the places where it is desired to secure the sound bars 36, said rivets passing through the bushings 38, which, in this modification, preferably are shaped as indicated in Fig. 9 and have upper and lower flanges 45.

What I claim as new, is:

1. In a xylophone, an elongated resonance box made of sheet material, being open at the top and having a bottom, two side walls and two end walls, and being of a generally lyre shape cross section, its side walls having oppositely curved upper and lower portions, so that said box is narrower at the top, its side walls having inwardly curved or convex upper portions, and wider towards the bottom, its side walls having oppositely, outwardly, curved or convex lower portions.

2. In a xylophone as set forth in claim 1, said side walls being continued downwardly to form two elongated straight flanges, and said bottom being secured between the lower portions of said end walls and said downward straight flanges in the side walls.

3. In a xylophone as set forth in claim 1, shoulders formed at the upper ends of said side walls, yieldable strips of material secured on said shoulders, said strips being adapted to receive securing means for the sound bars of the xylophone.

4. In a xylophone, as set forth in claim 1, shoulders formed adjacent to the top in each side wall, a nail receiving strip of yieldable material, like wood, secured on each shoulder, a strip of resilient sound insulating material, like felt, placed over each yieldable strip, said resilient strips being adapted to receive the sound bars of the xylophone and insulating the same, and said yieldable strip being adapted to receive securing nails for said sound bars.

5. In a xylophone, as set forth in claim 1, transverse flanges formed at the free top of each side wall, a plurality of securing means on said flanges arranged in respective registering pairs in the two flanges, each pair of securing means being adapted to secure one sound bar transversely to said side walls on said flanges.

6. In a xylophone, as set forth in claim 1, spaced apart raised portions on the top of each side wall, said raised portions being arranged in corresponding pairs on the two side walls, a projection on each raised portion, a securing means at the upper end of each projection, the respective pairs of projections with their securing means being adapted to receive and secure the usual sound bars transversely over the tops of said side walls.

7. In a xylophone, as set forth in claim 1, spaced apart raised portions on the top of each side wall, said raised portions being arranged in corresponding pairs on the two side walls, a projection on each raised portion, a securing means at the upper end of each projection, the respective pairs of projections with their securing means being adapted to receive and secure the usual sound bars transversely over the tops of said side walls, the top of each raised portion forming shoulders at the sides of the respective projection, the sound bars being adapted to rest on said shoulders and thereby to be placed in a spaced apart relation from, and at a desired distance above, the top edges of said side walls.

ELMER SAS.