April 20, 1943. H. ZIMMERMAN 2,317,165

XYLOPHONE

Filed Oct. 7, 1942 2 Sheets-Sheet 1

FIG. 1

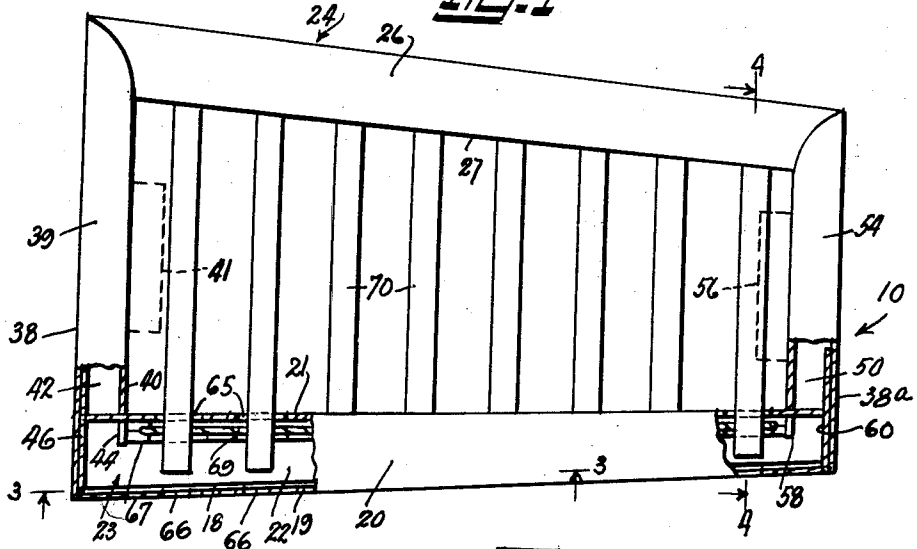


FIG. 2

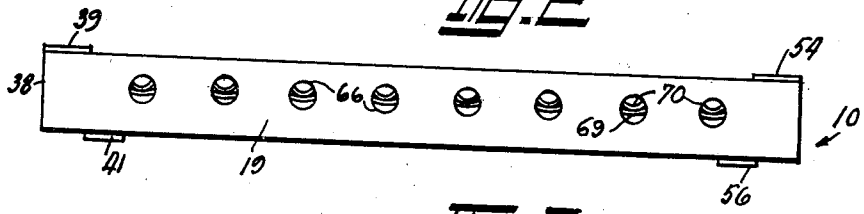


FIG. 3

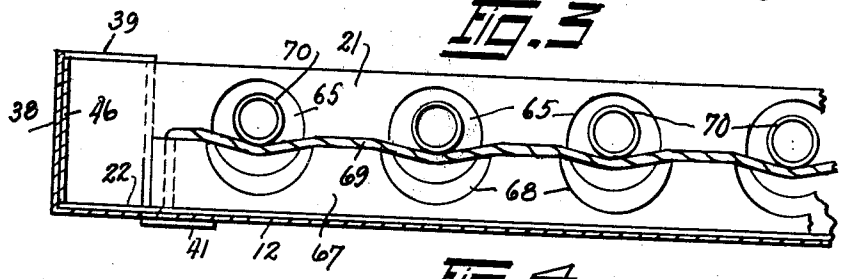
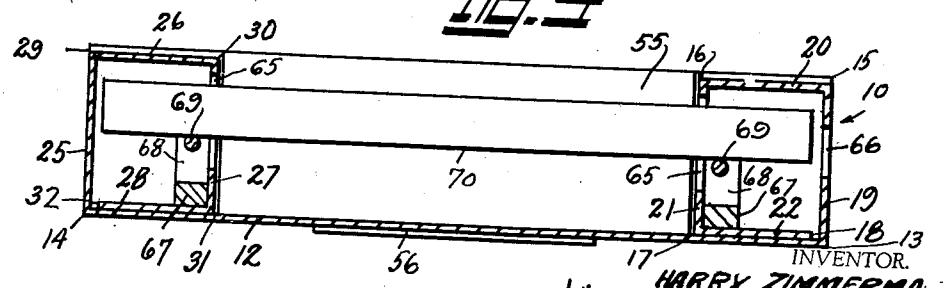


FIG. 4



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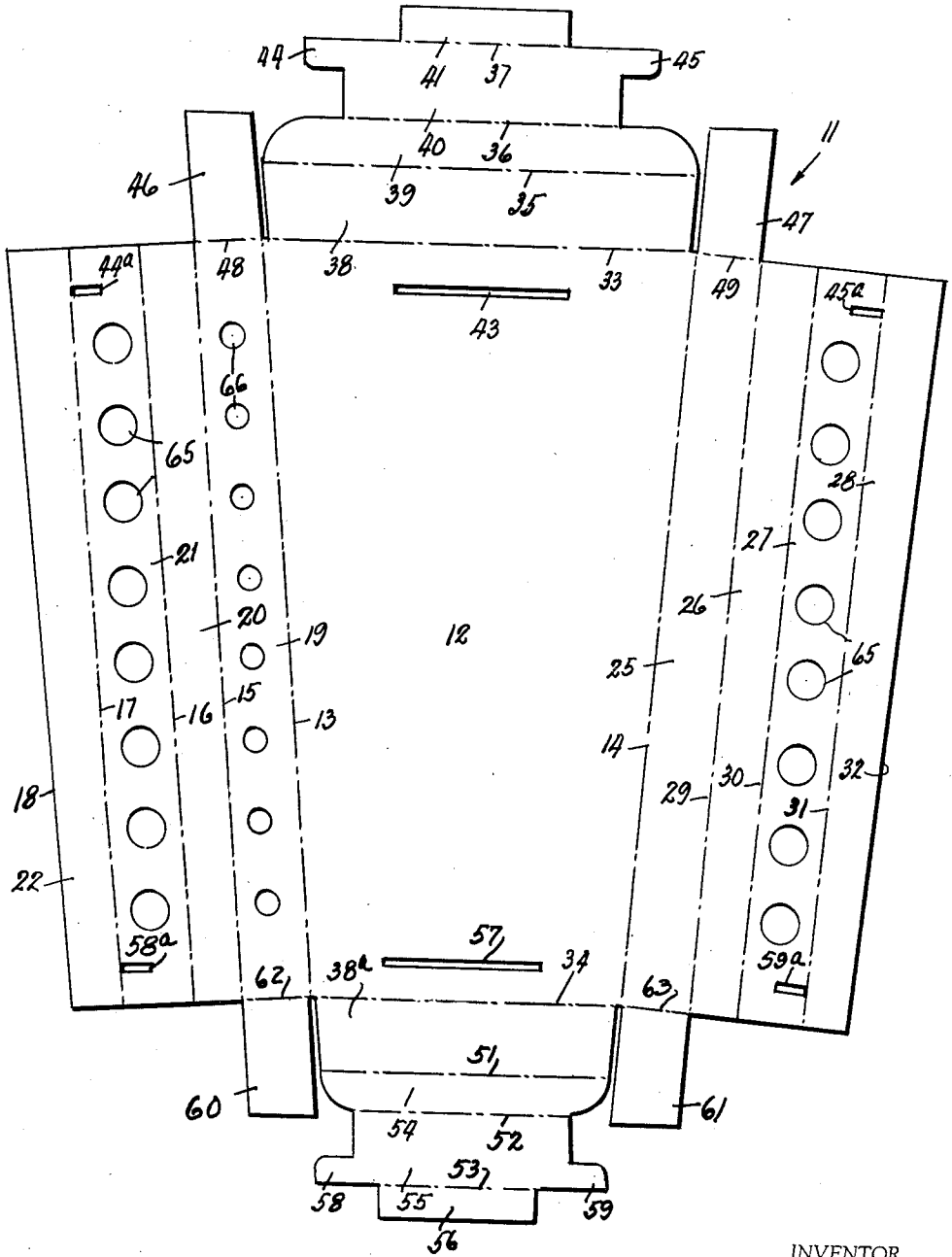
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April 20, 1943. H. ZIMMERMAN 2,317,165

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Filed Oct. 7, 1942 2 Sheets-Sheet 2

FIG. 5



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Patented Apr. 20, 1943 2,317,165

UNITED STATES PATENT OFFICE

2,317,165

XYLOPHONE

Harry Zimmerman, New York, N. Y.

Application October 7, 1942, Serial No. 461,093

8 Claims. (Cl. 84—403)

This invention relates to xylophones or other similar musical instruments generally and more particularly to the frame and means for supporting the musical members or bars thereof.

One object of the invention is to provide simple inexpensive yet highly efficient manner and means for mounting and supporting the musical members of such instruments, so as to avoid expensive assembling operations and to prevent accidental displacement of the said musical members and likewise to prevent injury to hands of anyone handling the instrument.

Another object of the invention is the provision of such a musical instrument in which the supporting frame is made of a single sheet of cardboard or the like.

Another object is to produce a device of the character described in which the maximum simplicity of construction and operation is secured.

Other objects and advantages will appear as the nature of the improvements is better understood, the invention consisting substantially in the novel arrangement and co-relation of parts herein fully described and illustrated in the accompanying drawings, wherein similar reference characters are used to describe corresponding parts throughout the several views, and then finally pointed out and specifically defined and indicated in the appended claims.

The disclosure made the basis of exemplifying the present inventive concept suggests a practical embodiment thereof, but the invention is not to be restricted to the exact details of this disclosure, and the latter, therefore, is to be understood from an illustrative, rather than a restrictive standpoint.

The inventive idea involved is capable of receiving a variety of mechanical expressions, one of which, for the purpose of illustration, is shown in the accompanying drawings, in which—

Figure 1 is a top plan view of a xylophone made in accordance with my present invention;

Figure 2 is a side view thereof;

Figure 3 is a fragmental sectional view taken on line 3—3 of Figure 1;

Figure 4 is a cross-sectional view taken on line 4—4 Figure 1 and

Figure 5 is a developed view of the blank from which the frame is formed.

Referring to the drawings in detail 10 indicates the frame of a xylophone or other similar musical instrument, said frame being made of a single sheet of card board or the like. In Figure 5 I have shown the blank 11 from which the said frame is formed. The said blank comprises a central base section 12 formed between two converging score lines 13 and 14. To the left of the score line 13 and substantially parallel thereto are score lines 15, 16 and 17 the said score lines and the slanting longitudinal edge 18 define an outer side wall 19, a top wall 20, an inner side wall 21 and a base 22 of a tubular housing 23 which is substantially rectangular in cross section. A similar housing 24 is formed to the right of the score line 14 and comprises an outer side wall 25, a top wall 26, an outer side wall 27 and base 28, formed respectively between the score line 14, score lines 29, 30 and 31 and slanting longitudinal side edge 32. Parallel score lines 33 and 34 define the ends of the base 12.

Parallel to and spaced from the score line 33 are score lines 35, 36 and 37 defining respectively an outer end wall 38, a top wall 39, an inner end wall 40 and a tab 41 which when folded form a hollow end or rectangular compartment 42, the tab 41 being adapted to pass through a slot 43 at the upper end of the base 12 and foldable thereunder. The inner wall 40 is provided with tabs 44 and 45 which are adapted to enter slots 44*a* and 45*a* respectively located in the inner side walls 21 and 27. Tabs 46 and 47 foldable from score lines 48 and 49 and extending from their respective outer side walls 19 and 25 act as retaining means for the said side walls at one end. A compartment 50 similar to but narrower than the compartment 42 is formed at the opposite end of the frame by means of the score line 34 and parallel and spaced apart score lines 51, 52 and 53 which define the outer end wall 38*a*, top wall 54, inner end wall 55 and tab 56 which passes through a slot 57 in the base 12. The wall 55 like the wall 40 is provided with tabs 58 and 59 adapted to pass through slots 58*a* and 59*a*. Tabs 60 and 61 foldable respectively from score lines 62 and 63 at the lower ends of outer side wall sections 19 and 25 act to retain the said side walls at the said lower ends. The hollow compartmented end walls together with the hollow compartmented side walls form a rigid frame construction.

Each of the inner side walls 21 and 27 is provided with a plurality of spaced apart holes or openings 65, the holes in one wall being in alinement with the holes in the other wall and the outer side wall 19 has an equal number of holes 66 the objects of which will shortly be described. Secured to the inner surface of each of the said walls 21 and 27 is a cardboard or other similar strip 67 provided with cutouts 68 preferably in vertical alinement with both the holes 65 and 66, the said cutouts being provided in the upper edge of the said strips. Overlying the said strips 67 and openings or cutouts 68 are a pair of cords or strings 69 which are suitably secured at their ends to the said strips. Musical members or tubes 70 rest upon the cords 69 and pass loosely through the holes 65 which are considerably larger than the diameter of the tubes 70. The said arrangement of holes and cutouts permitting of a rolling action as well as an up and down move-

ment of the tubes when struck by a playing hammer without coming in contact with the frame material thus insuring true and undistorted tones of the said musical tubes. The holes 66 however are of about the same size as the tubes thus preventing accidental displacement of the musical members. Likewise due to the fact that the cords are at a higher level than the bottom of the tubes, accidental displacement of them is prevented.

From the foregoing it will be seen that I have provided a simple, inexpensive non-metallic frame for supporting the musical members of a xylophone or other similar instrument in which the ends of the musical members are covered and in which the musical members themselves are freely mounted and cannot be accidentally displaced from their position. Likewise they are so arranged that they cannot ordinarily while the instrument is being played come in contact with any sound deadening or distorting material.

Having described my invention what I claim as new and desire to secure by Letters Patent is:

1. A xylophone or the like comprising a pair of spaced apart inter-connected hollow housings forming side chambers, a pair of hollow housings between the ends of the first mentioned housings and forming end chambers, the side chambers each having openings in their inner side walls arranged in opposed relation, a vibration-dampening element supported in each side chamber above the bottom of the openings therein, and a musical member extending through each pair of oppositely disposed openings and resting upon the vibration-damping elements.

2. A xylophone or the like comprising a pair of spaced apart inter-connected hollow housings forming side chambers, a pair of hollow housings between the ends of the first mentioned housings and forming end chambers, the side chambers each having openings in their inner side walls arranged in opposed relation, a flexible vibration-damping element supported in each side chamber and extending longitudinally thereof above the bottom of the openings, and a musical member extending through each pair of oppositely disposed openings and resting upon the vibration-damping elements.

3. A xylophone or the like comprising a pair of spaced apart inter-connected hollow housings forming side chambers, a pair of hollow housings between the ends of the first mentioned housings forming end chambers, said housings being formed from a single blank of material, the inner opposed walls of the side chambers being provided with openings arranged in opposed relation, a vibration-damping element supported in each side chamber above the bottom of the openings therein, and a musical member extending through pairs of oppositely disposed openings and resting upon the vibration-damping elements.

4. A xylophone or the like comprising a pair of spaced apart inter-connected hollow housings forming side chambers, a pair of hollow housings between the ends of the first mentioned housings forming end chambers, said housings being formed from a single blank of material, the inner opposed walls of the side chambers being provided with openings arranged in opposed relation, a flexible vibration-damping element supported in each side chamber and extending longitudinally thereof above the bottom of the openings, and a musical member extending through pairs of oppositely disposed openings and resting upon the vibration-damping elements.

5. A xylophone or the like comprising a pair of spaced apart inter-connected hollow housings forming side chambers, a pair of hollow housings between the ends of the first mentioned housings forming end chambers, the inner opposed walls of said side chambers having openings therein arranged in opposed relation, the outer side wall of one of said side chambers being also provided with entrance openings of smaller diameter than the aforesaid openings and in general alinement with the latter, a vibration-damping element in each side chamber above the bottom of the openings, and a musical member extending through each pair of oppositely disposed openings and resting upon the vibration-damping elements.

6. A xylophone or the like comprising a pair of spaced apart inter-connected hollow housings forming side chambers, a pair of hollow housings disposed between the ends of the first mentioned housings and forming end chambers, said side and end chambers being formed from a single blank of material, the inner opposed side walls of said side chambers being provided with openings arranged in opposed relation, the outer side wall of one of said side chambers being provided with entrance openings of smaller diameter than the aforesaid openings and in general alinement with the latter, a vibration-damping element supported in each side chamber and extending longitudinally thereof above the bottom of the first mentioned openings, and a musical member extending through each pair of oppositely disposed openings and resting upon the vibration-damping elements.

7. A xylophone or the like comprising a pair of spaced apart inter-connected hollow housings forming side chambers, a pair of hollow housings disposed between the ends of the first mentioned housings forming end chambers, the side chambers each having openings in their inner side walls arranged in opposed relation, supporting means arranged in each of said side chambers, a flexible vibration-damping element on the supporting means in each side chamber extending longitudinally thereof above the bottom of the openings, and a musical member extending through each pair of oppositely disposed openings and resting upon said vibration-damping elements.

8. A xylophone or the like comprising a pair of spaced apart inter-connected hollow housings forming side chambers, a pair of hollow housings between the ends of the first mentioned housings forming end chambers, the side chambers each having openings in their inner side walls arranged in opposed relation, the outer wall of one of said side chambers also having entrance openings therein of smaller diameter than the aforesaid openings and in general alinement with the latter, supporting means in each side chamber, a flexible vibration-damping element mounted on the supporting means in each side chamber and extending longitudinally thereof above the bottom of the first mentioned openings, and a musical member extending through each pair of oppositely disposed openings and resting upon said vibration-damping elements.

HARRY ZIMMERMAN.