United States Patent

[11] 3,546,994

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[21] Appl. No. **793,093**
[22] Filed **Jan. 22, 1969**
[45] Patented **Dec. 15, 1970**
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[32] Priority **Feb. 20, 1968**
[33] **Switzerland**
[31] **No. 2489/68**
Pat. 465,370

[54] **CYMBAL**
6 Claims, 1 Drawing Fig.

[52] **U.S. Cl.** **84/402,** 84/422
[51] **Int. Cl.** **G10d 13/06**
[50] **Field of Search** 84/402, 422, 403, 406

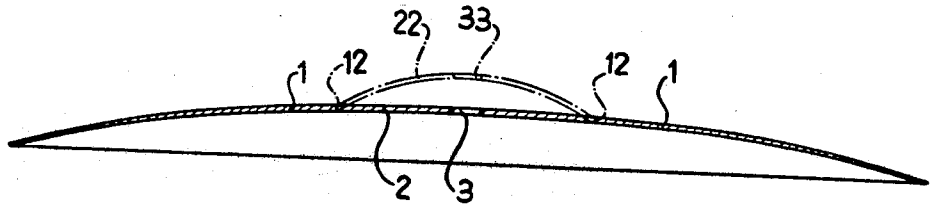
[56] **References Cited**

UNITED STATES PATENTS

1,128,142	2/1915	Hubmann	84/422
1,647,795	11/1927	Gladstone	84/402
2,559,143	7/1951	Zildjian	84/402

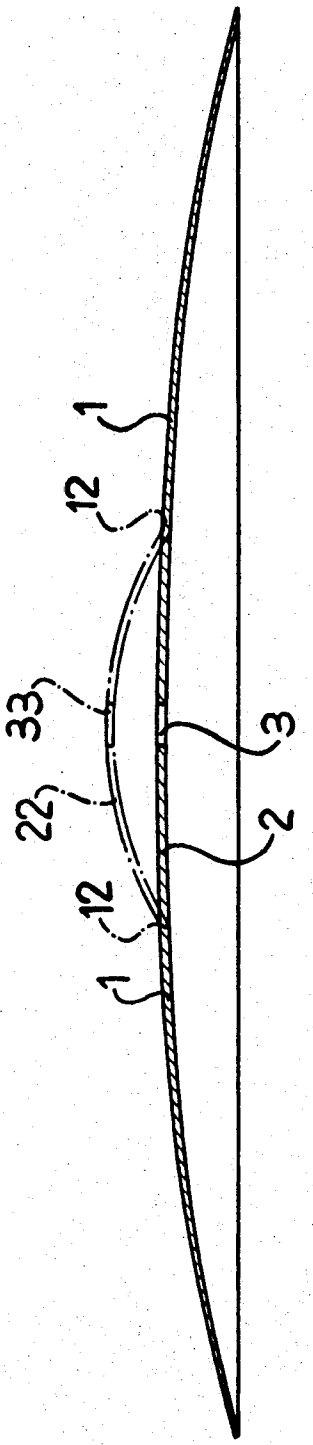
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ABSTRACT: There is disclosed a cymbal possessing the form of a substantially lenslike, arched, flat bowl or plate. Such bowl or plate may possess a wall thickness which decreases towards its edge or else is approximately uniform throughout. Upon striking of the cymbal, it will ring out without natural resonance.



PATENTED DEC 15 1970

3,546,994



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CYMBAL

BACKGROUND OF THE INVENTION

The present invention broadly relates to improvements in percussion instruments, and in its more specific aspects, concerns a new type of cymbal.

Today, cymbals are essentially distinguished from one another through two basic shapes or forms: The Chinese-type and the Turkish-type cymbals. While the Turkish-type cymbal has found application in European music, and especially also in modern music, the Chinese-type cymbal has been less widely accepted since it does not generally tend to fulfill the requisite musical appreciation.

The previous known cymbals possess the shape of a flat bowl or plate which at its outer region is lens-shaped and which at its central region transforms into a dome which protrudes past the lens-shaped arch. The cymbals of the Turkish-type possess the characteristics that after they have been struck at their edge or rim produce an amplification of the sound due to natural resonance, and thereafter the sound gradually loses its intensity.

SUMMARY OF THE INVENTION

It is a primary objecting of the present invention to provide a new and improved cymbal which is more compatible with modern music, which is especially based upon rhythm, and which reduces or completely eliminates the natural resonance effect of presently known cymbals with the therewith associated amplification and prolonged ringing, while at the same time retaining the cymballike sound.

Another significant object of the present invention is to provide an improved cymbal which after being struck will ring out without natural resonance.

Extensive tests have proven that the objectives of the invention can be attained if the usual dome which has been used for hundreds of years with cymbals is omitted.

Accordingly, the invention cymbal is manifested by the features that it possesses the shape or form of a substantially lenslike arched or curved, flat bowl or plate. In putting the teachings of the invention into practice, it is possible for the lenslike bowl to be formed by a spherical segment which is equipped at its central region with a hole or aperture for suspending the cymbal, much in the manner provided for at conventional cymbals.

Moreover, the invention contemplates that the wall thickness of the lens-shaped bowl or plate can be either approximately the same thickness throughout, whereby the ring-shaped ribs which are often present during manufacture, remain unnoticed, or the wall thickness can be reduced towards the edges of the cymbal.

If a cymbal is constructed in accordance with the aforementioned teachings of the invention, then it will not possess the resonance effects which are to be prevented. As a general rule, after the cymbal is struck, the sound will also die down quicker or dissipate much more quickly than with a conventional cymbal possessing a dome. However, if the lens-shaped bowl is not permitted to run out flat, rather if there is chosen, for instance, a spherical segment which is closer with respect to the height of the sphere to the bell-shape than the bowl-shape, then nonetheless a resonance effect could occur. This should be prevented by the teachings of the invention.

The inventive cymbal can be constructed in accordance with the principles of the invention in different ways with respect to its diameter, curvature, wall thickness and material.

Up to now, it has not been possible to completely explain why the inventive cymbal with respect to the standard cymbals having a dome permits the retention of the cymballike sound,

but prevents natural resonance. It would have been more probable to expect, on the one hand, the loss of the cymballike sound and, on the other hand, the retention of the natural resonance or even an amplification thereof. This is so because the dome due to its relatively pronounced curvature and due to the curved transition connection locations which join the dome with the outer portion of the cymbal provide reinforcement which should have the effect of dampening oscillations.

BRIEF DESCRIPTION OF THE DRAWING

The invention will be better understood, and objects other than those set forth above, will become apparent, when consideration is given to the following detailed description thereof. Such description makes reference to the annexed drawing wherein the single FIG. shows a schematic sectional view through the center of the inventive cymbal shown in full lines, and wherein the phantom lines depict the dome corresponding to the conventional shape of present-day cymbals.

DESCRIPTION OF PREFERRED EMBODIMENTS

Describing now the drawing, it will be recognized that the inventive cymbal possesses the shape of a substantially lenslike arched or curved flat bowl or plate. It will be seen to comprise the outer rim portion **1** which directly merges along a substantially circular arc with the central region **2**, so that both outer rim portions **1** are connected with the central region or portion **2** into a circular curve. On the other hand, with the prior art cymbal at the location of the central portion **2** of the inventive cymbal there would be provided a dome **22**, as depicted in phantom lines. This dome would be connected to the similar outer rim portions **1** by the curved connection locations or joints **12**. Moreover, as previously mentioned, the rim portions **1** and central region or portion **2** of the inventive cymbal can be considered to be formed from a spherical segment.

Continuing, it will be recognized that with the inventive construction of cymbal, there is provided a central suspension hole or aperture **3**, and with the conventional dome-type cymbal construction there would be a similar hole or aperture **33** for suspension purposes, which then would be provided directly at the dome **22**.

The invention further contemplates that the wall thickness of the lenslike, curved, flat bowl or plate defining the inventive cymbal can either decrease towards its edge or can be approximately uniform throughout. Furthermore, it should be mentioned for completeness that instead of the circular-shaped sectional form, it would also be possible to use a different continuous curve without the dome in order to form the inventive cymbal.

It should be apparent from the foregoing detailed description, that the objects set forth at the outset to the specification have been successfully achieved.

I claim:

1. A cymbal in the form of a shallow concave disc having a substantially constant curvature along any surface thereof lying in a plane containing any diameter.

2. A cymbal as defined in claim **1**, wherein said shallow concave disc is defined by a spherical segment.

3. A cymbal as defined in claim **2**, wherein the wall thickness of said disc is approximately uniform throughout.

4. A cymbal as defined in claim **2**, wherein the wall thickness of said disc decreases towards its edge.

5. A cymbal as defined in claim **1**, wherein the wall thickness of said disc is approximately uniform throughout.

6. A cymbal as defined in claim **1**, wherein the wall thickness of said disc decreases towards its edge.