

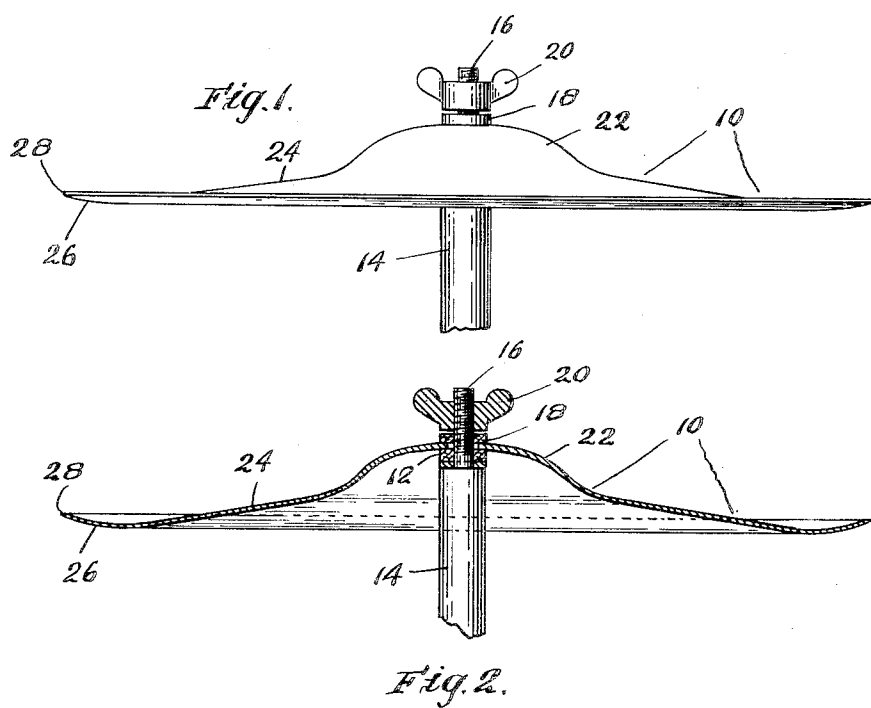
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CYMBAL

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CYMBAL

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1 Claim. (Cl. 84-402)

This invention relates to cymbals particularly adapted for use in connection with dance music, especially the so-called swing music.

A cymbal comprises a round, usually somewhat concave, metal disc adapted to be supported at its middle and struck at or near its edge to emit its characteristic sound. As an orchestral instrument it is used to beat the time, to emphasize a part of the musical composition being played, and to terminate the composition or a particular phase thereof.

The usual sound effect desired from a cymbal is a crash, although large cymbals used sometimes by symphony orchestras produce a distinct musical note. For most orchestral uses and for dance orchestras, with which this invention is particularly concerned, the cymbal should have no dominant musical note which might discord with other instruments of the orchestra. The crash sound of the cymbal, however, has a well defined pitch, for instance, a high pitch or a low pitch. For dance music, and particularly so-called swing music, a high pitch cymbal is desired.

The pitch of the usual cymbal of given diameter can be raised by making the cymbal thinner and so-called "paper thin" cymbals have been made having a relatively higher pitch than thicker cymbals of the same diameter. A still higher pitch cymbal is desired, however, and the thinness of the cymbal is limited.

A cymbal ordinarily is made by casting a blank from a suitable composition of metals, tempering the blank in a suitable manner and then facing or surface finishing the blank by turning. Turning the disc too thin is injurious to the sound of the cymbal. The pitch of a cymbal may be raised by decreasing its diameter but this is accomplished only at the expense of reduction of volume of sound which is not desirable.

Hence an object of the present invention is to provide a high pitch cymbal and particularly a high pitch paper thin cymbal.

A further object of the invention is the provision of a high pitch cymbal capable of producing a crashing sound and superimposed thereupon a bass or low pitch effect that becomes distinguishable as the high pitch vibrations die away, thus giving a sound that rises rapidly to or starts at high pitch and has the effect of dropping in pitch as the intensity of the sound diminishes.

It is also a further object of the invention to provide a cymbal the sound of which terminates with a prolonged high pitched audible vi-

bration best described as a swish. That is to say as the dominant crashing sound drops in intensity there emerges from the crash a low volume bass sound and a high-pitch gradually-diminishing rustle or swish of long duration to carry over between successive beats of the music.

These objects briefly are obtained by making the cymbal of paper thinness with a shallow center spheroidal cup or dome and upturning the edge of the cymbal prominently with a broad sweep.

Fig. 1 is an elevation of a cymbal embodying the present invention.

Fig. 2 is a cross section of the cymbal of Fig. 1. The cymbal indicated generally by the numeral 10 can be conveniently held or supported in any suitable manner but as herein shown is supported loosely upon a felt disc 12 located at the upper end of a standard 14. A screw-threaded stud 16 passes loosely through the cymbal and there is a second felt washer 18 resting upon the top of the cymbal and under a wing nut 20 threaded on the stud. For some uses the nut 20 may not be in pressure contact with the underlying felt 18 so that the cymbal is merely loosely supported by the stud 16 and the nut prevents separation of the cymbal from the stud when the cymbal is violently struck on its periphery which for most orchestral purposes is the usual manner of sounding the cymbal. The particular method of supporting the cymbal is not important except that it usually is supported at its middle so that it can vibrate freely.

The cymbal embodying the present invention comprises a metal disc having the central cup or dome 22 through the middle of which the stud 16 is loosely passed. From the periphery of the cup the cymbal is flared outwardly and downwardly in substantially a straight line, as indicated at 24, the body 24 being in effect a flat cone. The peripheral edge portion of the cymbal is upturned as at 26 along a smooth gradual curve of large radius, the peripheral edge 28 extending in elevation approximately about half way up the conical section 24. This distance, however, can be varied. The cymbal is exceptionally thin, being of so-called paper thinness, which in a twelve inch cymbal is approximately twenty-five thousandths of an inch, although the thickness increases slightly toward the center.

The cymbal is made from a tensioned metal blank having the upturned edge portion 26 formed by turning. The tensioned cymbal is then faced by a hand cutting tool while being rotated.

The upturned edge or rim is effective in greatly raising the pitch of the sound produced by the cymbal. A cymbal that, except for the upturned edge, has the same shape and dimensions gives a sound having a much lower pitch.

The upturned rim also is effective in producing the highly desired sustained "swish" sound. The cup 22 provides resonance and gives a bass tone that becomes discernible, superimposed on the high pitch swish as the vibrations diminish in amplitude. This is not the case of a cymbal not having the upturned rim.

The sound effect produced by the cymbal when struck sharply on its periphery is a high pitched crash substantially free from any dominant note and dying slowly away with a diminution of pitch and ending in a prolonged swish fading away through a whisper with an underlying low tone. The underlying low tone and the prolonged swish are quite absent in the usual cymbal.

I claim:

A paper thin high pitch cymbal having a flattened shallow resonant conical body provided with an upwardly flaring edge portion and a central resonant shallow dome gradually rising above the conical body and gradually rounding over at the top where it is provided with a support-hole therethrough, said dome providing a low tone discernible in the latter part of the audible-vibrations of the cymbal and the upwardly flaring edge portion providing a high pitch crash sound, a vertical standard on which said cymbal is supported, said standard having a smaller diameter stud passed loosely through said support-hole, and a soft yielding disc on said stud under said cymbal and on which said cymbal rests loosely, the cymbal being free to tilt on said disc and to vibrate thereat.

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