Dec. 10, 1963 J. B. THOMPSON 3,113,481

SNARE DRUM

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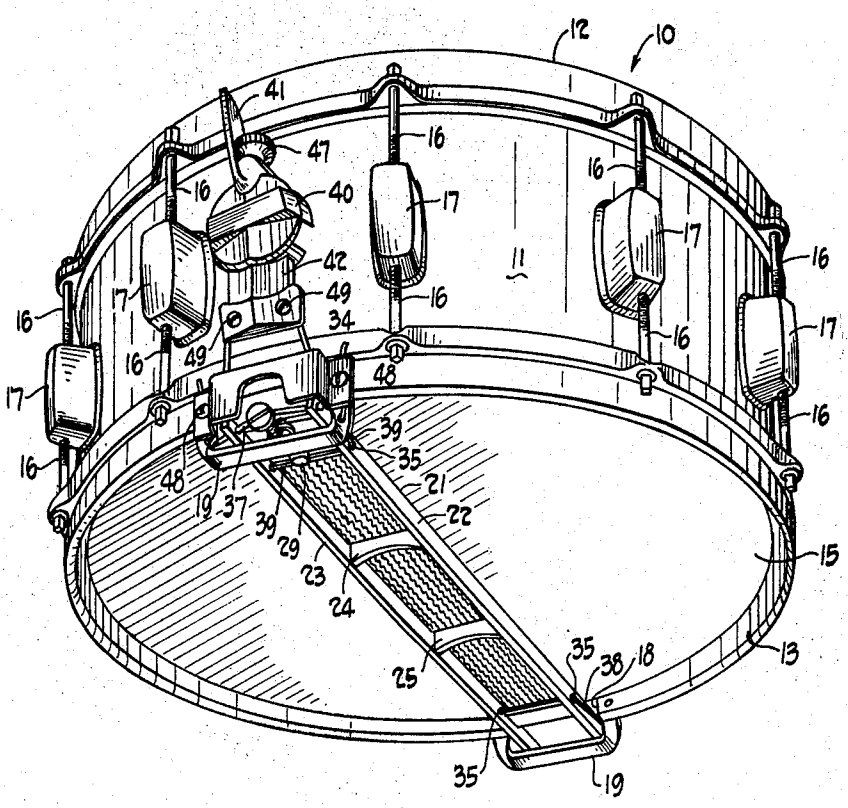
Fig. 1



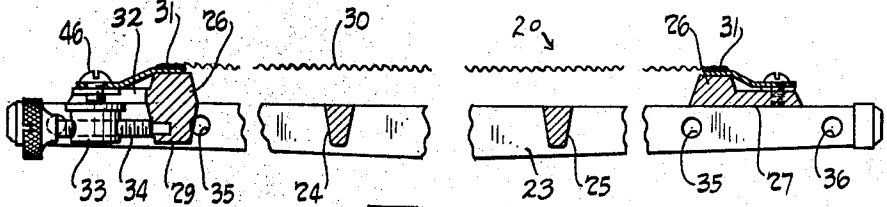


Fig. 4

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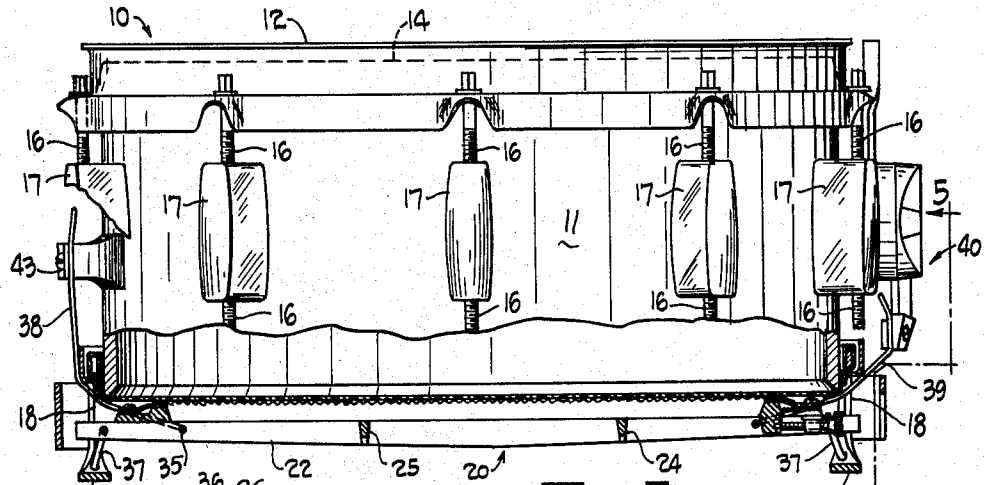

Fig. 2

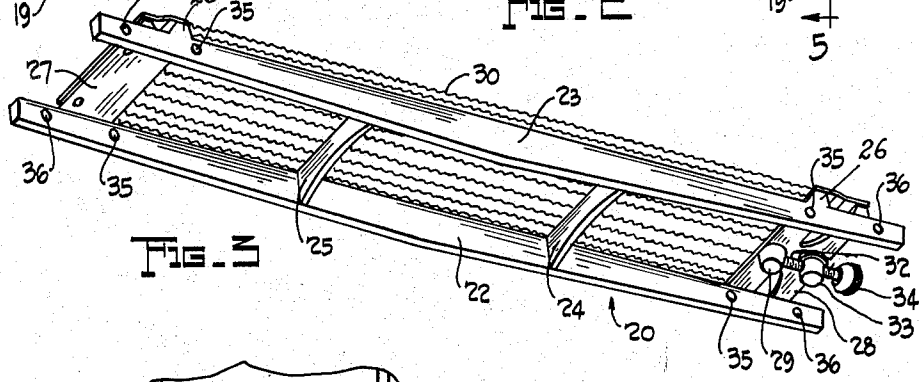

Fig. 3

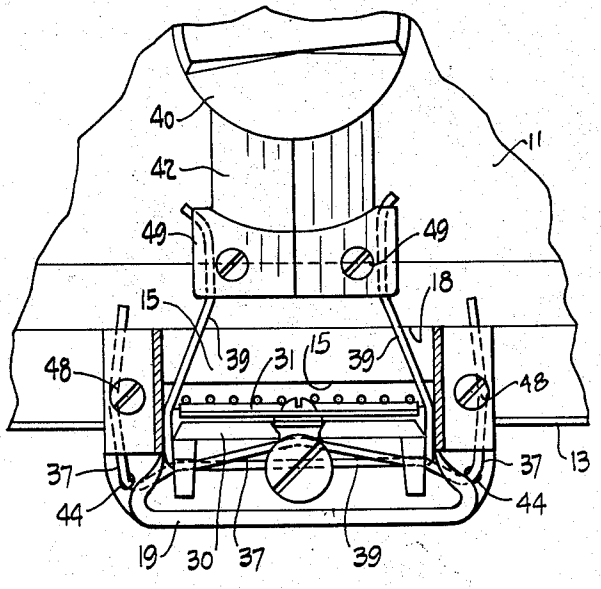

Fig. 5

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SNARE DRUM

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1 Claim. (Cl. 84—415)

This invention relates to snare drums and particularly to improved means for mounting the snares thereon.

Conducive to a better understanding of this invention, it may be well to point out that a drum consists of a cylindrical shell having both of its ends covered by suitable diaphragms, or heads, which together define a closure containing a confined column of air. When the upper, or batter, head is depressed, as when struck by a drum stick, it pushes the air column against the lower head which is flexed outwardly in response to the pressure. Thus the vibrations of each head are communicated to the other through the confined air column.

Only when both heads have equal areas, and each is under the same tension, is the truest tone quality and maximum volume produced.

Ordinarily the snare head side, or the bottom of the shell, must be formed with snare beds in order to insure the engagement of the snares with the head, and their vibration when the upper head is beaten.

Snare beds are formed by cutting away the shell to create areas on diametrically opposite sides of the snare head side that are lower and under less tension than the balance of the head, causing the head to assume a bowed, or convex, configuration.

As a result, the central portion of the snare head must be flattened and distorted by the snares if they are to maintain contact with the head over their entire length.

It will be evident that the physical characteristics of the batter and snare heads of a snare drum so constructed can never be equal, resulting in loss of volume and tone quality due to distortion, "dead spots," and so-called "chocking."

The primary object of this invention, therefore, is to provide a snare drum having floating snares that ride with the snare head to provide crisp and clear beats, without snare slap.

Another object is to provide a drum whose snare suspension requires no snare beds and whose snare wires can be tensioned without pressure on the snare head, thereby doing away with chocking and "dead spots" anywhere on the heads.

A further object is to provide a snare unit that is entirely independent of the drum, for snare wire tensioning, that can be shifted in and out of contact with the snare head, and that when in its "on" position functions most efficiently in a non-pressure, or kiss-contact, with the head, so that the snare action is always without slap, sharply defined, crisp, and free of distortion over the entire head area.

These and other objects of the invention will become apparent from a reading of the following specification and claim, together with the accompanying drawings, wherein like parts are referred to and indicated by like reference numerals, and wherein:

FIGURE 1 is a perspective view of the snare drum that is the subject of this invention;

FIGURE 2 is a side elevation of the same with portions broken away and in section, showing the snare unit in contact with the snare head of the drum;

FIGURE 3 is a perspective view of the snare unit in its unmounted condition and viewed from below;

FIGURE 4 is a side elevation of the same, partly in section;

FIGURE 5 is an end view of the snare unit mounting

strainer, taken along the line and in the direction of the arrows 5—5 of FIGURE 2, but showing the snare unit in its lowered, or non-operating position.

Referred more particularly to the drawings, there is seen the snare drum that is the subject of this invention, broadly indicated by reference numeral 10, with the snare unit 20 mounted in playing position.

The drum 10 comprises a cylindrical barrel, or shell, 11 having an upper, or batter, head 14 secured thereto by a hoop 12 and a lower, or snare head 15 secured thereto by a hoop 13. These hoops are engaged by diaphragm tensioning bolts 16 anchored in lugs 17 mounted on the shell 11.

The snare hoop 13 is cut out on diametrically opposite sides to provide openings 18 which expose the edge of the snare head 15. These openings 18 are bridged by brackets 19 secured to the hoop 13 by mounting screws 48.

A throw-off strainer 40 is mounted on the shell 11 at one opening 18, and a strainer anchor block 43 is mounted on the shell 11 at the other opening 18, as is seen most clearly in FIGURE 2. The strainer illustrated is the type covered by my United States Patent No. D. 188,438, issued July 19, 1960, although any other type having both tensioning and throw-off features may be used.

The snare unit 20 comprises a rigid, substantially rectangular frame 21 of a length to extend diametrically across the snare head hoop 13 between the apertures 18, bridged by the two brackets 19.

The frame 21 has two, spaced and parallel side rails 22 and 23 joined through anchor beds 27 and 28, near their ends, as is seen most clearly in FIGURE 3. Spaced cross-braces 24 and 25 are also provided to insure added rigidity.

Reference numeral 26 indicates upstanding and aligned bridges positioned across and near the ends of the rails 22 and 23, on the beds 27 and 28, as is seen most clearly in FIGURES 3 and 4.

The top, or upper, surfaces of the two spaced bridges 26 are machined flat in a plane parallel to the long axis of the frame and are in exact alignment with each other, so that they provide two horizontal supports lying in the same plane.

Reference numerals 35 indicate oppositely aligned bores in each rail, positioned inwardly of the bridges 26 and 27, through which the snare suspension cords 38 and 39 are looped, as explained hereinafter. A second pair of oppositely aligned bores 36, are positioned through each rail proximate the end thereof. Elastic cords 37 are looped through the bores 36, as explained hereinafter.

Reference numeral 29 indicates a dependent, fixed anchor post on the under-side of the frame bed 28. A slot 32 is cut in the bed 28 in alignment with the anchor post 29. A tension adjusting post 33 is slidable longitudinally of the slot 32 toward or away from the anchor post 29.

A tension adjusting screw 34 is threadedly mounted through the post 33 with its end adapted to bear against the anchor post, whereby the distance between the two posts can be varied by small increments.

Reference numeral 30 indicates a plurality of snare wires of equal length, anchored at their ends to metallic carriers or plates 31. These snare carriers 31 extend the width of the bridges 26 and are shaped to be supported thereon when anchored to the end beds 27 and 28, as described hereinafter.

In the preferred form illustrated, the snare wires 30 consist of metallic wire helices.

One end of the snare wire assembly 30 is anchored through its carrier plate 31 in fixed position on the frame bed 27, as seen in FIGURE 4.

The other end is anchored through its carrier plate 31 to the top of the movable tension post 33 by means

of the screw **46**. The snare wires **30** can be given any desired tension by turning the screw **34** against the anchor post **29**, or away from the anchor post **29**, which causes the tension post **33** to move toward or away from it in the slot **32**.

The snare, just described, is attached to the drum **10** by means of flexible cords **38** and **39**. These cords may be freely flexed but are not elastic in the sense that they cannot be materially lengthened by pulling their ends apart.

The cord **38** is looped through the rail bores **35**, as seen in FIGURES 1 and 2. The two ends of the cord **38** pass through the aperture **18** of the first bracket **19**, over the edge of the snare head **15**, in substantially spaced parallel alignment. The ends of the cord **38** are then secured to anchor block **43**.

Cord **39** is looped through bores **35**. The ends of cord **39** are then passed in parallel alignment over the edge of snare head **15**, through the aperture **18** of the second bracket **19** and under the clamping screws **49** of the tongue **42** of the throw-off strainer **40**, as is seen most clearly in FIGURE 5.

The combined length of the two flexible snare support cords **38** and **39** is such that when the throw-off handle **41** of the strainer is in its "on" position, the snare unit **20** will be in the position illustrated in FIGURES 1 and 2 with the snare wires **30** in "kiss" contact with the snare head **15**.

Minor adjustments, to secure the exact contact wanted, can be made by the strainer tension screw **47**. By moving the strainer handle **41** to its "off" position, the snare unit will be dropped away from the snare head **15**, as seen in FIGURE 5, to permit the drum to be operated without snare action.

Side, and up and down, movement of the snare unit **20** when in its "off" position is dampened by elastic cords **37** which are looped through frame bores **36**, with their ends pased through holes **44** in bracket **19** and clamped under bracket mounting screws **48**.

Since the support cords **38** and **39** are looped through the rail bores **35**, and not immovably attached thereto, the snare unit **20** is free to float on the cords **38** and **39** and always maintains a position of diametric parallelism to the snare head **15** in either "on" or "off" positions.

When in its "on" position, the snare unit **20** is held in "kiss" contact with the snare head **15** over its entire length. There is no flattening or distortion of the head diaphragm.

Again, due to the fact that the flexible cords **38** and **39** have a slight inherent "give," and that bores **35** in frame **21** through which they pass are so placed as to

allow flexibility in suspension, the snare unit **20** can "float" with the vibrations of the head **15**, and therefore follows the movements of the head faithfully, avoiding so-called "snare-slap" which occurs when the snare wire support is held immovably in place by rigid metal braces.

The resultant snare action is crisp, clear, brilliant, and, under hard and rapid staccato playing, each specific snare action is clearly identifiable.

This particular characteristic is known in today's drumming art as "definition."

With prior art snare drums, having rigid suspension of the snare unit, good "definition" under all playing conditions is unobtainable since the snare action tends to run together and become blurred as the speed and hardness of the playing increases.

It will now be clear that there is provided a device which accomplishes the objectives heretofore set forth.

While the invention has been disclosed in its preferred form, it is to be understood that the specific embodiment thereof as described and illustrated herein is not to be considered in a limiting sense, as there may be other forms or modifications of the invention which should also be construed to come within the scope of the appended claim.

I claim:

In combination with a snare drum having snare frame supporting means, a snare unit, comprising, a rigid rectangular frame having spaced side rails joined through cross-braces; a solid bridge, of substantially rectangular cross-section, positioned cross-wise of the rails proximate each end of the frame with upper surfaces positioned above the rails, the upper surfaces of said spaced bridges being flat and parallel to the longitudinal axis of the frame and in planar alignment with each other; a flat snare carrier plate mounted on the frame, at each bridge, and seated on the flat upper surface of its associated bridge; a plurality of snare wires secured between said carrier plates; and means, mounted on the frame, for moving one of the snare carrier plates across its supporting bridge, relative to the other, for tensioning the snare wires.

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