

June 1, 1965

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3,186,289

DRUM

Filed June 5, 1961

3 Sheets-Sheet 1

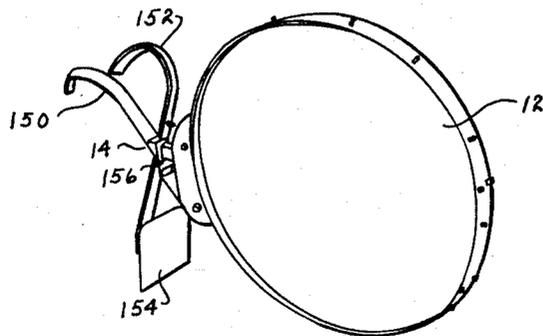


FIG. 1

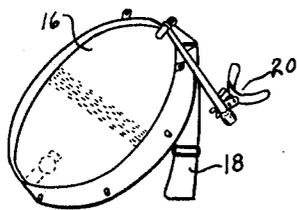


FIG. 2

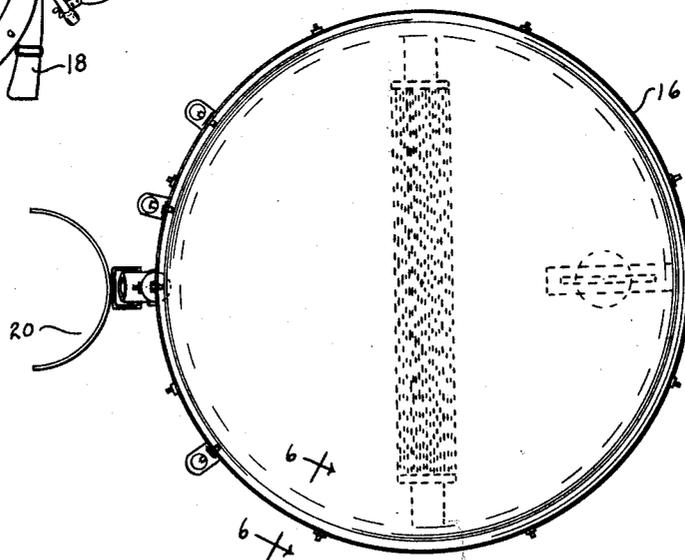


FIG. 3

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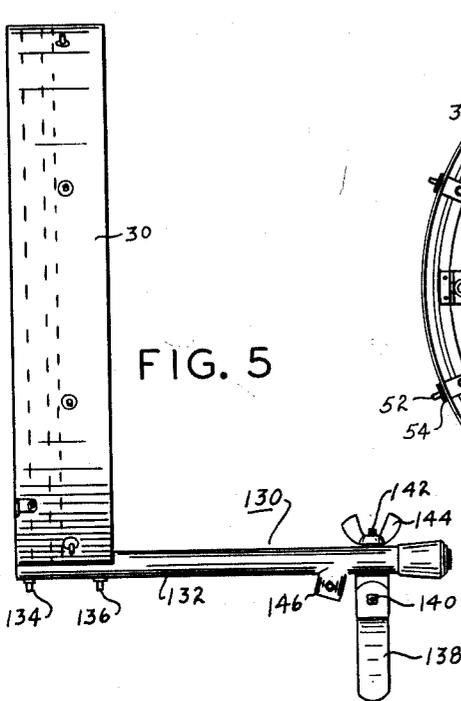


FIG. 5

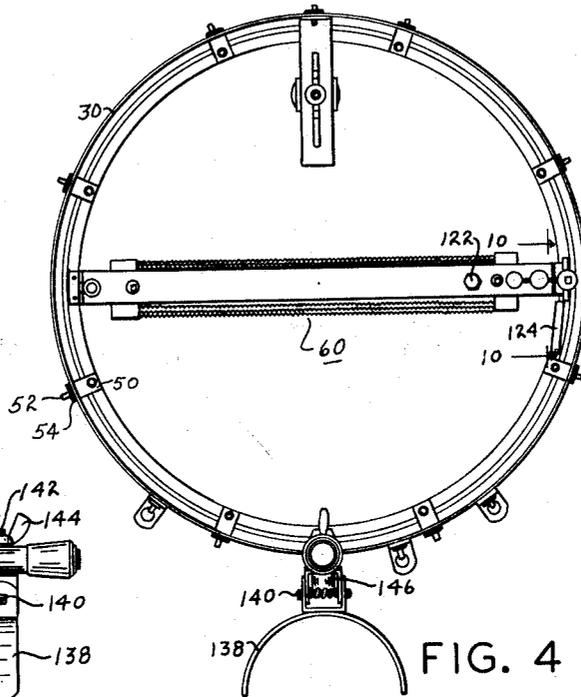


FIG. 4

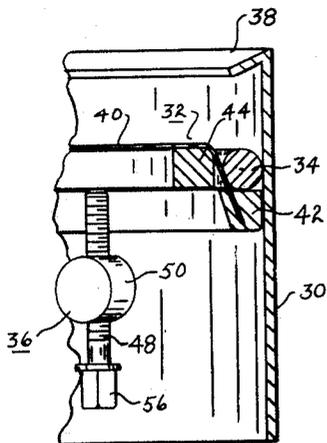


FIG. 6

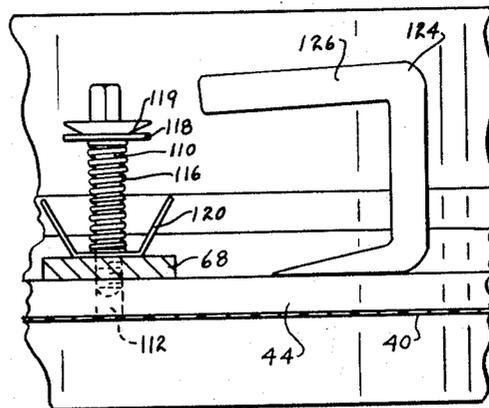


FIG. 10

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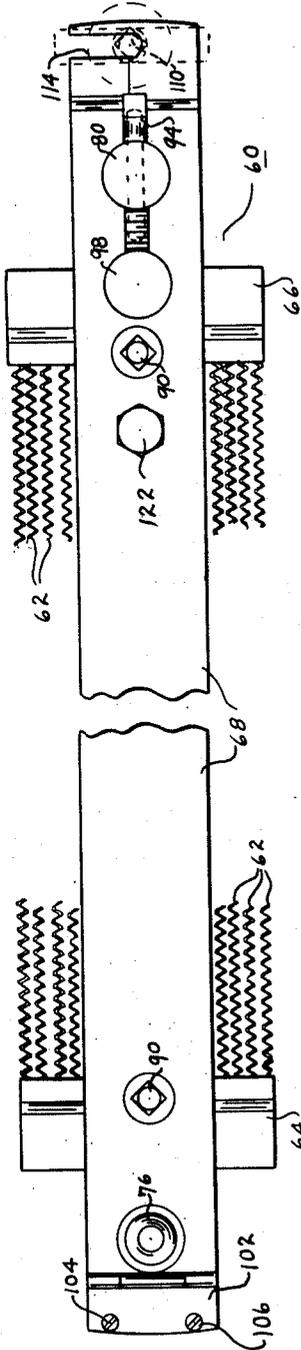


FIG. 7

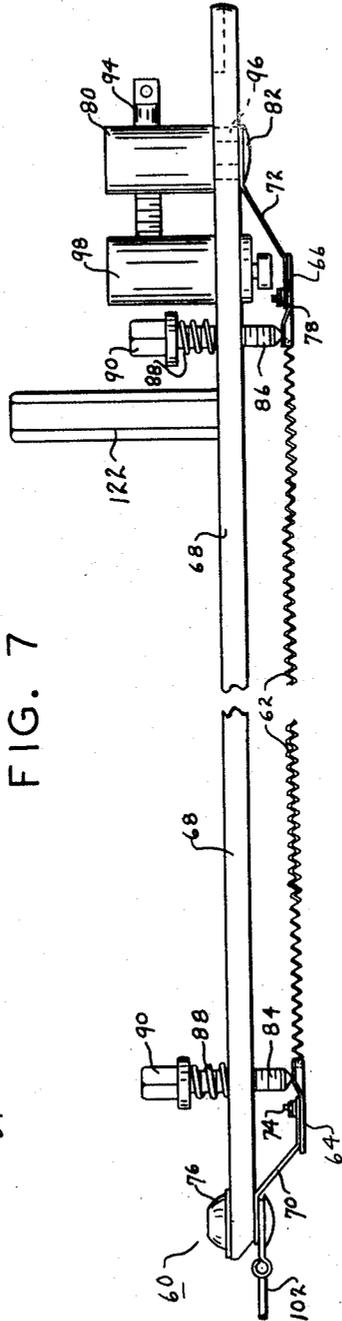


FIG. 8

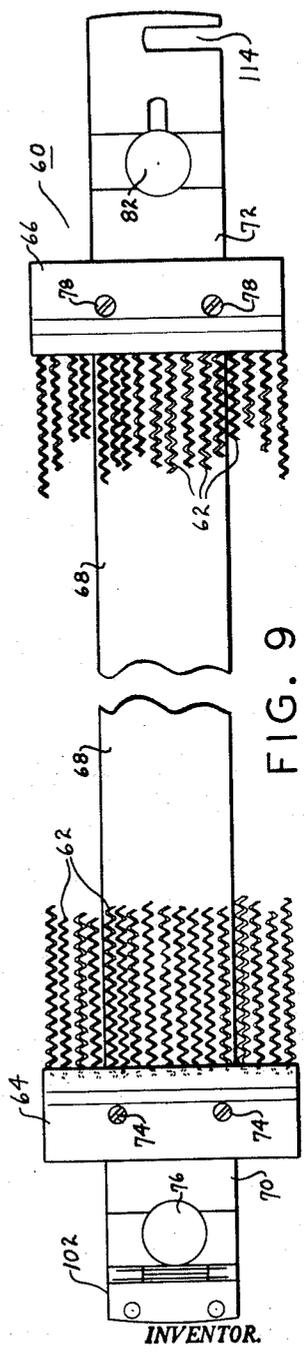


FIG. 9

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7 Claims. (Cl. 84-411)

The present invention relates to drums and more particularly to single head drums without a shell, referred to herein as shell-less drums.

Drums are inherently relatively large and hard to handle and carry and often interfere with the drummer's ability to maneuver effectively in executing various marching formations and in performing with precision certain movements of the drum and drum attachments. As a result of these difficulties, drum sections of a band are required to undergo extensive drilling and practice or are limited to only the relatively simple formations. In addition, with the conventional dual head drums it is often difficult to tune the two heads to obtain proper resonance between the two heads, particularly by inexperienced drummers, thus frequently resulting in poor sound-tone quality in the individual drums and poor harmony between the drums in the drum section. It is therefore one of the principal objects of the invention to provide a construction and design for drums which permit complete freedom of maneuverability of the drummer and manipulation of the drum through various movements by the drummer during marching and during the execution of complicated and intricate formations, and to provide a drum which is relatively light in weight, attractive in appearance and easy to adjust for optimum tone quality.

Another object of the invention is to provide a single head drum without a shell in which the fixtures for tensioning the head are confined within the rim in places of easy access, and the sound control devices and modifiers are positioned beneath the head where they will not interfere with the movements of the drum or the drummer, and will not detract from the appearance of the drum.

Still another object of the invention is to provide a shell-less drum which can be carried away from the drummer's body and above the normal movement of the drummer's legs and yet which can be held in the same position for playing as the conventional marching bass, snare or tenor drums.

A further object of the invention is to provide a drum of relatively simple construction which is quicker and more responsive to the striking of the drum sticks and other drum playing instruments and which has a more pure sound tone than the conventional drum.

Another object of the invention is to provide a family of drums, each of which is much lighter in weight and easier to handle and carry than the respective or comparable conventional drum, and which is more compact, sturdy and durable and requires substantially less adjusting and service to maintain it in proper playing condition.

Another object of the invention is to provide a drum on which the adjusting fixtures, sound control device and special or extra sound attachments can be easily mounted on the drum structure within convenient reach of the drummer and without interfering with the normal playing of the drum, and on which various types of sound control devices and special and extra sound attachments can be selectively mounted and used as the arrangement requires.

Another object is to provide a novel head tensioning construction and snare device which can easily and effectively be adjusted to obtain the optimum tone quality and performance.

Additional objects and advantages of the invention will

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become apparent from the following description and accompanying drawings, wherein:

FIGURE 1 is a perspective view of a marching bass drum mounted on a spinner or twirling rig device carried by the drummer, embodying the present invention;

FIGURE 2 is a perspective view of a marching snare drum embodying the present invention;

FIGURE 3 is an enlarged top plan view of the snare drum shown in FIGURE 2;

FIGURE 4 is a bottom plan view of the snare drum shown in FIGURES 2 and 3;

FIGURE 5 is a side elevational view of the snare drum shown in the preceding figures;

FIGURE 6 is an enlarged fragmentary cross sectional view of the drum shown in FIGURE 3, taken on line 6-6 of the latter figure;

FIGURE 7 is an enlarged view of the snare strainer or carrying device used on the snare drum shown in the preceding figures;

FIGURE 8 is a side elevational view of the snare carrying device shown in FIGURE 7;

FIGURE 9 is a plan view of the snare carrying device of FIGURES 7 and 8 from the side opposite that shown in FIGURE 7; and

FIGURE 10 is an enlarged fragmentary partial cross sectional view of the drum, taken on line 10-10 of FIGURE 4 showing a portion of the latching mechanism used in conjunction with the snare carrying device.

Referring more specifically to the drawings and to FIGURES 1 and 2 in particular, numeral 12 designates a marching bass drum embodying my invention supported by the drummer with a spinner or twirling rig 14, and numeral 16 designates a marching snare drum supported by the drummer with shoulder straps 18 and leg rest 20.

The basic construction of the two drums 12 and 16 is the same, the primary difference being the size of the drum and certain basic parts thereof. The present invention is applicable to a number of different types of drums, including the marching bass drum of the type shown in FIGURE 1, the marching snare drum of the type shown in FIGURE 2, marching tenor drum, dance bass drum, dance tom toms, and a number of other types, various minor changes being required in adapting the present invention to the various types of drums. While the present drums may be in many instances used with conventional drum holders, a more satisfactory support for the drums will usually be obtained by special holders or fixtures designed specifically for the present drum. Since the basic construction is the same for the various drums enumerated above, only the marching snare drum will be described in detail herein, since certain special advantages result from the use of the applicant's novel structure therein.

The present drum of any one of the aforementioned types consists of a rim 30 and a head assembly 32 supported within the confines of rim 30 by a rim reinforcing ring or rib 34, and a plurality of tensioning fixtures 36 equally spaced around the inside of rim 30. The rim is a round structure of metal sufficient in thickness to form a rigid structure ranging in diameter from approximately four to forty inches or larger, depending upon the type of drum such as, for example, the dance tom toms usually forming the smaller drums, and the dance, concert, or marching bass drums forming the larger drums. Both the internal and external surfaces of the rim are preferably chrome plated or coated with any other suitable type of tarnish resistant attractive material. The upper edge of rim 30 of the snare drum preferably contains an inwardly extending flange 38, attached integrally to the edge of the rim and forming a suitable surface for the drum sticks to strike when the drummer taps the rim.

The drum head assembly 32 consists of a head 40 of

any one of a number of well known extensively used drum head materials joined integrally and firmly at its peripheral edge to a ring 42, the external diameter of which is only slightly less than the internal diameter of rim 30. The head assembly consisting of head 40 and ring 42 is assembled within rim 30 beneath reinforcing ring 34 with the upper surface of ring 42 engaging the lower surface of ring 34. With the head assembly mounted in this manner, a head tensioning ring 44 of slightly less external diameter than the internal diameter of ring 34 is placed beneath head 40 and forced upwardly against the underside of the head by fixtures 36. As ring 44 is pressed upwardly and ring 42 is held in fixed position against the lower surface of ring 34, the drummer adjusts the tension on head 40 by tightening threaded tensioning rod 43 of each fixture 36, the upper end of the rods engaging and pressing against the lower surface of head tensioning ring 44. Fixtures 36 each contain a lug 50 having a vertical hole therethrough for receiving rod 43 and having a threaded stem 52 extending outwardly through suitably located holes in rim 30. A nut 54 is tightened onto stem 52 to rigidly hold the respective fixture 36 on the internal surface of rim 30. Rods 43 are provided with a head 56 for receiving a removable key (not shown) used in adjusting the tension on the head.

One of the special advantages of the present invention is the fact that the fixtures for adjusting the tension on the head and the snare and sound controls can be placed beneath the head usually within the confines of rim 30. The snare carrying device 60 is shown in detail in FIGURES 7, 8 and 9, and consists of a plurality of spring-like snares 62 supported by and joined firmly to plates 64 and 66, which in turn are adjustably supported on a rigid bar 68 by levers 70 and 72, respectively. Lever 70 is connected at one end to plate 64 by a bolt or rivet 74, and at the other end to bar 68 by a relatively large bolt or rivet 76 forming the pivot means for the lever. Lever 72 is connected at one end to plate 66 by a bolt or rivet 78, and at the other end to a stem 80 by a screw 82 extending through a hole in lever 72 and in stem 80 and forming a pivot means for lever 72. While the snare carrying device is shown mounted at the center of the drum, it may be offset to either side, and various types of snares, other than the type shown, may be used satisfactorily in the present device.

Levers 70 and 72 are flexible to permit the snares to be moved inwardly and adjusted within limits toward and away from the undersurface of head 40 by two pressure adjustment screws 84 and 86, extending through threaded holes in bar 68, and engaging the inner edge of the respective plate 64 or 66 near the center thereof. Screws 84 and 86 can be adjusted either in or out to provide the optimum snare pressure on the head. Each adjustment screw is provided with a spring 88 for maintaining the proper adjusted position, and a head 90 for receiving a key used in making the adjustment. In order to increase and decrease the tension on the snare, an adjustment device is provided consisting of member 80 and screw 82 and adjustment screw 94. Screw 82 is disposed in an elongated slot 96, and screw 94 extends through member 80 and abuts against a fixed lug 98 rigidly secured to bar 68 by a screw extending upwardly through the bar into lug 98. It is seen that by rotating screw 94, member 80 is moved longitudinally from right to left as seen in FIGURE 8 to increase or decrease the tension as required on the snares.

The entire snare carrying device is mounted on head tensioning ring 44, one end thereof being secured to the ring by a hinged portion 102, and screws 104 and 106 extending through the butt of the hinge into the underside of ring 44. The hinge is provided to permit the snares to be removed from their position against the underside of head 40. The other end of the carrying device is supported on head tensioning ring 44 by a fixture consisting of a screw 110 threadedly received in a hole 112 in ring

44. The end of bar 68 is tapered and contains a laterally extending open end slot 114 for slipping laterally onto screw 110, the bar being held firmly in place on the screw by spring 116 reacting between a washer 118 adjacent head 119 and a washer-like member 120, seated on the end of bar 68. The snare carrying device can readily be removed from its effective position by merely pivoting bar 68, using handle 122, from the position shown in FIGURE 4 to the position within the confines of supporting member 124. The bar is connected loosely to hinge 102 to permit it to pivot between the two positions mentioned. When the snare carrying device has been moved to the position within member 124, the adjacent end thereof rests on finger 126 of member 124, and is thereby held in spaced relation from the underside of the head, but sufficiently close thereto that the device can again readily be placed in operating position by merely shifting it to its effective position on screw 110.

While various types of drum holding means may be used, the snare drum shown in the drawings is provided with a leg rest attachment 130 consisting of a stem 132 connected at one end to rim 30 by bolts 134 and 136, and supporting at the other end a leg engaging fixture 138, the latter being pivotally adjusted on bolt 140 and supported on stem 132 by a screw 142 and wing nut 144. Lug 146 is provided in stem 132 to support the rod of a drum holder such as that disclosed in my copending application Serial No. 821,758, now Patent No. 3,021,744. The bass drum of FIGURE 1 is supported by the drummer by a spinner rig having rigid shoulder bars 150 and 152, and plate 154, the rig carrying a pivoting member 156 connected to drum 12. This spinner or twirling rig permits the drum to be spun while the drummer is marching and playing the drum. When the present drums are used in a dance band, suitable legs and fixtures, preferably in the form of a saw horse, are attached to rim 30 on opposite sides thereof to form a firm support for the drum. A pedal can be attached to the rim in the same manner as it is attached to the conventional dance bass drum.

While only one embodiment of the present invention has been described in detail herein, various changes and modifications may be made without departing from the scope of the present invention.

I claim:

1. A shell-less drum comprising an annular rim of rigid construction, an annular rib on the internal surface of said rim secured rigidly thereto and spaced inwardly from the two edges thereof, a disc-shaped head, a rigid ring secured to the periphery of said head and seating on one side of said rib, a tensioning ring of smaller diameter than said first mentioned ring contacting the side of said head opposite said rib, a plurality of head tensioning fixtures attached to the inside of said rim, each having an adjustment screw for engaging said tensioning ring for urging the head peripheral ring and tensioning ring apart and thereby increasing the tension on the head, a snare device mounted on said drum including a bar pivotally mounted at one end on said tensioning ring and releasably mounted at the other end of said tensioning ring and extending thereacross, a plurality of snares extending parallel with said bar and supported thereon adjacent the head by a fixture at each end movable toward and away from the head, an adjustment means carried by said bar and contacting said last mentioned fixtures for moving said snares toward and away from said head, and a latch means for releasably retaining said snare device in operating position against said head.

2. A shell-less drum comprising an annular rim of rigid construction, an annular shoulder secured rigidly thereto and spaced inwardly from the two edges thereof, a head, a ring secured to the periphery of said head and seating on said shoulder, a tensioning ring of smaller diameter than said first mentioned ring contacting the side of said head opposite said shoulder, a plurality of head tensioning fixtures attached to the inside of said rim, each having

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an adjustment screw for engaging said tensioning ring for urging the head peripheral ring and tensioning ring apart and thereby increasing the tension on the head, a snare device mounted on said drum including a bar mounted at opposite ends on said tensioning ring and extending thereacross, a snare extending parallel with said bar and supported thereon, and an adjustment means for moving said snare toward and away from said head.

3. A shell-less drum comprising an annular rim, an annular rib on the internal surface of said rim secured rigidly thereto and spaced inwardly from the two edges thereof, a disc-shaped head, a ring secured to the periphery of said head and seating on one side of said rib, a tensioning ring of smaller diameter than said first mentioned ring contacting the side of said head opposite said rib, a plurality of head tensioning fixtures attached to the inside of said rim, each having an adjustment screw for engaging said tensioning ring for urging the head peripheral ring and tensioning ring apart and thereby increasing the tension on the head, and a snare device mounted on said drum on the same side of the head as said tensioning ring and attached at opposite ends on said tensioning ring.

4. A shell-less drum comprising an annular rim, an annular rib on the internal surface of said rim, secured rigidly thereto, a disc-shaped head, a ring secured to the periphery of said head and seating on said rib, a tensioning ring of smaller diameter than said first mentioned ring contacting the side of said head opposite said rib, and a plurality of head tensioning fixtures attached to the inside of said rim, each having an adjustment screw for engaging said tensioning ring for urging the head peripheral ring and tensioning ring apart and thereby increasing the tension on the head.

5. A shell-less drum comprising an annular rim, an annular shoulder on the internal side thereof and secured rigidly thereto, a head, a ring secured to the periphery of said head and seating on said shoulder, a tensioning

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ring of smaller diameter than said first mentioned ring contacting the side of said head opposite said shoulder, and a plurality of head tensioning fixtures attached to the inside of said rim engaging said tensioning ring for urging the head peripheral ring and tensioning ring apart and thereby increasing the tension on the head.

6. A shell-less drum comprising a rim, a rib on the internal surface of said rim secured rigidly thereto, a head, a ring secured to the periphery of said head and seating on one side of said rib, a tensioning ring contacting the side of said head opposite said rib, and a plurality of head tensioning fixtures engaging said tensioning ring for urging the head peripheral ring and tensioning ring apart and thereby increasing the tension on the head.

7. A drum comprising a rim, a rib on the internal surface of said rim secured rigidly thereto, a head, a ring secured to the periphery of said head and seating on one side of said rib, a tensioning ring contacting the side of said head opposite said rib, and means for moving said rib and ring relative to one another.

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