United States Patent

[11] 3,541,914

[72] Inventor Josephus B. Thompson, deceased by K. E. Stade, administrator, Covington, Ohio

[21] Appl. No. 749,261
[22] Filed July 29, 1968
[45] Patented Nov. 24, 1970

[73] Assignee Columbia Broadcasting System, Inc.
New York, New York
a corporation of New York

[54] ANGULARLY AND RADIALLY ADJUSTABLE SPUR ASSEMBLY FOR BASS DRUMS

7 Claims, 6 Drawing Figs.

[52] U.S. Cl. 84/421
[51] Int. Cl. G10d 13/02
[50] Field of Search 84/411, 421, 422

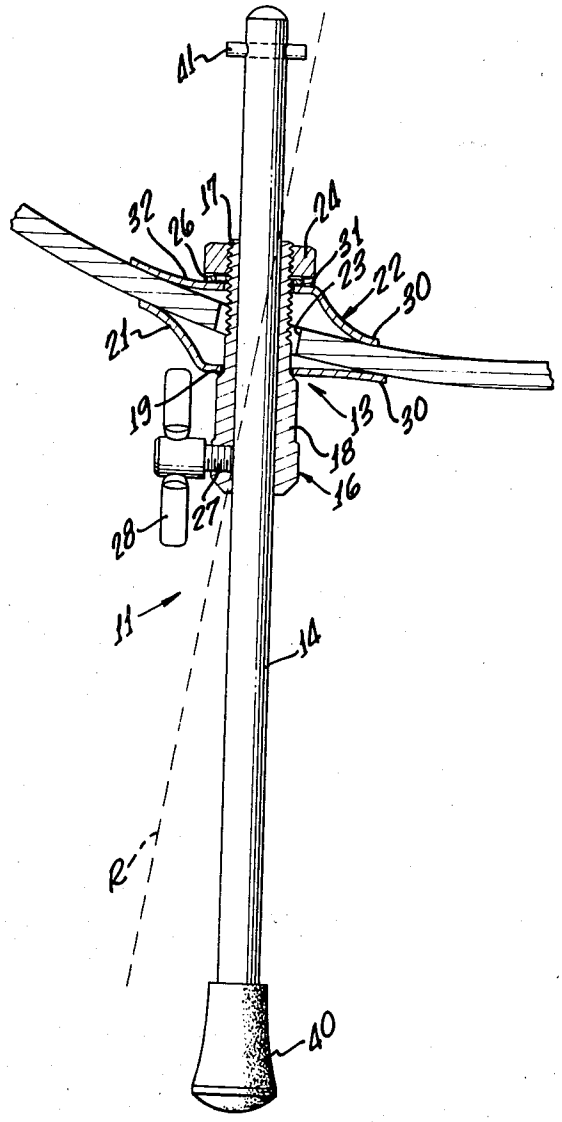
[56] References Cited

UNITED STATES PATENTS

2,919,618	1/1960	Slingerland	84/421
3,139,783	7/1964	Grant et al.	84/411

Primary Examiner—Richard B. Wilkinson
Assistant Examiner—Lawrence R. Franklin
Attorney—Gausewitz & Carr

ABSTRACT: A spur assembly for bass drums, in which a bushing is mounted generally radially of the drum shell by means of a nut and first and second corresponding mounting washers, such washers being angularly offset 180° relative to each other. A set screw is provided to mount the spur in the bushing at any desired radial position. Conjoint rotation of both washers during the mounting procedure permits the bushing and thus the spur to project at a great variety of angles relative to the shell, so that the spur may be mounted on different diameters and types of bass drums.



Patented Nov. 24, 1970 3,541,914

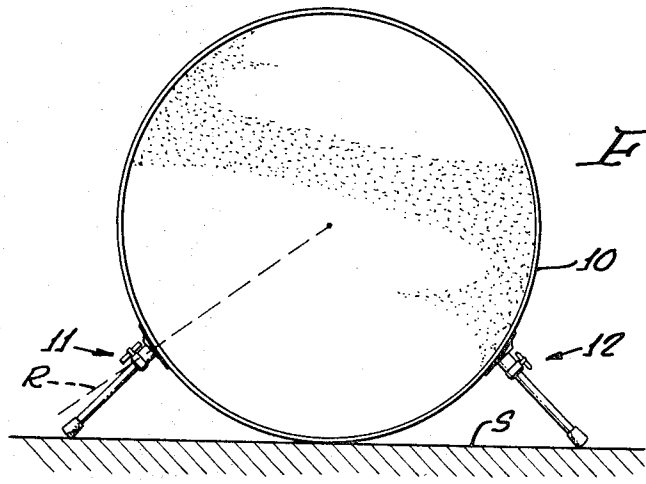


FIG. 1.

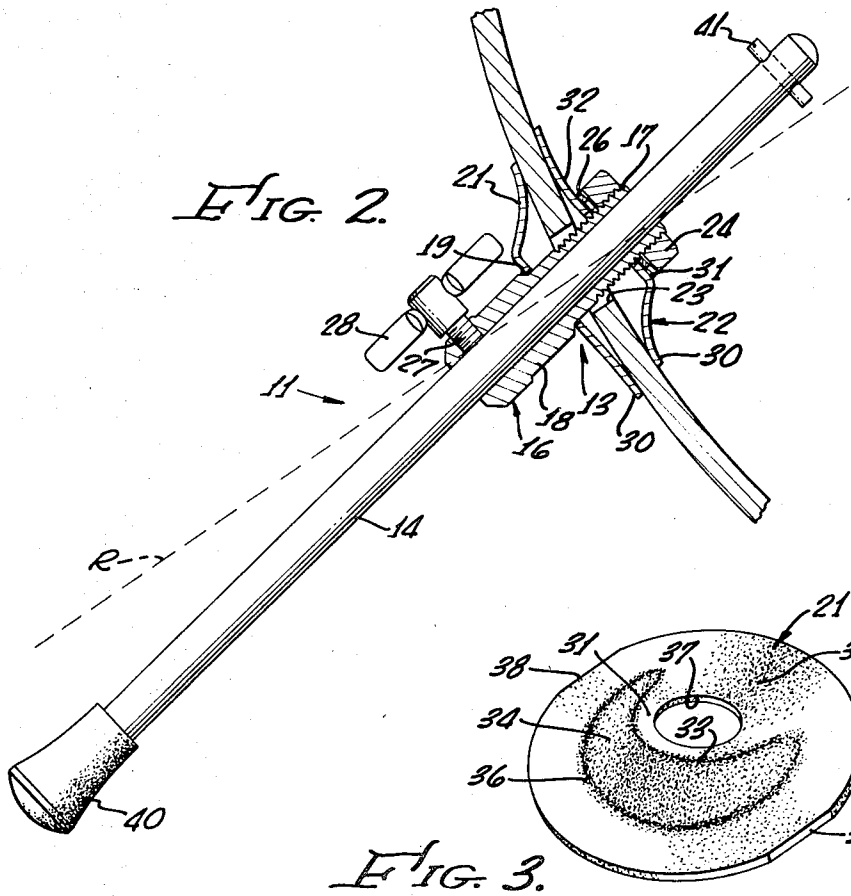


FIG. 2.

FIG. 3.

INVENTOR.
JOSEPHUS B. THOMPSON
BY
Jansawitz & Carr
ATTORNEYS.

FIG. 4.

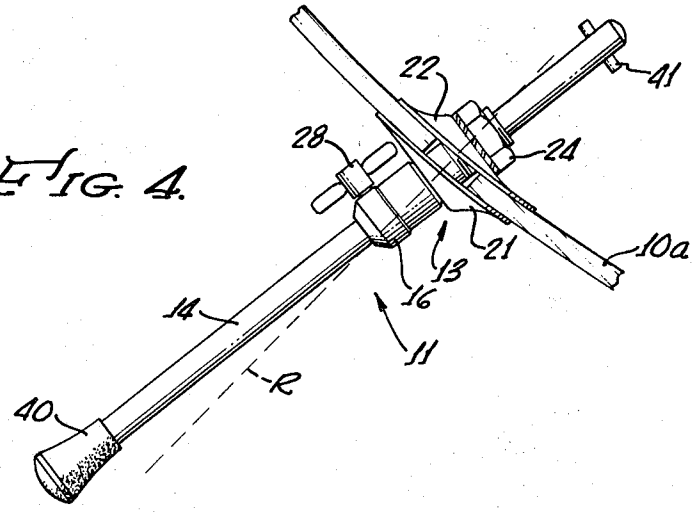


FIG. 5.

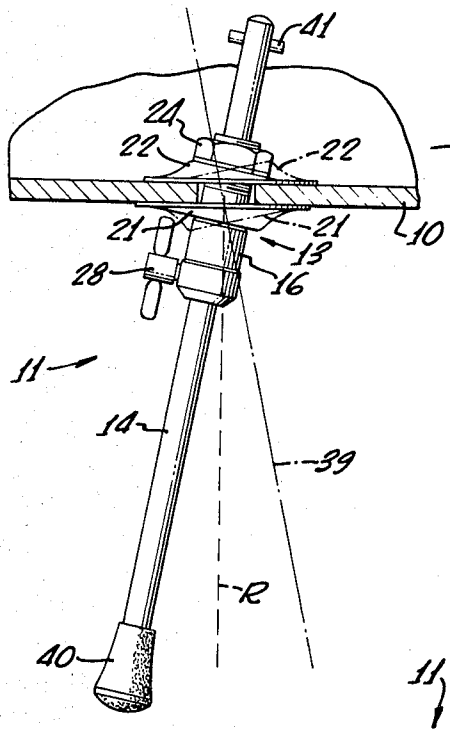
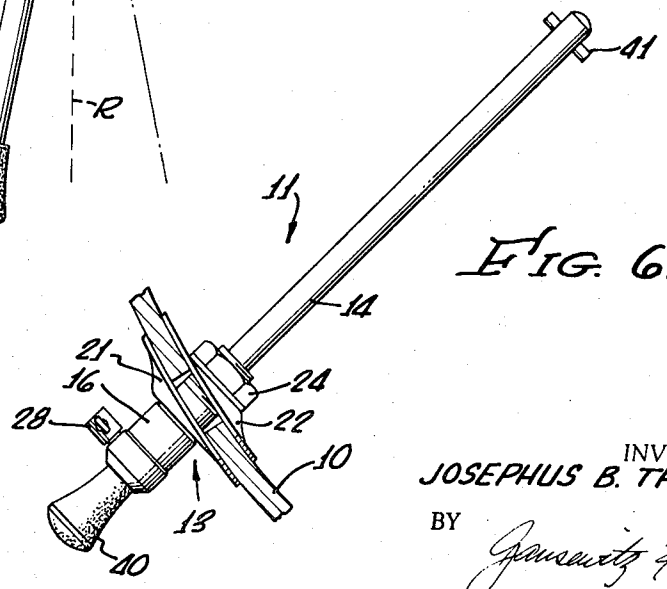


FIG. 6.



INVENTOR.
JOSEPHUS B. THOMPSON
BY Jansenitz & Carr
ATTORNEYS.

ANGULARLY AND RADIALLY ADJUSTABLE SPUR ASSEMBLY FOR BASS DRUMS

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to the field of support and accessory apparatus for bass drums.

2. Description of the Prior Art

Prior-art spur assemblies for bass drums conventionally incorporated lugs or collet plates which required separate mounting (as by a plurality of bolts) on the shell of the drum. The elongated spurs which were mounted in such collet plates or lugs could sometimes be adjusted radially of the drum, but they could not be angularly adjusted to a wide variety of angles adapted to permit mounting of the spurs on bass drums of different diameters. It therefore frequently occurred that different types of collet plates, etc., were manufactured for different diameters of bass drums. This increased the tooling and production costs.

Another disadvantage of prior-art spur assemblies for bass drums was that they did little or nothing to prevent forward creeping or inching of the drums in response to repeated pounding as by a foot-pedal beater assembly. Because of the creep problem, special assemblies were sometimes mounted on drums, being adapted to bite into the carpeting or floor in order to minimize creep. The spur assemblies themselves were not adapted to be adjusted to angular positions such that the problem of creep was reduced or eliminated.

SUMMARY OF THE INVENTION

In accordance with the present invention, only a single nut is required to rapidly mount the assembly on the shells of bass drums of various diameters. There is no necessity to vary the spur assembly in accordance with the diameter of the drum, since the angle of projection of the spur may be readily adjusted in order to compensate for differences in shell diameters. Furthermore, the spur may be caused to incline forwardly, away from the drum beater assembly, in order to minimize creep.

The invention comprises a bushing which is inserted through an oversize opening in the drum shell, the size of the opening being such as to permit the bushing to be adjusted to various angular positions in relation to an extended radius of the shell. First and second mounting washers are provided around the bushing and respectively on the exterior and interior of the shell. Such washers are formed with apertured seat portions which lie in planes oblique to the planes of the rims of the washers, each of such seat portions being rotated to 180-degree-out-of-registry position relative to the seat portion of the remaining washer. The result is that conjoint rotation of the washers changes the position of the bushing, and thus of the drum spur, relative to an extended radius of the shell. Means are provided to mount a drum spur in the bushing for radial adjustment therein.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front elevational view illustrating in schematic manner a drum shell having mounted thereon a set of drum spur assemblies in accordance with the present invention;

FIG. 2 is an enlarged view illustrating the spur-mounting means and associated drum shell portion in vertical section, and illustrating the spur itself in elevation;

FIG. 3 is a perspective view of one of the washers;

FIG. 4 is a view corresponding generally to FIG. 2 but showing the washers and spur as rotated to a different position permitting mounting of the assembly on a different diameter shell;

FIG. 5 is a horizontal sectional view of the shell portion in which the spur and mounting means therefor are provided, and illustrating different rotational positions by solid and phantom lines; and

FIG. 6 is a view corresponding generally to FIG. 2, the spur being shown to its innermost adjusted position.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring first to FIG. 1, a hollow cylindrical drum shell 10 is shown as resting on a floor or other horizontal supporting surface S, the axis of the shell 10 being horizontal. First and second spur assemblies 11 and 12 are illustrated as mounted on shell 10 in order to prevent the same from rotating about its axis or from creeping forwardly in response to beating of the drum. Spur assemblies 11 and 12 are identical to each other, so only one (number 11) will be described in detail.

Each spur assembly comprises a mounting or base portion 13 in which is adjustably mounted an elongated spur 14. Mounting or base portion 13 comprises an elongated tubular bushing 16 having a cylindrical shank 17 and a generally cylindrical head 18 of larger outer diameter. A majority of the length of shank 17 is externally threaded, the thread preferably terminating a substantial distance from a shoulder 19 which separates the shank from head 18. Such shoulder 19 is preferably frustoconical and convergent toward the end of the shank.

Shank 17 extends through exterior and interior metal washers 21 and 22, respectively, and also through an oversize opening or aperture 23 in shell 10. The diameter of such opening 23, which is preferably circular, is sufficient to permit inclination of the bushing 16 and thus of spur 14 relative to the axis of the opening (which axis is along an extended radius of the shell 10).

Washers 21 and 22 are employed to fixedly mount bushing 16 on shell 10. For this purpose, the washers are compressed toward each other, and clamped against the outer and inner surfaces of the shell, by means of a nut 24. Such nut is threaded over the inner end of the shank 17, there being a lock washer 26 provided between the nut and the inner washer 22. When the nut 24 thus acts against the washers, the exterior washer 21 seats forcibly on the shoulder 19 adjacent head 18.

Mounted radially in the head 18, and threadedly associated therewith, is a setscrew 27 having a wing-shaped head 28 adapted to permit manual rotation by the drummer. The setscrew 27 bears against the spur 14, which is an elongated cylindrical element slidably mounted within bushing 16. Preferably the outer diameter of the spur is only slightly smaller than the inner diameter of the passage within the bushing.

There will next be described the particular construction and relationship of the exterior and interior washers 21 and 22 which permit the bushing and the spur 14 to be oriented at various angles relative to the drum shell.

Referring to FIG. 3, exterior washer 21 is illustrated. Such washer is generally identical to the interior washer 22, but the two washers are so rotated relative to each other that they are approximately 180° out of angular registry. Each of washers 21 and 22 preferably has a circular rim 30 which lies generally in a single plane, although a certain amount of curvature of the rim may be provided if desired in order to cause it to conform more closely to the curvature of shell 10.

Formed in the central portion of each washer is an inclined seat 31 lying at an acute angle to the plane of the rim 30. Each of the seats merges at a region 32 with the adjacent radial rim region, then inclines upwardly from such merger region 32 to a generally arcuate peak or ridge region 33. The adjacent section of the washer inclines steeply downwardly along an arcuate or crescent-shaped portion 34 to another merger region 36 with the rim 30. Region 36 is arcuate, and the central portion thereof is diametrically opposite the first-mentioned merger region 32. The angle of the inclined seat 31 relative to the plane of rim 30 is such as to permit the desired amount of angular adjustment of the spur in response to conjoint rotation of the washers.

Formed centrally in seat 31 is a circular opening 37 adapted to receive the bushing shank 17 in relatively close-fitting relationship. Suitable flat portions 38 are preferably provided at the diametrically opposite regions of the washer in order to facilitate rotation or registry during the manufacturing process.

The washers 21 and 22 are readily formed by stamping procedures, following which the exterior washer 21 is usually chrome plated and the interior washer 22 cadmium plated. Because the exterior and interior washers may be generally identical to each other, tooling costs are minimized.

Referring particularly to FIG. 2, the exterior and interior washers 21 and 22 are shown as mounted on the bushing shank 17 and in their positions 180° out of angular registry with each other. Because of the 180 -degree relationship, the seats 31 (FIG. 3) are generally parallel to each other and operate effectively to receive and seat the lock washer 26 and nut 24 as well as the shoulder 19 of the bushing.

In the relationship illustrated in FIGS. 1 and 2, the washers 21 and 22 are conjointly rotated to such positions that the spur 14 is inclined downwardly relative to an extended radius R of shell 10. The angle of such incline (angle between the spur and radius R) is determined by the angles of inclination of seats 31 relative to rims 30.

Referring to FIG. 4, both of the washers 21 and 22 are illustrated as rotated 180° from the positions shown in FIG. 2. It follows that spur 14 is on the opposite side of the extended radius R, being thereabove instead of therebeneath. The spur may thus be mounted on a second shell, indicated at 10*a*, the diameter of which may be different from that of the first-indicated shell 10.

By mounting (during manufacture of the drum) the washers 21 and 22 in suitable rotational positions at or between the extremes indicated in FIGS. 2 and 4, the spur may be mounted on shells 10 having substantially different diameters. It is to be understood that in thus adapting the mounting or base assembly 13 to shells 10 of different diameters, the manufacturer considers not only the rotational positions of washers 21, 22 but also the radial position of spur 14 in the bushing 16, such radial position being maintained by the set or locking screw 27.

From the above it will be understood that conjoint rotation of the washers 21 and 22, which are always 180° out of angular registry, causes the spur 14 to describe a surface of revolution about the radius of shell 10. More specifically, such surface of revolution is generally conical, the apex of the cone being near opening 23.

Referring next to FIG. 5, which is a horizontal section (the spur 14 being viewed from above), the extended radius R is again illustrated and the washers 21 and 22 are shown in solid lines as rotated 90° in one direction from either of the positions shown in FIGS. 2 and 4. In phantom lines, the washers 21, 22 are shown as rotated 90° in the opposite direction, the position of spur 14 then being indicated by the phantom line 39. Such angular adjustability not only increases the number of types of drum shells on which the spur assembly may be mounted, but may also be employed to reduce the tendency of the drum toward creeping along the surface S (FIG. 1) in response to beating of the drum.

Let is be assumed, for example, that the batter side of the bass drum is to the right as viewed in FIG. 5, and that the spur is in the position shown in solid lines in such figure. The spur 14 is thus inclined forwardly, causing the rubber tip of foot 40 which is provided at the outer end of the spur to be in position to tend to dig into the supporting surface S in response to the beating action. This reduces the tendency of the drum to creep along the surface S as beating continues.

When it is desired to ship the drum, it is merely necessary to loosen the setscrew 27 by means of the wing-head 28 and then shift the spur 14 radially inwardly to the extreme position illustrated in FIG. 6, excessive inward shifting being prevented by the foot or tip 40. Undesired movement in the opposite direction is prevented by a cross element 41 which is mounted in force-fit relationship through a transverse bore in the inner end of the spur.

It is pointed out that in conventional prior-art spur assemblies for bass drums, it was first necessary, as a separate manufacturing operation, to mount a collet or receptacle on a plate and at a particular angle determined by the diameter of the drum shell. It was then necessary to mount the plate on the shell as an additional manufacturing operation, this being conventionally effected by means of a substantial number of bolts. In the present construction, there is no necessity for any preassembly operation, since the shank 17 is assembled with the washers, and the angular positions of the washers are determined, in a simple manner during any manufacturing run. Only the single nut 24 and lock washer 26 are needed to lock the components in position as illustrated. Not only is adjustability greatly increased, and manufacturing costs greatly lessened, but the resulting spur assembly is attractive in appearance and may be rapidly mounted on numerous diameters of drum shells.

The present spur-mounting assembly may also be employed for other purposes in the drum art. For example, the foot 40 may be replaced by a suitable mounting means for a cymbal. In such case, the base or mounting portion 13 is provided at the upper region of shell 10 and the apparatus becomes a cymbal holder instead of a spur.

In the appended claims, the "radius"referred to is a radius (such as R) which is (1) perpendicular to the axis of shell 10, and (2) intersects such axis, and (3) passes through the opening (such as 23) for the bushing (such as 16).

The foregoing detailed description is to be clearly understood as given by way of illustration and example only, the spirit and scope of this invention being limited solely by the appended claims.

It is claimed:

1. An assembly for mounting on the shell of a bass drum or the like, which comprises:

a bushing extended through an opening in the shell of a bass drum, said opening in said shell being substantially larger than the diameter of the bushing portion received therein;

an elongated element movably mounted in said bushing;

means to lock said elongated element in any desired position longitudinally of said bushing, said locking means being disposed exteriorly of said shell for access by the drummer;

first and second washers mounted on said bushing and respectively exteriorly and interiorly of said shell, said washers being shaped with apertured seat portions which are inclined in relation to the rim portions thereof, whereby said bushing received within the apertures in said washers is inclined relative to an extended radius of said shell, the direction of incline being determined by the rotated positions of said washers; and

means to lock said washers tightly against the outer and inner surfaces of said shell, and to maintain said bushing rigidly in position in said opening, said locking means comprising a nut threadedly associated with said bushing inwardly of said shell and also inwardly of said second washer, said locking means also comprising seat means on said bushing exteriorly of said shell and outwardly of said first washer, said seat means being adapted to seat said first washer and prevent the same from moving excessively in response to the pressure exerted by said nut.

2. The invention as claimed in claim 1, in which said elongated element is a spur adapted to support said bass drum and prevent rotation thereof about its axis.

3. The invention as claimed in claim 2, in which the outer end of said spur is provided with a foot portion adapted to frictionally engage a supporting surface.

4. The invention as claimed in claim 1, in which said washers are so shaped and related that conjoint rotation thereof causes said elongated element to describe a cone the axis of which is a radius of said shell.

5. The invention as claimed in claim 1, in which said washers are shaped similarly to each other, and in which each of said washers is approximately 180° out of angular registry with the other, whereby said seat portions are generally parallel to each other, and whereby said bushing and the elongated element received therein is disposed at a substantial angle relative to a radius of said shell.

6. The invention as claimed in claim 5, in which each of said washers is a sheet metal stamping having a rim portion disposed generally in a plane, one edge of said apertured and inclined seat portion of said stamping merging with one side of said rim portion, said seat portion inclining away from said plane to a generally arcuate ridge relatively remote from said one side of said rim portion.

7. The invention as claimed in claim 6, in which said stamping has a crescent-shaped region between said arcuate ridge and the side of said rim portion which is diametrically opposite said one side of said rim portion.