

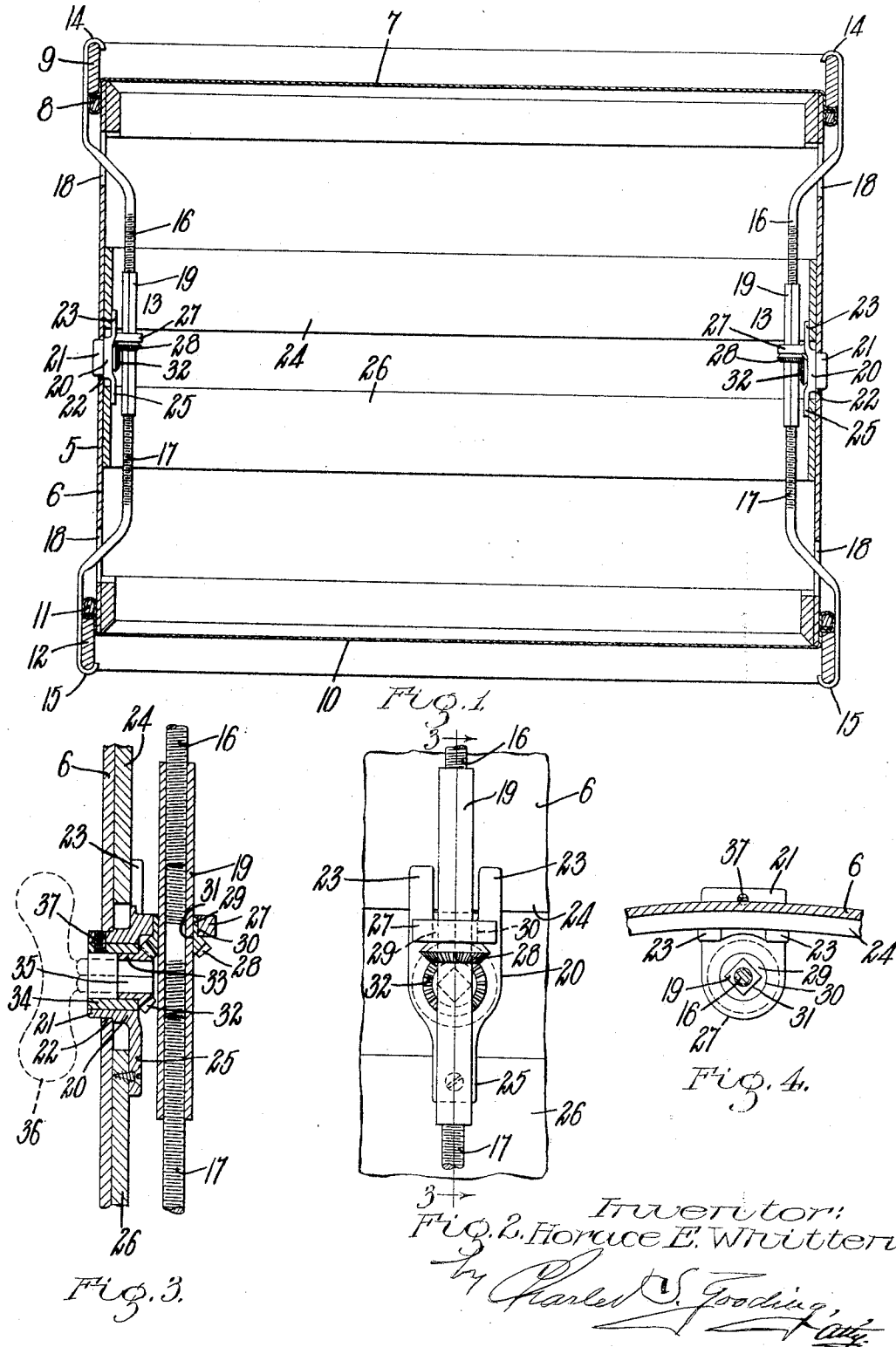
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DRUM

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UNITED STATES PATENT OFFICE

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DRUM

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This invention relates to an improvement in drums, and particularly to a tension device for drum heads.

The object of the invention is to provide a simple and effective mechanism for clamping the drum heads and regulating the tension thereof.

Another object of the invention is to provide a structure which for the most part is concealed within the interior of the drum where it is not possible for protruding parts of the mechanism to rub against the clothing of the drummer when he is marching and thereby causing unnecessary and excessive wear to said clothing by continual contact therewith.

Still another object of the invention is to provide a mechanism by means of which both drum heads may be tightened in unison.

The invention consists in an improvement in drums as set forth in the following specification and particularly as pointed out in the claims thereof.

Referring to the drawing:—

Fig. 1 represents a central vertical section through a drum, tension devices for the drum heads embodying my invention being illustrated upon diametrically opposite sides only of said drum.

Fig. 2 is an enlarged front elevation of a portion of the tension mechanism.

Fig. 3 is a vertical sectional elevation taken on the line 3—3, Fig. 2, looking in the direction of the arrows on said line.

Fig. 4 is a sectional plan view of the mechanism illustrated in Figs. 2 and 3.

Like numerals refer to like parts throughout the several views of the drawing.

In the drawing, 5 represents a drum embodying therein a shell 6, a batter head 7, a flesh hoop 8 for the head 7 and a tension hoop 9 also for said head. The drum illustrated also embodies therein a snare head 10, a flesh hoop 11 for said head and a tension hoop 12 also for said head. All of these hereinbefore mentioned parts are well known in the art.

The drum heads 7 and 10 are clamped at their respective ends of the shell 6 and a tension placed thereon by means of a plurality of tension devices 13, and it is in these ten-

sion devices that the novel features of this invention reside. The tension devices 13 embody therein oppositely disposed hooks 14 and 15 provided with shank portions 16 and 17 respectively, the shank portion 16 being provided with a right hand screw-threaded portion and the shank portion 17 being provided with a left hand screw-threaded portion. The shank portions 16 and 17 both have reverse bends provided therein and project through slots 18 that are provided in the shell 6. The screw-threaded portions of the shanks 16 and 17 are connected together within the interior of the shell 6 by means of a turn buckle 19 which is square in cross-sectional contour. The turn buckle 19 is positioned upon the shell 6 by means of a bracket 20 which is mounted upon the inner side of said shell and has a cylindrical portion 21 embodied therein which projects through an opening 22 formed in said shell. The bracket 20 also has a pair of arms 23 projecting upwardly therefrom, which engage a hoop 24 which is located upon the interior of the shell 6. The bracket 20 also has a downwardly projecting arm 25 embodied therein which engages a hoop 26 which is located within the interior of the shell 6.

Positioned within a lug 27, which forms a part of the bracket 20, is a bevel gear 28, a hub portion 29 of which is rotatably mounted in a circular bearing portion 30 provided in said lug. A square hole 31 extends entirely through the bevel gear 28 upon the longitudinal median line thereof, and the turn buckle 19 has a sliding fit within said hole. The bevel gear 28 meshes with and is driven by a bevel gear 32, a hub portion 33 of which is rotatably mounted within a sleeve 34 which is in turn mounted within the cylindrical portion 21 of the bracket 20. The bevel gear 32 has a square hole or socket 35 extending there-through to receive a key 36 which is illustrated in dotted lines in Fig. 3, said key being utilized to manually rotate the gears. The sleeve 34 is secured within the cylindrical portion 21 of the bracket 20 by means of a screw 37.

The general operation of the mechanism hereinbefore specifically described is as fol-

lows:—When it is desired to either increase or decrease the tension upon the drum heads 7 and 10, the key 36 is inserted in the square hole 35 which is provided in the bevel gear 32 and the latter, upon being rotated, will cause the bevel gear 28 and turn buckle 19 to rotate in unison therewith. As the turn buckle 19 has right hand screw-threaded engagement with the shank of the hook 14 and left hand screw-threaded engagement with the shank of the hook 15, these hooks will be moved toward each other or away from each other in unison according to the direction in which the key is rotated, and the tension hoops 9 and 12 will be either drawn together in unison or loosened in unison accordingly, to either increase the tension upon the drum heads 7 and 10 or release the tension thereon as may be desired. It will be understood that the key 36 is applied successively to the various tension devices 13 until the tension is equally distributed over the surface of both drum heads.

I claim:

1. A drum having, in combination, a shell, a head therefor, a tension hoop for said head, hooks positioned within said shell and projecting outwardly therethrough and engaging said hoop, and means within said shell to actuate each of said hooks to regulate the tension upon the head.

2. A drum having, in combination, a shell, a head therefor, a tension hoop for said head, hooks positioned within said shell and projecting outwardly therethrough and engaging said hoop, nuts having screw-threaded engagement with each of said hooks, and means to rotate each of said nuts and thereby actuate the hooks to regulate the tension upon the head.

3. A drum having, in combination, a shell, a head therefor, a tension hoop for said head, hooks positioned within said shell and projecting outwardly therethrough and engaging said hoop, nuts having screw-threaded engagement with each of said hooks, and a train of gears operatively connected to each of said nuts and adapted to rotate the latter to actuate the hooks to regulate the tension upon the head.

4. A drum having, in combination, a shell, a head therefor, a tension hoop for said head, hooks positioned within said shell and projecting outwardly therethrough and engaging said hoop, nuts having screw-threaded engagement with each of said hooks, and a train of gears operatively connected to each of said nuts and adapted to rotate the same to actuate the hooks to regulate the tension upon the head, one of said gears having a socket embodied therein adapted to receive an actuating member.

5. A drum having, in combination, a shell, heads upon opposite ends thereof, tension hoops for said heads, co-operating pairs of

hooks positioned within said shell and projecting outwardly therethrough and engaging both of said hoops, a turn buckle for each pair of hooks, and means to rotate said turn buckle to actuate each pair of hooks in unison and thereby regulate the tension upon both of the heads.

6. A drum having, in combination, a shell, heads upon opposite ends thereof, tension hoops for said heads, co-operating pairs of hooks for said hoops, a turn buckle for each pair of hooks, and a train of gears operatively connected to each turn buckle and adapted to rotate the latter to actuate the hooks to regulate the tension upon both of the heads.

7. A drum having, in combination, a shell, heads upon opposite ends thereof, tension hoops for said heads, co-operating pairs of hooks positioned within said shell and projecting outwardly therethrough and engaging both of said hoops, a turn buckle for each pair of hooks, and a train of gears also located within said shell and operatively connected to each turn buckle and adapted to rotate the latter to actuate the hooks to regulate the tension upon both of the heads.

8. A drum having, in combination, a shell, heads upon opposite ends thereof, tension hoops for said heads, co-operating pairs of hooks positioned within said shell and projecting outwardly therethrough and engaging both of said hoops, a turn buckle for each pair of hooks, a gear adapted to rotate said turn buckle and in which the latter is also slidably mounted, and another gear meshing with said first-named gear and adapted to rotate the same to actuate the hooks to regulate the tension upon both of the heads, said last-named gear having a socket embodied therein adapted to receive an actuating member.

9. A drum having, in combination, a shell, heads upon opposite ends thereof, tension hoops for said heads, co-operating pairs of hooks positioned within said shell and projecting outwardly therethrough and engaging both of said hoops, a turn buckle for each pair of hooks, a bracket within said shell and upon which said turn buckle is mounted, and a train of gears mounted upon said bracket and operatively connected with said turn buckle and adapted to rotate the latter to actuate the hooks to regulate the tension upon both of the heads.

10. A drum having, in combination, a shell, heads upon opposite ends thereof, tension hoops for said heads, co-operating pairs of hooks positioned within said shell and projecting outwardly therethrough and engaging both of said hoops, a turn buckle for each pair of hooks, a bracket within said shell and embodying therein a bearing portion which projects outwardly therethrough, a train of gears mounted upon said bracket and operatively connected with said turn buckle and

adapted to rotate the same to actuate the
hooks to regulate the tension upon both of the
heads, one of said gears being rotatable with-
in the bearing portion of the bracket and
5 having a socket embodied therein adapted to
receive an actuating member.

In testimony whereof I have hereunto set
my hand.

HORACE E. WHITTEN.

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