

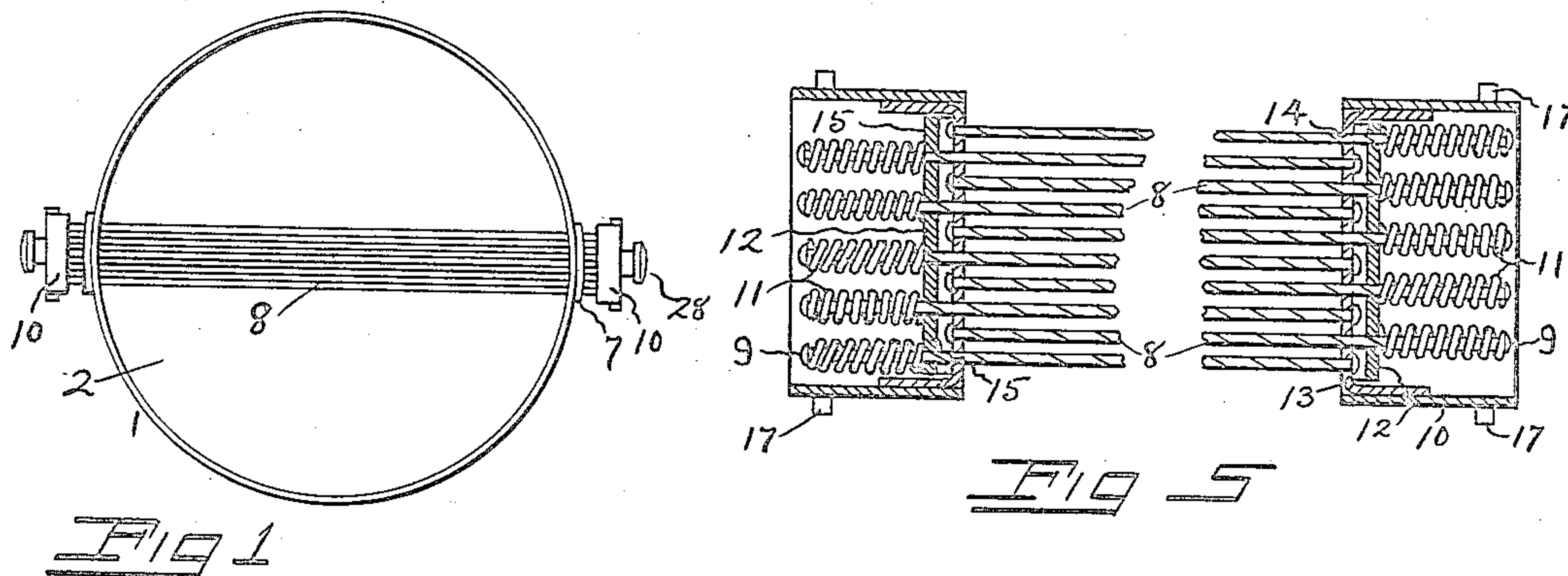
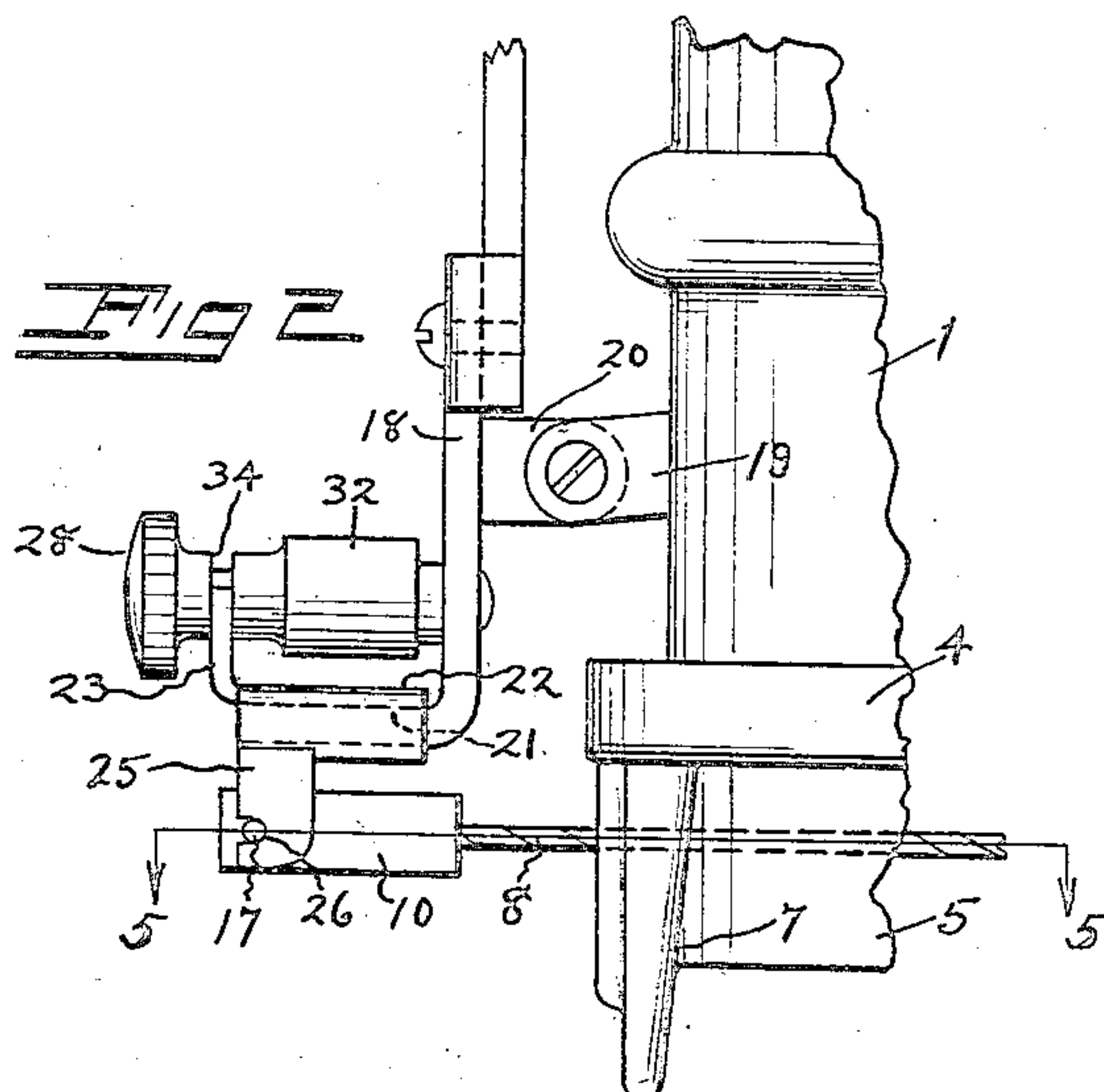
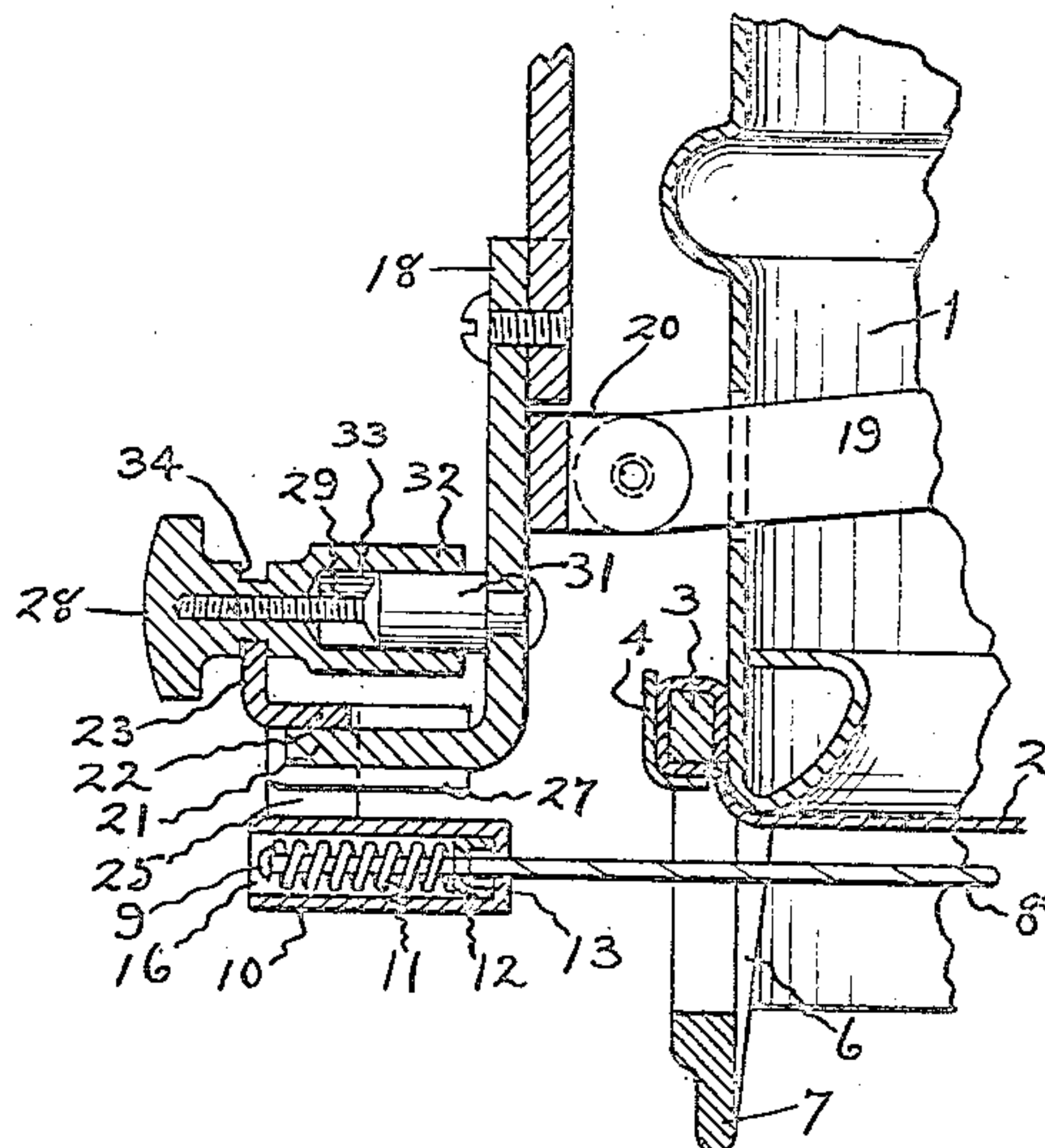
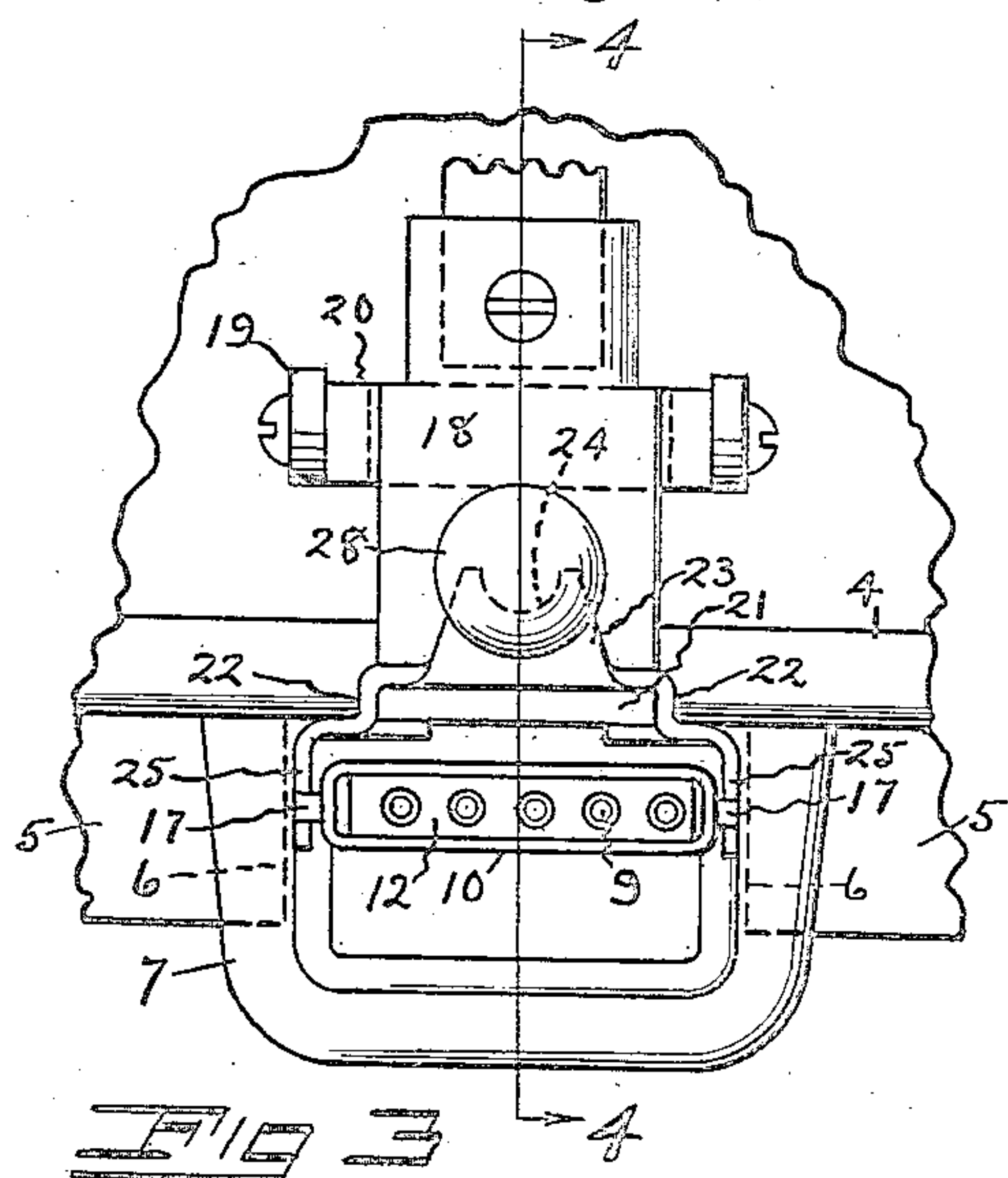
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DRUM

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DRUM

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My invention relates to drums and more particularly to snare drums and the snares thereof.

It is well known in the snare drum art that drum snares function to produce certain desired tonal effects, and that the efficiency of the snare unit is determined by the tension thereof. If the tension of the various individual snares of the snare unit is not uniform the snare unit is inefficient and cannot be made efficient until a uniform tension of the snares is effected and maintained.

Drum snares may be made of various materials, but those made of gut, raw hide, and a composite snare made of silk and wire, are now in general use, although all are objectionable for certain reasons. For example, it is well known that gut and raw hide snares, which are usually made of twisted stock, will expand, shrink or twist under atmospheric changes, whereby the snare efficiency is materially impaired.

The present common practice in mounting a snare unit in a drum is to clamp both ends of the snare unit after producing a certain tension in the various individual snares; but this practice is unsatisfactory and unscientific, and periodically it is necessary to readjust the individual snare tension, due to the unequal stretching, contraction, or contortion thereof. And unless this readjustment of the snare tension is very carefully done the snare unit is still improperly conditioned for efficient use.

An object of my invention is to provide a mount for a drum snare unit which automatically maintains the individual snares at an efficient tension after the initial tensioning and mounting of the snare unit in the drum.

Another object of the invention is to provide a snare adjusting and tensioning means, whereby the various individual snares of the snare unit are automatically and efficiently tensioned regardless of the unequal stretching or shrinking thereof.

A third object of the invention is to provide snare adjusting means, whereby either or both ends of the various individual snares of the snare unit may turn or rotate in the mount to compensate for twisting thereof.

Still another object of the invention is to provide a snare mount and adjustment means, whereby the snare unit may be quickly mounted on a drum and the initial snare tension quickly effected, and whereby, thereafter, the desired tension of the various individual snares is automatically effected by an individual spring for each snare string.

Another object of the invention is to provide a snare unit which comprises a plurality of snare strings which have their opposite ends arranged within a block or casing, and spring controlled therein, said blocks or casings being readily mountable or applicable to the drum body and quickly removable therefrom.

And another object of the invention is to provide a snare unit in which gut or raw hide snares are incorporated with a control spring for each individual snare, the snare unit including a casing for the snare ends which are freely rotatable in the casing to prevent untwisting of the individual snares.

Other and more specific objects of the invention are mentioned and described herein.

The preferred embodiment of my invention is illustrated in the accompanying drawing, wherein

Figure 1 is a plan view of a drum bottom to which my invention is applied;

Figure 2 is a fragmentary elevational view illustrating the means for mounting the snare unit at one end and the screw means for adjustment thereof;

Figure 3 is a front view of the structure illustrated in Figure 2;

Figure 4 is a section taken on line 4—4 of Figure 3; and

Figure 5 is a section taken on line 5—5 of Figure 2 illustrating the complete snare unit.

Similar numerals of reference indicate like parts throughout the several views on the drawing.

The drum illustrated in the accompanying drawing may be any suitable shape but is illustrated as having a substantially cylindrical shell 1 over which the usual skin head 2 is stretched as by the usual flesh hoop means 3 and the counter hoop 4. Any suitable means (none illustrated) may be provided for actuating the counter hoop 4 axially of the drum body to move the hoop 3 axially of the drum shell to place the skin head 2 under tension. As such means forms no part of the present invention it has not been illustrated or described herein.

The counter hoop 4 may have an integral depending annular flange 5 which, at two diametrically opposite points thereof, may be cut away at 6 to permit the introduction of a U shaped filler member 7 therein, which filler member may be soldered or welded to the flange 5 on opposite sides of the opening 6 to reinforce said flange.

The filler member 7 also provides an opening through which the snares 8 of the snare unit

may be trained, as hereinafter described, the points of said filler member preferably terminating adjacent the hoop body 4. The snares 8, as illustrated in the drawing, are single or individual elements and ten in number, although any other suitable number may be incorporated in the snare unit. And as illustrated, the snares 8 may be made of gut, raw-hide, or composite silk and wire, or any other suitable stock. However, for this particular snare unit a gut or raw-hide snare element produces the maximum of efficiency when constructed and arranged in the unit hereinafter described.

When the snares 8 are made of gut or raw-hide the opposite end of each snare element or string is provided with an integral enlarged head 9 which may be expansibly formed thereon by the application of heat to the end of the snare element. The snare unit may comprise a pair of hollow blocks or casings 10, functioning as snare holders, and mounted in opposed relation on opposite sides of the drum and alike in construction, the snare strings 8 having their opposite ends mounted interiorly of said blocks or casings; said snare unit including also individual compression coil springs 11 for each snare string, and a channeled seat member 12 which functions as a cover for certain of the snare heads 9 and a seat for certain of the springs 11.

As shown, the front wall 13 of each casing 10 is provided with a plurality of apertures 14, corresponding in number with the snares 8, each of said apertures being traversed by one of the snares, one half of said snares having the heads 9 in engagement with the casing wall 13 within said casing to prevent displacement of the snare through the openings 14. The other one half of the snares 8 traverse suitable apertures 15 formed in a series in the member 12 and extending longitudinally thereof.

The channeled member 12 may be removably mounted in the casing or block 10 transversely thereof, in contact with the inner surface of the casing wall 13 and covering certain of the snare heads 9, as heretofore stated. The snare strings 8 which traverse channel member apertures 15 extend beyond said member toward the rear open end 16 of the casing 10, the extended snare portion being encompassed by the coil compression spring 11 which seats against the snare head 9 and the member 12. Sufficient clearance is provided in the apertures 14 and 15 to permit free movement of the snares therein under urge of the springs 11 and to compensate for any torsional tendency or action of the snares due to temperature or atmospheric changes.

Each of the snare holders 10 may be provided with a pair of opposed bearing studs or trunnion elements 17 rigidly connected with and projecting from the side walls of said snare holders adjacent one end thereof, said studs or trunnions being adapted to pivotally support said snare holders on a bearing bracket 18, as hereinafter described. A pair of the bearing brackets 18 is provided for this invention and which are alike in construction and operation and arranged at two diametrically opposite points on the drum exterior adjacent the hoop 4, said brackets forming a material part of this invention, being associated with undisclosed mechanism for shifting said brackets substantially axially of the drum for alternately shifting the snares 8 into and out of engagement with the drum head 2, said shifting mechanism forming no part of this invention, but including a fragmental portion of a

shifting element 19. The outer end of the element 19 is operatively connected with a U shaped bracket 20 rigidly connected with and extending transversely of the bracket 18.

As illustrated, the snares 8 are disengaged from the drum head 2, but, as stated, they are shiftable by said undisclosed mechanism into engagement with said drum head. Each bearing bracket 18 may be provided with a lateral outwardly projecting arm 21 upon which a slidable bearing bracket 22 is mounted, said bracket 22 being provided with a right angular abutment arm 23 which may be semicircularly recessed at 24, and which is provided also with a pair of opposed spaced bearing arms 25 depending therefrom. Each bearing arm 25 may be provided with an open recess or seat 26 which recesses are adapted to be removably engaged by the casing trunnions 17 when the snare unit is operatively mounted on the drum, in which relation of the parts the casings 10 are desirably pivotally and removably arranged between the two bracket arms 25.

The slidable bracket 22 may be provided with a pair of opposed retaining lugs 27 which may engage beneath the bracket arm 21 to prevent undue tilting movement or lateral displacement thereof from said bracket arm, said slidable bracket being readily removable from or applicable to the end of the arm 21. The bracket arm 21 is disposed substantially radially of the drum body to cause radial movement of the bracket 22 when the latter is actuated by the headed nut 28 which coacts with the stationary radially arranged screw 29 rigidly mounted in the bracket 18 at 30. The screw 29 may be provided with an enlarged cylindrical portion 31 adjacent the base thereof, and the nut 28 may be provided with a tubular extension 32, the cylindrical bore 33 whereof is engaged by the portion 31 of the screw 29, the threaded portion of the screw 29 extending through the nut bore 33 into the head of the nut 28. The engagement of the screw portion 31 in the nut bore 33, which is relatively loose, functions to support the nut 28 and to relieve the threads of the screw 29 of undue stress.

The nut 28 may be provided with a circumferential groove 34 adjacent the head thereof, which groove may be engaged, with slight clearance, by the point of the recessed arm 23 of the slidable tensioning bracket 22, whereby, upon operation of the nut 28, the bracket 22 may be reciprocally and radially actuated on the bracket arm 21.

In operation, the snare unit is assembled, as herein described, and the casing studs 17 are operatively arranged in the bracket arm recesses 26 preparatory to tensioning the adjustment of the snares of the snare unit. The nut 28 is then operated to actuate the tensioning bracket 22 outward to securely position the snare casing studs 17 in the bearing recesses 26 and to render the individual snares taut. Thereafter, the operator may effect any desired tension in the snares 8 upon operation of the nut 28 which actuates the snare casings 10, the tension of the individual snares being automatically adjusted by the springs 11 in response to the actuation of said casings. And in this operation of the nut 28, the bracket 22, and the snare casing 10, the latter readily pivots on the bearing studs 17 to compensate for any inequalities of structure in the parts and to maintain the individual snares in perfect rectilinear form and arrangement. It will be evident that the nut 28 readily functions

as a unitary means for actuating the snare casings 10, whereby all of the snares 8 are automatically brought to the desired tension by the coil springs 11, and that either or both of the nuts 22 may be utilized to effect the desired snare adjustment.

I claim:

1. In a drum snare unit, a pair of snare holders mounted on opposite sides of a drum, a plurality of snares connected with said snare holders, and means for adjusting one of said holders radially of the drum to tension said snares, said means including slidable means for supporting said adjustable snare holder.

2. In a drum snare unit, a pair of snare holders mounted on opposite sides of a drum, a plurality of snares connected with said snare holders, and screw means for adjusting one of said holders radially of the drum to tension said snares, said means including slidable means for supporting said adjustable snare holder.

3. In a drum snare unit, a pair of hollow snare holders mounted on opposite sides of a drum, a plurality of snares connected with the interior of said snare holders, one end of each snare being resiliently supported within a snare holder, and means for adjusting one of said snare holders radially of the drum to tension said snares.

4. In a drum snare unit, a pair of hollow snare holders mounted on opposite sides of a drum, one or both of said holders being pivotally mounted on the drum, a plurality of snares connected with said snare holders, each of said snares having one end thereof resiliently supported within a snare holder, and means for adjusting one of said snare holders radially of the drum to tension said snares.

5. In a drum snare unit, a pair of hollow snare holders mounted on opposite sides of a drum, a plurality of snares connected with the interior of said snare holders, each of said snares having one end thereof resiliently mounted within one snare holder and the opposite end thereof unyieldingly connected with the other snare holder, and screw means for adjusting one of said snare holders radially of the drum to tension said snares.

6. In a drum snare unit, a pair of hollow snare holders mounted on opposite sides of a drum, one of said holders being pivotally mounted thereon, a plurality of snares connected with said holders and extending rectilinearly from one

to the other, resilient means within the holder for supporting one end of each snare in a snare holder, and means for adjusting one of said snare holders radially of the drum to tension said snares.

7. In a drum snare unit, a pair of hollow snare holders mounted on opposite sides of a drum, one of said holders being pivotally mounted thereon, a plurality of snares connected with said holders and extending rectilinearly from one to the other, spring means within the holder for supporting one end of each snare in a snare holder, and screw means for adjusting one of said snare holders radially of the drum to tension said snares.

8. In a drum snare unit, a supporting bracket carried by the drum, a slidable bracket carried by said supporting bracket, a snare holder carried by said movable bracket, and screw means carried by said supporting bracket for adjusting said movable bracket, and thereby said snare holder, toward and away from the drum.

9. In a drum snare unit, a supporting bracket carried by the drum, a slidable bracket carried by said supporting bracket, a snare holder tiltably mounted upon said movable bracket, and screw means for adjusting said movable bracket, and thereby said snare holder, toward and away from the drum.

10. In a drum snare unit, a supporting bracket carried by the drum, a slidable bracket carried by said supporting bracket and movable thereon, a snare holder tiltably mounted upon said movable bracket, a plurality of snares carried by said snare holder and spring tensioned in relation thereto, and screw means for adjusting said movable bracket, and thereby said snare holder, toward and away from the drum.

11. In a drum snare unit, a supporting bracket adapted to be mounted upon a drum body and provided with a lateral arm, a tensioning bracket slidably mounted upon said bracket lateral arm, a snare holder connected with said tensioning bracket and movable therewith, a plurality of snares connected with said snare holder, and screw means for actuating said tensioning bracket and snare holder to tension said snares, said means comprising a screw connected with said supporting bracket and a nut provided with a tubular portion into which said screw telescopes.

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