

G. W. DU LANY.

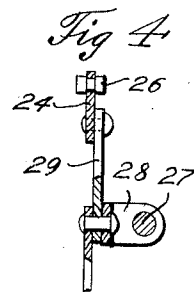
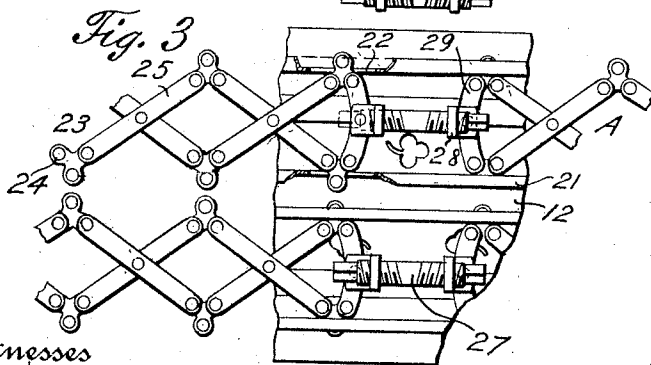
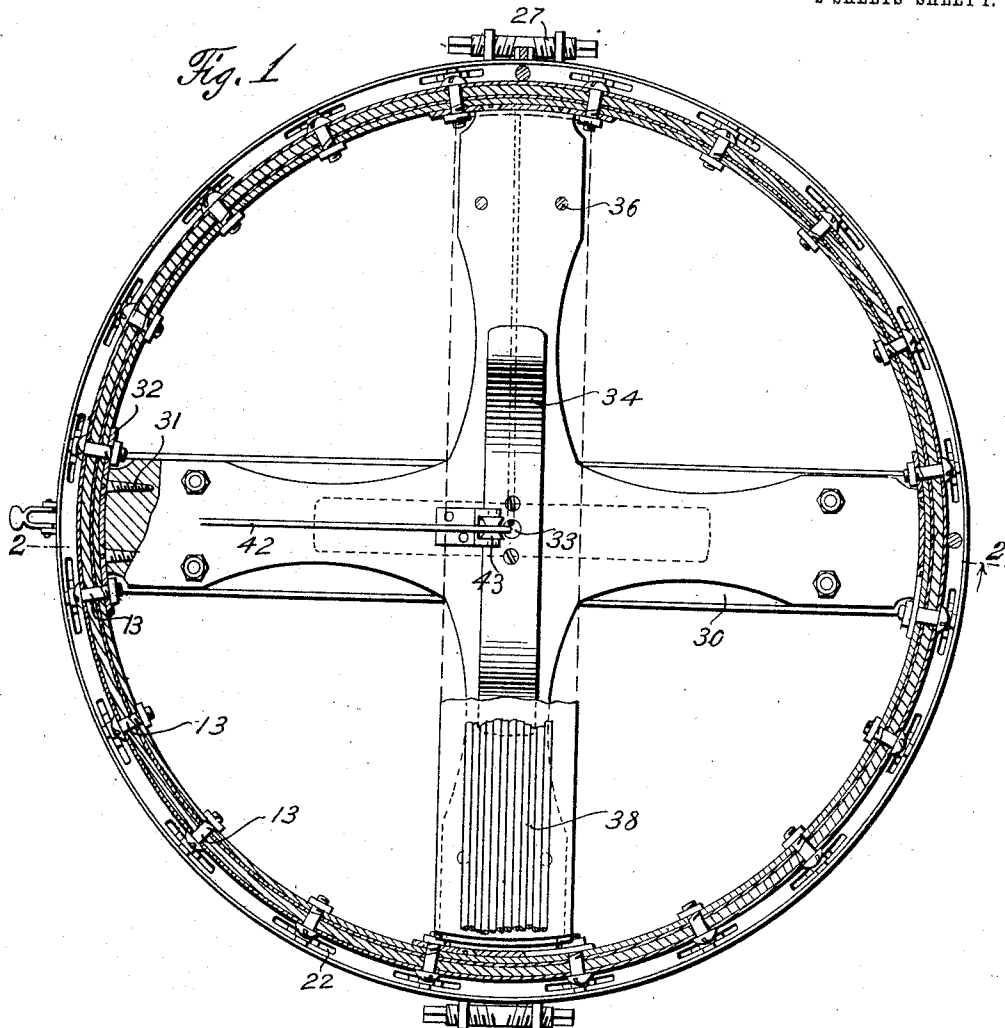
DRUM.

APPLICATION FILED NOV. 8, 1909.

974,647.

Patented Nov. 1, 1910.

2 SHEETS-SHEET 1.



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2 SHEETS-SHEET 2.

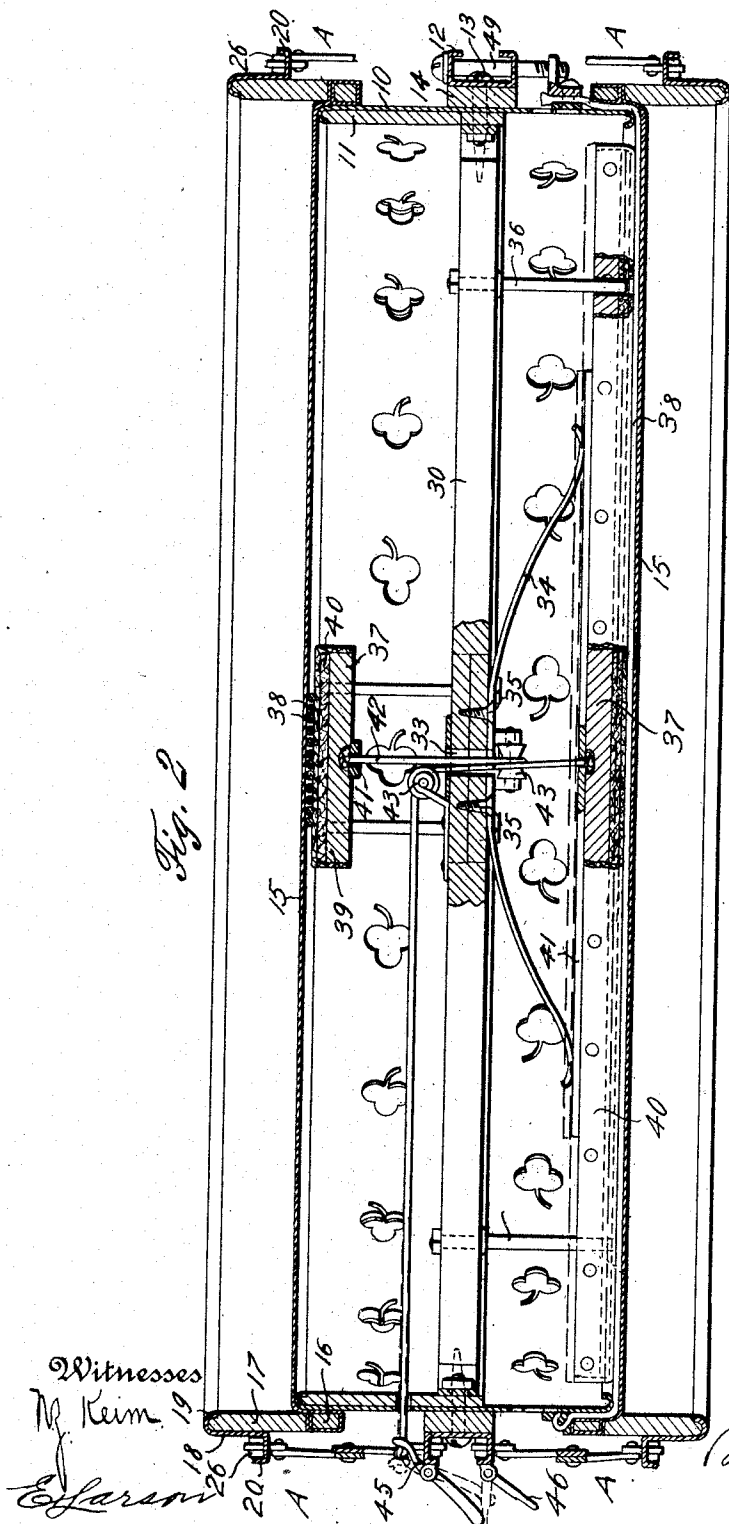
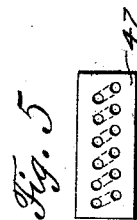
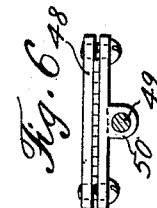
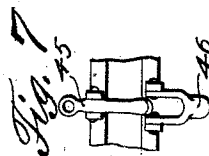


Fig. 2



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UNITED STATES PATENT OFFICE.

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DRUM.

974,647.

Specification of Letters Patent.

Patented Nov. 1, 1910.

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To all whom it may concern:

Be it known that I, GEORGE W. DU LANY, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Drums, of which the following is a specification.

This invention relates to drums and is designed to provide a means whereby the heads thereof may be tightened with one movement, thus eliminating the necessity of tightening a series of straps as heretofore.

A further object of this invention is to construct a drum of this type and character that will be provided with mutes which may be brought to bear against the snares at the will of the operator.

With the above and other objects in view this invention consists in the construction, combination and arrangement of parts all as hereinafter more fully described, claimed, and illustrated in the annexed drawings, wherein:

Figure 1 is a central horizontal section of a drum constructed in accordance with the present invention; Fig. 2 is a vertical transverse section taken along line 2—2 of Fig. 1; Fig. 3 is a partial side elevation illustrating the means whereby the heads are tightened; Fig. 4 is a central section of a link forming the connections of the lazy tong bars, parts thereof being broken away; Fig. 5 is an elevation of the means of securing one extremity of the snares; Fig. 6 is a plan view of the adjustable snares engaging clamp; Fig. 7 is an elevation of the means for operating the mutes and retaining the same from engagement with the snares.

The drum forming the subject-matter of the present invention comprises the metal drum cylinder 10, which has the edges thereof turned in and is partially lined with the wooden cylinder 11. If it is desired the wooden cylinder 11 may completely line the outer cylinder 10, or one-half of the drum cylinder 10 may be constructed of wood.

A U-shaped ring 12 is secured to the drum cylinder 10 by the bolts 13, said bolts passing through the outer cylinder and the wooden cylinder 11. To provide a substantial foundation for said ring and also to provide a means whereby the same may be held a sufficient distance from the body of the cylinder 10 in order to bring it in alinement

with the tightening hoops, a wooden ring 14 is interposed between said U-shaped ring 12 and the drum cylinder.

The heads 15 constructed in the usual manner, that is having the ring 16 engaging the drum cylinder, are secured on each side of said cylinder, and are held in place by the tightening hoops 17. To provide a means whereby the hoops 17 may be brought to bear on the ring 16 with sufficient force to tighten the heads, there are carried on the outer edges thereof by the inwardly curved flanges 19 the rings 18, said rings having formed on the lower side thereof the outwardly extending flange 20 which is in direct alinement with the side flanges 21 of the U-shaped ring 12.

In the side flanges 21 of the ring 12 and the flange 20 of the ring 18 are a series of registering orifices or slots 22 in which operate the joints of a lazy tong structure. These joints comprise the links 23 which have three radiating lugs 24, to two of which are attached the bars 25 of the lazy tongs and in the other is seated the pin 26, said pin bearing against the inner faces of the flanges 20 and 21. Each system of this lazy tong structure indicated in general as A encircles approximately one-half of the drum cylinder 10 between the flanges 20 and 21 and has its extremities secured to a right and left hand bolt 27, by the angle iron 28 which is carried by the short links 29 of the lazy tongs and has the threaded orifices therein for the reception of the bolt 27. Thus it will be seen that upon drawing the angle irons 28 toward each other by the rotation of the bolt 27 the joints of the lazy tongs will tend to converge thus drawing the ring 18 and in turn the hoop 17 toward the central horizontal plane of the drum and as a result tightening the head. In a double headed drum as is shown in the accompanying drawings this system is duplicated on each side thereof necessitating the use of four bolts and four systems of lazy tongs, but in a single headed drum two systems and two bolts are necessary.

A pair of crossed braces 30 are secured to the interior of the cylinder and are disposed in the same horizontal plane as the U-shaped ring 12. These braces are held by the screws 31 which pass through a plate 32 carried on the interior of the cylinder by the bolts 13

which attach the said U-shaped ring to the cylinder. These braces are formed in any usual manner and are pierced by the orifice 33 located centrally at their junction. A
 5 spring 34 is carried by each of these braces by the screws 35 and extends longitudinally with respect thereto. These springs are also pierced with openings which are adapted to register with the opening or orifice 33 of the
 10 braces. At each extremity of the braces 30 are the upright pins 36 on which reciprocate the mutes 37, said mutes being adapted to rest on the springs 34 and to be retained against the snares 38 thereby. These mutes
 15 comprise a wooden bar 39 having a covering of felt 40 on one side thereof, oppositely disposed to which is an orificed plate 41 through which the operating cord 42 passes and is secured. The operating cords 42 for
 20 the mutes pass through the orifice 33 in opposite directions and over the rollers 43, adjacent said orifice and on opposite sides thereof, to the openings 44, in the drum cylinder. The terminal of each cord 42 is se-
 25 cured to the extremity of a lever 45 by which it is operated. When it is desired to retain either mute from contact with the snares 38 the corresponding lever 45 is pressed toward the cylinder of the drum and is retained in
 30 this position by the hasp 46 as illustrated in Fig. 2 by the dotted lines. The snares are of the usual construction and are laced at one extremity through the leather strap 47 retained under the hoop 16 of the drum
 35 head, as shown in Fig. 5 and are clamped between the plates 48 at the other, said plates being movable vertically on the screw 49 which passes through the flanges 21 of the U-shaped ring 12 and is threaded into
 40 the eye 50 carried on the exterior of said plates. From this construction it will be seen that the tautness of the snares may be regulated as desired.

The construction of the drum in accord-
 45 ance with the present invention is highly advantageous inasmuch as it eliminates the use of the numerous straps and cords which were heretofore necessary to tighten the heads, and consolidating the same into one
 50 mechanism.

Having thus described the invention, what I claim as new is:—

1. In a drum of the class described, the combination with a drum cylinder having
 55 heads carried thereon, said heads being tightened by hoops supported by the same, of rings secured to the upper edges of said hoops having an outwardly formed flange on the lower side thereof, said flange having
 60 slots formed therein at regular intervals, a U-shaped ring carried midway of the drum cylinder provided with slots in the arms thereof adapted to register with the similar
 65 openings in the hoop rings, means operating in said slots for drawing together the hoop

rings and tightening the heads, and means carried on the interior of the drum for regulating the tone thereof.

2. In a drum of the class described, the combination with a drum cylinder having
 70 heads carried thereon, said heads adapted to be tightened by hoops supported by the same, of rings carried on the upper edges of said hoops having the lower sides thereof
 75 flanged outwardly, said flanges having slots therein at regular intervals, a U-shaped stationary ring carried midway on the exterior of the drum cylinder, having a series of
 80 slots formed in the arms thereof, a lazy tong structure adapted to reciprocate in said slots, and means for drawing together the elements of said lazy tong structure and tight-
 85 ening the head.

3. In a drum of the class described, the combination with a drum cylinder having
 85 drum heads carried thereon, of tightening hoops operating against said drum heads, outwardly flanged rings carried on the upper edges of said tightening hoops, hav-
 90 ing slots formed in the flange thereof at regular intervals, a stationary U-shaped ring secured midway of the drum cylinder and provided with a series of slots therein at
 95 regular intervals adapted to register with the similar openings in the hoop rings, a lazy tong structure interposed between said rings and provided with transverse pins at
 100 the joints, said pins adapted to bear against the surface of the ring adjacent said slots and permit the joints to reciprocate, and means for drawing together the elements of
 105 said lazy tong structure and tightening the drum heads.

4. In a drum of the class described, the combination with a drum cylinder having
 105 heads carried thereon, of means secured to the drum cylinder and operating against the heads for tightening the same by a continuous mechanical movement, crossed braces
 110 carried on the interior of the drum cylinder, mutes operating on said crossed braces, and means whereby said mutes may be operated.

5. In a drum of the class described, the combination with a drum cylinder, snares
 115 disposed at right angles under said heads, of means secured to the drum cylinder and operating against the heads for tightening the same by a continuous mechanical move-
 120 ment, crossed braces carried midway on the interior of the drum cylinder, springs supported thereby, vertical guides at each longitudinal extremity thereof, and mutes
 125 adapted to be reciprocated on said guides and be retained against the snares by said springs, as and for the purpose set forth.

6. In a drum of the class described, the combination with a drum cylinder, snares
 130 disposed at right angles under said heads, of means secured to the drum cylinder and operating against the heads for tightening the

same by a continuous mechanical movement, crossed braces carried midway on the interior of the drum cylinder having a central orifice at the junction thereof, springs carried on said braces, vertical guides at each longitudinal extremity thereof, mutes adapted to reciprocate on said guides and be retained against the snares by said springs, and means for operating said mutes and retain the same from contact with said snares.

7. In a drum of the class described, the combination with a drum cylinder, snares disposed at right angles under said heads, of means secured to the drum cylinder and operating against the heads for tightening the same by a continuous mechanical movement, crossed braces carried midway on the interior of the drum cylinder having a central orifice at the junction thereof, springs carried on said braces, vertical guides at each longitudinal extremity thereof, mutes adapted to reciprocate on said guides and be retained against the snares by said

springs, and means comprising cords operating over rollers adjacent said opening and on opposite sides thereof for operating the mutes and retaining the same from contact with said snares.

8. A drum comprising a cylinder, heads carried on said cylinder, tightening hoops bearing against said heads carrying operating rings thereon, a stationary ring disposed midway of said drum cylinder, means interposed between said operating rings and stationary member for tightening the heads by a continuous mechanical movement, mutes operating on the interior of the drum, snares on the interior of the drum cylinder adapted to be engaged by said mutes, and means for securing said mutes comprising a lever and hasp.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. DU LANY.

Witnesses:

W. D. HAYNES,
G. C. BARTON.