(No Model.)

R. WURLITZER.

DRUM.

No. 373,873. Patented Nov. 29, 1887.

Fig. 1.

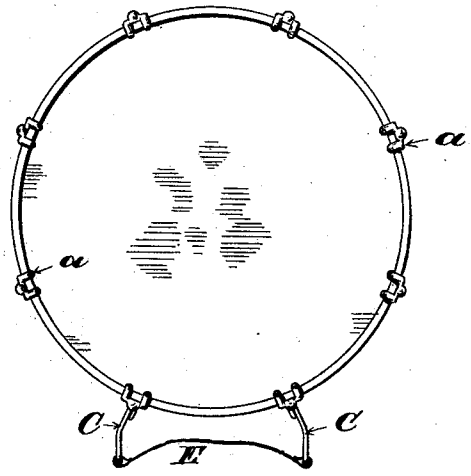


Fig. 2.

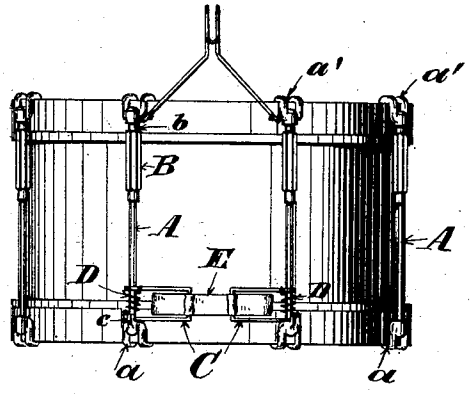


Fig. 3.

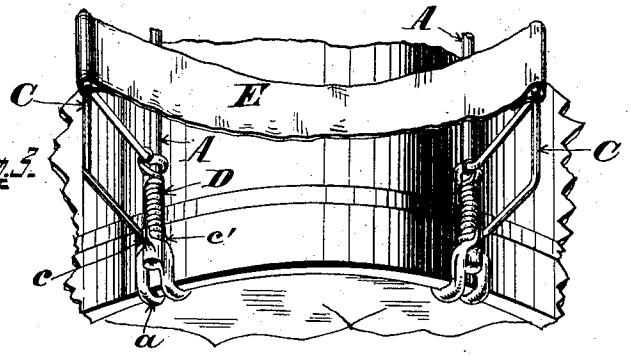
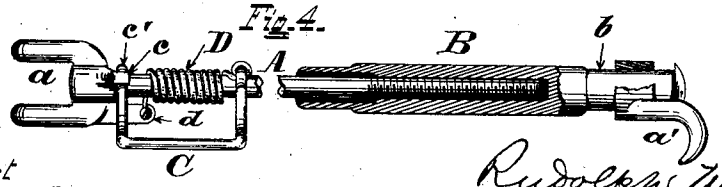


Fig. 4.



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UNITED STATES PATENT OFFICE.

RUDOLPH WURLITZER, OF CINCINNATI, OHIO.

DRUM.

SPECIFICATION forming part of Letters Patent No. 373,873, dated November 29, 1887.

Application filed April 7, 1884. Serial No. 126,884. (No model.)

To all whom it may concern:

Be it known that I, RUDOLPH WURLITZER, of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Drums, of which the following is a specification.

My invention relates, first, to means for tightening the hoops of the drum, and, second, to a novel knee-rest adapted to be folded down upon the periphery of said drum; and it consists in combining with a tightening-rod a claw or claws rigidly affixed to one end thereof to take over one of the hoops and incidentally hold the rod against axial rotation, a squared or polygonal coupling-sleeve threaded over the free end of the rod, and another claw or claws swiveled to the outer end of this coupling to take over the second hoop in a knee-rest composed of two carrying-frames pivoted to fold toward and open away from each other in a plane parallel, or nearly so, with the drum-heads, a flexible strap or band connecting the free ends of said frame, and detents or locking devices to hold them in their open position, and in the various other combinations and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a plan view of a drum-head showing the knee-rest attached and open. Fig. 2 is a front view with the knee-rest folded. Fig. 3 is a detail showing knee-rest and tighteners, and Fig. 4 is a sectional view of a tightener.

A represents a tightening-rod of suitable metal and provided at one end with hooks or claws *a*, one or more, preferably at least two, to take over the drum-hoop at said end, while the other end, which lies along the body of the drum, is screw-threaded. In order to hold the rod against axial rotation, which the ensuing description will show to be undesirable in this element of the tightening device, the claws are rigidly pinned or secured thereto. Thus when they have been caught over the drum-hoop they will resist any such tendency, however imparted. The threaded end of the tightening-rod enters a long threaded socket in a coupling-sleeve, B, the exterior of which sleeve presents a square or polygonal surface, to which a wrench or key may be applied and thereby take in or let out the rod. The solid head of this coupler has a neck, *b*, turned upon it, whereby means is afforded for a swivel-joint between said coupler and the hook or claw *a'*, which takes over the hoop at that end of the drum. It will be sufficient for the main features of this part of my invention if the connection is merely swiveling, to permit the coupler to be turned freely when the drum is to be strained or tightened; but in order to enable the claws at each end of the tightener to be properly fitted to their respective hoops at the very outset, before even the coupling is turned to take up the tightener, the neck upon said coupler is elongated, as shown, to permit the swivel-claw to slide sufficiently to reach its seat.

The knee-rest, referred to above as constituting a second feature of my invention, may be attached to the drum independently of the tighteners; but, for the reason already suggested—to wit, capacity of bodily removal—and also a saving in the number of parts, I prefer that it shall be supported upon two adjacent tighteners, and will herein describe it under such conditions, premising that the other mode of applying it will be readily apparent from this description. Near the lower ends of two adjacent tightening-rods, and most conveniently formed upon the hub or shank of the respective claws, which as a rule are of cast metal, are shoulders *c*, set out from the periphery of the rod and beveled or inclined on their contiguous faces, but cut away abruptly on the other side to afford a catch or stop. A skeleton-support, C, composed of a strong wire bent into substantially the form shown—that is, U-shaped, and advisably curved as a whole to conform to the curve of the drum-shell when folded down upon the latter—is pivotally secured to each of the tightener-rods by coiling the ends of its arms once around the latter and at some distance apart, the lower coil, *c'*, resting normally against the hub of the claw at that point and in a recess between the just-mentioned stop or shoulder and the rod. Springs D are coiled around the rods between the arms of the U-frames, one end of each spring being secured to a lug, *d*, from the hub of the claw and behind the beveled shoulder and the other end fastened to the upper arm of said frames. The springs are thus made to

serve a twofold purpose. They exert a constant tendency to shut the frames in toward each other and down against the side of the drum, and they hold them down against the hub elastically. The frames are connected together by a flexible strap or band, E, which forms the part actually in contact with the knee, and which, if desired, may be made adjustable in length. Now, supposing the knee-rest to be folded down upon the drum-body, the flexible portion will lie beneath the U-frames and be safely confined by them; but if it is desired to arrange the rest for use the frames will be opened against the stress of their respective springs, and as they are swung back the lower arm of each will ride up the inclined face of the shoulder from the claw-hub, yielding elastically for the purpose, and then will snap down and be locked behind the abrupt face or stop portion of the shoulder. With each frame thus opened and fastened the rest is ready for use. To close it again, the lower arms are simply sprung out from behind the stops, when the coiled springs urge them at once down upon the drum.

The arms of the U-frames may be rigid; but in practice I prefer to give them enough elasticity to enable the lower arm to be sprung toward the other and relieve the coiled spring to that extent; nor do I confine myself to the specific application of coiled spring, shoulder, and stop for the purpose of locking and releasing a knee-rest of the described construction and mode of operation, considering that there are many equivalent locking devices that can be applied and feasibly used without departing from the principle of the invention.

I claim—

1. The combination, in a drum, with the drum-hoops, of tighteners capable of extension and retraction, as described, and having a folding knee-rest attached thereto.

2. As an improvement in drums, a knee-rest consisting of the U-frames pivoted to fold toward each other, springs by which they are urged toward a folded position, the stops to hold them open, and the flexible strap which connects them and forms the actual rest.

3. The combination, in a drum, with the hoops and tighteners, of the knee-rest, frames pivoted upon such tighteners, the beveled shoulders, the coiled spring, and the flexible strap, substantially as described.

RUDOLPH WURLITZER.

Witnesses:

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