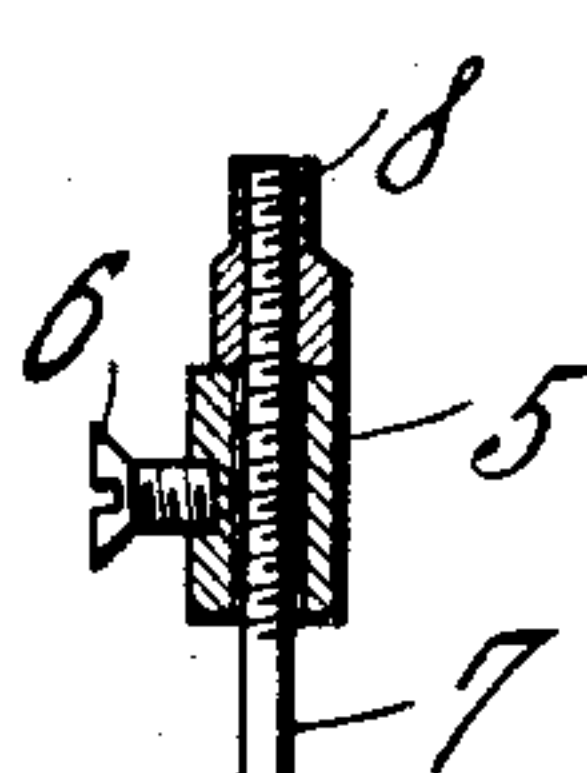
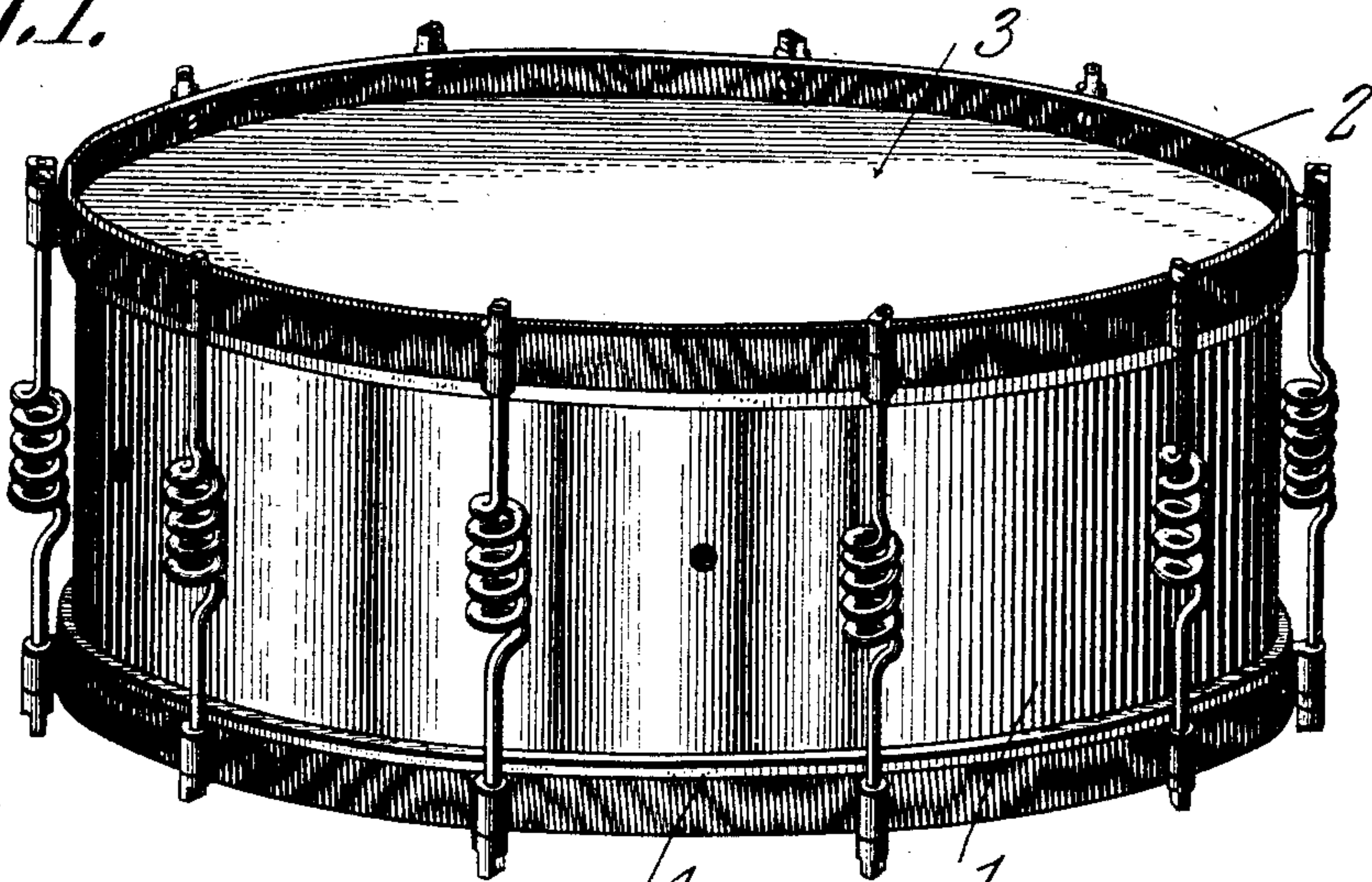


I. H. SAPP.  
 DRUMHEAD TIGHTENER.  
 APPLICATION FILED JUNE 7, 1909.

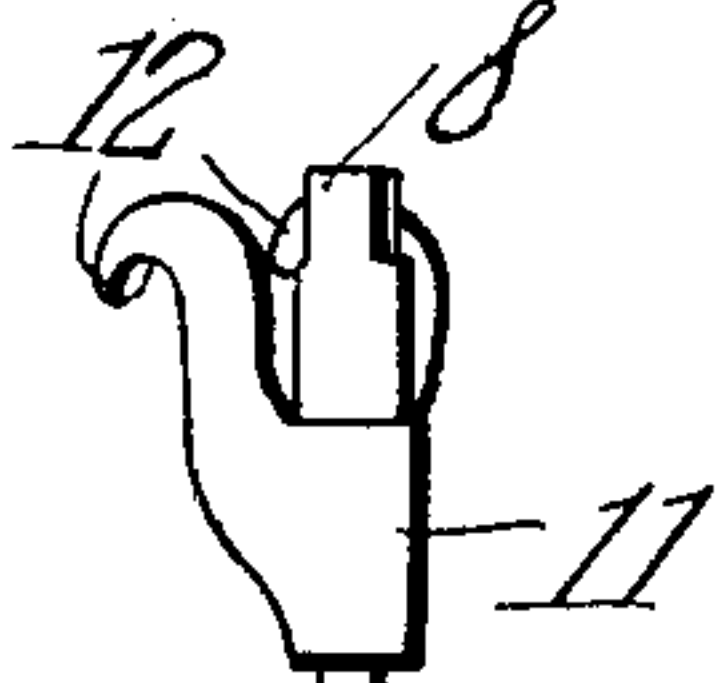
966,477.

Patented Aug. 9, 1910.

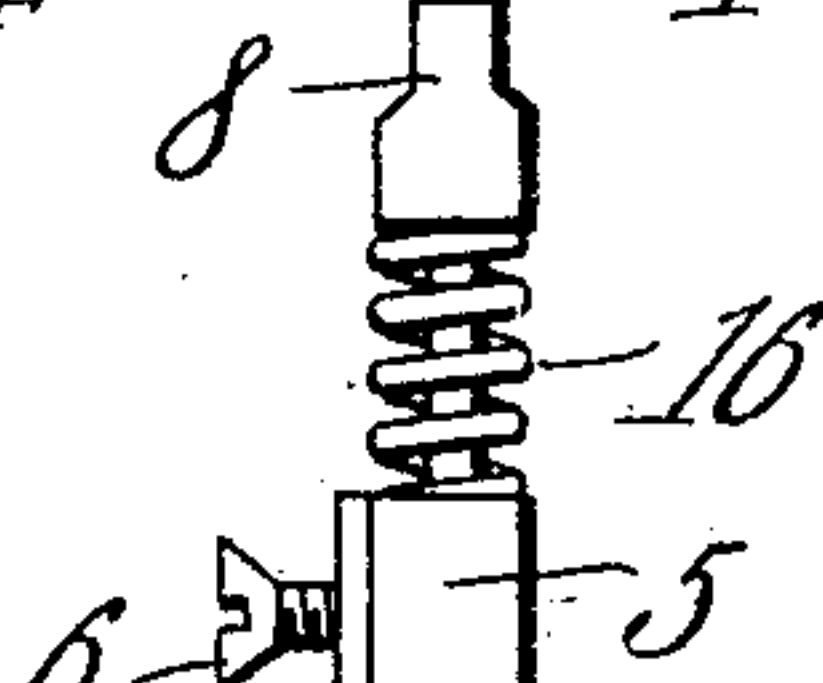
*Fig. 1.*



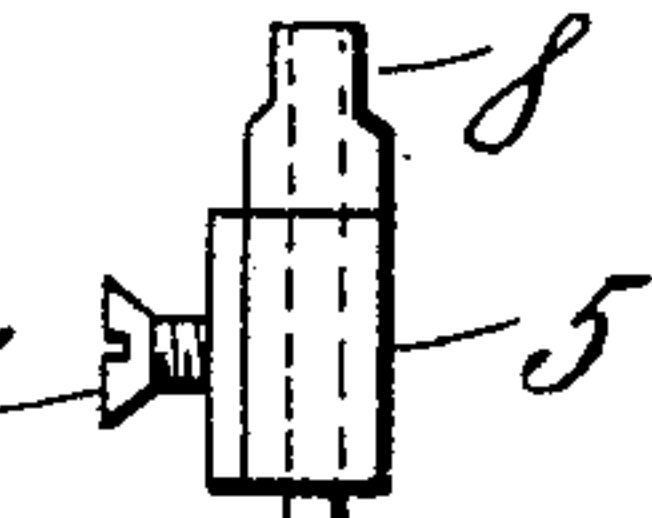
*Fig. 2.*



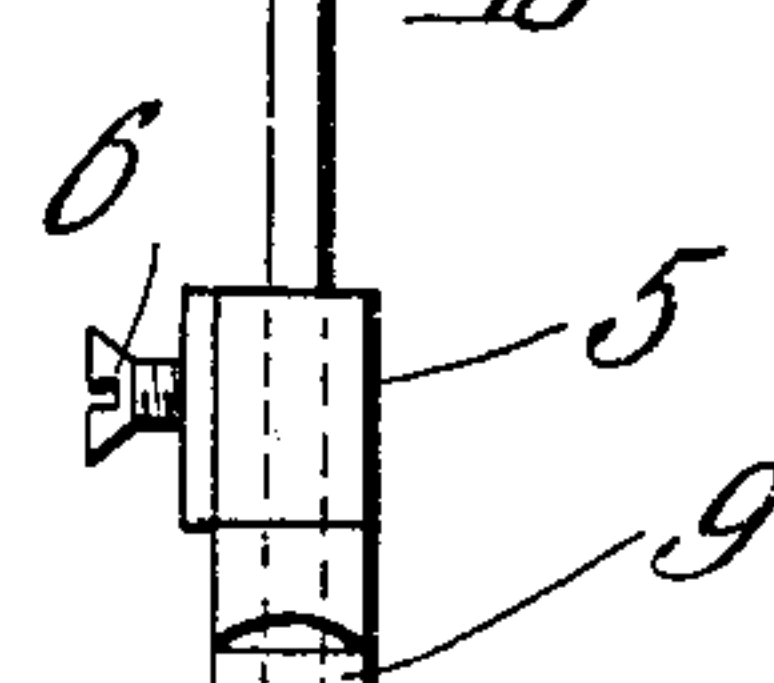
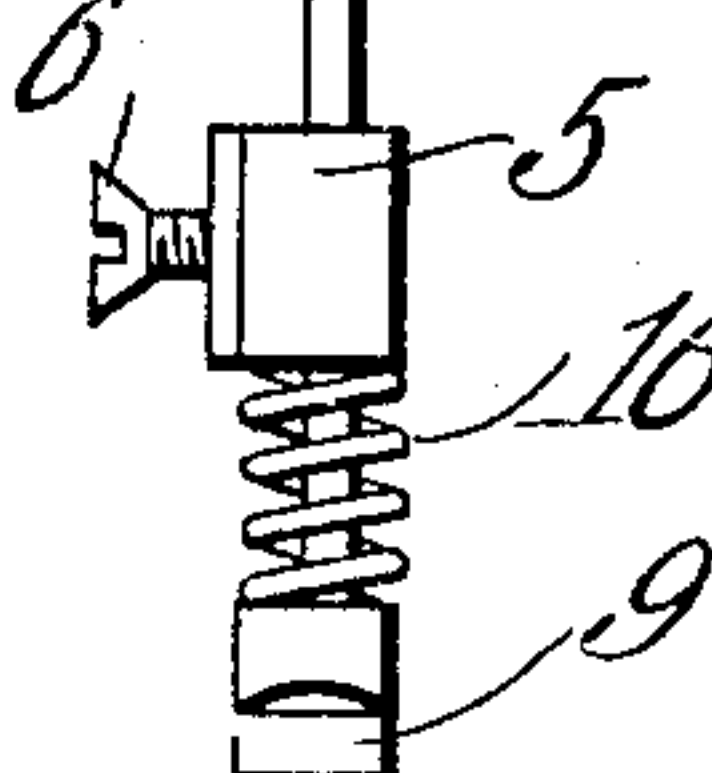
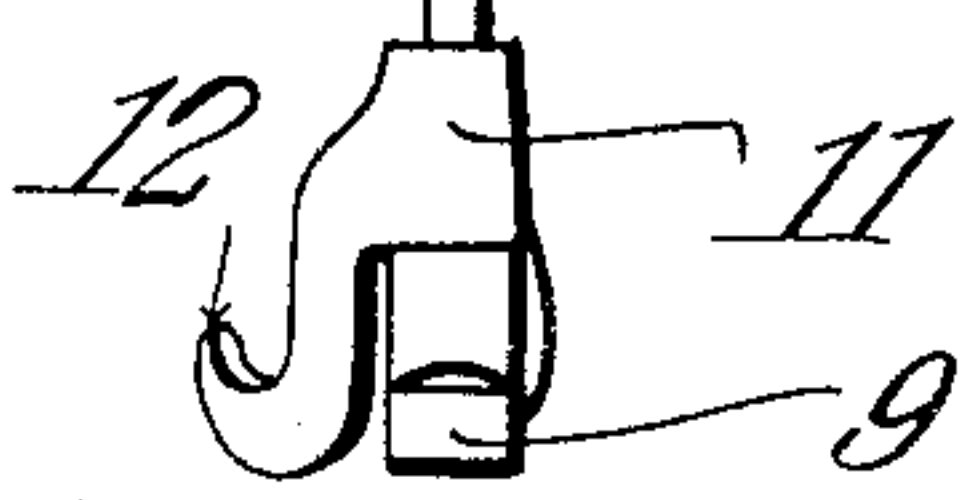
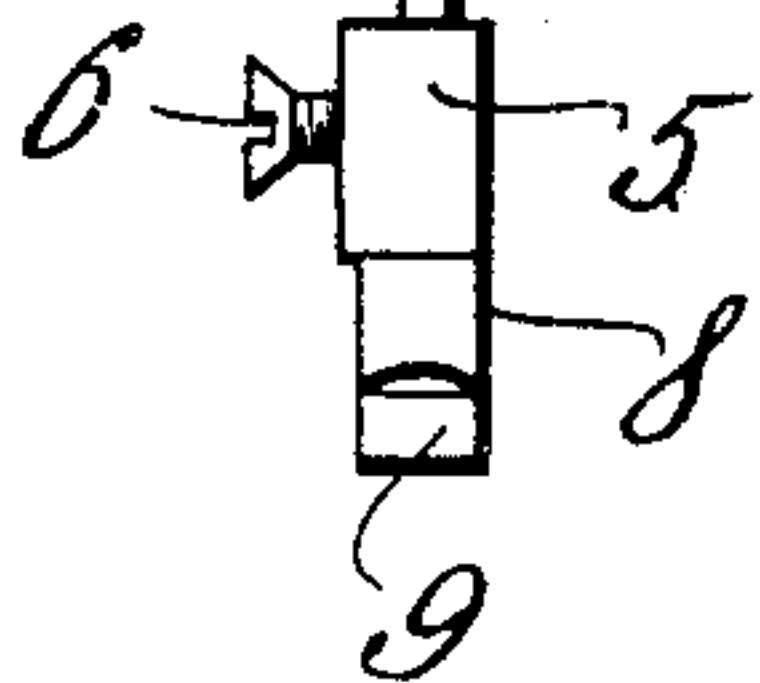
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



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 Attorneys



# UNITED STATES PATENT OFFICE.

ISAAC HUDSON SAPP, OF CHEYENNE, WYOMING.

DRUMHEAD-TIGHTENER.

966,477.

Specification of Letters Patent.

Patented Aug. 9, 1910.

Application filed June 7, 1909. Serial No. 500,588.

*To all whom it may concern:*

Be it known that I, ISAAC HUDSON SAPP, a citizen of the United States, residing at Cheyenne, in the county of Laramie and State of Wyoming, have invented a new and useful Drumhead-Tightener, of which the following is a specification.

By way of explanation I will state, that, under favorable circumstances, when the head of a drum is struck, the same vibrates, moving the column of air inside of the drum and transmitting the concussion to the head and snares in the opposite end of the instrument. To produce this effect, there must be a certain amount of elasticity, either in the head of the drum or in the tightening mechanism. In the ordinary straight rod whereby the heads of the drum are connected and tightened, there is no elasticity, this property residing in the heads of the drum alone. The elasticity of the drum head is soon destroyed, and the head becomes lifeless and incapable of vibrating under the blow of the drum stick. The superior tonal properties of the old time rope drum were due to the resiliency of the rope whereby the heads were connected to each other and tightened; however, as this method of tightening the heads of the drum resulted in an unsightly structure, inconvenient in manipulation and uncertain in operation, the rope-tightened drum has passed into disuse.

It is the object of this invention to provide a tightener for drum heads which shall combine in a single device, the advantages incident to the ordinary tightening rod, with the desirable features of a rope tightener, so that, if desired, the drum heads themselves may be made inelastic, the connection between the heads furnishing the desired resiliency.

With these and other objects in view, as will hereinafter more fully appear, the invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the accompanying drawings, and particularly pointed out in that portion of this instrument wherein patentable novelty is claimed for certain distinctive and peculiar features of the device, it being understood, that, within the scope of what hereinafter thus is claimed, divers changes in the form, proportions, size, and minor details of the structure may be made, without departing from the spirit or sacri-

ficing any of the advantages of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings.

In the accompanying drawings, Figure 1 shows in perspective, a drum equipped with one form of tightening means constructed in accordance with my invention. Fig. 2 is a side elevation of the tightener shown in Fig. 1, parts being shown in section, better to illustrate the means whereby the tightener is connected with the heads of the drum; Fig. 3 is a perspective of a tightener resembling in form the one shown in Fig. 2, but modified slightly; Fig. 4 is a side elevation of a modified form of the invention, compressible instead of retractile resilient elements being employed; and Fig. 5 is a side elevation illustrating a still further modification of my invention.

Referring particularly to Fig. 1, the numeral 1 denotes the body or shell of a drum, surrounded by the usual hoops 2, adapted to engage between themselves and the body of the drum, the peripheries of the heads 3 of the instrument, the hoops 2 being encircled by bands 4, usually of wire, whereby the extreme edge of the heads 3 may be connected to the hoops 2.

Referring to Figs. 1 and 2, it will be seen that the hoops 2 carry a plurality of oppositely disposed, equally spaced sockets 5, each of which is provided with a face conforming to the arc upon which the hoops of the drum are struck. This face of the socket 5 is held in close contact with the hoop 2 by means of a screw 6, which, passing outwardly through the hoop, engages an aperture provided for its reception in the socket 5. The oppositely disposed sockets 5 are apertured in alinement, to receive slidably, the extremities of a rod 7. This rod 7, in its preferred form, is fashioned from steel, coiled while hot, to form, intermediate its ends, a helical portion 10 which is subsequently given a spring temper. It may profitably be said at this point that there should not be enough resiliency in this member 10 to prevent the tightening up of the heads of the drum, and, upon the other hand, this member 10 should not be so hard and unyielding, that it will not respond to the blows of the drum stick. The extremities of the rod 7 protrude beyond the faces of the



sockets 5 to which it is connected, and these protruding portions are threaded to receive nuts 8, which, if desired, may be provided with polygonal heads 9, whereby the nuts 5 may be grasped for rotation by a key or like instrument.

Referring now to the form shown in Fig. 3, it will be seen that the socket 11 is provided with hooked fingers 12 adapted to engage the hoops 2 of the drum, this construction being desirable in some instances, to replace the sockets 5 and screw 6 of Fig. 2. It will be noted in Fig. 3, that the helical spring 14 is smaller diameter than the one shown in Fig. 2, and that its convolutions are disposed more closely together, it being understood, that the diameter and construction of this helical member may be varied to suit the exigencies of the proposed use.

In the form shown in Fig. 4, the rod 15 is made substantially straight from end to end, resilient elements being introduced, to act compressively when the nuts 8 are tightened, between said nuts 8 and the sockets 5. It is to be understood that these resilient elements may be of any form, and that they may be fashioned from any substance having the desired degree of resiliency. In the present instance, in order to present a concrete embodiment, I have shown them in the form of helical springs 16.

In the form shown in Fig. 5, the connecting member is formed in two sections 17 and 18. The section 17 is somewhat longer than the section 18, and is provided with a transverse head 19 which is rigidly connected with the end of the section. The section 18 is provided with a head 20, rigidly mounted upon its extremity, and from this head 20, adjacent the ends thereof, rise arms 21, united by a head 22, having an aperture in which the section 17 is adapted to reciprocate. The head 19 is apertured to receive the arms 21, and is slidably mounted thereon, a resilient compression member being introduced between the heads 19 and 22. As with the resilient element described in connection with Fig. 4, the resilient element of Fig. 5 may be variously formed. It may, if desired, take the form of a helical compression spring 23.

The operation of the device will be apparent to any person skilled in the art to

which my invention appertains, upon reading the foregoing description in connection with the drawings, but it may be stated, generally, that, in the forms shown in Figs. 1, 2 and 3, when the nuts 8 are tightened, the resilient elements, owing to their retractile properties, will maintain the desired condition in the heads of the drum; and that, when the forms shown in Figs. 4 and 5 are employed, when the nuts 8 are rotated, the resilient elements, owing to their tendency to resist compression, will maintain the heads of the drum in the desired condition.

In conclusion, it may be said that my invention gives elastic properties to drum heads that are not in themselves elastic; that it preserves the elastic properties of the ordinary drum head and renders it impossible to tighten the head to such a degree that it will not vibrate; that it allows the drum to be tightened up when not in use, without danger of destroying the elastic properties of the heads; that it renders the act of drumming much easier; and finally, that it gives the instrument an artistic appearance.

Having thus described my invention what I claim as new and desire to protect by Letters Patent is:

1. A device of the class described comprising sockets provided with means for attaching the same to the hoops of a drum; rods slidably mounted in the sockets; a resilient member surrounding the rods and operative to effect a yieldable mounting of the rods in the sockets; means mounted upon the rods for adjusting the resilient member and for retaining the rods within the sockets.

2. A device of the class described comprising sockets provided with means for attaching the same to the hoops of a drum; rods slidably mounted in the sockets; a resilient member surrounding the rods and operative to effect a yieldable mounting of the rods in the sockets; and nuts threaded to engage the ends of the rods and operative to adjust the resilient member and to retain the rods within the sockets.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

ISAAC HUDSON SAPP.

Witnesses:

HIRAM SAPP,

B. H. FINKBINER.