Nov. 9, 1948. B. CARTER 2,453,492

BARREL CLOSING RING

Filed March 29, 1945

2 Sheets-Sheet 1

Fig. 1.

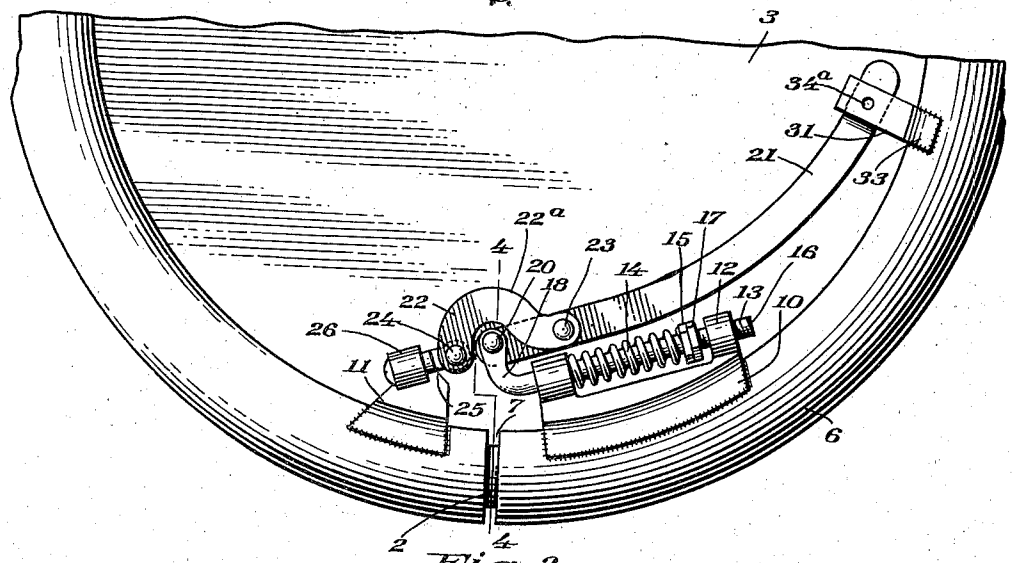
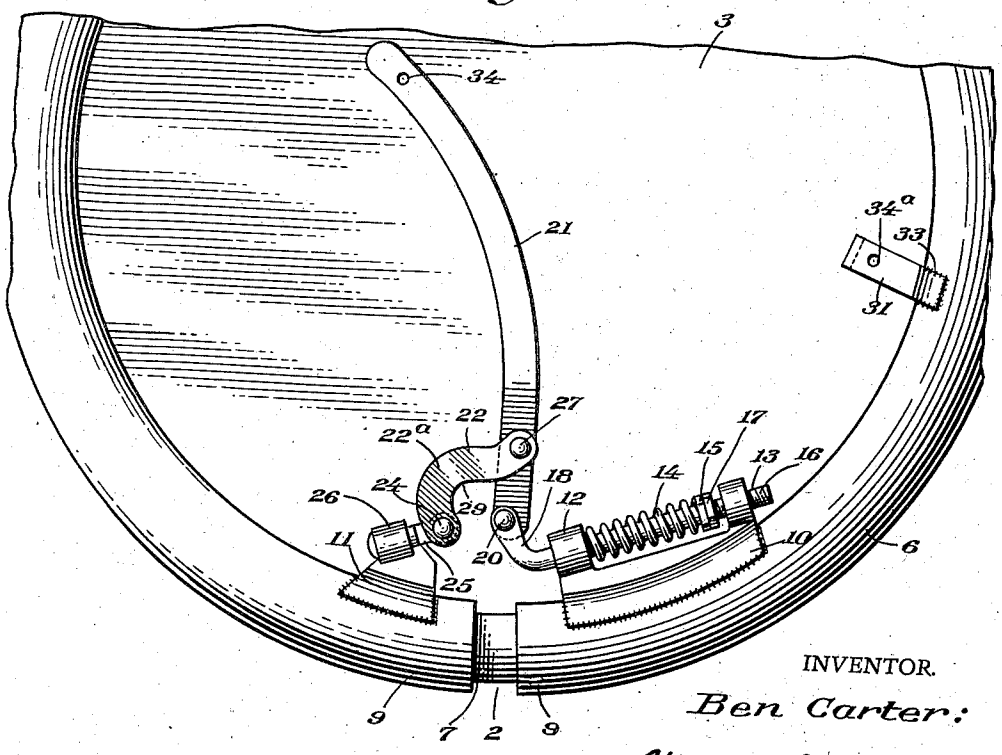


Fig. 2.



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Fig. 3.

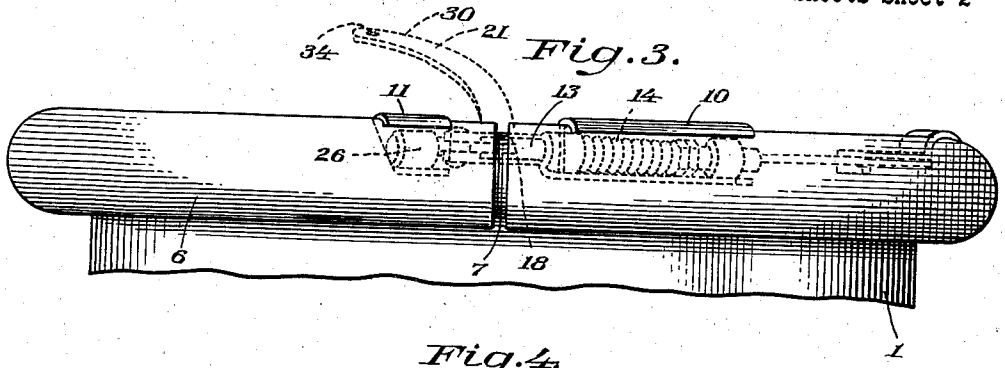


Fig. 4.

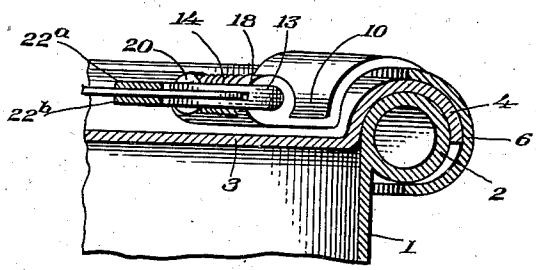


Fig. 5.

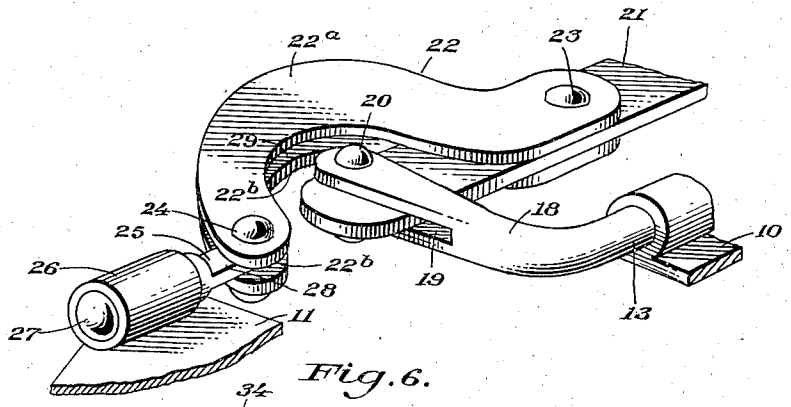
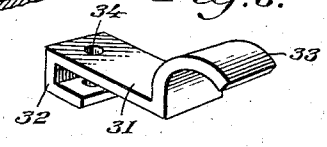


Fig. 6.



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2,453,492

BARREL CLOSING RING

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Application March 29, 1945, Serial No. 585,563

1 Claim. (Cl. 24—71)

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This invention relates to a closing or clamping ring for steel barrels or drums having removable heads.

The main purposes of my invention are (1) to provide a spring tensioning device to automatically tighten the ring whenever the barrel or drum is handled, rolled or jarred; (2), to provide a locking device, including a lever and link having pivot points in fulcrums which are off-center when the operating mechanism is in closed position, and to provide a holding keeper for the operating lever in closed position; and (3), provide a lever having limited lateral free movement whereby the same can be raised up from the drum or barrel head to facilitate operation and to prevent injury to the hands and the like. My operating mechanism does not extend above the top rim of a drum or barrel so that there is no interference with stacking or the like, and the parts are simple, sturdy and practical and there are no parts likely to get out of order or become broken or deranged.

Other and equally important objects and advantages of my invention will be apparent from the following description and drawings, and it is pointed out that changes in form, size, shape, materials and construction and arrangement of parts is permissible and fall within the purview of my inventive concept and the scope of the appended claim.

In the drawings, wherein I have illustrated a preferred form of my invention:

Figure 1 is a fragmentary top plan view of a barrel or drum with my invention applied thereto and in closed or clamping position;

Figure 2 is a fragmentary top plan view of a barrel or drum with my invention applied thereto and in open position;

Figure 3 is a side view, and shows the operating handle in raised position in dotted lines;

Figure 4 is a section on the line 4—4 of Figure 1;

Figure 5 is a perspective view of the operating apparatus, and

Figure 6 is a perspective view of the holding keeper.

In the drawings, wherein like characters of reference are used to designate like or similar parts:

The numeral 1 designates a steel barrel or drum, which has the usual top rim bead 2 and depressed top or head 3 with an annular, arcute rim 4 fitting over the head. To hold the head on the drum or barrel, there is provided an annular clamping ring 6 which is semi-circular in cross-section and is split at 7. Fixed on the

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ring 6 adjacent the meeting ends 9 is a bearing bracket 10 and a swivel bracket 11. The bracket 10 has spaced ears 12 with aligned opening through which is mounted an L-shaped rod on link 13. About the link, between the ears 12, is a spring 14, which bears against an ear 12 and the adjusting nut 15 on the threaded end 16 of the link to adjust the tension of the spring, a lock and nut 17 holds the adjusting nut in adjusted position. The link has an inwardly and right-angularly bent extension 18 which is bifurcated as at 19 to receive a pin 20 on which is pivotally mounted the curved operating hand lever or handle 21. A curved U-shaped link 22 is pivoted at 23 on the handle adjacent the pin 20 and has its other end pivoted as at 24 to the straight pin 25 carried in the sleeve 26 on the bracket 11. The pin 25 has a head 27 and a flat end 28 and the sleeve 26 is set at an angle on the bracket 11. The curved link 22 is formed with spaced plates 22a and 22b and the curved part 29 receives the extension 18 and pin 20 so that the pivot point or fulcrum 20 is off-center of the pivot points or fulcrums 23 and 24 when the handle 21 is in the closed or clamping position of Figure 1, whereby to lock the handle in such position until it is positively released. The handle is mounted for some loose lateral movement so that it may be moved out from the drum head to the dotted line position 30 of Figure 3 to facilitate operation and prevent injury to the hands. A locking keeper plate 31 has an end hook 32 and an arcuate end 33 and is connected to the ring to receive the handle when in closed or clamping position.

In operation, the handle 21 is pulled out, as in Figure 2, to expand the ring, and pushed into the position shown in Figure 1 to contact the ring in clamping position about a drum top, and the spring 14 insures proper clamping engagement which is increased as the barrel or drum is rolled, handled, or jarred. An opening 34 is provided in the end of the handle registering with the opening 34a in the keeper 31 to receive a seal, if desired, when the lever is engaged with hook 32 of the keeper.

From the foregoing, it is believed that the operation and advantages of my invention will be apparent, but it is again pointed out that interpretation of its scope should only be conclusive when made in the light of the subjoined claim.

I claim:

A barrel closing ring having an opening therein, a bearing bracket mounted on the inner surface of the said ring spaced from the opening thereof,

a swivel bracket also mounted on the inner surface of the said ring spaced from the opening thereof and positioned on the opposite side of the opening from that on which the bearing bracket is mounted, an L-shaped rod with one leg rotatably mounted in said bearing bracket, and the other leg extended inwardly toward the center of the ring, a pin rotatably mounted in the said swivel bracket and having a head limiting longitudinal movement thereof toward the opening of the ring, a hand lever positioned within said ring with an end thereof pivotally mounted on the end of the centrally extended leg of the L-shaped rod, and a U-shaped link pivotally attached to the pin in the swivel bracket at one end and with the other end pivotally attached to the said hand lever.

BEN CARTER.

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