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DEVICE FOR HANDLING BARRELS, KEGS AND THE LIKE

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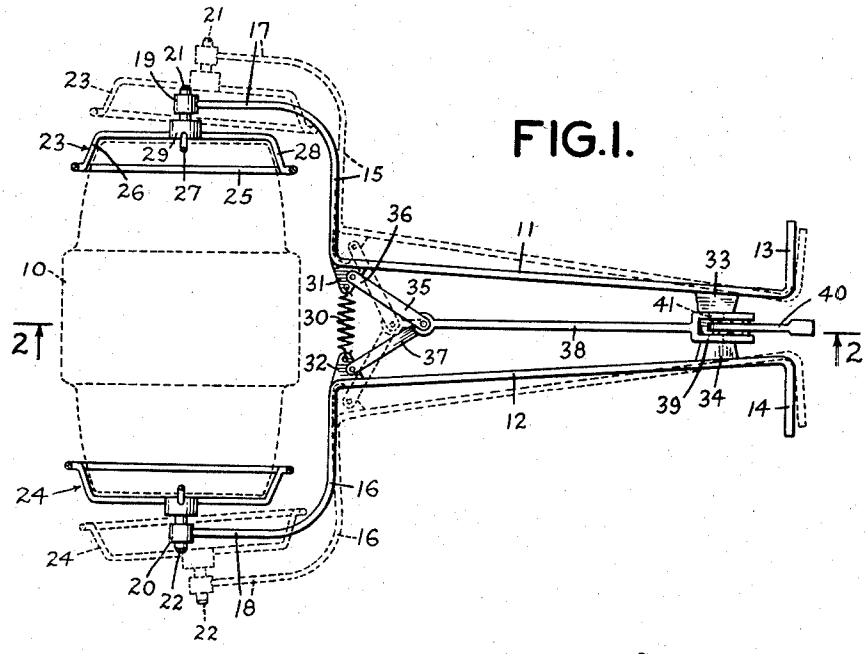


FIG.1.

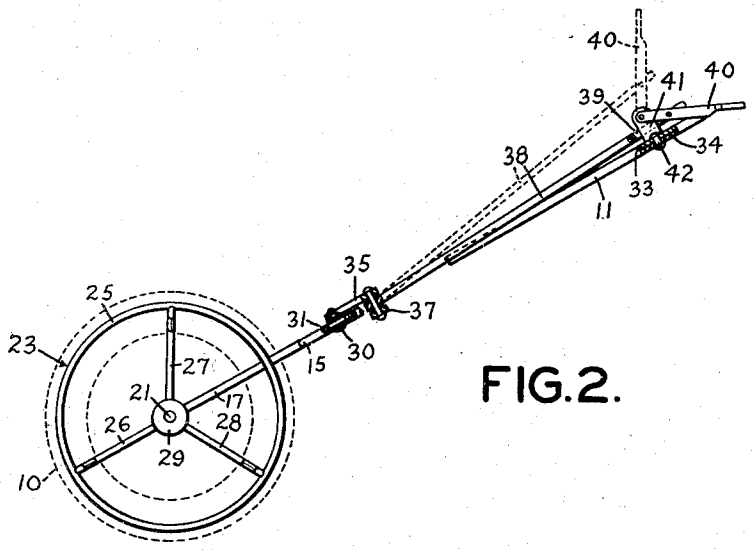


FIG.2.

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DEVICE FOR HANDLING BARRELS, KEGS AND THE LIKE

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8 Claims. (Cl. 294—4)

This invention relates to devices for facilitating the movement and handling of barrels, kegs and other articles of generally cylindrical shape and it relates particularly to a device by means of which beer kegs can be rolled from one location to another. Despite the fact that many different types of devices have been proposed in the past for handling barrels, beer kegs and the like, the most common means for handling them is to lay them on their sides and roll them by hand from place to place. Such an operation is laborious and tiresome especially when large numbers of kegs or barrels are handled during the course of the day.

The prior devices proposed for rolling kegs have been cumbersome, and heavy because it was deemed necessary to impose a lifting action by means of the handling device. To that end, wheels for moving the handling device from place to place and serving as fulcra and pivot shafts which had to be centered accurately with respect to the ends of the barrels or kegs were considered to be necessary. Inasmuch as these handling devices required considerable skill to center them with respect to the ends of the barrel or keg and added substantial weight to an already heavy article, very little advantage was gained by their use.

In accordance with the present invention, I have provided a device for handling and rolling kegs, barrels and the like which is light in weight, can be attached and removed and centered with respect to the axes of such kegs and barrels easily and with a minimum of skill and thereby greatly eases the work of rolling the barrels or kegs from place to place.

More particularly, the handling device embodying the present invention includes a pair of lightweight rotatable wheel-like elements which are adapted to engage the sides of the barrel adjacent to its ends in order to connect the barrel to towing or pushing handles by means of which the barrel can be pushed or pulled and caused to roll on its mid-portion. The wheels do not support the barrel or keg but they do support the handling device when it is detached from a barrel so that it can be rolled easily from one place to another. Inasmuch as the handling device does not support the weight of the keg or barrel but serves as a handle to push or pull it, it can be made of relatively lightweight material such as steel or aluminum tubing or the like. It can be readily rolled or picked up and carried because it weighs only a few pounds.

For a better understanding of the present invention, reference may be had to the accompanying drawings in which:

Fig. 1 is a plan view of a typical handling device for kegs, barrels and the like, with a portion of the gripping wheels shown in section to disclose details thereof; and

Fig. 2 is a view in section taken on line 2—2 of Fig. 1.

As shown in Fig. 1, a typical device for handling beer kegs, such as the metal keg **10** shown in dotted lines, may consist of a pair of arms **11** and **12** formed of steel tubing or other similar lightweight material. On one

end of each arm **11**, **12**, is a laterally bent portion **13** or **14** forming the manipulating handles for the device. The opposite ends of the arms **11** and **12** are bent laterally at **15** and **16** and then forwardly to form spaced extensions **17** and **18** to be disposed at opposite ends of a keg **10**, barrel or the like. The extensions **17** and **18** may be provided with bearings **19** and **20** which receive rotatably stub shafts **21** and **22** on the gripping wheels **23** and **24** of the device.

Each of the gripping wheels **23** and **24** includes a rim ring **25** formed of rod or tubing bent into a circle and joined by three or more spokes **26**, **27** and **28** to a hub **29** from which the stub shaft **21** or **22** projects. The spokes **26**, **27** and **28** extend radially from the hub and then are bent laterally at an angle of less than 90° so that they form with the rim **25** a converging socket-like structure to enable the ends of kegs or barrels of substantially varying diameter to be received within and engaged by the inclined portions of the spokes and centered in the gripping wheels.

The diameter of the rim **25** preferably is somewhat less than the maximum diameter of the keg **10** so that when the gripping wheels **23** and **24** engage the keg **10** the wheels will be out of contact with the ground or floor and the weight of the keg will be supported on its center band **10**.

Engagement of the wheels **23** and **24** with the keg is maintained by means of a spring **30** interposed between inwardly extending lugs or plates **31** and **32** on the arms **10** and **11**. Inward and outward movement of the wheels is permitted by means of a pair of pivotally connected plates **33** and **34** extending inwardly from the arms **11** and **12** adjacent to the manipulating handles **13** and **14**. The spring **30** normally urges the gripping wheels **23** and **24** together so that they will engage and retain a keg or barrel between them.

A toggle **35** is provided by means of which the arms **11** and **12** may be forced apart to receive or release the keg **10**. The toggle **35** includes a pair of links **36** and **37** having their ends connected respectively to the lugs **31** and **32** and to a drawbar or link **38** which extends lengthwise of and between the arms **11** and **12**. The drawbar **38** has a bifurcated end portion **39** which is connected to an operating lever **40** having one end pivotally mounted on a bracket **41** which is carried by the pivot pin **42** extending through the lugs **33** and **34** and joining them. Thus, when the operating lever **40** is pulled to the full line position shown in Figs. 1 and 2, the toggle **35** is collapsed and, with the aid of the spring **30**, draws the gripping wheels **23** and **24** together. When the operating lever **40** is lifted to the dotted line position shown in Fig. 2, the toggle **35** is expanded to the dotted line position shown in Fig. 1, thereby moving the arms **11** and **12** and the gripping wheels **23** and **24** apart.

It will be understood that the above-described handling devices can be made in a variety of sizes or provided with gripping wheels of different diameter to enable handling of different kinds and sizes of barrels, kegs and the like. The tapered arrangement of the spokes in the gripping wheels allows kegs of slightly varying sizes to be gripped even if they are somewhat dented or otherwise damaged or oversize or undersize.

Inasmuch as the arms and the rims of the wheel are made of relatively lightweight steel tubing, or rod, the over-all weight of the handling device can be kept at only a small fraction of the weight of the keg or barrel to be handled so that little effort is required in moving the handling device from place to place. It will be understood that when the keg is gripped between the wheels **23** and **24**, it can be pushed or pulled like a lawn roller without lifting or bending on the part of the person moving the keg.

Inasmuch as the shape and size of the gripping wheels and the size and over-all shape of the arms of the device are susceptible to considerable modification without departing from the invention, it will be understood that the device disclosed herein is illustrative and is not to be considered as limiting the scope of the following claims.

I claim:

1. A device for handling barrels and the like having an outer sidewall and generally circular heads comprising a pair of wheel-like clamping elements for engaging the outer sidewall of the barrel adjacent to its heads, arms connected to and supporting each clamping element rotatably and for movement toward and away from each other and means connected to said arms for moving said clamping elements relatively toward and away from each other to engage and release said barrel.

2. A device for rolling barrels and the like having an outer sidewall and generally circular heads comprising a pair of arms pivotally connected adjacent to one end thereof for movement of their opposite ends toward each other and apart, manipulating handles at said one end of said arms, a wheel-like gripping member mounted for rotation at the other end of each arm, said wheels having outwardly converging portions adjacent to their peripheries for engaging the outer sidewall of the barrel adjacent to its heads, manually operable means mounted on and connected to said arms for moving said arms and the gripping members thereon relatively apart, and means connected to said arms for moving said arms toward each other.

3. A device for rolling and manipulating barrels and the like having an outer sidewall and generally circular heads comprising a pair of elongated arms having outwardly extending hand grips thereon at one end, means pivotally connecting said arms adjacent to said one end for movement of their opposite ends toward and away from each other, a pair of wheel-like gripping members each having a rim portion for rolling along a support and for engaging around the outer sidewall of a barrel adjacent to one head thereof and hub means offset outwardly from said rim, means rotatably connecting each of said hub means to said opposite end of one of said arms, said gripping members being movable with said arms to engage said sidewall adjacent to the heads of said barrel and to release said barrel, and means connected to said arms and including a manually-operated member mounted on said arms adjacent to said hand grips for moving said arms toward and away from each other.

4. The device set forth in claim 3 in which the means for moving said arms toward and away from each other comprise an operating lever pivotally mounted on said arms, and a toggle linkage connected to said arms and said lever.

5. The device set forth in claim 4 comprising a spring connecting said arms between said pivot means and said gripping members for normally urging said arms toward each other.

6. A barrel handling device comprising a pair of arms each having an outwardly extending handle portion at one end and a laterally and forwardly extending portion at its opposite end, a pivot connection between said arms adjacent to said one end of each arm, a wheel-like gripping member having a hub rotatably connected to the forwardly extending portion of each arm, the gripping members being in substantially axial alignment and positioned between the forwardly projecting portions of said arms, each gripping member having a rim for rolling on a support and for encircling a barrel adjacent to a head thereof and having supporting means connecting said rim to said hub offset outwardly relative to said rim to engage the sidewall of the barrel adjacent to the head of the barrel, and means on said arms for moving said gripping members toward and away from each other to grip and release said barrel.

7. The barrel handling device set forth in claim 6 in which said means for moving said arms comprises a spring normally biasing said arms toward each other and a manually operated toggle for moving said arms apart.

8. The device set forth in claim 6 in which the supporting means connecting the rim of the gripping members to its hub comprises a plurality of spokes extending radially from said hub, said spokes having their ends bent laterally at an angle of less than 90° and joined to said rim to enable said spokes to engage the sidewalls of barrels of different diameter.

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