April 29, 1958 N. STERLING 2,832,630

APPARATUS FOR HANDLING SHIPPING DRUMS

Filed Aug. 2, 1954

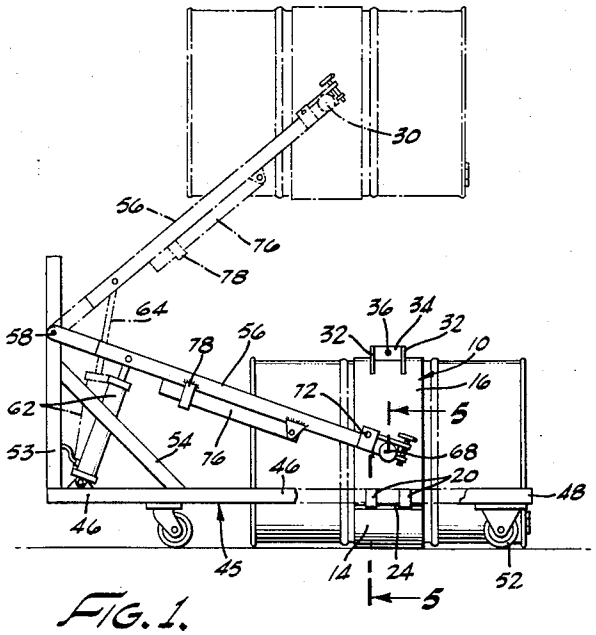



FIG. 1.

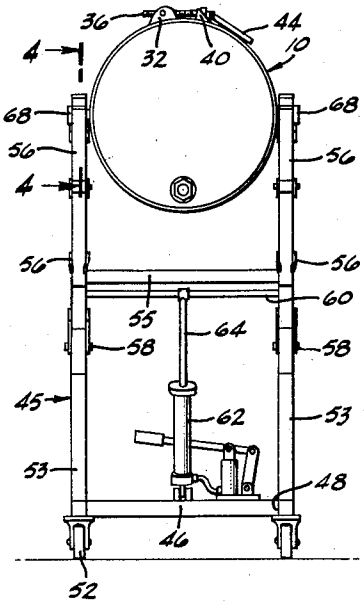



FIG. 2.

FIG. 3.

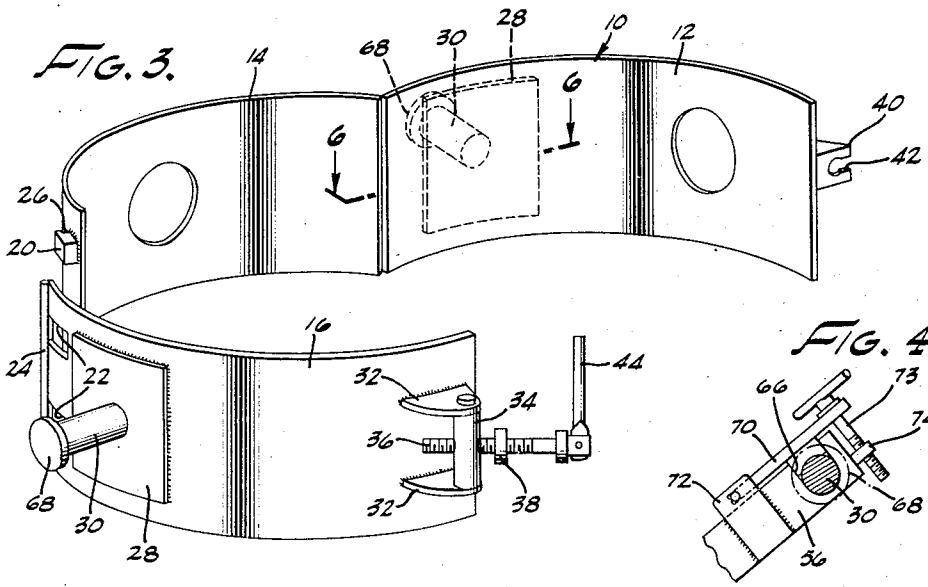



FIG. 4.




FIG. 5.

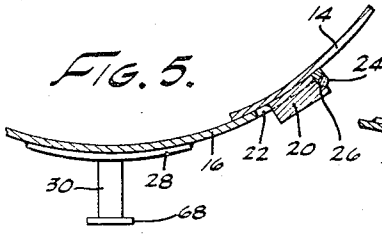
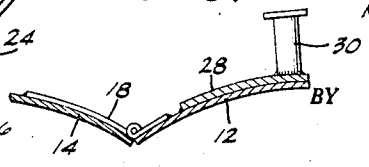



FIG. 6.




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2,832,630

# APPARATUS FOR HANDLING SHIPPING DRUMS

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Application August 2, 1954, Serial No. 447,134

2 Claims. (Cl. 294—67)

This invention relates to a device for handling drums and the like.

It is frequently necessary in many industries to move heavy steel drums filled with chemicals or the like for use or storage. Such drums are too heavy to be handled manually and consequently various types of lifting and transporting devices have been developed.

It is an object of this invention to provide a device for lifting and transporting drums and the like.

It is a further object of this invention to provide a drum lifting and transporting device which can lift a drum irrespective of its position that is, whether standing on end or lying on its side.

It is a further object of this invention to provide a device of this class which can hold a drum in a pouring position.

Other objects and advantages will be readily apparent from the following description.

This is a continuing in part of my co-pending application Serial No. 366,581, filed July 7, 1953, now abandoned and entitled Method of Handling Shipping Drums.

In the drawings:

Figure 1 is a side elevation of the device.

Figure 2 is an end view of the drum lifting device.

Figure 3 is a perspective view of the drum girdle.

Figure 4 is a section taken along line 4—4 of Figure 2.

Figure 5 is a section taken along line 5—5 of Figure 1.

Figure 6 is a section taken along line 6—6 of Figure 3.

The girdle **10** is formed of three sections **12**, **14** and **16**. Sections **12** and **14** are pivotally connected by each being connected to an arm of hinge **18**. The section **16** is also pivotally connected to section **14**. This connection is formed by studs **20** formed upon section **14** which project through slots **22**. The section **16** has a bead **24** formed thereon which fits into grooves **26** of studs **20** forming a pivotal connection, as best seen in Figure 5.

Each of sections **12** and **16** has fixed thereto a plate **28** which supports posts **30**, which are spaced from one another to be diametrically opposed when section **12** is secured to section **16**. Section **16** has fixed thereto a pair of brackets **32** which have mounted therebetween shaft **34** which is so supported as to be rotatable. The shaft **34** has a threaded aperture which receives screw **36**. Screw **36** carries a nut **38** which bears against slotted bracket **40** when screw **36** is pivoted into slot **42**. By turning handle **44** the screw may be moved in shaft **34**, thereby clamping the girdle **10** on a drum or releasing same.

A transportation dolly generally designated **45** is provided. The base **46** is formed of three sides of a rectangle open at extremity **48** to receive drum **50**. The base is mounted upon four caster wheels **52**. At the rear of dolly **45** a pair of spaced upright standards **53** are provided which are each supported by a diagonal brace **54** at its lower extremity and cross brace **55** at its upper extremity.

Pivotally mounted upon each standard **53** is a lifting



arm **56** mounted on a pin such as **58**. The lifting arms are interconnected by a cross brace **60**.

A jack **62** is supported upon suitable bracing in base **46** and has its arm **64** pivotally connected to cross brace **60**. The jack may be of any type well known to those skilled in the art.

Each lifting arm **56** is provided at its outer extremity with slot **66** to receive one of the support posts **30**. Each post is provided with a head **68** to prevent the post moving out of the slot in one direction and a clamping mechanism prevents removal of the post in the other direction.

The clamping mechanism comprises a locking plate **70** pivotally mounted in bracket **72** carried by arm **56**. The plate **70** carries a screw **73** which screws into tab **74** carried on arm **56** on the opposite side of slot **66** from bracket **72**.

Thus it is apparent that dolly **45** may be moved over a barrel or drum irrespective of whether the drum is on its end or on its side. The arms **56** receive posts **30**, the girdle having previously been positioned on the drum. With the posts **30** in slots **66** and the clamping mechanism secured the load may be lifted off the ground by actuation of jack **62**, to be held for pouring or held for transportation and storage.

Pivotally mounted upon arms **56** are legs **76** which are retained against arms **56** by spring clamps **78**. When these legs are pivoted downwardly and arms **56** are horizontal, they will engage the base **46** of dolly **45** and support the drum taking the load off jack **62**.

While what hereinbefore has been described is the preferred embodiment of this invention, it is readily apparent that alterations and modifications can be resorted to without departing from the scope of this invention and such alterations and modifications are intended to be within the scope of the appended claims.

I claim:

1. A girdle for lifting a drum, comprising: a wide metal band adapted to be placed around said drum while the latter is resting upon a plane surface in either a horizontal or vertical position and to substantially completely encircle said drum, said band having three arcuate sections two of which are permanently hinged together and the third being removable from the first two, cooperating means adjacent the free end of one of said permanently hinged sections and adjacent one free end of the third section for removably securing said ends in pivotal engagement, cooperating means adjacent the free end of the other of said hinged sections and adjacent the other end of said third section for securing said ends together and for clamping the assembled band around the drum to be lifted, a radially-outwardly-extending lifting post mounted on one of said hinged sections, and a radially-outwardly-extending lifting post mounted on said third section in diametricaly opposed relation to the post on the hinged section when the band is in assembled position upon said drum, whereby one of said hinged sections may be slipped beneath a drum in horizontal position without interference with a lifting post.

2. A girdle adapted to be placed around a drum resting on a plane surface in either a horizontal or vertical position, comprising: a wide metal band having three arcuate sections two of which are hinged together and the third removably engaging the other two, one of said hinged sections and said third section carrying lifting posts extending radially outwardly from said band in diametrically opposed relationship when the band is in assembled position on the drum, cooperating means adjacent the free end of the hinged section having no lifting post thereon and adjacent one free end of the third section for removably securing said ends, and cooperating means adjacent the free end of the hinged section carrying a lifting post and

adjacent the other end of said third section for securing said ends together and for clamping the assembled band around the drum to be lifted, whereby said hinged section having no lifting post thereon may be slipped beneath a drum in a horizontal position without interference with the lifting posts or drum clamping means.

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