Sept. 4, 1962 M. M. FLEISCHMAN 3,052,441

BARREL HANDLING GIRDLE

Filed May 10, 1960

FIG. 1

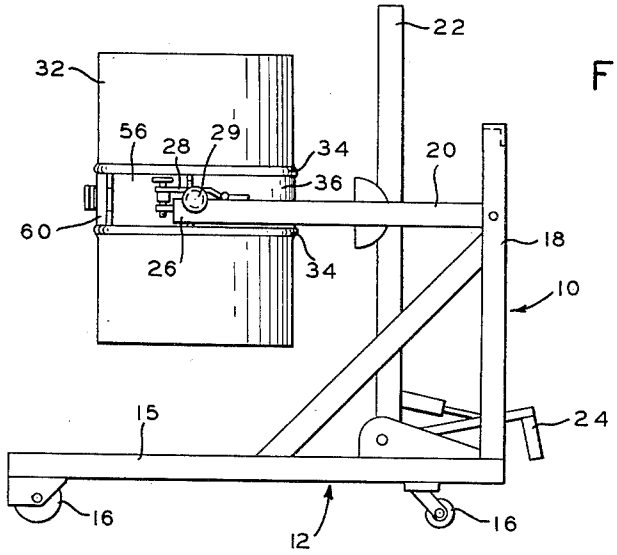


FIG. 2

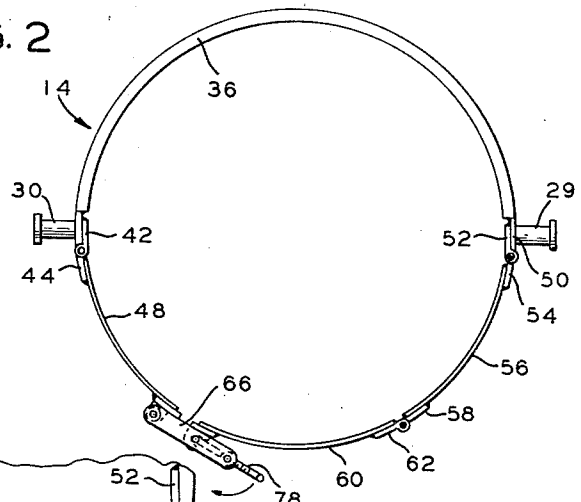
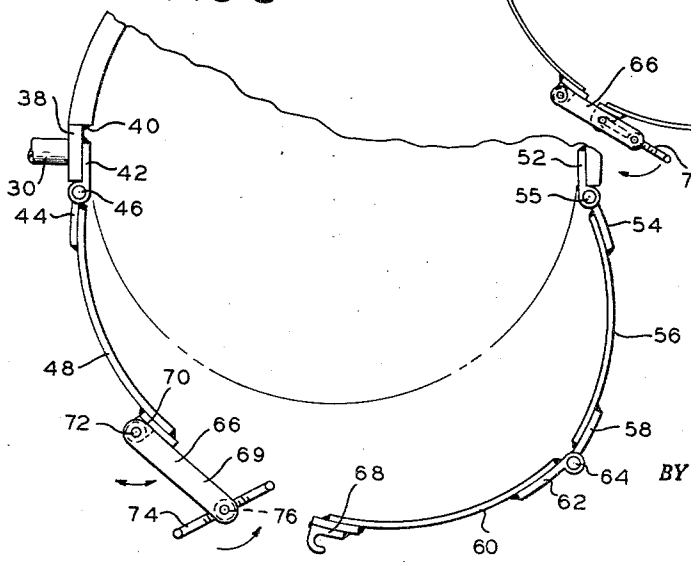


FIG. 3



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BARREL HANDLING GIRDLE

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1 Claim. (Cl. 248—141)

This invention relates to barrel handling apparatus, and more particularly to a barrel handling girdle.

The supporting of large barrels and their facile manipulation has long presented a serious problem. Such barrels, in their conventional sizes, when loaded, are too heavy for easy manual handling.

Large barrels are generally stored in rows and are stacked on top of one another to conserve space. Various types of apparatus have been used in the past for facilitating the movement of large barrels and assisting in stacking such barrels. In a large warehouse, a plurality of rows of large barrels will be provided, and in order to conserve space, adjacent barrels will be very close to one another.

The conventional girdles used heretofore for handling large barrels comprised a semi-circular member and an arcuate member pivotably secured to the ends of the semi-circular member. Each of the arcuate members was provided with cooperating locking means. With such structure, it has been found exceedingly difficult to secure the girdle about the central portion of a large barrel when the barrel is positioned intermediate two other barrels. Thus, it has been found necessary to move the adjacent barrels in order to provide sufficient room so that the girdle may be secured to the central portion of the barrel which is desired to be moved.

Thus, known girdles for large barrels suffer from a defect; they require a large amount of room before they can be secured to a central portion of a barrel.

It is an object of the present invention to overcome the above and other disadvantages of the known barrel handling girdles.

It is another object of this invention to provide a barrel handling girdle which may be easily and quickly secured about a central portion of a barrel positioned among a group of barrels.

Other objects will appear hereinafter.

For the purpose of illustrating the invention there is shown in the drawings a form which is presently preferred; it being understood, however, that this invention is not limited to the precise arrangements and instrumentalities shown.

FIGURE 1 is a side elevational view of the apparatus for handling barrels on which the barrel handling girdle of the present invention is mounted.

FIGURE 2 is a plan view of the barrel handling girdle of the present invention.

FIGURE 3 is a partial plan view of the barrel handling girdle of the present invention, with portions of the girdle shown in solid lines in their open position, and portions of the girdle shown in phantom lines in their closed position.

Referring to the drawings, wherein like numerals indicate like elements, there is shown in FIGURE 1 a barrel handling apparatus designated **10**.

The barrel handling apparatus **10** comprises a barrel lift **12** and a barrel handling girdle **14**.

The barrel handling lift **12** comprises a pair of spaced frame members **15** mounted on casters **16**. At the rear ends of the frame members **15** there is provided uprights **18** on which are provided pivotably mounted arms **20**.

Pivotation of the arms **20** in respect to the uprights **18** is effected by the hydraulic jack **22**. Actuation of the hydraulic jack **22** is accomplished by pedal **24** which is operated by the user's foot.

Each of the arms **20** are provided with a clamp **28** at the free ends **26** of the arms **20**. The clamp **28** cooperates with the free ends **26** to rotatably support the trunnions **29** and **30** of the barrel handling girdle **14**.

As seen more clearly in FIGURES 2 and 3, the barrel handling girdle **14** comprises a semi-circular member **36** which fits around the middle portion of a barrel **32** between ridges **34**. The trunnion **30** is provided with a trunnion extension **38**. The trunnion extension **38** is fixedly secured to one end of the semi-circular member **36** by weld **40**. The hinge member **42** is fixedly secured to the trunnion extension **38**. A hinge member **44** is pivotably secured to the hinge member **42** by pin **46**. An arcuate member **48** is fixedly secured at one end to the hinge member **44**.

The trunnion **29** is provided with a trunnion extension **50**. The trunnion extension **50** is fixedly secured to the other end of the semi-circular member **36** in the same manner as the securement of the trunnion extension **38**. A hinge member **52** is fixedly secured to the trunnion extension **50**. A hinge member **54** is pivotably secured to the hinge member **52** by a pin **55**. An arcuate member **56** is fixedly secured at one end to the hinge member **54**. A hinge member **58** is fixedly secured to the other end of the arcuate member **56**. An arcuate member **60** is fixedly secured to a hinge member **62**. The hinge member **62** is pivotably secured to the hinge member **58** by pin **64**.

Each of the arcuate members **48**, **56**, and **60** represent an arc of substantially sixty degrees. The arcuate members **48**, **56**, and **60** are held in their closed disposition, as shown in FIGURE 2, by the locking means **66**. As shown more clearly in FIGURE 3, the locking means **66** comprises a keeper **68** secured to the other end of the arcuate member **60**, and an element **69**. The element **69** is pivotably secured to a standard **70** by pin **72**. The standard **70** is fixedly secured to the other end of the arcuate member **48**. A locking lever **74** extends through a bushing **76** pivotably secured to the element **69** The locking lever **74** is provided with threads **78** which cooperate with threads on the bushing **76** to draw the element **69** to the keeper **68**.

The barrel handling girdle of the present invention is utilized in the following manner:

The barrel handling girdle **14** is applied to the barrel which is desired to be moved. The semi-circular member **26** is positioned around the central portion of the barrel **32** between the ridges **34**. Since the semi-circular member **36** is a band, it will encompass that portion of the peripheral surface of the barrel **32** between the ridges **34**. The arcuate members **48**, **56**, and **60** are pivoted to their closed disposition and the locking means **66** is secured. Since the barrel handling girdle **14** comprises a semi-circular member **36** and three arcuate members, the barrel handling girdle **14** may be secured around barrels which are stacked closer together than the girdles used heretofore which had only two arcuate members. After locking means **66** has been secured, the barrel handling lift **12** is moved into position whereby the free ends **26** of the pivotable arms **22** are disposed beneath the trunnions **29** and **30**. The clamps **28** secure the trunnions **29** and **30** to the free ends **26** of the pivotable arms **22**, and then the jack **22** is operated by the pedal **24** to raise the barrel **32**. Then the barrel lift **12** is moved to the position where the operator desires to locate the barrel **32**.

If desired, the barrel handling lift **12** may be provided with means on the pivotable arms **20** for tilting the barrel **32** so as to pour the contents from the barrel **32**.

The present invention may be embodied in other specific forms without departing from the spirit or essential attributes thereof and, accordingly, reference should be made to the appended claim, rather than to the fore-

going specification as indicating the scope of the invention.

I claim:

A barrel handling girdle comprising a semi-circular member, a trunnion extension fixedly secured to one end of said semi-circular member, a trunnion fixedly secured to said trunnion extension and extending radially therefrom, a second trunnion extension fixedly secured to the other end of said semi-circular member, a second trunnion fixedly secured to said second trunnion extension and extending radially outwardly therefrom, a first arcuate member pivotably secured to said trunnion extension, a second arcuate member pivotably secured to said second trunnion extension, a third arcuate member pivotably secured to said second arcuate member, and locking means comprising interengaging elements on said first and third arcuate members, said first, second, and third arcuate members each representing an arc substantially sixty degrees, each of said members being substantially greater in width than in thickness so as to have the shape of a band.

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