June 19, 1962 A. BOUZA 3,039,808

SLING SUPPORT

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FIG. 1.

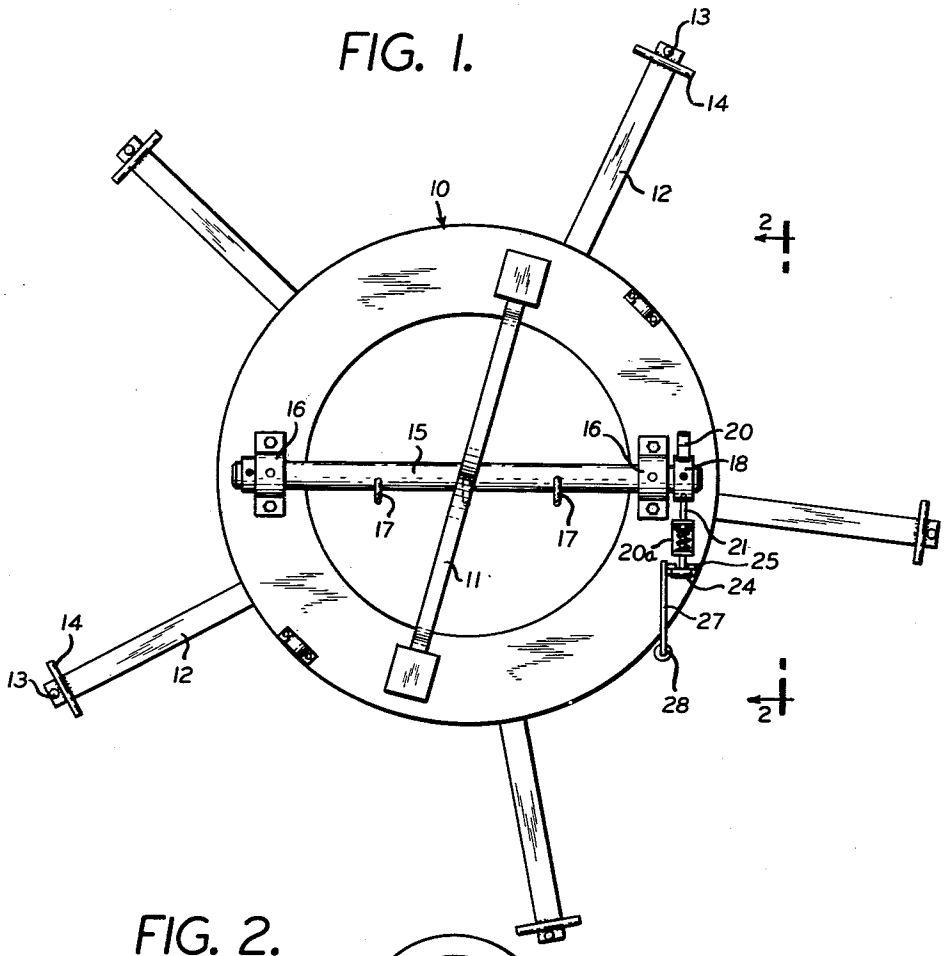
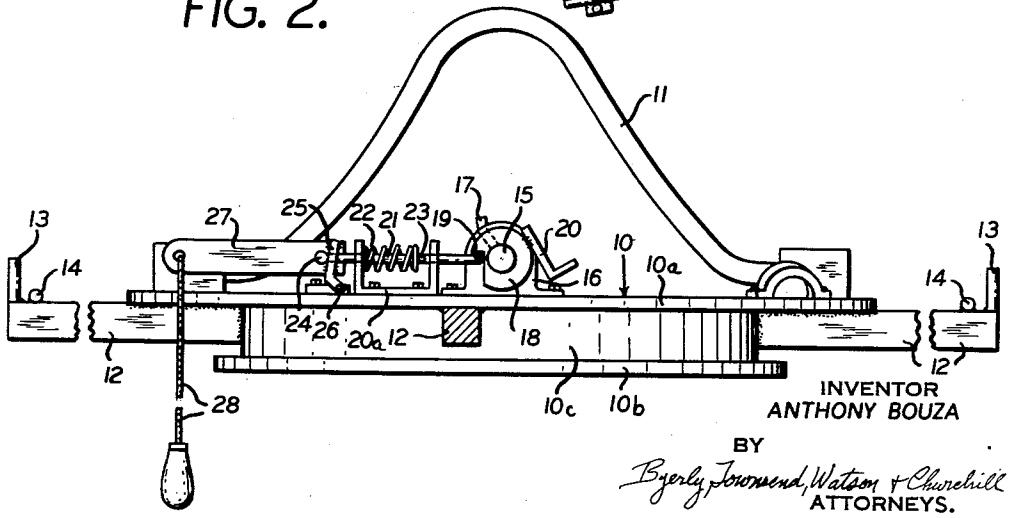


FIG. 2.



INVENTOR
ANTHONY BOUZA

BY
Byerly, Townsend, Watson & Churchill
ATTORNEYS.

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FIG. 3.

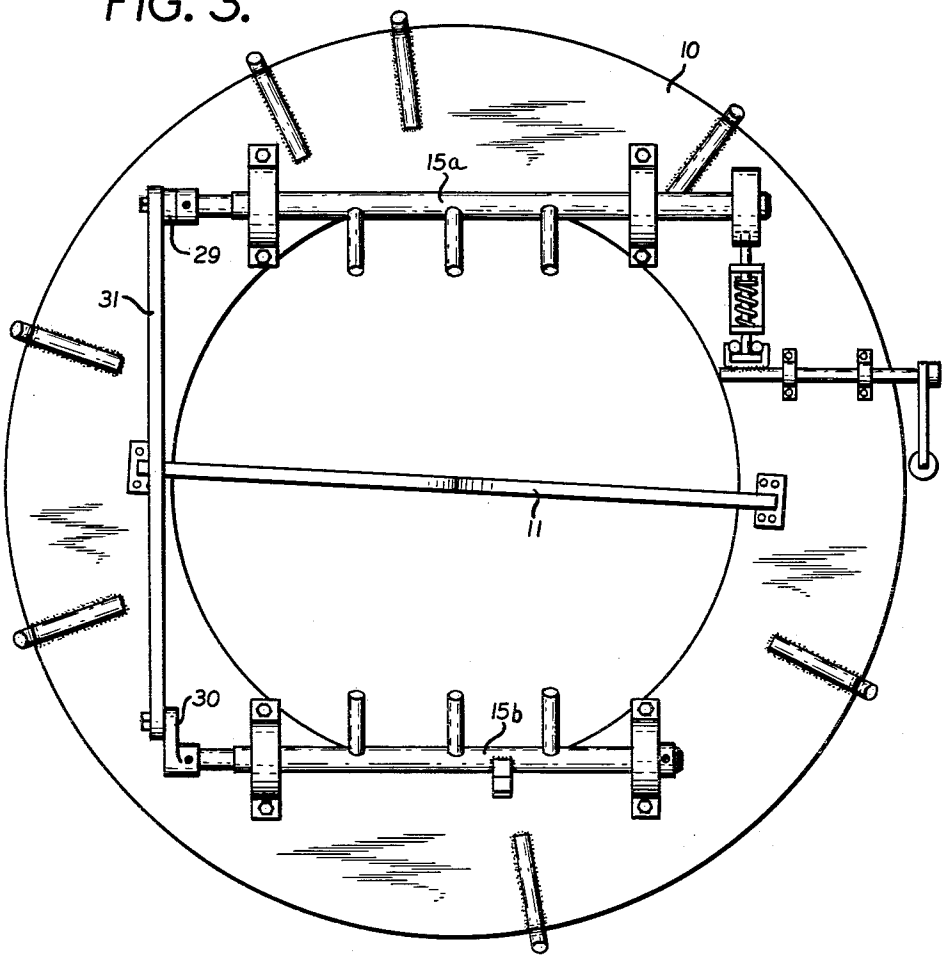
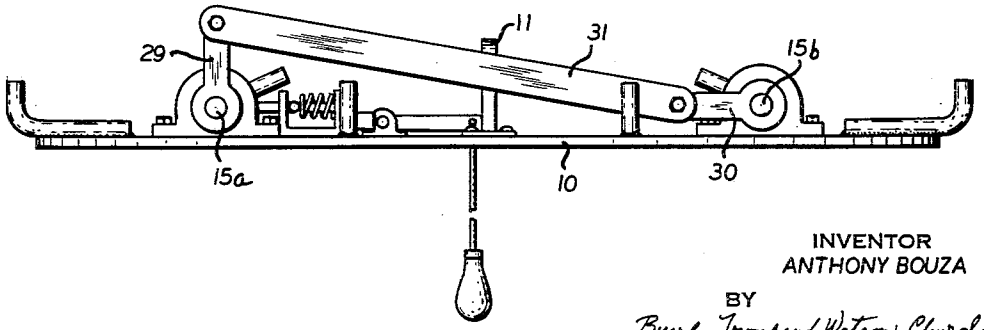


FIG. 4.



INVENTOR
ANTHONY BOUZA

BY
Byerly, Townsend, Watson & Churchill
ATTORNEYS.

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FIG. 5.

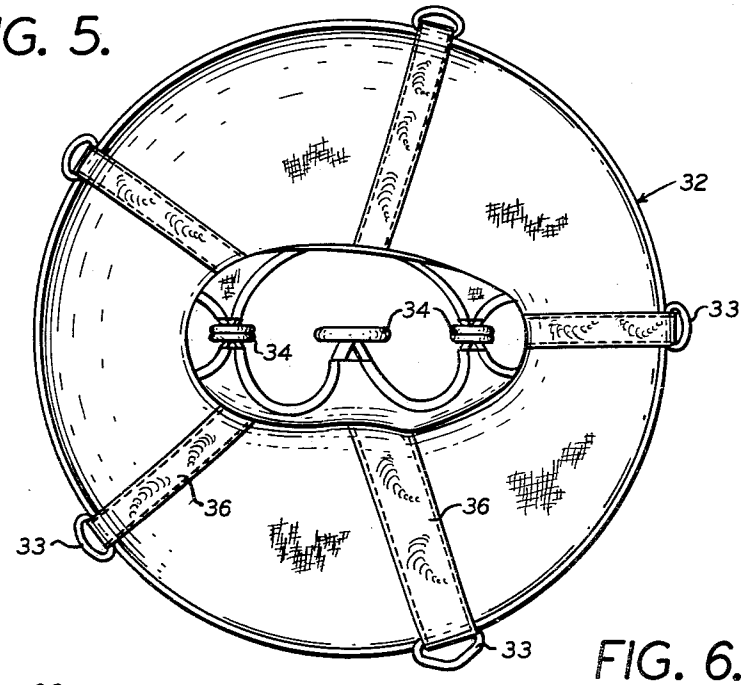


FIG. 6.

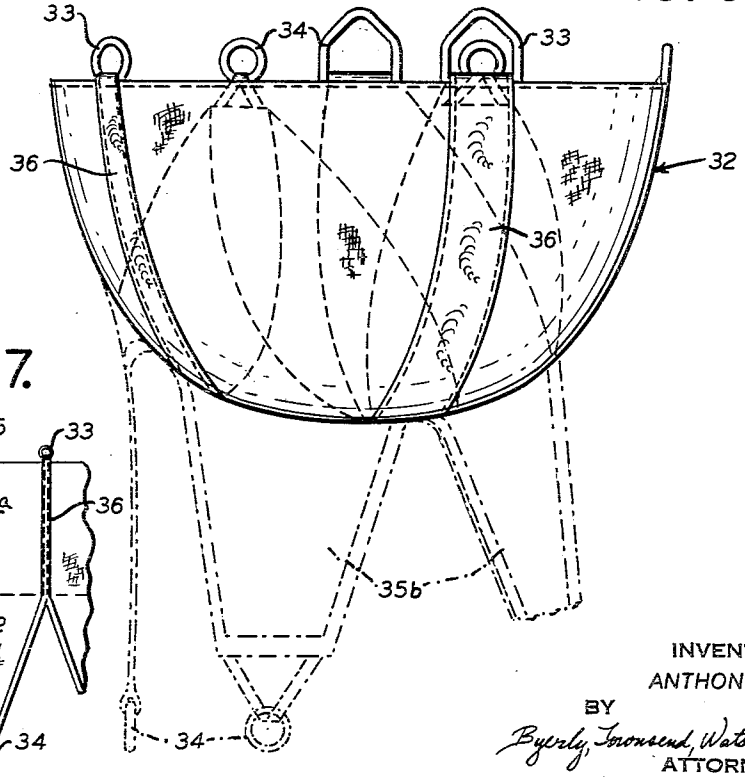
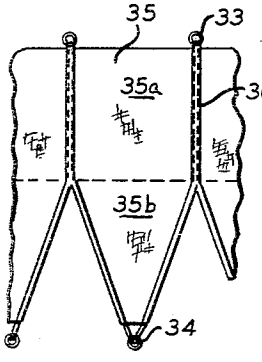


FIG. 7.



INVENTOR
ANTHONY BOUZA
BY
Byerly, Townsend, Watson & Churchill
ATTORNEYS.

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3,039,808

SLING SUPPORT

Anthony Bouza, Greenwich, Conn., assignor to General Linen Supply & Laundry Co., Inc., Brooklyn, N.Y., a corporation of New York

Filed Sept. 8, 1958, Ser. No. 759,565
8 Claims. (Cl. 294—69)

The present invention relates to a sling and a support therefor and aims to provide certain improvements therein. More particularly it relates to a sling and a support for use in a commercial laundry for transferring a batch of laundry between different stations at which the laundry is to be or has been processed.

In one phase of commercial laundry practice, laundry after being washed in a drum is transferred to a sling which is spread out on the floor adjacent the washing drum, the sling which has a plurality of inner and outer anchoring means is then attached to a sling support carried by a hoist on an overhead trolley and the sling with its contents are conveyed to and lowered into a centrifuge and the sling with its contents disconnected from the sling support. The sling and its contents are then centrifuged to extract the water from the washed laundry.

Heretofore the sling anchoring means had to be individually manually released from the support, a procedure which has proved to be time consuming because of the difficulty in gaining access to the anchoring means at the inner edge of the sling.

Among the objects of the present invention are (1) to provide a sling and support wherein certain of the anchoring means for the sling can be released simultaneously from the support; (2) where such release can be accomplished from a point externally of the sling and (3) wherein by releasing certain of the anchoring means the contents held within the sling can be dumped therefrom.

The invention will be better understood from the detailed description which follows when considered in connection with the accompanying drawings which show two preferred embodiments and wherein:

FIGURE 1 is a top plan view of a sling support embodying the invention.

FIG. 2 is a section taken along the plane of line 2—2 of FIG. 1.

FIG. 3 is a top plan view of another embodiment of the sling support.

FIG. 4 is a side elevation of the sling support shown in FIG. 3 as viewed from the left edge thereof.

FIG. 5 is a top plan view of the sling in its mounting position on a sling support.

FIG. 6 is a side elevation of the sling shown in FIG. 5.

FIG. 7 is a fractional development of the sling.

Referring first to FIGS. 1 and 2 of the drawing the sling support may be said to consist of a rigid open frame **10** preferably in the nature of an annulus having flanges **10***a*, **10***b* and a web **10***c*, a bail or yoke **11** and a plurality of circumferentially spaced arms **12** each provided at its free end with an upstanding pin **13** and a transverse pin **14**, said pins providing means for engagement with anchoring means on a sling presently to be described. Extending diametrically of the frame **10** and preferably through the bail **11** is a shaft **15** mounted in bearings **16** on the flange **10***a*, the said shaft being provided with a plurality of spaced upstanding pins or hooks **17**, adapted for engagement with anchoring means on a sling. Fixedly mounted on one end of the shaft **15** is an enlarged disc-like member **18** having a detent **19** formed therein and secured to the periphery of said member **18** is a handle **20** for manually rotating the

shaft for presenting the pins **17** in substantially up-right position. Mounted on the flange **10***a* adjacent the disc-like member **18** is a latch means consisting of a cradle **20***a* which carries a plunger pin **21**, the free end of which is adapted to engage within the detent **19**, the plunger pin being normally biased into engagement with the detent **19** by a spring **22** encircling the pin and engaging at one end against a cross pin **23** on the plunger pin and at its other end against an end of the cradle. The opposite end of the plunger pin has an enlarged head **24** which is engaged by a bifurcated arm **25** pivoted at **26** and having an extension **27** to the free end of which is secured a pull cord **28**. It will thus be seen that when the cord **28** is pulled downwardly it will cause the bifurcated arm **25** to engage the enlarged head **24** and move the plunger pin **21** to the left against the force of the spring **22** and disengage the free end of the plunger pin from the detent **19**.

In the embodiment of the sling support shown in FIGS. 3 and 4 a pair of shafts **15***a* and **15***b* are disposed substantially parallel to the bail **11** at either side thereof with the pins normally overlying the opening in the annulus **10**. One end of the shaft **15***a* is provided with a detent for cooperation with latch means of a character similar to those employed in FIGS. 1 and 2. The shafts **15***a* and **15***b* are connected through links **29**, **30** and **31** so that rotation of the shafts will take place in opposite directions.

The sling as shown in FIGS. 5, 6 and 7 preferably consists of an open ended water permeable, flexible tubular member **32** adapted to be shaped into the form of an open end, open top annular pocket provided with anchoring means or rings **33** and **34** spaced circumferentially around the open top of the walls of said pocket. The tubular member **32** may be conveniently formed from a plurality of pentagonal sections **35** each of which may be considered as consisting of a rectangular portion **35***a* and a depending triangular portion **35***b*, the lateral sides of the rectangular portion being sewn together and reinforced as shown at **36**. Preferably the anchoring rings **33** are connected at the top of said reinforcements **36** and the anchoring rings **34** are connected to the free apices of the triangular portions or flaps **35***b*.

The sling **32** when mounted on the sling support will have the anchoring rings **33** engaged over the pins **13** and the anchoring rings **34** engaged over the pins **17** to provide a semi-toroidal annulus or open top annular pocket.

In use, the sling would be spread out on the floor adjacent a washing drum and the laundry after washing is distributed onto the surface of the sling between the inner and outer peripheries thereof. A hoist suspending the sling support by the bail is then lowered and the anchoring rings **33** are engaged over the supporting pins **13**, and the flaps **35***b* are moved inwardly toward the center of a circle and the rings **34** are engaged over the pins **17** on the shafts **15** or **15***a* and **15***b*. After the hoist is raised to suspend the sling the weight of the wet laundry will impart to the sling a substantially semi-toroidal form or open top annular pocket as shown in FIGS. 5 and 6. The sling is then transported to a centrifuge which has a re-entrant central conical bearing and the sling is lowered into the centrifuge over said conical bearing and the anchoring means disconnected from the support. Alternatively, the sling may be positioned within a portable extractor bowl having a central conical bearing with the rings **33** extending over the rim of the bowl and the rings **34** overlying the top of the conical bearing and the laundry after removal from the washing drum is placed within such positioned sling, and after engaging the anchoring means to a sling support suspended by the hoist, the sling is raised from the bowl,

transported and positioned within the centrifuge or extractor after which the sling support is disconnected from the sling. After centrifuging the anchoring rings are again attached to the sling support, the sling with its contents lifted out from the centrifuge and transported to a dumping station whereat upon pulling the cord 28 the latch means are disengaged from the detent 19 whereupon owing to the weight of the laundry the shaft 15 is rotated to move the pins 17 downwardly and the anchoring rings 34 will disengage from said pins to open the sling and dump the contents therefrom.

From the foregoing detailed description it will be understood that the various objects of the invention as recited in the opening statement of this specification are accomplished in an expeditious manner.

While I have shown and described certain embodiments of my invention, it will be understood that changes in details of construction of the sling support and the sling may be made within the range of engineering or mechanical skill without departing from the spirit of the invention hereinafter claimed.

What I claim is:

1. A sling support comprising a rigid ringlike open frame having means for suspending said frame, means spaced around the perimeter of the frame and carried thereby adapted for engagement with primary anchoring means on a sling, additional means carried by and disposed transversely of the open-ring of the frame adapted for releasable supporting engagement with other anchoring means on a sling, said transversely disposed means being mounted to release said other anchoring means when engaged thereon, and latch means carried by the frame normally holding said transversely disposed means in position for holding engagement with said other anchoring means.

2. A sling support according to claim 1 wherein the open frame is an annulus, and the additional means disposed transversely of the frame is a rotatable shaft having pins projecting transverse to the axis of the shaft and overlying the space within the annulus.

3. A sling support according to claim 1 wherein the open frame is an annulus, the additional means disposed transversely of frame is a rotatable shaft having transversely projecting pins overlying the space within the annulus and the latch means comprises a spring biased pin engageable with a shoulder on the rotatable shaft and a lever operable to disengage the pin from the shoulder.

4. A sling support according to claim 2 wherein the rotatable shaft extends substantially diametrically of the annulus.

5. A sling support according to claim 2 wherein there are two rotatable shafts disposed substantially parallel to a diameter of the annulus, one on either side of such diameter with the pins on the respective shafts normally directed toward each other.

6. A sling support according to claim 2 wherein there

are two rotatable shafts disposed substantially parallel to a diameter of the annulus, one on either side of such diameter with the pins on the respective shafts normally directed toward each other, and means connecting said shafts to cause them to rotate in opposite directions when the latch means are released.

7. In combination, a sling and a sling support, the sling comprising a flexible water permeable tubular member in the form of an open top annular pocket having anchoring means spaced circumferentially around the walls at said open top thereof; the sling support comprising a rigid ring-like open frame having means for suspending said frame, means spaced around the perimeter of said frame and carried thereby for releasable engagement with the anchoring means on the outer peripheral wall of the annular pocket and additional means carried by and extending transversely across the open ring of the frame for releasable supporting engagement with the anchoring means on the inner wall of the annular pocket.

8. In combination, a sling and a sling support, the sling comprising a flexible tubular water permeable member the open ends of which are provided with anchoring means spaced circumferentially therearound, said sling being shaped into the form of an open top annular pocket with the anchoring means disposed around the walls of the pocket at the open top thereof; the sling support comprising a rigid ring-like open frame having means for suspending said frame, means spaced around the perimeter of the frame and carried thereby for detachable engagement with the anchoring means on the outer wall of the open top pocket of the sling, additional means carried by the frame and disposed transversely of the open ring of the frame for releasable supporting engagement with the anchoring means on the inner wall of the open top pocket of the sling, said additional means being movably mounted to release the anchoring means engaged thereon and latch means normally holding said additional means in position to hold said anchoring means.

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UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,039,808 June 19, 1962

Anthony Bouza

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

Column 4, list of references cited, under "UNITED STATES PATENTS, add the following:

2,038,993 Erlanger ---------- Apr. 28, 1936

Signed and sealed this 9th day of October 1962.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

DAVID L. LADD
Commissioner of Patents