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ATTACHABLE DOLLY FOR SLIVER COILER

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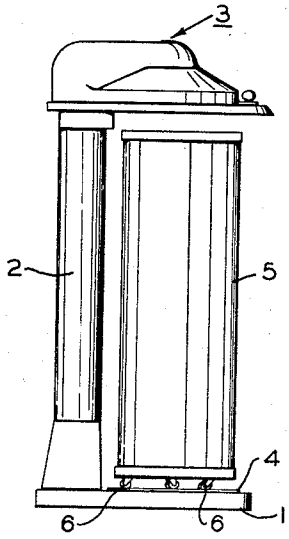

FIG. 1

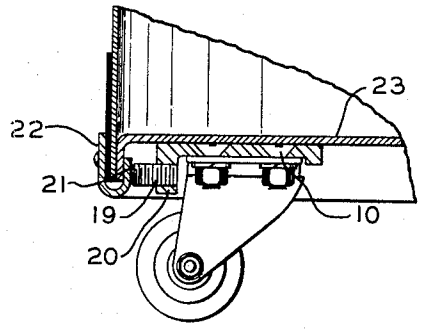

FIG. 4

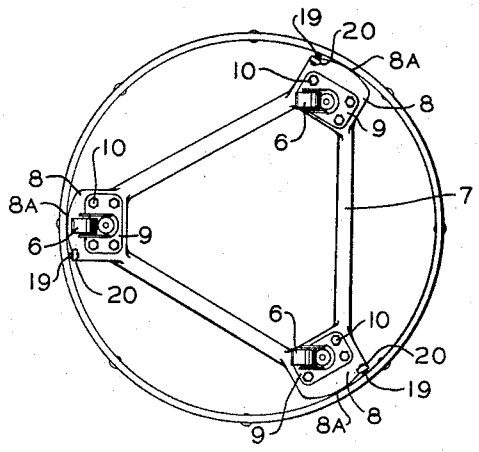

FIG. 2

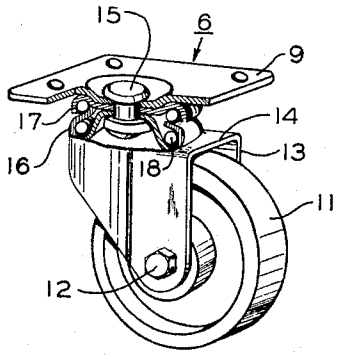

FIG. 3

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ATTACHABLE DOLLY FOR SLIVER COILER

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Application July 8, 1958, Serial No. 747,232

2 Claims. (Cl. 280—79.2)

This invention relates to sliver coilers and more particularly to coilers using large cans provided with rollers or the like to facilitate bodily movement of the cans and their contents from one position to another.

It is customary to move sliver cans from place to place as a routine procedure in textile mills. Frequently the cans are moved manually by an operator who simply slides the cans along the floor in groups of five or six cans. The trend toward cans of larger and larger diameters results in substantial increases in the weight of the cans, particularly when filled with sliver. Thus with heavier cans to handle, it is becoming more and more difficult for an operator to move the cans about, especially where a particular operation requires him to slide a group of several cans along the floor. In some instances it is necessary for the operator to reduce the number of cans moved simultaneously in a group and by so doing partially to defeat the purpose of using larger cans.

A principal object of this invention is the provision of an improved sliver can having casters affixed to the bottom part thereof, the casters being arranged so as not to add materially to the height of the can and so as to constitute a sturdy support therefor.

Another object of this invention is to provide an improved dolly which is adapted to be affixed to the bottom of conventional sliver cans as a unit and which facilitates the movement of the cans from place to place.

The invention in one form comprises a conventional sliver can and associated dolly in the form of a triangular frame of unitary construction which is especially adapted to receive a swivel type caster at each vertex and which is provided with symmetrical thrust transmitting means engageable with the bottom flange of a conventional coiler can for securely affixing the dolly to the bottom of the can.

The invention will be better understood from the following detailed description taken in conjunction with the accompanying drawings in which Fig. 1 is a side view of a coiler having a wheel mounted can; Fig. 2 is a view of the bottom of a coiler can to which a dolly constructed according to this invention is affixed; Fig. 3 is an enlarged perspective view of a caster used in the invention; and in which Fig. 4 is a sectional view of a portion of the dolly showing the cooperation between the dolly and the coiler can.

With reference to Fig. 1 the numeral 1 designates a coiler base on which a pedestal 2 is securely affixed in conventional fashion. Mounted atop the pedestal 2 is a coiler head generally designated by the numeral 3. As is well understood in the art. suitable mechanism is provided and is disposed within the pedestal 2 for imparting rotary motion to a platform 4 rotatably mounted on the base 1. Suitable motion is imparted to a sliver fed into the top of the head 3 whereby the sliver is coiled in a predetermined pattern within the can 5 mounted on the rotatable platform 4.

As can be seen in Fig. 1 the can 5 is provided with a plurality of rollers 6.

As is disclosed in detail in co-pending application Serial Number 744,510 filed June 25, 1958, the rotatable platform 4 is constructed so as to enable an operator readily to position the can 5 in its proper centered relation to the rotatable platform 4 and so as to engage the rollers 6 and thereby to hold can 5 in position on platform 4.

From Figs. 2 and 4 it can be seen that the casters 6 are affixed to a triangular frame 7 of unitary construction and that an integral caster mounting base 8 is provided at each vertex of frame 7. Each mounting base 8 is of arcuate configuration as indicated at 8A so as to allow the mounting bases to fit in close proximity to the can flange. The mounting plate 9 of each caster is affixed by bolts 10 to the associated mounting base 8.

As is best shown in Fig. 3 each caster 6 is of conventional design and comprises a wheel 11 mounted on an axle 12 supported by a U-shaped yoke 13 the bight portion 14 of which is secured to a swivel pin 15. Mounting plate 9 is provided with a central aperture through which pin 15 is extended. Also mounted between plate 9 and yoke 13 is a lower bearing race 16 and an upper bearing race 17 between which ball bearings 18 are captured. Bearing races 16 and 17 are both provided with a central opening for receiving the pin 15 which pin serves to hold the bearing races and bearings together.

For the purpose of securing the frame 7 in position on the can 5 a plurality of set screws 19 are threaded through tabs 20 formed integrally on each mounting base 8. These set screws are simple adjusted to engage the inner surface 21 of the can flange 22.

For the purpose of establishing a balanced distribution of thrust forces exerted by set screws 20 each set screw is disposed generally radially. In this fashion the dolly frame 7 is secured within the flange 22 and the balanced forces exerted on the flange apply a minimum of distortion to the can flange. Since the dolly is received within the can flange 22 it does not add materially to the height of the can. Furthermore, the dolly does not pound the can bottom 23 because the weight of the can is transmitted to the dolly through the set screws 19 and the sturdy flange 22 and because the upper surfaces of the dolly are completely flat. The can may be conventional and the dolly constructed according to this invention can be easily applied to the can without modifying the can itself.

While I have shown a triangular frame with three casters, it will be understood that a greater number of sides for the frame could be provided together with a corresponding number of casters.

I do not wish to be limited to the particular embodiment of the invention shown and described and I intend in the appended claims to cover all changes and modifications as fall within the true spirit and scope of the invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A sliver can dolly for removable mounting inside the bottom flange of a coiler can, said dolly comprising a multisided frame, a mounting base constituting an integral junction for adjacent ends of the sides of said frame, the sides of said frame and said mounting bases being flat on the top surfaces thereof, a plurality of swivel type casters respectively affixed to the bottom surfaces of said mounting bases, a plurality of downwardly extending tabs respectively forming an integral part of said mounting bases, and a plurality of set screws respectively in threaded engagement with said tabs and extending entirely therethrough and outwardly therefrom to exert a thrust against the inside of the can bottom flange and thereby to form a frictional support for the can, the axes of said set screws being spaced from the associated

caster and extending in a generally radial direction with respect to said frame.

2. A mobile sliver can comprising a substantially flat bottom, a sturdy bottom flange secured to said bottom, a plurality of rod-like elements joined at their ends by a plurality of integral mounting bases to form a frame of generally polygonal form, the upper surfaces of said rod-like elements and of said mounting bases being continuous and substantially flat and the peripheral outer surfaces of said mounting bases being configured to conform to the inner surface of said flange, a plurality of downwardly extending tabs respectively formed on said bases, a plurality of set screws respectively in threaded engagement with said tabs and disposed radially of said flange so as to exert an outward thrust against the inner surface of said flange, the axes of said set screws being spaced from the center of their respective mounting bases and said set screws being frictionally engageable with the inner surface of said flange whereby to form an operative support connection between said can and said dolly and a plurality of casters respectively mounted on the bottom surfaces of said mounting bases.

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