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TEXTILE SLIVER CAN

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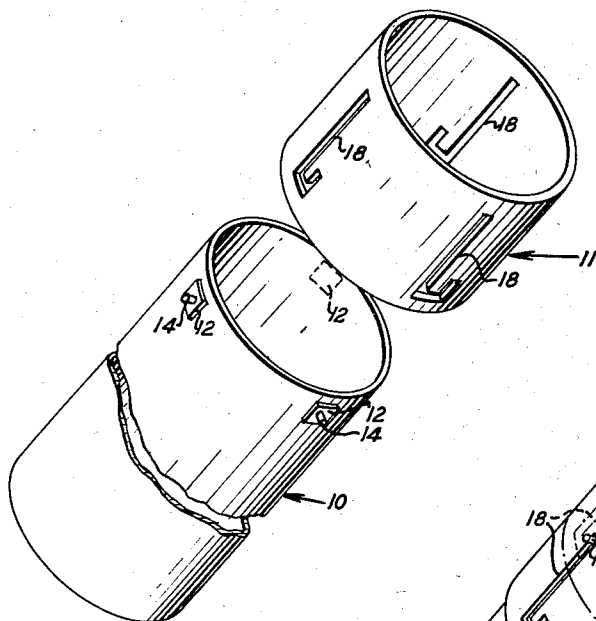


Fig. 1

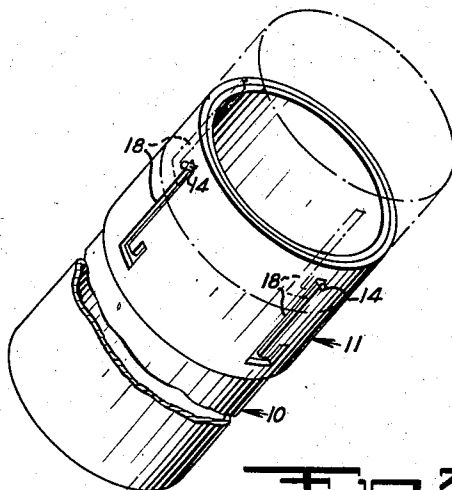


Fig. 2

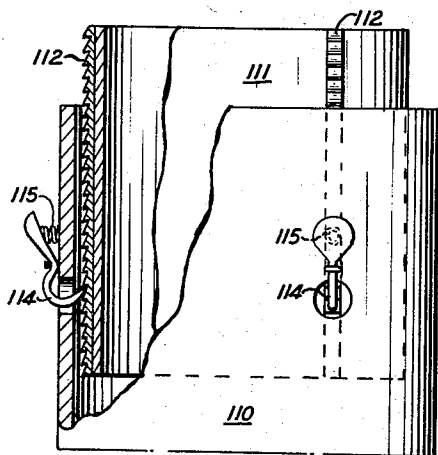


Fig. 3

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TEXTILE SLIVER CAN

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1 Claim. (Cl. 19—159)

The present invention relates to a can for collecting textile sliver emerging from a card or drawing frame and is particularly concerned with the provision of an extension for the top of such cans for the purpose of substantially reducing the amount of tangled sliver at the feed end of the next processing operation.

At the delivery end of textile carding and drawing machines, a coiler feeds sliver into cans and coils it in a manner calculated to reduce tangling upon removal. To avoid an excessive number of doffings per day coiler heads are so constructed as to permit them to pack the light fluffy sliver into the cans to an extent which nearly doubles the capacity of the cans. The degree of packing is limited by the fact that once the can is removed from beneath the coiler, the packed sliver expands and exposes the upper coils above the top of the can. If these exposed coils are piled too high or if care is not exercised in handling the filled cans it is obvious that tangling will occur with a consequent loss of time and of sliver.

It has now been found that the degree of packing is much less limited and the probability of tangling the sliver is greatly reduced by the provision of a telescoping extension on the top of an ordinary sliver can. During coiling the extension is lowered and that operation is hindered in no way whatsoever. Forthwith upon doffing the machine, the extension is raised to its uppermost position and locked there. Thus, it surrounds and protects the rising top coils of sliver which would otherwise be exposed and easily tangled.

The invention will be better understood by reference to the attached drawings in which Fig. 1 is an exploded view of a can and extension constructed in accordance with this invention. Fig. 2 is a perspective view of the same can as it would be placed under a coiler and dotted lines indicate the raised position of the extension. Fig. 3 is a partially broken side elevation of a modified form of the invention in which the extension is placed within the container and held in any desired position of elevation by rack and latch assemblies.

Referring now to the preferred form of the invention illustrated in Fig. 1, the invention comprises a can 10 and an extension 11. The sliver can 10 is of standard construction and is provided with three metal reinforcements equally spaced about its circumference at a point just enough below its top to avoid weakening the construction. Mounted on each reinforcement 12 is a stud for engaging a bayonet slot on the extension. The extension 11 may be constructed of any suitable material such as cardboard, plastic or the like, but it has been found preferable to use sheet metal, such as iron or other aluminum as those materials are inexpensive and resist tear. The extension is provided with three J-shaped slots 13 for engaging the studs 14 thereby forming the means for holding the extension either in a lowered position under the coiler or in a raised position once the processing machine is doffed.

In operation the extension is in the lowered position until the sliver can has been removed from the textile processing machine to go to the next textile processing operation. As soon as it is removed, the extension is raised by a simple lifting motion and it is then locked

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in the raised position by a counterclockwise turning motion which causes the studs 14 to move from the long leg of J into the short leg.

It will be obvious to those skilled in the art that the studs can be placed on the extension and the slots can be placed on the can without departing from the scope of this invention. However, it will also be clear that the form shown in Fig. 1 is superior to the alternate form because the alternate form might permit tangling of the sliver within the can.

In the modification shown in Fig. 3 a can 110 is provided with an extension 111 of a lesser diameter so that the extension moves up and down inside the can. Equally spaced around the circumference of the extension are three vertical racks 112. Cooperating with these racks are three latches 114 pivotally mounted on the outside of the can 110. Springs 115 urge the latches 114 into engagement with the racks 112 to obtain proper positioning of the extension within the can.

While this form of the invention permits one to raise the extension to any desired height, it has the disadvantage of changing the inside dimension of the sliver can and it is more expensive than the simpler form of the invention shown in Figs. 1 and 2.

Thus it will be seen that the present invention provides a sliver can which can be fully packed with sliver at the delivery end of one textile processing operation and can be carried to the next operation without fear of tangling the exposed coils.

I claim:

A sliver can adapted to be removably positioned on a card doffing apparatus including a coiler head and a base, said can including a cylindrical body of a height just less than the distance between the base and the coiler head, a closed bottom, and a cylindrical extension open at each end slidably surrounding the upper portion of said can, and means including three bayonet studs substantially equally circumferentially spaced and extending radially outwardly about said sliver can and three J-shaped slots circumferentially spaced about said extension, said J-shaped slots arranged so that their hook portions are near the lower end of said extension, and each J-shaped slot consisting of a first slot running substantially the length of said extension, a second shorter slot parallel to said first slot, and a connecting slot joining said first and second slots, said studs and slots being radially aligned and said J-shaped slots receiving said studs for holding said extension in two positions, one of which positions has the studs in said first slots and places the top of the extension no higher than the top of the can and the other of which has the studs in said second shorter slots and places the top of the extension well above the top of the can, said J-shaped slots through the action of the said studs in said second shorter slots positively holding the extension in the upper position, whereby said can may be filled with sliver in the conventional manner with the extension in its lower position and upon removal of the can from the base, the extension may be manually raised to its upper position to prevent the entanglement of the sliver, upon its expansion.

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