

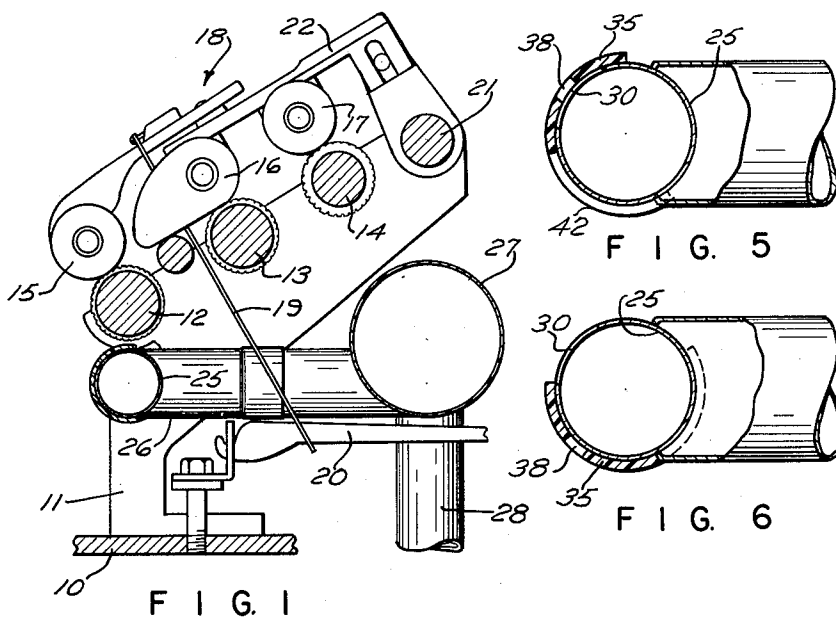
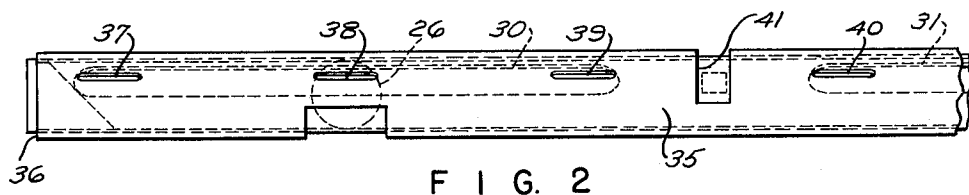
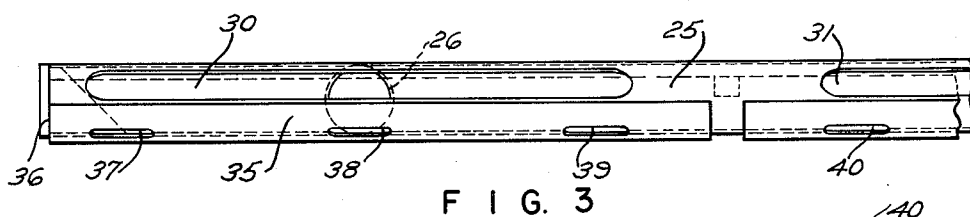
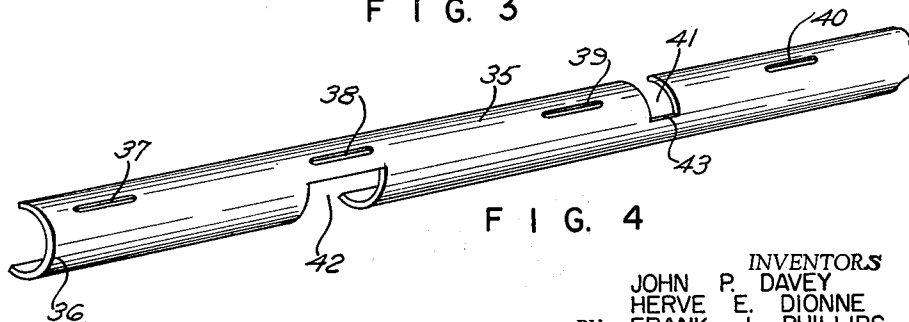
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LINT COLLECTING DEVICE FOR TEXTILE MACHINE

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1

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LINT COLLECTING DEVICE FOR TEXTILE MACHINE

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3 Claims. (Cl. 15—306)

This invention relates to a textile machine or more particularly to a spinning frame which is provided with a suction system comprising tubes with openings in them to pick up lint from the strand and hold the strand should it break until it is again pieced up to keep it away from the rolls used for operating upon it.

One of the objects of this invention is to provide a suction device which may be easily cleaned and thus one which will result in lower downtime for the operation of the machine.

Another object of the invention is to provide a suction conduit which will have a cover so that it may be opened to expose the interior of the conduit for cleaning.

A more specific object of the invention is to provide a conduit having an elongated opening provided with a cover, which cover may be removed to provide access to the opening and which cover will in turn have a smaller opening or slot in it adjacent the locations where the lint is to be picked up so that when necessary the cover may be moved to open position exposing this opening in the tubular conduit for easy access.

With these and other objects in view, the invention consists of certain novel features of construction as will be more fully described and particularly pointed out in the appended claims.

In the accompanying drawings:

FIG. 1 is a side elevation partly in section, of a spinning frame showing the invention as applied thereto;

FIG. 2 is an elevation of the suction tube with the cover thereon;

FIG. 3 is an elevation of the suction tube with the cover removed;

FIG. 4 is a perspective view of the cover alone;

FIG. 5 is a sectional view through an opening with the cover assembled on the conduit tube in a closed position; and

FIG. 6 is a sectional view showing the cover in open position.

In proceeding with this invention, we provide a pick-up tube with a much longer opening than has heretofore been utilized and place over this tube a cover having a plurality of smaller slots therein, one located adjacent each yarn end which cover may be rocked or revolved around the cylindrical conduit from an operating position to an open position thus leaving a long opening in the conduit exposed for easy access facilitating cleaning of the conduit.

With reference more specifically to the drawings, 10 designates a rail of the frame of the machine having a bracket standard 11 thereon which supports lower rolls 12, 13 and 14 of the spinning frame. Upper rolls 15, 16 and 17 are provided above these lower rolls with the usual saddles 18 and stirrup 19 extending to a lever 20 which carries some weight for applying pressure to the top rolls. These top rolls may be suspended from a back bar 21 to part 22 which serves as the lower part of the saddle system.

2

In order to pick up the lint which may occur or an end should it break, there is a suction system comprising a tube 25 extending parallel to the front lower roll 12 and spaced therefrom. Such tube will extend lengthwise of the frame across a plurality of ends or perhaps the length of one of the sections of the lower roll 12, and at convenient locations from this pick up tube 25 there are tubes 26 extending to a larger collector tube 27, being applied from the tube 28 which leads to a bin or other accumulating location for the lint.

The pick up tube 25, shown by itself fragmentally in FIG. 3, has a long opening 30 cut therein extending axially of the conduit and substantially parallel to the lower roll 12. Another such opening is shown at 31. These openings will span a number of ends, possibly three, on the left hand side of the center and additional ones on the right hand side of the center of the tube.

Upon this tube 25, so as to cover the openings 30 and 31, we provide a cover 35 of some plastic material which will be arcuate in shape as shown at 36 so as to substantially fit the arcuate circular shape of the tube 25. Portions of this cover, as seen in FIGS. 5 and 6 will extend about the conduit greater than 180° so as to retain the cover in position on the conduit. This cover is provided with a plurality of smaller slots 37, 38, 39, and 40 etc. which will register with the long openings 30, 31 in the tube 25. One of these slots will be located so as to be adjacent each of the ends as it extends from the roll from the spinning machine. This arcuate formation of cover 35 is less than 360° by an amount at least equal to the width or circumferential extent of the opening 30 at the portions of the cover containing the slots so that the cover may be rocked circularly about the tube 25 from a closed position shown in FIG. 5 to the open position shown in FIG. 6, thus exposing the circumferential extent or width of the long opening 30 in the tube 25 for easy access and cleaning of the tube and without removing of the tube 25 from the machine. In order to provide that this arcuate cover may rock with reference to the tubes 26, it is notched as at 42 at each location of such tube 26 so that this uncovering action may occur. A notch 41 at the center of this cover is also provided so that a wall 43 is formed permitting the operator to more easily grasp the tube cover for rocking the same.

We claim:

1. In a textile machine, a suction system to pick up lint comprising a tubular conduit, said conduit having an opening therein with the length of the opening extending axially of the conduit and the width of the opening extending circumferentially of the conduit sufficiently to prevent the use of the opening as a suction pick up for lint but such as to permit access to the interior of the conduit for cleaning, a cover over said opening having a slot therein communicating with said opening, said slot having its length extending axially of the conduit and its width extending circumferentially of the conduit, the width of said slot being such as to limit the width of the opening sufficiently to permit the use of said slot and opening as a suction pick up for lint the circumferential extent of said opening being many times greater than the corresponding extent of said slot, and means to mount said cover over said opening for movement of the cover to substantially completely expose said opening for access to the interior of said conduit for cleaning.

3

2. In a textile machine as in claim 1 wherein said tubular conduit is cylindrical and said cover is arcuate and of a size to slidably fit said conduit and said cover extends in an arc greater than 180° in some portions to retain it in position on said conduit, said cover in those portions of the cover containing the slots having an arcuate extent less than 360° by an amount at least equal to the width of said openings, wherein the cover is mounted for rotation about the axis of the conduit to substantially completely expose said opening for access to the interior of said conduit for cleaning. 5 10

4

3. In a textile machine as in claim 1 wherein said cover is of plastic material.

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