Aug. 14, 1945. W. J. DUNLEAVY 2,382,214

CLEARER FOR ROVING OR SPINNING FRAMES

Filed Oct. 14, 1944

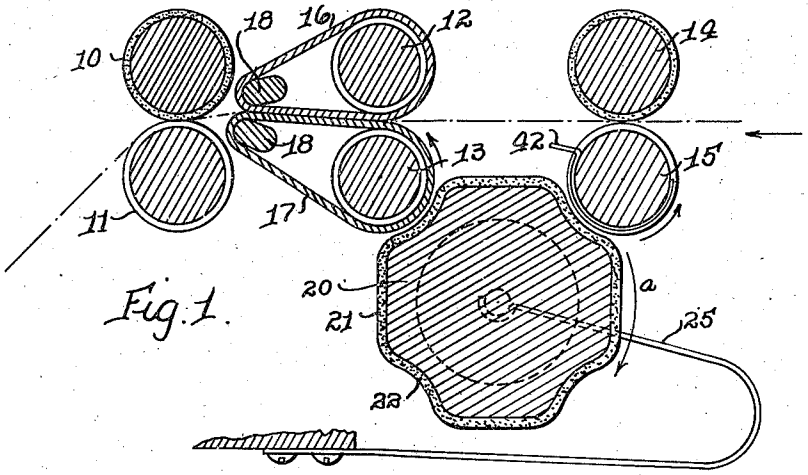


Fig. 1.

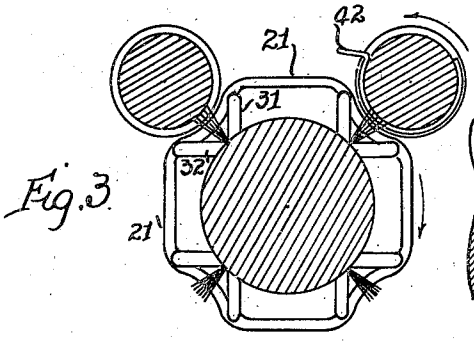


Fig. 3.

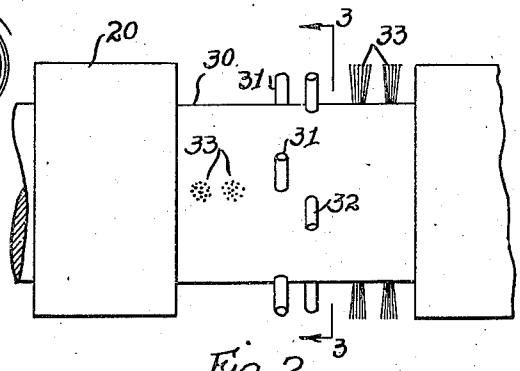


Fig. 2.

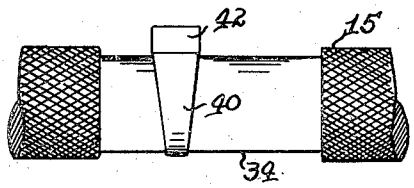


Fig. 4.

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CLEARER FOR ROVING OR SPINNING FRAMES

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2 Claims. (Cl. 19—140)

This invention relates to clearers for removing lint or fly from drawing rolls or aprons in a roving or spinning frame. Both fixed and movable clearers have heretofore been used, and it is the general object of my invention to provide a clearer which will effectively combine the good features of both fixed and movable clearers.

To the accomplishment of this object, I provide a clearer which is intermittently advanced angularly after brief intervening stationary or rest periods. I thus present successive lint-collecting surfaces to the rolls or aprons and I also secure the wiping effect of a stationary or fixed clearer.

My improved clearer is simple in construction and may be economically produced. It is also exceptionally reliable and satisfactory in use.

My invention further relates to arrangements and combinations of parts which will be hereinafter described and more particularly pointed out in the appended claims.

A preferred form of the invention is shown in the drawing, in which

Fig. 1 is a sectional end view of my improved clearer, with associated parts of a drawing frame;

Fig. 2 is a partial front elevation of the clearer roll;

Fig. 3 is a sectional end view, taken along the line 3—3 in Fig. 2; and

Fig. 4 is a partial front elevation of a drawing roll.

Referring to the drawing, I have shown parts of a drawing frame of usual construction and comprising upper and lower front drawing rolls 10 and 11, upper and lower middle rolls 12 and 13, and upper and lower back rolls 14 and 15. Long draft aprons 16 and 17 may be provided for the middle rolls 12 and 13, and these aprons have fixed guide-bars 18 adjacent the front rolls 10 and 11, all of these parts being of the usual commercial construction.

My improved clearer comprises a roll 20, preferably of light wood and having alternate flat outer surface portions 21 and concave depressed portions 22. At its ends, the roll 20 is provided with pins or gudgeons having bearing support on leaf springs 25.

The middle portion of the roll 20 is reduced in diameter, as indicated at 30, and is provided with a series of pins 31 spaced at 90° and inclined at substantially 45° clockwise, as viewed in Fig. 3. A similar and adjacent series of pins 32 is also provided but these pins are inclined in the opposite direction or anti-clockwise. Spaced brush portions 33 are provided at each side of the pins 31 and 32 to clear the neck 34 of the drawing roll.

The surface of the roll 20 is provided with a soft cushion surface, which may be of felt or some other loosely woven and felt-like fabric.

The lower back drawing roll 15 has a spring clip 40 applied to its reduced middle portion or neck 34, as shown in Fig. 4, and this clip 40 has an offset end portion forming a driving lug 42 adapted to engage the pins 31 or 32.

During the major part of each rotation of the drawing roll 15, the clearer roll 20 remains in the position shown in Figs. 1 and 3, with the concave recessed portions 22 engaging the rolls 13 and 15 and wiping the lint and fly therefrom. As the lug 42 advances, it engages one of the pins 32, as indicated in Fig. 3, and the roll 20 will then be advanced in the direction of the arrow *a* in Fig. 1 until the lug 42 clears the engaged pin 32. By this time, however, the flat portions 21 of the roll 20 will be engaged by the rolls 13 and 15 and the roll will be further advanced thereby until depressed portions 22 again engage the drawing rolls. The clearer will then remain at rest until the lug 42 engages another pin 32.

Two series of pins 31 and 32 are provided, so that the roll 20 will be operated if inserted in the position shown in Fig. 2 or if inserted in a reverse position, with the pins 31 at the right of the pins 32. In the latter case, the lug 42 will engage the pins 31. It will be noted in Fig. 4 that the clip 40 is so placed that the lug 42 is off center and will engage only one series of pins for each end-for-end position of the roll 20.

This extremely simple clearer construction has the wiping effect of a stationary clearer when in the position shown in Fig. 1 and also has the advantage of the movable clearer as it is advanced angularly at each revolution of the drawing rolls.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than as set forth in the claims, but what I claim is:

1. Clearer mechanism for drawing rolls comprising a clearer roll having angularly spaced depressed wiping portions and intervening raised portions, and intermittently-operated means to angularly advance said clearer roll to effect engagement of raised portions of said roll with the drawing rolls for further angular advance of said clearer roll thereby, and said latter means comprising spaced pins on said clearer roll and a driving lug on one of the drawing rolls which engages successive pins on said clearer roll on successive revolutions of said drawing roll, said pins being disposed in two oppositely inclined sets and said driving lug being axially positioned to engage one set only of said pins in the clearer roll in a given end-for-end position of said roll.

2. The combination in a clearer mechanism as set forth in claim 1, in which the clearer roll is provided with brushes alongside said set of pins, which brushes engage and clean the drawing rolls at each side of the driving lug.

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