D. O. PEASE.

SPINNING MACHINE.

APPLICATION FILED MAY 12, 1910. RENEWED FEB. 17, 1911.

987,317. Patented Mar. 21, 1911.

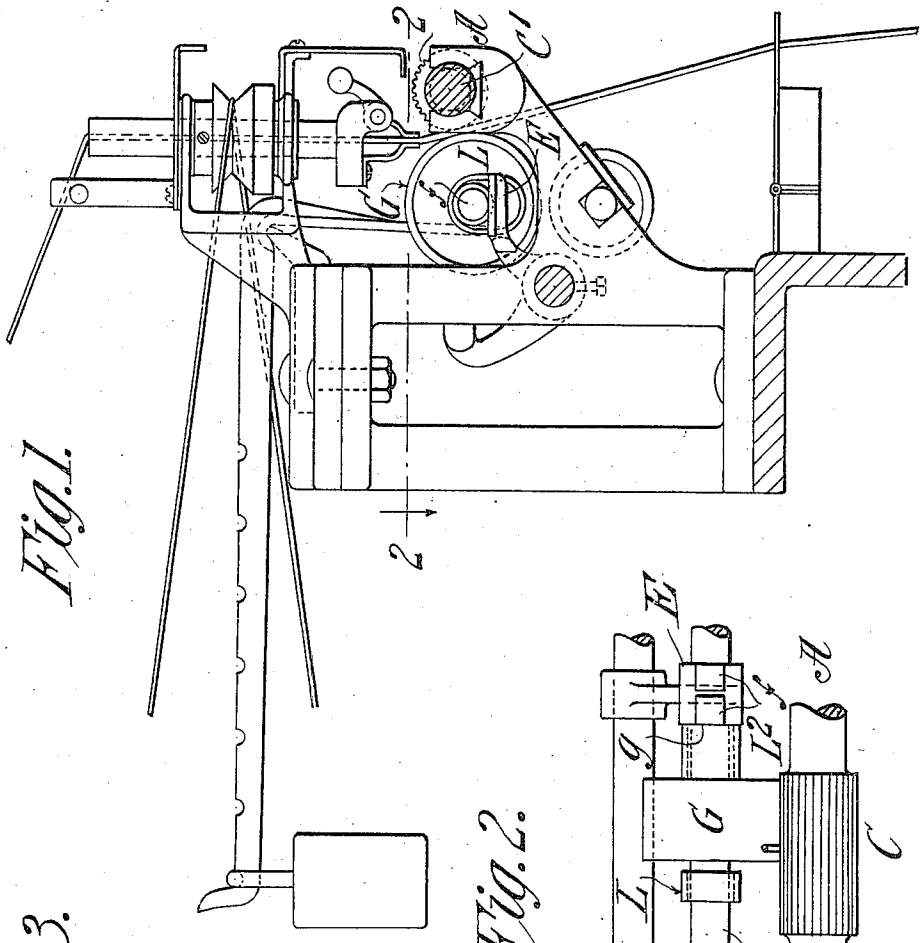

Fig. 1.

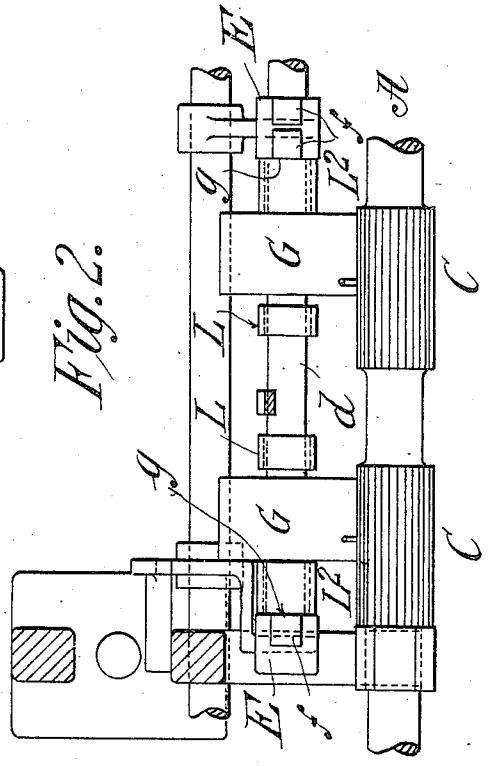

Fig. 2.

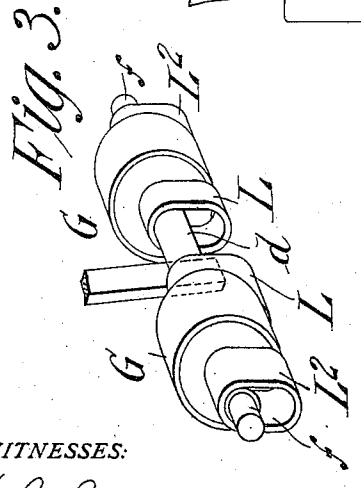

Fig. 3.

WITNESSES:

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UNITED STATES PATENT OFFICE.

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SPINNING-MACHINE.

987,317. Specification of Letters Patent. Patented Mar. 21, 1911.

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To all whom it may concern:

Be it known that I, DURELL O. PEASE, a citizen of the United States of America, and resident of Hampden, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Spinning-Machines, of which the following is a full, clear, and exact description.

This invention for improvements in spinning frames particularly relates to appurtenances of the drawing rolls in conjunction with which the twister heads have their cooperative relations.

It is of frequent occurrence in the operation of the spinning machine that the rovings or yarns become broken between the twisters and the drawing rolls, and the broken end portions thereof become wound around the arbor for one roll of a companion set or pair of the drawing rolls, requiring either vigilant attention and alertness on the part of the operator, or the stopping of the spinning machine for rectifying the condition caused by the broken roving. And, therefore, the object of this invention is to provide, in relation to one drawing roll of each set or pair, guards, which, while of a very simple form and inexpensive character, are entirely efficient for preventing the broken ends of the roving or yarn from coming in contact with the arbors or shafts which connect pairs of the rolls.

The invention is described, in conjunction with the accompanying drawings, and set forth in the claims.

In the drawings:—Figure 1 is a sectional elevation of a portion of a spinning machine comprising the twisters and drawing rolls and showing the location thereon of the guards. Fig. 2 is a partial plan view as seen below the plane indicated by line 2—2, Fig. 1. Fig. 3 is a perspective view of an arbor united pair of the drawing rolls showing the application of the guard bands or belts which constitute this invention.

In the drawings, A represents a shaft arranged horizontally along the front of the spinning machine, the same being mounted in suitable bearings and understood as being rotated in the usual manner, said shaft having drawing rolls C C formed as integral parts thereof or rigidly united thereto, these rolls being preferably longitudinally grooved or fluted.

G G represent separated drawing rolls in pairs, each pair thereof being united by an arbor *d* and having outside thereof oppositely projecting journals *f* with shoulders *g* between their ends and the outer faces of the rolls,—the said journals having supporting bearings on brackets E E. The shoulders *g g* have engagements against the sides of the bracket so that any axial motion of the arbor united pair of the drawing rolls G G is prevented. A pair of endless bands or belts L L, which may be of leather, metal, or any suitable material, are suspended from the uniting arbor of each pair of the rolls. These have their locations in relation to the inner faces of the rolls and serve as guards not only to prevent the broken ends of the sliver or roving from coming in contact with the arbor to be wound up therearound, but also to prevent the stock from becoming oiled or greased by reason of the presence of more or less grease or lubricant which cannot practicably be prevented from having a presence on the roll uniting arbor. Endless bands L^2, L^2, similar to those L are also provided in suspension on the portions of the roll journals between the outer faces of the rolls and the shoulders *g g*, their retention in their positions as guards next to, but outside of, the rolls, being insured by their edgewise engagements with the rolls, and the edges of the brackets. The outside guards L^2, L^2 serve to prevent winding of broken ends on the journals and protect the yarn from becoming greasy in the same manner as insured by the inner guards L L. It may be stated that incidentally the endless bands will have a slow creeping motion around the arbor in the direction of its rotation, but this action is not of sufficient rapidity as to impair the action of the bands for their service as guards.

I claim:—

1. In a spinning machine, a set of continuous drawing rolls and companion rolls in rear of drawing rolls having a uniting arbor and an endless band suspended from

the arbor and serving as a guard for preventing the yarn passing between the drawing rolls from contacting with the arbor.

2. In a spinning machine, a set of continuous drawing rolls and companion rolls in pairs in rear of drawing rolls, having a uniting arbor and having journals extending outwardly beyond the ends of the rolls, and endless bands suspended from said journals outside of the rolls and also suspended from the arbor between the rolls, for the purpose set forth.

Signed by me at Springfield, Mass., in presence of two subscribing witnesses.

DURELL O. PEASE.

Witnesses:
WM. S. BELLOWS,
G. R. DRISCOLL.