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TRAVERSE MECHANISM FOR CROSS SPOOLING MACHINES

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Fig. 1.

Fig. 2.

Fig. 3.

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TRAVERSE MECHANISM FOR CROSS-SPOOLING MACHINES.

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To all whom it may concern:

Be it known that I, Oswald Stenglein, a citizen of the German Republic, residing at Markersdorf, District of Leipzig, Germany, have invented certain Improvements in Traverse Mechanisms for Cross-Spooling Machines, of which the following is a specification.

Pinning and winding machines are known in which the traversing thread guide is operated by means of a crank-and-slot mechanism whose crank is rotated by means of a toothed gearing having an elliptic driving wheel adapted to impart to the guide an even speed of travel.

The present invention relates to a mechanism of this kind and its object is to render the movement of the thread guide sufficiently uniform to allow the mechanism to be employed satisfactorily in a cross-spooling machine, and this object is achieved according to the invention by providing the toothed gearing with a heart-shaped driving wheel.

Fig. 1 of the accompanying drawings rep-

resents a vertical section of the improved mechanism,

Fig. 2, a plan of the same, and

Fig. 3, a cross-section on the line 3—3 of Fig. 2.

The traverse-mechanism employed in cross-spooling machines usually consists of a traverse cam by which the thread guide is reciprocated. The sudden reversal in the movement of the thread guide is brought about by a sharp bend in the cam groove, and the abrupt stoppage of the roller which runs in the groove, produces shocks which, particularly where a large number of spindles are operated at the same time, result in a loud noise.

To obviate this noise, the traverse-mechanism is, according to the present invention, constructed as shown in the drawing. The thread guide i is connected to a slide f which is guided in grooves o in the casing n and operated by means of a crank e. The crank pin g, which is fitted with a roller h, works in an elongated slot s and reciprocates the thread guide between the end points v and u of the spool r. Fig. 2 shows the crank in the position it occupies when the reversal of the slide movement takes place. As the crank movement is at this instance parallel with the slot s, there is nothing to oppose it, and no shock will be produced.

As the spindle p on which the spool r is mounted, rotates at a uniform speed, it is also essential for the thread guide to move uniformly from one end of the spool to the other. To equalize the crank displacement in the direction of the slide travel, the crank shaft m is driven by means of a heart wheel gear. The heart wheel c is mounted on a shaft l and meshes with a corresponding elliptic gear d mounted on the crank shaft m.

Rotation is imparted to the shaft l from the driving shaft k through the medium of spiral gears a and b. The ratio of the gearing from a to b is preferably 3:1 and from c to d 2:1, so that the crank shaft makes one revolution while the driving shaft makes six.

Owing to the noiseless operation of this traverse-mechanism the machine can be run at a very high speed consistent with the strength of the yarn.

The mechanism is enclosed within the casing n.

I claim:

In a device for operating the traversing guide of a cross-spooling machine, the combination with a crank-and-slot mechanism for reciprocating said guide, of a toothed gearing having a heart-shaped driving wheel for operating said mechanism.

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