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G. H. THOMPSON ET AL

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TENSION DEVICE FOR YARN WINDING MACHINES

Filed July 22, 1925

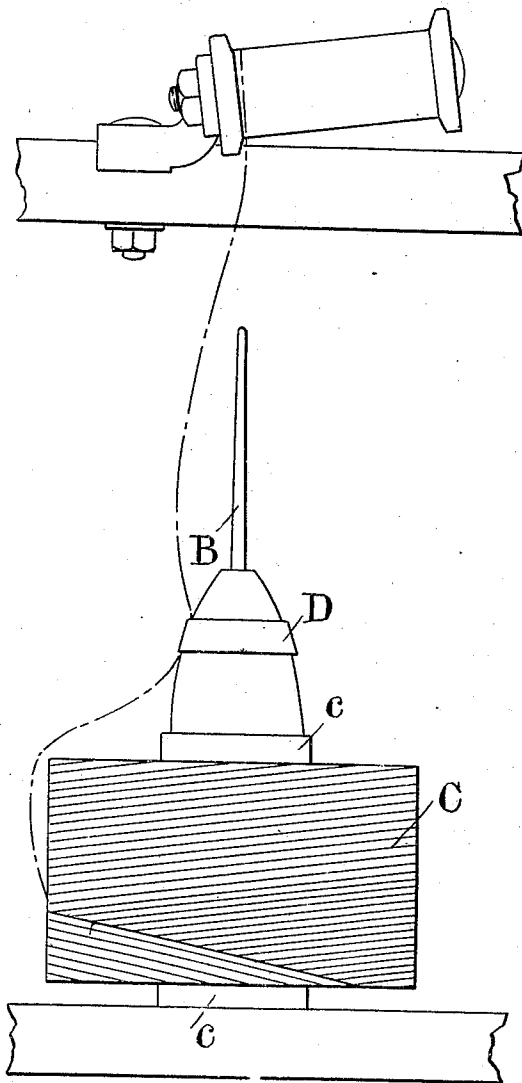


Fig. 1.

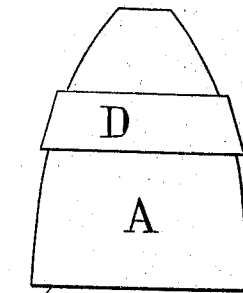


Fig. 2.

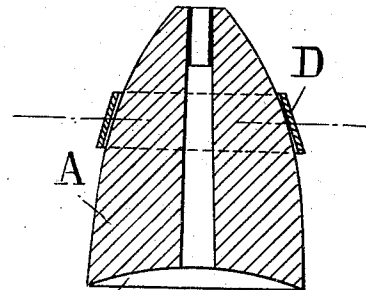


Fig. 3.

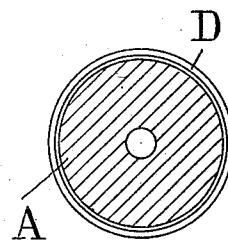


Fig. 4.

INVENTORS.

Geo. H. Thompson
Geo. Dronofeld
By Q. Outanorian
attys.

UNITED STATES PATENT OFFICE.

GEORGE HERBERT THOMPSON AND GEORGE DRONSFIELD, OF OLDHAM, ENGLAND.

TENSION DEVICE FOR YARN-WINDING MACHINES.

Application filed July 22, 1925, Serial No. 45,383, and in Great Britain October 29, 1924.

This invention relates to improvements in tensioning or controlling devices for yarn winding machines to maintain the yarn or thread taut and prevent snarls and ballooning when winding off a cheese, cone or bobbin on to another cheese, cone or bobbin of the type in which a guide block adapted to be mounted on the end of the bobbin spindle is formed with a ring member resting upon it, the yarn passing between the ring member and the guide block.

This invention consists in providing a guide block for mounting on the winding off spindle having an exterior surface of conoidal or paraboloidal shape and a dished base or underside to rest flat against the head of the bobbin or cheese and a ring of light material resting on the guide block the inner surface of this ring being of corresponding conoidal or paraboloidal shape to that of the guide block, the yarn from the cheese passing between the block and the ring during winding off.

The invention will be fully described with reference to the accompanying drawings in which sufficient of a winding machine is shown to illustrate the invention.

Fig. 1 is a front elevation of part of winding machine showing the invention applied.

Fig. 2 is an elevation of the tensioning guide block detached.

Fig. 3 is a sectional elevation.

Fig. 4 is a sectional plan.

The tensioning guide block A is constructed of conical or parabolic shape, and is mounted on the stationary drawing off spindle B of a winding machine above either a cheese C or a cone or bobbin and upon the guide block is placed the tensioning ring D of corresponding shape between which and the guide block the yarn or thread is passed.

The guide block A may be made of wood, metal, hard wax or other suitable material, and is preferably dished on its underside at a to rest flat against the head of a bobbin c and so prevent yarn getting between.

The interior of the ring D conforms to the contour of the guide block A and fits loosely upon it and may be made of aluminium or other material and the weight may vary according to the fineness or coarseness of the yarn.

The yarn is passed inside the ring D between it and the guide block A and is drawn upward towards the apex and as it unwinds the ring is held in a floating or suspended condition and the yarn travels upwards and round the guide block A to a guide or roller E. The device may be applied to pirn winding machines, gassing frames and cheese winding and similar machines.

What we claim as our invention and desire to protect by Letters Patent is:

A tensioning or controlling device for yarn winding machines of the type referred to comprising the combination with the winding off spindle of a guide block mounted on and encircling this spindle having an exterior surface of conoidal shape and a dished base to rest flat against the head of the bobbin and a ring of light material encircling and resting on the guide block the inner surface of this ring being of corresponding conoidal shape to the outer surface of the guide block, the yarn from the bobbin passing between the guide block and the ring during winding off.

In testimony whereof we have hereunto set our hands.

GEORGE HERBERT THOMPSON.
GEORGE DRONSFIELD.