FLIER FOR SPINNING MACHINES

Inventor,

Harvey E. Herr,

by W. P. Blyer

Attorneys.
FLIER FOR SPINNING MACHINES

Harvey E. Herr, Buffalo, N.Y., assignor to Herr Manufacturing Company, Inc., Buffalo, N.Y., a corporation of New York

Application January 20, 1939. Serial No. 251,983

6 Claims. (Cl. 57—116)

This invention relates to certain new and useful improvements in the fliers employed in connection with spinning machines and the like.

It has for one of its objects to provide a flier structure which is so designed and constructed that those parts thereof which are subject to wear may be readily replaced without discarding the whole flier, thereby affording a material saving to the flier users.

Another object of the invention is to provide a flier which is simple, light and inexpensive in construction, which is efficient in operation, and which is further so designed as to prevent the flier overrunning or continuing to revolve after the bobbin has come to rest.

In the accompanying drawings:

Figure 1 is a fragmentary front view of a portion of a spinning machine showing my improved flier applied thereto. Figure 2 is an enlarged top plan view of the flier and associated bobbin. Figure 3 is a fragmentary vertical section taken on line 3—3, Figure 2. Figures 4 and 5 are horizontal sections taken on the correspondingly-numbered lines in Figure 3. Figure 6 is a side elevation of the flier-base hub or bearing member.

Similar characters of reference indicate corresponding parts throughout the several views.

The invention is applicable to spinning machines of any suitable and well known construction, 10 indicating the bobbin spindle and 11 the take-off bobbin mounted thereon. The thread or yarn from the bobbin extends upwardly through the flier wires 12 and 13 mounted on a holder or flier body applied to the bobbin spindle and thence passes upwardly through a guide or centering eye 14 to a take-up spool (not shown). The bobbin shown is of the type used with fliers of the eccentric type and has a recess 15 in its top containing an inverted cup-like member 16 having an opening 17 therein arranged concentric to the axis of the bobbin spindle.

The flier body preferably consists of an attaching sleeve or journal member 18 adapted to be fitted over the bobbin spindle and made of any suitable metal. At its lower end this sleeve has an eccentrically-shaped flange 19 adapted to be passed through the cup-opening 17 during the application and removal of the flier body to and from the spindle. Spaced above this eccentric flange is an annular flange 20 and formed in the sleeve preferably in the plane of this flange is an internal annular groove 21. Encircling the spindle 10 and fitted in this groove, is a substantially circular wire spring 22 which, as shown in Figure 5, is adapted to engage the spindle and the sleeve to provide a driving connection between these parts. When the flier is running, the outer portion of the spring 22 tightens against the outer wall of the sleeve-groove 21 and effectually holds the flier-body to the spindle.

Rotatably mounted on the attaching sleeve 18 and bearing at its lower side on the top face of the flange 20 is a bearing member 23 to which the wire-base 24 is attached. This bearing member is preferably made of fiber and is detachably mounted on the sleeve for limited axial displacement, the upper end of the sleeve having a detachable split band 25 applied thereto which forms a shoulder for limiting the upward displacement of the bearing member during its rotation. When it is desired to remove the bearing member from the sleeve, this can be readily effected by merely removing the band 25 therefrom.

To prevent the flier overrunning after the bobbin has come to rest, I provide the bearing member 23 with a brake element 26 substantially in the form of a pin which is guided in a radial opening in the bearing member and which is adapted for frictional or braking contact with the contiguous surface of the sleeve 18. A retaining spring 27 is seated in an annular groove 28 in the bearing member and extends over and bears against the outer end of the brake 26 to constantly urge the latter into frictional contact with the sleeve 18 and resist outward displacement of the brake pin from the bearing member.

I claim as my invention:

1. A flier for spinning machines and the like, comprising a sleeve adapted for attachment to a bobbin-spindle, a bearing member detachably mounted on said sleeve, a wire-base mounted on said bearing member, and yieldable clutch means disposed between said sleeve and the spindle and constituting a driving connection between such parts.

2. A flier for spinning machines and the like, comprising a sleeve adapted for attachment to a bobbin-spindle and having an internal annular groove therein, a yieldable clutching element encircling the spindle and fitted in said groove and constituting a driving connection between the sleeve and the spindle, a bearing member detachably mounted on said sleeve, and a wire-base mounted on said bearing member.

3. A flier for spinning machines and the like, comprising a sleeve adapted for attachment to a bobbin-spindle and having an internal annular groove therein, a substantially circular wire
spring fitted in said groove about the spindle and in bearing contact with the latter and said sleeve to provide a driving connection between such parts, and a wire-base rotatably mounted on said sleeve.

4. A flier for spinning machines and the like, comprising a sleeve adapted for attachment to a bobbin-spindle, a bearing member detachably mounted on said sleeve, a wire-base mounted on said bearing member, and a braking means applied to said bearing member for engagement with said sleeve.

5. A flier for spinning machines and the like, comprising a sleeve adapted for attachment to a bobbin-spindle, a bearing member detachably mounted on said sleeve, a wire-base mounted on said bearing member, a braking means applied to said bearing member for engagement with said sleeve, and yieldable clutching means disposed between said sleeve and the spindle and constituting a driving connection between said parts.

6. A flier for spinning machines and the like, comprising a metallic sleeve adapted for attachment to a bobbin-spindle, a fiber bearing member loosely mounted on said sleeve and having a wire-base borne thereby, a spring clutching element disposed substantially concentrically of and between said sleeve and the spindle and constituting a driving connection between such parts, and a braking element applied to said bearing member for frictional contact with said sleeve and including spring means for urging it into contact with the latter.

HARVEY E. HERR.