(No Model.)

F. BROADBENT.

KINK CATCHER FOR SPINNING FRAMES.

No. 280,567. Patented July 3, 1883.

Fig. 1.

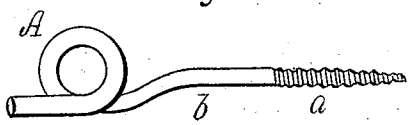


Fig. 3.

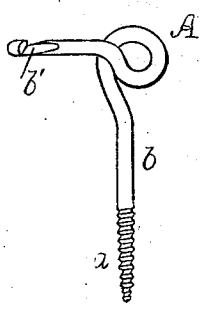


Fig. 2.

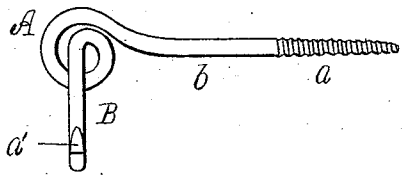


Fig. 4.

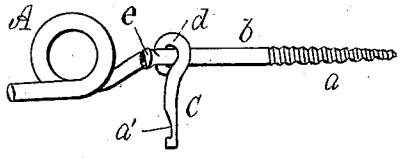


Fig. 5.

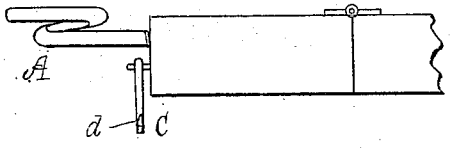
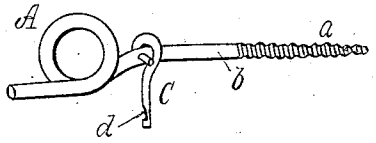


Fig. 6.



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UNITED STATES PATENT OFFICE.

FREDERICK BROADBENT, OF PROVIDENCE, RHODE ISLAND.

KINK-CATCHER FOR SPINNING-FRAMES.

SPECIFICATION forming part of Letters Patent No. 280,567, dated July 3, 1883.

Application filed January 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK BROADBENT, a subject of the Queen of Great Britain, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Kink-Catchers for Spinning-Frames; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to "kink-catchers," so called, or devices connected with spinning-frames and located between the drawing-rolls and spindles, to catch kinks in the thread, which may occur in spinning when a traveler breaks, or is disconnected from its ring, or becomes unserviceable from other causes. These kink-catchers are valuable additions to spinning-frames, for the reason that they arrest kinks in the threads and prevent adjacent threads from being broken by flying about of the kink, thereby preventing making of waste.

Heretofore these kink-catchers have been formed by extending the end of the guide-wire downward and forming a nick or notch in its lower end for catching the loose thread, the portion of the eye of such guide-wire over which the thread passes being situated directly over the center of the spindle. This kink-catcher, from its exposed or unprotected position with respect to the eye of the guide-wire and the spindle, is objectionable, as it necessitates an extra motion for the spinner in threading the eye, and is often struck by the hand or caught by the clothing of the spinner and turned to one side, thereby misplacing the eye of the guide-wire.

In my invention I employ a pendent rod or kink-catcher with a notch in its lower end; but I place this catcher in rear of the eye of the guide-wire, where it is less in the way of the spinner and less liable to be struck, even if rigid, than if in front of the eye of the guide-wire. I prefer that my kink-catcher shall be suspended loosely from or swiveled to the shank of the guide-wire, in order that when struck it may swing to one side out of the way of the spinner or attendant when cleaning or otherwise, or drop when the fly-board is turned up in the act of doffing; or my catcher may be applied independently of the guide-wire and suspended loosely from the edge of the fly-board or other adjacent part of the frame; but wherever the catcher may be located, I prefer to attach it loosely, that it may be free to swing from its support.

The drawings accompanying this specification represent, in Figure 1, a view of a plain thread-guide or "pig-tail," commonly in use upon ring-spinning frames to guide the threads from the drawing-rolls to the spindle or the bobbin upon the spindles; Figs. 2 and 3, views of kink-catchers in use prior to my invention. Fig. 4 is a view of my improved catcher as suspended from the shank of the plain guide-wire. Fig. 5 is a view of ordinary guide-wire and the fly-board, to which it is attached, with my catcher suspended from such board independent of the guide-wire. Fig. 6 shows a modification of the means for preventing slipping forward of the catcher when the latter is hung loosely from the shank of the guide-wire.

In these drawings, A represents the curled-wire thread guide or eye, and *b* the shank of the same, while the screw-thread upon the latter for attachment to the fly-board of the spinning-frame is shown at *a*.

Fig. 2 in said drawings shows the kink-catcher heretofore in use, which is formed by extending downward the front end of the guide-wire in a rigid extension, B, the nick or notch in the lower end of this extension for catching the kink being shown at *a'*.

In Figs. 4, 5, and 6 of said drawings my kink-catcher is represented in various forms. In Figs. 4 and 6 it is shown at C as a short piece of wire pendent from the shank *b* of the guide-wire A at a point some distance in rear of the eye of said guide-wire, in which position the catcher is, as before stated, less in the way of the spinner or other attendant of the spinning-frame, and less liable to be struck when cleaning is to be done or threading of the eye or mending takes place.

The catcher C, I hang or suspend loosely from said guide-wire or fly-board, in order, as before stated, that when interfered with it shall yield to the pressure and swing to one side or drop when the fly-board is raised in in the act of doffing, thereby naturally ac-

commodating itself to any change in position of its support, and remain vertical. If the catcher C is swiveled loosely to the shank *b* of the guide-wire, precaution must be taken to prevent the catcher from slipping forward and obstructing the eye A. This may be effected by forming a collar upon said shank *b* in rear of the eye A; or a simple nick may be cut in such shank to throw up a spur, *e*, in front of said catcher, as shown in Fig. 4; or a pin may be driven into the shank *b*, and the outer end of such pin left protruding in front of the catcher C, as shown in Fig. 6; or the catcher may be formed with an eye in its upper end to engage a loop or staple secured to the fly-board, as shown in Fig. 5. This would avoid necessity of employing the spur *e* or its equivalent.

I do not confine myself to any precise manner of connecting my catcher to the guide-wire or fly-board.

I claim—

1. The combination, with the fly-board and guide-wire of a spinning-frame, of a loosely-suspended kink-catcher which may yield when interfered with and subsequently return automatically to its normal position when the disturbing force is removed, substantially as set forth.

2. The combination of a guide-wire and a kink-catcher suspended movably thereon, with a spur which prevents the said kink-catcher from slipping forward beyond a certain point, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK BROADBENT.

Witnesses:

EDWARD D. BASSETT,

LOUIS BLANKENHORN.