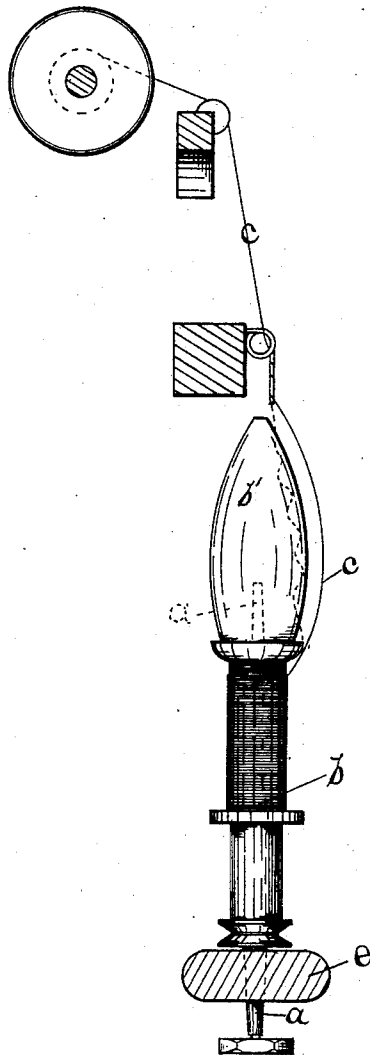


(No Model.)

T. H. HOOD.
KINK PREVENTER FOR SILK SPINNING MACHINES.

No. 364,516.

Patented June 7, 1887.



Witnesses

William H. Allen,
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Inventor

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UNITED STATES PATENT OFFICE.

T. HOWELL HOOD, OF NORWICH, CONNECTICUT.

KINK-PREVENTER FOR SILK-SPINNING MACHINES.

SPECIFICATION forming part of Letters Patent No. 364,516, dated June 7, 1887.

Application filed September 30, 1886. Serial No. 214,906. (No model.)

To all whom it may concern:

Be it known that I, T. HOWELL HOOD, a citizen of the United States, residing in the city of Norwich, in the county of New London and State of Connecticut, have invented a certain new and useful Improvement in Kink-Preventers for Silk-Spinning Machines, which improvement is fully set forth and described in the following specification, reference being had to the accompanying drawing, which is a side elevation of a single spindle and bobbin having my new device properly attached.

My invention relates to machinery for spinning or for doubling and twisting silk, and is provided to overcome a common tendency on the part of the fine strands of silk to kink as the spindles are stopped. This is caused chiefly by the fact that the bobbin continues to rotate (by its momentum) after the drawing-rolls or "take-up" spools stop, leaving the silk slack; and as a natural consequence this slack portion immediately doubles and twists together. Owing to the strands being very fine and easily broken, the operation of straightening out such kinks becomes both a tiresome and expensive one.

My invention is intended to overcome this serious difficulty, and accomplishes the desired result by providing an attachment which receives the strand of silk the instant it stops and retains it in its extended position instead of allowing it to hang limp, as heretofore. I am aware that a circular band of plush encircling the bobbin-head has been used for this purpose; but the stiff nap of said plush frequently breaks the fine strands, leaving them in a worse condition than if allowed to kink.

My improvement may be briefly described as an extension of general conical shape secured to the upper head of the delivery-bobbin or formed as a part thereof, said extension being circular in cross-section and having its vertical outline approximately parallel with the curve described by the whirling strand of silk.

In the annexed drawing I have designated the spindle by the letter *a*.

b indicates the bobbin, *b'* my extension, and *c* the silk.

e represents the bolster-rail of a spinning-

frame in which the several spindles are supported and adapted to rotate.

Aside from the bobbin-extension referred to above, the mechanism employed by me remains precisely the same as used heretofore, my purpose being to remedy the defect by altering the bobbin rather than by rebuilding or adding to the machinery. By so doing I am able to correct the defect by simply substituting my new form of bobbin for that before used.

As above intimated, I prefer to form the extension *b'* as a part of the bobbin, but it may be formed separate and slipped tightly onto the upper end of the spindle; but in either case the extension and bobbin should rotate together.

I prefer to turn the extensions *b'* from a light wood and use them without any covering; but they may, if preferred, be covered with cloth or velvet, though, as a rule, I have not found it necessary in practice to do so.

While the machinery is in motion and the bobbin rotating swiftly the strand of silk is whirled outward by centrifugal force, describing a circle so large that it travels around extension *b'*, as shown in full lines in the drawing; but when the mechanism is stopped and the momentum of the bobbin checked the silken strand drops inward against said extension, as shown in dotted lines, or wraps itself around the extension, in which extended position it remains until the bobbins are again set in motion, when it is immediately swung clear and thrown outward by centrifugal force. My improvement may be cheaply produced, and, as above stated, may be applied to spinning-frames without any alteration to said frames.

It should be understood that I do not seek to overcome the tendency to kink by using a rotary brush, as the extension *b'* stops before the strand of silk comes in contact with it, and serves only to receive the silk as it settles by gravity and support it on its periphery, offering sufficient friction to prevent said strand from moving or kinking so long as it rests on said extension. I find in practice a tendency on the part of the silk to contract slightly, as indicated by the dotted lines; but the twist in

the silk does not furnish sufficient power to overcome the frictional resistance offered by the surface of the extension.

I claim as new, and wish to secure by Letters Patent—

5 The combination, with a spindle and bobbin, of the kink-preventer *b'*, constructed substantially circular in cross-section and having

its vertical outline approximately parallel with the curve described by the strand of silk in the act of spinning, as herein described. 10

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Witnesses:

FRANK H. ALLEN,
JOHN C. FOGARTY.