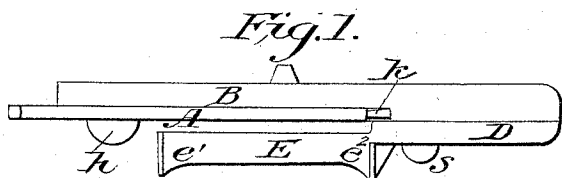
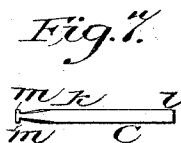
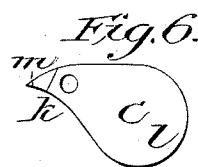
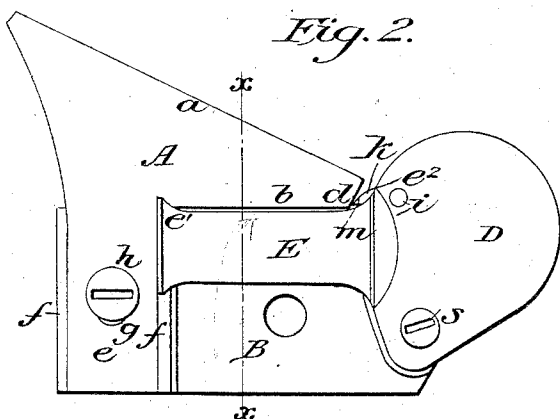
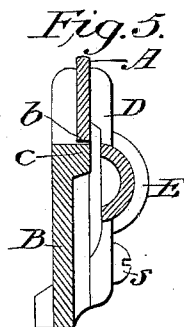
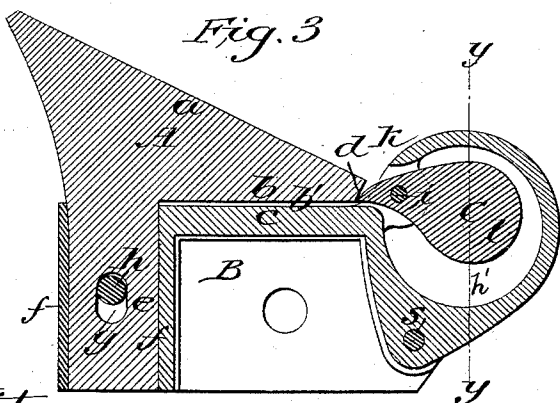
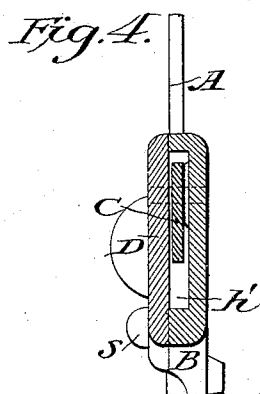


(No Model.)

J. M. CURTICE.
YARN CLEANER FOR SPOOLING MACHINES.

No. 448,622.

Patented Mar. 17, 1891.



Witnesses.

Ob. L. Remy.

Jas. W. Mahan.

Inventor.

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Att'y.

UNITED STATES PATENT OFFICE.

JOHN M. CURTICE, OF LOWELL, MASSACHUSETTS, ASSIGNOR TO HIMSELF
AND THE LOWELL MACHINE SHOP, OF SAME PLACE.

YARN-CLEANER FOR SPOOLING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 448,622, dated March 17, 1891.

Application filed May 31, 1881. Serial No. 34,576. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. CURTICE, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and
5 useful Improvement in Yarn-Cleaners for Spooling-Machines; and I do hereby declare the same to be described in the following specification, and represented in the accompanying drawings, of which—

10 Figure 1 is a top view, Fig. 2 a front elevation, Fig. 3 a vertical and longitudinal section, and Figs. 4 and 5 transverse sections, of one of my improved yarn-cleaners, the plan of section of Fig. 5 being taken on the
15 dotted line *xx* of Fig. 2, and that of Fig. 4 being taken on the dotted line *yy* of Fig. 3. Fig. 6 is a side view, and Fig. 7 a top view, of its automatic stop-gate, to be hereinafter described.

20 While being spooled, yarn, after having been spun by a ring-spinning frame, is usually drawn between parallel edges arranged very closely to each other, they operating to separate from it any small bunches or extraneous
25 matters. When a bunch in the yarn may be so large as to become caught by the cleaner, in a manner to prevent the yarn from being drawn through it, an attendant, rather than remove the bunch by hand from the yarn,
30 will sometimes slip the yarn out of the cleaner, so as to allow the bunch to pass to the spool, the yarn being next dropped into place in the cleaner. To prevent this from being done, cleaners have been devised in which the slot
35 is closed by a detent or dog, so as to prevent the dislodgment of the thread. My invention relates to cleaners having such dogs; and it consists in a cleaner having the construction hereinafter pointed out.

40 In the drawings, the adjustable portion of the yarn-cleaner is shown at A and its support-piece at B. The upper edge *a* of the portion A is inclined to its cleaning-edge *b*, which is directly over the parallel fellow edge *c* of the
45 support-piece and forms therewith a horizontal slot, and there is between the upper and lower edges *a b* of the portion A another and short edge *d*, which makes an obtuse angle with the edge *b*. The portion A has projecting
50 down from it a tongue *e*, which is arranged between and against parallel guides *f f*, pro-

jecting from the front of the support-piece, such tongue having a short vertical slot *g* in it to receive the shank of a set-screw *h*, used to confine the tongue to the support-piece B. 55
The said support-piece is chambered, as shown at *h'*, to receive the automatic stop-gate C, the cap D of the chamber having projecting from it the supporter E, upon which the yarn travels while being cleansed, said supporter 60
being at its ends provided with inclined surfaces *e' e''*, for the purpose of keeping the yarn in proper position upon it, (the said supporter.) This supporter E is in front of the guide-slot *b'*, between the edges *b c*, and sup- 65
ports the thread on its way to said slot. The cap is held to the support-piece, not only by the stop-gate pivot, which extends into the cap, but by a set-screw *s*, which goes through the cap and is screwed into the support-piece. 70
By having the yarn-supporter and the cap of the stop-gate chamber connected or in one piece the supporter becomes sustained by and removable with the cap, such being ad- 75
vantageous for permitting ready access to be had to the cleaning-edges or the stop-gate for the separation therefrom of fibrous accumulations or for other purposes. The stop-gate, formed as shown, turns upon a stationary pivot *i*, arranged as represented, the nose *k* 80
of the gate being borne against the edge *d* by the gravitating power of the part *l* of the gate. Projecting from each side of the said nose is a spur *m*. The yarn on being dropped upon the upper edge of the portion A will 85
pass down such against the nose of the gate, which by the pressure of the yarn will be tripped and will allow the yarn to pass into the space between the gage-edge *b* and the fellow cleansing-edge *c*, the gravitating power 90
of the gate causing the nose to be thrown up instantly afterward to the edge *d*. The gate when against the said edge will operate to prevent the yarn from being drawn out from under the portion A, the spurs preventing ad- 95
ditional obstruction thereto. As the thread is wound about the spool, it is drawn over the supporter E and then through the slot *b'*. As it is thus wound, it travels lengthwise of the slot and traverses the supporter from end to 100
end, allowance being thus made for the increase of thread upon the spool, and the thread

not running over one line of the supporter but moving along it does not cut the latter. By this construction the old form of yarn-cleaner is modified so that the detent is hung in such a way that the attendant cannot tamper with it. The detent is entirely concealed except at the small point where it crosses the guide-slot. This point is so narrow that any instrument inserted to move the detent would of itself fill the slot.

I am aware that a yarn cleaner or guide having a vertical slot which is varied in width by an adjustable blade is old; also that it has been proposed to use therewith a hooked detent to prevent the yarn from being pulled out, and I lay no claim to any such invention.

What I claim is—

1. The automatic or gravitating stop-gate provided with a spur or spurs projecting from its nose, substantially as and for the purpose specified.

2. The support-piece chambered to receive the automatic stop-gate, in combination with the cap of the chamber having the yarn-supporter extended from it, as represented.

3. The combination of the support-piece B and supporter E, having inclines e' e'' at its end, with the adjustable portion A fitted to the support-piece, substantially as shown and described.

JOHN M. CURTICE.

Witnesses:

EDWARD C. MCCOY,
WM. P. CANNING.