

(No Model.)

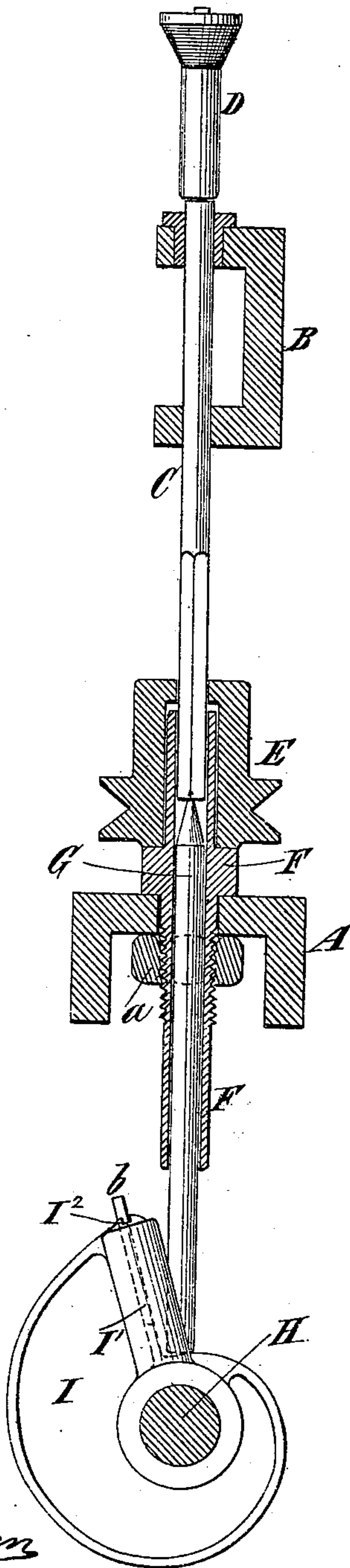
E. BARTON.

MACHINE FOR WINDING COPS, QUILLS, BOBBINS, &c.

No. 272,623.

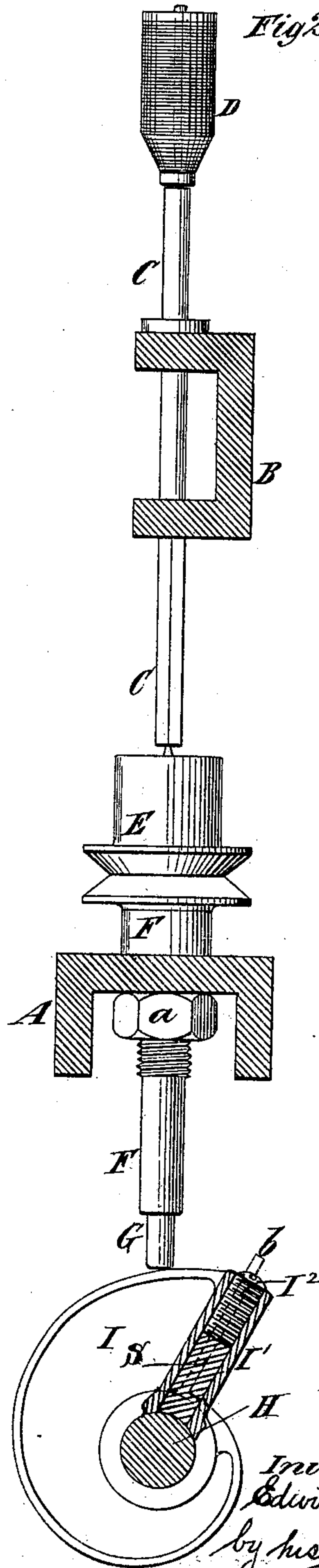
Patented Feb. 20, 1883.

Fig 1.



Witnesses:
Edw. Moran
Olaf Sundgren

Fig 2.



Inventor:
Edwin Barton
by his Attorneys
Rowland H. Brown

UNITED STATES PATENT OFFICE.

EDWIN BARTON, OF PATERSON, NEW JERSEY, ASSIGNOR TO CATHOLINA LAMBERT, OF SAME PLACE.

MACHINE FOR WINDING COPS, QUILLS, BOBBINS, &c.

SPECIFICATION forming part of Letters Patent No. 272,623, dated February 20, 1883.

Application filed November 17, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDWIN BARTON, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful
5 Improvement in Machines for Winding Cops, Quills, Bobbins, &c., of which the following is a specification.

My invention relates to machines made use of for winding cops, quills, or bobbins, and
10 more particularly to that class shown and described in my application for Letters Patent filed October 13, 1882, and the serial number of which is 74,194; and the object of the invention is to provide a very simple means
15 whereby the spindles will be automatically stopped when the cop, quill, or bobbin is finished.

The invention consists in the combination, with a hollow stationary bolster or sleeve and a
20 whirl capable of rotating thereon, of a spindle adapted to slide through the bolster or sleeve and whirl, but fitting the whirl with a square or otherwise, so as to be rotated therewith, and mechanism for acting directly upon the spindle
25 to raise the latter. As the cop, quill, or bobbin is built up the spindle is raised until it or its square or equivalent portion is raised above the whirl, whereupon the rotation ceases, and the cop, quill, or bobbin is finished.

The invention also consists in the combination, with the above-described bolster or sleeve, whirl, and spindle, of a push or step pin capable of sliding within the bolster or sleeve, and
30 upon which the spindle is supported, and mechanism for raising the said pin and with it the spindle which it supports. The means employed to raise the push or step pin may consist of a shaft and a cam having a frictional engagement therewith, and upon the
35 periphery of which the said pin rests, and which is provided with a stop adapted to come in contact with said pin, and thus terminate the movement of the cam, while the shaft continues its rotation unchecked, which it is free to
40 do by reason of the frictional engagement of the cam with it.

In the accompanying drawings, Figure 1 represents a sectional elevation of such parts of a quilling-machine as are necessary to illustrate
50 my invention, the spindle being shown in its lowest position; and Fig. 2 represents a partly-

sectional elevation thereof, the spindle being shown as raised entirely out of the whirl.

Similar letters of reference designate corresponding parts in both figures.

A designates the bolster-rail, and B the spindle-rail, of the machine.

C designates the spindle, on which is placed the cop, quill, or bobbin D, which is wound in conical layers, commencing at the upper end.

E designates the whirl, around which the driving-band is placed, and which fits outside of or over a sleeve or bolster, F, which is secured in the rail A, as here shown, by a nut, a, and which is prolonged considerably below
60 the said rail. When the whirl is thus mounted the pull of the driving-band has no tendency to bend the spindle. The lower end of the spindle C is shown as square and fits in a hole of corresponding shape in the whirl E. Consequently the spindle is caused to turn with
65 the whirl, although it may slide freely up and down in the whirl. The sleeve or bolster F is bored out sufficiently large so that the spindle may both turn therein and slide freely up and
70 down.

In the sleeve or bolster F is a push-pin or step-pin, G, which is capable of sliding freely therein, and upon the upper end of which the lower end of the spindle C rests, the pin being
80 here shown as pointed at its upper end, which slightly enters the end of the spindle, and thereby maintains the spindle and pin in line.

H designates a shaft arranged below the row of spindles, and having secured upon it a
85 snail-cam, I, on the periphery of which the push or step pin G rests. The cam has a frictional engagement with its shaft. As here shown, it is provided with a socket, I', wherein may be placed a piece or pad, S, of leather
90 or other suitable material, which is forced against the shaft with the desired pressure by a screw, I², as shown in Fig. 2. Such a form of friction device is well known. The cam I is provided at its point of greatest projection
95 with a lip, b, which is adapted to come in contact with the pin G as the cam rotates. When the cop, quill, or bobbin D is commenced the spindle is in its lowest position, as shown in Fig. 1, with the pin G resting on the part of the
100 periphery of the cam which is of least projection. As the conical layers of the cop, quill, or

bobbin are wound the push-pin G and its superposed spindle C are raised by the step-by-step rotation of the shaft H and cam I until the cop, quill, or bobbin is finished, at which time the spindle is raised entirely clear of the whirl, as shown in Fig. 2, and its rotation ceases. The lip or stop *b* thereupon comes in contact with the pin G and the motion of the cam I is arrested, while the shaft H continues to advance to raise the other spindles of the machine. After the finished cop, quill, or bobbin has been taken off and a new one substituted on the spindle the cam I is turned back by hand to the position shown in Fig. 1, where-
 5 by the spindle is allowed to fall into the whirl, whereupon it will be rotated, as before described.

In lieu of the spindle and the hole in the whirl being square, they might be of any other
 10 form which would insure the spindle rotating with the whirl.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a hollow stationary bolster or sleeve and a whirl capable of rotating thereon, of the spindle adapted to slide through the bolster or sleeve and the whirl, but fitted to the whirl, so as to be rotated therewith, and mechanism for acting directly upon
 15 the spindle to raise it through the whirl, substantially as and for the purpose herein described.

2. The combination, with a hollow stationary bolster or sleeve and a whirl capable of rotating thereon, of a spindle adapted to slide
 35 through the bolster or sleeve and the whirl, but fitted to the whirl, so as to be rotated therewith, a push or step pin on which the spindle is supported and which slides in the bolster or sleeve, and mechanism for raising the push
 40 or step pin and its superposed spindle, substantially as and for the purpose herein described.

3. The combination of the sliding spindle C, the whirl E, the stationary hollow bolster or
 45 sleeve F, the sliding push or step pin G, the shaft H, and the cam I, having a frictional engagement therewith, substantially as herein described.

4. The combination of the sliding spindle C,
 50 the whirl E, the stationary hollow bolster or sleeve F, the sliding push or step pin G, the shaft H, and the cam I, having frictional engagement with said shaft, and also having the stop *b* for coming in contact with said pin to
 55 arrest the cam, substantially as herein described.

EDWIN BARTON. [L. S.]

Witnesses:

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