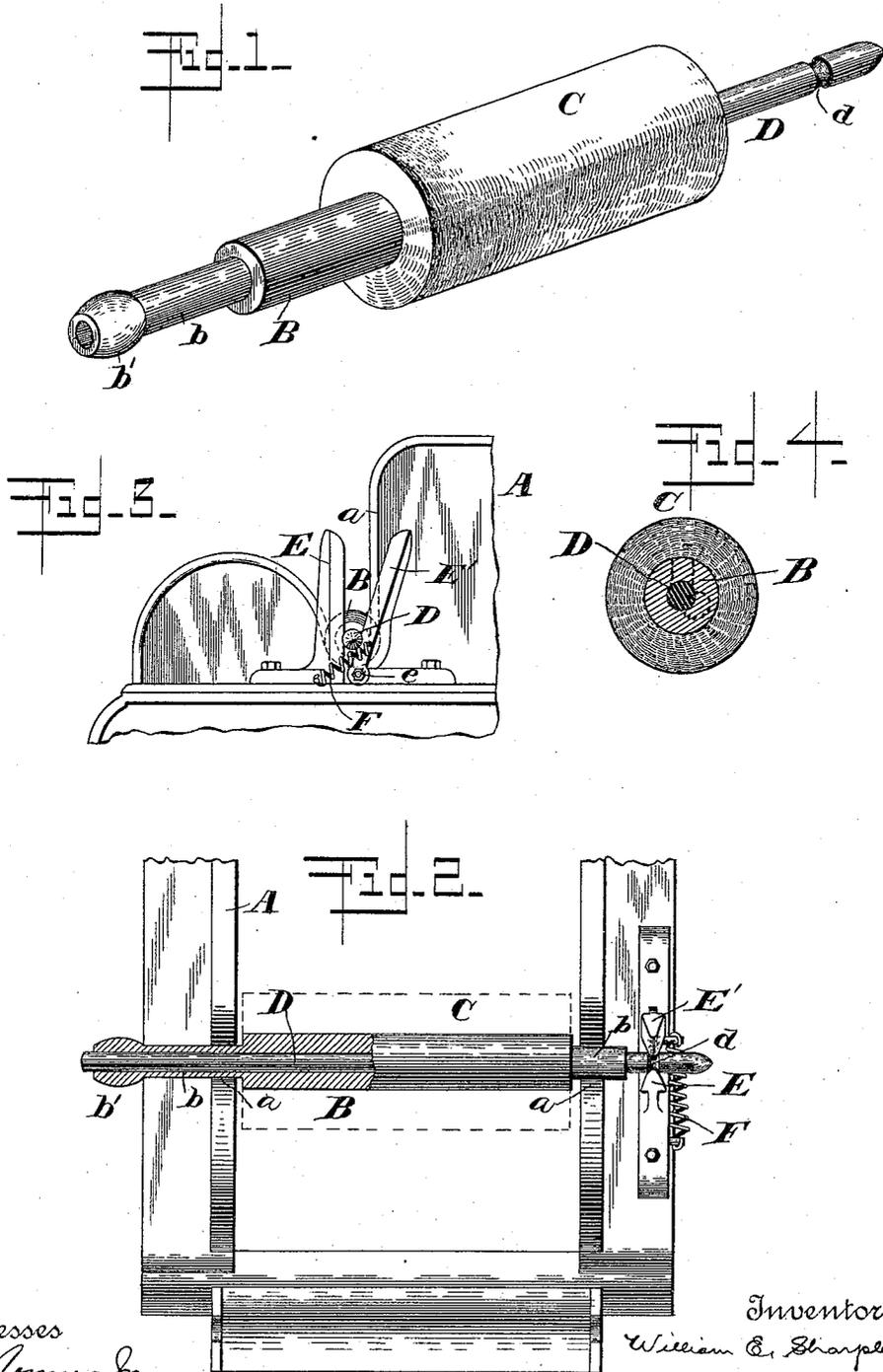


(No Model.)

W. E. SHARPLES.
LAP ROLL FOR CARDING MACHINES.

No. 494,600.

Patented Apr. 4, 1893.



Witnesses
L. A. Combs Jr.
P. L. Clark.

Inventor
William E. Sharples
By *Geo. Whitney*
Attorney

UNITED STATES PATENT OFFICE.

WILLIAM E. SHARPLES, OF FALL RIVER, MASSACHUSETTS.

LAP-ROLL FOR CARDING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 494,600, dated April 4, 1893.

Application filed October 14, 1892. Serial No. 448,858. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. SHARPLES, a citizen of the United States, residing at Fall River, in the county of Bristol and State
5 of Massachusetts, have invented certain new and useful Improvements in Lap - Rolls for Carding-Machines; and I do 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 the letters of reference marked thereon, which form a part of this specification.

15 My invention relates to lapping machines, and among its objects are to facilitate the removal of the lap from the machine, to prevent injury to the lap, and the waste of cotton, and to insure better results in subsequent treatment of the cotton.

In one of the stages of the manufacture of cotton cloth, the cotton is wound in flakes upon a roll called the lap roll, which is mounted removably in the lapping machine. When the roll
25 is full, the mass of cotton, or lap, must be removed from the roll, for transfer to another lapping machine, or to the carding machine as may be desired. The common way of doing this is to first pull the roll out of the lap.
30 The operative then puts his hands into the ends of the hole in the lap, lifts it off the machine, and stands it up on end on the floor. A small wooden or iron roll or skewer is then thrust down through the hole in the lap to
35 enable the lap to be carried away, and to support it when being unrolled in the machine to which it is transferred. But when the lap roll is pulled out, the cotton, being no longer supported, presses in toward the center and
40 partially closes the hole left by the lap roll. This closure is further aggravated by the handling to which the lap is subjected. The consequence is that when the small roll or skewer is thrust into the lap, which is from
45 thirty six to forty four inches long, the end of the roll is very liable to catch on the inside of the lap, tearing out portions of it, and breaking and disarranging the layers, thus wasting the cotton, and producing uneven yarn. My
50 invention removes all these difficulties.

It consists in a lap roll, having a longitudinal hole, and a small roll or skewer loosely

received within said hole, so that the lap roll can be pulled out of the lap and off from the skewer and leave the latter inside of the lap,
55 ready for service, and without any disturbance of the lap.

In the accompanying drawings, Figure 1 is a perspective view of a lap of cotton on a lap roll embodying my invention. Fig. 2 is a top
60 plan view of a portion of a lapping machine, showing the lap roll partly in section. Fig. 3 is an end elevation and Fig. 4 is a cross section of the roll and lap.

The lapping machine A is of any usual construction, having vertical open bearings *a* to
65 receive the journals *b* at each end of the lap roll B, which may be provided at one end with a head *b'* to facilitate its removal from the lap C. Passing longitudinally into or through
70 the roll is a hole, preferably circular in cross section. It may be central as shown: or eccentric to the center: or it may be a groove extending toward or to the center, as indicated in dotted lines in Fig. 4. Loosely
75 received in the hole is a small roll or skewer D, which is long enough to project beyond the lap at each end.

Means are provided for retaining the skewer in place, so that it will not be removed with
80 the lap roll when the latter is pulled out of the lap. This may consist of a latch engaging with a groove or a collar on the skewer.

In the drawings is shown a groove *d* in the skewer which is engaged by the opposing
85 edges of the blades E, E', the latter being hinged at *e*, and held up against the skewer by a weight, or a spring as F. The edge of the blade E is vertical, so that the blades remain in engagement with the skewer as the
90 latter rises with the increase in the size of the lap. When the lap roll is full, it is pulled out, to the left in Fig. 2, leaving the skewer in the lap, the blades preventing it from axial movement. The lap can then be easily and
95 safely removed and transferred to another machine, by means of the skewer, so that the difficulties heretofore existing at this stage of the work are thus entirely avoided.

It is obvious that if desired the skewer need
100 not be inserted into the lap roll until the latter is full and ready to be removed: and that in such case, the holding devices may not be needed, since the skewer can be inserted by

one operative and held in position by him while another removes the lap roll.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

5 1. The combination with a frame, of a lap roll journaled in open bearings in said frame, and having a longitudinal hole, a skewer loosely received in said hole, and a detachable
10 fastening device attached to said frame and serving to hold the skewer from axial displacement, but to release it when the roll is lifted from its bearings, substantially as described.

15 2. The combination with the frame, of a lap roll journaled in bearings in said frame, and having a longitudinal hole, a skewer received in said hole, and a spring latch secured to the frame and engaging with said skewer, sub-
20 stantially as described.

3. The combination with the frame, of a lap roll journaled therein and having a longitudinal hole, a skewer received in said hole and provided near one end with a groove, and a pair of blades mounted on the frame and en- 25
gaging with said groove, substantially as described.

4. The combination with the frame, of the lap roll having a longitudinal hole and jour- 30
naled in the frame, the skewer received in said hole, and having a groove and a fixed blade and a spring-actuated blade engaging with opposite sides of said groove, substantially as described.

In testimony whereof I affix my signature in 35
presence of two witnesses.

WILLIAM E. SHARPLES.

Witnesses:

ARBA N. LINCOLN,
CHARLES L. FOOTE.