W. HASLAM.

MACHINE FOR WINDING YARN.

No. 182,664. Patented Sept. 26, 1876.

FIG. 1.

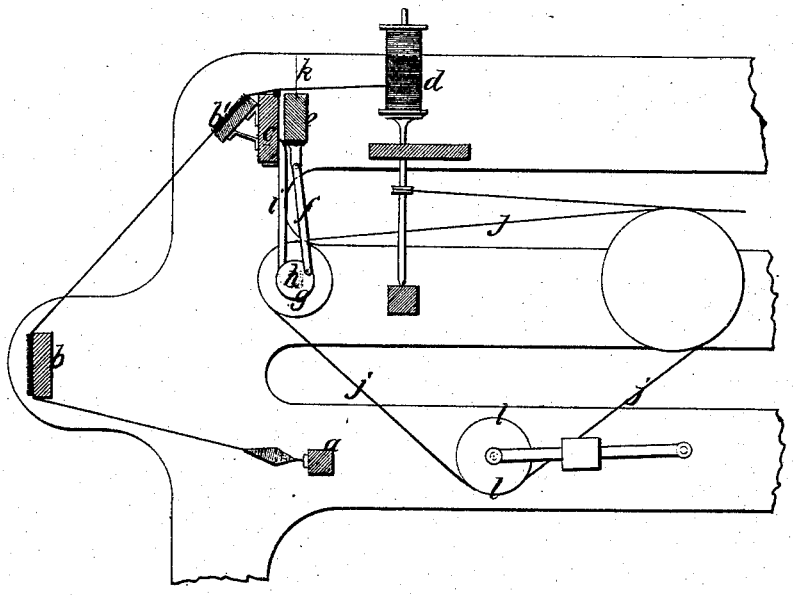
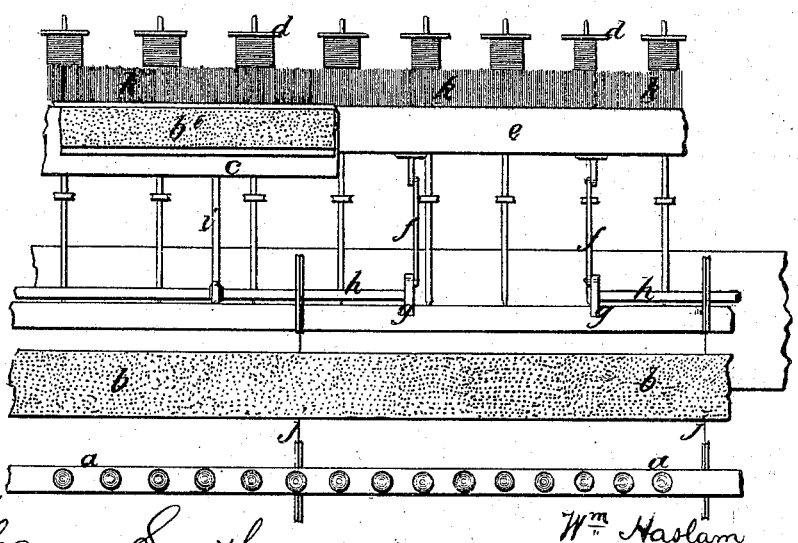


FIG. 2.



Witnesses
Harry Smith
Hubert Howson

Wm Haslam
by his Attorneys,
Howson & Howson

UNITED STATES PATENT OFFICE.

WILLIAM HASLAM, OF BOLTON, ENGLAND.

IMPROVEMENT IN MACHINES FOR WINDING YARN.

Specification forming part of Letters Patent No. **182,664**, dated September 26, 1876; application filed August 16, 1875.

To all whom it may concern:

Be it known that I, WILLIAM HASLAM, of Bolton, in the county of Lancaster, England, have invented an Improvement in Apparatus to be Employed in Machinery for Winding Yarns, of which the following is a specification:

This invention, for which an English patent, No. 1,143, was granted to me A. D. 1875, relates principally to winding-frames used for winding yarns or threads from cops or spindles onto bobbins, and is designed to prevent breakages and to clean the yarn from any dirt or inequalities that may be attached thereto, but it is also equally applicable to any other machine or apparatus wherein yarns or threads are wound from one bobbin, spool or spindle to another.

The improvements consist in the employment and use of an open reed or comb, to which a continual vertical oscillating movement is imparted by means of a cam or other equivalent arrangement of mechanism. This oscillating reed or comb is intended to be used instead of the ordinary stationary snick-plates now in use, which only allow a certain count of yarn to pass through them, and which cause the yarn or thread to break whenever there is any dust or impurities in the cotton.

By the use of this improvement any count of yarn or thread may be wound in the same frame, the teeth of the comb being flexible, and the dirt or impurities in the yarn are cleared and breakages prevented, a better yarn produced, and consequently a better cloth.

Figure 1 in the annexed drawing is a sectional view, and Fig. 2 a front elevation, of a winding-frame with my invention shown as applied thereto.

a a is the rail, which carries the cops of yarn to be wound, and *b b'* are the brushes, through which the yarn passes, the second brush, *b'*, being attached to the guide-rail *c c*, over which the yarn passes to the bobbins *d d*. This guide-rail has a slow rising-and-falling motion imparted to it in the ordinary manner and by the usual means, in order to wind the yarn in an even and regular manner onto the bobbins. So far this is an ordinary winding frame with the snick-plates removed.

At the back of the guide *c c* is a second rail, *e e*, so mounted in slides as to be capable of an independent vertical motion. This rail *e e* is connected by a link, *f f*, to a crank-pin on a face-plate, *g g*, keyed on a small shaft, *h h*, which is carried by a hanger, *i i*, attached to the guide-rail *c c*. Thus it will be seen that as the guide-rail *c c* moves up and down in guiding the threads onto the bobbins, it carries the rail *e e* and shaft *h h* with it, and as the shaft *h h* is caused to revolve at the same time by means of an endless band, *j j*, it imparts an independent rapid vertical rising-and-falling motion to the rail *e e*. This rail *e e* carries an open reed or comb, *k k*, through which the yarn passes, as above described. *l l* is a compensating-pulley, for keeping the endless band *j j* always tight.

I claim as my invention—

The combination, in a machine for winding yarn, of the vertically-reciprocating guide-rail *c c* with the rail *e e*, having a reed or comb, *k*, and moving with the said guide-rail, but at the same time having an independent vertically-reciprocating motion, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM HASLAM.

Witnesses:

THOMAS E. DAVIES,

JOHN HUGHES.