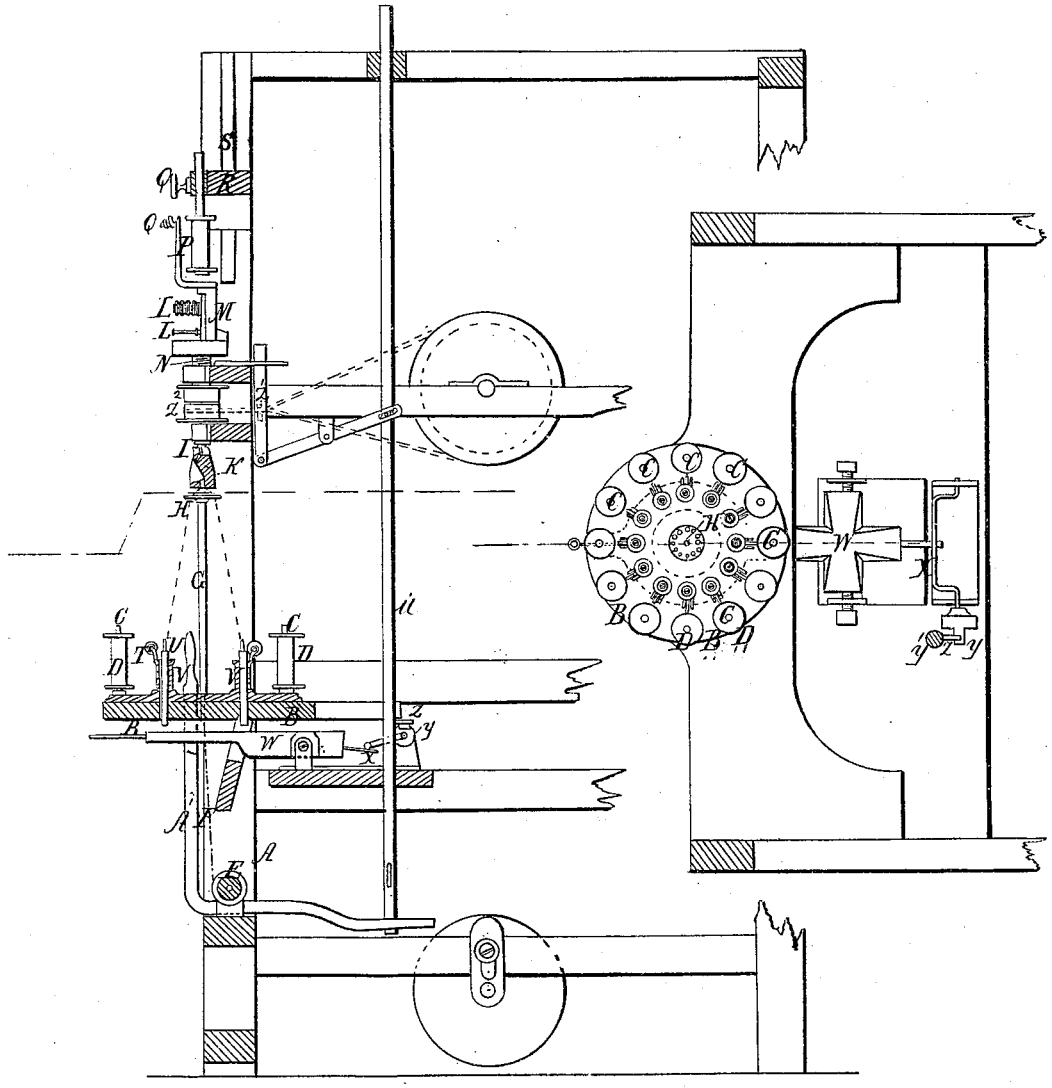
T. N. Dale, Jr. & G. Krank.

Covering Cord.

No. 107,010. Patented Sept. 6, 1870.



Witnesses;
Chas. Nida
Alex. F. Roberts

Inventor;
Thos. N. Dale, Jr.
Geo. Kranks
Per Munn & Co.

United States Patent Office.

THOMAS N. DALE, JR., AND GEORGE KRAINK, OF PATERSON, NEW JERSEY.

Letters Patent No. 107,010, *dated September* 6, 1870.

IMPROVED MACHINE FOR COVERING CORD.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, THOMAS N. DALE, Jr., and GEORGE KRAINK, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and useful Improvement in Covering Cord; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

This invention relates to improvements in machinery for covering cotton or other material, for making hard or soft gimp, and consists in an arrangement of the bobbins containing the covering-material on a supporting-disk or table, permanently attached to the frame, and a twister or covering-device in connection therewith, in such a manner that the covering is accomplished by the rotation of the twister.

The object is, by twisting the silk equally around the cotton, to cover with less silk than is done in the ordinary manner, where the silk and cotton are both twisted together, by means of an ordinary flier, around each other.

This machine twists them together too, but the twisting being done centrally through a hollow spindle the cotton is kept in the center, and silk is drawn up around it.

Figure 1 is a sectional elevation of our improved covering-machine, and

Figure 2 is a horizontal section of the same.

Similar letters of reference indicate corresponding parts.

A is the main frame, and

B is a horizontal table, permanently attached thereto.

It is preferably made circular in form, and has a number of spindles, C, arranged in a circle on the top, to support the covering-bobbins D.

E is the bobbin for the cotton or other material to be covered.

It is mounted horizontally below the said table, in suitable bearings, and the thread F is drawn up through the center of the table, and through a hollow tube, G, and guide-plate H, to the covering or twisting-head I, which is a revolving tube, in which the hole or passage for the thread is caused to diverge from the straight line, as shown at K, for the purpose of straining it over the diverging wall, so as to cause the twisting to be done between the said diverging point and the guide H, through the slotted edge of which the covering-threads are drawn, previous to joining the center thread at the lower end of the twister, into which both the center thread and the covering are drawn to be twisted.

The drawing is effected by the grooved rollers L, mounted in the vertical part M on the top of the twister, and rotated by gearing with a fixed worm-wheel, N, in the axis of which the tube I turns.

From these rollers the covered cord is conveyed, through the fliers O, to the bobbin F, mounted on the spindle Q, supported on the traversing rail R, which is arranged to slide up and down on the ways S, any suitable arrangement of means being employed to traverse it.

The covering-threads are passed through guides at T, and have weights U suspended on them thereat, for tripping the belt-shifter in case the thread breaks.

These weights hang in vertical tubes V, supported on the table B.

They fall upon the long arm of the lever W and throw it down, thereby raising the bent tripping-rod X, having a stud, *y*, on the end on which the drop-bar *y'* is supported by the stud-pin Z, when the belt-shifter Z^1 is down, and the belt is running on the fast pulley Z^2.

The lever W is hollow, and contains a rolling weight, which runs to the outer end as soon as the weights U have tilted it slightly, and assists in carrying it down.

By the above-described arrangement of the revolving twister Y or covering-device with the covering-bobbins on a fixed support, we are enabled to accomplish the work much cheaper and a little better than when arranged in the common way, as will be readily seen.

Instead of supporting the guide-plate H by the tube G, it may be supported by arms, connected to the frame above the table in any suitable way.

Having thus described our invention,

We claim as new and desire to secure by Letters Patent—

The combination, with the stand or table B and spindles C, of the guide-plate H, twisting or covering-head, and the traversing spindle Q, all constructed and operating as specified.

T. N. DALE, JR.
G. KRAINK.

Witnesses:
CHAS. H. KIMBALL,
THOMAS H. HURST.