

Patented Mar. 23, 1858.

Fig 2.

Witnesses.

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WM. J. HORSTMANN, OF PHILADELPHIA, PENNSYLVANIA.

RIBBON-LOOM.

Specification of Letters Patent No. 19,698, dated March 23, 1858.

To all whom it may concern:

Be it known that I, WILLIAM J. HORSTMANN, of the city of Philadelphia and State of Pennsylvania, have invented a new and
5 useful Improvement in the Construction of Ribbon-Looms for Weaving Fringes and other Trimmings Wider Than the Opening of the Lay; and I do hereby declare the following to be a full and exact description of
10 the same, reference being had to the annexed drawing, making a part of this specification, in which—

Figure 1 represents a perspective view of a small ribbon loom, showing the operative
15 parts necessary to the manufacture of one stripe of fringe. Fig. 2, a detached view of my improvement.

A, B, C, D, represents the frame of the loom; E, F, the lay suspended and working
20 in the ordinary manner of power loom lays.

G, is the shuttle, sliding through an ordinary guide, and worked by either of the ordinary modes of throwing the shuttle in
25 ribbon looms.

H, I, and H', I', represent the warp threads. The filling thread is carried by the shuttle.

P is the breast-beam roller, over which the fringe passes. At the part K, I attach a
30 piece of iron bent into the shape K, L, M, N, N', (as shown detached in Fig. 2.) This piece of iron is about $\frac{1}{4}$ inch square, and occupies the position shown in Fig. 1. It is hinged at K, so as to permit it to rise and
35 fall with portions of the warp, according to the figure of the goods made, and is raised by being attached to the jack, or jacquard

machine of the loom, in the same manner as that in which the warp threads are raised. This bent rod, K, L, M, N, N', is raised above
40 the groove of the shuttle, whenever the under part of the fringe or trimming is to work, in order to allow the shuttle, with the filling, to pass under the rod. When the upper part of the fringe or trimming is working, the
45 rod remains at rest, and the shuttle passes over it, thereby causing the goods to be equal in width from the selvage of the lower heading of the fringe or trimming, around the rod to the selvage of the upper heading.
50 This distance is or can be made twice as great as the width of the opening of the lay at S. This fringe, so made, when opened, would therefore be twice the width of a fringe made in an ordinary loom of the same
55 width of opening in the lay.

I do not confine myself to making the hinge or fulcrum of the rod K, L, M, N, N', at point K, as said hinge or fulcrum can be placed at L, M, or any point between the lay
60 and the breast-beam.

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

The bent rod, K, L, M, N, N', passing be-
65 tween the two headings of the trimmings or fringes, and forming a back or edge, over which the filling is worked, substantially as above described.

WM. J. HORSTMANN.

Witnesses:

J. H. B. JENKINS.

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