(No Model.)

J. W. SCHLOSS.

BRAIDING MACHINE.

No. 492,437. Patented Feb. 28, 1893.

Fig. 2.

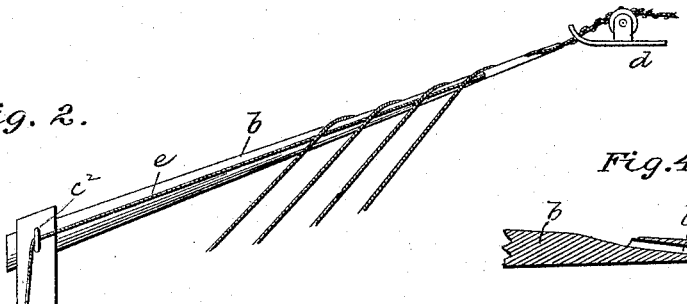
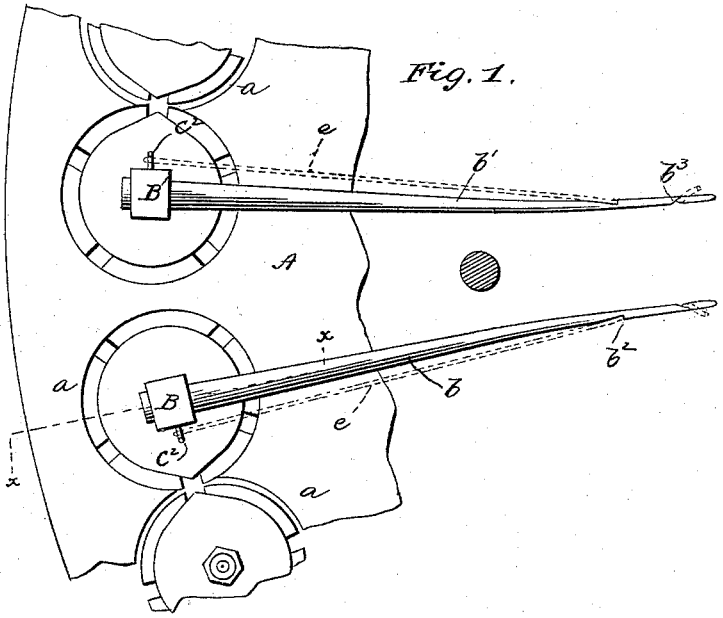


Fig. 4.

Fig. 1.



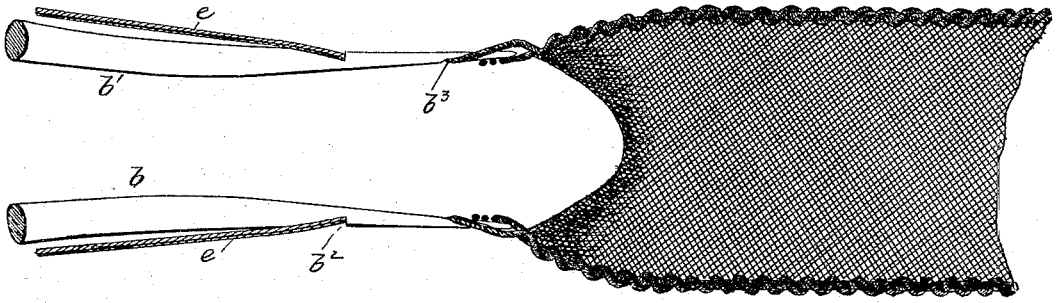


Fig. 3.

WITNESSES:

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JOSEPH W. SCHLOSS, OF NEW YORK, N. Y.

BRAIDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 492,437, dated February 28, 1893.

Application filed May 25, 1892. Serial No. 434,306. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. SCHLOSS, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Braiding-Machines, of which the following is a specification.

This invention relates to machines for making braid.

The object of the invention is to provide a device for use in connection with braiding machines by which a purled or raised edge may be formed on one or both edges of the braid simultaneously with the formation of the body of the fabric. I am aware that I am not the first to produce a machine for this purpose, but my invention is designed as an improvement upon anything of the kind now in existence.

The invention consists of the details of construction hereinafter described and claimed.

In the accompanying drawings: Figure 1 represents a plan of a portion of the race plate of a braiding machine with my improved device attached. Fig. 2 is a vertical section taken on line $x\,x$ of Fig. 1. Fig. 3 is a plan of a piece of the braid in the course of manufacture, with my improved device in working position, and Fig. 4 is a sectional detail.

Referring to the drawings by letter, A represents the race plate of an ordinary braiding machine.

a are the double serpentine slots formed near the edges of the plate making circular paths in which the bobbins carrying the thread of which the braid is made, move. In the center of the terminal circles, which are adjacent to each other, are fixed posts B, B′, carrying at their upper ends tapering needles b, b', which extend in an upward direction to a point above the center of the rear plate where the braid guide d is located. These needles are solid, but are provided with diagonal perforations b^2 which extend from the outer sides of the needles toward their points to the inner sides, where they terminate in shallow grooves b^3, twisting toward the point. This groove is not an essential feature of the needle, but is used to guide the cord over the end of the needle in the manner hereinafter described. Along the circular slots of the race plate are placed the usual concentric gears, one of which is shown at c in Fig. 2. This one is beneath the terminal circle and is mounted upon a continuation of the post B, there being a similar construction under the post B′. The shaft upon which the gear turns is hollow and the base of the post itself is provided with an opening c' communicating with the passage through the shaft. At the upper end of each post and on the outside of the needle, a guide c^2 is placed. The cord e which forms the raised or purled edge of the braid extends up through the hollow shaft, thence out through the opening c' in the base of the post, thence through the guide eye c^2, then along the outside of the needle through the diagonal perforations, then it turns over the point of the needle and enters the braid as illustrated in Fig. 3.

When the machine is at work, the threads which are braided together to form the body of the fabric, are carried by the bobbins running in the circular slots of the race plate, and they extend from these bobbins over the tops of the needles in a diagonal direction and gradually lead across the inner sides of the needles until they all come together and are braided over each other at the end of the braid strip. It is necessary that these threads should not bear upon and bind the cord e on its passage along the needles, as such action would produce a poorly finished braid. Therefore, I lead the cord along the outer sides of the needles where it is not interfered with by the threads and in order to get it on to the inner sides without interference, I pass it through the diagonal perforations in the manner described. The threads forming the body of the braid slip off the needle and fall upon the cord e, which thereby becomes bound or interwoven with the braiding threads at the edges of the fabric and the cord assumes the spiral form illustrated in Fig. 3. This spiral form is produced by the over-lapping of the braided threads, a certain number of overlapping threads lying between two threads of the spiral and the design may be modified by varying the distance between the ends of the needles. It is obvious that the purled or raised edge may be formed on one edge only of the braid, by using only one cord.

Having thus described my invention, I claim—

1. In a braiding machine, the combination with the race plate, the carriers and the braid guide, of a needle supported from the center of a terminal circle of the race plate extending at its tip into proximity to the braid guide, said needle provided near its tip with a perforation adapted for the passage of an edge or purling cord substantially as described.

2. In a braiding machine, the combination with the race plate, the carriers and the braid guide, of a needle supported from the center of a terminal circle of the race plate extending at its tip into proximity to the braid guide, said needle provided near its tip with a diagonal perforation adapted for the passage of an edge or purling cord substantially as described.

3. In a braiding machine, the combination with the race plate, the carriers and the braid guide of two needles supported from the centers of the terminal circles of the race plate converging at their tips in proximity to the braid guide, said needles provided near their tips with perforations adapted for the passage of edge or purling cords substantially as described.

4. In a braiding machine, the combination of the race plate, the carriers and the braid guide, of a needle supported from the center of a terminal circle of the race plate, extending at its tip into proximity to the braid guide said needle provided near its tip with a perforation adapted for the passage of an edge or purling cord and guides located on the outer side of the needle for conducting the cord free of the body threads substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

JOSEPH W. SCHLOSS.

Witnesses:
FRANK S. OBER,
WM. A. ROSENBAUM.