D. M. HARMAN.

Mechanism for Weaving Mats.

No. 161,681. Patented April 6, 1875.

FIG. I.

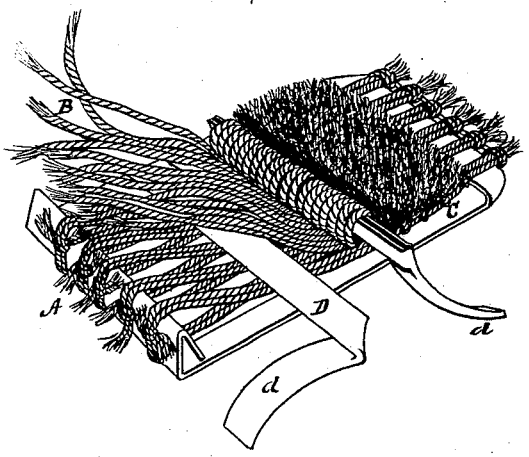


FIG. II.

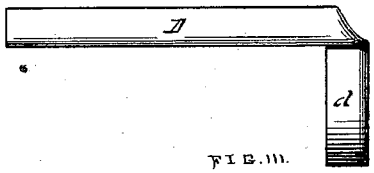
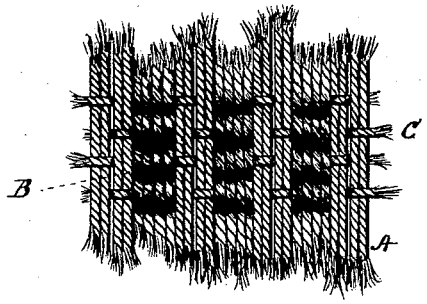


FIG. III.



WITNESSES

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UNITED STATES PATENT OFFICE.

DANIEL M. HARMAN, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN MECHANISMS FOR WEAVING MATS.

Specification forming part of Letters Patent No. **161,681**, dated April 6, 1875; application filed February 15, 1875.

To all whom it may concern:

Be it known that I, DANIEL M. HARMAN, of Baltimore, Maryland, have invented a new and useful Improvement in the Manufacture of Cocoa and other similar Mats, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 represents a portion of a loom with a partially-woven mat thereon. Fig. 2 represents the filling-bar. Fig. 3 represents the under side of a mat.

My invention relates to making of door and other mats from cocoa and other similar materials; and it consists essentially in the devices which enable me to weave a mat on a loom, as herein described and claimed.

To enable others skilled in the art to make and use my invention, I will proceed to describe the exact manner in which I have carried it out.

In the drawings, A represents the foundation warp-threads secured in a loom, and B the tufting warp-threads, to be fed forward as required in the construction of the mat. C is the weft-thread to be introduced by a shuttle or any other desirable means. D D are filling-bars, which are introduced between the foundation-warp and the tufting-strands, whereby the latter are forced up and bent into the proper position and size to be cut and form the tufts, the tufting-warp being raised by the shedding mechanism. These filling-bars are laid flat on the foundation-warp and below the tufting-strands, when, by a second movement of the shedding-treadle the tufting-strands are carried down over the filling-bars and below the foundation-warp, and the weft is then passed through the shed thus formed. As the reed swings forward to press up the weft, the lay strikes the bent arm *d* of the filling-bar D, and turns it up upon one edge, thus forcing up the tufting-strands into loops and securing them in position at the same time that the weft is driven tightly home. By another movement of the shedding-treadle the tufting-strands are again raised above the foundation-warp, and after the loops are cut the filling-bar is withdrawn and advanced for another operation. This is continued until the mat is of any desired length. In Fig. 1 the filling-bar is seen in its two positions, and two bars may be used, being alternately inserted and withdrawn. The tufting-strands, like the foundation-warp, are arranged on a roller so as to be easily fed forward, and in order that the material may be the more readily bent or tufted I usually arrange a trough of water in some convenient position so that the strands be thoroughly wetted before reaching the filling-bars. This in a great measure overcomes the brash unyielding character of the tufting material and enables me to make a compact fabric.

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

The flat filling-bar D, provided with an arm, *d*, and adapted to be operated in such a manner as to raise the tufting-warps into loops, as and for the purpose set forth.

DANIEL M. HARMAN.

Witnesses:

JNO. P. MADDOX,

ALONZO SNYDER.