May 5, 1931. W. B. GREAVES ET AL. 1,804,008

RUG OR CARPET WEAVING LOOM

Filed Dec. 2, 1929

Fig. 1.

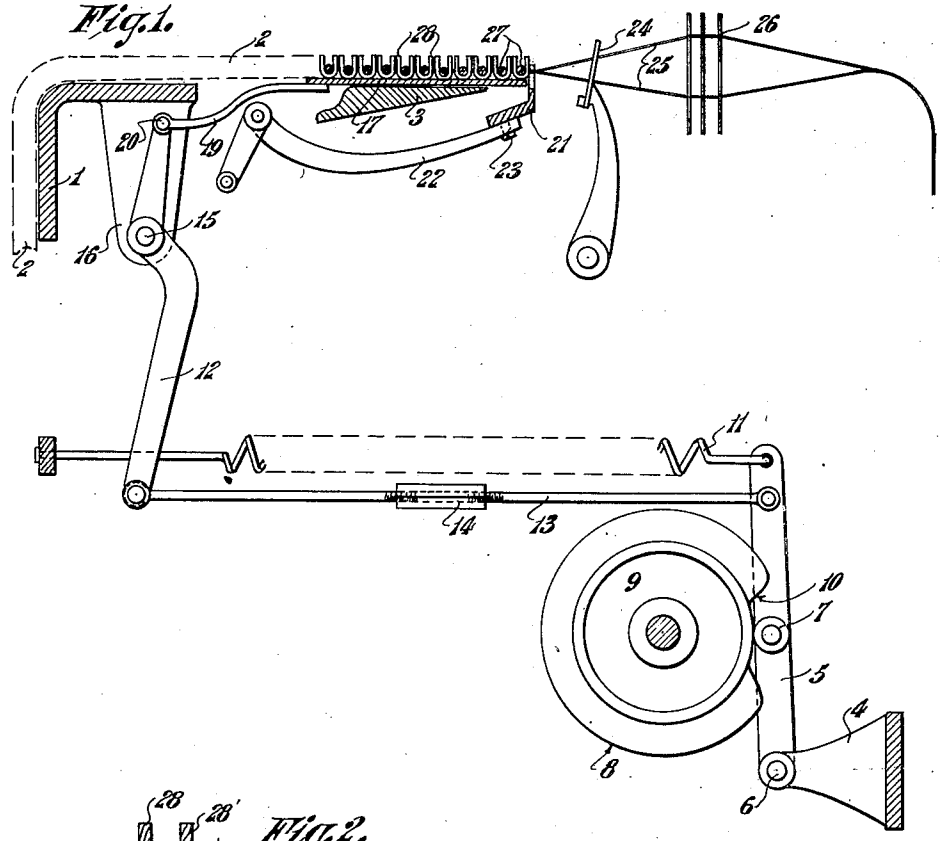


Fig. 2.

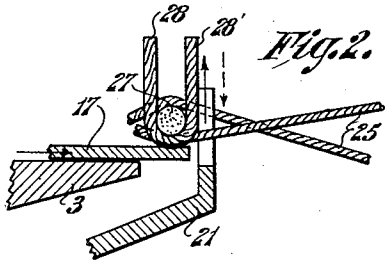
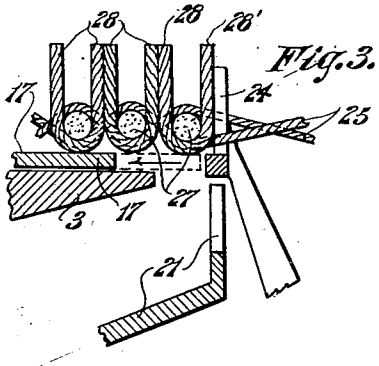


Fig. 3.



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RUG OR CARPET WEAVING LOOM

Application filed December 2, 1929. Serial No. 410,982.

This invention relates to improvements in rug or carpet weaving looms.

An object of the invention is to provide means for drawing, holding and supporting the tuft threads of a rug, carpet, or the like during the weaving operations, in a tight form or compact manner about the weft threads, so that the bottom portion of the finished rug will have a substantially smooth under surface.

Heretofore, and up to the present time, as far as we are aware, there has not been any satisfactory means, or devices employed, when carrying out the rug or carpet weaving operations, in order that the tuft and warp threads may be drawn tightly together. As a consequent result of such imperfection in the loom, the underside of a rug is left loose, or slack, when finished and often resulting in the tuft threads working loose.

Broadly considered, our improvement comprises what may be termed an auxiliary press plate that is designed to be slidably mounted and located above the usual, or common press plate, which is normally retained in a fixed or immovable position. The rug, or carpet, is formed or woven on this slidable plate, by first placing a weft thread, then operating the harness, then inserting or feeding, and bending a tuft thread around the weft thread, then moving the slidable plate beyond the end of the press plate and under the last inserted tuft and weft threads, next moving or elevating the comb member above and close to the end of the slidable plate to form the U-shaped bend in the tuft thread, then cutting, and finally packing or compressing the threads together, after the comb member is moved downward. This construction and operation, in practice, results in leaving the lower surface of the rug smooth and with the threads firmly secured together.

Referring to the drawings:

Fig. 1 is a general side elevational view, partly in section, showing our improvement in use, the operative connected parts, and a portion of the finished rug.

Fig. 2 is an enlarged detail view of the slidable plate in its operative or extended position, with the comb elevated, and

Fig. 3 is an enlarged view, showing the slidable plate and comb withdrawn, and the packer arm in operation, after the cutting operation.

Referring to the drawings in detail:

1 designates the breast beam of the main frame over which the completed rug or carpet, indicated at 2, passes; 3 is the usual fixed press plate on which the rug is formed; the back girder is indicated at 4 to which the cam operated lever 5 is pivotally connected at 6. 7 is a roller on the cam operated lever 5 which engages the periphery 8 of the cam wheel 9 that is formed with the recess portion 10, into which the roller 7 enters, when actuated by the contractile spring 11. 12 is a lever which is actuated by the lever 5 and spring 11 by means of the connecting rod 13, the length of which is adjustable with the turn buckle 14. The lever 12 is pivotally supported at 15 on the bracket 16. 17 is a slidable plate which is located on the upper surface of the fixedly secured press plate 3. This slidable plate has secured at one end, as shown, an operating rod or bar 19, the other end of which is pivotally connected to the upper end of the lever 12, as indicated at 20. The slidable plate is therefore actuated from, and in unison with, the cam 9, when the loom is in operation. 21 indicates the usual comb which has imparted thereto a vertical upward and downward movement, in the usual manner by means of the arm 22 to which it is attached, or secured, as shown at 23. The reed is indicated at 24 through which the warp threads 25 pass, and, back of the reed 24, is the harness portion 26. The weft threads are indicated in the enlarged views of Figs. 2 and 3 at 27. Referring to Fig. 2, it is to be understood that a weft thread 27 has been placed by a needle, next, in the sequence of operation, a tuft thread 28 has been fed downward from a spool, (not shown), and passed against and under the weft thread 27, now, the slidable plate 17 is moved into the full line position shown in Fig. 2, which provides a firm support for the threads 25, 27 and 28. The comb 21 is now moved upward into the full line position to complete the U-shaped bend, next, the ends 28 and 28′ are cut off. The

comb 21 now descends, as shown, in Fig. 3, and the reed arm 24 is moved into the position, shown in Fig. 3. The slidable plate 17 is now moved into the full line position, shown in Fig. 3, which completes the cycle of operations.

By reason of the utilization of the slidable plate 17, a very much firmer rug, or carpet, is produced; the bottom portion is smooth, as there are no loose tuft pieces to work loose or become completely detached. The slidable plate successfully solves the problem of tightly and firmly securing the tufts in place.

What we claim is:

1. In a machine of the kind described, a press plate, a comb member, a slidable plate mounted on the press plate and extending beyond the outer end of the press plate, when operated, for supporting and engaging the tuft threads of a rug and for effecting a tight draw of tuft threads around the weft threads, when the comb is elevated.

2. In a rug weaving machine, or the like, the combination of a press plate, a reciprocable plate located on the press plate, means for moving its outer end beyond the edge of the press plate for supporting the tuft warp, and weft threads beyond said edge, after the tuft threads are passed under the weft thread, and means for operating the reciprocable plate, as described.

3. In a rug weaving machine, or the like, the combination, of a press plate, a reciprocable plate located on the press plate, means for moving its outer end beyond the press plate for supporting the tuft, warp, and weft threads, a beater member, and means for operating the reciprocable plate, as described, a comb, and means for elevating the comb, after the slidable plate is extended under the tuft threads for imparting a U-shaped bend to the tuft threads, whereby the tuft threads are drawn tightly and a smooth surface is imparted to the finished rug, or the like, upon the operation of the beater member.

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