June 10, 1969 R. G. MALLARD 3,448,776

PICKER STICK

Filed Oct. 26, 1967

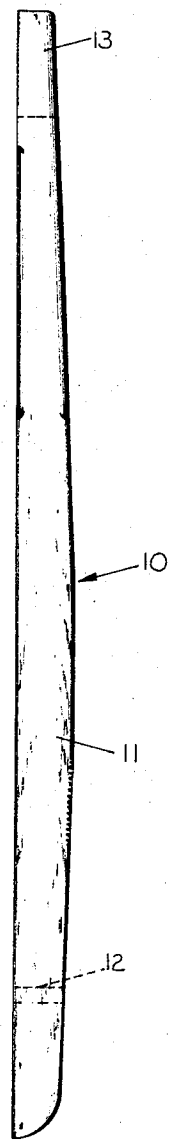


FIG. 1

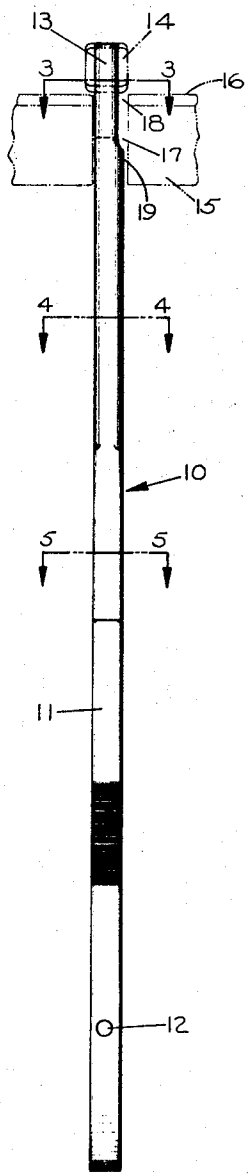


FIG. 2

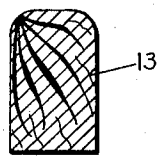


FIG. 3



FIG. 4

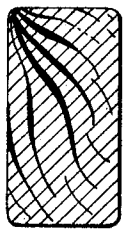


FIG. 5

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PICKER STICK

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U.S. Cl. 139—157 1 Claim

ABSTRACT OF THE DISCLOSURE

A picker stick for looms having a built-up surface on one side thereof for reducing the clearance within the opening in the lay in which it is adapted to travel and for maintaining the picker retaining portion of said stick in axial alignment with said lay during movement of the latter.

Background of the invention

The invention relates to picker sticks for looms and more particularly to an improved means for guiding and maintaining the opposed picker sticks of a loom in alignment during the swinging movement of the lay and the picking of a shuttle thereacross.

As is well known in the weaving art, picker sticks during the performance of their intended function are pivoted at their lower ends by a so-called parallel motion and the upper portions are caused to travel to and fro within slots of shuttle boxes forming the ends of the lay beam.

With the demand for increased production of looms, the higher speed at which they are caused to travel has presented numerous conditions which were not considered serious with looms running at lesser speeds. One such condition is that of the picker stick's clearance within the slots of the shuttle boxes. With the conventional clearance in combination with an increase in loom speed, the upper picker retaining portion of the stick is forced rearwardly through the forces of inertia when the lay is moving from back to front center. Such a condition moves the picker and the upper end of the picker stick out of its intended alignment with the flight path of the shuttle and will induce erratic shuttle flight which is responsible for a large percentage of filling yarn breakage.

With the picker stick according to the instant invention, the clearance described above has been reduced to a minimum and trial results have shown such picker sticks to be very desirable in providing greatly improved shuttle flight with a substantial decrease in complaints on filling yarn breakage.

Summary of the invention

The picker stick of the present invention is of conventional length having a loom attachment point adjacent the lower end thereof and a picker retaining portion at its upper end. The picker retaining portion is in axial alignment with the attachment point and immediately below said retaining portion the stick is provided on the rear side thereof with a built-up surface which extends downwardly and blends with the body portion of the stick adjacent to said attachment point.

The built-up surface substantially traverses the opening in the end of the lay in which the picker stick is caused to travel and with said surface being on the rearward side thereof, the picker retaining portion is maintained in its desired position relative to the longitudinal extent of the lay during movement of the latter.

Brief description of the drawing

FIG. 1 is a view in side elevation of a loom picker stick;

FIG. 2 is an end view of the picker stick in FIG. 1 showing the built-up surface; and

FIGS. 3, 4 and 5 are sectional views of the picker stick taken along lines **3—3**, **4—4** and **5—5**, respectively, in FIG. 2.

Description of the preferred embodiment

Referring now to the figures of drawing, there is shown in FIGS. 1 and 2 a loom picker stick generally indicated by numeral **10**. The picker stick includes an elongated body portion **11** with a lower loom attachment point **12** and a picker retaining portion **13** at the upper end thereof.

In FIG. 2 there is shown by means of phantom lines a picker **14** and its position of attachment on the upper end of the picker stick. Additionally this figure of drawing shows a portion of the lay **15** and lay end **16** with their aligned openings **17** and **18**, respectively, through which the upper portion of the picker stick is caused to move during the performance of its intended function.

Immediately below the picker retaining portion **13**, the side of the picker stick toward the back of the loom is provided with a built-up surface **19**. This built-up surface extends in a downwardly direction and blends with the body portion of the picker stick adjacent its loom attachment point **12** at the lower end thereof. In assembled position the built-up surface of the picker stick substantially traverses the width of the opening **17** in the lay and in operation said built-up surface is effective in maintaining the picker retaining portion **13** and the picker **14** attached thereto in alignment with the longitudinal extent of the lay **15**. By maintaining the picker in true alignment with the desired flight path of the shuttle, the problem of erratic shuttle flight is prevented and along with a substantial decrease in filling yarn breakage, the many problems associated with shuttle boxing are greatly reduced.

While one embodiment of the invention has been disclosed, it is to be understood that the inventive concept may be carried out in a number of ways. The invention is, therefore, not to be limited to the precise details described, but is intended to embrace all variations and modifications thereof falling within the spirit of the invention and the scope of the claim.

I claim:

1. For a loom having in combination a lay and a lay end forming the shuttle supporting surface of a shuttle box, a picker stick adapted to have a picker fixed to one end thereof and which is movable within the limits of aligned openings in said lay and lay end, said picker stick including an elongated body portion with a loom attachment point adjacent the lower end thereof and the upper end defining a picker retaining portion in axial alignment with said attachment point, one side of said body portion below said picker retaining portion having an integrally formed built-up surface whereby the thickness of said body portion substantially traverses the width of the opening in said lay and which extends in a downward direction for the remainder of the length of said

body portion and blends with the side of the picker stick adjacent said attachment point.

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JAMES KEE CHI, *Primary Examiner.*