

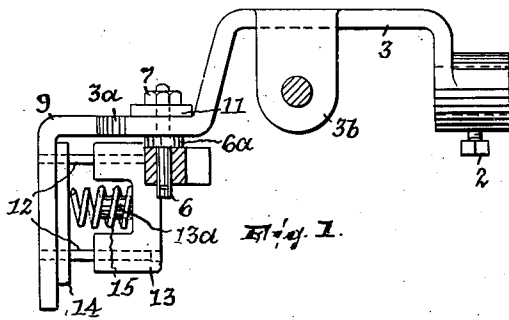
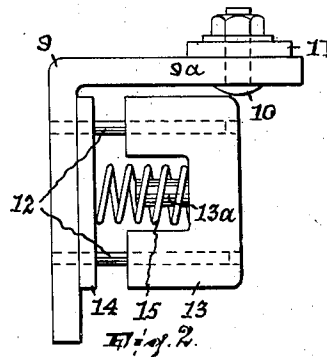
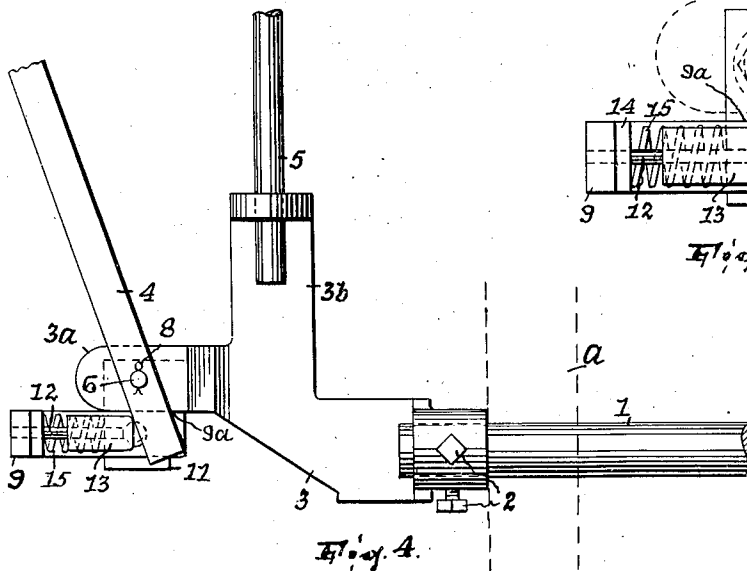
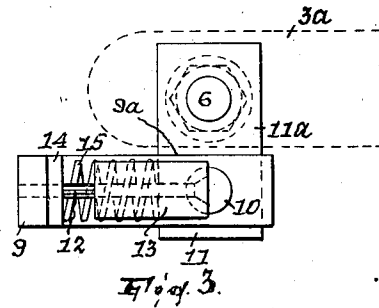
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LOOM

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LOOM

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2 Claims. (Cl. 139-149)

In a loom the picker-stick is pivoted in a carrier fast to a rock-shaft on which are also fast the lay-swords that carry the lay or batten. The picking mechanism usually includes, with the picker-stick, some form of buffer with which the stick at its upper end portion contacts and, as a separate device, some flexible longitudinally extensible elastic medium for effecting retraction of the stick, as a spring extending under its pivot and attached at its ends to the stick and the carrier. My object is to simplify the picking mechanism in respect to so much thereof as affords the buffer and provides for retraction of the stick. To that end I contemplate combining with the stick and carrier what is in effect a unitary assembly readily attachable to any standard picker-stick carrier and of such construction as to withstand the wear and tear imposed thereon much longer than either of the mentioned devices.

The invention is herein shown applied to a box-loom but it may be applied, as will be apparent, to a plain loom.

In the drawing,

Fig. 1 shows the carrier and my device in plan and the picker-stick in section;

Fig. 2 is a plan of said device on a larger scale;

Fig. 3 is a front elevation of said device, with a part of the carrier appearing in broken lines; and

Fig. 4 shows the carrier, picker-stick and said device in front elevation.

On the horizontal rock-shaft 1, journaled in the frame *a*, is made fast, as by set-screws 2, the usual carrier 3 in whose terminal 3*a* the picker-stick 4 is pivoted to move in an upright plane extending lengthwise of the rock-shaft. Said carrier being here adapted for a box-loom having shiftable boxes, it is formed with a rearward bend as seen in plan and as usual and, upstanding from such bend, with a guiding portion 3*b* for guiding the box-rod 5. The pivot for the picker-stick is formed by a pin or bolt 6 which penetrates the terminal 3*a* and is formed with a collar 6*a* and has a nut 7 for clamping it to the carrier, 8 being the usual cotter-pin to retain the picker-stick on the bolt.

According to this invention means is provided for checking the shuttle-impelling movement of and thereupon retracting the picker-stick (or stick) 4 as follows:

A bracket is made fast to the carrier and in the present instance includes the following parts: 9 is an L-shaped part or angle-iron to one arm of which is rigidly fixed, as by a bolt or rivet

10, a plate 11 which is perpendicular to and projects from the common plane of both arms of part 9; parts 9 and 11 may of course exist as a unit, or as an L-shaped member having extending from one arm thereof and from said plane a projection, as 11*a* (Fig. 4). Such projection and hence the bracket is here clamped to the carrier by the bolt 6 and nut 7 so that the other arm of the bracket extends forwardly, or through the plane of movement and lateral of the stick. Projecting from that side of the latter arm which adjoins the stick is a pair of spaced guide-pins 12, preferably fixed to said arm in any way, as by being welded thereto.

On the pins of the thus-formed bracket and arranged in the path of movement of the picker-stick is an elastic buffer means formed as follows: A U-shaped buffer 13, formed of some tough, preferably fibrous material, as raw-hide, is slidable on the pins 12, its extremities projecting toward said arm of the bracket and penetrated by the pins. Between its extremities the buffer has a stud 13*a* projecting toward said arm. Bearing against that face of said arm which adjoins the buffer is a yielding somewhat elastic pad 14, as of leather, penetrated by the pins. And between the pad and buffer is a helical spring 15 into which stud 13*a* projects and which normally tends to maintain the buffer at the limit provided by the heads of the pins 12.

In this example the device comprising the bracket and the elastic stick-control or buffer means is so related to the terminal 3*a* of the carrier that said means is at an elevation below that of the picker-stick pivot whereby the part of the stick below such pivot will at its outer side contact said means, which is here outward of the stick; but, obviously, the formation of the carrier being such that said device could be accommodated, the latter could be positioned, in inverted state, at an elevation above that of the pivot, in which case the stick would contact said means above the pivot and at its own inner side.

In any event, it will be understood that the device is so constructed and should be so arranged that when the picker-stick is made to undergo the shuttle-impelling movement (or clockwise in Fig. 4) the parts 13-15 of said yielding stick-control means substantially immediately oppose such movement.

More specifically, on the shuttle-impelling stroke of the stick its movement is at first yieldingly opposed by said parts 13-15 of said means but finally it is more positively but still yield-

ingly opposed by the parts 13—14. Thereupon the parts 13—15 again come into effect to retract the stick.

The construction is not only such that the checking and retracting functions are performed by what is a unitary assembly readily attachable to any standard loom but the arrangement and disposition of the parts of said assembly are such that they most efficiently coact with the picker-stick and well withstand the strains and stresses imposed on them.

It is noted that the picker-stick pivoting bolt 6 itself provides the means for securing the bracket to the carrier. Further, that that surface of the arm of the bracket beyond which projection 11a extends provides a ledge 9a contacting the under edge of the carrier terminal 3a, whereby to prevent the bracket from shifting around the bolt 6.

To remove for repairs or replacement any of the parts 13, 14 and 15 it is only necessary to dismount the picker-stick, which otherwise obstructs removal of the buffer from pins 12.

Having thus fully described my invention, what I claim is:

1. In combination, with the picker-stick carrier of a loom and a picker-stick pivoted therein to move in an upright plane, means to check the shuttle-impelling movement of and thereupon retract the picker-stick comprising a bracket L-shaped in plan and having one arm thereof affixed to the carrier and the other projecting, laterally of the picker-stick, through said plane and in a horizontal plane close to but removed from the horizontal plane of the picker-stick pivot, and elastic buffer means supported by the bracket between the latter arm and the picker-stick.

2. In combination, with the picker-stick carrier of a loom having a projecting pivot-forming clamping device and with a picker-stick pivoted on said device, a bracket penetrated and clamped to the carrier by said device, and elastic means, carried by the bracket, to check the shuttle-impelling movement of and thereupon retract the picker-stick.

JOSEPH VANOIRE,