Nov. 28, 1939. J. VANORE 2,181,386

PICKER STICK BUFFER FOR LOOMS

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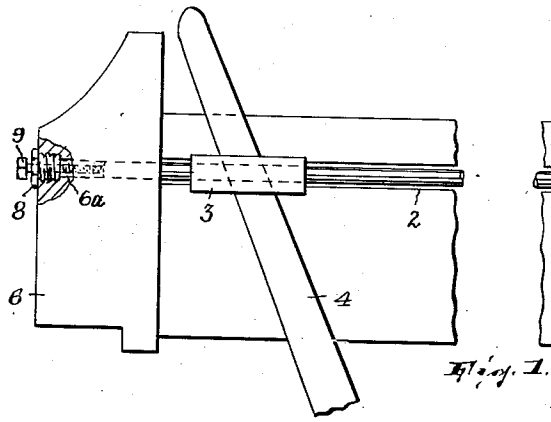
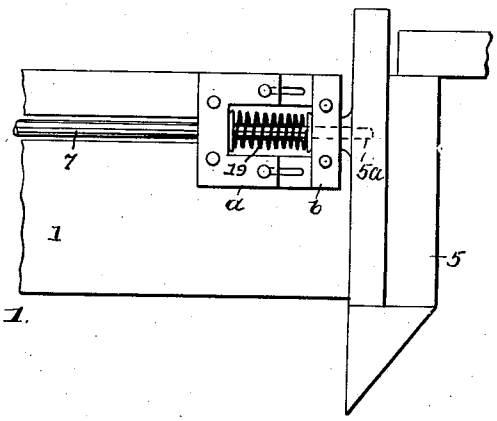


Fig. 1.



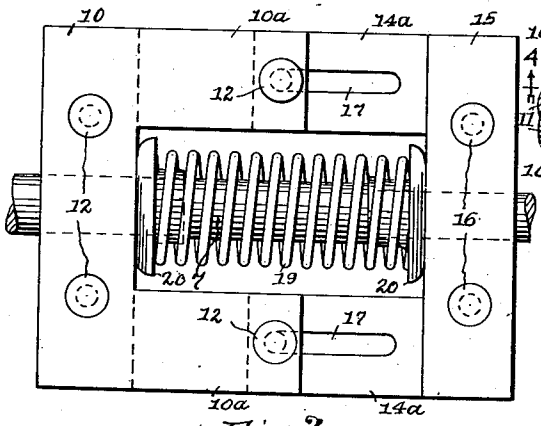


Fig. 2.

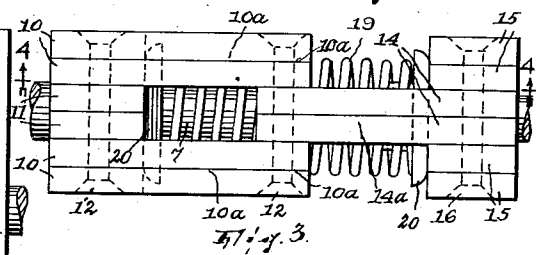


Fig. 3.

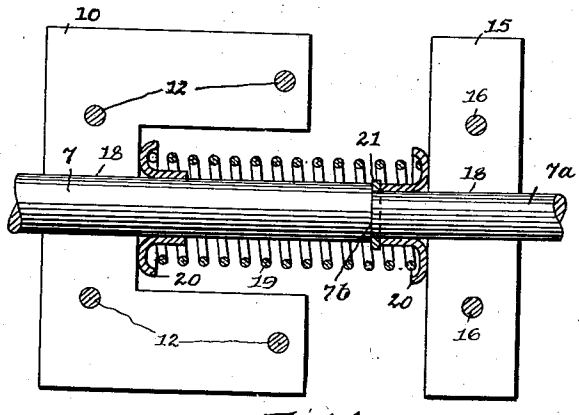


Fig. 4.

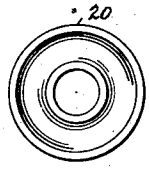


Fig. 5.

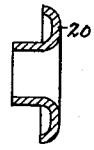


Fig. 6.

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PICKER STICK BUFFER FOR LOOMS

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7 Claims. (Cl. 139—167)

In order to check the picker of a loom at the end of each forward stroke it is usual to employ a buffer consisting of a strip of heavy leather bent back and forth upon itself and having its several folds or laps penetrated by the rod on which the picker is guided. Such a buffer serves well enough to cushion the blows of the picker but it can only withstand the violent action to which it is subjected for a comparatively short time, after which it is without the necessary resiliency and has to be replaced with a new one. One object of this invention is to provide a resilient buffer for the picker which shall remain serviceable both as to wear and as to resiliency practically indefinitely.

Another object is to provide for so mounting the rod on which the picker slides and the buffer is mounted that when it loosens, as must inevitably be the case when, as usual, it is not integral with what supports it and in view of the friction and vibratory action to which it is constantly subjected, it may be tightened. Ordinarily there is no expedient for tightening the rod, and looseness of even the slightest degree soon becomes so appreciable that the picking motion is inaccurate, necessitating the removal and repair or replacement of the entire rod-containing structure.

In the drawing,

Fig. 1 is a rear elevation of a shuttle-box and picking means and including the present improvements;

Figs. 2 and 3 respectively show the picker and its guiding rod in rear elevation and top plan;

Fig. 4 is a section on line 4—4, Fig. 3; and

Figs. 5 and 6 are respectively a face view and section of one of the spring abutments.

Supporting structure for the rod on which the picker slides is afforded, as usual, by a wall 1 back of the shuttle boxes and provided with a horizontal slot 2, as usual, to receive the picker 3 reciprocated by the picker-stick 4. The back wall joins two uprights or supports 5 and 6. The picker is penetrated and guided by a horizontal rod 7 formed and mounted thus:

One end of the rod is reduced at 7*a* and is set in a socket 5*a* in upright 5. The other upright has a bore 6*a* into whose enlarged outer end is screwed a nut 8 which in turn has screwed into it a screw 9. The rod is entered through bore 6*a*, with the nut removed, its reduced end being entered into the socket, whereupon the nut and screw being positioned as shown, the screw is screwed against the rod to hold it fast. If by the motion of the moving parts the rod in time loosens, it is only a matter of adjusting the screw to re-tighten it. Ordinarily, there is no means to tighten the rod when it loosens as the result of wear principally at its right-hand end and affecting such end and the corresponding upright.

Generally, my improved buffer comprises, with a spring, two block-like elements or blocks designated *a* and *b* in Fig. 1 and having a spring between them and movable together and having bores to be penetrated by the rod and each block having at least one projection extending toward and lapped by a projection of the other block and the projections having means to limit the motion of the blocks apart; in the preferred form there are two pairs of lapping projections and further the lapping is an incident of forming the projections in the pair extending from one block bifurcated and receiving the projections of the other block. In the example here shown the buffer is specifically formed as follows:

To form the blocks, layers of raw-hide having generally the form shown in Fig. 4 are used, i. e., one being elongated and the other generally U-shaped.

For what is here the block *a* there are four of the U-shaped layers, as 10, and two of the elongated layers, as 11, they being all disposed in laminated arrangement with the two layers 11 between pairs of the layers 10. They are all so arranged that the resulting block itself has a generally U-shaped form. All the layers are held together by rivets 12, two of which penetrate the portions 10*a* of the layers 10 which, being the terminals of the U of the block, constitute its projections, each in this case bifurcated as shown in plan by Fig. 3.

For what is here the block *b* there are used two of the U-shaped layers, as 14, and four of the elongated layers, as 15, they being all disposed in laminated arrangement with the two layers 14 between pairs of layers 15. They are all so arranged that the resulting block has a generally U-shaped form. All the layers are held together by rivets 16, but in this case the portions 14*a* of the layers 14 which, being the terminals of the U of the block, constitute its projections, have longitudinal slots 17; these projections are non-bifurcated, forming tongues to be received by the bifurcated projections 10*a* of the other block.

In the assembled state of the blocks the projections 14*a* of the one block are received by and in that sense lap the bifurcated projections 10*a* of the other block, as shown, the rivets exist-

ing in the latter projections penetrating the slots 17 and thus limiting the movement of the blocks apart and giving the whole the character of a unitary structure.

Parallel with and between their projections the blocks have alined bores 18 and concentric with the bores and between the blocks is a coiled spring 19 which bears at its ends against abutment elements 20 seated against the blocks.

The buffer is assembled with the rod so that the latter penetrates its bores 18, the spring and the abutment elements. The buffer is sufficiently close to the back wall of the box-structure so as to be confined to the upright position shown in Fig. 1. In order to confine the buffer against movement lengthwise of the rod, a washer 21 is placed on the latter's reduced end, abutting the shoulder at 7b, so that when the rod is held fast by screw 9 the washer acts through the right-hand abutment element and coacts with the upright 5 to clamp the right-hand buffer block and hence the buffer.

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

1. A buffer for the picker of a loom comprising a pair of members movable together and apart and each having a portion projecting toward the other member, said portions being wholly lateral of and in wiping contact with each other, means, extending through said members transversely of their movement, to maintain the members with said portions in such contact with each other, and resilient means interposed between and yieldingly opposing movement together of the members.

2. A buffer for the picker of a loom comprising a pair of members movable together and apart and each having a pair of spaced portions projecting toward the other member, the portions of each pair being wholly lateral of and in wiping contact with the respective portions of the other pair, means, extending through said members transversely of their movement, to maintain the members with said portions of the two pairs in such contact with each other, and resilient means interposed between and yieldingly opposing movement together of the members.

3. A buffer for the picker of a loom comprising a pair of members movable together and apart and respectively having projections extending lengthwise of the members and toward each other, one of said projections having a bifurcation receiving and fitting the other projection, and a resilient element interposed between and yieldingly opposing movement together of said members.

4. The buffer set forth in claim 3 characterized by its said members having means to limit their movement apart.

5. A buffer for the picker of a loom comprising a pair of members movable together and apart and respectively having pairs of spaced portions extending lengthwise of the members, said pairs extending toward each other and two of said portions having bifurcations and the other two being received in and fitting the respective bifurcations, and a resilient element interposed between and yieldingly opposing movement together of said members.

6. In combination, with the picker-guiding rod of a loom and a support from which the rod projects, a picker buffer comprising a pair of generally U-shaped members penetrated by the rod and having their extremities projecting toward each other, and a coiled spring also penetrated by the rod and interposed between said members and their projections.

7. In combination, with a pair of spaced supports, one having a bore and the other a socket alined with the bore, a loom picker guiding rod entered through the bore and having its entering end received by the socket and also having a shoulder near the second support, and a buffer on the rod having a portion to be clamped between the shoulder and second-named support, the first-named support having means to urge the rod toward the second-named support and thereby clamp said buffer portion between the shoulder and said second-named support.

JOSEPH VANORE.