

W. F. DAVITT.
PICKER STICK.
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1,406,544.

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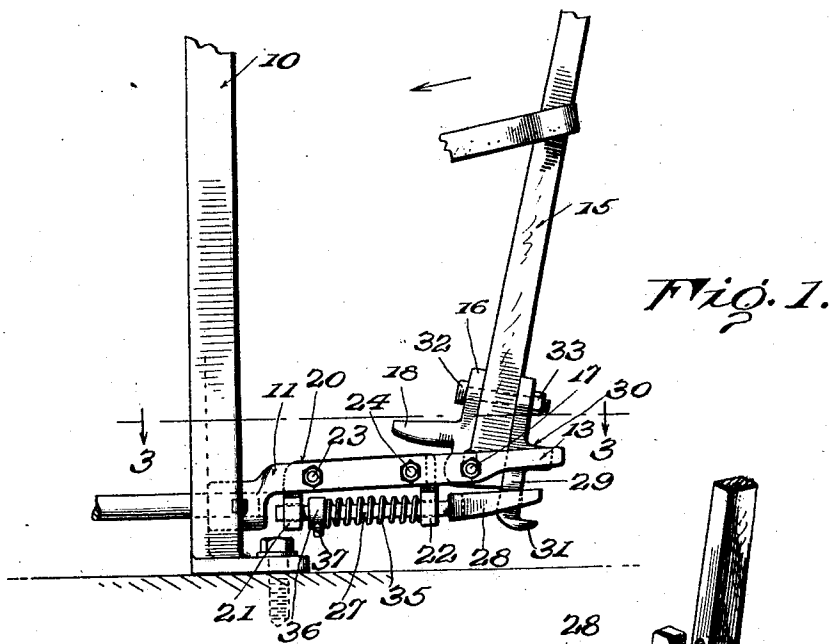


Fig. 1.

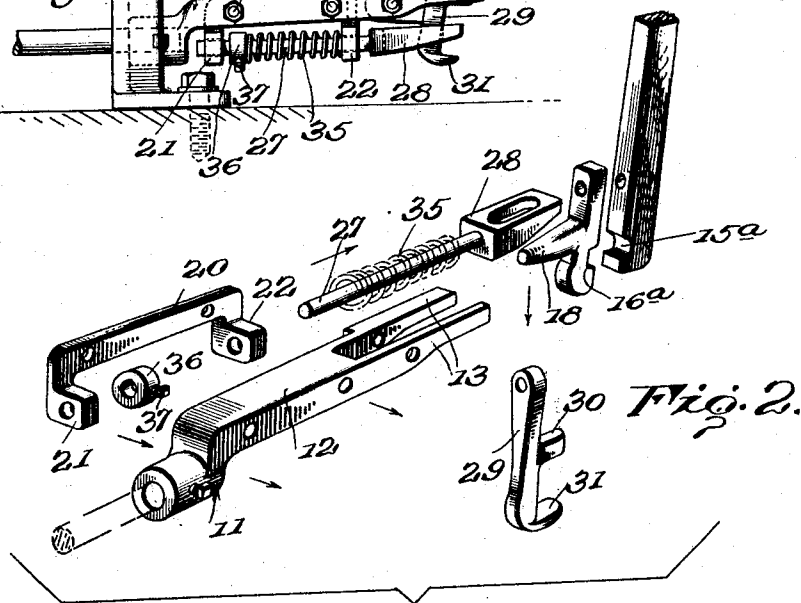


Fig. 2.

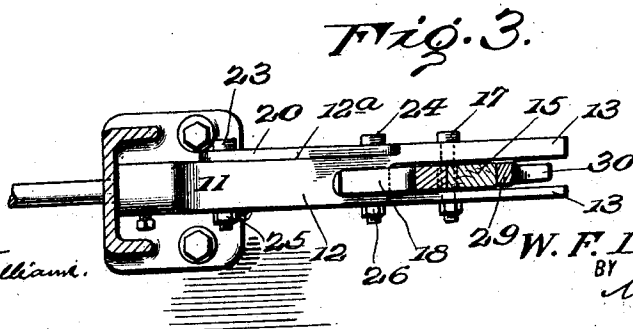


Fig. 3.

WITNESSES
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PICKER STICK.

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To all whom it may concern:

Be it known that I, WILLIAM F. DAVITT, a citizen of the United States, and a resident of Manchester, in the county of Hillsborough and State of New Hampshire, have invented certain new and useful Improvements in Picker Sticks, of which the following is a specification.

The present invention relates to a picker stick mechanism or motion for looms, and has for its object to provide a device of this character which eliminates all straps, except the lug strap, which operates in such a manner as to throw the shuttle straight across the loom on the race board, which precludes all possibility of the picker stick jumping out of its holder with resulting damage to the cloth or shuttle, or both, and which is in general of simple and durable construction, reliable in operation and easy and inexpensive to manufacture.

Other objects and advantages of the invention reside in certain novel features of construction, combination and arrangement of parts which will be hereinafter more fully described and particularly pointed out in the appended claims, reference being had to the accompanying drawings forming part of this specification, and in which:

Figure 1 is a side elevational view, illustrating the preferred embodiment of the invention;

Figure 2 is a group view in perspective, showing the elements of the invention immediately prior to assembly; and

Figure 3 is a view in horizontal section on line 3—3 of Figure 1.

Referring to the drawings wherein for the sake of illustration is shown the preferred embodiment of the invention, the numeral 10 designates the loom side upon which a support, designated generally at 11 is arranged. The support 11 includes a body portion 12 and a pair of spaced parallel arms 13 constituting a yoke. A picker stick designated at 15 has its lower end disposed between the arms 13. At the lower end of the picker stick 15 a shoe 16 is arranged, and the shoe and the picker stick are provided with complementary notches, designated at 15^a and 16^a respectively which in assembly define a pivot bearing in which a pivot bolt 17 is operatively arranged, the pivot bolt being carried by the arms 13 of the yoke whereby the picker stick is pivotally mounted on the support. A toe 18 extends later-

ally from the shoe 16 over the body portion of the support and is engageable with the support to limit the movement of the picker stick.

The body portion 12 of the support is cut away at one side thereof to provide a recess 12^a and in this recess a frame 20 is arranged. Offset bearing lugs 21 and 22 are integrally formed with the frame 20 or otherwise secured thereto and in assembly these bearing lugs are disposed beneath the body portion 12. Means is provided for securing the frame 20 to the body portion 12 and preferably consists of bolts 23 and 24 extending through suitable bolt holes provided therefor in the frame 20 and the body portion 12 and secured in position by means of nuts 25 and 26 threaded on the bolt. A sliding shaft 27 is journaled in the bearing lugs 21 and 22 and has fixed thereto at one end a slotted head 28. A connecting bar 29 operates in the slot of the head 28 and is provided with stop lugs 30 and 31 cooperable with the head 28. Common means is provided for securing the shoe 16 and the connecting bar 29 to the picker stick and preferably consists of a single bolt 32 extending through suitable bolt holes provided therefor in the shoe 16, the picker stick 15 and the connecting bar 29, and secured in position by means of a nut 33 threaded on the end thereof.

A compression coil spring 35 encircles the sliding shaft 27 between the bearing lugs 21 and 22 and abuts the bearing lug 22 at one end, the other end of the coil spring engaging a collar 36 adjustably fixed on the sliding shaft 27 by means of a set screw 37.

In operation, when operative movement is imparted to the picker stick 15, the sliding shaft 27 also moves by virtue of the connection between the picker stick and the sliding shaft afforded by the connecting bar 29 and the slotted head 28. This movement of the sliding shaft 27 is resiliently resisted by the coil spring 35, as this movement further compresses the coil spring. The spring 35 thus functions to cushion the movement of the picker stick, thereby preventing it from striking the wall of the slot in the shuttle box. The resistance offered by the spring 35 to the movement of the sliding shaft may be readily varied by adjusting the collar 36 on the sliding shaft 27.

By providing this picker stick motion or mechanism the necessity for using straps

to check or control the picker stick in its movements is avoided. It is well known in the art that such straps stretch and result in throwing the shuttle from near the top of the picker stick in an elliptical path, the curve of which increases as the strap stretches. In the mechanism of the present invention the shuttle is thrown in a straight path across the loom on the race board. Moreover, when the straps heretofore used broke, the picker stick jumped out of the holder thereby working damage to the cloth or shuttle or both. In the present invention it is impossible for the picker stick to so jump and work injury to these elements.

I claim:

1. A picker stick mechanism comprising a support including a body portion and a yoke having a pair of arms, a picker stick having its lower end disposed between said pair of arms, a shoe associated with said picker stick and having a toe extending therefrom and engageable with the body portion to limit the movement of the picker stick, said picker stick and said shoe having complementary notches defining a pivot bearing, a pivot bolt carried by said pair of arms and operating in said pivot bearing whereby said picker stick is pivotally mounted on said support, said body portion having a recess at one side, a frame disposed in said recess, offset bearing lugs carried by said frame and disposed beneath said body portion, means for securing said frame to said body portion, a sliding shaft journaled in said bearing lugs, a slotted head connected with one end of said sliding shaft, a connecting

bar operating in said slotted head and having stop lugs cooperable therewith, common means for securing said shoe and said connecting bar to said picker stick, a coil spring arranged on said shaft and engaging one of said bearing lugs at one end, and a collar fixed to said shaft and engaging the other end of said coil spring.

2. A picker stick mechanism comprising a support including a body portion and a yoke having a pair of arms, a picker stick having its lower end disposed between said pair of arms and pivotally secured thereto, a frame secured to said body portion, offset bearing lugs carried by said frame and disposed beneath said body portion, a sliding shaft journaled in said bearing lugs, a slotted head connected with one end of said sliding shaft, a connecting bar operating in said slotted head and secured to said picker stick, a coil spring arranged on said shaft and engaging one of said bearing lugs at one end and a collar adjustably fixed to said shaft and engaging the other end of said coil spring.

3. A picker stick mechanism comprising a support, a picker stick pivotally mounted on said support, a frame secured to said support, bearing lugs carried by said frame, a sliding shaft journaled in said bearing lugs, a connecting bar secured to said picker stick and operatively connected with said sliding shaft, a coil spring arranged on said shaft and engaging one of said bearing lugs at one end, and a collar adjustably fixed to said shaft and engaging the other end of said coil spring.

WILLIAM F. DAVITT.