

No. 693,592.

Patented Feb. 18, 1902.

D. DURKIN.
PICKER MOTION FOR LOOMS.

(Application filed July 15, 1901.)

(No Model.)

Fig. 1.

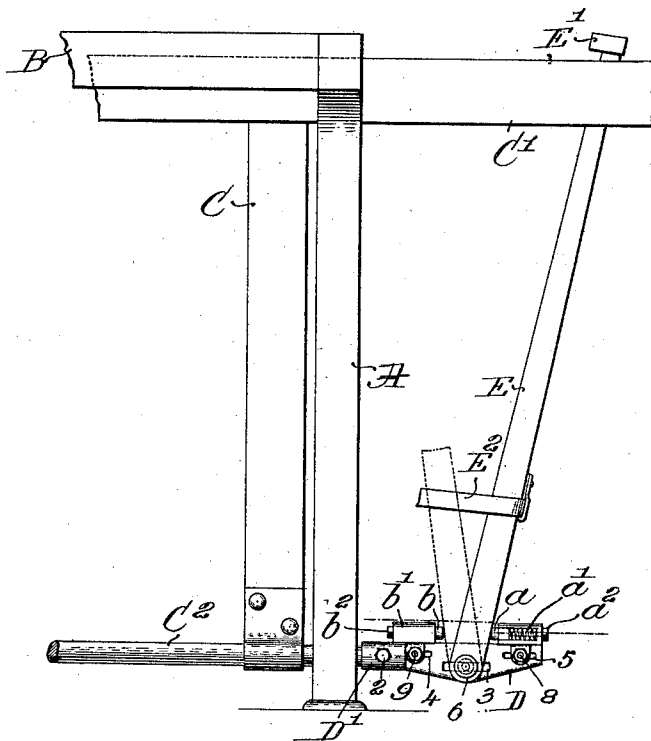
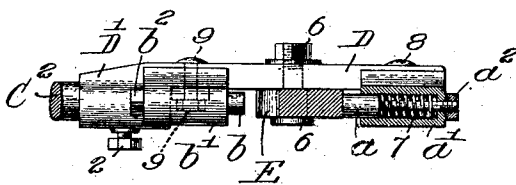


Fig. 2.



witnesses:
Fred S. Greenleaf
Adolph B. Kaiser

Inverdon
Daniel Durkin,
by Henry Gregory.
Atty.

UNITED STATES PATENT OFFICE.

DANIEL DURKIN, OF MANVILLE, RHODE ISLAND.

PICKER-MOTION FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 693,592, dated February 18, 1902.

Application filed July 15, 1901. Serial No. 68,293. (No model.)

To all whom it may concern:

Be it known that I, DANIEL DURKIN, a citizen of the United States, residing at Manville, in the county of Providence and State of Rhode Island, have invented an Improvement in Picker-Motions for Looms, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

In my studies as now commonly used the picker-stick is carried by a curved rocker resting on a rocker-bed, and checking means is commonly employed to coast with the upper end of the picker.

In my studies to improve and simplify picker-motions and reduce their cost I have devised a casting adapted to be connected with the rock-shaft of the lay, said casting sustaining adjustably a stud on which is pivoted the lower end of the picker-stick, the casting sustaining suitable spring-sustained checks occupying a position at each edge of and in line with the path of movement of the picker-stick.

Figure 1, in elevation, shows a sufficient portion of a loom with a picker-stick in position to illustrate my invention; and Fig. 2, a section in the irregular dotted line *x*, Fig. 1.

The framework A, the breast-beam B, the lay C, having a shuttle-box C', and the rock-shaft C² of the lay are and may be all as usual.

In accordance with my invention I have devised a casting D, provided at one end with a sleeve D' to fit over the rock-shaft C², to which it is secured by a suitable screw 2. The casting shown has a slot 3 and two other slots 4 and 5. The slot 3 receives a bolt 6, provided with a loose bushing, which fits a hole in the lower end of a picker-stick E, having at its upper end a picker E' and deriving its motion to throw the usual shuttle by or through a so-called "lug-strap" E², actuated in any usual or suitable manner common to looms. The movement of the stick to throw the shuttle is imparted by the strap, the outward movement of the stick being caused by the impact of the shuttle against it as the shuttle leaves the shed.

I have discovered by experiment that I may do away with friction against the stick

by timing the motion of the stick so that it may be moved steadily back and forth.

To time the picker-stick exactly, I have mounted the same on the adjustable stud 6 and have provided the casting D with outer and inner buffers *a b*. The buffer *a* is shown as a shouldered rod surrounded by a spring 7 and extended through a hole in a buffer-support *a'*, connected, as shown, adjustably with the casting D by a bolt 8 in the slot 5, the outer screw-threaded end of said buffer receiving on it a nut *a*² to thereby adjust the buffer longitudinally and regulate the stress of the spring 7 according to the work to be done.

The buffer *b* is constructed, as described, of buffer *a*, it entering a hole in a buffer-guide *b'*, attached adjustably to the casting D by a bolt 9 in slot 4.

By the adjustment of the fulcrum 6 of the stick and the buffer-guides *a' b'* the stick and buffer may be so placed one with relation to the other that as the inner or active stroke of the stick is completed and the shuttle has had imparted to it the full effect of the blow of the stick the inner edge of the stick near its fulcrum meets the inner buffer *b* and compresses the spring coacting with it, which acts to start the stick in its outward movement, the shuttle on its return flight meeting the stick moving outwardly, the stick finally striking the outer buffer *a* and compressing the spring, which gradually arrests the picker-stick and picker, the recoil of the spring 7 and the pull on the strap E² acting, preferably, substantially together when the stick is started in its inward stroke, the strap completing the movement of the stick.

With my invention the arrest in a yielding manner of the picker-stick on its inward movement by the buffer *b* obviates excessive strain on the picking-strap, thus making the same more durable, and I find in practice that the outer buffer obviates such rebounding of the shuttle at the end of its flight as is apt to result in breaking the filling.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a picker-motion for looms, the combination of a rocker-shaft, a casting secured

to said rocker-shaft to move therewith, a freely-mounted picker-stick fulcrumed on said casting and two disconnected buffers also mounted on the said casting independent of the picker-stick and one on each side of the said picker-stick adjacent the fulcrum thereof and adapted to act upon said picker-stick only near the end of its inward and outward strokes to arrest the movement thereof, the said fulcrum of the freely-mounted picker-stick being adjustable between the disconnected buffers.

2. In a picker-motion for looms, the combination of a rocker-shaft, a casting secured to said rocker-shaft to move therewith, two disconnected buffers also mounted on said casting and separately adjustable toward and away from each other, and a freely-mounted picker-stick independent of said disconnected adjustable buffers and fulcrumed on said casting between the same, and means affording adjustment of the fulcrum of said picker-stick between the independent adjustable

buffers, said buffers acting upon the picker-stick adjacent its fulcrum and only near the end of the inward and outward strokes to arrest the movement thereof.

3. In a picker-motion for looms, the combination of a rocker-shaft, a casting secured to said rocker-shaft to move therewith and provided with a series of three slots, two buffers independently mounted in the end slots of the series and adjustable toward and from each other, and a picker-stick adjustably mounted in the center slot of the series and between the two adjustable buffers, said buffers acting upon the picker-stick adjacent its fulcrum and near the end of the inner and outer strokes to arrest the movement thereof.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DANIEL DURKIN.

Witnesses:

THOMAS W. HAGUE,
JONATHAN BATEMAN.