

No. 782,777.

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H. CÔTÉ.
PICK MOTION FOR LOOMS.
APPLICATION FILED NOV. 12, 1904.

Fig. 1.

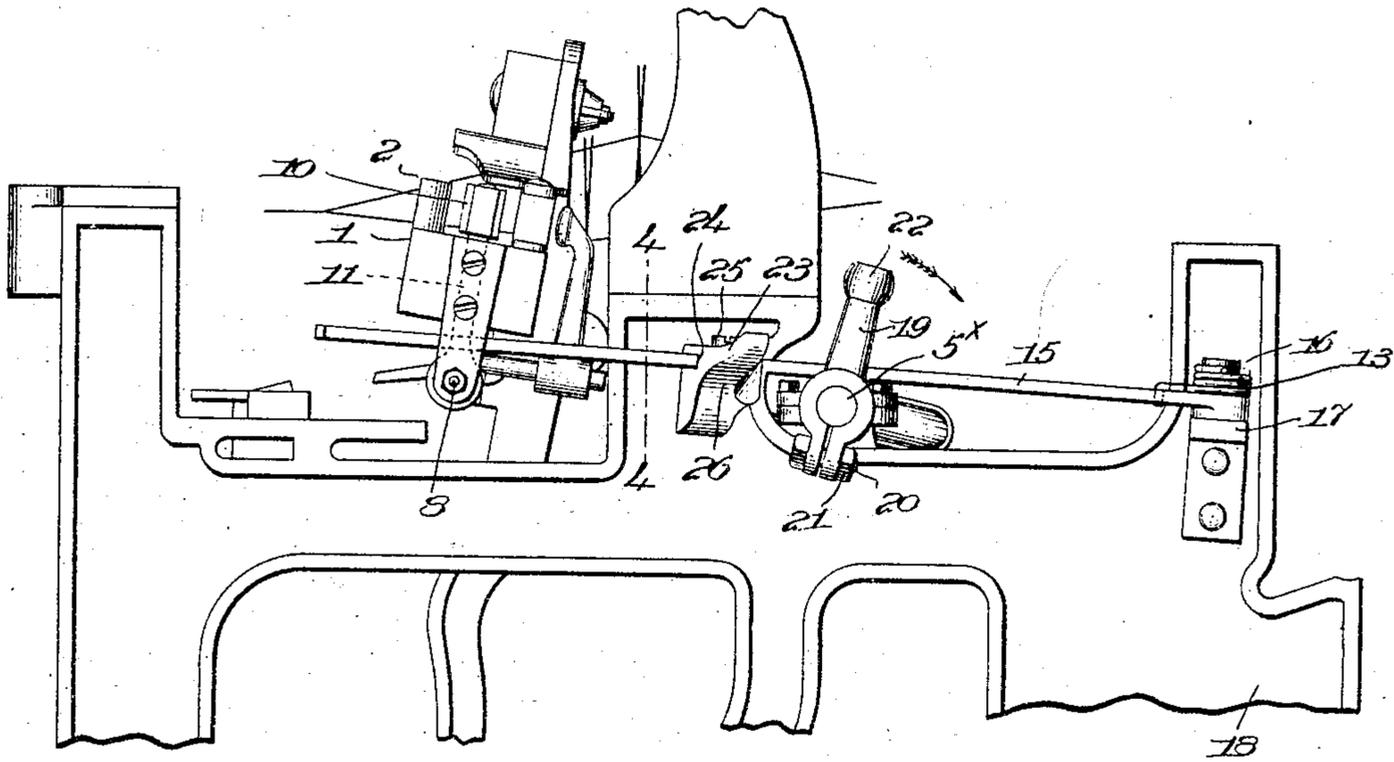


Fig. 2.

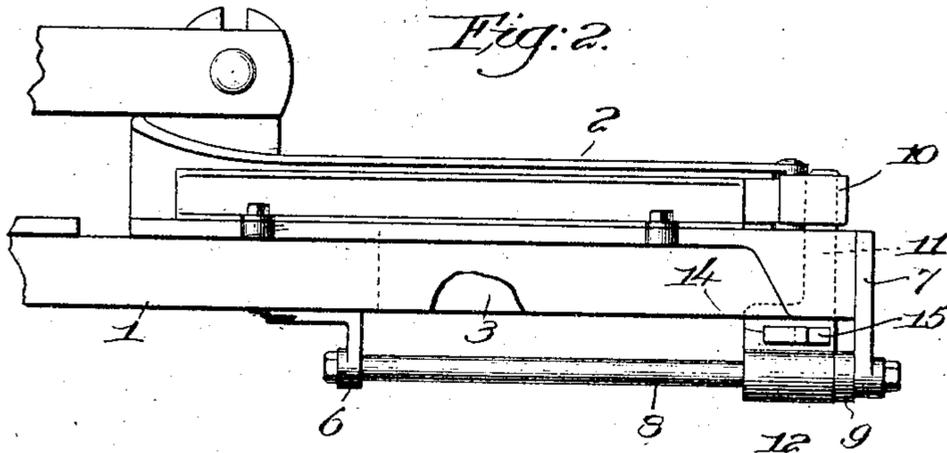


Fig. 3.

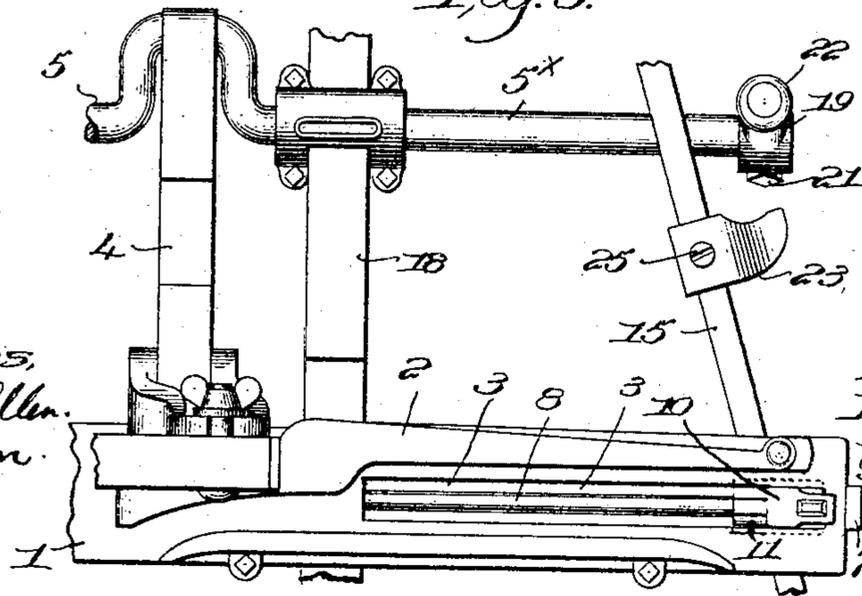
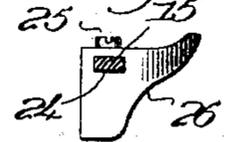


Fig. 4.



Witnesses,
Edward H. Allen.
J. Wm. Lutton.

Inventor:
Henry Côté,
by Lewis Gregory,
attorney.

UNITED STATES PATENT OFFICE.

HENRY CÔTÉ, OF WEST WARREN, MASSACHUSETTS, ASSIGNOR TO
DRAPER COMPANY, OF HOPEDALE, MASSACHUSETTS, A COR-
PORATION OF MAINE.

PICK-MOTION FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 782,777, dated February 14, 1905.

Application filed November 12, 1904. Serial No. 232,411.

To all whom it may concern:

Be it known that I, HENRY CÔTÉ, a citizen of the United States, and a resident of West Warren, county of Worcester, State of Massachusetts, have invented an Improvement in Pick-Motions for Looms, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings representing like parts.

This invention has for its object the production of a simple direct-acting pick-motion for looms, whereby the inward or operative stroke of the picker is imparted in a quick positive manner to properly throw the shuttle from the shuttle-box.

In accordance with my invention the pickers are carried by and movable longitudinally of the lay, and a swinging picker-arm fixedly fulcrumed at one end is slidably connected at the other end with each picker.

Means are provided to act intermittingly and positively upon the arms in alternation to swing them inward, and thereby impart the operative stroke to the pickers.

A spring is provided to retract the picker and through it to return the picker-arm to starting position.

The novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

Figure 1 is a right-hand side elevation of a sufficient portion of a loom to be understood, with one embodiment of my invention applied thereto. Fig. 2 is a front elevation of one end of the lay, showing the shuttle-box, picker, and picker guide and support. Fig. 3 is a partial top or plan view of the picking mechanism shown in Fig. 1, and Fig. 4 is a detail front elevation of the cam in the picker-arm on the line 4 4, Fig. 1, looking toward the right.

Inasmuch as the pick-motion is the same at each side of the loom, I have shown and will describe the same for one side only of the loom, it being understood that as the pickers

move inward in alternation the respective pick-motions operate alternately. The lay 1 is provided at each end with a shuttle-box 2 of suitable construction, and below each shuttle-box the lay is longitudinally slotted at 3, (see Figs. 2 and 3,) the lay being operated in usual manner by pitmen, one of which, as 4, is shown in Fig. 3 connected with the crank-shaft 5, the construction so far described being all substantially well known.

In the present embodiment of my invention I secure depending brackets 6,7 to the lay to rigidly support a guide shown as a rod 8, extending longitudinally of the lay and below the slot 3, it being understood that one of such rods is provided for each end of the lay.

The bracket 7 is shown as secured to the end of the lay, and a cushion 9, of rubber or other suitable material, is preferably attached to the rod adjacent the bracket to cushion the picker on its outward stroke.

The picker 10 has a depending foot 11, provided with a longitudinal hole 12 (see dotted lines, Fig. 2) to slidably receive the guide-rod 8.

The upper part of the foot 11 extends through the slot 3 in the lay, so that the picker can reciprocate longitudinally of the lay on the guide 8, a spring, to be referred to, acting to retract or move it outward against the cushion 9.

The picker-foot is provided with a slot 14 (clearly shown in Fig. 2) to slidably receive the free end of a swinging picker-arm 15, extended rearwardly and mounted to rock or swing in a lateral path on a fixed fulcrum 16, secured to a bracket-arm 17, attached to and extended outward from the loom side 18. (See Fig. 1.)

As shown in Figs. 1 and 3, the picker-arm extends above the crank-shaft 5, which in accordance with my present invention is elongated or lengthened at its ends, at 5^x, and an arm 19 is fixedly secured on each prolongation by means of a suitable clamp-bolt 20 and set-nut 21.

The arm 19 is provided with a wiper con-

veniently made as a roll 22 and so located that in the rotation of the crank-shaft the wiper is adapted to cooperate intermittingly with a cam 23, secured to the adjacent picker-arm. This cam has a slot-like opening 24, (see Fig. 4,) through which the picker-arm is extended, a set-screw 25 holding the cam fixedly in place on the arm.

A light spring 13 is herein shown as coiled around the fulcrum and fixed at one end, (see Fig. 1,) its other end bearing against the picker-arm to move the latter and the picker outward into starting position.

The acting face 26 of the cam is shown best in Figs. 1 and 4, and viewing those figures it will be manifest that the rotation of the crank-shaft will cause the wiper 22 to engage and wipe over the face 26, moving thereover from its lower to its upper end, and thereby swinging the picker-arm to the left, viewing Fig. 3. The cam is so shaped and the action of the wiper thereon is such that a quick sharp movement will be imparted to the arm and through it to the picker, imparting to the latter its operative stroke to throw the shuttle from the box. As the picker-arm swings it moves longitudinally in the slot 14 of the picker-foot relatively to the latter; but it is at all times in positive connection therewith. When the wiper passes the upper point of the cam-face 26, the picker-arm is instantly released and the retracting-spring 13 returns the picker and arm to starting position.

A very steady pick-motion is secured by the construction herein set forth, and the picker moves in absolute parallelism with the path of the shuttle.

By properly shaping the cam-face 26 the motion of the picker on its operative stroke can be adjusted or controlled as may be desired.

The picker-motion described does away with the use of heavy pick-cams mounted on a cam-shaft at the lower part of the loom, and by dispensing with such cam-shaft a very large warp-beam may be used.

The wiper-arm 19 is so set on the crank-shaft extension that the picking action will take place just about as the lay is on top center, and by means of the clamping bolt and nut the wiper-arm can be properly set.

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

1. A loom having in combination a longitudinally-slotted lay having an adjacent shuttle-box, a guide on the lay below the slotted portion, a picker having a foot depending through the slot and slidably mounted on the guide, means in positive and slidable engagement with the picker-foot to impart the in-

ward stroke of the picker, and a spring to retract the picker.

2. A loom having in combination a longitudinally-slotted lay having an adjacent shuttle-box, a guide on the lay below the slotted portion, a picker having a foot depending through the slot and slidably mounted on the guide, a swinging picker-arm fixedly fulcrumed at one end and in sliding engagement with the picker-foot, means to act intermittingly upon and swing the arm to impart the operative stroke to the picker, and a spring to retract the picker and picker-arm.

3. A loom having in combination a longitudinally-slotted lay having an adjacent shuttle-box, a guide on the lay below the slotted portion, a picker having a foot depending through the slot and slidably mounted on the guide, a swinging picker-arm fixedly fulcrumed at one end and in sliding engagement with the picker-foot, a cam on said arm, and a rotating wiper to intermittingly engage the cam and swing the arm to impart the operative stroke to the picker, and a retracting-spring for the picker and picker-arm.

4. A loom having in combination a lay, a longitudinally-extended guide mounted thereon, a picker having a foot slidable on the guide and provided with a slot, a picker-arm fixedly fulcrumed at its rear end and slidably extended through the slot in the picker-foot, means to positively swing the arm in one direction to impart the operative stroke to the picker, and a retracting-spring for the latter.

5. A loom having in combination a lay, a reciprocating picker carried thereby, a swinging picker-arm slidably connected with the picker, and having an attached cam, a crank-shaft operatively connected with the lay, and a wiper mounted on the crank-shaft and adapted to cooperate intermittingly with the cam and thereby swing the arm to impart the operative stroke to the picker.

6. A loom having in combination a lay, a reciprocating picker carried thereby, a laterally-swinging picker-arm fixedly fulcrumed at one end and slidably connected with the picker, a cam fast on the said arm, a crank-shaft operatively connected with the lay, and a wiper on said crank-shaft, to cooperate intermittingly with the cam and thereby swing the arm inward to effect the operative stroke of the picker.

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

HENRY CÔTÉ.

Witnesses:

GEORGE OTIS DRAPER,
ERNEST W. WOOD.