March 12, 1929. W. W. LASSEY 1,704,860

PICKING MECHANISM FOR WIDE CARPET LOOMS

Filed March 2, 1927

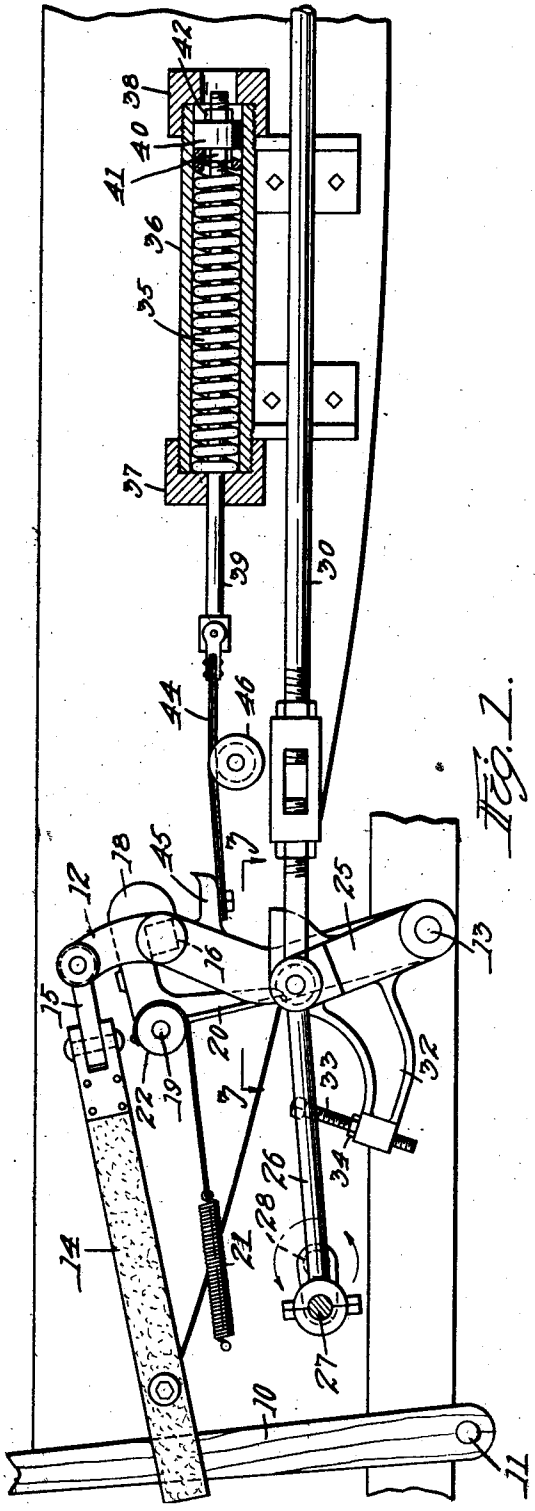


Fig. 1.

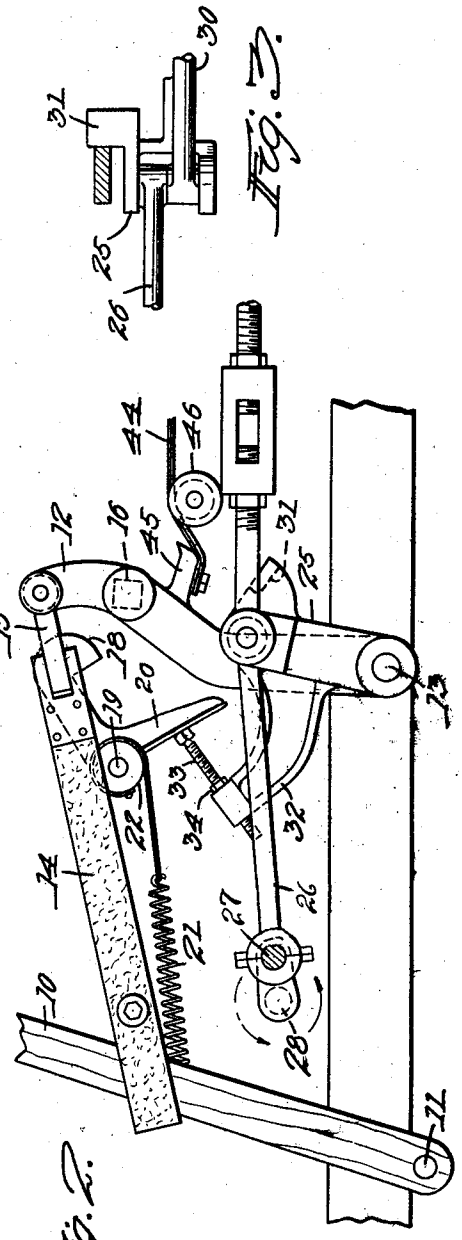


Fig. 2.

Fig. 3.

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Patented Mar. 12, 1929. 1,704,860

UNITED STATES PATENT OFFICE.

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PICKING MECHANISM FOR WIDE CARPET LOOMS.

Application filed March 2, 1927. Serial No. 172,123.

This invention relates to certain improvements in the picking mechanism of wide carpet looms, it being the particular object of my invention to improve the spring tension devices for giving actuating movement to the picking mechanism.

By the use of my improvements, the cost of manufacture of the picking mechanism is substantially reduced, and the breakage of springs and consequent loss of running time of the loom is largely eliminated.

My invention further relates to arrangements and combinations of parts which will be hereinafter described and more particularly pointed out in the appended claims.

A preferred form of the invention is shown in the drawings, in which

Fig. 1 is a front elevation, partly in section, of certain parts of a wide carpet loom embodying my improvements;

Fig. 2 is a similar view, showing certain of the parts in a different position; and

Fig. 3 is a detail sectional plan view, taken along the line 3—3 in Fig. 1.

Referring to the drawings, I have indicated a pickerstick 10, pivoted at 11, and a pick-lever 12, pivoted at 13, and connected with the pickerstick by the usual link connections 14 and 15. A square lug 16 projects laterally from the side of the lever 12 and is positioned for engagement by a latch 18 pivoted at 19 and having a depending arm 20. A spring 21 is flexibly conected to the hub 22 of the latch 18 and tends to move the latch yieldingly to holding position.

A setting lever 25 is also pivoted at 13, and is connected by a rod 26 with a crank pin 27, mounted on a crank shaft 28 and continuously rotated. Suitable connections 30 are provided between the setting lever 25 shown in the drawings, and a similar setting lever positioned at the opposite side of the loom.

The setting lever 25 is provided with a rearwardly projecting lug 31 (Fig. 3) positioned to engage the pick-lever 12 as the lever 25 is moved to the left, (as viewed in Fig. 1) by the rotation of the crank pin 27. When the pick-lever 12 is thus moved to the left, it is engaged and held by the latch 18, remaining in its left-hand position while the setting lever 25 returns to its initial or right-hand position.

The setting lever 25 is provided with a laterally projecting arm 32 having a contact stud 33 threaded in the outer end thereof and adjustably secured to a lock nut 34. As the setting lever returns to initial or right-hand position, the stud 33 engages the depending arm 20 of the latch 18, raising the latch and releasing the pick-lever 12.

For actuating the pick-lever when thus released, I have provided a heavy coiled spring 35 (Fig. 1) housed within a casing 36 which has a head 37 at one end and a removable cap 38 at the opposite end. The casing is firmly bolted to a portion of the loom frame. A rod 39 extends through an opening in the head 37 and also extends axially through the spring 35. A collar or abutment 40 is adjustably positioned on the rod 39 by nuts 41 and 42, one end of the spring 35 being centered by the nut 41.

The opposite end of the rod 39 is connected by a flexible member 44 to a lug 45 projecting from the side of the pick-lever 12. A guide roll 46 is also provided, so that the tension on the flexible member 44 may be kept directly in line with the axis of the sliding rod 39.

When the pick-lever 12 is moved to the left by the setting lever 25 and is secured by the latch 18, the spring 35 is placed under increased tension and when the latch 18 is released, the spring 35 swings the pick-lever 12 with a quick powerful motion to the right, giving the desired picking motion to the pickerstick 10. The force and effectiveness of the picking motion may be regulated as desired by adjusting the nuts 41 and 42 on the rod 39.

It will be noted that the spring 35 is substantially enclosed within its casing and is effectively protected from dirt and accidental injury. Also, that the action of the spring is due to compression rather than tension, and that the probability of breakage of the spring is thereby very much reduced.

In the practical operation of my improved picking mechanism, it has been found that the replacement of springs has been almost entirely eliminated, with a corresponding and very substantial saving in the running time of the loom.

Having thus described my invention and

the advantages thereof, I do not wish to be limited to the details herein disclosed otherwise than as set forth in the claims, but

What I claim is:—

1. In a wide loom, a picking mechanism comprising a shaft, a pick-lever mounted thereon, a latch for said lever, means including a setting lever on said shaft to trip said latch and release said pick-lever, and a spring device effective to give said released pick-lever a picking movement, and continuously acting means to return said pick-lever to position for latching, said spring device comprising a heavy coiled spring and means to place said spring under compression as said lever is moved to position for engagement by said latch.

2. In a wide loom, a picking mechanism comprising a shaft, a pick-lever mounted thereon, a latch for said lever, means including a setting lever on said shaft to trip said latch and release said pick-lever, and a spring device effective to give said released pick-lever a picking movement, and continuously acting means to return said pick-lever to position for latching, said spring device comprising a heavy coiled spring, a casing therefor, a rod extending into said casing and through said spring, an abutment on said rod engaging said spring at the end thereof remote from said lever, and connections from said rod to said lever.

3. In a wide loom, a picking mechanism comprising a shaft, a pick-lever mounted thereon, a latch for said lever, means including a setting lever on said shaft to trip said latch and release said pick-lever, and a spring device effective to give said released pick-lever a picking movement, said spring device comprising a heavy coiled spring, a casing therefor, a rod extending into said casing and through said spring and having an abutment engaging said spring at the end thereof remote from said lever, a flexible connection from said rod to said lever, and a guide for said flexible connection.

4. In a wide loom, a picking mechanism comprising a shaft, a pick-lever mounted thereon, a latch for said lever, means including a setting lever on said shaft to trip said latch and release said pick-lever, and a spring device effective to give said released pick-lever a picking movement, and continuously acting means to return said pick-lever to position for latching, said spring device comprising a heavy coiled spring, a casing therefor, and a rod extending into said casing and through said spring and having an abutment engaging said spring at the end thereof remote from said lever, said casing being substantially closed at each end and effectively protecting said spring from dirt.

5. In a wide loom, a picker stick pivoted thereon, a picking mechanism comprising a shaft, a pick lever mounted thereon, a latch for said pick-lever, continuously acting means including a setting lever, mounted on said shaft, to trip said latch and release said pick lever, and a spring device effective to give said released pick-lever a picking movement, said spring device comprising a compression spring, said continuously acting means adapted to place said spring under compression and restore said lever to initial position for re-engagement with said latch.

In testimony whereof I have hereunto affixed my signature.

WALTER W. LASSEY.