June 15, 1937. F. W. MERRICK 2,084,102

LOOM PICKER

Filed Jan. 31, 1934

Fig. 2.

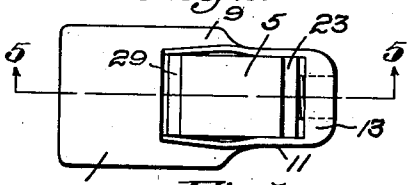


Fig. 3.

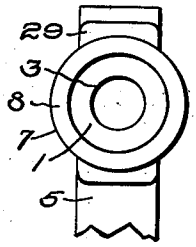


Fig. 1.

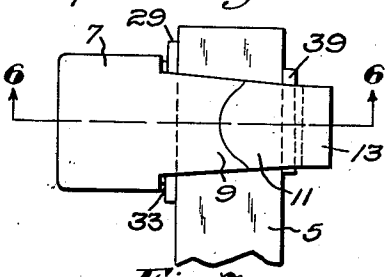


Fig. 4.

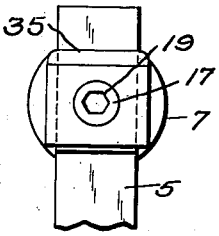


Fig. 8.

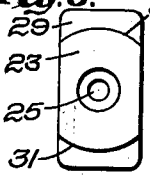


Fig. 8a.



Fig. 7.

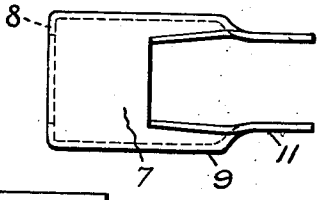


Fig. 7a.

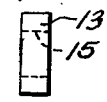


Fig. 9.

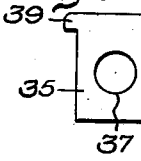


Fig. 9a.

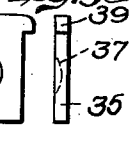


Fig. 5.

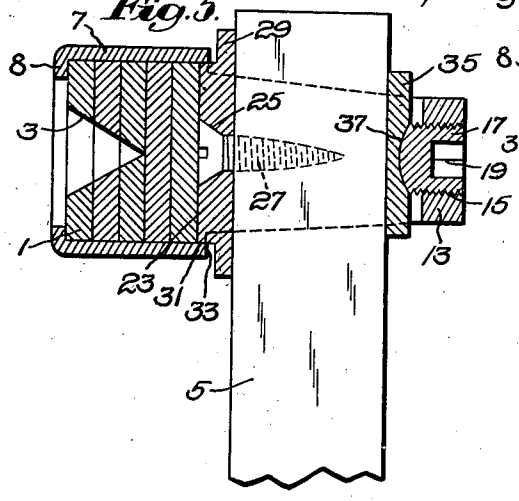
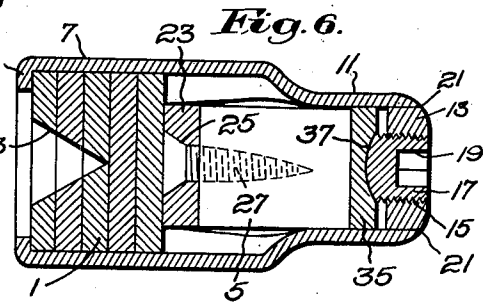


Fig. 6.



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Attys.

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UNITED STATES PATENT OFFICE

2,084,102

LOOM PICKER

Frank W. Merrick, Boston, Mass., assignor to American Stay Company, East Boston, Mass., a corporation of Massachusetts

Application January 31, 1934, Serial No. 709,182

7 Claims. (Cl. 139—159)

My invention relates to loom pickers.

The invention, which has among its objects the provision of a durable loom picker of compact construction suitable for use in modern looms, will be best understood from the following description when read in the light of the accompanying drawing of an embodiment of the invention selected for illustrative purposes, the scope of which invention will be more particularly pointed out in the appended claims.

In the drawing:—

Figure 1 is a side elevation of a loom picker, constructed according to the invention, in assembled relation with the picker stick;

Figs. 2, 3 and 4 are respectively a plan, front elevation, and rear elevation, of the picker constructed according to Fig. 1;

Fig. 5 is a section, on an enlarged scale, on the line 5—5 of Fig. 2;

Fig. 6 is a section, on an enlarged scale, on the line 6—6 of Fig. 1;

Figs. 7 and 7*a* are respectively side elevations of the two parts which in the finished device are united to form the bunter head holder;

Figs. 8 and 8*a* are front and side elevations respectively of a plug which in the assembled device abuts the bunter head; and

Figs. 9 and 9*a* are front and side elevations respectively of a plate which coacts with the screw for clamping the bunter head holder to the picker stick.

The picker illustrated comprises a bunter head formed of cylindrical discs 1 of relatively stiff, slightly resilient material such as sole leather or shark skin, the outer end face of the bunter head being formed with a conical recess 3 for cooperation with the shuttle point.

As illustrated, the bunter head is secured to the picker stick 5 by a holder which includes the cylindrical casing 7. This casing receives the bunter head, which latter fits the interior cylindrical walls of the casing. As shown, the casing has open ends, the outer end being formed with an inturned annular flange 8 which engages with the outer end face of the bunter head adjacent its periphery.

Formed integrally with the casing 7 is a generally U-shaped member which provides a strap for embracing the picker stick. As shown, the edges of this U-shaped member, for a material portion 9 of their lengths adjacent the casing 7, form continuations of the cylindrical walls of the casing, the remaining portions 11 of these legs being flat. At their outer ends the legs of the U-shaped member are bridged by a part 13 formed integrally therewith and provided with a screw threaded perforation 15 which receives the screw 17 formed at its outer end with a hexagonal socket 19 for receiving a wrench.

The bunter head holder, comprising the casing 7 and the legs of the U-shaped strap, may be formed from a metal tube, or may be pressed from a metal blank by use of suitable dies, in each case to form a structure having the shape indicated in Fig. 7, after which the pre-formed bridge member 13, illustrated in Fig. 7*a*, may be placed between the ends of the legs of the U-shaped member and welded thereto. The corners 21 (Fig. 6) may then be rounded off by a grinding operation.

In the present embodiment of the invention the inner face of the bunter head abuts with a plug 23 provided with a countersunk perforation 25 through which extends a wood screw 27 for securing the plug to the picker stick. This plug is preferably formed of metal, and has a base portion 29 resting against the picker stick, the plug and base member conveniently being approximately of a width corresponding to the thickness of the picker stick.

As shown, the cylindrical outer surfaces 31 of the plug 23 fit the inner wall of the casing 7. The parts of the picker are so formed that when the picker is assembled with the picker stick a space 33 exists between the inner edge of the casing and the outer surface of the base 29 of the plug.

As illustrated, inserted between the end of the screw 17 and the picker stick is a metallic plate 35 formed with a cup-shaped recess 37 which is preferably spherical for fitting the correspondingly shaped end of the screw. As shown, the plate 35 at one end has projections 39 adapted to rest upon the upper edges of the opposite legs of the U-shaped strap member.

In assembling the device, the discs 1 forming the bunter head may be inserted one by one edgewise through the opening in the U-shaped strap member with their diameters arranged axially of the casing 7. The enlarged portion 9 of the legs of the U-shaped member permit the discs when thus inserted to be turned around into coaxial relation with the casing and pushed into the casing into the positions illustrated in Figs. 5 and 6. The screw 17 may be backed off and the holder with the bunter head slipped over the end of the picker stick to bring the casing 7 in registry with the plug 23. The plate 35 may then be slipped into position and the screw 17 then tightened. Tightening of the screw 17 moves the holder rearwardly and causes the

bunter head to be tightly clamped between the forward face of the plug **23** and the rearward face of the flange **8**, thus operatively compressing the bunter head between the picker stick and said flange and operatively compressing the stick between the bunter head and the bridge or base portion **13** of the U-shaped strap member.

The rigid casing **7** prevents lateral expansion of the discs of the bunter head, thus prolonging their life and preventing the recess **3** in the bunter head from getting out of alignment with the shuttle point, which misalignment would otherwise occur due to the fact that the leather discs of the bunter head, being usually softer at one portion thereof than at other portions, will expand unevenly.

The plug **23**, being rigidly secured to the picker stick and internally fitting the casing **7**, prevents any tendency of the bunter head and casing **7** to tilt under the influence of the blow, centrifugal force, or excessive vibration. The broad base **29** of the plug acts to facilitate the securing of this effect. The plate **35** acts as an abutment for the screw **17** and prevents it from directly engaging with the relatively soft picker stick. The coacting recess **37** and correspondingly shaped end of the screw **17** permit the plate **35** to adapt itself to the surface of the adjacent edge of the stick. Further, the bunter head, being under compression, causes all parts of the picker to be securely clamped to the adjacent parts thereof and the stick, and this prevents any possibility of loose play due to vibration, it being observed that the occurrence of such loose play will be fatal in respect to the durability of the device.

Absence of excessive projections of the picker above and below the plane of the bunter head and at the rearward side of the stick permits the picker to be used in modern looms.

It will be understood that wide deviations may be made from the form of the invention illustrated without departing from the spirit of the invention.

I claim:

1. A loom picker having, in combination, a bunter head, a casing for said head, means for securing said casing to the picker stick, and means separate from said first mentioned means adapted to be rigidly secured to said stick and releasably to engage with the lateral walls of said casing for positively restraining said casing against lateral movement relative to the stick.

2. A loom picker having, in combination, a bunter head, a casing for said head, means for securing said casing to the picker stick, and means separate from said first mentioned means adapted to be rigidly secured to said stick and to form with said casing a cooperating slidably fitting plug and socket for positively restraining said casing against lateral movement relative to said stick.

3. A loom picker having, in combination, a bunter head, a casing for said head having abutment means for engaging with the outer end of said head, said casing having an open end facing the picker stick, casing-positioning-means adapted to be secured to said stick and to enter and slidably fit said open end of said casing in engagement with the casing walls for positively restraining said casing against lateral movement relative to the stick, said means abutting with said head, and means for drawing said casing toward said stick for clamping said head between the first mentioned and last mentioned means.

4. A loom picker having, in combination, a bunter head, means including a casing for said head and picker stick-engaging means for operatively clamping said head between said casing and picker stick and operatively clamping the latter between said head and said picker stick-engaging means, and casing-positioning means separate from said first mentioned means adapted to be rigidly secured to said stick for engaging said casing and acting positively to restrain said casing against transverse movement relative to said stick.

5. A loom picker having, in combination, a bunter head, an open ended casing for said head having means for engaging the outer end of said head, a part adapted to be rigidly secured to the picker stick having a relatively long base portion longitudinally of the stick, said part adapted to engage with said stick and the opposed surface of said head and slidably engage with a lateral wall of said casing for positively restraining the latter against lateral movement relative to said stick, and means engaging the side of said stick opposite said head and operatively connected to said casing for clamping said head against said part.

6. A loom picker having, in combination, a bunter head, an open ended casing for said head having means for engaging the outer end of said head, a part adapted to be rigidly secured to the picker stick having a relatively long base portion longitudinally of the stick, said part adapted to rest against said stick and the opposed surface of said head and to enter said casing in sliding contact with a lateral wall thereof for positively restraining the casing against lateral movement relative to said stick, and means engaging the side of said stick opposite said head and operatively connected to said casing for clamping said head against said part.

7. A loom picker having, in combination, a bunter head, a casing for said head having abutment means for engaging with an outwardly facing surface of said head and having an open end facing the picker stick, casing-positioning-means adapted to be secured to the stick slidably engaging the interior walls of said casing for preventing lateral movement of said casing relative to said stick, said means abutting with said bunter head, means secured to said casing and embracing said stick comprising a part spaced from the side of said stick opposite said head a distance sufficient to allow movement of said casing away from said stick far enough to disengage said casing from said casing-positioning-means, and movable means carried by said part adapted operatively to engage said stick and draw said casing toward said stick for clamping said head between said abutment means of said casing and said casing-positioning-means.

FRANK W. MERRICK.