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2,593,754

FRICTION GRIP LUG STRAP SUPPORT

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Fig. 1.

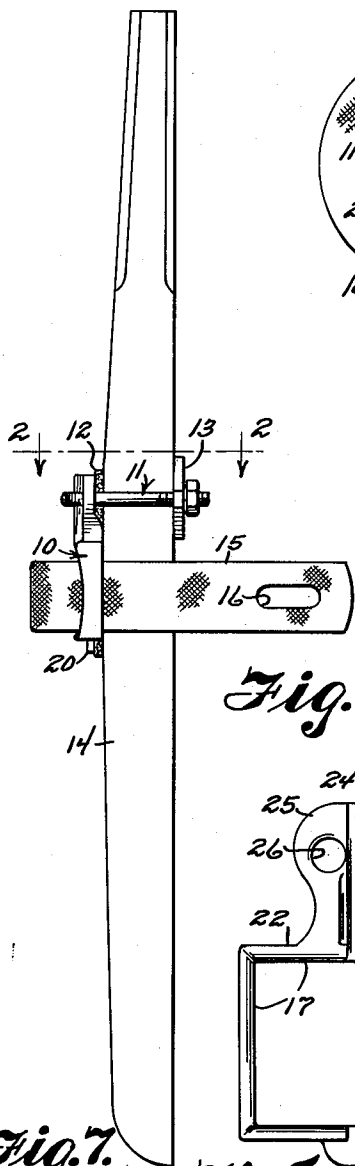


Fig. 2.

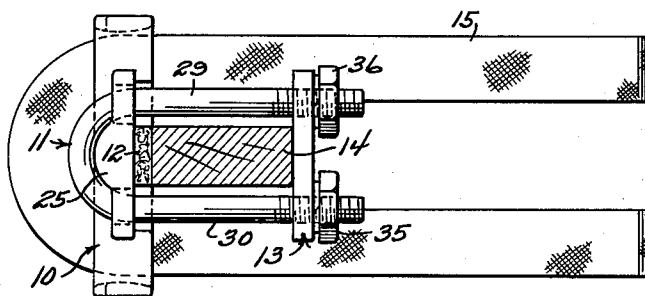


Fig. 3.

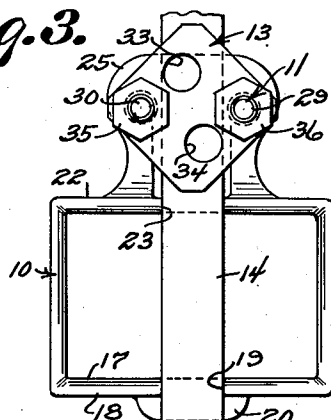


Fig. 4.

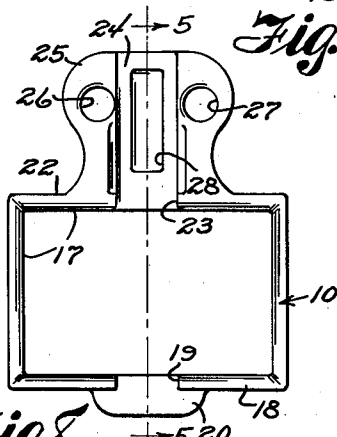


Fig. 5.

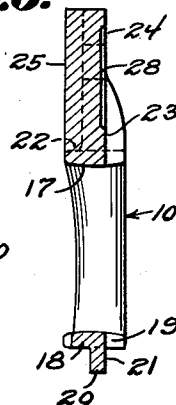


Fig. 6.

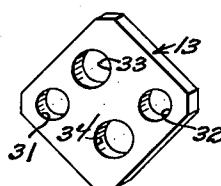


Fig. 7.

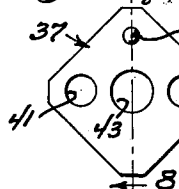
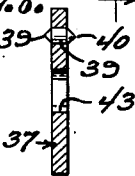


Fig. 8.



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FRICTION GRIP LUG STRAP SUPPORT

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4 Claims. (Cl. 139-154)

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This invention relates to improvements in looms used in the textile industry and in which sweep sticks of the loom are connected to picker sticks by lug straps through which the picker sticks extend, and in particular this invention relates to an improved friction gripping clamp for positively connecting the picker stick to the lug strap whereby the lug strap is supported in a fixed position without bolts, screws, or other fastening means extended through the picker stick.

The purpose of this invention is to improve the common type of lug strap support whereby the support is positively secured in position upon the picker stick by a friction grip.

This invention is an improvement over the lug strap supports of my prior Patents Nos. 2,140,675 and 2,467,260 in that a friction gripping pad of leather or the like is inserted between the metal frame of the support and the stick and the area of the bearing surfaces of the frame is increased to provide more positive gripping action.

It is common knowledge that picker sticks by which the shuttles are thrown back and forth on the race plate of a loom wear and often break because of the excessive strains and stresses imparted thereto in the heavy work they are required to perform. In the old method of fastening the lug straps to the picker stick bolts were placed through the sticks which weakened the sticks at these points so that the sticks broke. To overcome this various attempts have been made to clamp lug strap supports to the sticks without the use of bolts, screws and the like but because of the hard wood and the highly finished surfaces the clamps slip on the sticks. With this thought in mind this invention contemplates an improved method of clamping the lug strap support to the sticks wherein contacts or bearing surfaces are extended to increase the bearing area and bearing plates are provided with openings that bite into the surface of the stick to positively assure the support remaining in position upon the stick.

The object of this invention is, therefore, to provide means for forming lug strap supports for picker sticks of looms whereby the straps are positively held in position and the supports do not slide on the sticks.

Another object of this invention is to provide an improved lug strap support for picker sticks of looms that may be applied to picker sticks now in use without changing the design or arrangement thereof.

A further object of the invention is to provide an improved lug strap support for picker sticks

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of looms which is of a simple and economical construction.

Other features and advantages of the invention will appear from the following description taken in connection with the drawings wherein:

Figure 1 is a side elevational view of the picker stick of a loom showing a lug strap supported by a clamp secured to the surface of a picker stick by a U-bolt.

Figure 2 is a sectional plan taken on line 2-2 of Figure 1 showing the support secured on the picker stick.

Figure 3 is an elevational view looking toward the inner side of the picker stick and showing the support clamped thereto.

Figure 4 is an elevational view looking toward the inner surface of the support with other parts removed.

Figure 5 is a vertical section through the support taken on line 5-5 of Figure 4.

Figure 6 is a detail illustrating a bearing plate that engages the inner surface of the picker stick for securing the inner end of the U-bolt thereon.

Figure 7 is a similar view illustrating a modification wherein the bearing plate is provided with pins, the points of which are forced into the surface of the picker stick.

Figure 8 is a cross section through the bearing plate shown in Figure 7 taken on line 8-8 thereof and showing the points extended from both sides of the plate.

Referring now to the drawings wherein like reference characters denote corresponding parts the improved lug strap support of this invention includes a frame 10, a U-bolt 11, a leather pad 12 and a bearing plate 13.

As illustrated in Figure 1 the frame 10 is clamped to a picker stick 14 and a lug strap 15 by which the picker stick is connected to a sweep stick of a loom, through bolt holes 16 in the ends thereof, is extended through the rectangular shaped frame 10, as illustrated in Figures 1 and 2.

The frame 10 which is rectangular-shaped is formed as illustrated in Figures 4 and 5 with upper and lower side members or bars and vertically disposed end members providing a continuous bar rectangular-shape in cross section and having an arcuate inner surface 17. The side member 18 of the bar is provided with a gap 19 from which a tab 20 extends, as shown. The face 21 of the tab is flush with the area of the frame in the gap 19 whereby an extended bearing surface is provided which is much greater than the area of the edge of the frame, as previously used.

The upper side bar 22 of the frame is also

formed with a gap 23 from which a bearing surface 24 on a mounting flange 25 extends. The flange 25 extends from the side of the frame 10 and bolt holes 26 and 27, for the U-bolt 11 are provided therein. The bearing surface 24 is also provided with a recess 28, as illustrated in Figures 4 and 5 and a leather strap 12 positioned across the frame and extended along the edge of a stick 14 facilitates the gripping action and with the material of the leather strip or pad squeezed into the recess 28 by the force of the U-bolt 11 it will be substantially impossible for the frame to slide on the leather pad and with the opposite surface of the leather pad clamped firmly against the edge of the picker stick the support will be positively held in position. The face of the mounting flange 25 opposite to that on which the bearing surface 24 is positioned is provided with a centrally disposed arcuate bulging section that nests in the closed end of a U-bolt with the side portions of the U-bolt extended through the bolt holes of the mounting flange.

To further insure the lug strap support remaining in position upon the picker stick a bearing plate 13, as illustrated in Figure 6 is placed over the ends of the arms 29 and 30 of the U-bolt with the arms 29 and 30 extended through bolt holes 31 and 32, respectively in the bearing plate. The bearing plate is also provided with openings 33 and 34, the sharp edges of which bite into the surface of the picker stick as nuts 35 and 36 on the arms of the U-bolt are tightened and with the openings 33 and 34 slightly offset as shown in Figure 3 the bearing plate will remain in position upon the picker stick.

To further insure the support remaining in position upon the picker stick bearing plates 37, as illustrated in Figures 7 and 8 may be used, and these plates are provided with a pin 38 which is mounted in the body of the plate and provided with pointed ends 39 and 40 that are forced into the surface of the picker stick as the nuts of the U-bolt are tightened. The plate is provided with points on both sides so that regardless of which side is positioned against picker sticks a point is provided which is positioned to be forced into the surface of the stick. The bearing plate 37 is also provided with bolt holes 41 and 42 and an opening 43 is provided in the center that not only provides sharp edges to bite into the surface of the stick but which also provides means for removing material to reduce the weight of the bearing plate. The openings 33 and 34 of the plate 13 also provide means for eliminating excess material whereby the weight of the plate is reduced.

With the parts arranged in this manner the support is positioned against the outer surface of a picker stick as illustrated in Figures 1, 2 and 3 with a leather strip or pad 12 positioned against the outer edge of the stick. The stick is extended through the gaps 19 and 23 of the frame 10 and the pad 12 is positioned against the bearing surfaces 20 and 24. The legs of the lug strap are extended through the openings in the sides of the frame 10 whereby the legs straddle the picker stick 14, as shown in Figure 2.

With the parts mounted in this manner the lug strap support is positively clamped to the picker stick and all possibility of the support creeping upwardly or downwardly on the stick is substantially eliminated.

It will be understood that other modifications may be made in the design and arrangement of

the parts without departing from the spirit of the invention.

What is claimed is:

1. In a lug strap support, the combination which comprises a rectangular shaped frame having horizontally disposed upper and lower side members and vertically disposed end members, said side and end members being substantially rectangular shaped in cross section and having long side walls with end walls shorter than said side walls, one of the side members of the frame having a mounting flange extended therefrom and the side member on the opposite side of the frame having a tab extended therefrom, the bearing surfaces of the said mounting flange and tab being in alignment whereby the tab and mounting flange are provided with gripping faces in a common plane and said tab provides an extended bearing surface on the side of the frame opposite to that from which the mounting flange extends, thereby preventing the said side member cutting into a strap gripped between the frame and a picker stick upon which the frame is mounted.

2. A lug strap support as described in claim 1, wherein the mounting flange and side member of the frame from which the tab extends is provided with rectangular shaped recesses positioned to grip a leather strap positioned between the frame and a picker stick.

3. A lug strap support as described in claim 1, wherein the mounting flange is provided with laterally spaced bolt holes and a U-bolt extended through said bolt holes and provided with a bearing plate having bolt holes and a gripping opening therethrough is positioned to clamp the lug strap support against the edge of a picker stick with the frame gripping a leather strap on one side of the stick and with the said bearing plate on the U-bolt gripping the opposite side of the picker stick.

4. A lug strap support as described in claim 1, wherein the mounting flange is provided with laterally spaced bolt holes and an arcuate bulging section positioned between the bolt holes providing a bearing surface for the closed end of a U-bolt, and a U-bolt having a bearing plate on extended ends thereof is extended through said bolt holes and positioned to clamp the lug strap support against the edge of a picker stick with the frame gripping a leather strap on one side of the stick and with the bearing plate on the U-bolt gripping the opposite side of the picker stick.

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