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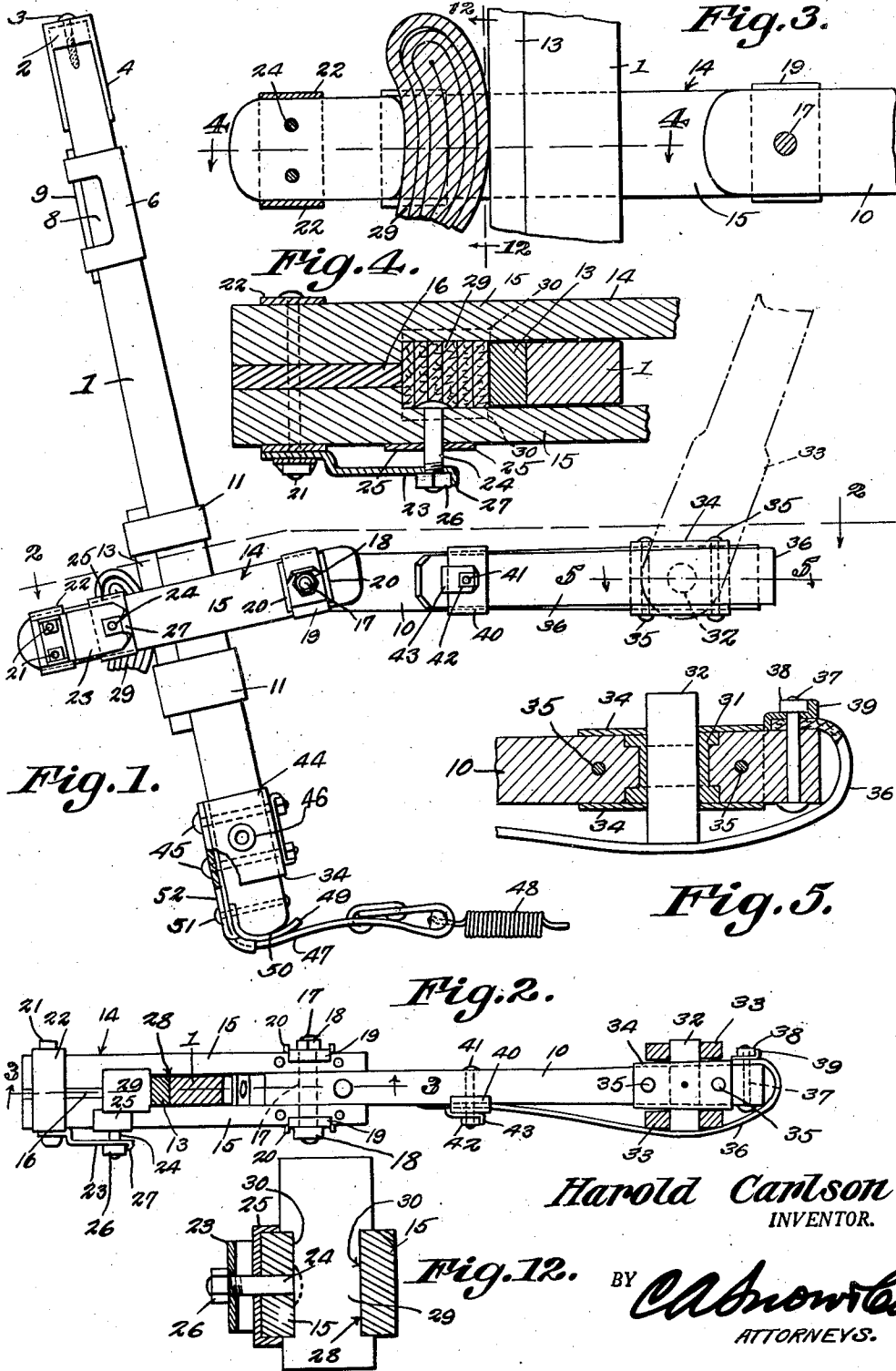
H. CARLSON

2,407,398

PICKER STICK

Filed May 23, 1945

2 Sheets-Sheet 1



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Sept. 10, 1946.

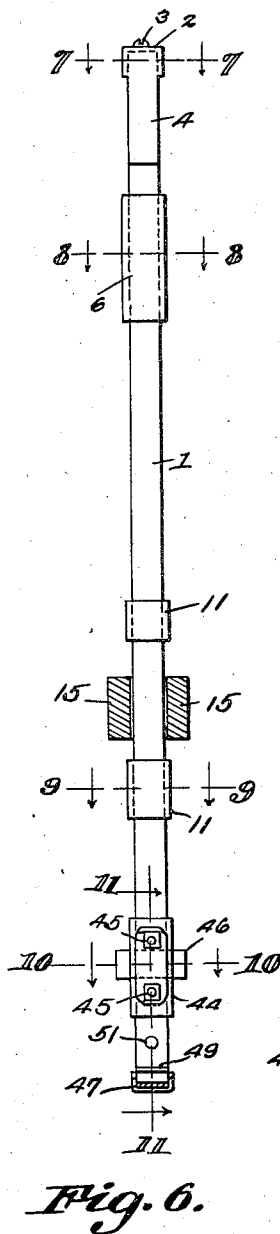
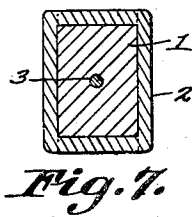
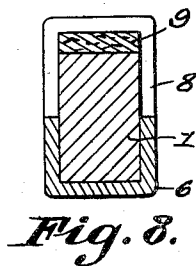
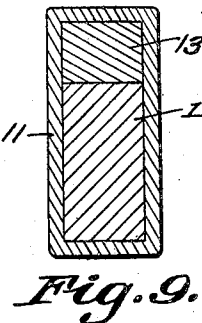
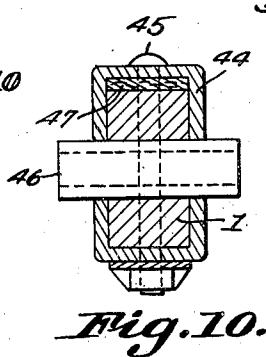
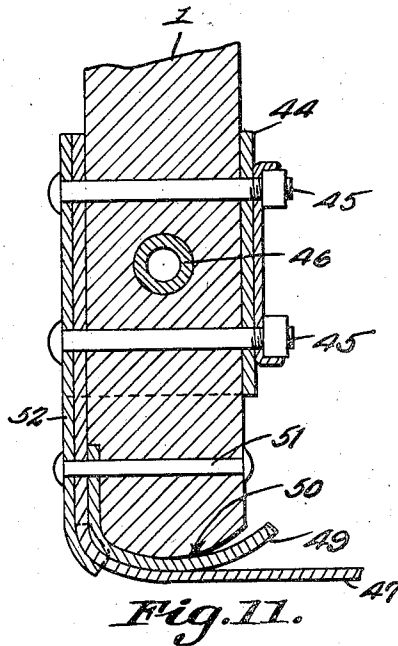
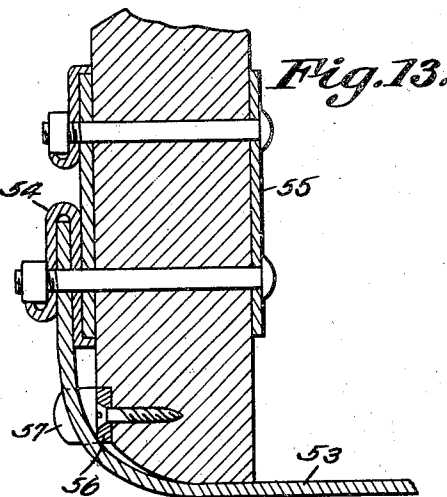
H. CARLSON

2,407,398

PICKER STICK

Filed May 23, 1945

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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PICKER STICK

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Application May 23, 1945, Serial No. 595,443

1 Claim. (Cl. 139—151)

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This invention relates to picker sticks for looms.

It is a fact well known to those skilled in the art that, because of the pounding and other strains to which a picker stick is subjected, it soon becomes worn or broken and thus is rendered unfit for further use.

It is an object of the present invention to provide a picker stick with reinforcing elements and pads or buffers located where they can take up the wear heretofore received by the wood of which the picker stick is formed.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawings the preferred forms of the invention have been shown.

In said drawings:

Figure 1 is a front elevation of a picker stick constructed in accordance with the present invention, the same being shown assembled with a sweep stick.

Figure 2 is a section on line 2—2, Figure 1.

Figure 3 is an enlarged section on line 3—3, Figure 2.

Figure 4 is a section on line 4—4, Figure 3.

Figure 5 is an enlarged section on line 5—5, Figure 1.

Figure 6 is an elevation of the picker stick viewed at right angles to Figure 1, the sweep stick link or lug being shown in section, and the spring strap also being shown in section.

Figure 7 is an enlarged section on line 7—7, Figure 6.

Figure 8 is an enlarged section on line 8—8, Figure 6.

Figure 9 is an enlarged section on line 9—9, Figure 6.

Figure 10 is an enlarged section on line 10—10, Figure 6.

Figure 11 is an enlarged section on line 11—11, Figure 6.

Figure 12 is a section on line 12—12, Figure 3.

Figure 13 is a section like Figure 11, showing a modified construction.

Referring to the figures by characters of reference, 1 designates a picker stick formed of wood, as ordinarily. In the present case, the upper end of the picker stick is reinforced by a sleeve 2 fitted snugly therearound and over the end there-

of so as to serve as a cap. This can be made of aluminum or a strong aluminum alloy of sufficient toughness to resist wear. The cap is held to the end of the picker stick by a screw 3 or the like extended downwardly into the picker stick and opposed tongues 4 can be formed integral with the reinforcing sleeve or cap so as to bear upon opposed faces of the picker stick to which they are attached by means of friction or other suitable means.

For the purpose of taking up wear upon that portion of the picker stick adjacent to the magazine of the loom, there is provided a metal collar 6 fitted tightly about the picker stick and held thereto by friction or the like. The side of the collar remote from the shuttle is cut away, as indicated at 8 and is bridged by a cushioning strip 9 formed of leather or the like which is held firmly to the picker stick by the end portions of the collar.

At a point between its ends, where the picker stick is to be connected to the sweep stick 10, there are provided spaced metal collars 11 held to the picker stick by friction or the like. These collars serve to attach a cushioning strip 13 to the picker stick as shown.

That portion of the picker stick located between the collars 11 is positioned within a link 14 formed of opposed strips 15 which are spaced apart at one end by a filler 16 of fibre or the like, while the opposite ends thereof lap opposed faces of one end of the sweep stick 10. A pivot bolt 17 is extended transversely through the sides 15 and the lapped portion of the sweep stick 10 and has nuts 18 which bear against wear plates 19 so shaped as to straddle the side strips 15. These wear plates also have offset edge portions 20 which serve as locks to prevent the nuts 18 from rotating on the bolt.

To prevent splitting, spaced bolts 21 are extended transversely through the outer end of the link 14, these bolts being also extended through a reinforcing collar 22 which extends around the end portion of the link. To one side of this collar is secured a bracket 23 which, in turn, is engaged by a bolt 24 extending laterally from a plate 25 which straddles one of the side strips 15, it being understood, of course, that the bolt is extended through the side strips. This bolt has a nut 26 thereon which can be locked against rotation by an outturned flange 27 or other suitable means. This bolt is utilized as a strap connection.

Interposed between the cushioning strip 13 and the adjacent end of the slot 28 formed between

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the side strips 15 and in which the picker stick works, is a cushion or bumper 29 formed of lapping layers of leather or other suitable material which are folded, as shown, and have side portions cut away, as at 30 so as to straddle the side strips 15 as clearly shown in Figure 12. After these lapping strips have been inserted in the slot they cannot fall therefrom because of the recesses at the points where the strips are cut away. This cushion or bumper can be formed of leather or of strips of leather and rubber and, under some conditions, one or more of the overlapping strips could be of metal. It is merely essential that the material of which the cushion or bumper is formed be such as to afford a proper cushioning effect whereby motion of the picker stick outwardly relative to the link 14 will not result in wear on the picker stick or the strip 13 carried thereby.

As shown particularly in Figures 1, 2 and 5, the sweep stick 10 has a tubular bearing 31 seated therein for receiving the pin 32 ordinarily employed for engagement by the fork indicated generally at 33. This portion of the sweep stick containing the bearing is reinforced by a collar 34 fitted snugly therearound and held to the sweep stick by rivets 35 or the like. The customary strap 36 is attached at one end to one end of the sweep stick by means of a transverse bolt 37 having a nut 38 which can be provided with a suitable lock 39 such as a flanged plate clamped to one end of the strap and to the sweep stick by the bolt 37. The other end of the strap 36 is clamped to the side of the sweep stick by a plate 40 held in position by a bolt 41 the nut 42 on which is held against free rotation by lock 43 of suitable construction.

The lower end of the picker stick has a collar 44 fitted tightly thereon and held thereto by rivets 45 or the like. This collar holds a tubular bearing member 46 which projects laterally beyond the picker stick and also serves to clamp to the picker stick one end of the strap 47 leading to the usual spring 48. A cushioning strip 49 can be held between the strap and the rounded

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end 50 of the picker stick, all of the parts being tightly held to the picker stick by one or more rivets 51 and by a tongue 52 constituting an extension of the collar 44.

As shown in Figure 13, the structure illustrated in Figure 11, can be modified by extending one end of the strap 53 into a looped or folded plate 54 clamped securely to the collar 55, as shown. In this connection a centering plate 56 is secured to the picker stick and extends transversely of the strap, this plate having side ears 57 which serve to prevent the strap from slipping laterally out of position.

It has been found in practice that by constructing a picker stick and the cooperating parts as herein described, the same will not break down as rapidly as other picker sticks but will stand up under severe wear. This is due to the fact that reinforcing collars are located at points where the picker stick is subjected to the greatest strain and cushioning elements are located at other points where the picker stick is subjected to sudden pounding or thrusting action.

What is claimed is:

The combination with a picker stick, a cushioning strip thereon, and collars embracing the picker stick and constituting means for holding the cushioning strip in position, of a link embracing the picker stick between the collars for attachment to a sweep stick, said link having a longitudinal slot in which the picker stick is mounted to work, and a cushioning pad interposed between one wall of the slot and the picker stick for engagement with the cushioning strip on the picker stick, said pad including overlying strips of flexible material folded upon themselves to form a single loop, at its sides the loop being cut away below the fold in the pad to receive and be supported solely by the sides of the link thereby to hold the fold portion of the loop in position to contract and expand when subjected successively to pressure by and release from the picker stick, those portions of the strips between the cut-away side being extended across the slot and the link.

HAROLD CARLSON.