Dec. 16, 1952 H. M. BACON 2,621,681

DROP BOX PICKER

Filed July 10, 1947 2 SHEETS—SHEET 1

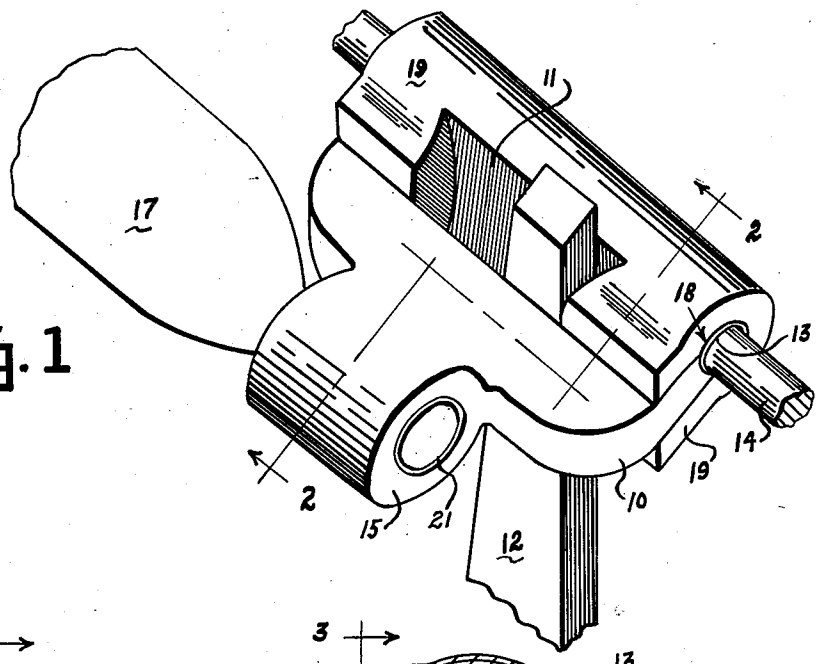


Fig. 1

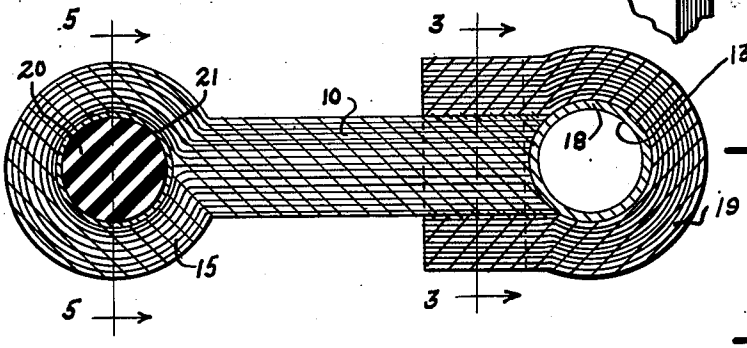


Fig. 2

Fig. 5

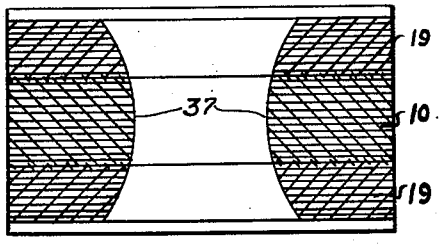
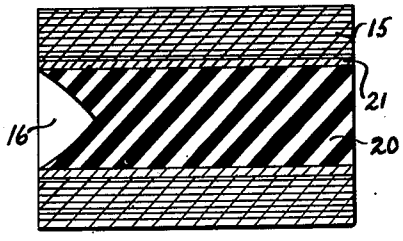


Fig. 3



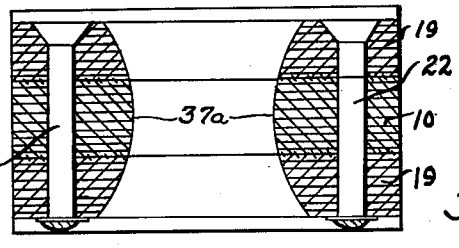


Fig. 4

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DROP BOX PICKER

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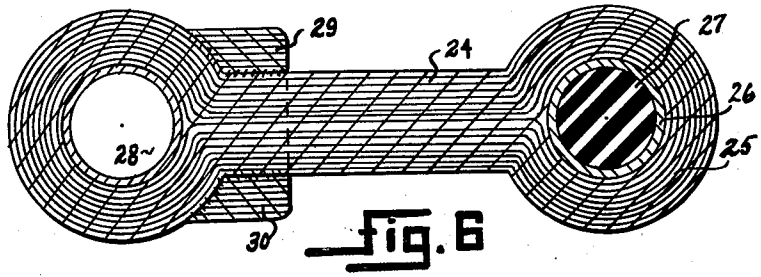


Fig. 6

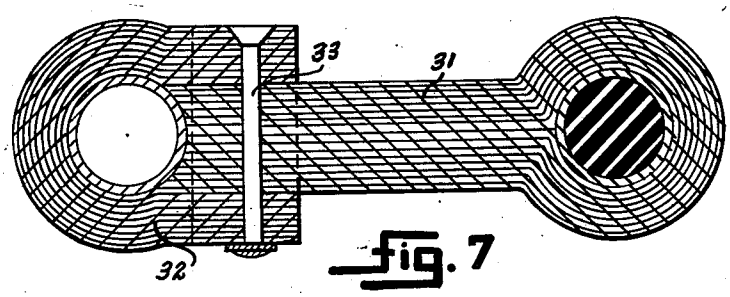


Fig. 7

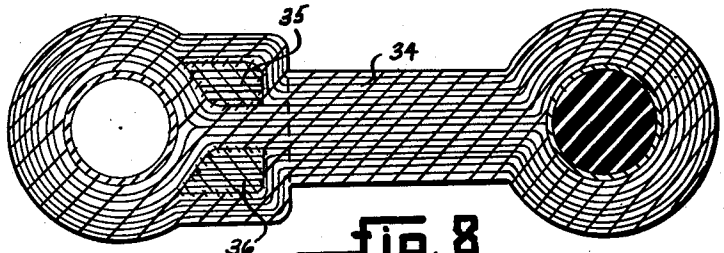


Fig. 8

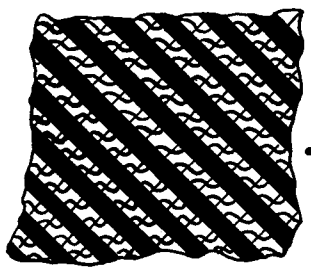


Fig. 9

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Patented Dec. 16, 1952 2,621,681

UNITED STATES PATENT OFFICE

2,621,681

DROP BOX PICKER

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Application July 10, 1947, Serial No. 759,940

3 Claims. (Cl. 139—160)

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This invention relates to loom pickers and more particularly to drop box pickers.

This application is a division of my copending application Serial Number 563,248 filed November 13, 1944, now Patent No. 2,437,342 issued March 9, 1948.

Heretofore, pickers have been fabricated of rubber compositions or rubberized fabrics and vulcanized so as to yield a hard material in order to give them a sufficiently high resistance to the impacts of the picker stick. Pickers, however, which showed satisfactory wear resistance, proved to be too rough and to cause a relatively fast wear of the picker sticks. It has been tried to make the surfaces which are contacted by the stick of softer material, but such pickers had a relatively short service life. Another disadvantage of previous pickers is that due to the various thicknesses of the different parts of the picker, the pressure exerted during curing causes the less bulky parts to flow to the more bulky areas, which results in buckling of the fabric and thus in a less resistable picker. Besides, different curing times are theoretically required for the zones of various thicknesses so that only part of the picker can be subjected to optimum curing times.

It is an object of the present invention to provide pickers which are free from all these disadvantages. The pickers of my invention are formed of two separate parts, namely, the web or body proper and the reinforcing means. Besides, in the pickers of my invention, both the rod hole and the shuttle head are provided with a bearing of highly resistant material, whereas the shuttle head itself is made of relatively soft material so as to reduce the wear of the picker stick to a minimum.

The invention will be more fully understood from the following description taken in connection with the accompanying drawings, in which—

Figure 1 is a perspective view of a picker according to my invention.

Figure 2 is a cross-sectional diagrammatic view along the lines 2—2 of Figure 1.

Figure 3 is a cross-sectional diagrammatic view along the line 3—3 of Figure 2.

Figure 4 is a cross-sectional diagrammatic view corresponding to that of Figure 3 but showing a modification of my invention.

Figure 5 is a cross-sectional diagrammatic view along line 5—5 of Figure 2.

Figure 6 is a cross-sectional diagrammatic

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view similar to Figure 2, but showing another modification of my invention.

Figure 7 is a cross-sectional diagrammatic view showing another modification of my invention.

Figure 8 is a cross-sectional diagrammatic view showing still another modification of my invention.

Figure 9 is a fractional cross-sectional view of a modification of a shuttle head.

Referring to the drawings in detail, and in particular to Figures 1 and 2, 10 is a web or body and 19 a hood of a picker having a picker stick hole 11 having arcuate stick contacting surfaces shown at 37 in Figure 3 and 37a in Figure 4 for a picker stick 12, and a bore 13 for a picker rod 14. The picker head 15 has a cavity 16 on one side (Figure 5), the so-called shuttle head, which is adapted to receive a shuttle 17.

The body of the picker is made of rubberized fabric. The rod hole 13 is lined with a bearing 18 which is made of some kind of hard, but not brittle material, e. g. glass, wire or cord. Around the rod-carrying part of the web there is arranged a hood 19, which is made of the same rubberized material as the web of the picker. The web and the hood preferably are separately molded and then assembled before vulcanization. This way a one-part picker unit is obtained from the original two parts. The picker head is of annular cylindrical shape; its bore contains a core 20 of relatively soft material, e. g. rubber composition which is surrounded and carried by a bearing 21. For this bearing the same materials are satisfactory as are described above in connection with the bearing 18.

By using a picker according to the invention, the picker stick contacts surfaces only of relatively soft material whereby its service life is considerably increased. Yet the picker itself is made of materials resistant and resilient enough so as to be of great durability itself. Since the picker, due to the arrangement of reinforcing means, forming with the web the arcuate stick contacting surfaces is of practically equal thickness all around the points of contact with the picker stick, the impact exerted by the picker stick affects all sections of the picker equally.

If desired, the hood and the web may, in addition to the bond obtained by vulcanization, be secured together by bolts 22 and 23, as shown in Figure 4.

In Figure 6 a modification of my invention is illustrated in which the web is not strengthened by a hood but by added bulk pieces vulcanized to

the web overlying the fabric layers thereof and adjacent to the point where the fabric curves around the picker rod bearing. In this illustration, 24 is the web with a head 25 having a bearing 26 and a rubber core 27. 28 is a rod hole, and 29 and 30 are strengthening bulk pieces vulcanized to the web. It will be understood that by this modification about the same advantages are obtained as by the modifications illustrated in the previous figures.

In the embodiment of Figure 7 the web 31 and the hood 32 are not vulcanized to each other. In this case they have been formed separately and then assembled; they are held together by a bolt 33.

In the modification shown in Figure 8, bulk pieces 35 and 36 are built into and vulcanized to the web 34 overlying some of the fabric layers above and below the longitudinal midsection of the web and adjacent to the point where the fabric curves around the picker rod bearing, in order to strengthen the surfaces contacted by the picker stick.

It will be understood that rubber composition is not the only material suitable for the shuttle core, but that other soft and resilient materials, for instance, a gum-bond bias fabric or a fiber-reinforced rubber composition may be used with equal satisfaction. One such modification is illustrated in Figure 9. There, material known to the art by the name of Stiflex, a rubber composition reinforced by substantially parallel fibers, is used for the shuttle core.

It will be understood that rubberized fabric is not the only material suitable for the body of the picker, but that other materials, as for instance leather, plastics, etc., may be used with equal satisfaction and without departing from the invention.

Instead of providing the picker head with only one shuttle head both sides may have a shuttle head so that the shuttle can be received on either side of the picker head.

It will also be understood that while there have been described certain specific embodiments of my invention, it is not intended thereby to have this invention limited to or circumscribed by the specific details of materials, arrangement of parts and conditions set forth in the specification or illustrated in the drawings in view of the fact that this invention is susceptible to many and varied modifications without departing from

the spirit of this disclosure and the scope of the appended claims.

I claim:

1. In a textile loom picker having a picker rod hole, a picker stick hole, and a shuttle head, the combination of a web comprising a plurality of layers of rubberized fabric, a picker rod hole formed at one end of the web and a picker rod bearing positioned in said picker rod hole, said bearing being completely surrounded by said layers of rubberized fabric to provide a bearing engaging surface, a pair of reinforcing members rigidly secured to said web and extending transversely thereof adjacent to and along the longitudinal axis of the picker rod hole and positioned between the picker rod hole and the shuttle head, one of said reinforcing members overlying at least some of the layers of fabric comprising the web and above the longitudinal midsection of the web adjacent to the point where the fabric of the web begins to curve around the bearing, and the other of said reinforcing members overlying at least some of the layers of fabric comprising the web and beneath the longitudinal midsection of the web adjacent to the point where the fabric of the web begins to curve around the bearing, and a picker stick hole having arcuate stick contacting surfaces of substantially equal thickness around all points of contact with the picker stick formed between the picker rod hole bearing and the shuttle head and through the web and the reinforcing members.

2. A textile loom picker according to claim 1 wherein the reinforcing means is embedded between layers of the web.

3. A textile loom picker according to claim 1 wherein the reinforcing means is positioned externally of the web and comprises rubberized material vulcanized thereto.

HENRY M. BACON.

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The following references are of record in the file of this patent:

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