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W. C. PAYNE

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PICKER STICK AND MOUNTING THEREFOR

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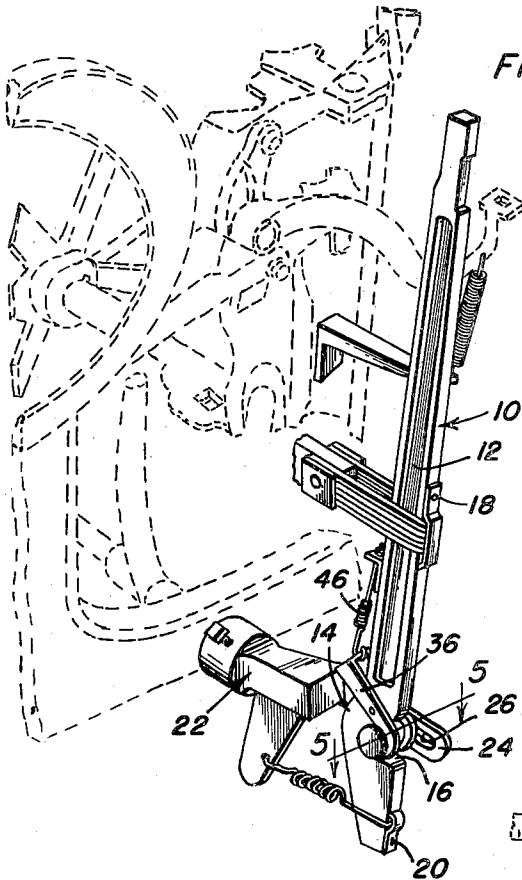


Fig. 1.

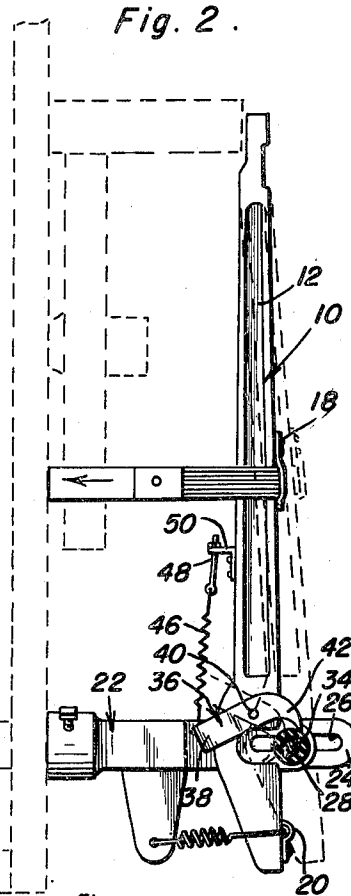


Fig. 2.

Fig. 3.

Fig. 4.

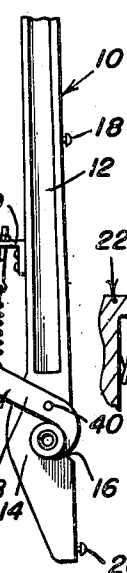
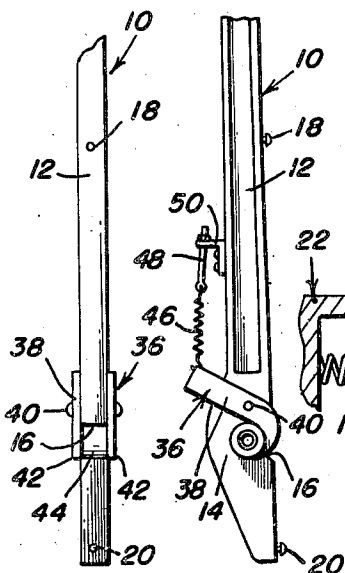


Fig. 5.

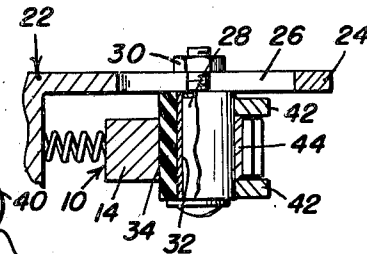
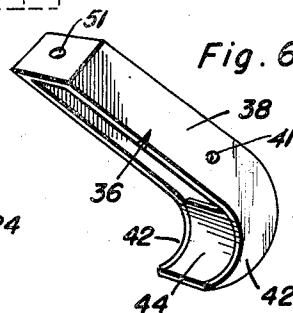


Fig. 6.



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PICKER STICK AND MOUNTING THEREFOR

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5 Claims. (Cl. 139-156)

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This invention relates to a picker stick and mounting therefor and more particularly to a picker stick which may be made from metal and the like.

Among the factors which have impeded the adoption of metal picker sticks are, the liability of injury to the loom mechanism should the picker stick encounter an obstruction during its movement under the influence of the power strap of the loom, and the liability of the metal to crystallize under the effects of the shock caused by the sharp and rapid impacts to which picker sticks are subjected when in service.

The primary object of this invention is to protect the mechanism of a loom from injury should a picker stick thereof meet an obstruction during its movement to and fro in the shuttle box of the loom.

Another important object is to render feasible the use of metal picker sticks in looms and to remove as far as possible at least one of the major factors which produce crystallization in such sticks.

The above and other objects may be attained by employing this invention which embodies among its features a laterally extending stud mounted on a loom parallel, a picker stick having a notch opening through one edge near its lower end for receiving the stud and pivotally supporting the picker stick on said parallel and means on the picker stick closing the open end of the notch and movable automatically out of notch closing position when the normal movement of the picker stick is obstructed.

Other features include a yoke pivotally mounted on the picker stick near the notch, a shoe carried by the yoke and movable therewith into and out of notch closing position, and yielding means connected to the yoke and to the picker stick to hold the shoe in notch closing position.

Still other features include a cylindrical cushion mounted on the stud for rotation about the axis thereof, a picker stick having a notch opening through one edge adjacent the lower end thereof, said notch receiving the stud rockably to support the picker stick on the loom parallel and means on the picker stick closing the open end of the notch and movable automatically of the notch closing position when the normal movement of the picker stick is obstructed.

In the drawings:

Figure 1 is a perspective view of a picker stick embodying the features of this invention, showing said stick mounted on a cushioned stud in accordance with this invention;

Figure 2 is a side view of the picker stick illustrated in Figure 1, and showing it dismounted from the cushioned stud, as when meeting an obstruction in the loom box;

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Figure 3 is a rear edge view of a picker stick embodying the features of this invention;

Figure 4 is a fragmentary side view of the picker stick illustrated in Figure 3;

Figure 5 is a horizontal sectional view taken substantially along the line 5-5 of Figure 1; and Figure 6 is a perspective view of the yoke and shoe forming a part of this invention.

Referring to the drawings in detail, a picker stick designated generally 10 comprises an elongated body 12 equipped at its upper end with conventional means for supporting a loom picker. The picker stick is enlarged as at 14 adjacent its lower end, and entering the edge of the body 12 directly opposite the enlargement 14 is a notch 16 for the reception of the mounting stud about which the picker stick pivots. The body 12 of the picker stick 10 is preferably cast of a light metal such as aluminum, magnesium or the like, and is equipped with conventional power strap attaching means 18 and return strap attaching means 20 by which the picker stick is rocked about the axis of its pivot.

Mounted on the conventional rocker shaft of the loom is a loom parallel designated generally 22 which is provided with a horizontally extending arm 24 having an elongated longitudinal slot 26 formed therein for the reception of the mounting stud 28 of the picker stick. This mounting stud is held in various adjusted positions in the slot 26 by means of a conventional clamp nut 30, and extends perpendicular from the arm 24 along a substantially horizontal axis. Surrounding the stud 28 is a bearing sleeve 32, and encircling the bearing sleeve is a cylindrical cushion 34 which is preferably formed of rubber or other suitable yielding material. The cushion 34 is held in place between the head of the stud 28, and the arm 24, and forms the surface which contacts the walls of the notch 16, pivotally to support the picker stick on the stud. The cushion 34 is preferably substantially equal in diameter to the width of the notch 16 so as to form a snug fit between the parts for the purpose of accurately supporting the picker stick in position on the loom.

In order releasably to secure the picker stick 10 in place on the cushioned stud 28 I provide a retaining member or yoke designated generally 36 which comprises substantially U-shaped arms 38 which are pivotally supported as at 40 on the picker stick through hole 41 on the yoke directly above the axis of the inner end of the recess or notch 16. The arms 38 of the yoke 36 embrace the picker stick as will be readily understood upon reference to the drawings, and provided at the ends the arms remote from the bight portion of the yoke are downwardly extending hooks 42 carrying a curved shoe 44 which, as illustrated in Figure 4, is adapted to enter the slot or notch 16

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to bear against the cushion 34 and hold the picker stick on the stud 28. One end of a retractile coil spring 46 is coupled to the bight portion of the yoke 36 through hole 51, while its opposite end is adjustably connected as at 48 to a bracket 50 carried by the body 12 of the picker stick 10 in upwardly spaced relation to the enlarged portion 14 of the picker stick. The spring 46 serves to retain the shoe 44 in contact with the cushion 34, and thus serves to hold the picker stick in proper position on the stud 28.

In use, the picker stick is mounted on the cushioned stud 28 as indicated in Figures 1 and 4, and should the picker stick encounter an obstruction during its movement under the effort of the power strap of the loom, it will be obvious that by regulating the tension of the spring 46, the pull against the picker stick will cause the yoke 36 to swing about the pivot 40, and open the end of the notch 16 before any damage can be done to the loom. The opening of the notch will cause the picker stick to fulcrum about the obstruction at its upper end, and throw its lower end off of the stud by moving the stud through the end of the notch 16, as suggested in Figure 2. By thus disconnecting the picker stick from its normal pivot, it will be obvious that danger of injury to the loom will be avoided. At the same time, when the trouble has been corrected, the picker stick may be remounted on the stud simply by causing the stud to be received in the slot or notch 16 while the shoe 44 is held out of slot closing position against the influence of the spring 46. As soon as the spring 46 is released, however, it will be obvious that the shoe will swing downwardly under the effort of the spring to close the end of the slot and hence restore the parts to working order.

Obviously, the restoration of the loom to a production basis requires but a few minutes, as no adjustment of the pivot of the picker stick needs to be made. Obviously, the picker stick may be restored to its pivotal support with but a minimum of effort.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that minor changes in the details of construction and arrangement of parts may be resorted to without departing from the spirit and scope of the invention as claimed.

Having described the invention, what is claimed as new is:

1. A picker stick and mounting therefor comprising a laterally extending stud mounted on a loom parallel, a picker stick having a notch opening through one edge near its lower end for receiving the stud and pivotally supporting the picker stick on said parallel and means on the picker stick closing the open end of the notch and movable automatically out of notch closing

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position when the normal movement of the picker stick is obstructed.

2. A picker stick and mounting therefor comprising a laterally extending stud mounted on a loom parallel, a picker stick having a notch opening through one edge near its lower end for receiving the stud and pivotally supporting the picker stick on said parallel, a yoke pivotally mounted on the picker stick near the notch, a shoe carried by the yoke and movable therewith into and out of notch closing position and yielding means connected to the yoke and to the picker stick to hold the shoe in notch closing position.

3. A picker stick and mounting therefor comprising a laterally extending stud mounted on a loom parallel, a cylindrical cushion mounted on said stud for rotation about the axis thereof, a picker stick having a notch opening through one edge adjacent its lower end, said notch receiving the stud rockably to support the picker stick on the loom parallel and means on the picker stick closing the open end of the notch and movable automatically out of notch closing position when the normal movement of the picker stick is obstructed.

4. A picker stick and mounting therefor comprising a laterally extending stud mounted on a loom parallel, a cylindrical cushion mounted on said stud for rotation about the axis thereof, a picker stick having a notch opening through one edge adjacent its lower end, said notch receiving the stud rockably to support the picker stick on the loom parallel, a yoke mounted on the picker stick to move into and out of position to close the open end of the notch and yielding means to hold the yoke in notch closing position.

5. A picker stick and mounting therefor comprising a laterally extending stud mounted on a loom parallel, a cylindrical cushion mounted on said stud for rotation about the axis thereof, a picker stick having a notch opening through one edge adjacent its lower end, said notch receiving the stud rockably to support the picker stick on the loom parallel, a yoke pivotally mounted on the picker stick near the notch, a shoe carried by the yoke and movable therewith into and out of notch closing position and yielding means connected to the yoke and to the picker stick to hold the shoe in notch closing position.

WORTH C. PAYNE.

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