(No Model.)

A. D. EMERY.

PICKER FOR LOOMS.

No. 503,464. Patented Aug. 15, 1893.

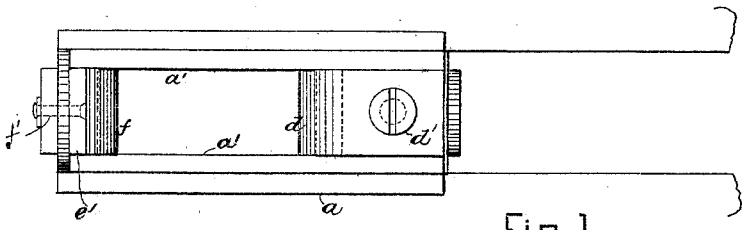

Fig. 1

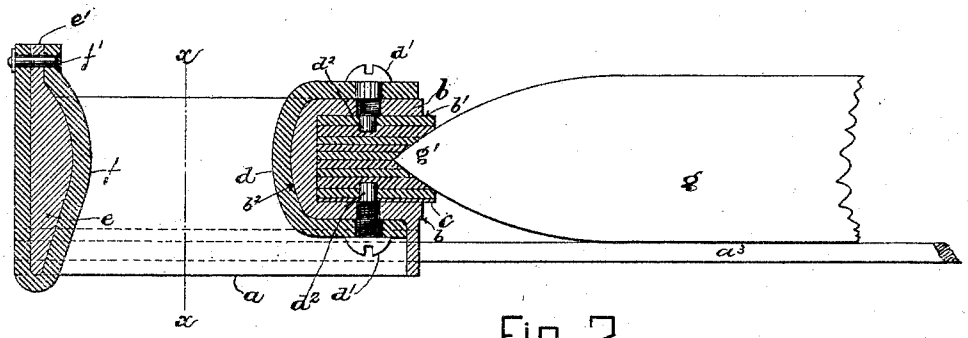

Fig. 2

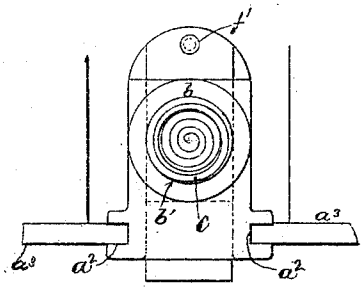

Fig. 3

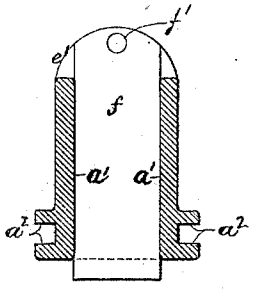

Fig. 4

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PICKER FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 503,464, dated August 15, 1893.

Application filed September 29, 1890. Renewed November 6, 1891. Again renewed December 1, 1892. Serial No. 453,691. (No model.)

To all whom it may concern:

Be it known that I, ABRAM D. EMERY, of Taunton, Massachusetts, have invented a certain Improvement in Pickers for Looms, of which the following is a specification.

This invention relates to a picker which is not connected with the picker staff, but which is wholly contained within and slides back and forth within the shuttle box, and is provided at its opposite ends with detachable cushions of semi-elastic material such as leather.

The picker consists of a metallic portion which serves as the carrier for the detachable cushions and is preferably made of an aluminium or other light metal alloy. It has a tongue and groove connection with the sides or bottom of the shuttle box, by means of which it is suitably guided in its proper path of motion, and it is wholly distinct from the destructible or wearing portions, to wit, the cushions which are easily applied to, or detached from, said carrier. The shuttle cushion is in the form of a roll, presenting one of its ends toward the shuttle and does not need to be originally provided with a recess for the reception of the point of the shuttle, because in operation such recess will be gradually formed merely by the impacts of the pointed end of the shuttle.

It is a further and great advantage of the invention, that the shuttle cushion constructed in the manner described is not subject to rapid wear, but in use will last much longer than the shuttle cushions heretofore employed. The picker staff extends through the picker and plays between the convex faces of cushions detachably applied to the transverse walls thereof.

The accompanying drawings representing the improved picker and a sufficient portion of the box and of the shuttle to illustrate the mode of construction and operation of the improvement, are as follows:

Figure 1 is a top view of the picker. Fig. 2 is a longitudinal vertical section of the picker showing portions of the shuttle box and of the shuttle and illustrating the manner in which the pointed end of the shuttle forms its own recess in the face of the shuttle cushion. Fig. 3 is an elevation of the shuttle end of the picker affording an end view of the roll of leather which constitutes the shuttle cushion, and showing it in the form which it has when first introduced into the picker before the recess has been formed in its face by continued impacts with the point of the shuttle. Fig. 4 is a transverse section of the middle portion of the picker taken through the plane indicated by the dotted line x—x on Fig. 2.

The picker is composed of a metallic carrier a, the parallel vertical side walls a' a' of which are cast or otherwise formed in one piece with transverse end walls. At the bottom the side walls are provided with the outwardly projecting grooved flanges a^2 a^2, the grooves of which are adapted to receive the horizontal tongues a^3, projecting inwardly from the bottom of the side walls of the shuttle-box. The transverse wall b on the end toward the shuttle has formed in it a cylindrical recess b' in which there is deposited the roll of leather c which is to serve as the shuttle cushion or buffer. Preferably the roll c is made from a strip of leather of a width slightly greater than the depth of the cylindrical recess b', so that the end of the roll will project slightly from the recess b'. The inner end b^2 of the wall b is rounded, as shown, and has applied to it the strip d of leather, the outer surface of which presents a convex bearing to receive the forward blow of the picker staff. The shuttle cushion c and the strip d are secured in their positions by means of the screws d' d', the inner ends d^2 d^2 of which, are forced into the periphery of the shuttle cushion c, as shown in Fig. 2. The transverse wall e at the opposite end of the carrier is rounded upon its inner side and has applied to it the strip of leather f which by means of the clamping screw or rivet f' is clamped to the projecting upper portion e' of the wall e. The shuttle g by the successive impacts of its point g' upon the shuttle cushion or buffer c forms its own recess therein. Ordinarily, the formation of a recess in the shuttle cushion is a work of considerable nicety, requiring the exercise of care to properly centralize it with relation to the longitudinal axis of the shuttle. In the

present case, as has been stated, the shuttle forms its own recess, which is therefore inevitably in proper alignment with the axis of the shuttle. The picker staff extends through the space between the side walls *a' a'* of the carrier and between the cushions *d* and *f*. When either of the cushions, *c*, *d* or *f*, becomes worn it is easily detached from the carrier and replaced by another. The shuttle cushion or buffer *c* can be rolled up and inserted in its recess *b'* without cementing. It is prevented from splitting by the wall of the recess in which it is contained, and will be found to last much longer than the shuttle buffers ordinarily employed.

It is preferred to make the buffers of a suitably wide strip of leather, shaved to a little less than one-eighth of an inch in thickness and to then wet it and wind it up into a roll and confine it in its rolled-up condition by tying a cord around it or otherwise, and let it stand until dry. When dry it is ready to be inserted in its recess in the carrier. Although it is not necessary that the convolutions of the roll *c* shall be cemented together, of course cement may be used if desired. Leather seems to be preferable to raw hide for the shuttle buffer, because it lasts longer and because there is less recoil of the shuttle from it.

What is claimed as the invention is—

1. The herein described picker for looms, the same consisting of a metallic carrier slotted to admit the extension through it of the picker shaft, and adapted to slide back and forth in the shuttle box, and composed of two longitudinal walls having parallel inner faces, and of two end walls having their inner faces convexly curved and covered with removable cushions of leather or other suitable material, and having in the outer face of one of its end walls a cylindrical recess, and a cylindrical roll of leather or other suitable material confined within said recess, and presenting its exposed end for receiving the impacts of the end of the shuttle.

2. The metallic carrier, *a*, presenting for the passage through it of the picker staff an opening, the opposed faces of the side walls, *a' a'*, of which are parallel, and the opposed faces of the end walls, *b*, and *e* of which are convex, in combination with the removable cushions, *d* and *f*, of leather or other suitable material.

3. The metallic carrier *a* having the end wall *e* and provided with a cylindrical recess *b'* formed in the outer face of its end wall *b*, the cylindrical shuttle buffer *c*, contained within said recess, and the cushion strip *d*, extending along the top and bottom and around the convex inner face of the wall *b* in combination with the set-screws *d' d'* for fastening the cushion strip *d* to the end wall *b*, and for confining the cylindrical shuttle buffer within its recess *b'*.

4. The metallic carrier *a* having the end wall *e* provided with an upward extension *e'* and having its inner face convexly curved in combination with the cushion strip *f* and the clamping bolt *f'*.

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