

(No Model.)

A. D. EMERY.
PICKER CAM FOR LOOMS.

No. 503,473.

Patented Aug. 15, 1893.

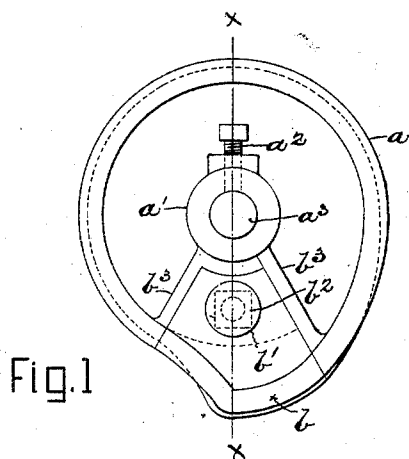


Fig. 1

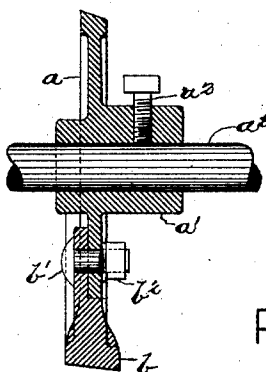


Fig. 2

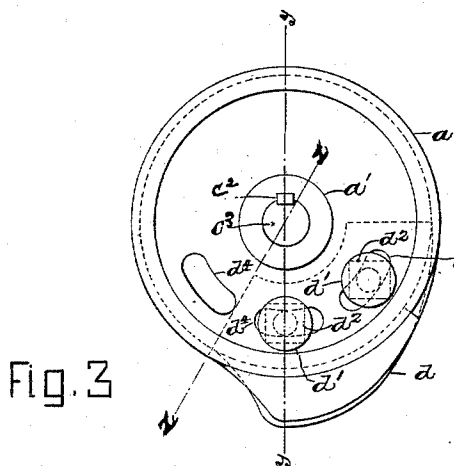


Fig. 3

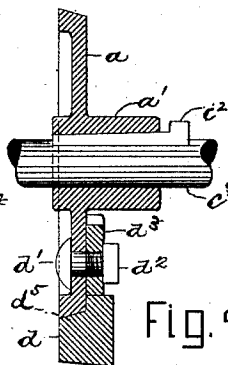


Fig. 4

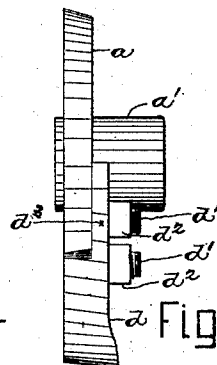


Fig. 5

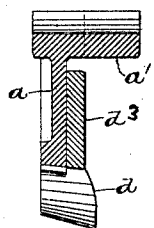


Fig. 6

Witnesses
E. Gatterer.
J. E. Burns.

Inventor
Abram D. Emery,
by Edw. E. Quincy,
Atty.

UNITED STATES PATENT OFFICE.

ABRAM D. EMERY, OF TAUNTON, MASSACHUSETTS.

PICKER-CAM FOR LOOMS.

SPECIFICATION forming part of Letters Patent No. 503,473, dated August 15, 1893.

Application filed September 24, 1890. Renewed March 17, 1893. Serial No. 466,541. (No model.)

To all whom it may concern:

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

This invention relates to a certain construction of picker cams for looms, by which such cams are not only made capable of easy and accurate adjustment, but are effectually prevented from being thrown out of adjustment by the shocks to which they are subjected in the operation of the loom. Picker cams are ordinarily secured by means of set-screws inserted through their hubs and bearing upon the picker cam shaft. To make the fastening secure, such screws have to be bedded into the shaft, and there is thus formed a cavity in the surface of the shaft. It is hence difficult and in some cases impossible to securely hold the cam in position after slight changes of adjustment, because the set-screw tends to slip back into the cavity previously formed.

The present improvement consists in the provision of a circular face plate which is rigidly keyed or otherwise immovably fastened to the picker cam shaft, and in the provision of a cam toe provided with a concentrically curved flaring shoulder adapted to bear upon the conical periphery of the face plate, and with a flange for bearing against the side of the face plate to which it is secured by transverse bolts inserted through concentric slots in the face plate and through said flange and provided with nuts, by means of which said flange is forced against the face plate, and the flaring shoulder of the toe is clamped upon the conical periphery of the face plate. This construction permits the cam toe to be readily and accurately adjusted to any degree of nicety however minute, and to be firmly secured in any position to which it may be adjusted, while the shocks to which the cam toe is subjected when in use are taken upon the periphery of the rigidly affixed face plate instead of being taken upon the adjustable fastening devices in such a direction as would tend to dislodge those devices.

The accompanying drawings illustrating the ordinary picker cam and the improved

construction herein described are as follows, viz:

Figure 1 is a face view of an ordinary picker cam, and Fig. 2 is a section of the same taken through the plane indicated by the dotted line $x-x$ on Fig. 1. Fig. 3 is a face view of a cam employing the present improvement. Fig. 4 is a section taken through the plane indicated by the dotted line $y-y$ on Fig. 3. Fig. 5 is an elevation showing the edge of the improved cam; and Fig. 6 is a section of a part of the improved cam taken through the plane indicated by the dotted line $z-z$ on Fig. 3.

The ordinary method of securing picker cams upon their shafts is illustrated in Figs. 1 and 2, in which, as will be seen, there is represented a face plate a provided with a hub a' through which there is inserted a set-screw a^2 , the inner end of which impinges upon the surface of the picker cam shaft a^3 . The cam toe b is fastened to the face plate by the transverse bolt b' provided with a nut b^2 . The cam toe is provided with an inwardly projecting flange, the sides of which are convergent and bear against the radial shoulders $b^3 b^3$ with which the face plate is provided. To adjust this cam, it is necessary to loosen the set-screw a^2 , and then after turning the face plate to the required position to again tighten the set-screw a^2 . By this mode of fastening the picker cam there is an unavoidable indentation and abrasion of the surface of the cam shaft, and the fastening at best is comparatively insecure, because the shocks to which the cam is subjected when in operation tend to turn it upon its shaft. These difficulties are avoided by the present improvement which is illustrated in Figs. 3, 4, 5, and 6 in which, as will be seen, the face plate a provided with a hub a' is by means of the key c^2 permanently secured to the cam shaft c^3 . The cam toe d is fastened to the face plate by means of the transverse bolts d' d' inserted respectively through two of the concentric slots $d^4 d^4$ formed in the face plate, and through the flange d^3 of the cam toe, and having applied to their projecting ends the nuts $d^2 d^2$. The cam toe is provided with a concentrically curved flaring shoulder d^5 which bears upon the conical periphery of the

face plate against which it is firmly clamped by the tightening action of the nuts d^2 d^2 .

What is claimed as the invention is—

1. The adjustable picker cam for looms herein described, the same consisting of a circular face plate having a conical periphery rigidly fastened to the picker cam shaft, a cam toe provided with a concentric shoulder shaped correspondingly to the periphery of the face plate, and adapted to bear thereupon, and means for clamping said shoulder tightly against the periphery of the said face plate, substantially as and for the purpose set forth.
2. The face-plate a rigidly keyed to the cam-shaft c^3 , having its periphery conical

and its web transversely perforated by a concentrically curved slot or slots, in combination with the inwardly projecting flange d^3 , and the concentrically curved flaring shoulder d^5 , of the cam toe d and a screw-bolt or bolts extending through said concentrically curved slot or slots for bolting said flange d^3 to said face plate, and thereby clamping the flaring shoulder d^5 of the cam toe upon the conical periphery of said face plate c substantially as set forth.

ABRAM D. EMERY.

Witnesses:

EDGAR L. CROSSMAN,
GEORGE L. WHITE.