Lay Rocker-Shaft Box or Bearing.


Application filed November 17, 1902. Serial No. 151,768. (No model.)

To all whom it may concern:

Be it known that I, SIDI HAMMETT BEVILL, a citizen of the United States, and a resident of Anderson, county of Anderson, State of South Carolina, have invented an Improvement in Lay Rocker-Shaft Boxes or Bearings, of which the following description, in connection with the accompanying drawings, is a specification, like letters and numerals on the drawings representing like parts.

This invention has for its object the production of a novel and adjustable bearing or box for the lay rocker-shaft of a loom whereby wear of the rocker-shaft in its bearings may be compensated for and lost motion taken up. As is well known to those skilled in the art, the lay-swords in a loom are rigidly secured at their lower ends to a rocker-shaft, which constitutes the pivot or fulerum on which the lay swings, the rocker-shaft being commonly supported in bearings fixedly secured to the loom sides. The constant rocking of the rocker-shaft tends to produce wear with attendant lost motion between it and its bearings, so that the path of the lay is not as uniform and accurate as it should be. By my present invention such wear can be corrected or compensated for and lost motion taken up, restoring to the movement of the lay its desired accuracy and certainty.

The novel features of my invention will be hereinafter described, and particularly pointed out in the following claims.

Figure 1 is a left-hand side elevation of a sufficient portion of a loom to be understood, with one embodiment of my present invention applied thereto. Fig. 2 is an enlarged sectional detail on the line 2 2, Fig. 1, looking toward the right; and Fig. 3 is a similar view, also enlarged, on the line 3 3, Fig. 1.

Referring to Fig. 1, the loom side A, lay A^\text{a}, the lay-swords A^\text{b}, (only one being herein shown,) and the lay rocker-shaft R may be and are all of substantially well-known or usual construction. The rocker-shaft is extended through holes a in the webs a^\text{a} of the loom sides, said holes being herein shown a much larger than the diameter of the shafts and on the outer side of each web a main bearing is secured. The main bearing is shown as an elongated plate b, preferably a casting, having a tubular hub or bearing b^\text{a} integral therewith to receive and support the rocker-shaft, the plate resting upon bosses a^\text{a} on the outer face of the web a^\text{a}, (see Fig. 3,) substantially as is now usual. Bolts b' pass through holes in the ends of the plate b and the bosses a^\text{a} to secure the plate to the web; but herein these bolts are made longer than usual, for a purpose to be described. An elongated sleeve-like auxiliary bearing or box d^\text{a} is shown herein as forming an integral part of an apron d, having at its upper end an overhanging lateral lip d', provided with a threaded hole d', Fig. 2, one of the auxiliary bearings being suspended by its apron from each loom side on the inner face of the vertical web a^\text{a}, the apron-lip overhanging the top flange 30 thereof. A vertical screw-stud f is threaded into the hole d' of the lip, extending therethrough and resting upon the flange 30, a check-nut f' on the screw-stud looking it when adjusted. The apron is made substantially triangular in shape, (see Fig. 1,) its base being long enough to extend beyond the bolts b', the inner ends of the latter passing through vertical slots d^\text{a} in the apron near its lower corners. Clamping-nuts b^\text{b} on the inner ends of the bolts act upon washers a^\text{w}, interposed between them and the face of the apron, so that when the nuts are set up the main bearing-plate b and the apron d will be clamped rigidly to the web a^\text{a}. The apron has a boss or enlargement d^\text{b} on its inner face (see Fig. 3) around each slot d^\text{a} to rest against the web. The bearing d^\text{c} projects into the hole a^\text{e} in the web, as shown clearly in Fig. 2, the hole being large enough to permit the bearing to be moved vertically therein.

When the main bearings b^\text{a} or the parts of 90 the rocker-shaft supported therein become worn, so that there is lost motion between such parts, the clamping-bolts b' are loosened and the adjusting screw-studs f are turned to raise the aprons and the auxiliary bearings of boxes d^\text{a} to thereby bring the rocker-shaft.
snugly against the upper part of the main bearings $b$, thus compensating for wear and taking up any lost motion.

After the vertical adjustment of the bearings $d^x$ is effected the check-nuts $j'$ and clamping-bolts are set up.

By the construction shown and described the rocker-shaft is accurately supported without any lost motion in its bearings, and consequentely the movement of the lay is uniform and free from objectionable vibration or chattering.

Any necessary leveling up of the rocker-shaft can also be readily effected by the means described.

My invention is not restricted to the construction and arrangement precisely as herein shown, as the same may be modified or rearranged in various particulars without departing from the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a loom, the lay rocker-shaft, fixed bearings therefor on the loom sides, and auxiliary bearings for the rocker-shaft, adjustably mounted on the loom sides.

2. In a loom, a rocker-shaft for the lay, fixed bearings therefor on the loom sides, auxiliary boxes or bearings for the rocker-shaft, suspended from the loom sides, and means to vertically adjust the same.

3. The loom sides having openings therein, a rocker-shaft for the lay, extended through said openings, main bearings rigidly secured to the loom sides, to support the rocker-shaft, and vertically-adjustable auxiliary bearings or boxes for the rocker-shaft, to take up wear and prevent lost motion in the main bearings.

4. In a loom, the lay rocker-shaft, main bearings therefor fixedly mounted on the loom sides, auxiliary, sleeve-like bearings for the rocker-shaft, and means to suspend said auxiliary bearings from the loom sides and vertically adjust them to take up wear and prevent lost motion.

5. The loom sides having openings in their vertical webs, a rocker-shaft for the lay extended therethrough, main bearings, auxiliary bearings suspended from the loom sides, said main and auxiliary bearings being located on opposite sides of the webs, bolts securing the main bearings fixedly in place and clamping the auxiliary bearings in adjusted position, and means to vertically adjust the auxiliary bearings.

6. In a loom, a rocker-shaft for the lay, main bearings therefor fixedly mounted on the loom sides, sleeve-like auxiliary bearings having attached aprons by which the said bearings are suspended from the loom sides, means to vertically adjust the aprons, to take up wear between the main bearings and the rocker-shaft, and clamping-bolts to hold the auxiliary bearings in adjusted position on the loom sides.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

Witnesses:

SIDI HAMMETT BÉVILL.

HAMPTON CATHTON,

B. F. WILSON.