COTTON WASTE RETAINER FOR RAILWAY JOURNAL BOXES

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Our invention relates to waste retainers for use in the journal boxes of railway cars in which babbit bearings are used. At the present time considerable trouble and expense is caused by particles of cotton waste working in between the bearings (usually termed the brass) and the journal. These particles wipe the lubricant in the journal box from the journal during rotation of the latter, with the result that a "hot-box" is soon developed which will cause destruction of the bearing unless the train is stopped in time and the trouble is rectified. By equipping the journal boxes with our device the cotton waste is retained in its proper place in the lower portions of the boxes and prevented from working in between the bearings and the associated journals.

Our devices are so constructed that they can be readily installed or removed from the journal boxes without disturbing any parts of the latter. The devices are of simple and inexpensive construction and since there is little or no wear thereon will last over a long period of time.

Other features will hereinafter appear and in order that the invention may be fully understood reference will now be had to the accompanying drawings, in which:

Fig. 1 is a cross section of the journal box on line 1—1 of Fig 2, with our device and the journal in position therein, the journal being partly in section.

Fig. 2 is a longitudinal sectional view of the journal box with the journal and our device arranged therein.

Fig. 3 is a perspective view of one of the devices.

Refraining in detail to the different parts disclosed by Figs. 1 to 3, inclusive, 2 designates a journal box which may be of any preferred or conventional form. Mounted in the journal box 2 is a journal 4 having a collar 6 at one end. Mounted upon the journal 4 is the usual brass or bearing 8, which is curved at its under babbited portion to snugly fit the journal 4, where it is held by a wedge 16. Lateral and longitudinal movements of the journal bearing 8 upon the journal 4 is prevented by the usual lugs 12 formed integral with opposite sides of the bearing 8, and lugs 14 formed integral with the inner side walls of the journal box 2.

The foregoing construction of the journal box and the interior parts thereof may be of conventional construction.

Refraining more particularly to our invention, 16 designates our device which, preferably but not necessarily, consists of one piece of tubing 17 bent substantially into the form shown by Fig. 3. The device is approximately of U-form when viewed from the front end, which latter comprises a transverse element 18, formed into a coiled spring 20 intermediate its ends for a purpose which will hereinafter appear. The opposite ends of the transverse element 18 are bent upwardly a short distance as indicated at 22, thence backwardly to provide lower longitudinal members 24 which are curved upwardly and rearwardly at their rear ends to provide elements 26, the upper ends of which are bent forwardly to provide upper longitudinal members 28, which are bent downward to provide front elements 30, fixed at their lower ends to the lower longitudinal members 24. The front elements 30 are arranged far enough from the transverse element 18 to admit the journal collar 6, as shown by Fig. 2, without contacting said collar. The rear and front elements 26 and 30, respectively, are inclined upwardly to bring the upper longitudinal members 28 closer together than the respective lower longitudinal members 24 for a purpose which will hereinafter appear. Preferably the longitudinal members 24 and 28 are arranged approximately in parallelism as shown. The upper members 28 are provided with longitudinal slots 32, in which the outer longitudinal edges of respective babbit bearing members 34 are firmly secured by pressing the sides of the slots 32 toward each other to firmly grip said bearing members 34, the inner confronting edges of which latter have series of notches 36.

By bending the tubing 17 as above described, a pair of approximately rectangular longitudinal frames 38 are provided.

In practice, the upper longitudinal members 28 of the respective frames 38 are grasped and spread apart to permit the rear elements 26 to pass the diametrically opposite sides of the journal collar 6, as the device is inserted through the customary front opening (not shown) in the journal box 2 and pushed backwardly until the transverse element 18 almost touches the journal collar 6. The device is then released to permit the frames 38 to be sprung toward each other by the coil spring 20 until the notched edges 36 of the bearing members 34 grip opposite sides of the journal 4 at points just below the oppositely disposed lower surfaces 40 of the journal bearing 8, and the upper longitudinal members 28 bear against the surfaces 40, as shown by Fig. 1. Thus the device is reliably held in place and prevented from shifting about in the
journal box or coming into contact with the journal, except when the bearing members are, as above described. When the device is being pushed back into the journal box, the inclined rear elements slide over the usual supply of cotton waste without disturbing the latter, and when the device is released, it presses down upon the cotton waste and holds it in place. When in position in the journal box, the collars, or the inner walls of the journal box, so that the only wear on the device will be along the notched edges of the bearing members. When the bearing members become worn out, the device is removed from the journal box so that the worn-out bearing members may be removed from the slots and replaced by new bearing members.

When the device is in position in the journal box as stated, the bearing members effectively prevent any of the cotton waste from working between the journal and the journal bearing, so that undue wear of said journal bearing is prevented. The notches permit lubricant in the journal box to be carried upward between the rotating journal and the journal bearing, thereby preventing the latter from becoming overheated for lack of a lubricant.

From the foregoing description taken in connection with the drawing it is apparent that we have provided simple, efficient and inexpensive devices possessing the advantages above pointed out, and while we have shown a preferred form of our invention, we reserve all rights to such changes or modifications thereof as properly fall within the spirit and scope of the invention as claimed.

Having thus described our invention, what we claim and desire to secure by Letters Patent, is:

1. A waste retainer insertable horizontally in a journal box, comprising one piece of tubing bent to provide a pair of approximately rectangular side frames spaced apart and comprising a pair of lower longitudinal members, a pair of upper longitudinal members, front and rear elements connecting the longitudinal members of each frame, the lower longitudinal members extending forward a predetermined distance beyond said front elements, a resilient transverse member connecting the forward ends of the lower longitudinal extensions, and confronting bearing members secured to the upper longitudinal members and adapted to bear against a journal.

2. The combination with a journal box, a journal in said journal box, and a brass mounted upon said journal and projecting laterally beyond opposite sides thereof, of a pair of approximately rectangular frames spaced apart and arranged at opposite sides of the journal, said rectangular frames including upper horizontal members adapted to bear against the upper surface of the laterally projecting portions of the brass, bearing members secured to said horizontal members and provided with confronting notched edges, and a resilient transverse member connecting the frames and adapted to press them towards each other and thereby press the foregoing notched surfaces against opposite sides of the journal.

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