Oct. 21, 1947. E. P. MORGAN 2,429,327

JOURNAL BEARING EXTRACTOR

Filed June 18, 1945 2 Sheets-Sheet 1

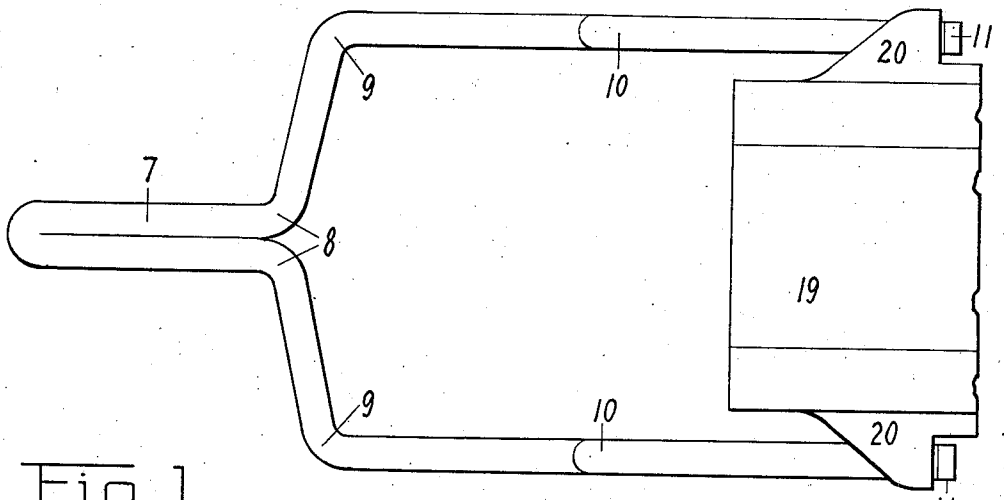


Fig. 1

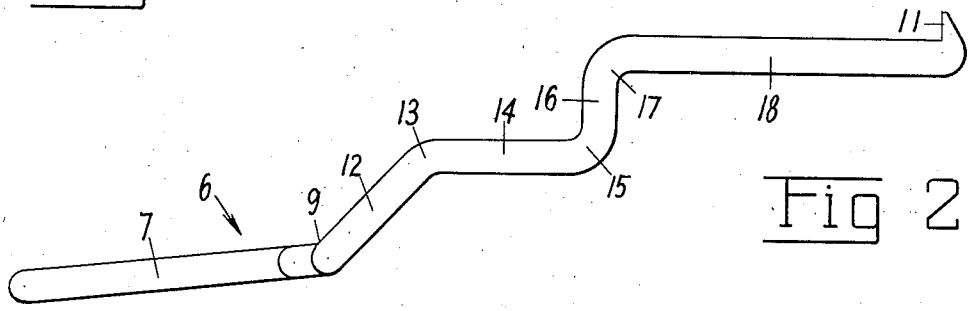


Fig 2

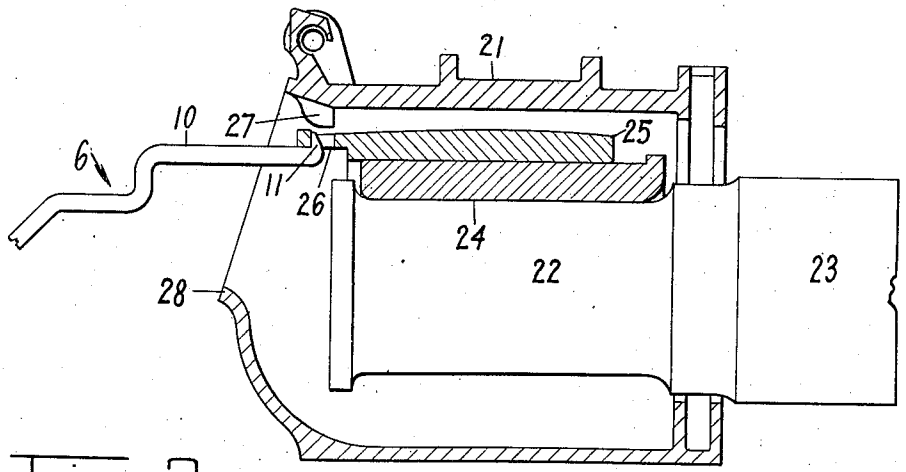


Fig. 3

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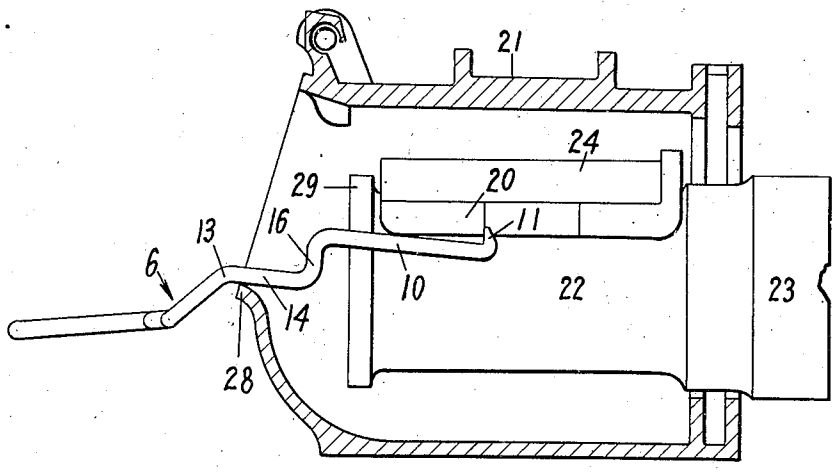


Fig. 4

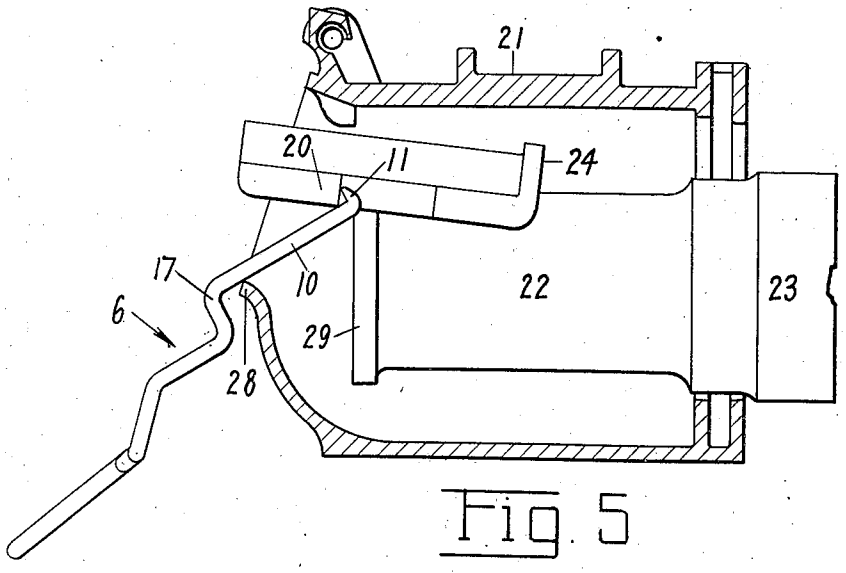


Fig. 5

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JOURNAL BEARING EXTRACTOR

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Application June 18, 1945, Serial No. 599,997

3 Claims. (Cl. 29—267)

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The present invention relates to a tool for extracting the wedges and bearings from railway car journal boxes.

The principal object of the invention is to provide a hand tool for use by the car repair mechanic in extracting the wedge and the journal bearing or "brass" from the box, after the truck frame has been jacked up. By the use of my improved tool, the necessity for inserting the hands into the box is eliminated, thereby minimizing the chance of accident. Moreover, a distinct saving of time is effected.

Another object is to provide a tool for the described purpose which is easy to operate and simple and cheap to manufacture, and which can be made in several different sizes and shapes to fit different standard journal boxes.

Other objects and advantages of the invention will be apparent from the following specification, which should be read with the understanding that changes, within the limits of the claims hereto appended, may be made in the form, construction and proportions of the tool without departing from the spirit of the invention as defined in said claims.

Reference will be made to the accompanying drawings, in which

Fig. 1 is a plan view of a typical embodiment of my improved tool showing it in operative relation to a journal bearing, a portion only of the bearing being shown.

Fig. 2 is a side elevation of the tool.

Fig. 3 is a vertical section of a journal box and bearing, illustrating the use of the tool in removing the wedge.

Figs. 4 and 5 are sectional views similar to Fig. 3 showing two successive stages in the removal of the bearing.

In the drawings, the reference numeral 6 designates generally my extracting tool, which is conveniently made of bar iron or steel in the general form of a yoke, having a handle portion 7 formed by bending the bar back upon itself at the middle of its length. At the base of the handle, the two parts of the bar are bent outwardly as at 8, and then bent again at 9 into parallel relation to form spaced legs 10, whose ends are upset to form upwardly directed hooks 11, all as shown in Fig. 1.

The two legs 10 are also bent in the vertical plane, as shown in Fig. 2, so that the hooked ends are offset vertically from the handle. The first or base portion 12 of each leg is bent upwardly at an angle from the horizontal bend 9, then is bent again at 13 to form a horizontal

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central portion 14, then is bent upwardly at 15 to form a vertical portion 16, and finally is again bent horizontally at 17. From the bend 17 to the hook 11, the final portion 18 is straight and horizontal. The two legs 10 are symmetrical, and are spaced apart sufficiently to straddle the journal bearing 19 at its narrow part between its side lugs 20 (Fig. 1).

The use of my improved extractor is illustrated in Figs. 3, 4 and 5. A standard journal box assembly comprises a box 21 in which the journal 22 of the axle 23 is inclosed, a journal bearing or "brass" 24, and a wedge 25 which lies between the brass 24 and the top of the journal box. The wedge has a hole 26 at its forward end, and the brass has the side lugs 20 with rearwardly facing shoulders.

When the journal box assembly is in service, the top of the box 21, the wedge 25, and the brass 24 are in contact, and transmit the weight of the truck to the axle. When the assembly is to be taken apart for repair or replacement of the journal bearing, the truck frame is jacked up to take its weight off the bearing, as shown in Fig. 3. This separates the top of the box from the wedge 25, and permits the wedge to be pulled out. The brass 24 still rests upon the journal 22, and the wedge rests upon the brass, but is freed from the holding lug 27 which projects downwardly from the top of the box.

The first step in disassembling the journal is to insert one of the hooks 11 of my tool in the hole 26 of the wedge, and pull said wedge out through the front of the box, as shown in Fig. 3. Only one leg 10 of the tool is used in this operation, the other leg being outside the box.

The next step, shown in Fig. 4, is to insert both legs of the tool into the box straddling the brass 24, and engage both hooks 11 behind the lugs 20. The angle or bend 13 of the tool rests upon the bottom edge 28 of the front opening of the box. Using the tool as a lever with the edge 28 of the box as a fulcrum, the brass is raised until it clears the front collar 29 of the journal, whereupon it can be pulled forward by the tool until its forward end rests upon the collar 29.

The angle or bend 17 of the tool then rests on the edge 28 of the box, as shown in Fig. 5, and the tool is again used as a lever to pry the brass outwardly until it can be grasped with the hands outside the box. Throughout the entire process the mechanic need not insert his hands or fingers into the box, and hence is unlikely to sustain injury.

It is to be noted that the localized downwardly

concave bends 13 and 17 in the legs 10 serve a useful purpose in providing seats to rest upon the forward edge 28 of the box to prevent slipping of the tool when used as a lever in lifting the brass 24. Said brass has considerable weight, and is difficult to lift, in its inaccessible position on top of the journal, without the use of a lever. The shape of the legs, particularly the vertical offset 16, also elevates the hooked ends 11 above the horizontal portion 14 and the bend 13, so that said hooks are in the best position to engage the brass when said bend 13 is resting upon the edge 28 of the box, as clearly illustrated in Fig. 4.

I claim:

1. A journal bearing extractor comprising a yoke-like tool having a handle at one end and a pair of laterally spaced symmetrical legs at the other end, each of said legs terminating in an up-turned hook and being formed with a localized downward facing concave bend between its hooked end and said handle, and each of said legs having a vertical off-set to elevate its hooked end above said bend.

2. A journal bearing extractor comprising a yoke-like tool formed from a single length of bar stock bent back upon itself midway between its ends to form a handle, the end portions of the bar being spaced apart to form legs positioned parallel with each other, each of said legs terminating in an up-turned hook, each of said legs being bent to form a localized downward facing concave portion, and each of said legs having an upward offset to elevate its hooked end above said concave portion.

3. A journal bearing extractor comprising a yoke-like tool having a handle at one end and a pair of laterally spaced legs at the other end, each of said legs terminating in an upturned hook, said tool having a localized downward facing concave bend between said handle end and said hooked end, and said tool having an upward offset between said bend and said hooked end, whereby said hooked end is elevated above said handle end.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
977,245	Wiest	Nov. 29, 1910
1,370,397	Axelton	Mar. 1, 1921
1,892,824	Ziegler et al.	Jan. 3, 1933