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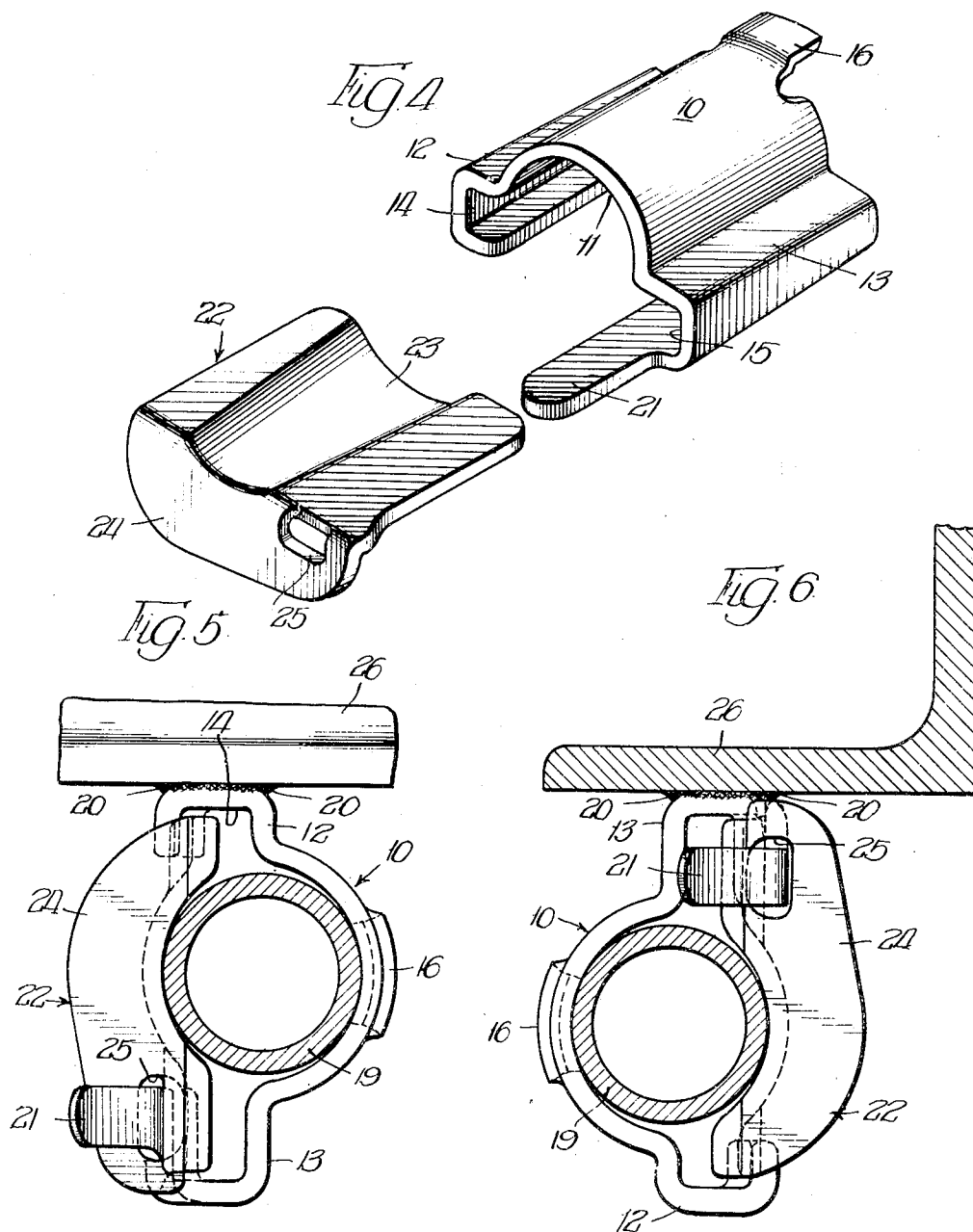
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PIPE ANCHOR

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PIPE ANCHOR

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Our invention relates to a pipe anchor which is more particularly adapted for rigidly securing the air lines or train pipes in the cross bearers of a railroad car so as to anchor or hold the pipes against vibration or improper movement and prevent ruptures and leaks; while at the same time providing an anchor which will adapt itself to variations in the pipe openings in the car underframe or cross bearers.

Another object of our invention is to provide an anchor which obviates the use of brackets or other fittings intended to be secured to the car by bolts or similar fastening elements which require the drilling of holes in the cross bearers or sills of the car; our improved anchor involves two elements which preferably may be formed of stamped or pressed metal and the body member or base so formed that it lends itself to various applications and distances between the train line or pipe and the base of certain sills of the car by simply rotating the base member of the anchor on the pipe so as to bring one of its longitudinal edges into contact with the car sill and permit the base member to be welded to the sill after application to the pipe; the two members of our anchor being formed to have inter-engaging and locking engagement with each other.

The aforementioned objects of our invention and the advantages inherent in the anchor will all be readily comprehended from the detailed description of the accompanying drawings wherein—

Figure 1 is a top plan view of our improved pipe anchor applied to a section of pipe and shown attached to a car underframe member or cross bearer.

Figure 2 is a side elevation of the structure shown in Figure 1.

Figure 3 is an end view as viewed on the line 3—3 of Figure 2, with the pipe in cross section.

Figure 4 is an exploded perspective view of the anchor before assembly.

Figure 5 is an end view, with the pipe in section, showing a modified manner of application, namely to the base of a longitudinal sill or cross sill.

Figure 6 is a similar view showing another manner of application to a car longitudinal or side sill of a car.

Our improved pipe anchor consists of a main body or base member 10 of suitable length and transversely arcuate to provide a pipe receiving channel 11 from end to end and laterally disposed sides 12 and 13, which are bent downward

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and thence inwardly toward each other to provide opposingly facing grooves 14, 15; the side 13 and its groove 15 being of somewhat greater width than the side 12 and its groove 14. The inner end of the pipe receiving portion of member 10, substantially at its longitudinal median line, is provided with an extension or lip 16 stamped to extend in a slightly raised plane above the crown of the pipe receiving channel portion of member 10. This extension or lip 16 is intended to enter the pipe receiving hole or opening 17 in the web of the car underframe or cross bearer 18, to constitute a spacer and to assist in properly applying the anchor to the cross bearer; to provide a suitable welding surface and to constantly maintain the desired position of the pipe relative to the hole 17 in the cross bearer when the anchor is horizontally disposed at the side of the diaphragm 18 of the underframe member as in Figure 1, 2 and 3.

The spacing between the marginal flange portions of the sides 12 and 13 is sufficient to permit the anchor to be crosswisely applied to a previously installed pipe 19 and then slid along the pipe toward the opening in the diaphragm of the cross bearer 18 and the spacer lip 16 forced into the opening, at which time the base member 10 may be intimately secured to the cross bearer by welding as indicated at 20.

The marginal flange portion, preferably of the wider side 13, is longitudinally extended to provide a locking tongue or strip 21, see Figure 4, whereby the companion or wedge member 22, after proper insertion in the base member 10, is locked in wedging position.

Wedge member 22 consists of a stamped piece of metal of suitable length and of width to slidably fit into the opposingly facing grooves 14 and 15 of the base member 10.

The wedge member 22 is longitudinally dished as at 23 to seat on or fit about the lower or exposed side of the pipe 19 and effect wedging relation therewith, induced by the slightly decreasing height of the sides toward the forward end of base member 10 and by decreasing the dishing 23 toward the rear end of the wedge member 22. The rear end of the wedge member 22 is bent downwardly or flanged as shown at 24 and the flange adjacent one side of the wedge member is provided with a slot 25 adapted to receive the tongue or extension 21.

With the flange 24 extending the full width of the wedge member 22 the latter is rigidified and a striking surface throughout the width of the wedge is provided for driving the wedge into

firm wedging relation with the pipe. When this is accomplished the workman then clinches the tongue 21 with hammer blows, bending the exposed end of the tongue downward over the end flange 24 of the wedge member 22 as shown in Figures 1, 2 and 3, thereby locking the wedge member in firm wedging engagement with the pipe.

The spacing between the inturned marginal portions of the groove forming sides of the base member 10 may be varied in keeping with the diametrical size of the pipe to be anchored. With pipe clamps as heretofore made and consisting of malleable castings, variations were not so easily taken care of, nor was application as readily made, it being necessary to provide additional appurtenances such as bolts, nuts and lock nuts for securing the wedge member in place. Aside from the extra time required to make proper application, frequent displacement of parts and loss of parts while the car is in service greatly increased the expense and maintenance cost. These difficulties and expense are eliminated with our improved pipe anchor which maintains a constant uniform anchoring of the pipe.

Our improved anchor adapts itself to various applications of train lines required for different types of cars, as for example where the train line is secured to a longitudinal sill, viz. to a side sill of the car as shown in Figures 5 and 6 where two methods of application are disclosed in connection with train lines arranged at slightly different elevations relative to the bottom flange of the sill indicated at 26.

In Figure 5 where the train line 19 is spaced a short distance from the bottom of the sill 26, our clamp or pipe anchor is rotated ninety degrees on the pipe so as to bring the narrower side 12 adjacent the bottom of the sill and this longitudinal side of the anchor is then welded to the sill as indicated at 23.

In Figure 6 we illustrate application to a train line 19 in a lower plane beneath the car sill 26. To accommodate the anchor to this condition, the clamp, before being placed in pipe clamping condition, is rotated on the air line 19 so as to present the wider side 13 to the bottom of the sill and this longitudinal side is then welded to the sill, as shown at 20.

As is apparent, our improved anchor affords almost universal application on all cars, achieved by rotating the anchor on the pipe and in either of its positions ample welding surface, relative to the car sill or cross bearer, is provided while at the same time ample access to the wedge member and the locking tongue is provided; the structure thus obviating the necessity of a multiple of styles of anchors as heretofore was necessary. Furthermore, with our improved anchor the desired and proper relationship between pipe and diaphragm members, at the point where the pipe passes through the hole or opening, is provided and maintained and the pipe is not distorted during the clamping operation.

It is also apparent that the operation of clinching the tongue 21 tends to force the member 22 into member 10 and thereby increases the clamping action of the anchor on the pipe; and with our anchor extrinsically applied to the car underframe member its application and replacement can readily be accomplished by simply cutting the weld-fillets at the underframe contacting marginal portions of the main or base member 10. By reason of the novel construction of the pressed steel anchor it is now possible to replace

at least three types of present day malleable clamps with one more or less universal type of steel anchor which effects the desired firm clamping action without causing distortion or misalignment of the pipe relative to its normal position or relation with the car underframe members to which the pipe is to be anchored.

We have described what we believe to be the simplest and best embodiments of our invention and the methods of application, but modifications in certain details are possible and may be made without departing from the spirit of our invention as defined in the appended claims.

What we claim is:

1. In a pipe anchor composed of a pair of pipe clamping longitudinal members arranged to have interengaging relation with each other, the main or base member at one end having a forwardly disposed spacing lip adapted to enter the pipe receiving hole in a car cross bearer or frame member and thereby maintain the relationship between the pipe and cross bearer and position the base member against the side of the cross bearer, the opposite end of the base member having a rearwardly extending tongue, while the other member at its rear end is provided with a downwardly disposed apertured portion adapted to receive said tongue whereby the two members are locked together in pipe clamping relation.

2. A pipe anchor composed of a pair of pipe clamping interengaging longitudinal members dishd lengthwise to provide a pipe receiving channel, the longitudinal sides of one member being bent downwardly and inwardly to provide oppositely facing grooves adapted to receive the longitudinal marginal portions of the other member, the groove forming sides of the first member being of different widths and formed to provide plane perpendicular surfaces, the rear end of the first member having a rearwardly extending bendable tongue adapted to effect locking engagement with the second member after associating the members into pipe clamping relation.

3. A pipe anchor comprising a pair of complementary pipe clamping members formed to have interengaging sliding relation with each other and to be disposed at opposite sides of the pipe, one of said members at its rear end having an elongated tongue while the other member has an apertured portion adapted to receive said tongue whereby the two members may be locked together against relative longitudinal movement, the tongue carrying member being provided with welding surfaces whereby said member may be secured against a car underframe member.

4. A pipe anchor composed of a pair of complementary pipe clamping members, one of said members having bent opposite side walls of different widths formed to provide oppositely facing grooves, the base portion of one of said grooves forming sides being extended rearwardly to provide a bendable tongue, while the other member has laterally disposed side marginal portions adapted to slide in said grooves and having a bent rear end provided with an opening adapted to receive said tongue and permit the latter to be bent over said bent rear end of the second mentioned member and thereby lock the members in pipe clamping condition.

5. A pipe anchor comprising a body member and a wedge member dishd longitudinally to provide a pipe receiving channel and adapted to engage opposite sides of a pipe, the longitudinal sides of the body member being bent downwardly and thence inwardly to provide oppositely facing

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grooves, one of the bent sides being lengthwisely extended to provide an elongated tongue extending longitudinally beyond the end of the body member; the wedge member having longitudinally outwardly disposed sides adapted to endwisely fit into said grooves of the body member, the dishing of said wedge member decreasing toward the rear end of the member and the rear end of the member having an angularly disposed flange provided with a slot adapted to receive said elongated tongue and permit it to be bent across said flange and thereby force said members into increasing pipe clamping and locking relation.

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