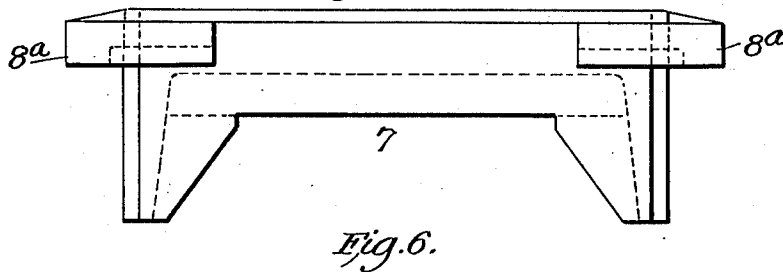
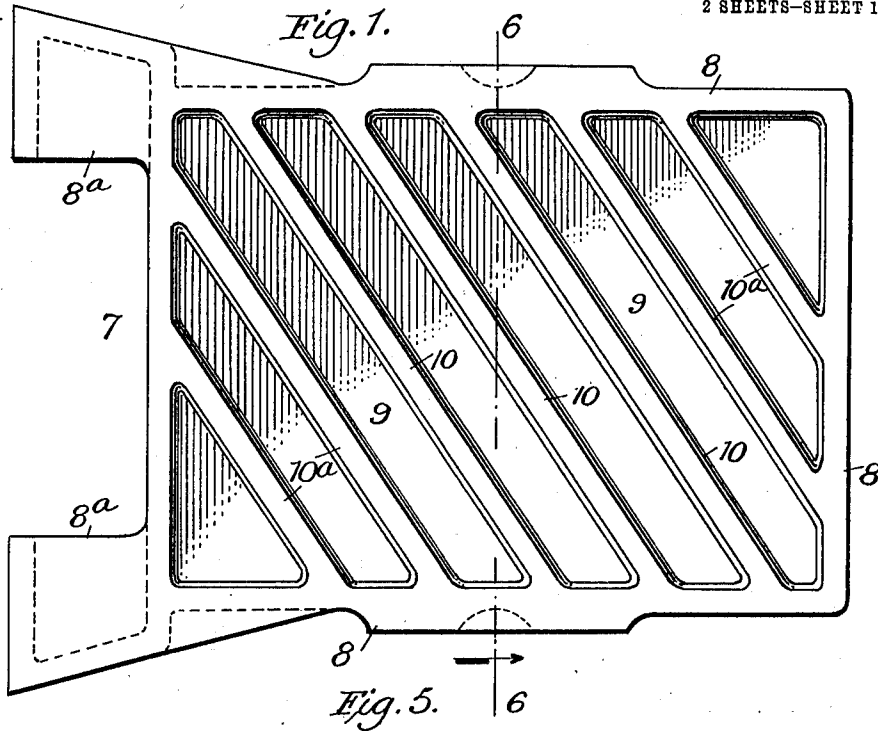


R. E. FRAME.
JOURNAL BEARING WEDGE.
APPLICATION FILED SEPT. 3, 1907.

1,021,141.

Patented Mar. 26, 1912.

2 SHEETS—SHEET 1.



Witnesses:
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A. W. Gibbs

Inventor,
Robert E. Frame,
By his Attorney
J. H. Gibbs

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2 SHEETS—SHEET 2.

Fig. 2.

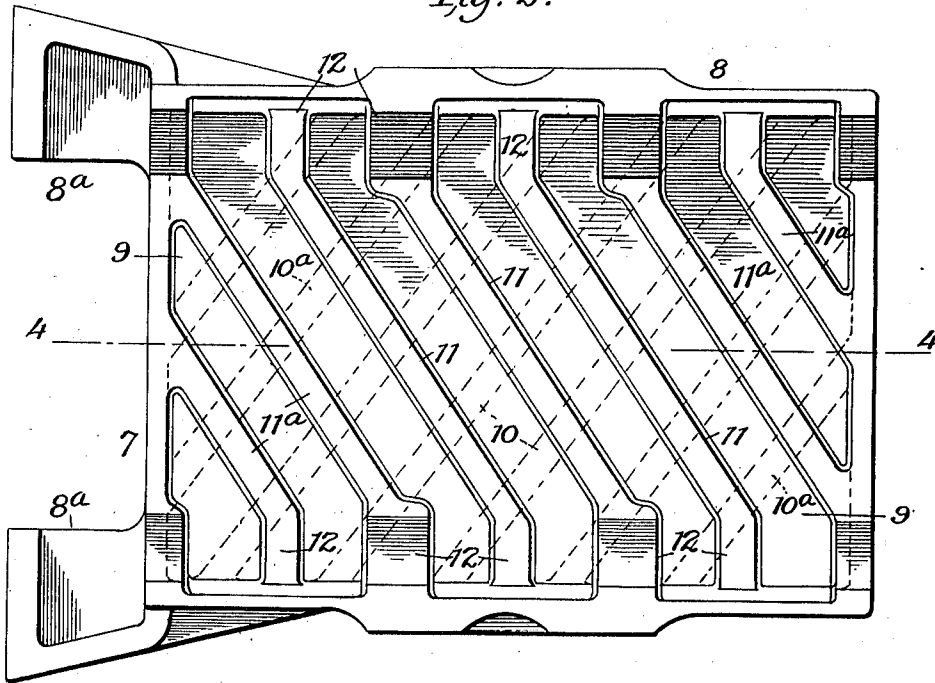


Fig. 3.

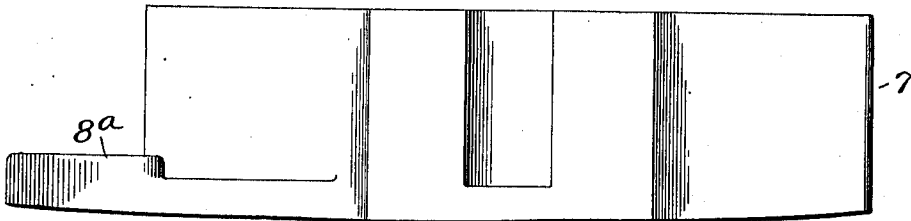
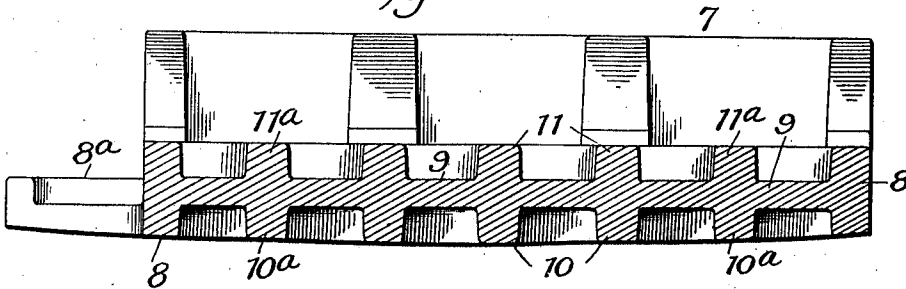


Fig. 4.



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UNITED STATES PATENT OFFICE.

ROBERT E. FRAME, OF ST. LOUIS, MISSOURI, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO AMERICAN CAR AND FOUNDRY COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF NEW JERSEY.

JOURNAL-BEARING WEDGE.

1,021,141.

Specification of Letters Patent.

Patented Mar. 26, 1912.

Application filed September 3, 1907. Serial No. 391,159.

To all whom it may concern:

Be it known that I, ROBERT E. FRAME, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Journal-Bearing Wedges, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view of one face of my improved wedge, which is made, preferably, of malleable iron; Fig. 2 is a view of the opposite face of the wedge, showing in dotted lines the location of the ribs shown in Fig. 1; Fig. 3 is a side elevational view; Fig. 4 is a central longitudinal sectional view, the section being taken on line 4—4 of Fig. 2; Fig. 5 is an end view and Fig. 6 is a transverse sectional view, the section being taken on line 6—6 of Fig. 1.

The object of the invention is to produce a journal bearing wedge or key adapted to cooperate with, and lock in position, the journal bearings used with railway rolling stock, which wedge will respond to the standard requirements of the Master Car Builders' Association but which will be lighter and more durable than the standard wedge now on the market, and this invention relates to a general arrangement of the integral elements of the wedge comprising the body portion thereof whereby a wedge of malleable iron is produced in which the portion of such wedge which is subjected to strains incident to use will be of thin metal which can be thoroughly annealed and consequently be very strong and durable in service.

Referring to the parts 7 indicates the wedge which is provided with a thickened edge portion 8 which edge portion entirely surrounds the web portion 9, while there is also provided a ledge 8^a extending at one end beyond the edge portion 8.

To comply with the present requirements of the Master Car Builders' Association rules it is essential that the wedge shall, in the main, be of standard length, breadth and thickness adapted to interlock with a journal

bearing and with depending lugs formed on the journal box.

Wedges of cast iron are commonly used but, owing to the thickness of material employed, it is practically impossible to thoroughly anneal wedges now in use.

To overcome this difficulty I have produced the wedge shown in the accompanying drawings comprising the usual thickness between extreme top and bottom faces but formed with a web portion 9 which is relatively thin, extending throughout the area between said edge portions, while diagonally disposed ribs extending in opposite directions project vertically from opposite faces of said web. The ribs 10 extend from one edge obliquely to the opposite edge on one face while the ribs 10^a extend from the longitudinal raised edge portions to the edge portions at the ends and are of nearly equal cross sectional area throughout their length and are preferably straight from end to end.

On the opposite side the ribs are provided with central portions 11—11^a which are substantially straight and cross the ribs 10 at nearly right angles, the ribs 11 extending from one side edge to the opposite side edge portion while the ribs 11^a extend from the side edge portions to the raised edges at opposite ends of the web.

The ribs 11—11^a terminate in angular end portions which are disposed at an angle to the middle portions thereof and said angular end portions 12 are so arranged that the angular end of one rib will be in substantial alinement with the end of another of said ribs and preferably in alinement with the rib next but one of this series. Thus, a line drawn through the center of any rib extension 12, parallel with the transverse axis of the wedge, will intersect three ribs upon one side and cross three ribs upon the opposite side of the web, thereby calling into play to resist a strain on such line the web portion and at least six of the ribs.

It will be observed that all of the ribs extend beyond the median line of the wedge and that each rib crosses a plurality of ribs upon the other side of said web.

The web is of thin metal and the ribs are of such thickness as to assist in thorough annealing in manufacture, the ribs being

about $\frac{3}{8}$ of an inch in width at their middle portions while the anchoring angular extensions of some ribs are about $\frac{7}{16}$ of an inch wide and others are $\frac{11}{16}$ of an inch wide, though it is obvious that these proportions may be varied.

From Fig. 2 it will be observed that the major portion of the angular portions 12 are out of vertical alinement with the end portions of the ribs on the opposite side, thereby permitting said angular portions to become properly annealed.

I am aware that wedges have been patented, said wedges being provided with ribs and projections adapted to cooperate with sockets in journal bearings to provide locking means therebetween. This is not the object of my invention and it is not my intention to claim the ribs as locking ribs to interlock with a journal bearing. The ribs in my device are strengthening ribs adapted to reinforce and strengthen a thin web of metal and to fill the space provided by the standard requirements of the Master Car Builders' Association between the upper face of a journal bearing and the inner lower face of the journal box.

Having described the invention, what is claimed as new is:

30 1. A wedge comprising a body provided with obliquely disposed integral ribs upon opposite sides, some of the ribs on one side extending entirely across said wedge and some of said ribs extending only across the median line of said wedge.

35 2. A journal bearing wedge, comprising a body with relatively thin web portion and having obliquely disposed integral ribs upon opposite sides, and a plurality of the ribs upon one side crossing a plurality of ribs upon the opposite side, at both sides of the median line.

40 3. A journal bearing wedge, comprising a relatively thin web or body portion provided with a plurality of separated strengthening ribs, said ribs having central portions and integral end portions, the end portions positioned substantially parallel to the transverse axis of the wedge and the central portions formed at an angle to the end portions, all of said ribs extending from the side of said wedge substantially to the median line.

45 4. A wedge of malleable iron having a series of substantially parallel diagonal ribs extending substantially across each of its two opposite faces and crossing on the median line and at each side thereof.

50 5. A journal bearing wedge of malleable iron comprising a relatively thin web or body provided with sets of obliquely disposed transverse ribs formed upon opposite

sides thereof, some of the ribs of one set crossing ribs of the other set at each side of the median line.

6. A malleable iron journal bearing wedge, 65 comprising a thin web or body portion provided with a thickened edge portion and obliquely disposed strengthening ribs, said ribs having central portions and integral end portions, the end portions being substantially parallel and the central portions 70 formed at an angle to the end portions, all of said ribs extending from the side of said wedge substantially to the median line.

7. A wedge of malleable iron, having a 75 series of substantially parallel diagonal ribs on each of its two opposite sides, said ribs crossing the middle portion of said wedge in opposite directions on opposite sides of the wedge. 80

8. A malleable iron journal bearing wedge comprising a body portion with integral obliquely disposed ribs of varying width all of which cross at the median line of said wedge. 85

9. A journal bearing wedge comprising a body with obliquely disposed ribs upon opposite sides, and the ribs upon one side crossing the ribs upon the opposite side on both sides of the longitudinal axis of said 90 wedge.

10. A journal bearing wedge comprising a body provided with sets of transverse ribs upon opposite sides, a plurality of the ribs of one set crossing a plurality of the ribs 95 of the other set upon both sides of the longitudinal axis of said wedge.

11. As a new article of manufacture, a journal bearing wedge formed of a single malleable casting and provided upon opposite sides with transversely extending ribs which ribs cross at both sides of the median line. 100

12. A wedge of malleable iron having a series of substantially parallel diagonal ribs 105 extending transversely thereof on each of its two opposite faces which ribs cross at both sides of the longitudinal axis of said wedge.

13. A journal bearing wedge comprising 110 a body with integral transversely extending ribs upon opposite sides and the ribs upon one side crossing the ribs upon the opposite side on the median line of said wedge also upon both sides of said line. 115

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 16th day of August 1907.

ROBERT E. FRAME.

Witnesses:

FRED G. WOLFF,

WM. J. ROA.