W. E. PATE.

CASTING DEVICE.

APPLICATION FILED SEPT. 6, 1916.

1,212,997.

Patented Jan. 16, 1917.

2 SHEETS—SHEET 1.

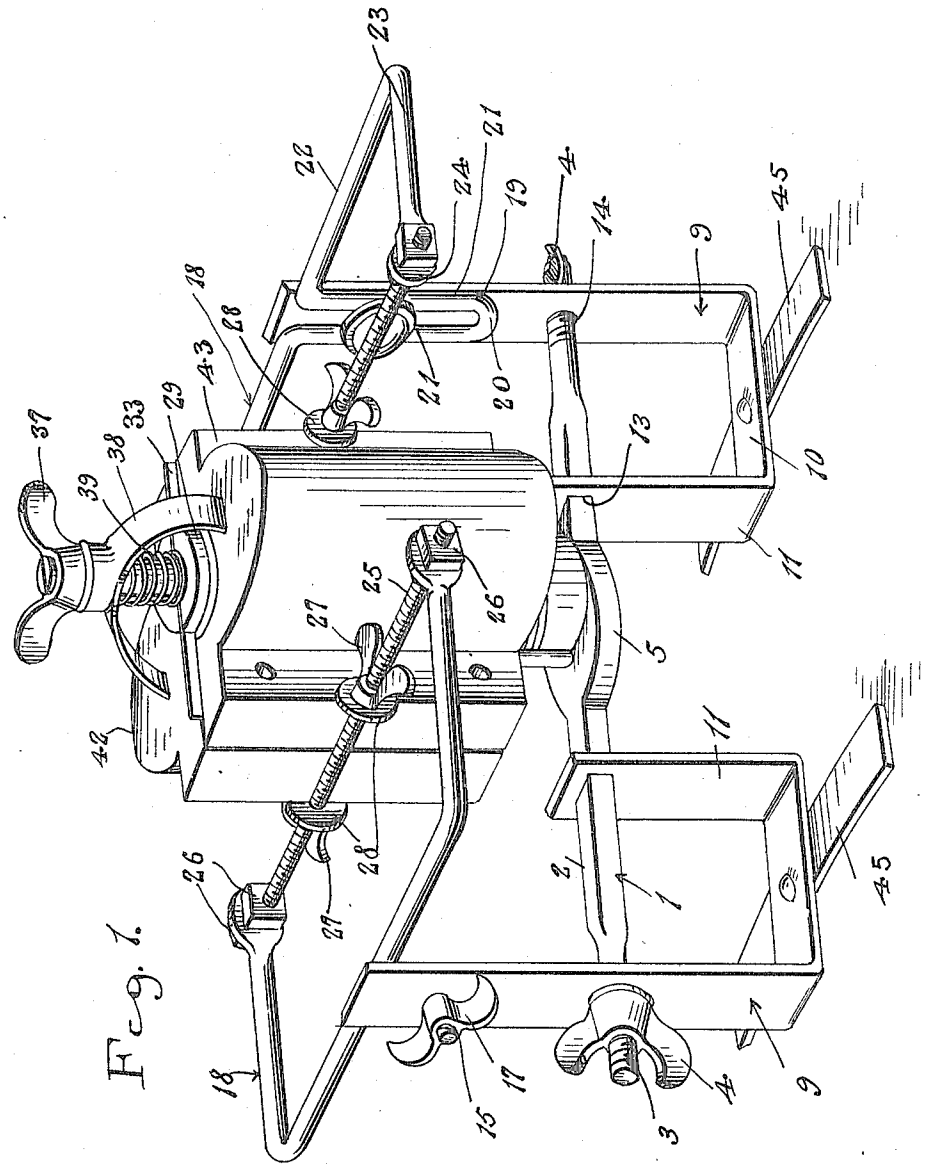


Fig. 1.

Inventor

W. E. Pate

Witnesses.

J. P. Babler,

H. Hayes Martin

By A. Rudolph Jr., Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

W. E. PATE.

CASTING DEVICE.

APPLICATION FILED SEPT. 6, 1916.

1,212,997. Patented Jan. 16, 1917.

2 SHEETS—SHEET 2.

Fig. 2.

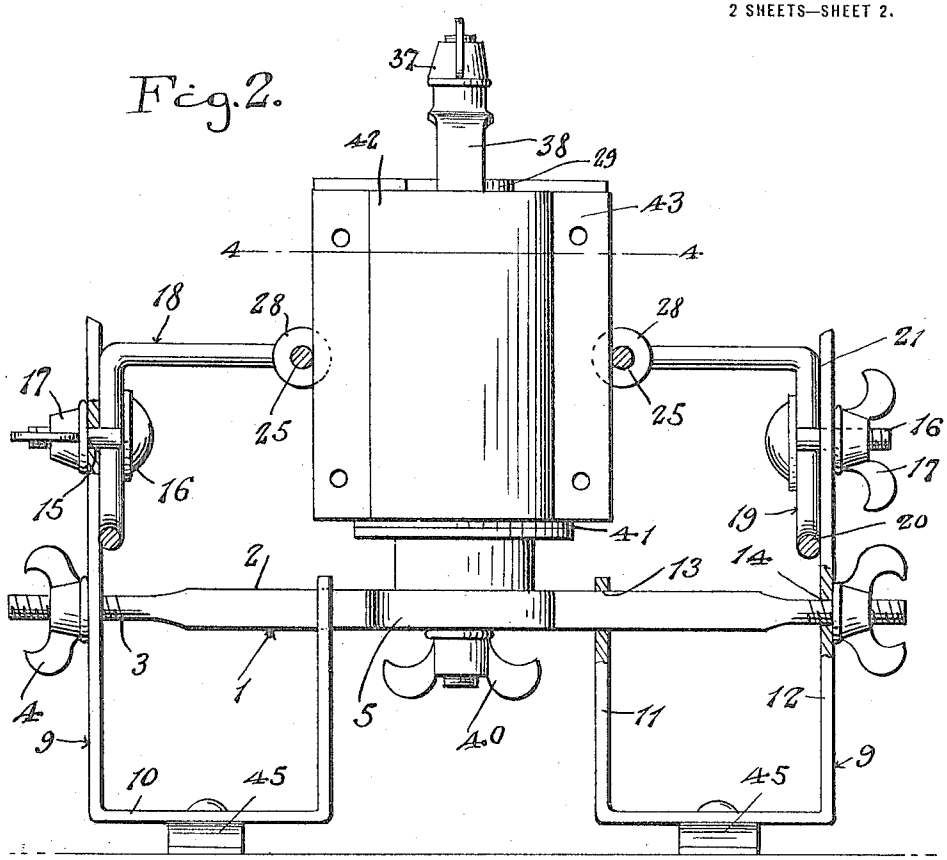


Fig. 4.

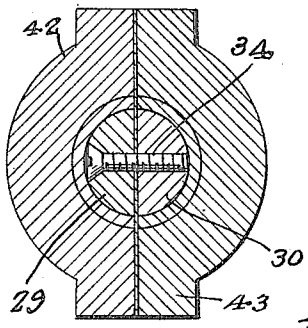


Fig. 3.

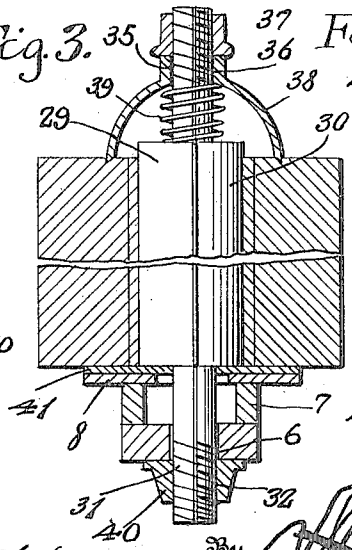
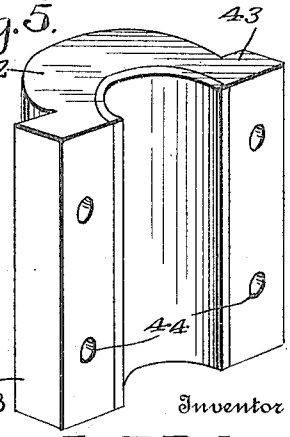


Fig. 5.



Witnesses

J. P. Mahler.

Inventor

W. E. Pate

By A. Randolph & Co.

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM E. PATE, OF GARYSBURG, NORTH CAROLINA, ASSIGNOR OF ONE-HALF TO WILLIAM T. WHITEHEAD, OF WELDON, NORTH CAROLINA.

CASTING DEVICE.

1,212,997. Specification of Letters Patent. Patented Jan. 16, 1917.

Application filed September 6, 1916. Serial No. 118,685.

To all whom it may concern:

Be it known that I, WILLIAM E. PATE, a citizen of the United States, residing at Garysburg, in the county of Northampton and State of North Carolina, have invented certain new and useful Improvements in Casting Devices; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in casting devices and the principal object of the invention is to provide a device which is particularly adapted for use in babbitting bearings.

Another object of the invention is to provide a holder for supporting the bearing boxes to be babbitted in such a position that they will be clamped around a core of the size of the shaft or axle so that upon pouring the Babbitt metal in place the same will be cast about the core.

Another object of the invention is to provide a novel means for supporting the core in position and insuring the same being centered at all times.

A still further object of the invention is to provide an adjustable holder for the bearing boxes which may be arranged to receive boxes of different sizes and will work equally well with a small or large box.

With these and other objects in view the invention consists in the novel combination and arrangement of parts which will be fully set forth in the following specification and accompanying drawings, in which:—

Figure 1 is a perspective view of a mold constructed in accordance with this invention, Fig. 2 is a longitudinal sectional view through Fig. 1. Fig. 3 is a fragmentary transverse sectional view through the core and the boxes. Fig. 4 is a horizontal sectional view on line 4—4 of Fig. 2, and Fig. 5 is a detail perspective view illustrating the babbitted box.

Referring to the drawings the numeral 1 designates the main bar of the mold consisting of the central rectangular body portion 2 provided with cylindrical threaded ends 3. These ends 3 are adapted to have the wing nuts 4 threaded thereon by means of which the U-shaped supporting frames which will be more fully hereinafter described are adjusted. Formed centrally of the bar 1 is an enlarged portion 5 having a central aperture 6 formed therein the use of which will appear as the description proceeds. A suitable collar 7 extends upwardly from the enlarged portion 5 and supports at its upper end the centrally apertured disk 8 as will be clearly seen upon reference to Fig. 3.

The supporting frames hereinbefore referred to are designated generally by the numeral 9 and each of said frames comprises the horizontal bight portion 10 formed with the inner and outer upstanding arms 11 and 12 respectively. The inner arm of each frame is formed near its upper end with a rectangular aperture 13 through which the rectangular portion 2 of the bar 1 is slidable while the outer arm 12 of each of the U-shaped frames is provided with a circular opening 14 arranged in axial alinement with the opening 13 for the reception of the threaded portion 3 of the bar 1. Formed adjacent the upper end of the arm 12 are suitable openings 15 for the reception of the clamp bolts 16 by means of which the supporting brackets for the clamp screws of the boxing sections are vertically adjustable. These bolts 16 are provided with the wing nuts 17 in order that the adjustment may be readily made.

The supporting brackets for the clamp members hereinbefore referred to are designated generally by the numeral 18 and each comprises a U-shaped frame designated by the numeral 19 which comprises a bight portion 20 having extending upwardly therefrom the arms 21. These arms terminate at their upper ends in the outwardly extending arms 22 which project at right angles from the arms 21 and in a plane with the U-shaped frame 19. Formed at the extreme outer ends of the arms 22 are the forwardly extending arms 23 which project at right angles to the plane of the frame 19 and are formed at their outer ends with the eyes 24 through which the ends of the threaded rod 25 extend. This rod is provided at opposite ends with suitable nuts 26 between which the eyes 24 are clamped. Suitable wing nuts 27 are threaded on the rod 25 and washers 28 are arranged to bear against the inner faces of the wing nuts to provide a clamping means for the bearing boxing.

The central core of the device is formed by cutting a section of a shaft to the proper length and providing the same with suitable threaded stems. The sections are designated respectively by the numerals 29 and 30 and their threaded stems are respectively designated by the numerals 31 and 32. The stems are assembled as illustrated in Fig. 3 and when in assembled position a suitable separating plate 33 is secured between the sections by suitable screws 34 or in any other desired manner. Like the lower end of each section 29 and 30 the upper ends thereof are respectively provided with the threaded extensions 35 and 36 as will be clearly seen upon reference to Fig. 3. These extensions 35 and 36 are adapted to receive a suitable wing nut 37 by means of which the inverted U-shaped pressure yoke 38 is forced downwardly on the upper ends of the journal bearing sections. A spring 39 is positioned on the upper end of each of the sections 29 and 30 and surrounds the extensions 35 and 36 and this spring is adapted to normally tend to move the yoke 38 upwardly and out of engagement with the boxing sections. In order to support the core in place, the threaded cylindrical portion on the lower end thereof consisting of the sections 31 and 32 is passed through the opening 6 of the bar 1 and a wing nut 40 is threaded on the extension in such a manner as to firmly clamp the same in place. Before placing the wing nut in position however, a suitable washer 41 which may be of any preferably soft material of a fabric nature is placed on the upper side of the disk 8 and forms a rest for the lower ends of the bearing boxes.

The bearing boxes hereinbefore referred to are constructed in the ordinary manner and consist of the arcuate portions 42 having the flanges 43 formed at its edges which flanges are preferably apertured as at 44 to receive the bolts by means of which the boxes are clamped together when the bearing is in use.

In use it will be seen that the core is first placed in position in the manner illustrated in the drawings and it will be apparent that the same will be centered with relation to the apparatus. The boxing sections are then placed in position by standing the same upright on the cushioning washer 41. The wing nut 37 is then turned so as to move the yoke 38 downwardly so as to insure the bearing boxes of properly sitting on the cushioning washer 41 and after this has been done the wing nuts 4 are turned to move the frames 9 inwardly toward the core until the threaded bars 25 engage the edges of the flanges 43 of the boxing sections after which the wing nuts 27 are turned up until the boxing sections are then secured in place. When in this position it will be seen that the boxing sections will be supported in spaced relation to the core and upon pouring in the Babbitt metal the space will be filled and the inner face of the metal will conform to the shape of the core thus insuring a proper fit and eliminating the necessity of machining.

In order to provide a means for holding the device upright suitable feet 45 are pivoted or otherwise attached to the bars 10.

While in the foregoing there has been shown and described the preferred embodiment of this invention, it is to be understood that such changes may be made in the combination and arrangement of parts as will fall within the spirit and scope of the invention as claimed.

What is claimed is:—

1. A device of the class described comprising a bar, a pair of U-shaped frames slidable on the bar, means to adjust said frames on said bar, the outer arms of the frames extending upwardly beyond the inner ends of the arms of the frames, brackets adjustable on the upper ends of the outer arms, a core supported centrally of the bar, threaded bars carried by the brackets, and clamps on the threaded bars for holding bearing boxings in position around the core.

2. In a device of the class described, a bar, a core removably secured centrally to the bar, a pair of U-shaped frames adjustably mounted on the bar, the outer arms of the frames extending upwardly beyond the inner ends of the arms of the frames, brackets adjustably attached to the upwardly extending arms, arms projecting inwardly from the brackets toward the core, threaded bars carried by the inner ends of the last mentioned arms, and clamps on the threaded bars for holding bearing boxes in place around the core.

3. In a device of the class described, a bar, a pair of U-shaped frames slidable on the bar, upward extensions on the outer arms of said frames, means to adjust said frames longitudinally of the bar, a core extending upwardly from the central portion of the bar, a dividing plate carried by the core, an inverted yoke adjustable on the upper end of the core, adjustable brackets vertically adjustable on the upward extensions, horizontally extending threaded bars carried by the brackets, and clamps adjustable on the threaded bars to hold bearing boxes in place around the core the holding of said boxes being assisted by the yoke.

4. In a device of the class described, a bar, a pair of U-shaped frames slidable on the bar, upward extensions on the outer arms of said frames, means to adjust said frames longitudinally of the bar, a core extending upwardly from the central portion of the bar, a dividing plate carried by the core, an inverted yoke adjustable on the upper end of the core, brackets vertically adjustable on the upward extensions, horizontally extend-

ing threaded bars carried by the brackets, and clamps adjustable on the threaded bars to hold bearing boxes in place around the core the holding of said boxes being assisted by the yoke.

5. A device of the class described comprising a pair of U-shaped frames, a bar connecting said frames, extensions on the outer arms of said frames, means to adjust the frames longitudinally of the bar, vertically adjustable arms at the upper ends of the extensions, the said arms extending toward each other, bars connecting the extreme inner ends of said arms, thumb nuts adjustable on said bars, a core supported centrally of the first mentioned bar and clamping washers actuated by the thumb nuts for engaging the flanges of bearing boxes to hold the same in place on the device and surrounding the core.

6. In a device of the class described, a pair of U-shaped frames, a bar connecting said frames, means to adjust the frames longitudinally of said bar, a core supported centrally of the bar between the frames, a yoke at the upper end of the core and means coöperating with the yoke in holding bearing boxes in place on the bar and surrounding the core.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM E. PATE.

Witnesses:
J. W. SLEDGE,
E. L. HAYWARD.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."