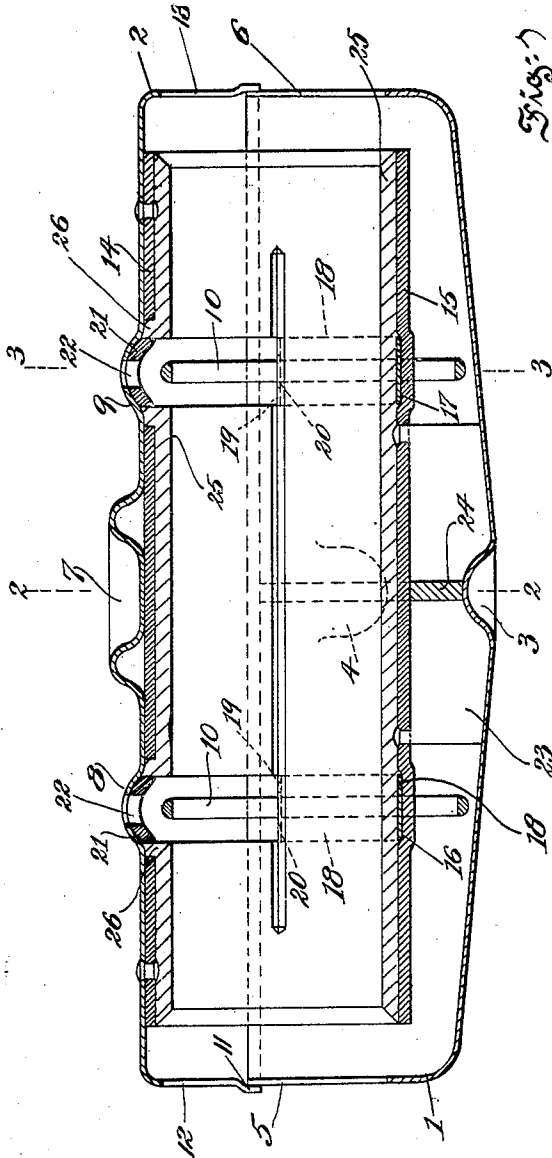
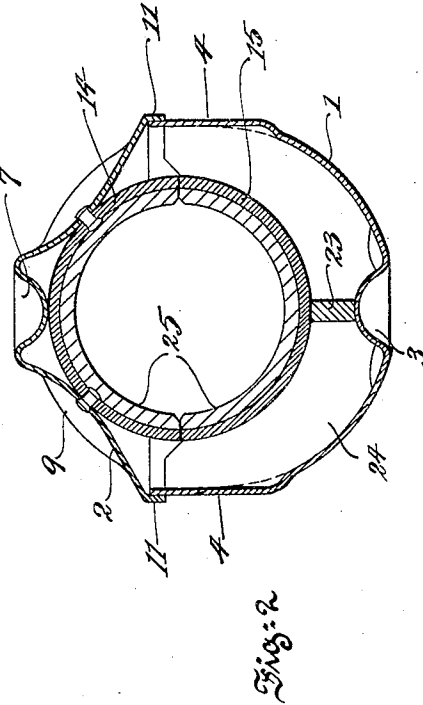


No. 882,579.

PATENTED MAR. 24, 1908.

H. E. NORBOM.
SHAFT OR JOURNAL BOX.
APPLICATION FILED MAY 26, 1906.

2 SHEETS—SHEET 1.



Witnesses:
J. W. Dilligan

Inventor:
Hakon E. Norbom.
By Augustus B. Slaughter,
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2 SHEETS—SHEET 2.

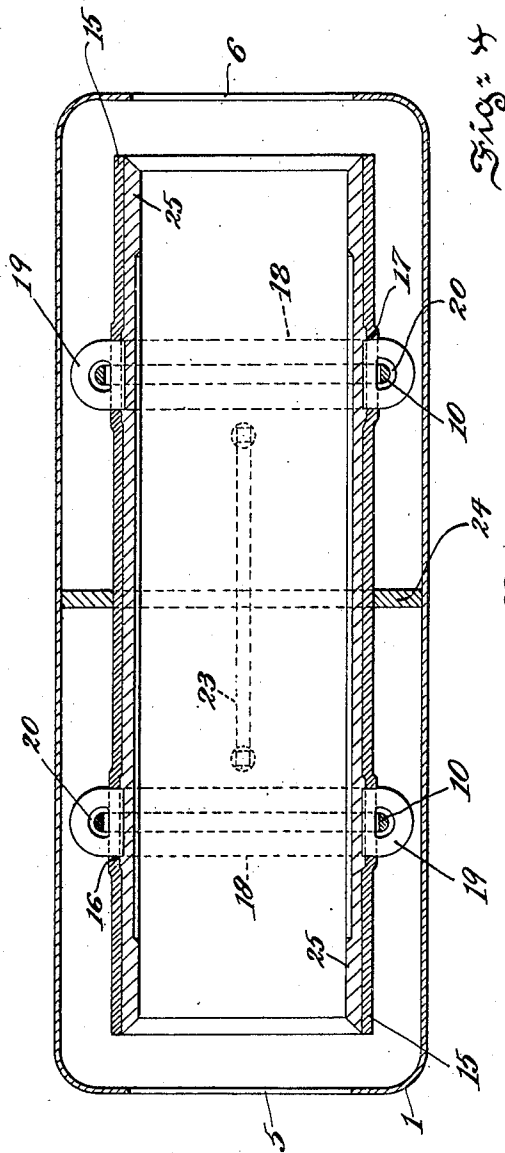


Fig. 4

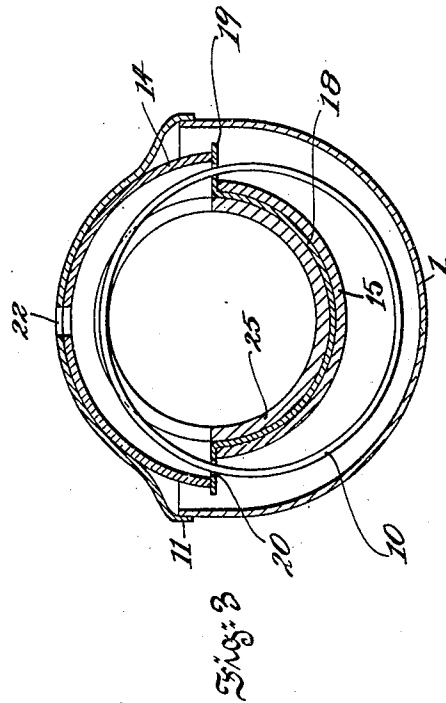


Fig. 3

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UNITED STATES PATENT OFFICE.

HAAKAN E. NORBOM, OF PHILADELPHIA, PENNSYLVANIA.

SHAFT OR JOURNAL BOX.

No. 882,579.

Specification of Letters Patent.

Patented March 24, 1908.

Application filed May 26, 1906. Serial No. 318,848.

To all whom it may concern:

Be it known that I, HAAKAN E. NORBOM, a citizen of the United States, and a resident of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a certain new and useful Shaft or Journal Box, of which the following is a specification.

Objects of the present invention are to so construct and arrange the parts of the box that the same may be commercially and comparatively and inexpensively manufactured from pressed metal, as steel; to provide a construction for the type of box recited which shall possess the strength and rigidity necessary for properly supporting a shaft; to provide for referring the pressure upon the pressed shells at the adjusting screws to the shaft; to provide an adequate abutment or connection for the adjusting screws, and to provide a box which shall be light and comparatively cheap and possessed of the requisite strength.

To these and other ends hereinafter set forth my invention comprises the improvements to be presently described and finally claimed.

The nature, characteristic features and scope of my invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof and in which

Figure 1, is an elevational view principally in central section of a box embodying features of the invention. Fig. 2, is a transverse sectional view taken on the line 2—2 of Fig. 1. Fig. 3, is a transverse sectional view taken on the line 3—3 of Fig. 1, and Fig. 4, is a top or plan view of the box with the upper section thereof removed.

In the drawings 1 and 2, are the parts which make up the external shell or housing. The part 1, is provided midway of its length with a suitable depression 3, for the reception of the point of the adjusting screw which is usually provided for supporting the box; and the part 1, is also provided with flat faced lateral bearing surfaces 4, upon which the points of the side adjusting screws bear. Otherwise than has been described, the part 1, is generally of trough-like form and is provided at its ends with generally semi-circular openings 5 and 6, which accommodate the shaft. The part 2, is provided with a depression 7, for the accommodation of the top set screw and this depression is shown as formed by pressing out an annular portion about midway of the length of the part 2.

The part 2, is also provided with annular bulges 8 and 9 which accommodate oil rings 10, as will be hereinafter described. The part 2, is shown as provided with depending lips 11, which fit over the top of the side walls of the part 1. The part 2, is provided at its ends with openings 12 and 13, for the accommodation of the shaft.

The internal shell comprises two parts 14 and 15, which are shown to be separable diametrically, whereas the outer shell is shown as separable above its diameter. The lower half 15 of the inner shell is slightly offset as at 16 and 17 and is otherwise semi-cylindrical throughout its length. The offsets 16 and 17 receive semi-circular yokes 18 provided with laterally extending ears 19 which are provided at 20 with openings through which the oil rings 10 pass. The purpose is to guide the oil rings which take up oil from a supply contained in the lower external shell 1, and by their revolution as they hang on the shaft, lubricate the latter. The upper internal shell 14 is provided with annular bulges 21, which nest with the bulges 8 and 9 and accommodate the oil rings. 22, are openings which may be provided to serve as oil holes. The part 2 of the external shell and 14 of the internal shell are riveted together as shown, but the part 1 of the external shell and the part 15, of the internal shell are connected together by means of a cradle, the best form of which now known to me will be described.

The cradle shown is cruciform and consists of two members 23 and 24 respectively notched and fitted together and these members are also cut away so as to conform to the inward projection 3, whereby they are held together and are also held against undue play or motion in the external casing. The member 23, is shown as riveted to the part 15 of the inner casing and the member 24 is shown of U-form, so as to conform to and support the part 15 and also extend between it and the flat faces 4. The cradle as a whole therefore supports the part 15 and serves to refer the pressure of the bottom and side set or adjusting screws directly to the part 15 and thence to the shaft itself and this is obviously a matter of very great importance as it imparts in a simple manner the necessary strength and rigidity to the structure and it furthermore enables all of the parts to be made by the employment of simple and comparatively inexpensive dies, none of which are in any way unusual or complicated in

form. Each section of the inner casing is lined with Babbitt or other suitable bearing metal 25 and in the case of the section 15 the Babbitt metal extends across the yokes 17, 5 serving to retain them against accidental displacement. The Babbitt metal may also be permitted to extend as shown at 26 through the upper section 14 of the inner casing so as to retain it to place adjacent the 10 bulges which accommodate the rings 10 and which bulges may not be lined. The described box may be advantageously made of pressed steel and I shall refer to it as made of that metal, but I realize that that metal may 15 be replaced with other material.

By the use of language in describing my invention I do not intend to limit the same further than the state of the art may require and my claims may specify, but

20 Having thus described the nature and objects of my invention, what I claim as new and desire to secure by Letters Patent is

1. A pressed steel hanger box comprising upper and lower external and internal shells, 25 and a cruciform cradle interposed between the internal and external lower shells and adapted to take pressure in three directions.

2. A pressed steel hanger box comprising upper and lower external and internal shells 30 of which the lower external shell is provided with a depression and with two flat lateral bearing surfaces, and a cradle interposed between and immovably connecting the internal and external lower shells and adapted to 35 take pressure in three directions.

3. The combination in a pressed hanger box of external and internal lower shells of which the external shell is provided with three points of support, and a member interposed 40 between immovably connecting the two shells and adapted to bridge them to sustain pressure, substantially as described.

4. The combination in a pressed hanger box of external and internal lower shells of 45 which the external shell is provided with three points of support, and a U-shaped member arranged edgewise and interposed between and immovably connecting the two shells and adapted to bridge them to sustain 50 pressure, substantially as described.

5. In a pressed metal hanger box the combination of internal and external shells whereof the external shell is provided with a depression constituting a point of support, and a lengthwise ranging member interposed 55 edgewise between the shells and adapted to resist pressure.

6. In a pressed hanger box the combination of internal and external lower shells whereof the latter is provided with a depression 60 constituting a point of support, and a cradle interposed between said shells and notched for engagement with the depression, substantially as described.

7. The combination in a hanger box of external and internal shells whereof the latter 65 is provided with a depressed point of support and with two flat faced points of support, and a cruciform cradle consisting of two members notched and fitted together and 70 notched to fit the depression, and whereof one is secured to the inner shell and the other is U-shaped and extends vertically upward to the flat faced supports, substantially as 75 described.

8. In a pressed hanger box the combination of an oil ring, an inner shell, and a yoke arranged in the inner shell and provided with openings for guiding the oil ring, substantially 80 as described.

9. In a pressed hanger box the combination of a bulged inner shell, a yoke fitted to the bulged part of the shell, a lining overlying the yoke, and an oil ring guided by the 85 yoke, substantially as described.

10. A pressed hanger box comprising a two-part inner shell whereof the parts are separable diametrically, a two-part external shell whereof the parts are separable above a diameter to provide flat faced lateral supports, and a cradle interposed between the 90 lower inner and outer shells and extending above the inner lower shell to brace the flat faced supports, substantially as described.

In testimony whereof I have hereunto 95 signed my name.

HAAKAN E. NORBOM.

Witnesses:

W. J. JACKSON,
K. M. GILLIGAN.