

H. E. NORBOM.

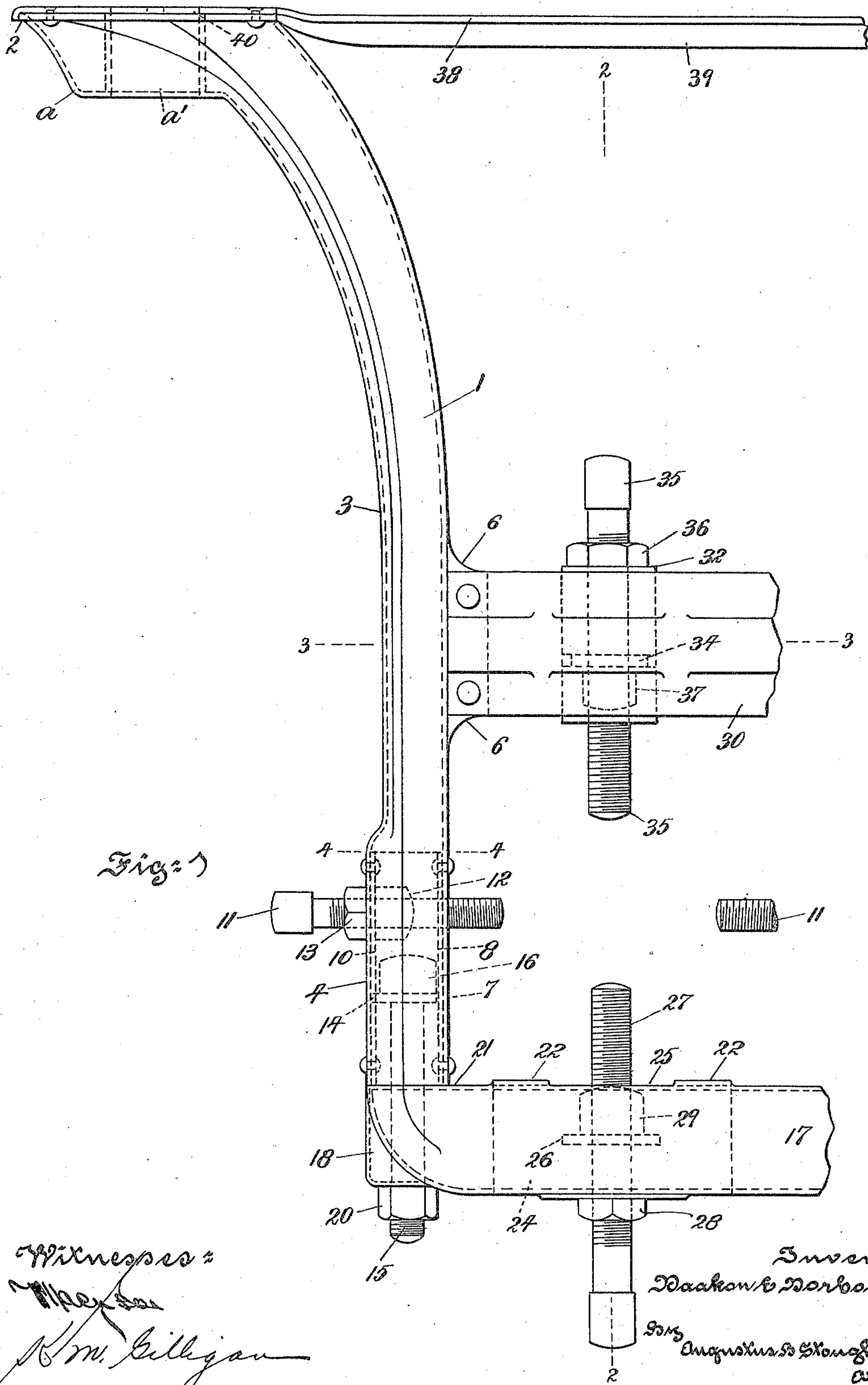
SHAFT HANGER.

APPLICATION FILED SEPT. 7, 1906.

951,447.

Patented Mar. 8, 1910.

3 SHEETS—SHEET 1.



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3 SHEETS—SHEET 2.

Fig. 8

Fig. 6

Fig. 5

Fig. 7

Fig. 2

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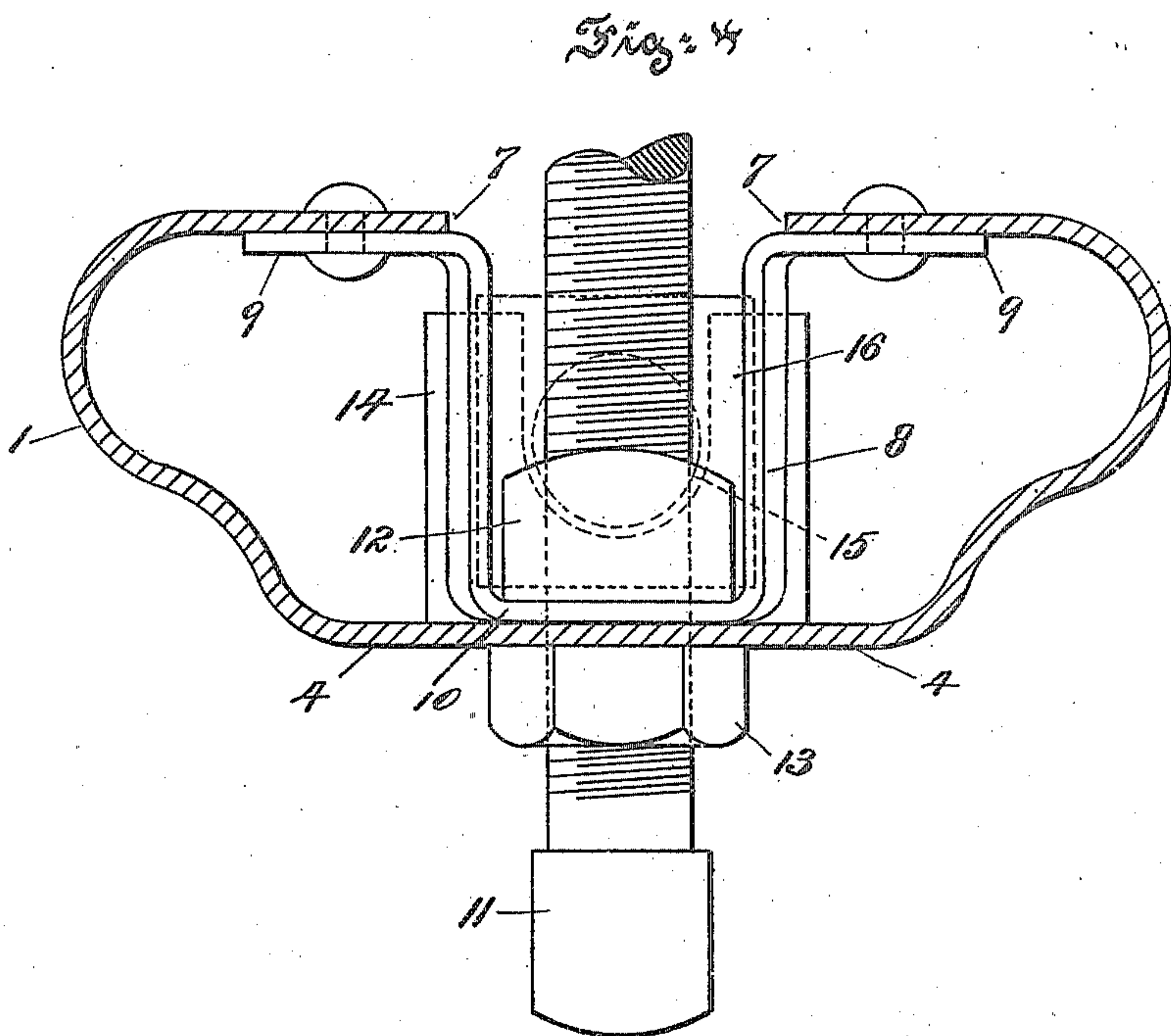
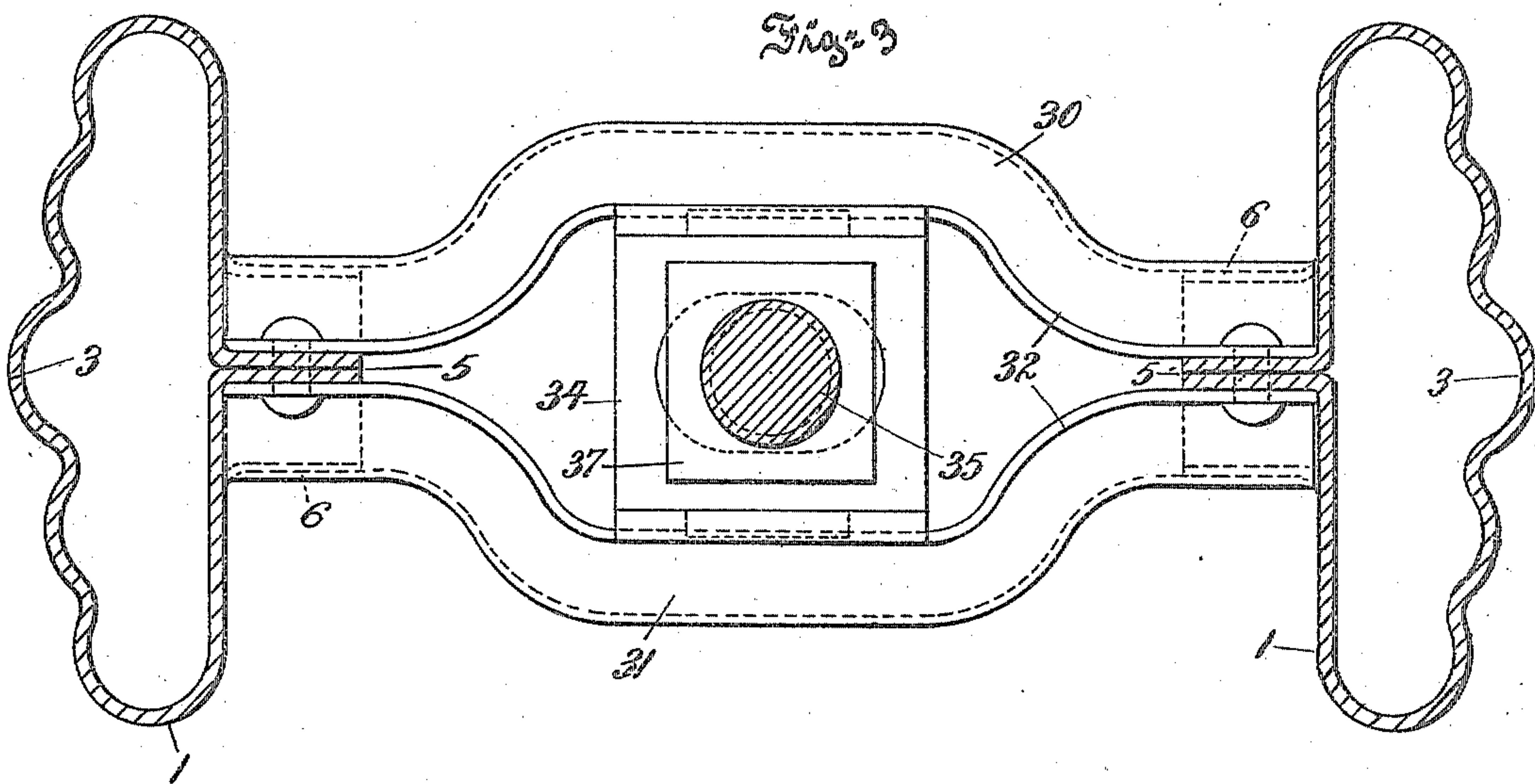
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UNITED STATES PATENT OFFICE.

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SHAFT-HANGER.

951,447.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed September 7, 1906. Serial No. 333,619.

To all whom it may concern:

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

Objects of the present invention are to provide a pressed metal shaft hanger which shall be comparatively light and inexpensive to make and yet possessed of the requisite mechanical strength, to provide a strong and reliable connection for holding the adjusting screws against deflection; and to provide a rigid connection for the lower cross bar.

To these and other ends hereinafter set forth the 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 a side elevational view illustrating so much of a hanger embodying features of the invention as is necessary for a description of the latter. Fig. 2, is a sectional view taken on the line 2—2 of Fig. 1. Fig. 3, is a sectional view taken on the line 3—3 of Fig. 1, looking upward. Fig. 4, is a sectional view taken on the line 4—4 of Fig. 1. Fig. 5, is a side view drawn to an enlarged scale illustrating one of the parts detached. Fig. 6, is a partial plan view of the lower cross-bar. Fig. 7, is an end view of the same, and Fig. 8, is a partial top view of the hanger.

1, is a hollow curved leg of which there are two, although for the sake of clearness only one is shown in Fig. 1, while both are indicated in Fig. 3. This hollow curved leg consists of a pressed sheet of metal, as steel. Each leg therefore is composed of a single piece bent to form a substantially closed form of box shaped girder, extending from the foot or top portion to the portion which supports the bearing, as will be described. The hollow curved leg is laterally flanged at its top, as shown at 2 and intermediate of the flanges it is provided with a downward bulge *a*, having an oblong opening *a*¹ for the passage of the means not shown by which the hanger is secured to place. The

leg is generally oblong in cross-section as shown in Fig. 3, and corrugated or ribbed at its upper outside portion 3, and flat at its lower outside portion 4. The meeting edges 5, are arranged on the inside portion of the leg. The meeting edges are provided with ears or parallel side wings 6, arranged about midway of the lengths of the legs and the meeting edges are also cut away or open as at 7 (Fig. 4), near the lower end of the leg for purposes to be presently described.

8, is a rectangular open ended trough shaped section or reinforcing plate consisting of a pressed metal sheet and it is arranged within the hollow leg opposite the open or cut away portion 7, thereof. This trough shaped section is provided with outward flanges 9 arranged in abutment with and secured to the inner faces of the front walls of the leg. The rear wall 10, of this trough shaped section is in abutment with the inner flat wall 4, of the leg (Fig. 4). The lateral adjusting screw 11, penetrates the abutting walls of the leg and trough shaped section and is engaged not only by a nut 12, arranged in the trough shaped section and held thereby against rotation, but also by a nut 13, arranged outside of the leg. These nuts and abutting walls insure a firm support and connection for the adjusting screw.

14, is a yoke plate having its ends fitted through and supported in slots in the side walls of the trough shaped section. This plate is provided with an opening through which passes the shank of the connecting bolt 15, of which the head 16, is supported on the yoke plate in such a way that the side walls of the trough shaped section hold the bolt against rotation, thus the bolt is well and firmly supported and connected to the end of the leg.

17, is a pressed metal bottom piece, of generally boat shape. This boat shaped piece is provided at the under side of its ends with flat faced perforated bulges 18, for the connecting bolt 15 and its nut 20. The boat shaped piece 17, has at the upper part of its ends, deck like portions 21 upon which bear the ends of the legs 1. At the center part of the boat shaped piece 17, there are in-turned fingers or flanges 22 and an open portion 23.

24, is an open ended trough shaped piece provided with lateral flanges 25. This trough shaped piece is fitted so as to rest on

the flat bottom of the boat shaped part 17 with its flanges 25 in engagement with the inturned fingers 22.

26, is a carrier plate arranged cross-wise of the trough shaped piece 24 with its ends in notches formed in the side walls of the trough shaped piece. The vertical adjusting screw 27 engages a nut 28 beneath the boat shaped part 17 and also a nut 29 arranged above the carrier plate 26 and in the trough shaped piece 24, by which it is held against rotation.

The middle cross-bar or intermediate transverse brace comprises two pressed metal channel bars 30 and 31 attached at their ends to the ears 6, and each centrally bowed or bent. An inverted trough shaped section 32 is arranged between the bowed portions of the channel bars 30 and 31, the edges of this trough shaped section being flanged as at 33, so as to engage the bars. A bridge piece 34 is arranged cross-wise of the trough shaped section with its ends supported in notches or openings formed in the side walls of the trough shaped section. An adjusting screw 35 passes through the wall of the trough shaped section 32 and through the bridge piece 34. There are nuts 36 and 37 arranged outside of the trough shaped section and of the bridge piece and they are engaged by the screw 35. The nut 37 is held against rotation between the side walls of the trough shaped section. The described arrangement of nuts for the adjusting screws gives the latter a good, firm bearing so that they are firmly held against lateral deflection.

The top cross-bar 38 comprises a plate of generally I-shape in plan having its center portion downwardly ribbed as at 39 and its end portions adapted to the lateral flanges at the top of the legs and provided with an oblong opening 40, for the bolts not shown and by means of which the hanger can be secured to place.

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

1. In a pressed metal hanger the combination of a member provided with a space, a trough shaped part having notched walls and arranged in said space, a supporting plate arranged in and held by said notched walls, and a screw penetrating said trough shaped part and nuts on said screw arranged to respectively abut on the trough shaped part and on the wall of the member, substantially as described.

2. In a pressed metal hanger the combination of a hollow leg, a trough shaped piece arranged in said leg and provided with notched walls, a yoke plate arranged in the notched walls, a generally boat shaped bottom bar provided at its end on top with a deck like portion upon which abuts the end

of the leg and provided beneath with a flat face bulge, and a bolt and nut engaging the yoke piece and bulge, substantially as described.

3. A shaft hanger comprising a top plate, hollow tubular legs depending from the top plate, a hollow bottom bar having deck like portions which abut on the ends of the legs, an intermediate bar, and means for connecting said plate, bars and legs, substantially as described.

4. A shaft hanger comprising a top plate, hollow legs each consisting of a bent sheet having its edges adjacent throughout the upper part and spaced apart throughout the lower part of the legs, an intermediate bar secured to the legs, a hollow bottom bar having deck like portions in abutment with the ends of the legs, and means arranged in the spaced part of the legs for attaching the bottom bar, substantially as described.

5. A shaft hanger provided with a hollow curved leg consisting of a bent sheet laterally flanged at its top and tubular in cross-section and ribbed on one side and having the meeting edges of the sheet arranged at the other side with the lower portions thereof cut away, substantially as described.

6. A shaft hanger provided with a hollow curved leg consisting of a bent sheet tubular in cross-section and ribbed on one side and having the meeting edges of the sheet arranged at the other side with the lower portions thereof cut away, substantially as described.

7. A shaft hanger provided with a hollow boat shaped bottom bar having flat faced perforated bulges at the ends of its under side and having at the ends of its upper part flat deck like portions, substantially as described.

8. A shaft hanger provided with a hollow boat shaped bottom bar having flat faced perforated bulges at the ends of its under side and having at the ends of its upper part flat deck like portions, and at its center part an open portion having inturned flanges or fingers, substantially as described.

9. In a shaft hanger the combination of a trough shaped part, a supporting plate carried by the walls of said part and spaced from its bottom wall, and a screw penetrating said bottom wall and plate and held thereby, substantially as described.

10. The combination in a shaft hanger, of a hollow leg having its wall cut away, a trough shaped part arranged in the cut away portion of the leg with its bottom wall in contact with the wall of the leg, a supporting plate carried by the side walls of said part and two screw members whereof one penetrates the contacting walls and the other penetrates the supporting plate, substantially as described.

11. In a shaft hanger the combination of a

bottom bar having a centrally arranged
open portion provided with inturned fingers,
a trough shaped member arranged in said
open portion and having its side walls pro-
5 vided with flanges engaged by said fingers,
a supporting plate carried by the side walls
of the trough shaped part, and a screw and
nuts, substantially as described.

12. A sheet metal shaft hanger comprising
10 two legs separated from each other and each
formed from a single sheet of metal bent

into tubular form with the edges thereof
projecting inwardly and in contact, a brace
of pressed metal overlapping and secured to
said inwardly projecting edges, and a yoke 15
connecting the ends of said legs.

In testimony whereof I have hereunto
signed my name.

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Witnesses:

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