H. T. HALLOWELL.

SHAFT HANGER.

APPLICATION FILED MAR. 26, 1913. RENEWED JUNE 24, 1918.

1,320,045. Patented Oct. 28, 1919.

5 SHEETS—SHEET 1.

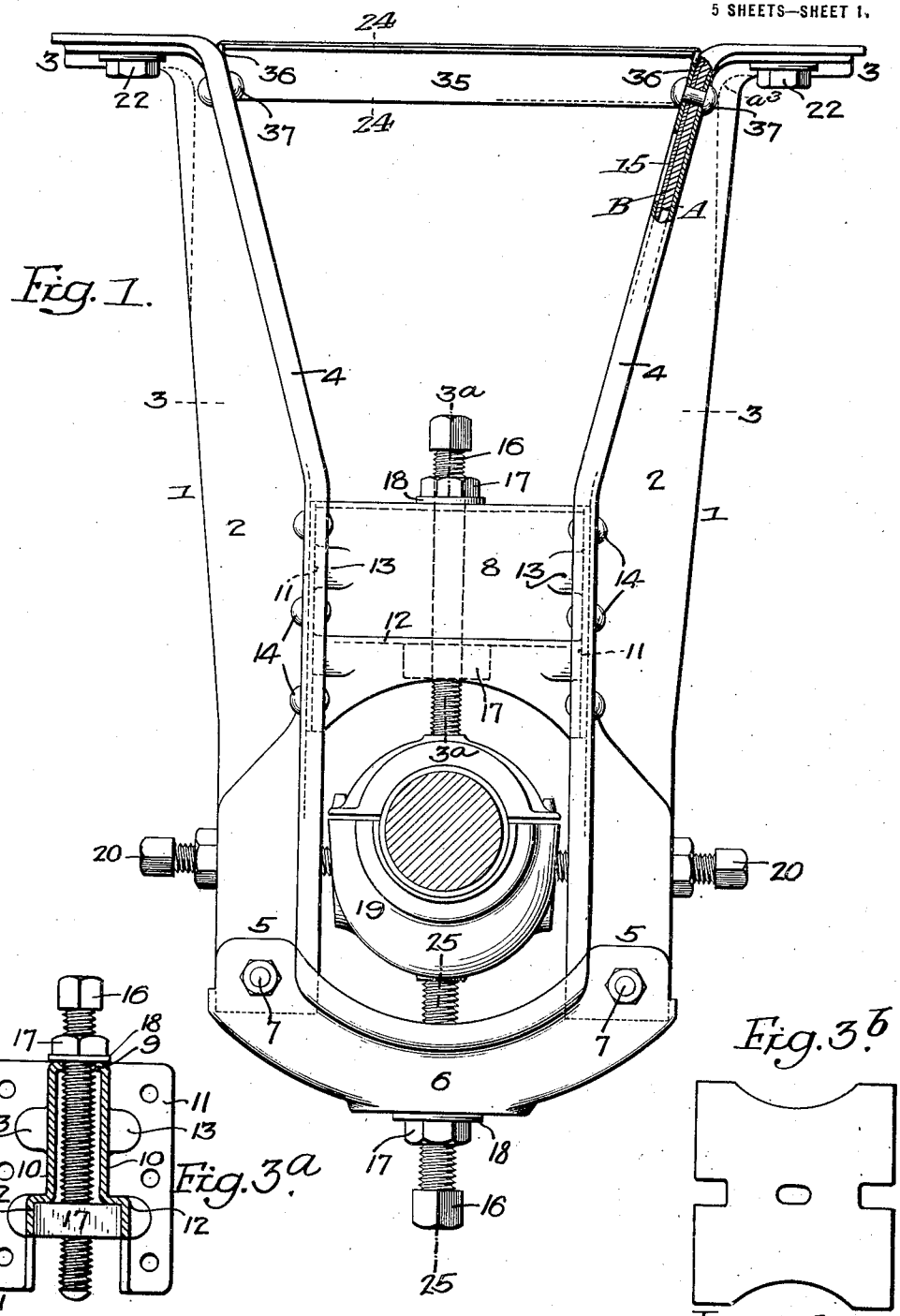



Fig. 1.




Fig. 3a.



Fig. 3b.

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5 SHEETS—SHEET 2.

Fig. 2

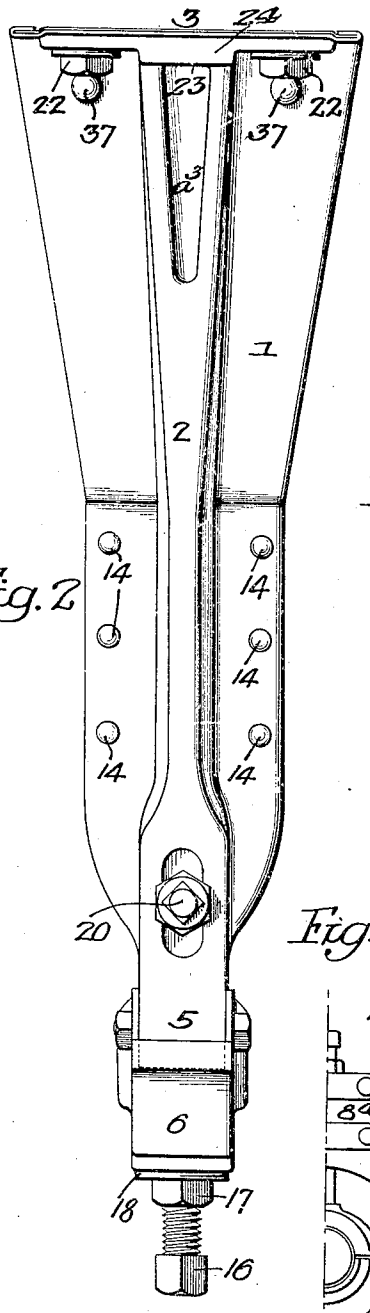



Fig. 3.

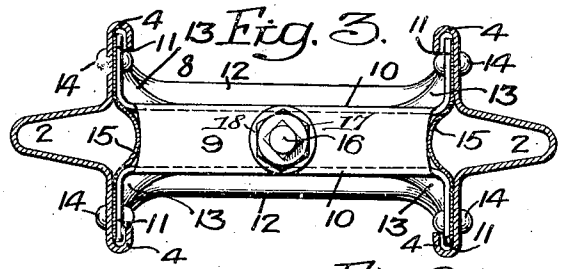



Fig. 24.




Fig. 23.

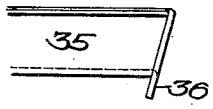



Fig. 25.

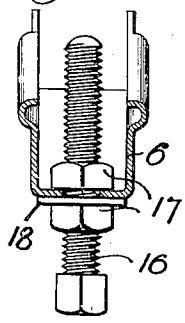



Fig. 22.

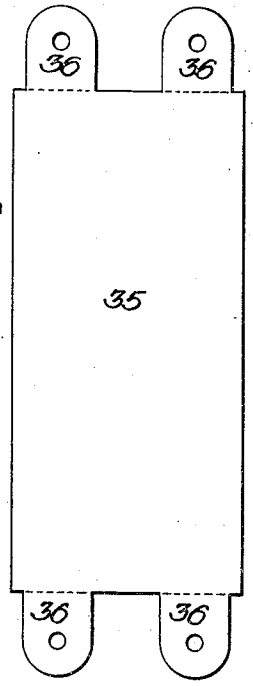
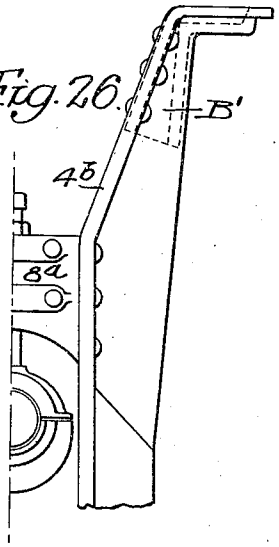



Fig. 26.




Witnesses—

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5 SHEETS—SHEET 3.

Fig. 4.

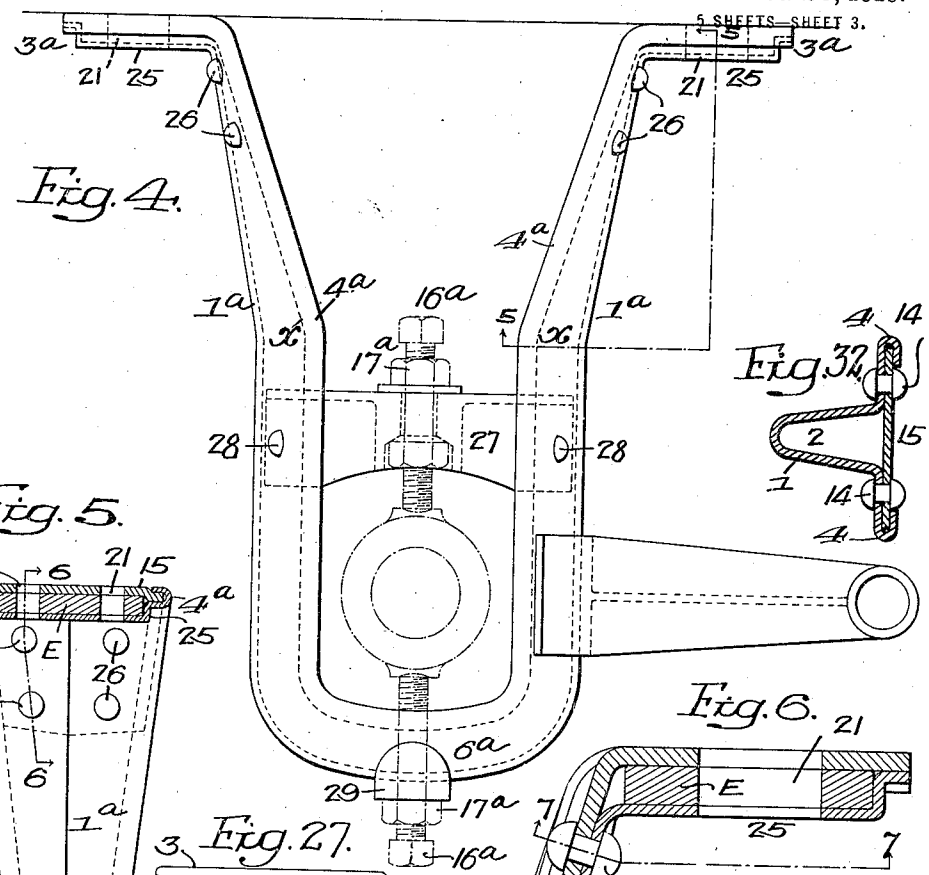



Fig. 32.




Fig. 5.




Fig. 27.

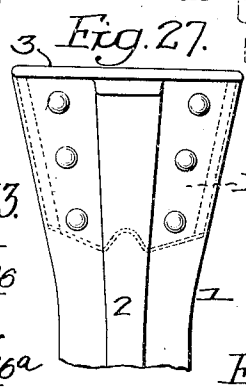



Fig. 6.

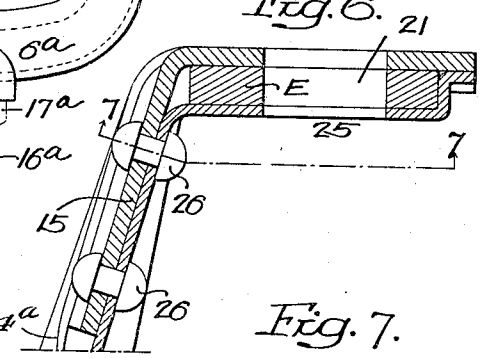



Fig. 33.

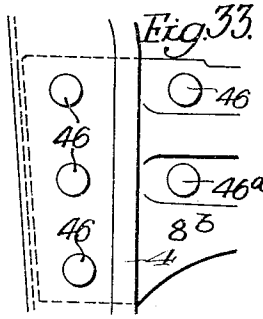



Fig. 7.

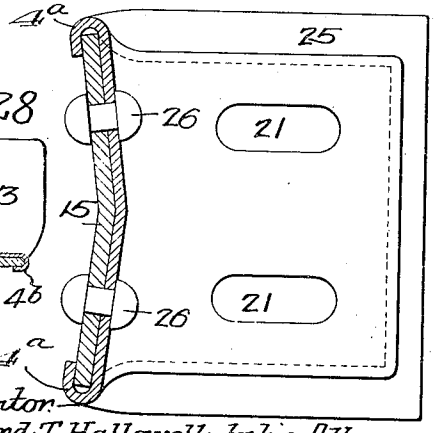



Fig. 28.

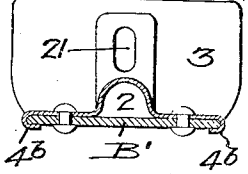
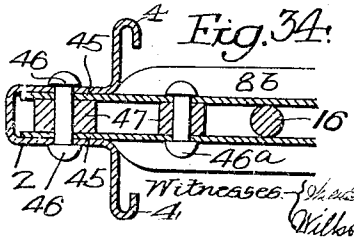



Fig. 34.



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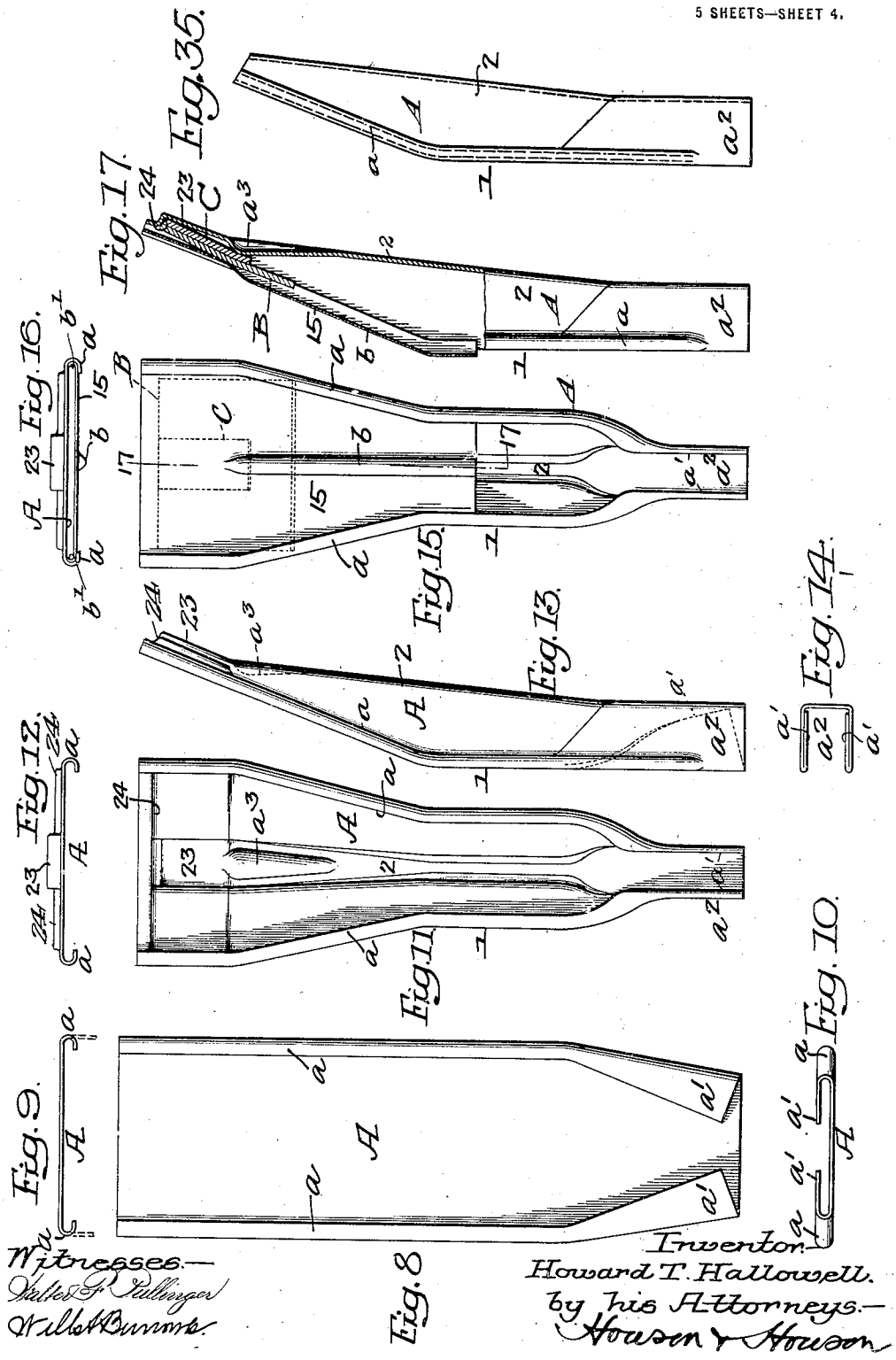
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**1,320,045.**

Patented Oct. 28, 1919.

5 SHEETS—SHEET 4.




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SHAFT HANGER.

APPLICATION FILED MAR. 26, 1913. RENEWED JUNE 24, 1918.

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5 SHEETS—SHEET 5.

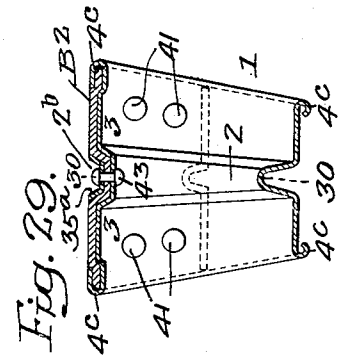


Fig. 29.

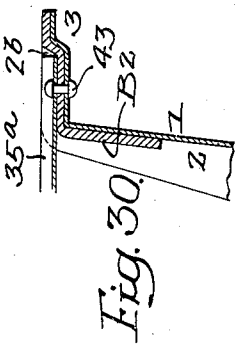


Fig. 30.

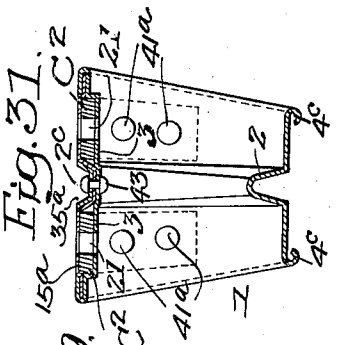


Fig. 31.

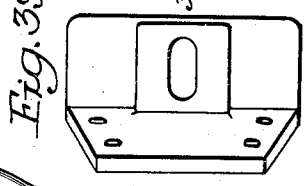


Fig. 39.

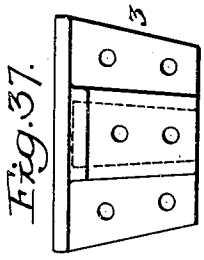


Fig. 37.

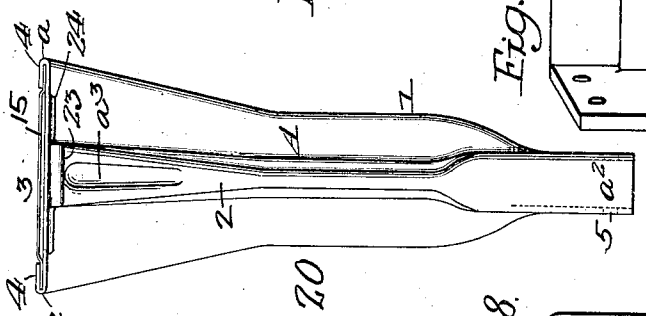


Fig. 20.

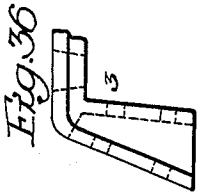


Fig. 36.

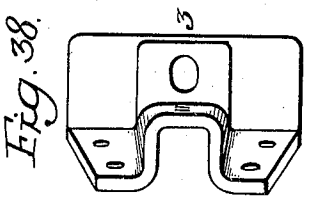


Fig. 38.

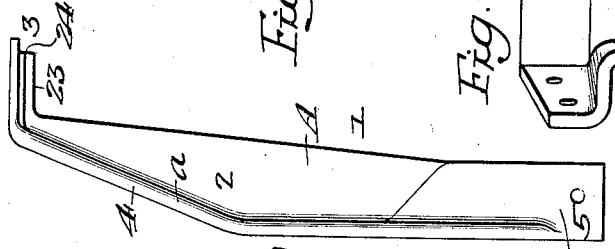


Fig. 19.

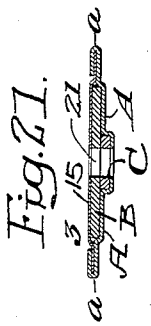


Fig. 21.

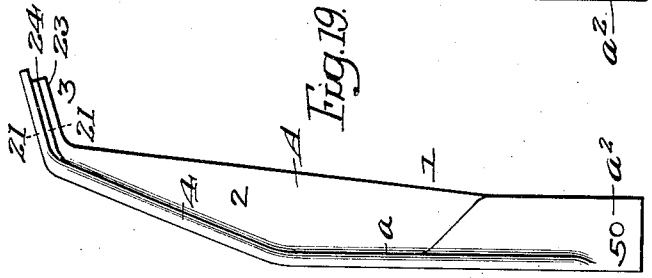


Fig. 18.

Witnesses.—

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by his Attorneys.—

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# UNITED STATES PATENT OFFICE.

HOWARD T. HALLOWELL, OF PHILADELPHIA, PENNSYLVANIA.

## SHAFT-HANGER.

1,320,045. Specification of Letters Patent. Patented Oct. 28, 1919.

Application filed March 26, 1913, Serial No. 756,926. Renewed June 24, 1918. Serial No. 241,690.

*To all whom it may concern:*

Be it known that I, HOWARD T. HALLOWELL, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in Shaft-Hangers, of which the following is a specification.

My invention relates to shaft supporting elements familiarly known as hangers, and consists of certain improvements in pressed sheet metal structures whereby I am enabled to produce a highly satisfactory article from relatively thin metal sheets; such construction including means in the shape of reinforcements for materially strengthening the same at vital points. An important object of my invention is to provide a structure which, in addition to its required and desired strength, shall possess considerable grace of contour and design and yet be simple in construction, relatively cheap and easily manufactured. While the general contour and arrangement of the parts making up my hanger are similar to those shown and described in my prior Patent No. 767,225, the feature of my present invention is the character of the reinforcing and connecting means employed for the purpose of strengthening the leg and foot of the hanger, particularly at the junction point of such leg and foot, whether integral or not, and the method or mode of assembling, shaping and attaching such reinforcing means with said leg and foot.

These and other features of my invention are more fully described hereinafter, reference being had to the accompanying drawings forming part thereof, in which:

Figure 1, is an elevation, partly in section, of one form of shaft hanger constructed in accordance with my invention;

Fig. 2, is a side elevation or edge view of the same;

Fig. 3, is a sectional plan view on the line 3—3, Fig. 1;

Fig. $3^a$, is a sectional elevation on the line $3^a$—$3^a$, Fig. 1, of the leg connecting member;

Fig. $3^b$, is a plan view of a blank from which the leg connecting member shown in Figs. 1, 3 and $3^a$, is formed;

Fig. 4, is a view in elevation of a modified construction within the scope of my invention;

Fig. 5, is a sectional view on the line 5—5, Fig. 4;

Fig. 6, is an enlarged sectional view of the modified form of hanger foot and leg, taken on the line 6—6, Fig. 5;

Fig. 7, is an inverted plan view of the foot, partly in section on the line 7—7, Fig. 6;

Fig. 8, is a view in elevation of a partially prepared blank from which a hanger leg is formed;

Figs. 9 and 10, are, respectively, top and bottom views of the blank shown in Fig. 8;

Fig. 11, is a view of a partially finished hanger leg, looking toward the inner side of the same;

Fig. 12, is a top view; Fig. 13, is a side elevation, and Fig. 14, is a bottom view of the hanger leg structure shown in Fig. 11.

Fig. 15, is a view similar to Fig. 11, with reinforcing elements in place and a covering plate engaged by the beaded edges of the hanger leg overlying the same;

Fig. 16, is a top view, and Fig. 17, is a side elevation, partly in section on the line 17—17, of the structure shown in Fig. 15;

Fig. 18, is a view illustrating the first bend applied to the combination finished hanger leg structure to form the foot;

Figs. 19 and 20, are, respectively, side and front elevations of a finished hanger leg structure;

Fig. 21, is a sectional view on the line 21—21, Fig. 18;

Figs. 22, 23, 24 and 25, are views illustrating details of the construction shown in Figs. 1, 2 and 3, and

Figs. 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38 and 39, are views showing modified constructions of various details of my improved hanger structure within the scope of my invention.

Shaft hangers of the type to which the details of construction forming the subject of my invention have been applied, comprise in general legs of pressed up sheet metal, and in the present instance, such legs, indicated at 1, have substantially centrally disposed longitudinal ribs 2 extending throughout their length, while their upper ends terminate in feet 3, preferably horizontally disposed for proper attachment to a support. The legs of my improved shaft hanger are provided with inwardly disposed rolled or beaded edges 4 throughout their length, and in the formation of the finished hanger said legs are preferably con-

nected together at their lower ends 5 by a suitable cross-piece, such as the cradle-shaped structure illustrated at 6 for instance, which cross-piece may be secured to said lower ends of the hanger legs, which are made substantially square to be embraced by the ends of said cross-piece 6, by bolts 7, as indicated in Fig. 1. In addition, the legs are connected together at a substantially central point by a cross-piece 8, more clearly illustrated in Figs. 3 and $3^a$, which cross-piece may be made from a blank such as shown in $3^b$ and comprises a double-walled structure having top and side webs 9 and 10, with flaring ends 11 which fit under the beaded edges 4 of the legs. In addition the side webs are pressed up at 12 for a purpose to be described, and raised portions 13 may be formed at the angle between said side webs and the flaring ends to strengthen them. Their flared ends are connected to the legs by rivets 14; plates 15 being preferably interposed between the flaring ends of said cross-piece and the inner wall of the legs; such plates giving a finish to the inside of said legs. The cross-pieces 6 and 8 carry bolts 16, with suitable inner and outer lock nuts 17, and washers 18, whereby a journal-box 19 may be properly disposed and supported in the hanger structure, and the latter may also be provided with horizontally disposed positioning bolts 20 for engagement with said journal-box.

The legs are shaped by bending or otherwise turned outwardly at their upper ends by suitable means to form the feet 3, whereby the hanger may be applied to a beam, joist, girder or other supporting structure, and these feet are slotted or apertured at 21 for the passage of bolts 22 whereby said hanger may be properly secured in place.

In the use of hangers of this type, lateral play of the same, due to any longitudinal movement of the shaft, tends to strain the feet at the bolt connections and cause the hanger to get out of plumb, thereby affecting its utility, and in many instances destroying its usefulness. To avoid this difficulty, I propose to provide reinforcing means for use at the junction of the leg and foot and extending into the foot; the reinforcing means and the leg being preferably bent simultaneously, thereby forming a reinforced foot element at a single operation.

Figs. 8 to 21, both inclusive, show the several steps in the method or process of forming shaft hanger legs in accordance with my invention, and the reinforcing means applied thereto comprise a plurality of plates which are applied to the end of the leg and after bending the end portion of the same to form the foot, said plates may be positively connected together by suitable means.

In Fig. 8, I have shown a partially prepared blank from which the shaft hanger legs are formed, comprising a sheet of metal A, having rolled or beaded edges $a$ throughout the greater part of its length and turned in portions $a'$ adjacent one end of the same which are continuous with said rolled or beaded edges. This plate with its prepared edges is then placed between suitable dies and formed or pressed into the shape shown in Figs. 11, 12, 13 and 14.

Fig. 11 is a view looking toward the inner side of the hanger leg, and this figure illustrates clearly the shape of the longitudinal side ribs 2 of the hanger; the squeezing together of the lower portion of the legs to form a substantially square channel construction $a^2$ for connection with the lower cross-piece 6; the shaping of the upper part of the plate, subsequently forming the foot portion, to receive reinforcing plates B and C whereby such portion of the hanger is strengthened, and the formation of a short vertical rib $a^3$ extending inwardly and formed in the upper portion of the outer face of the rib 2 of the leg, which rib $a^3$ coöperates with said reinforcing plates to properly position the latter. The reinforcing plate B extends substantially from side to side of the plate A, while the reinforcing plate C is smaller and rests in a depression 23 of the upper part of the rib 2, the latter having a wall 24 against which said plates abut while the lower end of the plate C is in engagement with the upper part of the short rib $a^3$.

To give the interior of the hanger structure a finish, I provide the cover plate 15, in which a central strengthening rib $b$ may be formed, and such plate may have beaded or rounded edges $b'$ which may be engaged by the rolled or beaded edges of the plate A, and when these parts are slipped together in the manner indicated in Figs. 15, 16 and 17, they retain in place the reinforcing plates B and C; the plate 15 being bent or shaped to engage the plate B. The bolt aperture may be centrally disposed, and the plate C is designed as the main reinforcement through which said aperture passes, although two bolts may be employed; passing also through the reinforcing plate B. Figs. 15 and 17 show clearly the manner of assembling the several reinforcing pieces. The end of the leg structure comprising the plates A, B and C and the cover plate 15, is then bent over in the manner indicated in Figs. 18, 19 and 20; Figs. 19 and 20 being, respectively, an edge view and side elevation of the finished leg.

In this bending over of the foot portion, the beaded edge of the plate forming the major portion of the leg is flattened down against the edges of the cover plate 15, and the internally placed plates B and C are embraced at the sides by the shaped wall of

said main plate. The leg is then provided with the necessary apertures for the reception of the positioning bolts, rivets, &c.

The modified construction shown in Figs. 4, 5, *et seq.*, comprises a one-piece hanger, by which is meant that the major portion of the legs $1^a$ and feet $3^a$ with a connecting web $6^a$ are in one piece, as shown. The section of metal making up this structure is provided with beaded edges $4^a$ serving to stiffen and strengthen the same; which beaded edges extend throughout the length of the structure, and reinforcing plates are provided at the junction of the feet with the legs.

$1^a$ represents the legs, which are substantially V-shaped in cross-section, with beaded edges $4^a$, and these legs are substantially parallel with each other from a point $x$ to the connecting web $6^a$, while above the point $x$ to the feet, said legs flare in two directions, spreading apart from the vertical axis of the structure, and being partially flattened in the formation of said feet.

In the operation of forming the feet, the web of the hanger is depressed as clearly indicated at 25, Figs. 5 and 6, and in this depression, a plate E is placed, and over the same the cover plate 15; the edges of which are caught under the beaded or turned edges $4^a$ of the hanger legs. The legs are subsequently bent into the foot portion of the desired shape, and in such bending operation, the plate 15 is retained by the formation of a wall around the same, as clearly shown in Figs. 5 and 6, and held in place by said plate E which is secured to the leg of the hanger by rivets 26.

In order to connect the legs of the hanger together and at the same time provide the necessary means of mounting the upper positioning screw for the journal-box, this form of hanger may be provided with the form of cross-piece shown in Figs. 1, 2 and 3, or with a suitable cast metal cross-piece 27 such as shown in Fig. 4. This cross-piece is connected to the hanger legs by rivets 28 and may be provided with the usual aperture for the passage of a bolt $16^a$ to engage the journal-box, which bolt carries the usual lock nuts $17^a$ common to structures of this type. The lower part of the hanger may have an external block 29 shaped to fit the angular wall of the lower integral cross-piece $6^a$; the lower bolt $16^a$ being also provided with suitable lock nuts $17^a$ inside and outside the wall of said cross-piece; one of said nuts engaging the block 29 whereby said lower bolt may be properly supported in position to engage the journal-box.

In the structure shown in Figs. 1, 2 and 3, I preferably connect the upper ends of the legs adjacent the feet by means of a channel-bar 35, preferably of pressed metal, having integral ears 36 which may be secured to said leg by rivets 37; part of Fig. 1 being shown in section to clearly illustrate this connection. A plan view of the blank from which this connecting channel member is formed, is shown in Fig. 22. The end of the finished structure for connection with the leg is shown in Fig. 23, and Fig. 24 is a cross-section of the channel member on the line 24—24, Fig. 1.

Fig. 25 is a sectional view on the line 25—25 of the cross-piece 6 connecting the lower ends of the shaft hanger legs.

Fig. 26 shows a fragmentary part of modified hanger leg structure in which a single reinforcing member B′ is held between rolled or beaded edges $4^b$ of the plate forming the leg, and in which construction a cover plate 15 has been omitted. A modified form of connecting member $8^a$ for the hanger legs is also shown. Fig. 27 is a view in elevation of the foot of the structure shown in Fig. 26, and Fig. 28 is an inverted sectional plan view of the leg and foot, showing the centrally depressed portion of the latter having the bolt aperture.

In Figs. 29, 30 and 31, I have shown, respectively, an end elevation partly in section and a vertical section on the line 30—30, Fig. 29, of another form of hanger leg structure, and an end elevation partly in section of still another form of hanger leg structure, in which different forms of reinforcing means for the junction of the leg and foot are employed.

In the structure shown in Figs. 29 and 30, the leg is bent at the foot, and a groove or depression $2^b$ following the contour and shape of the longitudinal rib 2 of the leg is also produced in the foot portion, into which portion a single reinforcing plate $B^2$ is placed and given the same contour as the leg and foot and subsequently secured to the leg by rivets 41; the leg in this instance also having rolled or beaded edges $4^c$ engaging said plate. In this structure, the cover plate 15 is omitted.

In the structure shown in Fig. 31, two reinforcing plates $C^2$, extending from the leg into the foot, are employed, with a cover plate $15^a$; the plates $C^2$ being disposed on opposite sides of the depression $2^c$ formed by grooving the foot in line with the rib 2 of the leg. The cover plate $15^a$ covering and inclosing these plates and confined by the rolled or turned edges $4^c$ of the hanger leg is also grooved; said cover plate and the plates $C^2$ being secured to the hanger leg by rivets $41^a$, in the manner indicated.

In the structures shown in Figs. 29, 30 and 31, I employ a channel-bar connecting element $35^a$ for the hanger legs at the feet thereof, which may be secured in place by rivets 43; such element being disposed in the depressed portion of the feet formed in line with the ribs of the legs.

In Fig. 32, I have shown a cross-sectional view of a hanger leg, illustrating the manner in which the same is stiffened by the use of the cover plate 15.

In Figs. 33 and 34, I have shown a modified form of cross-bar $8^b$, which is provided with ends 45 extending into the ribs 2 of the hanger legs; being confined thereto by rivets 46. This cross bar is in the form of two plates, spaced apart for the passage of the journal-box positioning bolts 16; and blocks 47 may be provided for this purpose through which rivets 46 and $46^a$ pass. In such construction, the cover plate 15 is omitted adjacent the cross-bar connection with the legs.

In some instances, I may provide a leg without an integral foot, a separate foot being attached by suitable means after the leg is finished. Such form of leg I have shown in Fig. 35. In Figs. 36, 37, 38 and 39, I have illustrated forms of cast iron feet which may be employed with a hanger leg of this type. These feet may be riveted to the legs and the legs may be connected by a bar similar to the bar 35 shown in Fig. 1.

I claim:

1. The combination with a shaft hanger element of pressed sheet metal and comprising a leg and foot thereof, of reinforcing means made of metal which may be bent disposed at the point of junction between the leg and foot, said reinforcing means comprising plates of different size, the hanger leg being recessed to receive the same, and a cover plate for said reinforcing members which may be bent simultaneously with the bending of the leg and the reinforcing plates.

2. The combination with a shaft hanger element of pressed sheet metal and comprising a leg and foot thereof, of reinforcing means made of metal which may be bent disposed on the inside of said element at the point of junction between the leg and foot, said reinforcing means comprising plates of different size and thickness, the hanger leg being recessed to receive the same, and a cover plate for said reinforcing members which may be bent simultaneously with the bending of the leg and the reinforcing plates.

3. The combination with a shaft hanger element of pressed sheet metal and comprising a leg and foot thereof, of reinforcing means made of sheet metal and disposed on the inside of said element at the point of junction between said leg and foot, said reinforcing means comprising plates of different size, the hanger leg being recessed to received the same, a cover plate for said reinforcing members which may be bent simultaneously with the bending of the reinforcing plates, and means carried by the leg element for securing said cover plate in place.

4. In a shaft hanger of pressed sheet metal, the combination of a leg, a foot, said leg having rolled or beaded edges and a centrally disposed longitudinal rib, a plurality of reinforcing members at the junction of the foot and leg, the metal comprising said foot and leg being recessed or socketed to receive said reinforcing members, and a cover plate for said reinforcing members retained by the rolled edges of the hanger leg.

5. In a shaft hanger of pressed sheet metal, the combination of a leg, a foot, said leg having rolled or beaded edges and a centrally disposed longitudinal rib, a plurality of reinforcing members of different size and thickness at the junction of the foot and leg, the metal comprising said foot and leg being recessed or socketed to receive said reinforcing members, and a cover plate for said reinforcing members retained by the rolled edges of the hanger leg, said cover plate reinforcing members and the foot portion of the leg having a strengthening rib formed by depressing a portion of the metal at the foot portion.

6. In a shaft hanger of pressed sheet metal, the combination of a leg, a foot, said leg having rolled edges and a centrally disposed longitudinal rib, a plurality of reinforcing members at the junction of the foot and leg, the metal comprising said foot and leg being recessed or socketed to receive said reinforcing members, a cover plate for said reinforcing members retained by the rolled edges of the hanger leg, and rivets for securing said parts in rigid relationship, said leg having a depression forming an internal rib below the foot which serves to position one of the reinforcing elements prior to the bending of the structure to form the reinforced foot portion.

7. In a shaft hanger of pressed sheet metal, the combination of a leg, a foot integral therewith, said leg having rolled edges and a centrally disposed longitudinal rib, a plurality of reinforcing members disposed on the inside of the leg at the junction of the foot and leg, the metal comprising said foot and leg being recessed or socketed to receive said reinforcing member, a cover plate disposed on the inside of said leg over said reinforcing members and retained by the rolled or beaded edges of the hanger leg, and rivets for securing said parts in rigid relationship, said leg having an internal rib below the foot which serves to position one of the reinforcing elements prior to the bending of the structure to secure the same in place, and said cover plate, reinforcing members and the foot portion of the leg having a strengthening rib formed by depressing a portion of the metal at the foot portion.

8. In a shaft hanger, a leg and foot inte-

grally connected, said members having continuous beaded edges, and a plurality of reinforcing plates of different size at the junction of said foot and leg, confined in place by said beaded edges, said leg having a recess receiving one of said reinforcing plates.

9. In a shaft hanger, a leg and foot integrally connected, said members having continuous beaded edges, reinforcing plates at the junction of said foot and leg, the latter being pressed up to form recesses for said reinforcing plates, the latter being retained by the beaded edges, said beaded edges lying flush with the reinforcing plates so that all of said parts are in close contact with the support for the hanger.

10. In a shaft hanger, a leg and foot integrally connected, said members having continuous beaded edges, reinforcing plates at the junction of said foot and leg, the latter being pressed up to form recesses receiving said plates, and a cover plate for said reinforcing plates retained in position by said beaded edges, said cover plate being depressed at its edges so that the metal of the beaded edges of the leg will lie flush with the same so that all of said parts are in close contact with the support for the hanger.

11. In a shaft hanger leg, the combination of a plate having a longitudinal rib, beaded edges, a cover plate retained by said beaded edges, and reinforcing plates interposed between said cover plate and the wall of the shaft hanger leg.

12. In a shaft hanger of pressed sheet metal, the combination of a pair of legs, feet integral with said legs, the metal forming said legs having rolled edges and centrally pressed up to form a longitudinal rib, a plurality of reinforcing members at the junction of each foot and leg, the metal comprising each foot and leg being recessed or socketed to receive said reinforcing members, cover plates for said reinforcing members retained by the rolled edges of the hanger legs, a cross-piece made of a plurality of parts connecting said legs, the ends of said parts being engaged by the beaded edges of the legs, rivets for securing the parts of said cross-piece together, and rivets for securing said cross-piece to the legs.

13. In a shaft hanger of pressed sheet metal, the combination of a pair of legs, feet integral with said legs, the metal forming said legs having rolled edges and centrally pressed up to form a longitudinal rib, a plurality of reinforcing members at the junction of each foot and leg, the metal comprising each foot and leg being recessed or socketed to receive said reinforcing members, cover plates for said reinforcing members retained by the rolled edges of the hanger legs, a cross-piece made of a folded piece of metal connecting said legs, the ends of said metal being flared and engaged by the beaded edges of the legs, and rivets for securing said cross-piece to the legs.

14. In a shaft hanger of pressed sheet metal, the combination of a pair of legs, feet integral with said legs, the metal forming said legs having rolled edges and centrally pressed up to form a longitudinal rib, cover plates for said legs retained by the rolled edges of the same, a cross-piece having a plurality of vertical walls connecting said legs, the ends of said walls being bent to overlie said cover plates and being engaged by the rolled edges of the legs, and means for securing said cross-piece to the legs.

15. In a shaft hanger of pressed sheet metal, the combination of a pair of legs, feet integral with said legs, the metal forming said legs having rolled edges and centrally pressed up to form a longitudinal rib, cover plates for said hanger legs retained by the rolled edges of the same, a cross-piece made of a folded piece of metal connecting said legs, the ends of said cross-piece being flared and overlying said cover plate and being engaged by the beaded edges of the legs, and means for securing said cross-piece to the legs.

16. In a shaft hanger of pressed sheet metal, the combination of a pair of legs, feet integral with said legs, the metal forming said legs having rolled edges and centrally pressed up to form a longitudinal rib, cover plates for said legs retained by the rolled edges of the same, a cross-piece connecting said legs, the ends of said cross-piece being engaged by the beaded edges of the legs, and means for securing said cross-piece to the legs.

17. In a shaft hanger, a leg and foot integrally connected and disposed at an angle with respect to each other, said members having continuous beaded edges, and reinforcing plates at the junction of said foot and leg, confined in place by said beaded edges; the metal of said foot and leg being recessed for the reception of said reinforcing plates.

18. In a shaft hanger, a sheet metal leg having a longitudinal rib centrally disposed and beaded edges, reinforcing plates carried by said leg at the foot portion of the same, a cover plate engaged by the beaded edges, and a support for one of the reinforcing plates during assembly of the parts comprising an internal rib pressed up from the longitudinal rib and disposed adjacent the foot of the leg.

19. In a shaft hanger, the combination of a pair of legs made of sheet metal and each having a longitudinal outwardly projecting rib with beaded edges flanking said rib and turned inwardly, a connecting and spacing member between said legs, means for securing said connecting member to the legs, and plates disposed on the inside of said legs across the hollow of the ribs of the

same and underlying the beaded edges; said plates being interposed between the connecting member and the legs and held by the same securing means.

20. In a shaft hanger. a sheet metal leg having inturned beaded edges, supplemental sheet metal reinforcing means applied thereto and disposed on the inside of said leg and engaged by said inturned beaded edges, and means carried by the leg for securing said reinforcing means in place.

21. In a shaft hanger, a sheet metal leg having a longitudinal rib substantially centrally disposed and beaded edges bent over toward the central plane of the hanger and flanking said rib and disposed on the inside of the leg, a foot, and a plurality of reinforcing plates connecting said leg and foot and underlying said beaded edges on the inner side of the leg.

22. In a shaft hanger, a leg having a hollow outstanding rib and beaded edges flanking said rib, a plate disposed on the inside of said leg and engaged by said beaded edges, and means for securing said plate to the leg for the purpose of preventing spreading of the same.

23. In a shaft hanger, a sheet metal leg having a longitudinal rib centrally disposed and beaded edges, reinforcing plates carried by said leg at the foot portion of the same, and a cover plate caught by the beaded edges; said leg having a support for one of the reinforcing plates during assembly of the parts and a wall at the end of said leg against which the reinforcing plates abut; the leg plate being recessed to receive the reinforcing plates.

24. In a shaft hanger, a pair of legs each comprising a plate having a longitudinal rib and inturned beaded edges, a cover plate retained by said beaded edges, bracing members spacing and connecting said legs, one of said bracing members having portions overlying the cover plate and underlying the beaded edges, and securing rivets passing through the plates of the legs, cover plate and bracing member.

25. In a shaft hanger, a leg and foot of pressed sheet metal, said members having beaded edges bent over toward the central plane of the hanger and disposed on the inside of the leg, and reinforcing means disposed at the junction of said foot and leg on the inner side of the latter and confined in place by said beaded edges.

26. In a shaft hanger, a leg and foot of pressed sheet metal, said members having beaded edges bent over toward the central plane of the hanger and disposed on the inside of the leg, and a plurality of reinforcing plates at the junction of said foot and leg on the inner side of the latter and confined in place by said beaded edges.

27. In a shaft hanger, a pair of legs having inturned beaded edges, a one-piece sheet-metal brace connecting said legs, outturned flanges carried by the ends of said connecting brace and underlying the inturned beaded edges of said legs, and rivets securing said flanges to the legs; said connecting brace having a channel of different widths and the wider portion forming a recess for the reception of a nut.

28. In a shaft hanger, a leg made of pressed up sheet metal having a longitudinal rib and inwardly disposed beaded edges flanking said rib and extending into the same at the lower end of the leg, and a cover plate extending across the inner face of said leg and underlying the beaded edges of the same.

29. In a shaft hanger, a sheet metal leg, and a supplemental reinforcing plate applied thereto and disposed on the inside of said leg, the latter having beaded edges inwardly disposed which overlie the marginal edges of and retain said supplemental reinforcing plate in place.

30. In a shaft hanger, a leg having a longitudinal rib and beaded edges flanking said rib, a foot, a plurality of reinforcing plates connecting said leg and foot, and a cover plate extending across the inside of said leg and held in place by said beaded edges.

31. In a shaft hanger, a pair of legs made of sheet metal bent to shape, feet for said legs, said legs having beaded edges, a cover plate extending across the inner face of the legs and retained by said beaded edges, and reinforcing plates at the junction of the foot and leg and disposed outside said cover plate.

32. In a shaft hanger, a pair of legs, each comprising a plate of sheet metal pressed to form a longitudinal rib and beaded edges, a cover plate retained by said beaded edges, feet and reinforcing means connecting said feet and legs, said reinforcing means having portions overlying the cover plate and underlying the beaded edges, and means for securing said feet, leg plates, cover plates and reinforcing means together.

33. The combination with a shaft hanger element of pressed sheet metal and comprising a leg and foot thereof, of reinforcing means made of metal which may be bent disposed at the point of junction between the leg and foot; said reinforcing means comprising plates of different size, and a cover plate for said reinforcing means which may be bent simultaneously with the bending of the leg and the reinforcing plates.

34. The combination with a shaft hanger element of pressed sheet metal and comprising a leg and foot thereof, of reinforcing means made of metal which may be bent

disposed on the inside of said element at the point of junction between the leg and foot; said reinforcing means comprising plates of different size and thickness, and a cover plate for said reinforcing means which may be bent simultaneously with the bending of the leg and the reinforcing plates.

35. In a shaft hanger, the combination of a pair of legs made of sheet metal and each having a longitudinal outwardly projecting rib with inwardly turned edges flanking said rib, a connecting and spacing member between said legs, means for securing said connecting member to the legs, and plates disposed on the inside of said legs across the hollow of the ribs of the same and underlying the inwardly turned edges; said plates being interposed between the connecting member and the legs and held by the same retaining means.

36. In a shaft hanger, a sheet metal leg having inturned edges, and supplemental sheet metal reinforcing means applied thereto and disposed on the inside of said leg and engaged by said inturned edges.

37. In a shaft hanger, a sheet metal leg having a longitudinal rib substantially centrally disposed and inturned edges bent over toward the central plane of the hanger and flanking said rib and disposed on the inside of the leg, a foot, and sheet metal reinforceing means connecting said leg and foot and underlying said inturned edges on the inner side of the leg.

38. In a shaft hanger, a leg having a hollow outstanding rib and inturned edges flanking said rib, a plate disposed on the inside of said leg and engaged by said inturned edges, and means for securing said plate to the leg for the purpose of preventing spreading of the same.

39. In a shaft hanger, a sheet metal leg having a longitudinal rib centrally disposed and inturned edges, reinforcing plates carried by said leg at the foot portion of the same, and a cover plate caught by the inturned edges; said leg having a support for one of the reinforcing plates during assembly of the parts and a wall at the end of said leg against which the reinforcing plates abut.

40. In a shaft hanger, a pair of legs each comprising a plate having a longitudinal rib and inturned edges, a cover plate retained by said inturned edges, bracing members spacing and connecting said legs, one of said bracing members having laterally extending portions overlying the cover plate and underlying the inturned edges, and securing rivets passing through the plates of the legs, cover plates and laterally extending portions of said bracing member.

41. In a shaft hanger, a leg and foot of pressed sheet metal, said members having edges bent over toward the central plane of the hanger and disposed on the inside of the leg, and reinforcing means disposed at the junction of said foot and leg on the inner side of the latter and confined in place by said bent over edges.

42. In a shaft hanger, a leg and foot of pressed sheet metal, said members having edges bent over toward the central plane of the hanger and disposed on the inside of the leg, and a plurality of reinforcing plates at the junction of said foot and leg on the inner side of the latter and confined in place by said bent over edges.

43. In a shaft hanger, a pair of legs having inturned edges, a one-piece sheet metal brace substantially U-shape in cross section connecting said legs, outturned ears or flanges carried by the ends of said connecting brace and underlying the inturned edges of said legs, and rivets securing said ears or flanges to the legs; the side walls of said connecting brace being shaped to form a recess for the reception of a nut.

44. The combination with a shaft hanger element of pressed sheet metal and comprising a leg and foot thereof, of reinforcing means made of sheet metal and disposed on the inside of said element at the point of junction between said leg and foot; the hanger leg being recessed to receive said reinforcing means, a cover plate for said reinforcing means which may be bent simultaneously therewith and with the bending of the shaft hanger element, and means carried by the leg element for securing said cover plate in place.

45. In a shaft hanger of pressed sheet metal, the combination of a leg, a foot, said leg having inwardly turned edges and a centrally disposed longitudinal rib, reinforcing members at the junction of the foot and leg, the metal comprising said foot and leg being recessed or socketed to receive said reinforcing members, and a cover plate for said reinforcing members retained by the inwardly turned edges of the hanger leg.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses.

HOWARD T. HALLOWELL.

Witnesses:

MURRAY C. BOYER,

JOS. H. KLEIN.

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