No. 874,062. PATENTED DEC. 17, 1907.

H. F. GADE.

SHAFT HANGER.

APPLICATION FILED SEPT. 14, 1904.

3 SHEETS—SHEET 1.

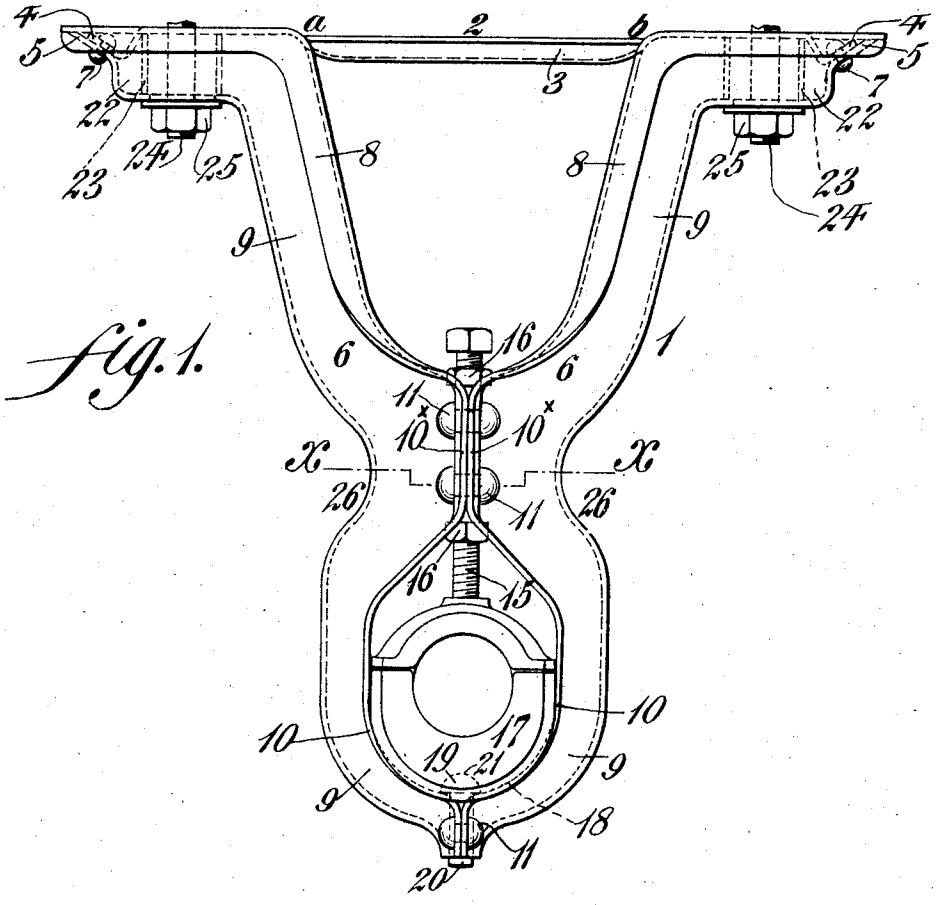

Fig. 1.

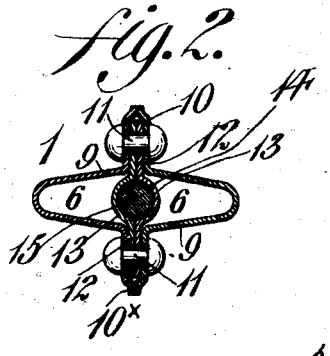

Fig. 2.

Witnesses

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3 SHEETS—SHEET 2.

fig. 3.

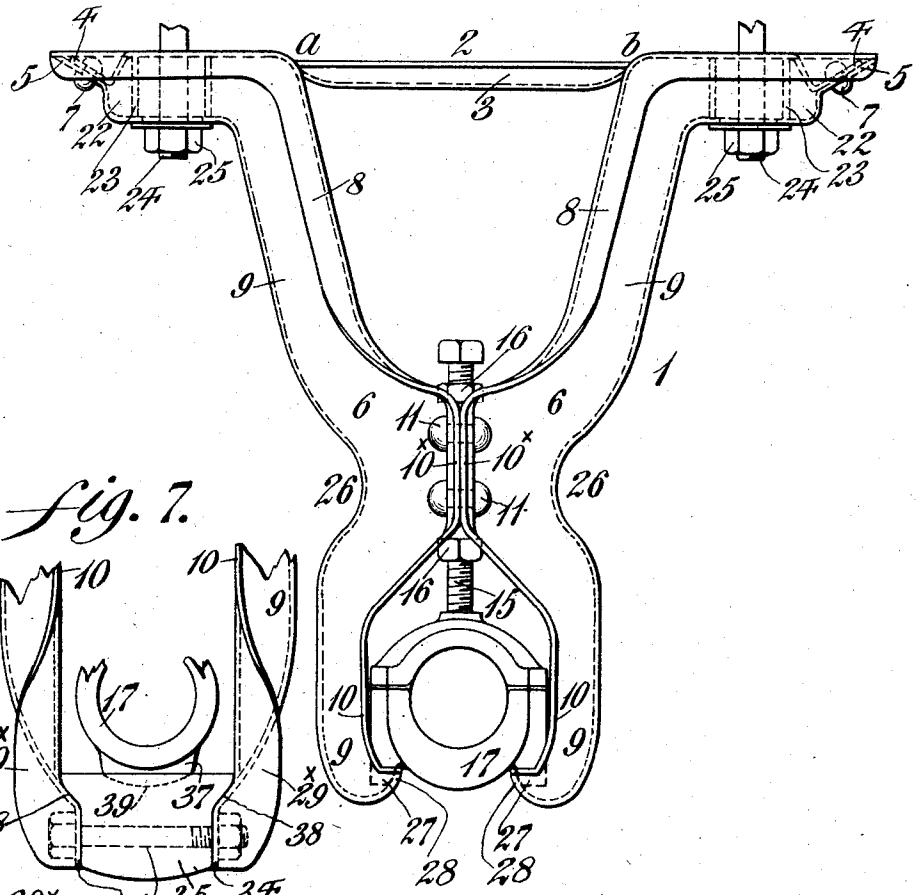

fig. 7.

fig. 8.

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3 SHEETS—SHEET 3.

Fig. 4.

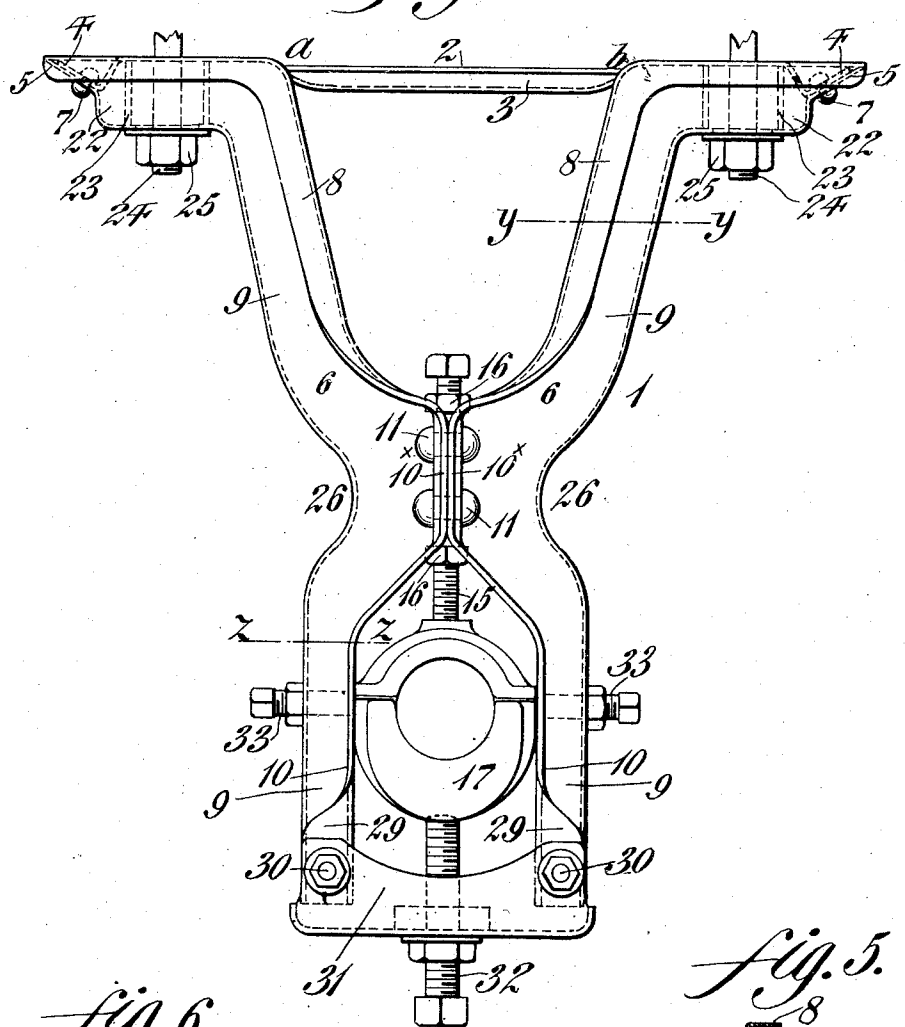
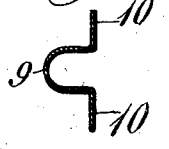


Fig. 6.



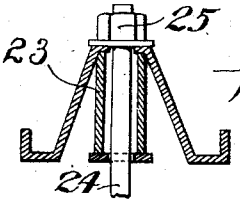


Fig. 5.

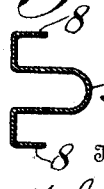


Fig. 9.

Witnesses

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UNITED STATES PATENT OFFICE.

HARALD F. GADE, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO STANDARD PRESSED STEEL COMPANY, OF PHILADELPHIA, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

SHAFT-HANGER.

No. 874,062. Specification of Letters Patent. Patented Dec. 17, 1907.

Application filed September 14, 1904. Serial No. 224,375.

To all whom it may concern:

Be it known that I, HARALD F. GADE, a subject of the King of Norway, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Shaft-Hangers, of which the following is a specification.

My invention consists of an improved construction of a pressed-sheet-metal hanger, which can be cheaply manufactured and which is of great strength and is light in weight and the novel features of which are fully set forth and pointed out in the claims.

My invention further consists in so forming the legs as to take the place of the usual brace intermediate their ends.

Figure 1 represents a side elevation of a shaft hanger embodying my invention. Fig. 2 represents a horizontal section on line *x*—*x* Fig. 1. Figs. 3 and 4 represent side elevations of modified forms of hangers. Figs. 5 and 6 represent horizontal sections on lines *y*—*y* and *z*—*z* respectively in Fig. 4. Fig. 7 represents a side elevation of the lower portion of a hanger of another modified form. Fig. 8 represents a plan view of the underside of a portion of the hanger seen in Fig. 7. Fig. 9 represents a vertical cross-section of the foot of my hanger through the bolt 24.

Similar numerals of reference indicate corresponding parts in the figures.

Referring to the drawings: Referring to Figs. 1 and 2, 1 designates a shaft hanger, preferably of wrought or pressed steel, which comprises a plate 2 formed with a bulging portion 3 which strengthens said plate between the points *a* and *b*. The plate 2 is bent as at 4 so that said bend may be secured to the bent portions 5 of the feet 22 by rivets 7 or other suitable fastenings.

The legs 6 are pressed into the desired shape which consists of the flanges 8 and longitudinal hollow strengthening ribs 9, it being noted that the flanges 8 are omitted from a point about midway of the length of the hanger to the lower extremity thereof. The legs 6 are secured together by rivets 11 or their equivalents which pass through the flanges 10 which unite the flanges 8 and the ribs and said rivets pass through the plates 12. In the form illustrated flanges 10 are bent at $10^{\times}$ at which point it will be seen that the flanges extend longitudinally when considered with reference to the legs proper and also laterally when considered with reference to the hollow strengthening ribs 9 so as to make contact. The plates are bent as at 13 so that when placed in position in said hanger 1, they form an eye 14 through which the bolt 15 is passed, said bolt having fitted thereon the nuts 16 whereby the end of the bolt 15 may be held in contact with the journal box 17 and retain the latter in position in the hanger 1. Said box is furthermore held in position in the form shown in Fig. 1 by a groove 18 on its underside within which fit the flanges 10 and also by the head 19 of a pin 20 which fits in a socket 21 in the lower portion of the box 17.

Interposed between the plate 2 and the ribbed top of each foot 22 of the legs 6 in all of the forms is a stiffening thimble 23 through which is passed the bolt 24 which sustains the hanger 1 from a ceiling or other point of support, the object being to prevent said feet from being bent out of shape when nuts 25 are tightened.

By forming the hanger 1 with recessed portions 26, a graceful outline is produced, a considerable saving in metal or increase in strength is effected and many operations required to produce the usual intermediate brace are eliminated.

In Fig. 3 the journal box 17 is provided with lugs 27 which fit in the spaces between the walls of the ribs 9 at the lower ends of the legs 6 which are bent to form brackets 28 which assist the lugs 27 in retaining the box 17 in position in the hanger.

In Fig. 4 the flanges 10 are bent at their lower extremities to form flanges 29 which are parallel to the flanges 8 and receive the bolts 30 which are passed through the ribs 9 and also through the yoke 31 to secure the latter to the legs 6. It is evident that flange 8 may be retained at this point taking the place of flange 29. The yoke 31 has fitted therein a bolt 32 which bears against the underside of the box 17 to support the latter. The ribs 9 adjacent to the box 17 have fitted therein bolts 33 whose ends bear against said box and assist in retaining the latter in its proper position, said bolts being provided with jam nuts.

In Fig. 7 the flanges 10 are bent to form flanges $29^{\times}$, which are connected by webs 34 between which latter the yoke 35 is placed. It is held in position by the bolt 36 and the brackets formed by inclined faces 38 be-

tween the webs 34 and ribs 9. The box 17 is formed with a projection 37 on its underside which engages a socket 39 in the base 35.

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

1. A shaft hanger comprising a pair of legs spaced at the upper or foot ends and near the lower ends thereof, each having a hollow longitudinally extending rib said legs bodily converging from both directions to approximately the center of the hanger and laterally extending portions at this point united to each other by suitable fastening devices and a journal box located between the lower ends of said legs.

2. A shaft hanger comprising a pair of legs spaced at the upper or foot ends and near the lower ends thereof, each having a hollow longitudinally extending rib, said legs bodily converging in each direction to approximately the center of the hanger, laterally extending portions at this point abutting each other, thereby making a central brace integral with the legs, and means passing through said abutting portions and rigidly securing the same together.

3. A shaft hanger formed of two longitudinally ribbed channels having laterally extending flanges united flange to flange near their centers and separated at one end to embrace and support a hanger box and spaced at the other end.

4. A shaft hanger comprising flanged opposed members ribbed upon the outside, the members being separated at both ends, the members being brought together within substantially the median line of the hanger and united through their flanges.

5. A sheet metal shaft hanger comprising a hollow foot with an aperture therein and a thimble supporting the foot around the aperture.

6. A sheet metal shaft hanger comprising a ribbed foot portion and a reinforcing thimble in the ribbed portion of the foot.

7. A sheet metal shaft hanger comprising a hollow foot and a thimble in the hollow of the foot.

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