(Model.)

R. WHITEHILL.

SHAFT HANGER.

No. 279,624. Patented June 19, 1883.

Fig. 1.

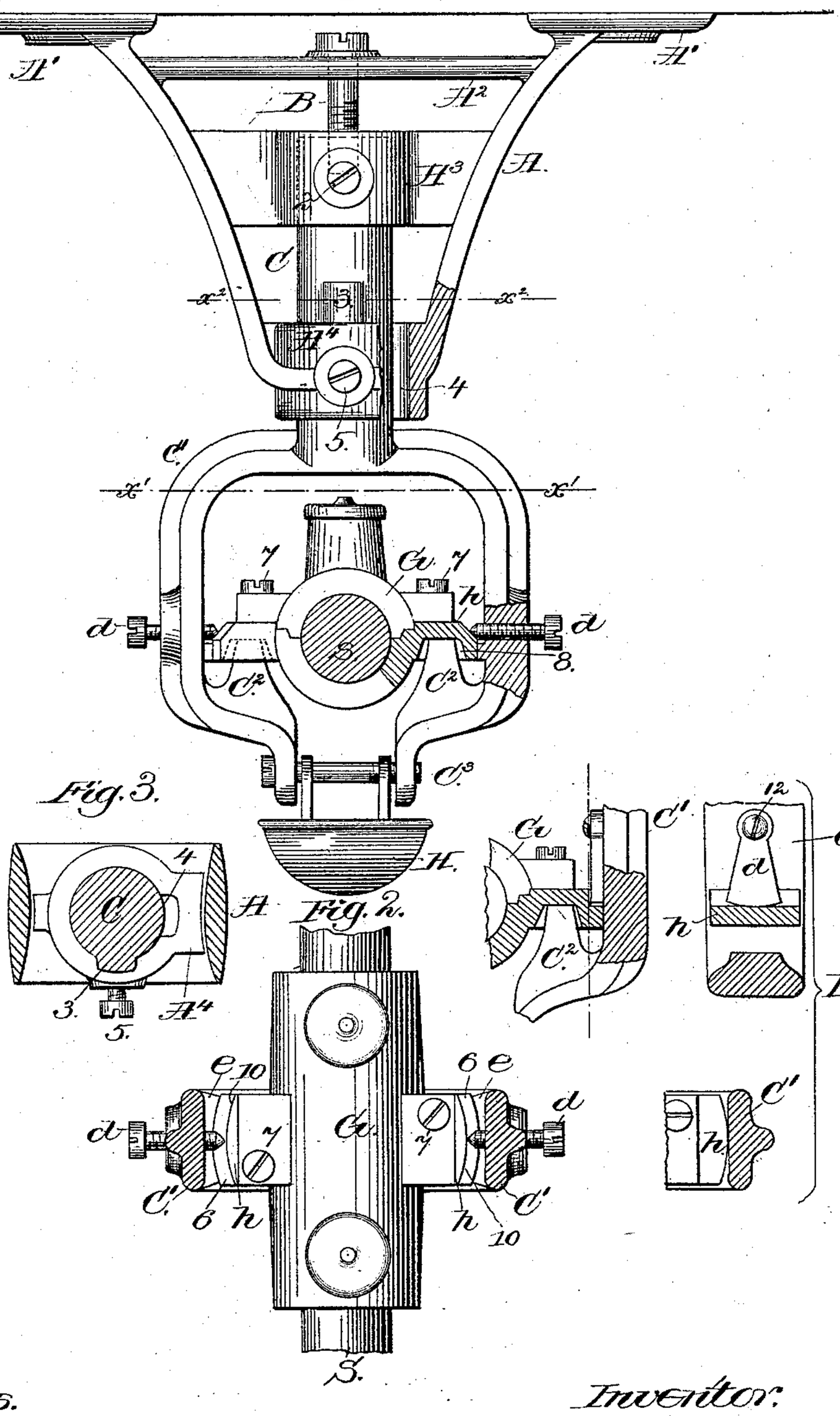

Fig. 3.

Fig. 2.

Fig. 4

Witnesses.
John F. C. Preinkert.
Fred A. Powell.

Inventor:
Robert Whitehill.
by Crosby & Gregory Attys.

UNITED STATES PATENT OFFICE.

ROBERT WHITEHILL, OF MILWAUKEE, WISCONSIN.

SHAFT-HANGER.

SPECIFICATION forming part of Letters Patent No. 279,624, dated June 19, 1883.

Application filed October 11, 1882. (Model.)

To all whom it may concern:

Be it known that I, ROBERT WHITEHILL, of Milwaukee, county of Milwaukee, State of Wisconsin, have invented an Improvement in Shaft-Hangers, of which the following description, in connection with the accompanying drawings, is a specification.

My invention has for its object the construction of an adjustable shaft-hanger in which the box is so supported as to be able to oscillate both vertically and horizontally, in order that the box may readily adapt or align itself to the shafting or its vibrations, thus avoiding the cramping of the shafting in the boxes, reducing the strain on the boxes, and enabling the shafting to be run by the expenditure of less power and with less wear than were the box held rigidly.

My invention consists in means, such as hereinafter described, for supporting the box in order that it may move as stated and for adjusting the yoke in which the box is held.

In the drawings, in which the same letters designate like parts, Figure 1 represents, in side elevation and vertical section, a shaft-hanger embodying my invention; Fig. 2, a cross-section thereof on the line x'; Fig. 3, a cross-section on the line x^2, and Fig. 4 three views of a modification to be referred to.

The base A of the hanger, adapted to be connected with the ceiling or other place by suitable screws or bolts extended through the ears A′, has a cross-bar, A^2, and guide-hub A^3 A^4, to receive the shank C of the yoke C′, provided with the box-supports C^2. The yoke C′ is sustained by a screw or bolt, B, extended through the cross-bar A^2 into the shank C, and by turning said bolt the yoke may be adjusted vertically to bring the box G, supported by it, to the proper level. The shank C of the yoke C′ has a key or projection, 3, and the hub A^4 has a correspondingly-shaped opening, 4, through which the said projection passes when the shank C is being placed in position in the hubs A^3 A^4, and as soon as the projection 3 passes above the hub A^4, slight rotation of the shank C carries the said projection beyond the said opening or slot 4 and prevents the yoke dropping while being adjusted into proper position by the screw B. The shank C is held or fixed in place by the set-screws 2 and 5. The under shell of the box G, having the usual top shell connected therewith by screws or bolts 7, has its side ears, *h*, carried above the center line of the shaft S, and the said ears are recessed or socketed at their under sides, as at 8, (see right of Fig. 1,) to form bearing-faces level with the center line of the said box and shaft. These bearing-faces rest upon the box-supporting projections C^2 of the yoke C′, the said projections having their narrow upper edges located at the level of the center line of the box G, so that the said box may tip up and down at its ends on the said projections as fulcra. To prevent the box leaving the said projections C^2 under any strain on the shaft in the direction of the base A or upward, I have added ear-holding devices *d*, (shown in Figs. 1 and 2 as pointed screws,) the ends of which rest above and in contact with the beveled edges 6 of the ears *h*. The ears *h*, at their ends, are turned in the arc of a circle described from the longitudinal center of the shaft or box as designated by the curved lines 10, (see Fig. 2,) and the said curved ends bear against curved bearing-pieces *e*, attached to the yoke C′, thus guiding the box in its horizontal movements or adjustments. The lower end of the yoke is held together by the bolt C^3, the turning of which controls the closeness of the contact of the said guide-pieces *e* with the curved ends of the ears *h*, to thus insure correct movements. This screw C^3 also supports the drip-cup H. The box tips vertically and turns horizontally on the projections C^2. Instead of the bevel face 6 of the ears *h* and the screws, I may employ an ear-holding device such as shown in Fig. 4, it being composed of a dog pivoted on the yoke at 12 above the center of the ear, and the said dog will act upon a surface of the top of the ear *h*, the said surface being level with the center line of the shaft S and immediately above the projections C^2. The lower ends of the yoke being separated, as shown in Fig. 1, ample space is afforded, when the bolt C^3 is removed, for the passage of the shafting into the yoke.

I claim—

1. The base of the hanger, and its cross-bar and hub, and the yoke having the shank C, combined with the adjusting-screw, to adjust the yoke vertically or longitudinally, substantially as described.

2. The base A, and the hub, and its cross-

bar A^2, provided with the adjusting-screw, and the hub provided with the passage 4, combined with the yoke, and its shank C, provided with the projection 3, to temporarily support the said yoke while being adjusted into operative position, substantially as described.

3. The yoke provided with the box-supporting projections, having their ends terminated at the center line of the box, combined with the box, having ears provided with bearing-faces to rest upon the said projections and turn thereon, both vertically and horizontally, substantially as described.

4. The yoke provided with the box-supporting projections C^2, and with the curved guides *e*, combined with the box having ears *h*, to rest upon the said projections, and curved to bear against the said guides, as and for the purposes described.

5. The yoke provided with the box-supporting projections, and with the guides *e*, and the box having the ears *h* curved at their outer ends as described, combined with the adjusting-screws *d*, to insure proper contact of the ears and guides, substantially as described.

6. The yoke provided with the box-supporting projections, and the box having ears *h* supported thereon, combined with the ear-holders to act upon the said ears above the said projections, substantially as and for the purpose set forth.

7. The base of the hanger, having the cross-bar A^2 and a hub, and the yoke C', having a shank, C, inserted in the said hub, combined with the screw B, to adjust the said yoke vertically, and with a set-screw co-operating with the said hub and shank of the yoke, to prevent the rotation of the said shank in the said hub, as shown.

8. The combination, substantially as shown and described, in a shaft-hanger, of a base provided with bearings for a vertical shank, a yoke having such shank to fit and be secured in said bearings, means for adjusting said yoke's shank in said bearings, and a shaft-box swiveled in said yoke, as and for the purpose specified.

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

ROBERT WHITEHILL.

Witnesses:

G. W. GREGORY,

B. J. NOYES.