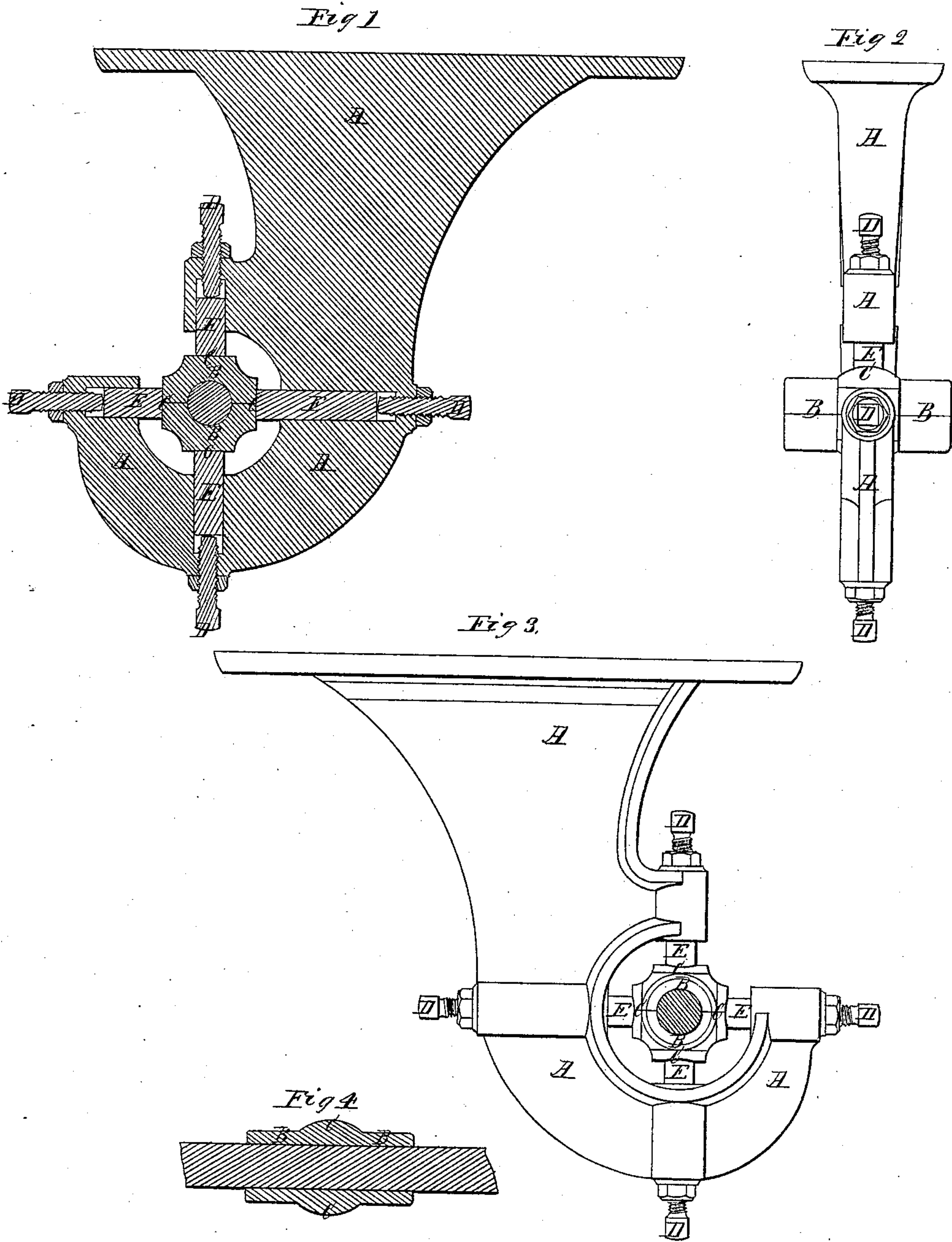


W. Johnson,
Shaft Hanger,
No 20,566, *Patented June 15, 1858.*



UNITED STATES PATENT OFFICE.

W. JOHNSON, OF LAMBERTVILLE, NEW JERSEY.

ADJUSTABLE HANGER FOR SHAFTING.

Specification of Letters Patent No. 20,566, dated June 15, 1858.

To all whom it may concern:

Be it known that I, WILLIAM JOHNSON, of the town of Lambertville, in the county of Hunterdon and State of New Jersey, have invented a new and useful Improvement in the Apparatus, commonly called a "Hanger," for Receiving and Supporting Shafting for Driving Machinery; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, with the letters of reference marked thereon, making part of this specification.

My invention consists substantially in so forming and securing the box, so called, or cylindrical tube which receives the arbor or journal of the shafting, that by means of four screws in the hanger or immovable support, and acting against as many cylindrical plugs or blocks, and through them against the four sides of the box before mentioned, in such manner as to effect an instant and easy adjustment of said box, both horizontally and vertically; and at the same time allowing a free angular motion, or change of direction (as well as of position) of the axis of the box, to accommodate itself to the exact line of the shafting.

In the accompanying drawings, Figure 1, represents a section of the hanger with all its parts; Fig. 2, is a front or edgewise view, and Fig. 3, is a side view or elevation of the same; and Fig. 4, represents a vertical section of the box or cylindrical tube, with a portion of the shaft inserted therein.

The large scroll-shaped plate A, A, A, of which the front edge only is seen at Fig. 2, is the immovable or unadjustable part of the hanger, to be made fast in the usual way to the solid parts of the building wherein the same is used.

B B is the adjustable box, or cylindrical tube made either whole or in halves, in or through which, the shafting is inserted, of which the four several surfaces C, C, C, C, instead of being so many parts of a ball or globe, are curved longitudinally, but not laterally; each pair of faces or surfaces (on opposite sides of the box) being portions or segments of a cylinder, the axis of which is at right angles with that of the box or tube; so that the transverse section of the box instead of being a circle, or four arcs of a circle, are straight lines in the form of a square.

D, D, D, D, are four screws acting in pairs

in the direction of a common center; one pair for adjusting the box horizontally, and the other vertically.

E, E, E, E, are cylindrical plugs or blocks, which may extend some distance into the hanger, as represented in the Figs. 1, and 3; or they may be so short as to be quite clear of the hanger; in which case, the screws will extend quite through the hanger; the inner end of each plug or block being made to fit the curved or cylindrical surface of the box; so that when the box makes an angular movement in a vertical direction, the horizontal plugs are forced to turn with it, acting as trunnions or pivots, as if they were firmly attached to it; while the vertical plugs at the same time slide over the curved surfaces of the box. And if the box is turned in a horizontal direction, the vertical plugs turn with it, and the others slide over it.

What I claim as my invention, and wish to secure by Letters Patent, is, not the employment of a box with trunnions or pivots solidly attached thereto, nor a box movable by means of a ball and socket; nor the adjusting of the box in position, either vertically or laterally, by means of screws, or screws and nuts, with or without a vertical stem, carrying the box with it; nor in any particular proportion, size or shape (except in the particular hereinafter mentioned) of any of the parts; but it is the cylindrical, instead of the globular form of the curved surfaces of the box; the axis of each cylinder (of which the opposite surfaces are parts) being at right angles to the other, and the axes of both being at right angles to the axis of the box or tube itself; so as to allow either pair of opposite plugs or blocks, to serve as trunnions, or pivots, or centers, upon which the box or tube may turn or revolve longitudinally; and so that the action or pressure or strain of, or upon the box, in whatsoever direction, or from whatsoever cause, shall always be precisely perpendicular to the several surfaces of the box, and of the plugs or blocks, pressing against the same; and so that the several plugs or blocks become so many perfect abutments, always acting perpendicularly, and never obliquely against the point of resistance; thereby securing a greater degree of compactness, simplicity and strength, relatively to the weight of material, and cost of construction, than by other methods.

What I claim then is—

The two pairs of cylindrical surfaces, at right angles to each other and to the axis of the box, in connection with the four plugs
5 or blocks, each with a cylindrical curvature fitting to that of the box, and secured and adjusted by the four screws; the whole con-

structed and operating substantially as here-
inbefore described and set forth.

WM. JOHNSON.

Witnesses:

L. H. PARSONS,
JOHN SILVERS.