

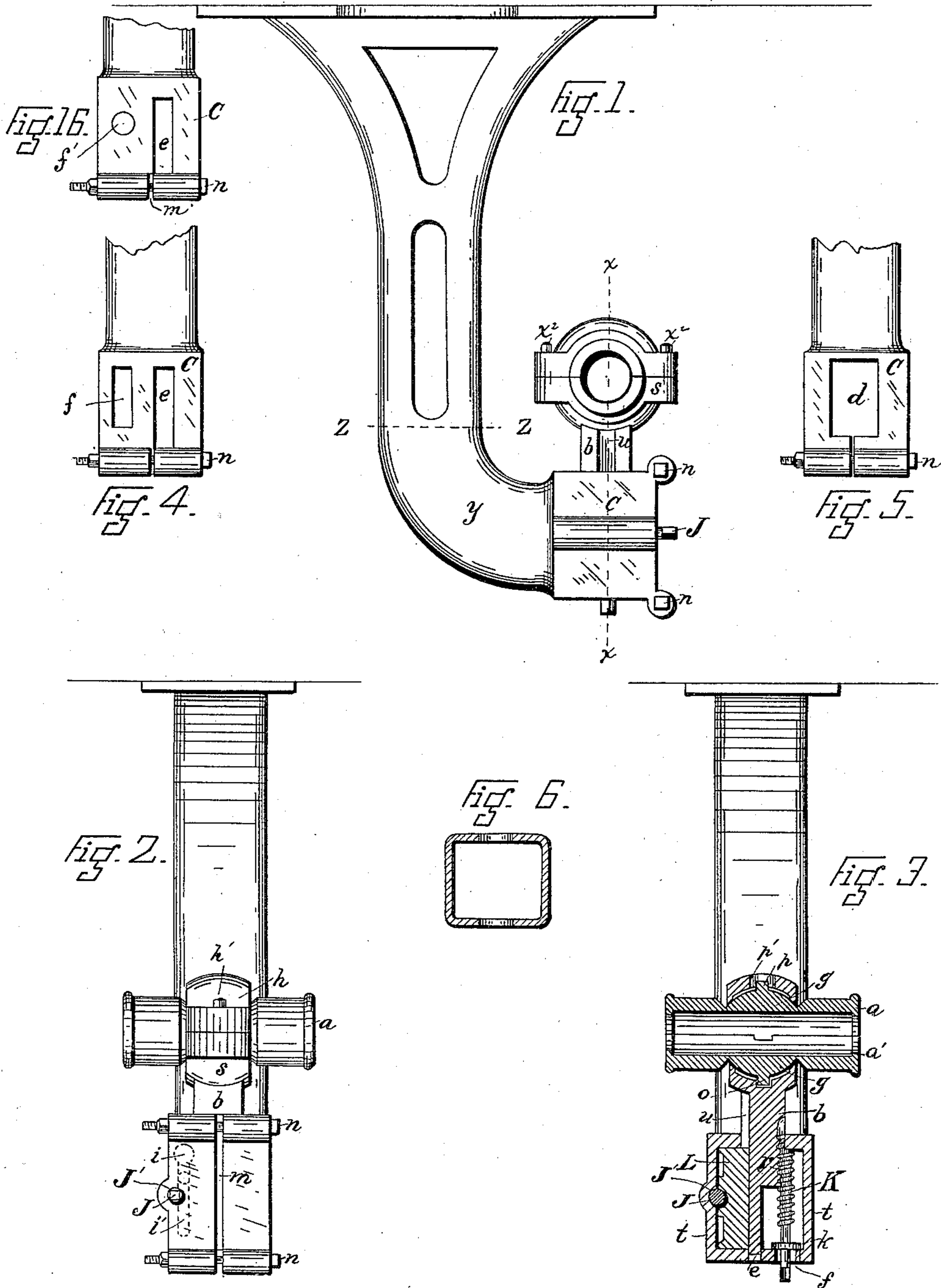
(No Model.)

2 Sheets—Sheet 1.

J. R. & W. E. BASSETT.
HANGER FOR SHAFTING.

No. 307,422.

Patented Nov. 4, 1884.



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Walter Chamberlin
O. M. Hill

Inventors
Joel R. Bassett
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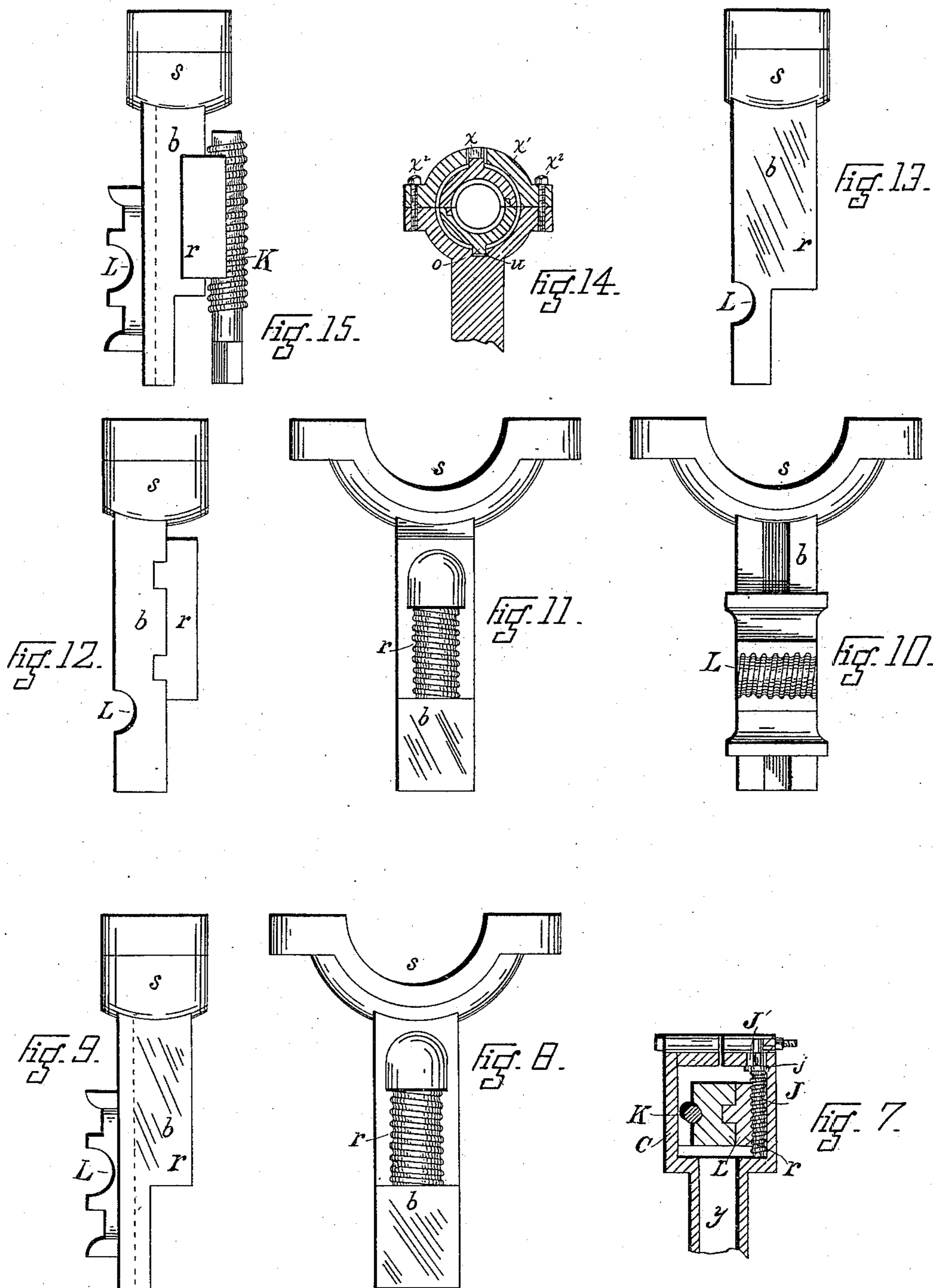
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UNITED STATES PATENT OFFICE.

JOEL R. BASSETT AND WALTER E. BASSETT, OF CINCINNATI, OHIO.

HANGER FOR SHAFTING.

SPECIFICATION forming part of Letters Patent No. 307,422, dated November 4, 1884.

Application filed February 12, 1884. (No model.)

To all whom it may concern:

Be it known that we, JOEL R. BASSETT and WALTER E. BASSETT, residents of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Hangers for Shafting, of which the following is a specification.

The invention relates to adjustable shafting-hangers which are adjustable in both a vertical and horizontal direction.

Hangers have heretofore been made adjustable vertically and horizontally, the vertical adjustment being made by means of two screws working vertically through nuts cast to the hanger or bracket, one above the other. Each of the adjacent ends of these screws is provided with a socket. The shaft journal box or bearing is embraced by and clamped between these sockets. This ball-and-socket joint is formed gives the desired swivel motion, the horizontal adjustment being commonly secured by casting slot-holes in the flanges, by which the hanger is supported, bolting the hanger nearly in position, and hammering the hanger in line. This is not only a laborious adjustment, but also one which is not reliable. Where the vertical adjustment is not secured, as above described, it is a common practice to put backing under the flange of the hanger, and where the journal-box is held between two screws, as aforementioned, it is necessary to be very cautious in tightening the top screw, as it very often happens that the box and shafting will fall, causing damage to shafting and pulleys and endangering life.

The principal object of our invention is to provide a simple construction, economical as to cost, and which shall enable all the movements necessary for the hanging and adjustment of shafting to be easily, quickly, and safely made. It may also be remarked that our invention overcomes the necessity of using slot-holes in bolting the hanger to its place, or for bolting any of its parts together.

The main feature of our invention consists in supporting a journal by means of an upright shaft supported and moved vertically by an upright screw and laterally by a horizontal screw.

The various features of our invention, and

the several advantages resulting from their use, conjointly or otherwise, will be fully apparent from the following description.

In the accompanying drawings, Figure 1 represents a side elevation of a hanger illustrating our invention. Fig. 2 is a front elevation of the same. Fig. 3 is a front elevation showing a vertical longitudinal section through the center of the journal-box, and taken at the dotted lines *xx* of Fig. 1, the vertical screw in the box being shown in elevation, the vertical adjusting-nut being made tight to the shank, and the horizontal adjusting-nut being made loose or sliding on the shank. Fig. 4 shows the bottom of the box inclosing adjusting mechanism, and as constructed when the vertical nut is made tight on the shank. Fig. 5 shows a top view of said box. Fig. 6 shows a section of the bracket, taken at the dotted line *zz*. Fig. 7 shows a horizontal section through center of said box inclosing adjusting mechanism and a part of the bracket connected thereto. Figs. 8, 9, and 10 are front and side views of the lower half of socket with shank having vertical screw-nut cast on it, and horizontally-adjusting screw-nut made separate, Figs. 8 and 10 being side views, and Fig. 9 a front view. Figs. 11 and 12 are modifications of the same, showing vertical screw-nut loose, and horizontal screw-nut tight. Fig. 13 shows both nuts cast on shaft. Fig. 14 represents a vertical central section of the ball-and-socket joint, taken in a plane at right angles to the line of the shaft. Fig. 15 shows both nuts separate from shank. Fig. 16 represents the bottom of said box when the vertical nut is made loose on the shank.

When the horizontal nut *L* (that is, a nut having the axis of its screw-thread horizontal) is made loose, and vertical nut *r* (that is, a nut having the axis of its screw-thread vertical) is made tight to the vertical supporting piece or shank *b*, the vertical screw *K* and the horizontal screw *J* and nut *L* are first placed in the box *C*. The end of shank *b* is then inserted through opening *d* until nut *r* is in contact with screw *K*, then by turning screw *K* the shank is lowered to its proper place. The lower portion of the vertical screw *K* is provided with a shoulder or flange, *k*, which rests upon the lower part of the box and prevents

the screw from slipping down. If both nuts are made loose, then nut *r* is laid in place on the shank *b*, and the same operation as above will put all parts properly in the box C. If both nuts are made tight to the shank, then by placing vertical screw K in box C, screwing shank down until nut L comes opposite opening *i*, screw J can be screwed in; then by screwing the shank still lower the end of screw J enters slot *i*, and the screw J is then prevented from working out of place while being adjusted horizontally by shoulder or flange *j* made on screw J, which flange or shoulder bears on the inside of box C, still allowing all necessary vertical adjustment. (See Figs. 2 and 7.) Should nut *r* be made loose and nut L tight, then to insert all of said parts into the box, nut *r* should be placed in position on shank *b*, and the same directions as heretofore given followed. When one or both of the nuts are made loose from the shank *b*, then in the connection between the shank and said loose nut or nuts suitable guides are employed, whose line of direction is at right angles to the axis of the screw which operates said nut. The shank is made to slide in or over the nut in a direction coincident with the longitudinal axis of the screw of said nut, but in a direction at right angles to said axis is so connected to said nut as to enable the operating-screw to move its nut and the shank in a line parallel to the axis of said screw. At the same time the shank *b*, if the other nut is made loose, slides on said latter nut in a line parallel to the axis of the operating-screw. If the nut be made tight to the shank *b*, it will carry its screw vertically or horizontally, according as the shank is moved. When both nuts are made tight, then the screw and nut are both moved at right angles by the action of the other nut and screw, the slots *f* and *i* being made in box C to permit said motion of screws which project through them to allow of a wrench being used to turn them as desired in adjusting the bearing for the shaft. The bottom of the box C is preferably provided with a slot, *e*, to receive the lower end of shank *b* and act as a guide, and serving to clamp the shank when the screws *n* are tightened, but when desired, the slot *e* may be omitted, in which event the parts in the box should fit closely against the sides *t t* of the box.

Having inserted the necessary parts in box C, the hanger is ready for bolting in position, which bolting is done in the ordinary manner. The bottom half, *a'*, of the journal box or bearing *a* is laid in place in the socket on the upper end of shank *b*. The screws are then turned to raise or lower the journal, or to move out or in, as may be necessary, to bring the center of journal in exact line with the center of the journals on the other hangers supporting the shaft. When this is accomplished, the screws or bolts *n* are tightened, drawing together the edges of slot *m*, and thus securing all parts in box C from any motion. Then the shaft may be laid in the journal-box,

the top half of box or cap and socket *h* may be put on and secured by bolts or screws *h'*. This ball-and-socket joint is formed with the ball on the box, and the socket being located at the end of the shank *b*, gives any swivel motion desired, the boss *u* preventing any rolling motion of the journal-box in the socket.

While the various features of our invention are preferably employed together, one or more of them may be used without the remainder, and so far as applicable may be used in connection with hangers other than that particularly herein described.

What we claim as new, and desire to secure by Letters Patent, is—

1. The box C, provided with the opening *d*, in combination with the shank *b*, substantially as and for the purposes specified.
2. The box C, provided with the openings *d* and *m*, in combination with rectangular shank *b* and screws or bolts *n*, substantially as and for the purposes specified.
3. The box C, provided with the openings *d*, *e*, and *m*, in combination with the shank *b*, substantially as and for the purposes specified.
4. The box C, provided with openings *d*, *e*, *f*, and *i*, in combination with screws J and K, and shank *b*, provided with nuts L and *r*, substantially as and for the purposes specified.
5. The box C, provided with openings *d*, *e*, *f*, and *J'*, in combination with shank *b*, provided with nut *r*, sliding nut L, and screws J and K, substantially as and for the purposes specified.
6. The box C, provided with openings *d*, *e*, and *i'*, in combination with shank *b*, provided with nut L, sliding nut *r*, and screws J and K, substantially as and for the purposes specified.
7. The box C, provided with openings *d*, *e*, *f'*, and *J'*, in combination with shank *b*, sliding nuts *r* and L, and screws J and K, substantially as and for the purposes specified.
8. The shank *b*, in combination with the ball-and-socket joint and journal-box *d*, substantially as and for the purposes specified.
9. In a laterally-adjusting hanger, the combination of a hollow bracket with screw J, substantially as and for the purposes specified.
10. In combination with box or support C, the shank *b* and two adjusting-nuts, the axis of rotation of one of these nuts being parallel to the length of the shank and the axis of rotation of the other being at right angles to the length of the shank and of the journal-box, and operating-screws, substantially as and for the purposes specified.
11. The box C, provided with openings *d*, *e*, *f*, and *i*, in combination with screws J and K, and shank *b*, provided with nuts L and *r*, and guides, substantially as and for the purposes specified.

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Attest:

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