(No Model.)

H. C. CROWELL.

SHAFT HANGER.

No. 272,861. Patented Feb. 27, 1883.

Fig. 1

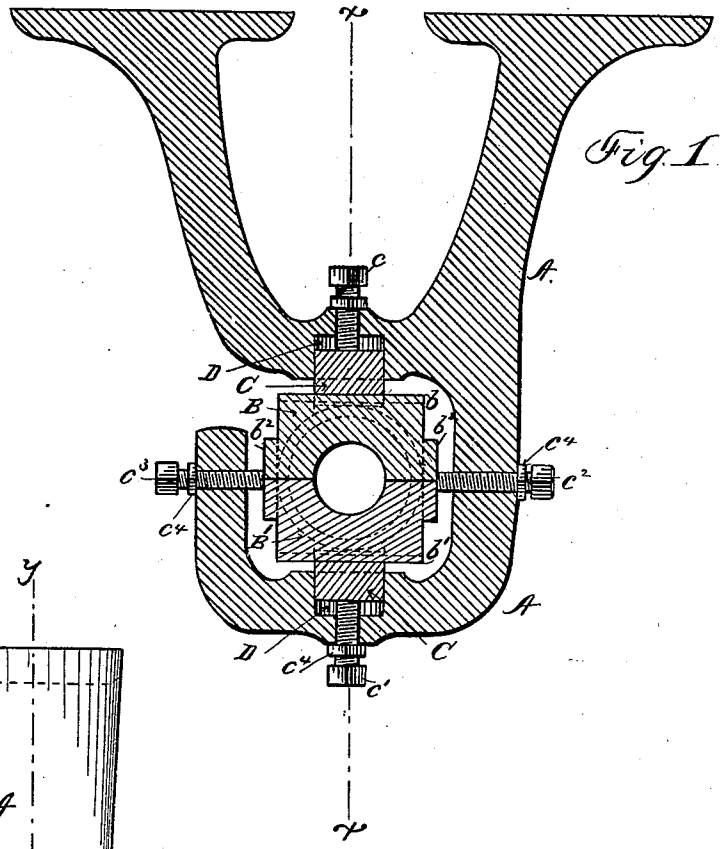


Fig. 2

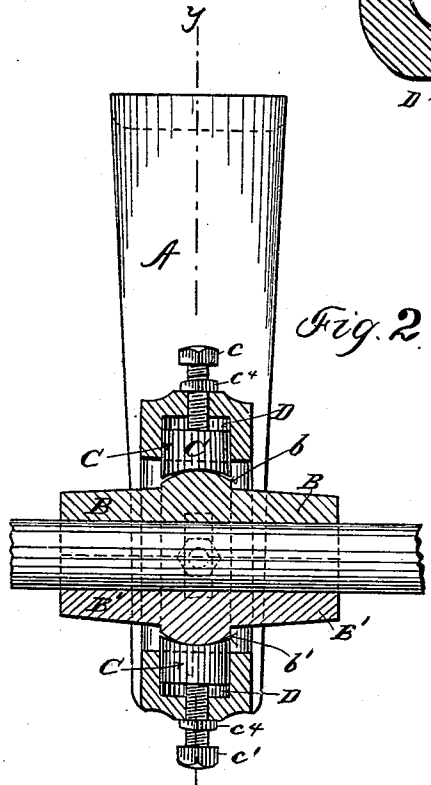
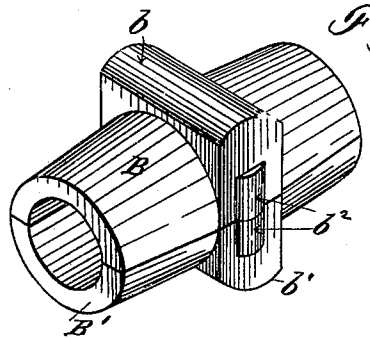


Fig. 3



Witnesses:
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UNITED STATES PATENT OFFICE.

HILEN C. CROWELL, OF ERIE, PENNSYLVANIA.

SHAFT-HANGER.

SPECIFICATION forming part of Letters Patent No. 272,861, dated February 27, 1883.

Application filed August 3, 1882. (No model.)

To all whom it may concern:

Be it known that I, HILEN C. CROWELL, a citizen of the United States, residing at Erie, in the county of Erie and State of Pennsylvania, have invented certain new and useful Improvements in Shaft-Hangers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to what are known as "shaft-hangers;" and it consists in certain new and useful improvements in the construction of the same, which will fully appear in the following description and claim.

The object of this invention is to so construct the shaft journal-box and adjust it in the frame or hanger as to have complete universal adjustment—that is, vertical and lateral adjustment—and also swivel attachment, whereby the box will permit the shaft to pass through the frame or hanger at an angle, and also whereby the box will automatically adjust itself to any vibratory movement of the shaft, or any springing of the shaft by reason of the weight upon it. The above objects have before been attained, but by more expensive and cumbersome devices than are employed by my construction. (See Patent No. 20,566, dated June 15, 1858, to W. Johnson.)

My device is illustrated in the accompanying drawings as follows:

Figure 1 is a vertical section on the line *y y* in Fig. 2. Fig. 2 is a vertical section on the line *x x* in Fig. 1, and is at right angles to the section-line *y y*. Fig. 3 is a perspective view of the shaft journal-box detached from the hanger or frame.

A is the frame of the hanger. B B′ is the shaft journal-box. D D are recesses in the frame above and below the box. These recesses are round and receive the bearing-blocks C C, which are also round, and on their bearing-faces are notched with a curved indentation. The box is formed of two parts, B and B′, which each have on their top or bottom a boss, *b* and *b′*, which extends across the box, and is finished with a curved top to fit in the curved notches in the blocks C C. On the sides of the box are curved bosses b^2 b^2. The box is held in place in the frame by the screws *c c′* c^2 c^3, of which the screws *c c′* set upon the bearing-block C C and the screws c^2 c^3 set directly against the bosses b^2 b^2. The screws are provided with jam-nuts c^4, to hold them from unscrewing when properly adjusted. The box can be adjusted laterally by the screws c^2 c^3, and when moved by them it slides in the notches on the blocks C C. It can be adjusted vertically by the screws *c c′*, and when moved by them it slips between the ends of the screws c^2 c^3, and the blocks C C move vertically in the recesses.

The swivel movement is accomplished as follows: When it swings vertically it moves or turns within the grooves in the blocks C C, the curved backs of the bosses *b b′* serving as trunnions. When swung laterally the blocks C C turn in the recesses D D, like trunnions, and the screws c^2 c^3 move upon the faces of the bosses b^2 b^2. This swivel movement permits the shaft to pass through the frame obliquely at various angles, and it allows the box to automatically adjust itself to any deflection or vibration of the shaft.

By comparison of my device with that shown in the patent to Johnson, above referred to, it will be observed that the difference in construction consists in omitting the bearing-blocks on the sides shown in Johnson's patent and using the ends of the side screws as bearing-surfaces. The result of this change of construction is as intimated above—viz., a less cumbersome and less expensive device. In order to use bearing-blocks on the sides of the box, the hanger-frame has to be made very bulky, as is clearly shown in Johnson's drawings, while by the construction I show the hanger-frame can be made very light and compact, occupying little space, saving a good deal of metal, and making it easier to handle and put in place, and all the advantages gained by their use are also secured by my construction. Another difference in the two constructions is found in the bosses *b b′*, which extend clear across the box, giving ample room for lateral adjustment of the box within the bearing-blocks C.

What I claim as new is—

In a shaft-hanger, the frame A, having recesses D D, and adjusting-screws *c c′* within the same, located above and below the shaft-

line, and adjusting-screws c^2 c^2 passing through the sides of the frame opposite the shaft-line and entering the space through which the shaft passes, in combination with the box B B′, having bosses b b' across its top and bottom and bosses b^2 b^2 on its sides, and the round bearing-blocks C C in the recesses D D, said box being held in place by the bearing-blocks C C upon the bosses b b' and the adjusting-screws c^2 c^3 upon the bosses b^2 b^2, substantially as shown.

In testimony whereof I affix my signature in presence of two witnesses.

HILEN C. CROWELL.

Witnesses:
JNO. K. HALLOCK,
JACOB F. WALTHER.