No. 870,945. PATENTED NOV. 12, 1907.

H. C. FLOYD.

SHAFT HANGER.

APPLICATION FILED NOV. 22, 1906.

2 SHEETS—SHEET 1.

Fig. 1.

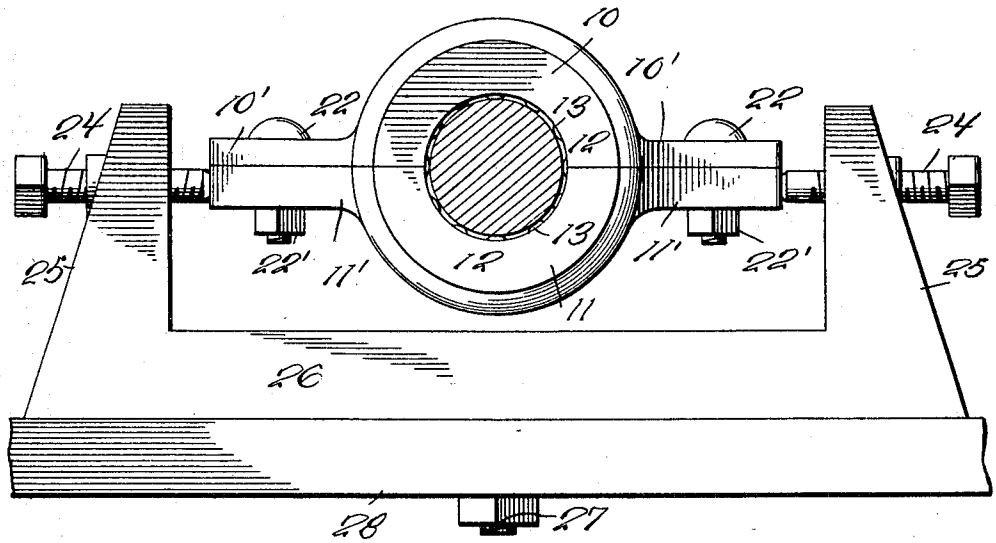
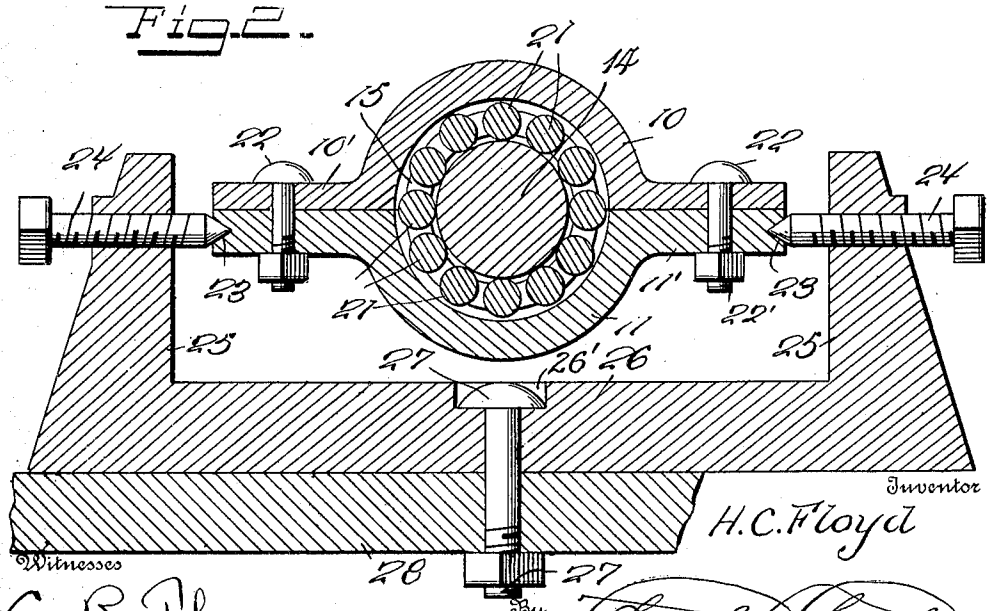


Fig. 2.



Witnesses

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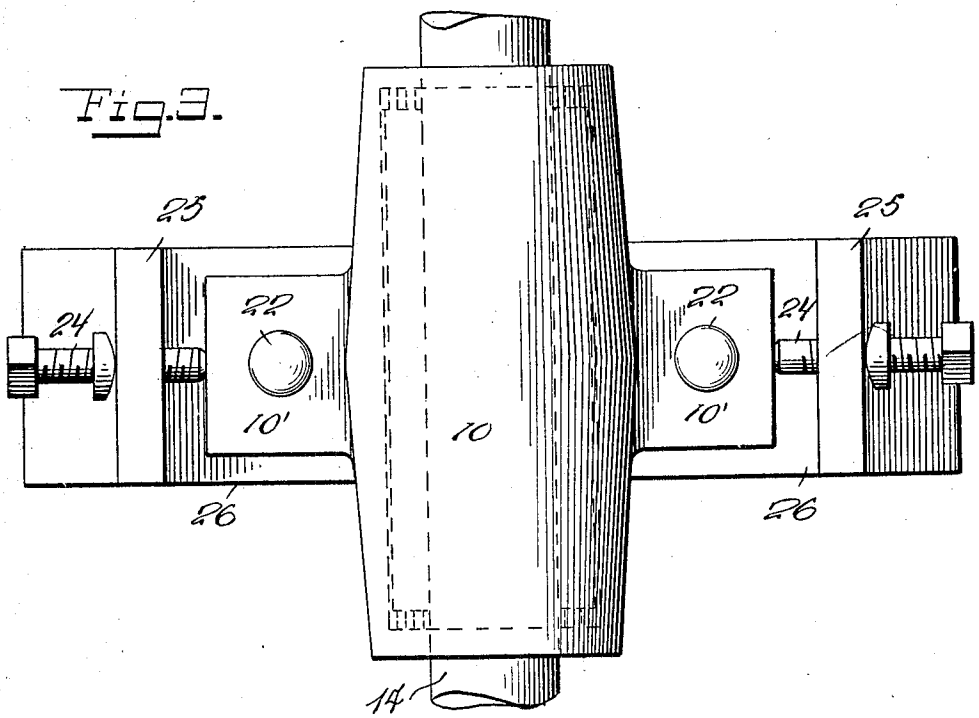
2 SHEETS—SHEET 2.

Fig. 3.



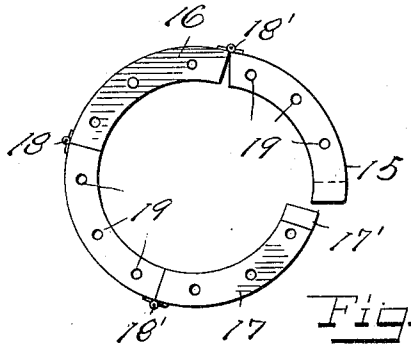


Fig. 4.

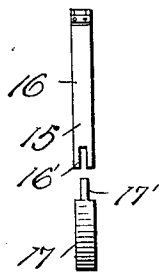


Fig. 5.

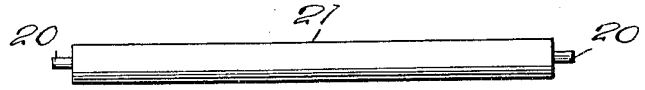


Fig. 6.

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UNITED STATES PATENT OFFICE.

HENRY C. FLOYD, OF BEULAHVILLE, VIRGINIA.

SHAFT-HANGER.

No. 870,945. Specification of Letters Patent. Patented Nov. 12, 1907.

Application filed November 22, 1906. Serial No. 344,667.

To all whom it may concern:

Be it known that I, HENRY C. FLOYD, a citizen of the United States, residing at Beulahville, in the county of King William, State of Virginia, 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.

The present invention has reference to improvements in shaft hangers, and it aims to provide a device of that class in which the boxing for the shaft is so mounted as to be capable of accommodating itself to any rocking movement of the shaft without reference to the plane of such movement, the invention embodying certain features of novelty whereby the bearing supports are located so as to be guarded from outside interference and well down toward the main support. To this end, the support for the boxing is provided with a pair of upstanding arms carrying horizontal set-screws, the inner ends of which fit in sockets formed in the lower member of the boxing, and serve as pivots therefor, the support itself being secured centrally to the foundation plate or base by means of a bolt upon which, as an axis, the support is free to turn, the boxing being provided with a pair of split rings bored to receive the shoulders formed on opposite ends of the rollers, to prevent any displacement of the rollers attendant upon the pivotal movement of the boxing.

The invention further consists in the construction, combination, and arrangement of parts, all as hereinafter fully described, specifically claimed, and illustrated in the accompanying drawings, in which like parts are designated by corresponding reference numerals in the several views.

Of the said drawings: Figure 1 is a front elevation of the complete device. Fig. 2 is a transverse vertical section therethrough. Fig. 3 is a top plan view of Fig. 1. Fig. 4 is an enlarged detail view of one of the roller retaining rings, with the parts thereof slightly opened. Fig. 5 is an edge view of a portion of the structure shown in Fig. 4. Fig. 6 is an enlarged detail view in elevation of one of the rollers.

Referring more particularly to the drawings, 10 and 11 designate respectively the upper and lower members of the casing or boxing, each of which is provided at opposite ends with a semicircular flange 12 provided with an opening 13 of similar shape, said openings mating when the members 10 and 11 are in place, and fitting closely around the shaft 14. The inclosed portion of said shaft is provided with a pair of sectional or split rings 15 disposed against the inner faces of the flanges 12 at opposite ends of the boxing and adapted to fit loosely in the space between the surface of the shaft and the inner face of the members 10 and 11 of the boxing. Each of said rings comprises an upper section 16 and a lower section 17 connected together by a hinge 18, the upper section having its free end bifurcated as at 16′ to provide a seat in which a tongue 17′ formed on the adjacent end of the lower section is received. Both sections are in turn halved, the members thereof being hinged together as at 18′.

The several sections of said rings are provided with a series of openings 19 which register with each other when the rings are in place in the boxing, and are adapted to receive the trunnions or shoulders 20 formed on opposite ends of the rollers 21, which are otherwise of the usual construction and are arranged around the shaft 14 in the usual manner, the rings thus holding the rollers in proper position, and preventing any displacement thereof attendant upon the pivotal movement of the bearing afterwards referred to.

The members 10 and 11 are secured together by bolts 22 which pass through openings formed on the lateral extensions 10′ and 11′ of said members and are provided with the usual locking nuts 22′.

The extensions 11′ of the lower member are, moreover, each provided with a socket 23 formed centrally in the outer edge thereof and adapted to receive the pointed end of an adjusting screw 24 movable through an opening formed in the corresponding upright arm 25 of a support 26. The pointed ends of said screws 24 are preferably conical while that portion thereof which fits in the opening in the arms 25 is threaded, to permit an endwise adjustment of said screws, the openings above referred to being in like manner internally threaded. It will thus be obvious that any vertical rocking motion of the shaft will be in turn communicated to the boxing, which, owing to the pin and socket joints above described, will readily accommodate itself thereto.

The support 26 is counterbored at 26′ and is moreover provided with a pivot bolt 27 passing through a central opening therein and with its head seated in said counterbore, the center bolt 27 extending also through the base plate or foundation 28, to allow the support to swing or move thereon as an axis, and thus accommodate itself to any lateral movement of the shaft.

As indicated most clearly in Figs. 1 and 2, the uprights 25 project upwardly from the outer ends of the plate 26, the outer faces thereof being inwardly inclined, and the screws 24 project through the upper ends of said uprights, lying substantially within the length of the broad flat bottom of the supporting plate 26 whereby the said bottom not only serves to effectively guard the screw heads from outside obstructions, but also provides a structure so low and broad relatively to the height of the bearing as to lessen the tendency for lateral strains on the shaft to rupture the attaching means or overturn the support. It will be apparent, therefore, from the foregoing that

upon any rocking movement of the shaft, whether lateral or vertical, the boxing carried thereby will be free to move correspondingly, and that there will be no displacement of the rollers incidental to such movement as the rings will retain the same in proper position irrespective of the angle of inclination of the shaft. It will likewise be apparent that, owing to the sectional formation of the retaining rings, any roller, upon becoming too worn, can be readily and quickly removed and a new one substituted.

What is claimed is:—

The hereindescribed shaft hanger comprising a flat horizontal foundation plate, a supporting plate having a broad flat bottom in contact with the upper surface of the foundation plate, said plates being provided with bolt holes in vertical registry and that of the supporting plate being counterbored at its upper end, a center bolt in said holes securing said plates together and with the bolt head seated within said counterbore and whereon the supporting plate may move in a horizontal plane with respect to the foundation plate, said supporting plate being provided with inwardly inclined uprights at opposite sides of the center bolt, oppositely disposed conical ended screws projecting through and adjustably secured in said uprights and in alinement with each other, the uprights and screws lying substantially within the length of the bottom of the supporting plate, and a shaft bearing pivotally and adjustably supported upon the said screw ends, the axis of the shaft opening of the bearing being at right angles to the line of the screws.

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

HENRY C. FLOYD.

Witnesses:
BERNARD FOX,
BELLE J. FOX.