J. Sparrow,

Shaft Hanger,

No. 50,745. Patented Oct. 31, 1865.

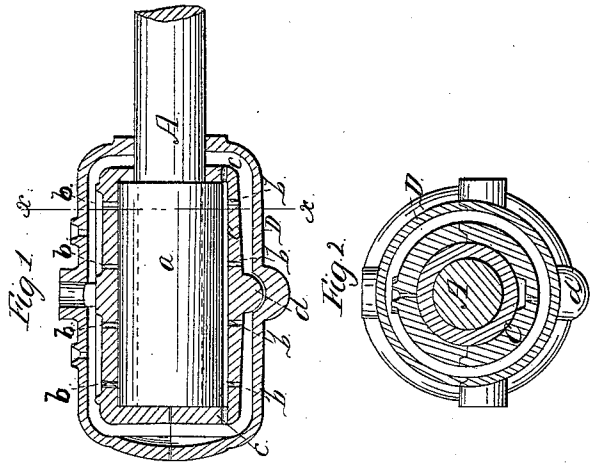


Fig. 1.

Fig. 2.

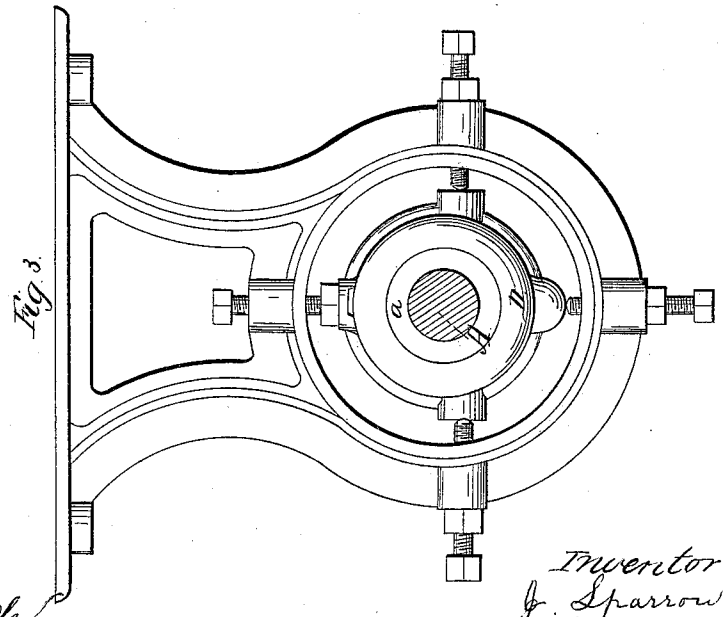


Fig. 3.

Witnesses.
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J. Sparrow.
By Munn & Co.
Attys

AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

JOHN SPARROW, OF PORTLAND, MAINE.

IMPROVED BOX FOR SHAFTING, &c.

Specification forming part of Letters Patent No. **50,745**, dated October 31, 1865.

To all whom it may concern:

Be it known that I, JOHN SPARROW, of Portland, in the county of Cumberland and State of Maine, have invented a new and Improved Box for Shafting, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a longitudinal central section of this invention. Fig. 2 is a transverse vertical section of the same, the line *x x*, Fig. 1, indicating the plane of section. Fig. 3 is a similar section, showing the application of my box to a hanger.

Similar letters of reference indicate like parts.

This invention consists, first, in the application of a raised or sleeve bearing to a shaft, instead of turning the shaft down, as usual, said sleeve-bearing being made of composition, steel, gun-metal, or other suitable material, in such a manner that the shaft, instead of being weakened by the journal, is rather strengthened, and that the bearing, when worn out, can be easily replaced without injuring the shaft.

It consists, further, in combining with the sleeve-bearing a perforated box inclosed in an outer shell intended to hold oil or other lubricating material in such a manner that a portion of the circumference of the sleeve-bearing is continually in a reservoir of oil or other lubricating substance.

It consists, finally, in the arrangement of a ball-joint on the inner box, and also on the shell, in such a manner that the box or shell is free to accommodate itself to the bearing of the shaft, and entire freedom of motion is effected.

A represents a shaft, the bearing of which, instead of being turned down, as usual, so as to weaken the shaft, is produced by fitting on it a sleeve, *a*, of composition, gun-metal, steel, or any other suitable material, which not only strengthens said shaft, but which can be taken off when worn out and replaced by another without disturbing the shaft. Said bearing is fitted into a box, C, which is made of cast-iron, composition, or any suitable material, and which is inclosed in the outer shell, D, as clearly shown in Fig. 1 of the drawings. Said box is perforated with a number of holes, *b*, in its circumference, and with channels *c* in its ends, so that oil or other lubricating material introduced into the shell D has free access to the sleeve-bearing *a*, and that a portion of the circumference of said sleeve-bearing is continually in contact with the lubricating material.

A ball-joint, *d*, on the circumference of the box C and a similar joint on the outside of the shell D permit the box to accommodate itself to the bearing, and insure perfect freedom of motion to the shaft.

This box is applicable to shafts or axles of any description, and it can be used with advantage for line-shafts, in which case it is arranged as shown in Fig. 3.

I claim as new and desire to secure by Letters Patent—

1. The application of a sleeve-bearing, *a*, to the shaft A, substantially as and for the purpose described.

2. The combination of the perforated box C with the shell D and sleeve-bearing *a* of the shaft A, constructed and operating substantially as and for the purpose set forth.

JOHN SPARROW.

Witnesses:

RUFUS D. BEAN,
T. R. MILLETT.