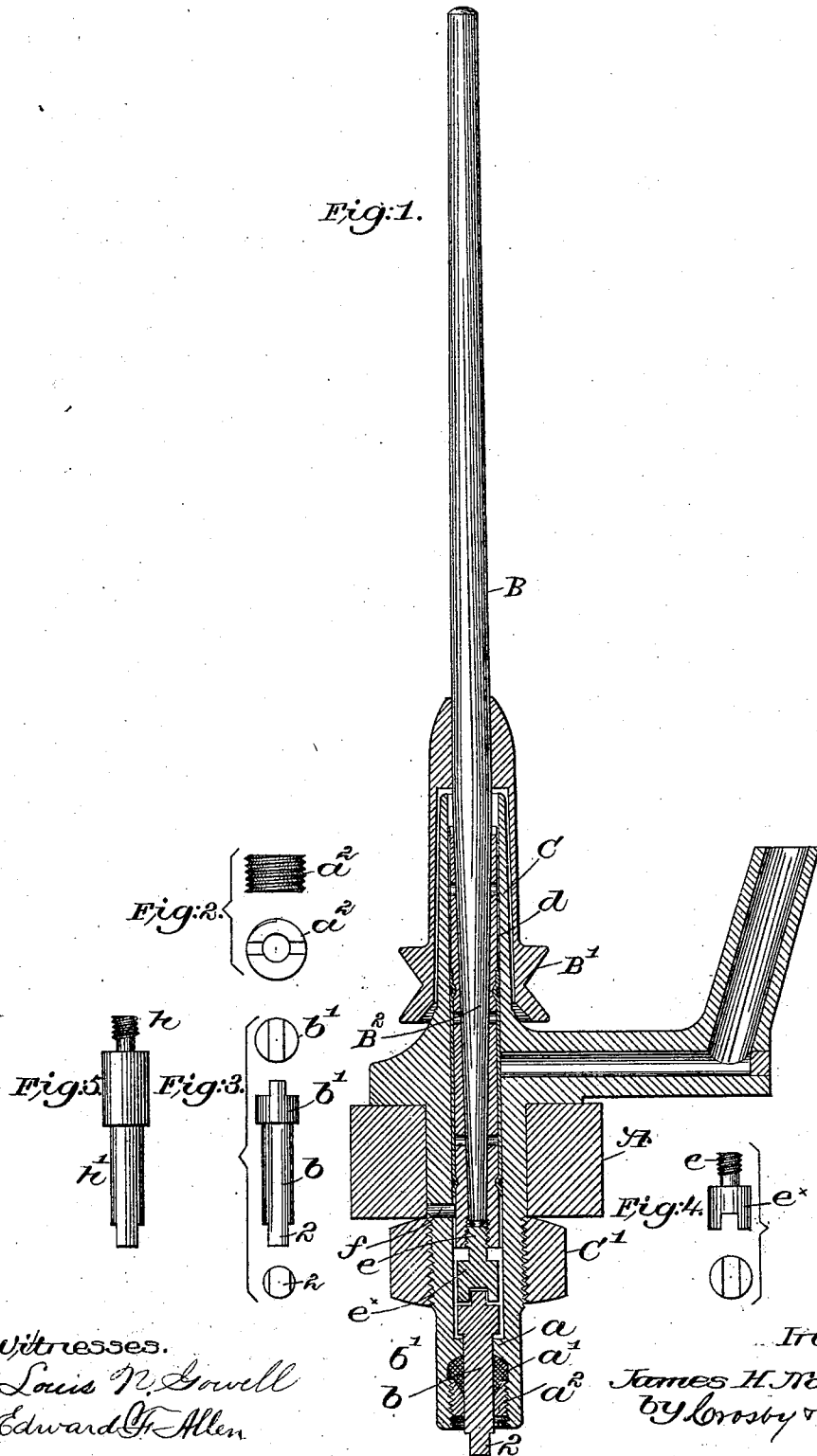


(No Model.)

J. H. NORTHROP.
SPINDLE SUPPORT.

No. 503,060.

Patented Aug. 8, 1893.



UNITED STATES PATENT OFFICE.

JAMES H. NORTHROP, OF HOPEDALE, MASSACHUSETTS, ASSIGNOR TO
GEORGE DRAPER & SONS, OF SAME PLACE.

SPINDLE-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 503,060, dated August 8, 1892.

Application filed December 1, 1892. Serial No. 453,745. (No model.)

To all whom it may concern:

Be it known that I, JAMES H. NORTHROP, of Hopedale, county of Worcester, State of Massachusetts, have invented an Improvement in Spindle-Supports, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

10 This invention relates to that class of bearings having a bolster tapered internally to receive the tapering pintle of the spindle, the bolster being adjustable in the supporting case to determine the amount of looseness between the spindle and bolster.

15 One part of my invention consists in a bolster case containing an internally tapered bolster which receives the spindle, and which bolster has a screwthreaded end which is engaged by a screwthreaded step to adjust the 20 bolster longitudinally, the step having an operating connection extending outside the bolster case and acted upon within the case by a restraining friction device, as will appear 25 fully and in detail hereinafter.

My invention also consists in a bolster support open at its lower end and provided with a packing; a bolster therein to receive the 30 pintle of a spindle; and a step connected to the bolster by a screw thread, combined with a key extended through said packing to the outer side of the bolster support whereby the step may be turned to adjust the bolster without removing the spindle, the packing referred 35 to, preventing the escape of oil, as will be described.

Figure 1, in vertical section, shows a spindle support embodying my invention; Figs. 2, 3 and 4, details thereof to be referred to; and 40 Fig. 5, a modification.

The rail A, and a spindle B having a sleeve whirl B¹, and tapering pintle B², are and may be all as usual. The rail has seated on it the supporting case C, the connection being shown 45 as affected by the nut C'. The case C is shown as open at its lower end, and as having a packing chamber below the shoulder a, said packing chamber receiving a packing a' which is compressed therein about the shank b of the 50 key b' by a gland a², shown as screwed into

said packing chamber, the rotation of the gland compressing the packing oil-tight about the shank of the key, but instead of the gland I may use any equivalent device. The bearing or bolster d tapered internally to fit the 55 taper of the pintle of the spindle, has screwed to it the step e shown as notched at its lower end e^x to receive a projection, or vice versa, at the upper end of the key, so that the said key, engaged at its outer end 2 by a suitable 60 wrench or actuator, may be rotated when it is desired to adjust the bolster vertically, the latter being restrained from rotation by a suitable pin or projection f.

In the modification Fig. 5, the step h has its 65 shank h' extended through the packing-chamber and packing to be engaged by a wrench or other suitable device by which to rotate the step, the shank of the step constituting a 70 key or device accessible from the outside of the supporting case C for manipulation while the spindle is being rotated. The loose connection between the key and step is advantageous for some uses.

This invention is not limited to the exact 75 shape of the packing chamber, nor to the class of packing used, nor the shape of the gland; nor to the shape of the key so long as the step is accessible for rotation from outer side the support. The bolster may be adjusted verti- 80 cally while the spindle is running, thus effecting great saving of time.

This invention is not limited to making the key or shank in a separate piece from the 85 step, as they may be made as one piece and yet be within the scope of my invention.

The packing a' exerts sufficient friction to prevent accidental rotation of the step.

Usually the screw-thread on the step which 90 engages the screw-thread of the bolster has a very loose fit and there is liability of the step rotating by the action of the spindle upon it unless some means is employed to prevent it.

Having described my invention, what I claim as new, and desire to secure by Letters 95 Patent, is—

1. The combination of a bolster case, a bolster therein tapered internally and screw-threaded at its lower end and adapted to receive a spindle, a screwthreaded step fitted to 100

the screwthreaded end of the bolster and having an operating connection extending outside of the bolster case and adapted to be rotated to adjust the bolster longitudinally and
5 a friction device located within the bolster case and acting upon the operating connection of the step to restrain the rotation of the step, substantially as described.

2. A bolster support provided at a point below the end of the bolster with a packing, said
10 packing being located within said bolster support, a bolster tapered internally to receive the tapered pintle of a spindle, and a step connected to the bolster by a screwthread, com-

bined with a key engaging the step and extended through said packing to the outside of the bolster support, whereby the step may be turned to adjust the bolster without removing the spindle, the packing referred to preventing the escape of oil, substantially as
15 described. 20

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JAMES H. NORTHROP.

Witnesses:

E. D. BANCROFT,
H. F. SEARLES.