

(No Model.)

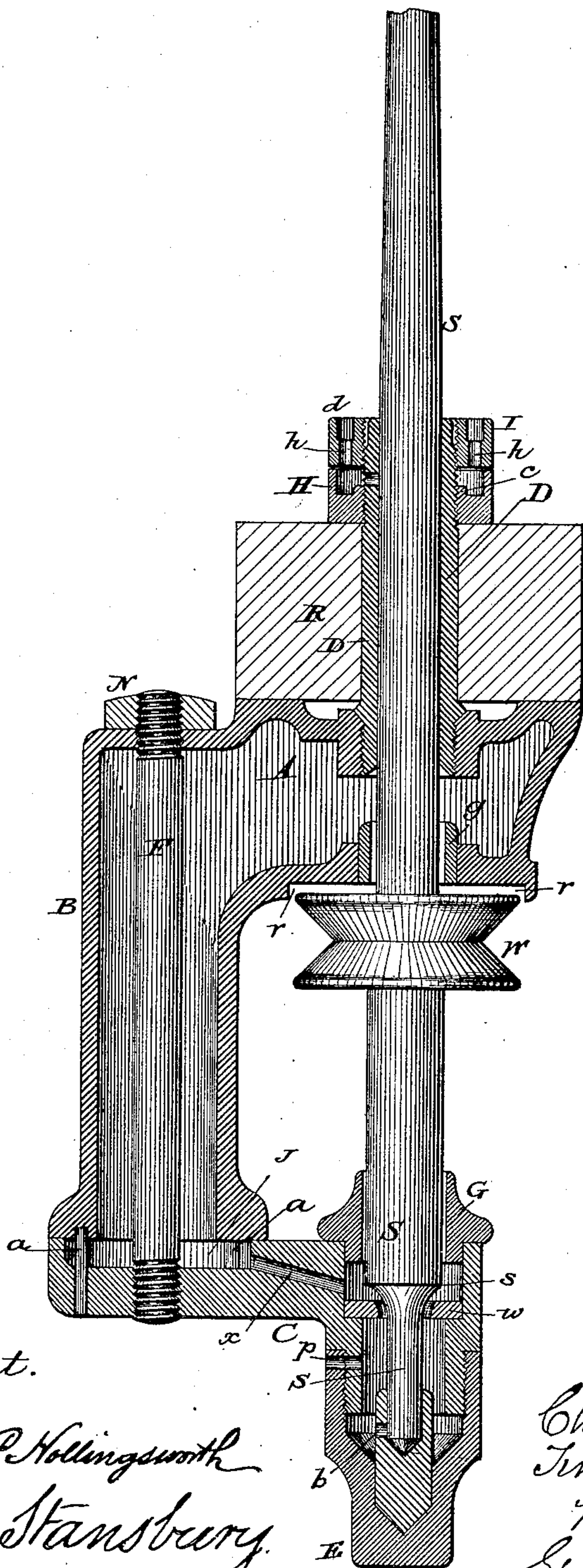
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SPINDLE BOLSTER AND STEP.

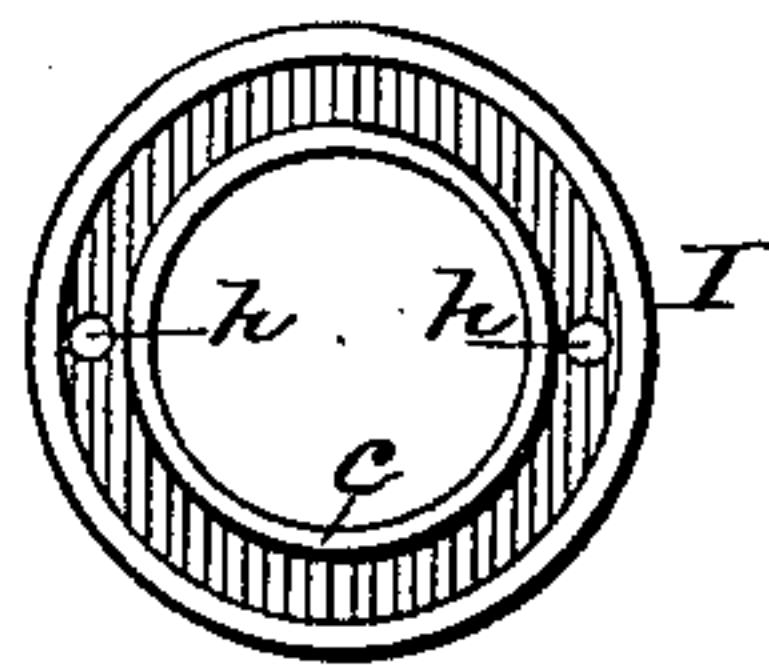
No. 245,993.

Patented Aug. 23, 1881.

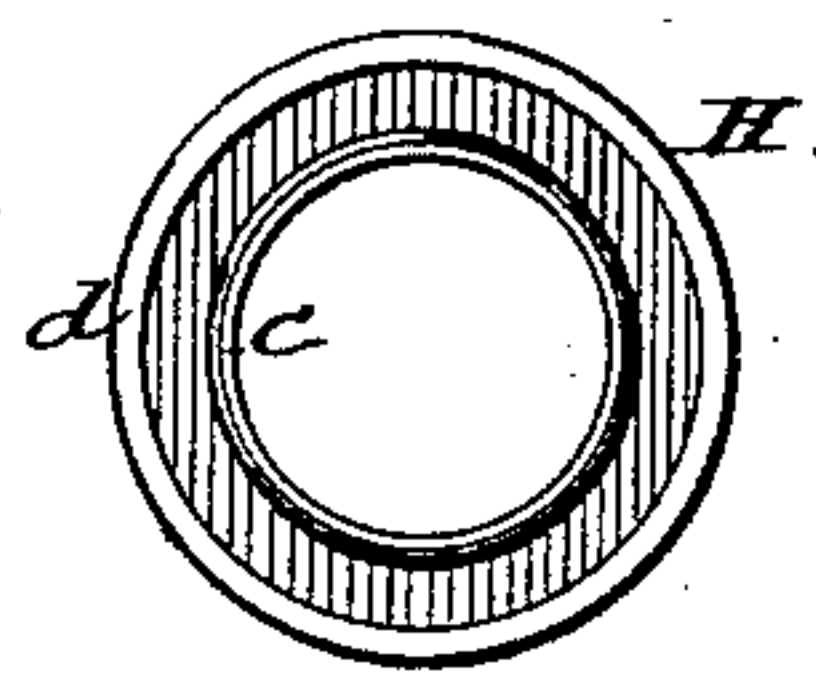
*Fig. 1.*



*Fig. 2*



*Fig. 3.*



*Attest.*

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# UNITED STATES PATENT OFFICE.

CHARLES G. BUTTRICK AND TIMOTHY B. FLANDERS, OF HOLYOKE, MASS.

## SPINDLE BOLSTER AND STEP.

SPECIFICATION forming part of Letters Patent No. 245,993, dated August 23, 1881.

Application filed November 19, 1880. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES G. BUTTRICK and TIMOTHY B. FLANDERS, of Holyoke, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Spindle Bolsters and Steps; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a vertical central section, transversely of the rail, of our improved spindle frame, bearing, and oiling devices. Fig. 2 is a plan or top view of the upper oil-cup. Fig. 3 is a similar view of the lower oil-cup.

The same part is indicated by the same letter wherever it occurs in the drawings.

Our invention consists in providing the spindle with a hollow frame and foot for conducting the oil from the bolster to the step without exposure to air and dust, and preventing it from running over the whirl and exposed part of the spindle below the whirl.

It further consists in giving a concave or cup shape to the lower end of the bolster, for the purpose of causing the oil to drop on the outer surface of a convex hub or ring below, and so to flow into the hollow of the frame, instead of following down the spindle to the whirl, all substantially as hereinafter more specifically set forth.

In the drawings, R marks the bolster-rail; A, the hollow stand, into which the lower end of the bolster D is screwed.

B is the hollow arm of stand A, leading down to a foot, C, upon which the step E is screwed. The foot C is fixed to arm B by means of rod F and nut N and pins *a a*.

The spindle S is provided, as usual, with the whirl W, the upper side of which is received in a shallow recess, *r*, made in the lower side of the stand A, to inclose and protect it from access of dust and lint. Near the lower end of the spindle is a shoulder, *s*, below which it is contracted and tapered, as shown, to fit the block in the step E, in which it turns.

The rail R supports the stand A, and through it passes the bolster D, the lower end of which is screwed into the stand and the upper end provided with a double oil-reservoir, H, both chambers of which may be screwed or otherwise attached to the bolster. The upper chamber of this reservoir receives the oil and serves as a cover to the lower section, which holds the oil and supplies it to the spindle-bearing, as required, through a small hole provided for that purpose. The oil flows from the upper to the lower chamber through holes in the bottom of the former. (Shown in Fig. 2.) The lower chamber has an annular lip, lower than the outer wall, to allow the oil to flow over it readily into the bearing. The upper chamber has an annular groove, into which the oil is poured, and whence it flows immediately into the lower chamber. The motion of the spindle, when revolving, creates a tendency to a vacuum between it and the bolster, and the oil flows in by atmospheric pressure by the operation of a familiar principle until the space is just filled. The oil is kept clean, and the operation is positive.

The hub or ring *g* of stand A has its upper lip made convex, as shown. This lip is directly under the concave lower end of bolster D, so that oil which drops from the bolster will fall upon the convex lip of hub *g* and be conducted into stand A, down arm B into a chamber, J, in foot C, just below it, and thence flows through duct *x* into the step E, which it fills to the level of the overflow *p*, and then falls into a receptacle placed below to receive it. A hub, G, surrounds the spindle where it enters the foot C, and a metallic washer, *w*, is seated in the foot, a little below the shoulder *s* of the spindle. The step E is screwed onto the lower side of the foot C. When it is removed the shoulder *s* of the spindle rests and turns upon washer *w*. When the step is screwed on the shoulder *s* is lifted up out of contact with the washer, and the spindle then is supported and turns upon its step. An oil-hole, *b*, admits oil to the lower end of the spindle resting in its block.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination of the hollow stand A, provided with the hollow arm B, with the step E, the bolster D, made concave at its lower end, and the hub or ring *g*, made convex on its  
5 upper end, all in the manner and for the purpose set forth.

2. The combination of the stand A, provided with the arm B, foot C, provided with the chamber J, and duct *x* and hollow step E, all in the  
10 manner and for the purpose specified.

In testimony that we claim the foregoing as our own invention we affix our signatures in presence of two witnesses.

CHARLES G. BUTTRICK.  
TIMOTHY B. FLANDERS.

Witnesses:

E. LYON,  
J. H. FRASER.