

(No Model.)

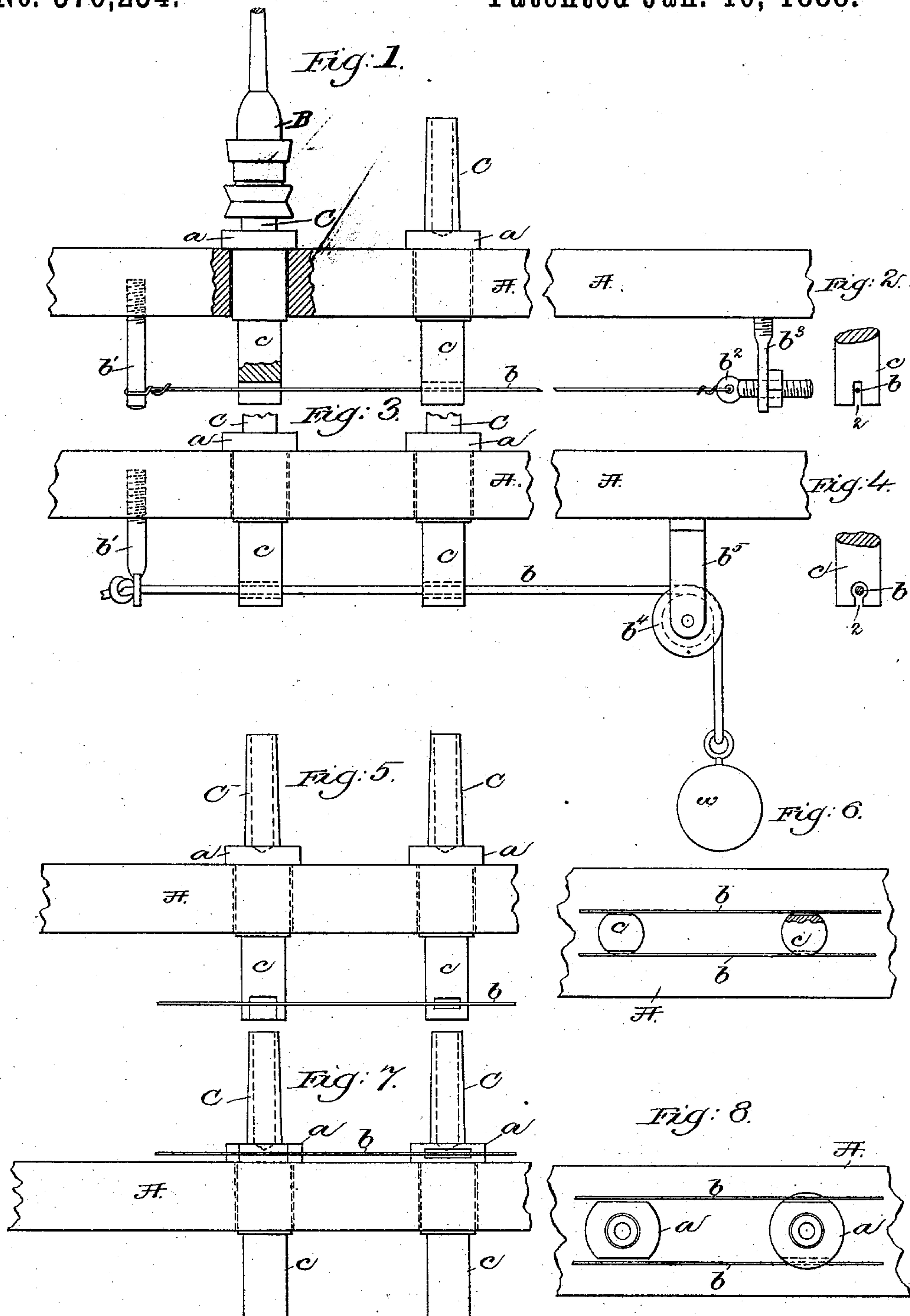
2 Sheets—Sheet 1.

W. T. CARROLL.

SUPPORT FOR SPINNING SPINDLES.

No. 376,234.

Patented Jan. 10, 1888.



Witnesses
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Inventor
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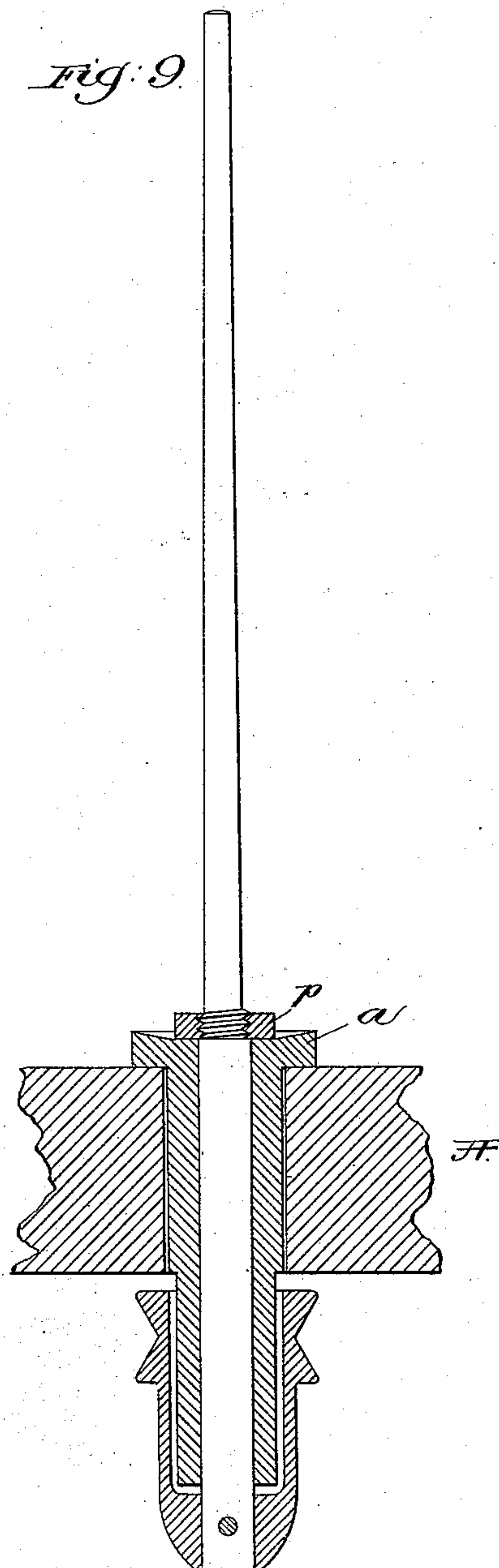
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UNITED STATES PATENT OFFICE.

WILLIAM T. CARROLL, OF WORCESTER, ASSIGNOR TO GEORGE DRAPER & SONS, OF HOPEDALE, MASSACHUSETTS.

SUPPORT FOR SPINNING-SPINDLES.

SPECIFICATION forming part of Letters Patent No. 376,234, dated January 10, 1888.

Application filed December 21, 1886. Serial No. 222,172. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. CARROLL, of Worcester, county of Worcester, and State of Massachusetts, have invented an Improvement in Supports for Spinning-Spindles, of which the following description, in connection with accompanying drawings, is a specification, like letters on the drawings representing like parts.

Prior to my invention bolster-bearings for that class of spindles having a sleeve-whirl have been mounted loosely in a rigid support, the bolster-bearing being surrounded sometimes by an elastic packing and sometimes by oil, which constitutes a cushion; and so, also, the bolster-bearing for this kind of spindle has been made rigid, and such bolster-bearing has been supported loosely upon or with relation to the bolster-rail, so that the said bearing might move bodily, thus doing away with the separate or independent bolster surrounded by either packing or oil.

In my present invention the bolster-bearing is extended through a hole in the bolster-rail, which hole it enters loosely, and a part of the bolster is arranged to co-operate with one or more yielding holders, the said holders co-operating, preferably, with two or more of the bolster-bearings when vibrated, by reason of the strain of the spindle within the said bolster-bearings, the said spindle being in rotation and being unevenly loaded.

My invention consists, essentially, in the combination, with a bolster-rail provided with a hole and a bolster having its shank extended through the said rail loosely, of a flexible holder co-operating with one or more of the said bolsters outside of the said rail to restrain their motion within certain limits when the said bolsters are made to vibrate or move laterally by reason of the strain of the spindles within them. This holder may also restrain the bolster from rotating with the spindle.

Figure 1 in side elevation represents a sufficient portion of a spinning-frame to enable my invention to be understood. Fig. 2 is a detailed elevation of the foot of one of the bolster-bearings shown in Fig. 1; Fig. 3, a detail showing a portion of a spinning-frame containing a modified form of my invention; Fig. 4, a detail showing in elevation the foot of one of

the bolster-bearings shown in Fig. 3. Figs. 5, 6, 7, and 8 are yet other modifications to be referred to, and Fig. 9 is yet another modification.

The bolster-rail A and the sleeve-whirl spindle B are and may be of usual construction.

The bolster-bearing C consists, essentially, of a tube-like extension, which receives within it the spindle B, and in turn is surrounded by the sleeve-whirl of the spindle. This bolster has a suitable shoulder or collar, as *a*, to determine the position of the bolster with relation to the rail A. The rail A has a series of holes—one for each bolster—the said holes being a little larger in diameter than the diameter of the bolster externally, so that when the bolsters are inserted in the said holes they have freedom of motion to a limited extent.

I have done away with all packing such as heretofore commonly used to surround the bolster-bearing, and instead I have notched or cut away the bolster-bearing to receive in the said notches a flexible holder, *b*, which for the best results will be either a flexible wire or rod, as shown in Figs. 1, 5, and 7, or a cord, as shown in Fig. 3.

The holder shown in Fig. 1 is connected at one end to a stud, *b'*, attached to the bolster-rail, and at the other end to an adjustable screw-stud, *b''*, extended through a lug, *b'''*, attached to the bolster-rail, the said holder being embraced by the forked or notched part, as 2, of the foot or shank *c* of each bolster, or of two or more bolsters, the diameter of the said holder and of the slot being preferably of such size one with relation to the other as to permit of slight movement of the foot of the bolster without coming in contact with the said holder; but as soon as a contact between the bolster and holder is made the holder thereafter acts as a check to the undue vibration of the bolster, and also acts as a cushion for the bolster, and prevents at the same time the rotation of the bolster in the rail and with the spindle.

In Fig. 3 the holder (shown as a rod or cord) is attached to a like stud, *b'*, and is then extended over a pulley, *b''*, having its axis supported in a hanger, *b'''*, the said holder having applied to its outer end a weight, *w*, the holder being extended, as shown by dotted lines in

Fig. 3 and by full lines in Fig. 4, through a slot in the shank *c* of the bolster.

In Fig. 5 the lower end of the bolster is notched at opposite sides, or slabbed or cut away to receive within said space the two holders *b b*, (shown best in Fig. 6,) one holder normally resting near or quite close to one of the slabbed or cut-away parts of the foot *c* of the bolster *C*, the other holder lying opposite it and near or close to the other cut-away portion of the foot of the bolster.

In Figs. 7 and 8 I have shown two holders, *b b*, preferably of wire, which are made to co-operate with a slabbed or notched part of the flange or collar *a*, all the said holders acting substantially alike with relation to the foot of the bolster, one holder co-operating with two or more bolsters.

It is obvious that all the bolsters of a spinning-frame of any length may be made to co-operate with one single holder, thus providing a very cheap and at the same time an effective cushion or check for any undue movement of the bolster.

In the modification, Fig. 9, the sleeve-whirl is fastened to the spindle below the bolster-rail, and below the bolster-bearing the weight of the spindle is sustained by means of a collar, *p*, which is screwed or otherwise fastened to the spindle at a point above the collar *a* of the bolster.

My invention is also applicable to not only cushion the movement of a bolster of this class, but also to prevent it from being rotated with the spindle, and to embody my invention with a bolster-bearing of the class referred to in Fig. 9 it is only necessary to apply against the

collar *a*, or it may be placed at a point below the rail *A*, a flexible holder, substantially such as shown and before described.

Prior to my invention I am aware that a bolster and also a step has been mounted in a rail in such manner that it may tip slightly about a ledge or seat between the ends of the bolster or step, the bolster or step being kept pressed close in its seat by a spring-rod located immediately opposite the seat; but such spring-rod does not act as a cushion for a bolster placed in a rail in such manner as to have a limited extent of unrestrained lateral movement. So, also, I am aware that a spindle-bolster having its shank extended loosely through a hole in a rail has been provided with an arm having an adjusting device, a spring being interposed between the said arm and rail to keep the whirl of the spindle inserted in the said bolster pressed properly into the band to keep it taut.

I claim—

The sleeve-whirl spindle and bolster-rail provided with a hole and a bolster having its shank extended therein loosely, combined with a flexible holder adapted to engage the bolster at a point outside of the said rail and prevent the rotation of the said bolster in the said rail, substantially as described.

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

WILLIAM T. CARROLL.

Witnesses:

G. W. GREGORY,
F. CUTTER.