

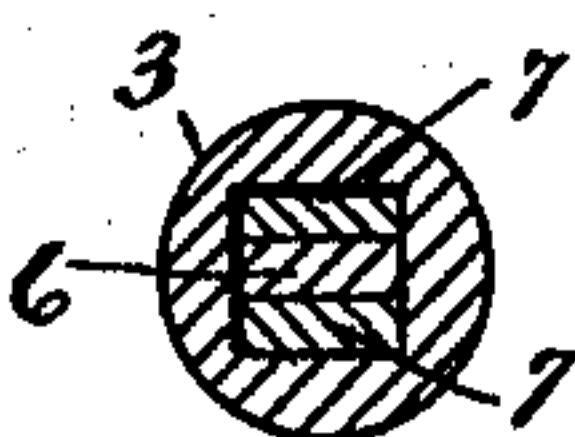
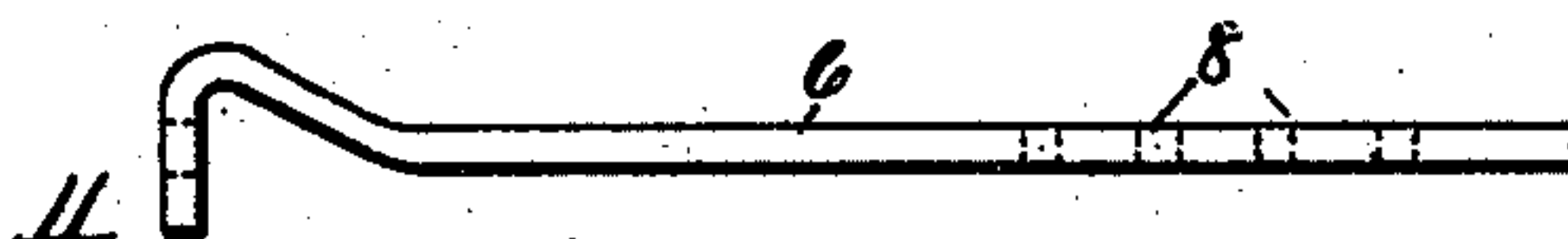
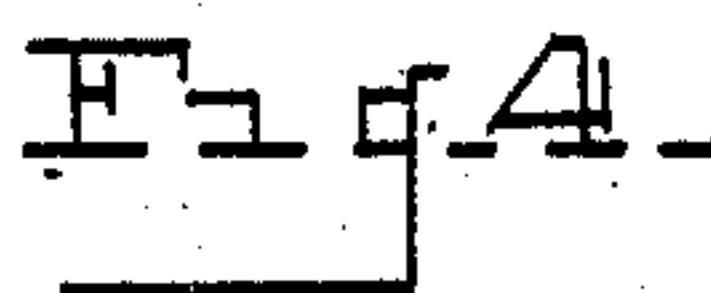
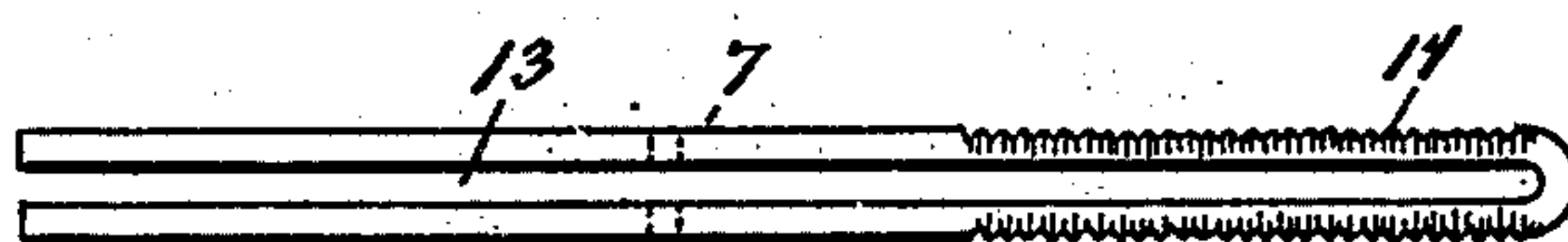
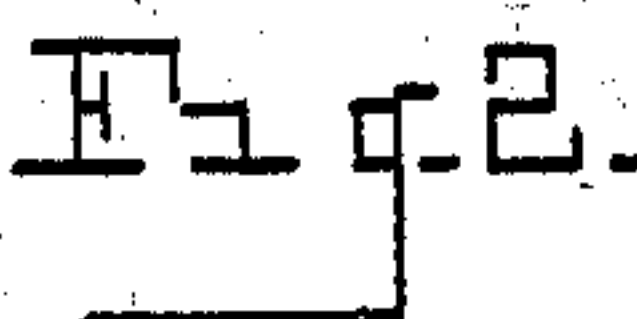
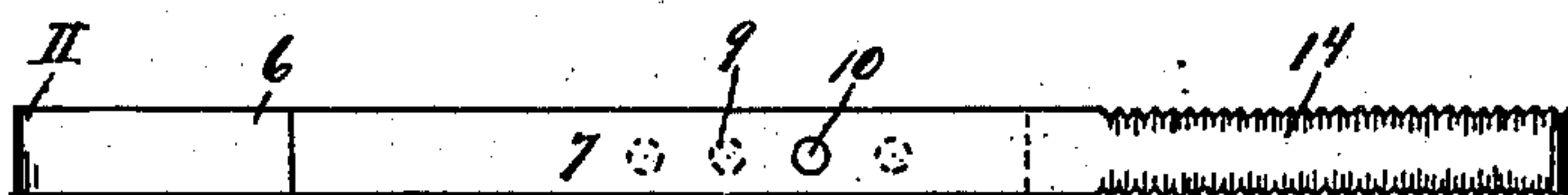
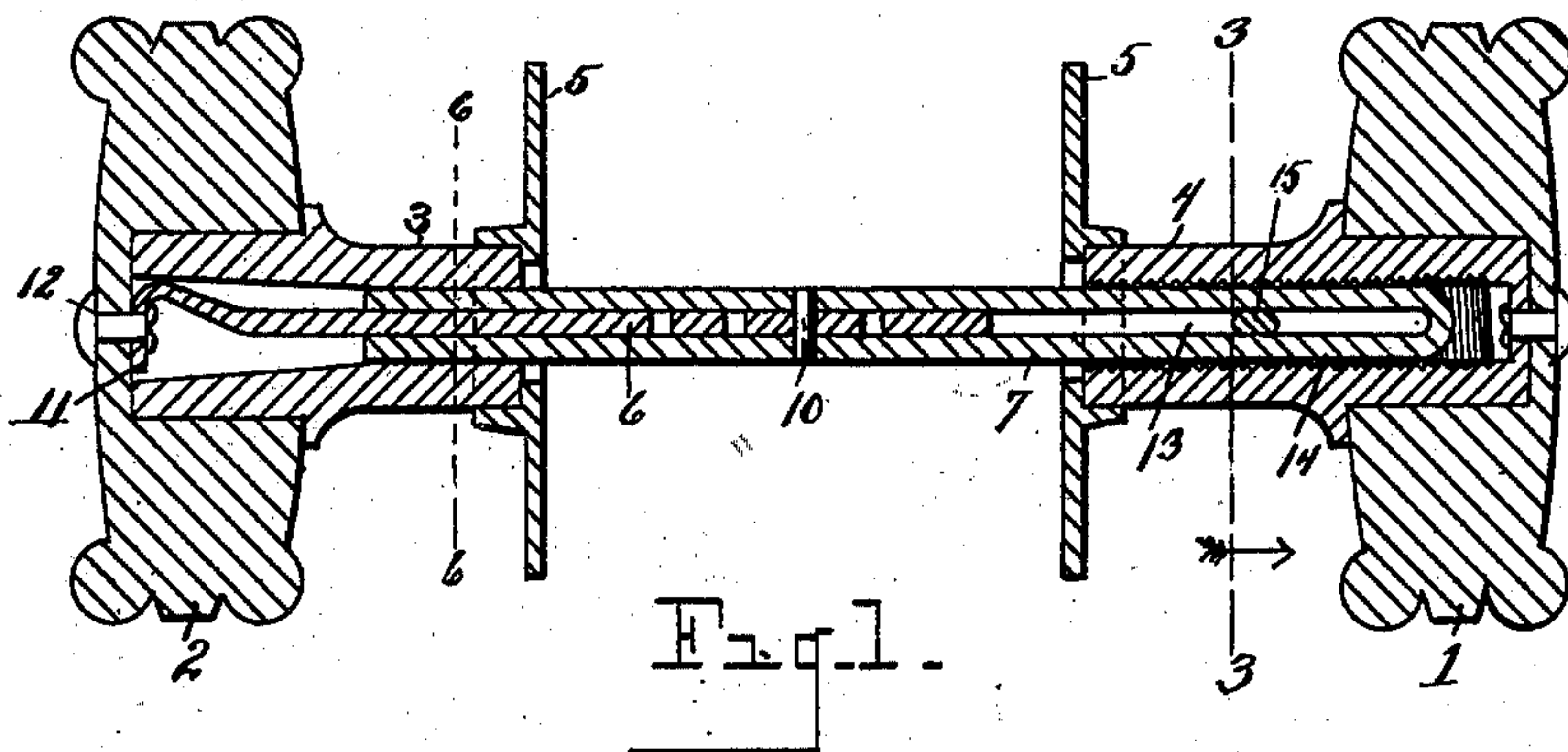
No. 671,018.

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W. H. GONNE.
KNOB ATTACHMENT.

(Application filed July 2, 1900.)

(No Model.)



WITNESSES.

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UNITED STATES PATENT OFFICE.

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KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 671,018, dated April 2, 1901.

Application filed July 2, 1900. Serial No. 22,281. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. GONNE, a citizen of the United States, residing at Chatham, in the county of Kent, Dominion of Canada, have invented certain new and useful Improvements in Adjustable Knob-Spindles; and I do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

This invention relates to adjustable knob-spindles; and it consists in the construction and arrangement of parts hereinafter set forth, and pointed out particularly in the claims.

The object of the invention is to provide simple and effective means for mounting the knobs upon an adjustable spindle, wherein the arrangement is such as to allow of a perfect adjustment of the parts to accommodate doors of various thicknesses and securely lock the adjustable parts when properly adjusted.

The above object is attained by the arrangement illustrated in the accompanying drawings, in which—

Figure 1 is a central longitudinal section through the knobs and spindle. Fig. 2 is a side elevation of the adjustable spindle. Fig. 3 is a transverse section through the neck of the knob and the spindle therein as on line 3 3 of Fig. 1. Fig. 4 is an edge view of the looped portion of the two-part spindle. Fig. 5 is a like view of the single or complementary portion of the spindle. Fig. 6 is a transverse section through the neck of one of the knobs and the spindle lying therein as on line 6 6 of Fig. 1.

Referring to the characters of reference, 1 and 2 designate the knobs, respectively provided with necks 3 and 4, which form sockets that receive the opposite ends of the spindle. Mounted upon the necks of the knobs are the usual rose-plates 5.

The spindle proper is composed of two parts comprising a single central spindle 6 and a looped or double spindle 7, adapted to receive the free end of the central spindle between its opposite sides. Formed through the cen-

tral spindle is a series of apertures 8, and formed in the opposite sides of the looped spindle is an aperture 9, adapted to register with the apertures in the central spindle, whereby said parts may be detachably united by means of a pin 10 passing through the registering apertures of said parts, as clearly shown in Fig. 1.

Formed upon the outer end of the central spindle 6 is an angular foot portion 11, which lies within the aperture in the neck 3 and is permanently secured to the knob 2 by means of the rivet 12, which passes through the wall of said knob and through the bent foot portion of said spindle, as also shown in Fig. 1.

The main or looped portion of the spindle is made by bending a flat piece of metal upon itself at its longitudinal center, forming sides which stand approximately parallel and between which is a slot or channel 13, which is adapted to receive the end of the single spindle 6. The looped end of the spindle 7 is threaded at the corners, as shown at 14, and the neck 4 of the knob 1 is tapped with a corresponding thread, so that it may be screwed upon said threaded looped portion, whereby knob 1 may be screwed any required distance upon the spindle to make the knobs fit the door tightly, thereby obviating any lost motion. When knob 1 has been screwed onto the looped threaded end of the spindle the proper distance, it is locked from unscrewing by means of a pin 15, which has a round head and a flat shank 16. Said pin is passed through an opening in the neck 4 and engages in the slot 13 between the sides of the looped portion of the spindle, whereby the knob 1 is locked upon said spindle. To prevent said pin from accidentally dropping out of the neck 4 and allowing the knob 1 to turn upon the spindle, the flattened portion of said pin is bent, as shown at 17 in Fig. 3, whereby when forced between the sides forming the loop of the spindle it causes said sides to spring slightly apart, and when the pin has been seated its bent end will project through the slot and engage the corner of the spindle with sufficient friction to prevent it from accidentally dropping out. Said pin may be readily removed, when it is desired to remove the knobs from the door, by means of a suitable punch.

Should it transpire that the adjustment of the threaded union between knob 1 and the looped portion of the spindle is insufficient, the spindle may be lengthened or shortened through the medium of the pin 10 and the registering apertures through the united parts of said spindle, whereby said spindle may be made to accommodate any thickness of door.

10 On referring to Fig. 6 it will be seen that the aperture in the neck 3 is square and that the ends of the looped portion 7 of the spindle lie in said opening and receive the central portion 6 of the spindle between them, 15 thereby filling the square opening in said neck and locking the spindle to the knob, so as to cause it to turn therewith.

Having thus fully set forth my invention, what I claim as new, and desire to secure by 20 Letters Patent, is—

1. In an adjustable knob-spindle, the combination with the knobs, of the spindle comprising a looped portion attached to one knob and a central portion lying within said looped 25 portion, the outer end of the central portion of the spindle being bent and riveted to the other knob.

2. In an adjustable knob-spindle, the combination with the knobs, of the spindle comprising a looped portion attached to one knob, 30 a central portion attached to the other knob, the end of the central portion lying between the sides of the looped portion and means for adjustably uniting said spindle parts.

35 3. In an adjustable knob-spindle, the com-

bination with the knobs, of the looped spindle forming an open slot between the parallel sides thereof, the neck of the knob embracing the looped end of said spindle and the flattened pin passing through the neck of 40 the knob and engaging in said slot.

4. In an adjustable knob-spindle, the combination with the knobs, of the two-part spindle, the main part comprising a loop attached to the complementary portion of the spindle 45 and having an opening-slot therethrough, the neck of the knob embracing the looped end of said main portion of the spindle, a flattened pin having a bent end, said pin passing through the neck of the knob and its bent 50 end passing through the slot of the looped portion and engaging the corner of the spindle.

5. In an adjustable knob-spindle, the combination with the knobs, of a two-part spindle comprising a looped portion and a central 55 portion embraced by said looped portion and detachably united thereto, the looped portion of said spindle having an exterior thread cut thereon, the neck of the knob being internally threaded to screw onto said threaded 60 spindle and a pin passing through the neck of the knob and into the slot of the looped portion of the spindle.

In testimony whereof I sign this specification in the presence of two witnesses. 65

WILLIAM H. GONNE.

Witnesses:

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