

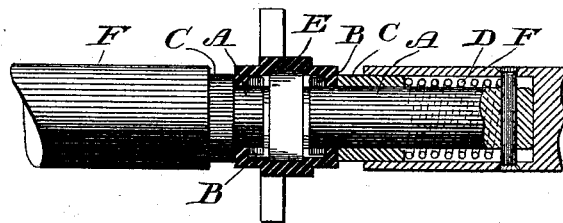
(No Model.)

W. I. ALVORD.  
KNOB ATTACHMENT.

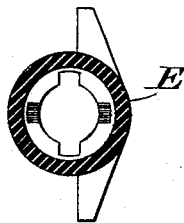
No. 347,411.

Patented Aug. 17, 1886.

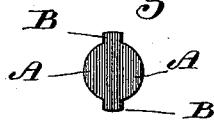
*Fig 1*



*Fig 2*



*Fig 3*



Witnesses

*S. Williamson*

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By

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# UNITED STATES PATENT OFFICE.

WILLISTON I. ALVORD, OF BRIDGEPORT, CONNECTICUT.

## KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 347,411, dated August 17, 1886.

Application filed January 2, 1886. Serial No. 137,329. (No model.)

*To all whom it may concern:*

Be it known that I, WILLISTON I. ALVORD, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Knob Attachments; and I do hereby 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.

My invention relates to certain novel and useful improvements in knob attachments, and has for its object simplicity of construction and a ready attachment to the door; and with these ends in view my invention consists in the details of construction and combination of elements hereinafter explained, and then specifically designated by the claim.

In order that those skilled in the art to which my invention appertains may fully understand its construction and operation, I will proceed to describe the same in detail, referring by letter to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a central section of the hub with the knob-spindles held therein; Fig. 2, a detail cross-section of the hub, and Fig. 3 an end view of the knob-spindles, showing the shape of the head.

Similar letters denote like parts in the several figures of the drawings.

In Letters Patent Nos. 330,186, 330,187, 330,188, and 330,189, granted to me November 10, 1885, I have shown and described various ways of attaching knobs, and my present improvement contemplates the same construction of latch-hub, the only material difference being in the manner of securing the knob, and I will therefore not enter into any detailed description of said hub.

A is the knob-spindle terminating in head B. C is a collar on the spindle, and D a coil-spring confined between said collar and the inner wall of the knob-shank F. The spindle is secured within the knob-shank by a rivet. The resiliency of the spring keeps the collar firmly against the head B.

The construction of the hub E is the same as in my aforesaid patents, and it is immate-

rial whether I use a single hub or two independent ones.

In attaching the knob-spindles the head is inserted within the hub and pressure applied, so as to force the collar backward against the resiliency of the spring until the head has entered the hub far enough to be given a quarter-turn when the pressure is released and the spring allowed to force the collar forward, and thereby draw the head within the counter recesses in the hub and hold it firmly in this position.

In detaching the spindle pressure is applied to the knob to force the collar backward, and when the head has been thrown out of the counter-recesses a quarter-turn is given to it, and the hub-opening being thus brought into direct and angular alignment the action of the spring will throw the collar forward against the head, thereby throwing the latter entirely out of the hub.

I am aware that prior to my invention spring-actuated collars have been arranged around the spindle for the purpose of locking the latter to the knob-shank when the several parts are in their proper position on the door; but I wish to distinctly disclaim any such construction, as my present invention comprehends the use of a spring-actuated collar around the spindle solely for the purpose of securing the latter in its position within the hub.

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

The combination of the knob-shank, the spindle A secured therein and terminating in head B, the coil-spring D around the spindle, the collar C, also on the spindle, between the said head and spring and held by the latter firmly against the former, and the latch-hub recessed to accommodate the head as against retraction, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLISTON I. ALVORD.

Witnesses:

S. S. WILLIAMSON.  
E. S. SUMNER.