No. 629,123. Patented July 18, 1899.

H. W. DAVIS.

KNOB ATTACHMENT.

(Application filed May 4, 1899.)

(No Model.)

Fig. 1.

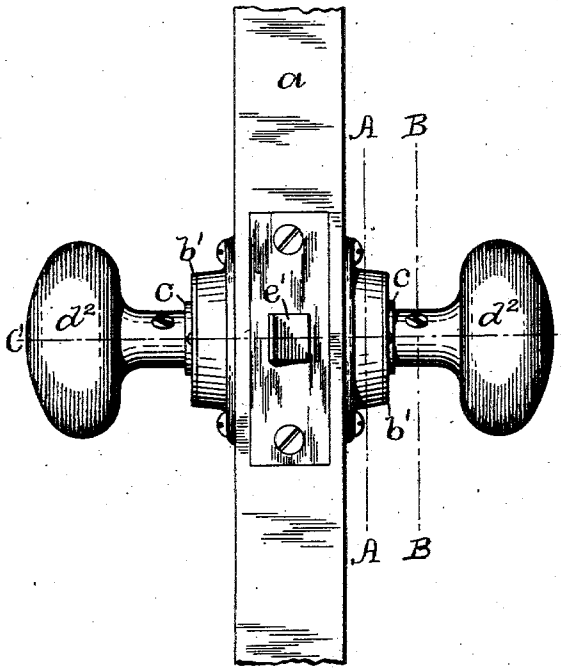


Fig. 2.

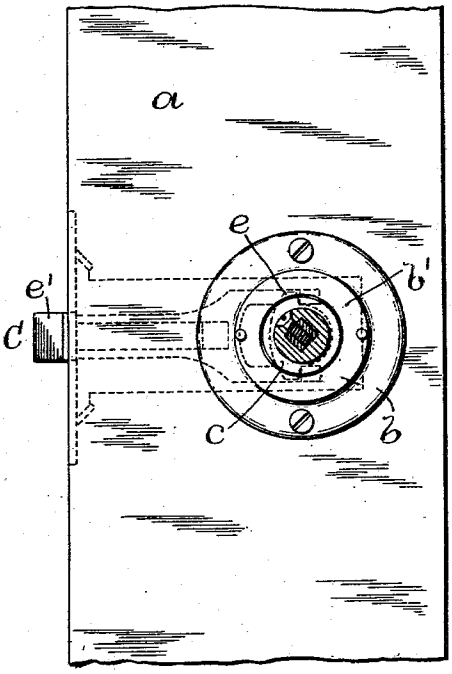


Fig. 3.

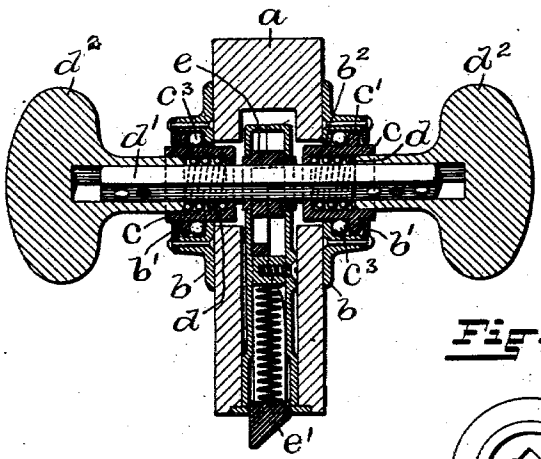


Fig. 4.

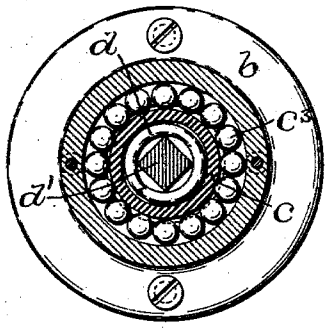
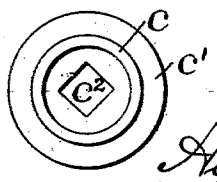


Fig. 5.



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KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 629,123, dated July 18, 1899.

Application filed May 4, 1899. Serial No. 715,528. (No model.)

To all whom it may concern:

Be it known that I, HERBERT W. DAVIS, of Fall River, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Door-Knob Attachments; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to an improvement in the class of door-knob attachments in which the door-knobs are secured to a spindle extending through the lock, which spindle is supported in a rose secured to the opposite sides of the door.

The invention consists in the peculiar and novel construction of sockets rotatably supported in the roses on the opposite sides of the door and in knobs secured to the spindle and held in position by coiled springs contained in the sockets and the friction-bearings in the post between the sockets and the roses, as will be more fully set forth hereinafter.

Figure 1 is an edge view of a door provided with a latch having door-knobs secured by my improved door-knob attachment. Fig. 2 is a side view of part of a door, the door-knob attachment being shown, partly in section, on the line B B of Fig. 1. Fig. 3 is a transverse section of a view on the line C C of Fig. 1, showing the construction of my improved door-knob attachment. Fig. 4 is a sectional view on the line A A of Fig. 1, showing the antifriction-bearing of the sleeve on the rose. Fig. 5 is an end view of one of the sockets.

In the drawings, a indicates the door; b b, the roses secured to the opposite sides of the door; b' b', annular disks secured to the outer ends of the roses, and c sockets having the outwardly-projecting flange c' and the bottom of the cup-shaped socket provided with the rectangular hole c^2. The series of balls c^3 form the antifriction-bearing between the socket c and the rose b. The said series of balls are held in position by an inner flange b^2 on the rose and the flange c' on the socket c. Within the sockets c c are placed the coiled springs d d. The spindle d', which extends through the two sockets and through the tumbler e of the latch e', is secured to the knobs d^2 d^2 by screws in the usual manner against the pressure of the compressed coiled spring d in the sockets c c. The spindle d' is of such (preferably rectangular) form as will fit the rectangular holes c^2 c^2 in the sockets c c and the rectangular hole in the tumbler e of the latch. By this construction the sockets c turn with the spindle d' and with the knob d^2 on the antifriction-bearing c^3 intermediate the sockets and the roses, and thereby give to the rotatable spindle a support of considerably greater diameter than the spindle and of considerably greater diameter than the diameter of the shank of the knobs.

The knobs having their shanks extending into the sockets, as shown in Fig. 3, rotate with the sockets, and as the coiled springs d d bear against the shoulders of the sockets on the knobs these knobs are firmly held against sagging and wear and are not liable to get loose, sag, or wabble.

The latch or lock forms no part of this invention, and any of the ordinary forms of latches or locks may be used or, if required, may be adapted for use in connection with my improved door-knob attchment, as with the door-knob attachment when only one door-knob is required only one rose b and one rotatable socket c may be used, and when so used the extended base, forming the antifriction-bearing for the socket, the spindle, and the knob, secures a rigidity not found in prior structures and facilitates the operation of the lock.

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

1. In a door-knob attachment, the combination with the spindle operating the latch and the door-knob, of a socket connected with the spindle, an outwardly-projecting, annular flange on the socket, a rose provided with an inwardly-projecting, annular flange, and a series of balls forming an antifriction-bearing for the socket in the rose; whereby the socket, the spindle and the door-knob rotate together on an extended base, substantially as described.

2. In a door-knob attachment, the combination with the spindle d', the knobs d^2 d^2,

means for securing the knobs to the spindle, and the coiled springs *d*, of the sockets *c* extending over the shanks of the knobs and secured to the spindle, the outwardly-extending flanges *c' c'* on the sockets, the roses *b b*, the annular disks *b' b'* secured to the roses, and the series of balls $c^3 c^3$; whereby the knobs are firmly secured to the spindle, and the spindle, sockets and knobs are rotated on an extended, annular base formed by the ball-bearings, as described.

In witness whereof I have hereunto set my hand.

HERBERT W. DAVIS.

Witnesses:
J. A. MILLER, Jr.,
B. M. SIMMS.