(No Model.)

A. T. MATTHEWS.

KNOB.

No. 385,814. Patented July 10, 1888.

Fig. 1.

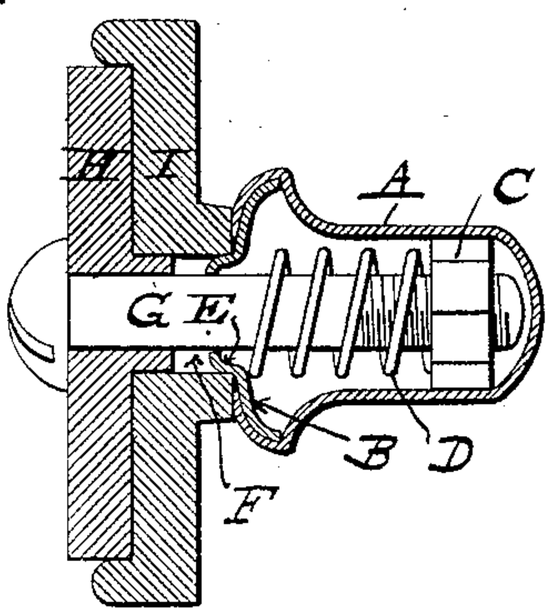


Fig. 2.

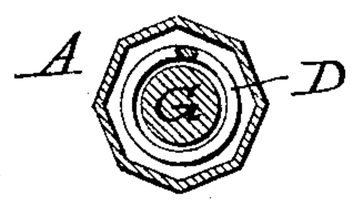


Fig. 3.

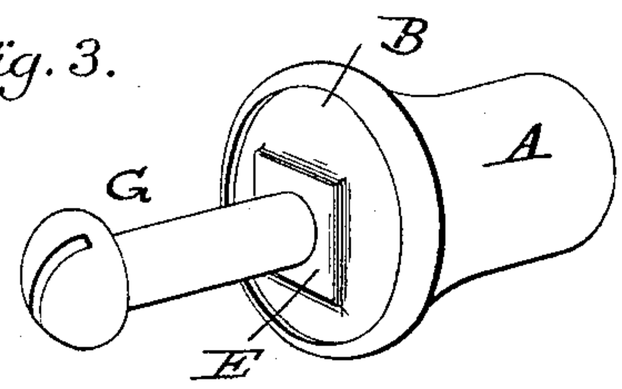


Fig. 4.

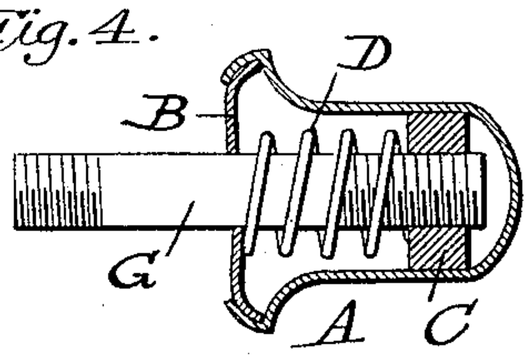


Fig. 5.

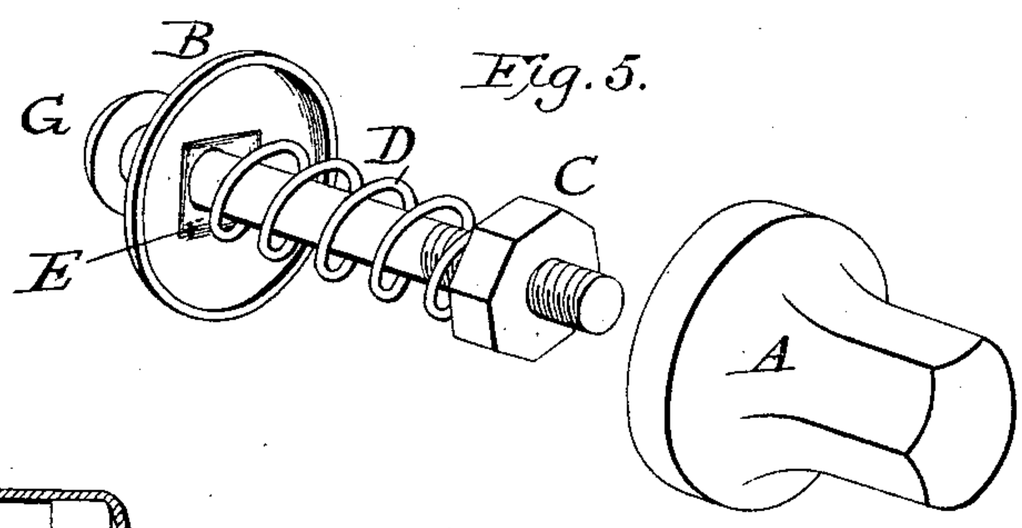
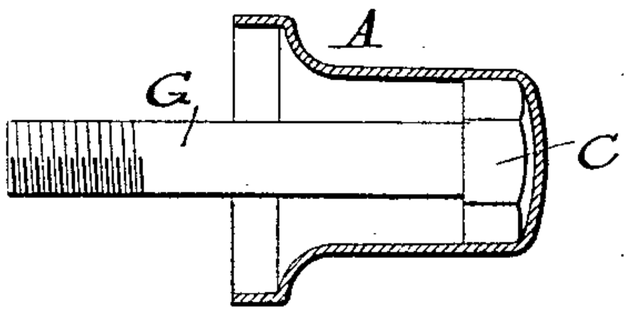


Fig. 6.



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UNITED STATES PATENT OFFICE.

AMBROSE T. MATTHEWS, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO THE WORCESTER FERRULE COMPANY, OF SAME PLACE.

KNOB.

SPECIFICATION forming part of Letters Patent No. 385,814, dated July 10, 1888.

Application filed January 27, 1888. Serial No. 262,144. (No model.)

To all whom it may concern:

Be it known that I, AMBROSE T. MATTHEWS, of Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Knobs, of which the following is a specification.

My invention relates to knobs for dampers or registers; and the object of the invention is to produce a knob which will cause the slide to which the knob is attached to fit closely to the door.

Another object of the invention is to provide for the adjustment of the parts relatively to each other, whereby wear may be compensated for and the parts kept tight and in proper relative positions.

Referring to the accompanying drawings, Figure 1 is a sectional view showing one of my improved knobs applied to a damper; Fig. 2, a vertical sectional view on the line 1 1. Fig. 3 is a perspective view of one of my improved knobs with a cylindrical instead of an angular body. Fig. 4 is a longitudinal sectional view of the same. Fig. 5 is a perspective view of the knob shown in Figs. 1 and 2 with the parts separated, and Fig. 6 a view illustrating a slight modification.

A indicates the case or shell of a knob, which is preferably closed at one end and open at its other end, as clearly shown, the said case or shell being advisably struck up out of sheet metal, as is well understood by those skilled in the art.

The case or shell will preferably be made angular in cross-section, as clearly shown in Figs. 1, 2, and 5, in order to permit the application of a wrench to its outer face, and also to hold and prevent from turning the nut which is placed within it to receive the threaded stem or bolt.

In Figs. 1, 2, and 5 I have shown the case or shell as being octagonal in cross-section; but it is apparent that it may be of any other desired form, either circular, triangular, hexagonal, or square.

B indicates the end plate, which is provided with a central perforation, and is adapted to fit into and close the end of the case or shell A. The precise manner of securing this end plate, B, to the case or shell A is a matter capable of considerable variation; but I prefer to simply turn the edges of the case or shell over upon the outer face of the cap-plate, as clearly shown in Figs. 1, 3, and 4. Before the cap-plate B is secured in place I insert into the case or shell A a nut, C, and a coiled spring, D, the said spring bearing at its opposite ends against the nut and the inner face of the cap-plate.

The nut will by preference correspond in form to the shape or cross-section of the case or shell, though this is not essential.

Immediately surrounding the central perforation in the end plate or cap-plate, B, is formed a rectangular projection, E, as shown in Figs. 1, 3, and 5, the said projection being adapted to fit into a slot, F, in the stove or other article to which knobs are attached, and thereby not only guide the knob in its movements, but also prevent it from turning.

G indicates a bolt or stem which passes through the perforation in the end plate, B, through the spring, and finally screws into the nut C in the outer end of the case or shell A, as shown in Figs. 1, 4, and 5. This bolt or stem G will advisably be provided with a slitted head, so that by the use of a screw-driver the said bolt or stem may be screwed into the nut C, to take up or compensate for wear of the parts.

From this construction it will be seen that the spring tends to keep the slide H of the damper in contact with the front I of the stove or other article, and that by reason of the rectangular projection E, working within the slot F, the knob is prevented from turning or unscrewing.

In some cases it is not possible to employ a headed bolt or stem, such as is shown in Figs. 1, 3, and 5, and in such case it will be necessary to employ a stud or bolt of the form represented in Fig. 4, which is threaded at both ends, so as to screw into the plate or slide.

It is obvious that the nut C may be dispensed with, and in such case the head of the bolt or stem G will be placed inside the case or shell A, as shown in Fig. 6.

Having thus described my invention, what I claim is—

1. In combination with a case or shell, a nut

carried thereby, a cap-plate, a spring bearing at opposite ends against the cap-plate and the nut, and a bolt or stem screwing into the nut, substantially as shown.

2. In a knob for dampers, &c., the combination, with the bolt or stem G, provided with an angular head or nut, C, of a case or shell, A, made angular in cross-section, all substantially as shown.

3. In combination with the slotted plate I, a damper, H, and a knob secured to the damper and provided with a rectangular projecting hub, E, to enter the slot in plate I.

4. In combination with the case or shell A, the perforated cap-plate B, provided with the rectangular projection E, a nut, C, placed within the case or shell, a spring, D, bearing at opposite ends against the nut and the cap-plate, and a headed bolt or its described equivalent screwing into the nut, all substantially as shown.

5. In a knob substantially such as shown, the combination, with a case or shell, of a bolt or stem, a spring, a nut, and a cap-plate inserted into the end of the case or shell and secured thereto, the edges of the latter being bent down upon the cap-plate.

6. In a knob for dampers, &c., the combination, with a shell or case, of a bolt or stem provided within the shell with a head or nut, and a spring located within the shell and bearing at opposite ends against the end of the shell and the nut or head of the bolt.

In witness whereof I hereunto set my hand in the presence of two witnesses.

AMBROSE T. MATTHEWS.

Witnesses:
C. F. STEVENS,
WM. E. LEWIS.