

(No Model.)

J. B. FINCH.  
KNOB ATTACHMENT.

No. 419,431.

Patented Jan. 14, 1890.

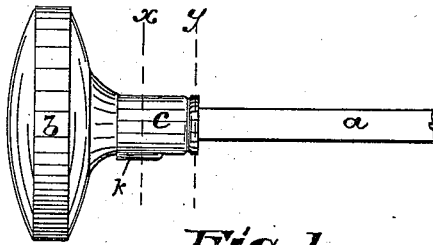


Fig. 1.

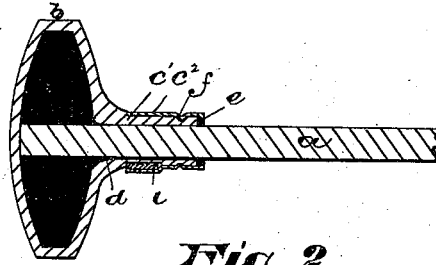


Fig. 2.

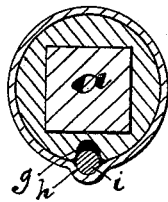


Fig. 3.

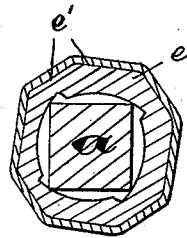


Fig. 4.

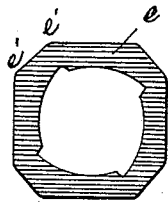


Fig. 5.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

JAMES B. FINCH, OF NEW YORK, N. Y.

## KNOB ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 419,431, dated January 14, 1890.

Application filed April 27, 1889. Serial No. 308,830. (No model.)

### *To all whom it may concern:*

Be it known that I, JAMES BOONE FINCH, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Knobs for Doors, &c.; 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to enable the door-knob to be more securely and nicely adjusted upon the knob-spindle, and with greater facility and ease after the latter has been thrust through the door or lock case; and it consists in the arrangements and combinations of parts, substantially as will be hereinafter set forth, and embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters indicate corresponding parts in each of the several figures, Figure 1 is a side elevation of the improved knob and shank or spindle. Fig. 2 is a central longitudinal section of the same. Fig. 3 is an enlarged section taken through line *x*, Fig. 1. Fig. 4 is an enlarged section through line *y*, and Fig. 5 is a detail view of the fastening plate or cutter.

In said drawings, *a* indicates an ordinary angular spindle, and *b* a knob, having a shank *c*, provided with an opening or socket *d*, formed and adapted to receive said angular spindle in the usual way. The said shank is made, preferably, in two parts. The one *c'* which contains the opening *d* serves as a core or inner body and is fixed to the bulb or ball of the knob or is integral therewith, as indicated in Fig. 2. The outer part *c''* is a sleeve, adapted to move upon the core as on a pivot. The outer extremity of the said sleeve is provided with a die or cutter *e*. (Shown in detail plan in Fig. 5.) This is fixed in the sleeve at the end of the core in any suitable manner, so as to revolve with said sleeve; but I prefer to secure said cutter by making its periphery

angular, as indicated at *e' e'*, and making the sleeve where it covers said cutter correspondingly angular, and thus prevent independent turning. The cutter is so disposed on the knob-shank as to allow the spindle to be introduced into the opening or socket therein, and then by turning the sleeve to bite or cut into the edge or edges of the spindle, so that the latter cannot be withdrawn from its socket. Thus the knob can be firmly and securely held on the spindle close to the door without the use of set-screws such as are commonly employed, and the objections arising from such use are avoided.

The peculiar formation of the cutter-plate shown in Fig. 5 is the one preferred, as by a slight exertion of power the cutting-edges indent or bite into each of the angular edges.

The sleeve and cutter are prevented from withdrawing from the core by grooving the latter, as at *f*, and forcing the sheet metal of the sleeve into the groove by a suitable tool.

To prevent the sleeve from turning when the knob is in use, and thus allowing the cutter to become disengaged from the spindle and the knob to be withdrawn from said spindle, I have provided a key adapted to lock the sleeve and core when the cutter is in holding relation to the spindle. To this end I have recessed the core on the under side, as at *g*, and have formed a similar recess *h* in the sleeve, and in the said recess *g* have introduced a key *i*. In turning the sleeve to secure the bite on the spindle, the two recesses *g h* are brought into coincidence and the key is thus allowed to drop into the lower recess, but project up into the recess *g*, thus preventing further turning of the parts in their relations to one another, the key acting as an ordinary shaft-feather.

When it is desired to unlock the parts, the key may be lifted by hand, a hole *k* for the finger or a nail or other tools being provided for that purpose.

Having thus described the invention, what I claim as new is—

1. In combination with a knob having a shank, core, and a spindle, a sleeve arranged on said core and provided with a cutter adapted to indent or bite the spindle to hold

the parts together, substantially as set forth.

2. In combination, the knob having the core, a sleeve, a cutter, and a key serving as a feather, substantially as and for the purpose set forth.

5 3. In combination with a peripherally-grooved knob-shank core, a sleeve arranged on said core and provided with a cutter to bite into the spindle and being bent or forced

into said groove, as at *f*, to hold the sleeve in position on said core, substantially as set forth. 10

In testimony that I claim the foregoing I have hereunto set my hand this 19th day of April, 1889.

JAMES B. FINCH.

Witnesses:

CHARLES H. PELL,  
E. L. SHERMAN.