No. 768,833. PATENTED AUG. 30 1904.

H. G. VOIGHT.

DOOR KNOB AND LOCK.

APPLICATION FILED APR. 25, 1904.

NO MODEL.

Fig. 1.

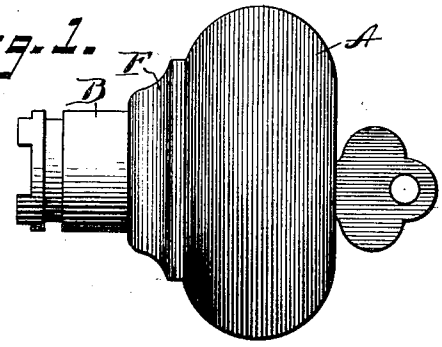


Fig. 2.

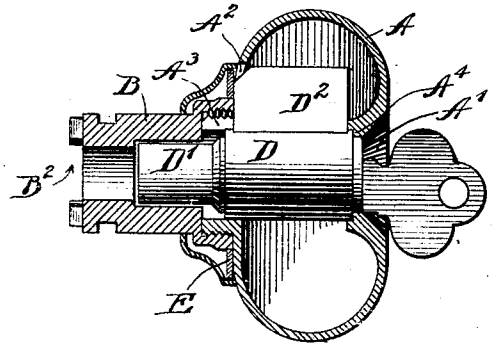


Fig. 3.

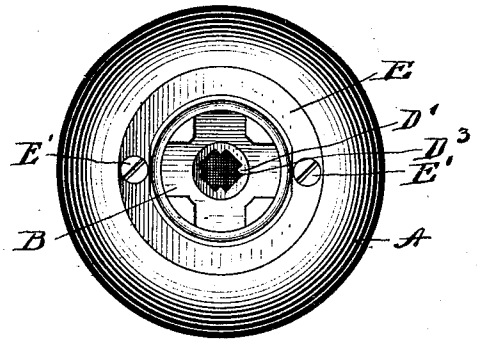
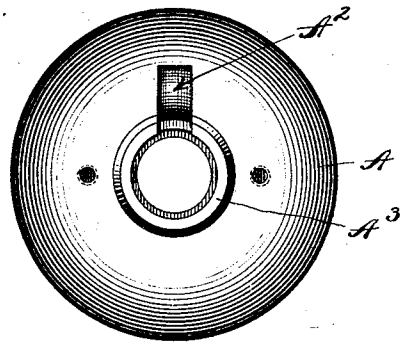


Fig. 4.



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UNITED STATES PATENT OFFICE.

HENRY G. VOIGHT, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE RUSSELL & ERWIN MANUFACTURING COMPANY, OF NEW BRITAIN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

DOOR KNOB AND LOCK.

SPECIFICATION forming part of Letters Patent No. 768,833, dated August 30, 1904.

Application filed April 25, 1904. Serial No. 204,896. (No model.)

To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, a citizen of the United States, residing at New Britain, in the county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Door Knobs and Locks, of which the following is a full, clear, and exact description.

My invention relates to locks and latches, and particularly to a knob therefor, said knob carrying key-controlled lock mechanism which may be operated independently of the knob for the purposes hereinafter set forth.

Figure 1 is a side elevation of a knob constructed to embody my invention. Fig. 2 is a longitudinal section of the same, the key-controlled lock being shown in elevation. Fig. 3 is an inner end elevation of the parts shown in Fig. 2, the rose-plate being removed. Fig. 4 is an inner end elevation of the knob with all of the parts removed.

A represents the hollow body or grip portion of a knob, the same being preferably formed by casting, having at its outer end a central tapered aperture A′. At the inner end of the knob there is another central aperture provided to receive a cylinder-lock, one side of the latter aperture being notched, as at A^2, to receive the tumbler-casing of said lock, as and for the purpose hereinafter described. The inner end of the knob is provided with a threaded neck A^3 around the latter aperture.

B is a tubular shank which screws onto the threaded neck A^3. The inner edge of the entrance-opening in the outer side of the knob is shouldered at A^4 to receive any outward thrust of the cylinder-lock.

D is the cylinder-lock casing.

D′ is the key-barrel.

D^2 is the tumbler-casing carried by the casing D, extending laterally thereof and shaped in cross-section to correspond substantially to the shape of the opening A^2 in the knob A. When the knob-shank B is removed, the cylinder-lock may be introduced from the inner end of the knob A until its end takes up against the shoulder A^4. When the knob-shank has been screwed onto the neck A^3, it will come to a stop when it engages the knob and then the cylinder-lock will be held in place against endwise movement, since a part of said shank will stand to the rear of the tumbler-casing D^2. The shank may then be locked against rotation by means of a ring E, which fits over the base thereof. The central opening in the ring E is preferably somewhat irregular, and that portion of the knob-shank B over which said ring fits when in place is correspondingly shaped, so that when the ring E is fastened in place by screws E′ E′ the knob-shank cannot possibly be turned independently of the knob. It should be observed that the tumbler-casing D^2 does not project entirely within the knob A when the parts are assembled, but that a portion of it is located in the recess A^2. By reason of this fact the lock-case D is prevented from turning when the knob and lock are assembled. At the inner end of the knob-shank B suitable notches are provided, as at B^2, to receive the usual roll-back. The inner end of the key-barrel D′ may also be formed with an angular pocket D^3, Fig. 3, to receive the end of the well-known spindle. F is a rosette or finishing-piece which at its smallest diameter fits neatly over the shank B, while its larger diameter is flared outwardly and covers the locking-ring E and notch A^2 in the knob-shank, thus presenting to the eye a handsome finished appearance at the inner end of the knob when the parts are assembled. No separate means is required to hold the rosette F in place, since when the knob is in use it will be held in place by the bearing, which will extend over the knob-shank B close up against the rear of said rosette.

The knob-body A being preferably seamless throughout possesses great strength. By providing the offset passage A^2 for the tumbler-casing I am enabled to introduce lock D into the knob, whereas in the absence of this feature it would be essential to make the knob in two or more pieces.

It is obvious that the method of mounting the knob in the lock or the method or means of connecting the roll-backs or spindles to the knob and cylinder-lock are entirely immaterial to those features which are made the subject-matter of this invention, and while I have shown in the drawings a preferred form of the invention it is obvious that changes may be made in the same without departure from the spirit and scope thereof. I have not attempted to illustrate the tumbler mechanism, since those parts are well known and constitute in themselves no portion of this invention.

In the drawings I have shown a key in place, and it will be seen that the tapered entrance A′ facilitates the ready introduction of the same into the key-barrel.

What I claim is—

1. In a knob, a hollow body or grip portion, a threaded neck projecting therefrom, an aperture in the outer and inner ends of said grip portion one of said apertures being enlarged at the side, a pin-tumbler lock carried within said body portion, a lateral projection from the body of said lock projecting into the enlargement in said aperture, a shank arranged to screw onto said threaded neck and hold said lock in place against longitudinal displacement.

2. In a device of the character described, a hollow body or grip portion, an opening in the outer face thereof and an opening in the inner face thereof opposite the first opening, a removable knob-shank, means for securing the same to the said knob-body and to cover one of said openings, a cylinder-lock, the case of said cylinder-lock being supported in said body, a lateral projection from said lock-case engaging with a corresponding notch in the body to prevent rotation of said lock-case.

3. A hollow seamless knob, a passage through said knob, a pin-tumbler lock seated within said knob and in said passage, means to prevent the rotation of the pin-tumbler casing and means independent of the knob for detachably holding said lock against longitudinal displacement.

4. A hollow seamless knob, a passage through said knob, a pin-tumbler lock seated within said knob and in said passage, means to prevent the rotation of the pin-tumbler casing and means independent of the knob for detachably holding said lock against longitudinal displacement said means being an independent knob-shank said shank having a passage therethrough in line with the inner end of said pin-tumbler lock.

5. In a device of the character described, a seamless hollow knob, an opening in the outer and inner ends of said knob, the inner opening being enlarged, a pin-tumbler lock supported in said knob in line with said openings, a portion of said pin-tumbler lock-casing entering the enlargement of the inner opening to prevent the independent rotation of the knob and lock-casing, a knob-shank, a screw-threaded connection between the knob-shank and the knob, the said shank holding the pin-tumbler lock in place when said shank and knob are connected.

Signed at New Britain, Connecticut, this 22d day of April, 1904.

HENRY G. VOIGHT.

Witnesses:
M. S. WIARD,
F. E. SUNBURN.