

(Model.)

J. K. CLARK.

DOOR KNOB.

No. 291,687.

Patented Jan. 8, 1884.

Fig. 1.

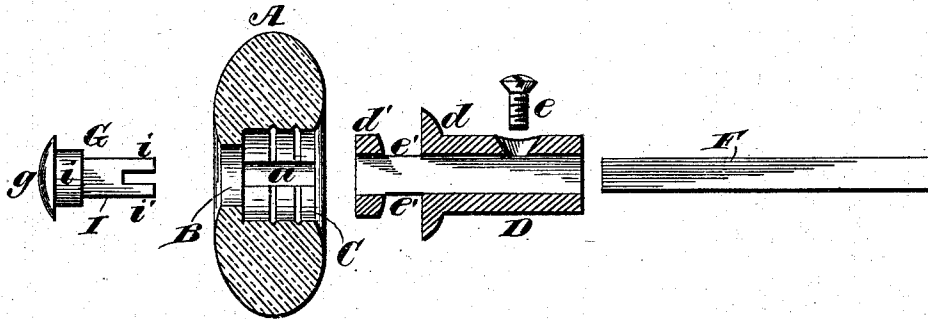


Fig. 2.

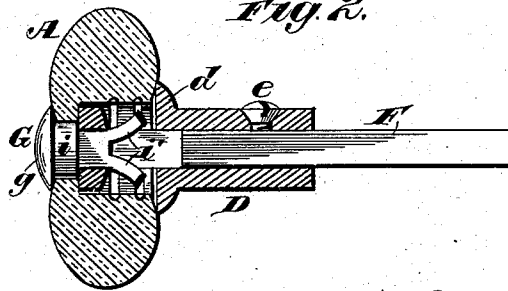


Fig. 6.

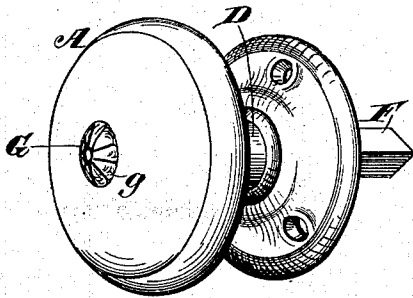


Fig. 3.

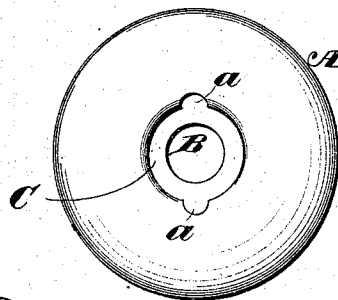


Fig. 4.

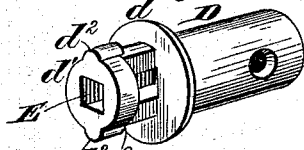


Fig. 5.



Witnesses,

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J. A. Rutherford

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By James L. Norris,

Att'y.

UNITED STATES PATENT OFFICE.

JOHN K. CLARK, OF BUFFALO, NEW YORK.

DOOR-KNOB.

SPECIFICATION forming part of Letters Patent No. 291,687, dated January 8, 1884.

Application filed September 18, 1883. (Model.)

To all whom it may concern:

Be it known that I, JOHN K. CLARK, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented new and useful Improvements in Door and other Knobs, of which the following is a specification.

My invention relates to door and other knobs, and the purpose thereof is to provide simple and efficient means for securing a knob formed of any suitable material to a metallic shank in such a manner as to prevent any possibility of its working loose from or upon said shank, forming at the same time a connection that will give the utmost solidity and impart a highly-ornamental appearance to the knob.

To this end my invention consists in the construction and combination of parts, hereinafter described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a central longitudinal section taken through the shank, knob, and post, the parts being separated to show the construction and relative arrangement. Fig. 2 is a similar section, showing the parts united. Fig. 3 is a plan view of the rear face of the knob. Fig. 4 is a detail perspective of the shank detached. Fig. 5 is a view of the spreading-tool used in attaching the knob to the shank. Fig. 6 is a perspective of the knob and rose attached to the shank.

In said drawings, the letter A designates the knob, which may be made of any suitable material and of any desired shape or pattern. It is pierced by a central aperture, B, which is deeply countersunk upon the rear face of the knob, forming a chamber or recess, C, within the wall of which are formed one, two, or more grooves or channels, *a*, parallel with the axis of the knob-spindle.

The letter D indicates the metallic shank, which is cast or otherwise formed with a cylindrical body, having a flange or collar, *d*, formed thereon, the end of the shank projecting beyond said collar, being about equal in length to the depth of the chamber or countersink C, and the diameter of the body of said shank is such that its end will easily enter said countersink until the collar *d* lies against the rear face of the knob. The end of the shank occupying said recess is provided

with splines or feathers *d'*, which lie in the channels *a* and prevent the knob from turning upon the shank. A central rectangular opening, E, traverses the shank D from end to end, of such size as to receive the bolt-spindle F, which is fastened in place by a screw, *e*, in the usual manner.

Between the collar D and the end of the shank, upon opposite sides thereof, the metal is cut away, as shown at *e' e'*, each cut being extended into the plane of the wall of the rectangular opening E, which is exposed thereby. Upon one side these openings are bounded by the collar *d*, and upon the opposite side by the segmental portions *f* of the end of the shank.

The letter G designates the stud or post, having a button, *g*, and a neck, *i*, of such diameter that it will enter the aperture B in the face of the knob. The body I of the stud is rectangular, of such dimensions that it will enter the central opening, E, in the shank, and its end is split or bifurcated, forming two parallel flexible metallic plates, *i' i'*, integral with the post or stud G.

The parts thus constructed are united in the following manner: The shank being inserted within the countersink C, with the wings or feathers *d'* in the channels *a*, the post G is inserted through the aperture B until the button or disk *g* lies upon the outer face of the knob, care being taken to so place it that the slot in its end will be parallel with a line drawn through the feathers *d'* upon the shank. In this position the parts *i' i'* are spread or bent outwardly from within the shank by any suitable means through the openings *e' e'*, as shown in Fig. 2, firmly uniting the knob and the shank.

It will readily be understood that the end of the shank which enters the recess in the knob may be made square instead of cylindrical, in which case the feathers *d'* will be dispensed with. When the latter are employed, they may extend from the collar *d* to the end of the shank, or may be formed upon a part only of that portion.

By this invention I am able not only to dispense with threaded attachments, but as the result thereof I can employ common gray iron for the construction of the shank, thereby ef-

fecting a reduction in the cost of the material as well as in the time and labor of manufacturing. Moreover, I produce a fastening which combines great strength and durability with the utmost simplicity, which is practically indestructible, and which can be furnished at a low price.

In order to spread the end of the stud or post when the end of the same is simply split, as shown, I use the tool shown in Fig. 5, which is inserted within the opening in the shank, its wedging end lying in the cut or slot in the end of the post, in which position one or two smart blows with a hammer will spread the end of the post and complete the union of the parts.

What I claim is—

1. The combination of a knob, a tubular shank, and a stud or post entering the shank from the face of the knob, and having its in-

ner end bifurcated and the bifurcations spread laterally and engaged with the shank, substantially as described.

2. The combination, with a knob having a central opening countersunk upon its rear face, of a tubular shank entering said countersink, and having its body cut away to form recesses opening into the central aperture, and a stud or post entering said shank through the face of the knob, the end of said post being split and bent or spread into the said recesses in the shank, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JOHN K. CLARK.

Witnesses:

JOHN A. FRANKE,
KIMBALL V. CLARK.