J. SCHADE.

Fastening for Bell-Pulls, &c.

No. 161,355. Patented March 30, 1875.

Fig: 1

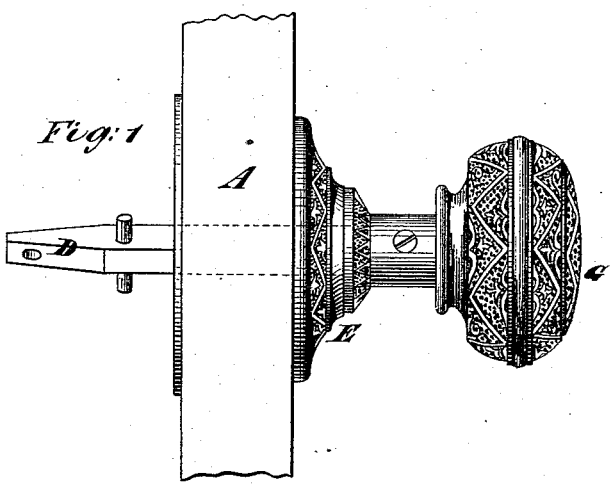


Fig: 2

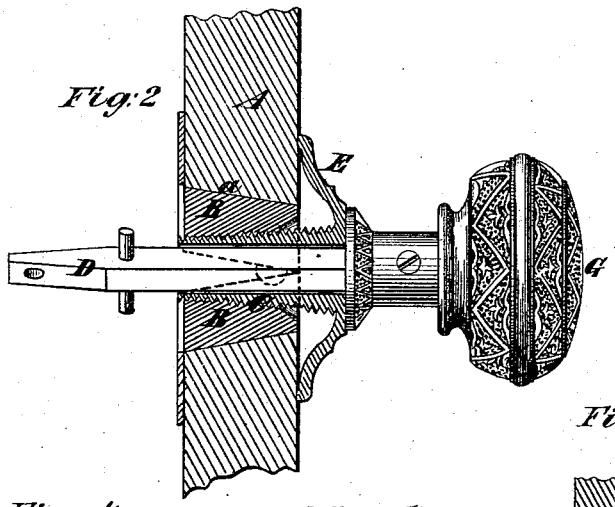


Fig: 3

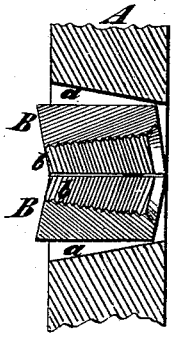


Fig: 4

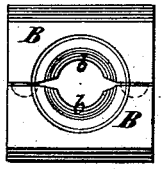
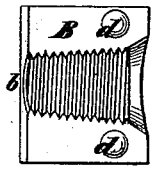


Fig: 5



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THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

JOHN SCHADE, OF STAMFORD, CONNECTICUT.

IMPROVEMENT IN FASTENINGS FOR BELL-PULLS, &c.

Specification forming part of Letters Patent No. **161,355**, dated March 30, 1875; application filed January 12, 1875.

To all whom it may concern:

Be it known that I, JOHN SCHADE, of Stamford, in the county of Fairfield and State of Connecticut, have invented a new and Improved Method of Securing Bell-Pulls to Stone Supports; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms a part of this specification.

My present invention consists in the combination of one or more expansible keys and a screw-expander adapted for use in connection with a mortise having two receding or diverging sides, or a mouth of lesser transverse area than the rear portion of the mortise, whereby a bell-pull may be easily and efficiently secured to a door-post or wall, and which, when occasion requires, may be readily detached without defacing it or the posts or walls.

In the accompanying drawing, Figure 1 is a side view of a bell-pull secured to a door-post according to my invention. Fig. 2 is a central longitudinal section of the same. Fig. 3 is a section of a part of a door-post and the keys, showing the position of the latter before being expanded or forced apart. Fig. 4 is a front view of the keys, and Fig. 5 is a face view of the inner surface of one of the keys.

A designates a portion of a stone door-post provided with a mortise, *a*, having two receding sides and two plain sides or walls. This mortise may extend directly through the door-post, or only partly through or into it, but in the latter case so as to communicate with a smaller opening capable of permitting the shank of the bell-pull to project through it. B B designate two expansible keys with straight or plain faces, and of such size that when placed face to face they can be inserted in the mortise *a* through its mouth. In opposite faces of these keys there are longitudinal grooves *b b*, so formed that when the keys are placed with the grooved sides in juxtaposition, a screw-socket will be produced, as clearly shown in Fig. 4. This socket is shown as of tapering form, (see Fig. 3,) its greater diameter being at the front or forward ends of the keys, so that when the expander C is screwed in the socket, as will presently be described, it will force the rear ends of the keys farther apart than the front ends, and thereby cause the keys to be dovetailed into the mortise *a*.

In order to preserve the proper relation between the screw-threads in the keys they may be interlocked in any suitable manner, say by teats *d d* provided on one key, so as to fit into corresponding recesses provided in the other key. The screw-expander C is provided with a male screw-thread to adapt it to engage with the threads in the screw-socket *b b*. The said expander is also shown of tapering or conical form, its lesser diameter being at its entering end. This expander is also, preferably, provided with a square opening to receive the shank D of the bell-pull.

A rose of sufficient size to cover the mortise *a* may be used in connection with a knob, G, in the usual way; but in this case I have shown a rose, E, as cast upon the expander, as will be seen by reference to Fig. 2.

I will here remark that the expander may be made cylindrical throughout its length, though I prefer to make it tapering, because I think it operates more efficiently to not only expand the rear ends of the keys, but also to press or force the keys bodily against the diverging walls or sides of the mortise *a*.

The shank D of the bell-pull extends through the expander, and has the end of the bell-wire fastened to it. To fasten the bell-pull to the post the keys B B are placed in the mortise *a* through its contracted mouth, and the expander C is inserted between them and screwed in tightly by a wrench or other means, which forces or spreads apart the keys against the diverging opposite sides of the said mortise *a*, and when thus expanded they form a dovetail, filling the mortise *a*, and are hence securely retained therein, and firmly hold the expander and its external attachments, and the shank of the bell-pull being of course inserted through the expander, so as to receive the bell-wire in the usual way. Should it be desirable for any reason to remove the bell-pull it may be readily done by reversing the operation above indicated.

It is obvious that when the mortise *a* has a back against which the keys can abut, the rose E is unnecessary except for ornament; but when the said mortise, as in the drawing, has no back, and the expander has no outward strain

exerted on it, the latter must be furnished at the front end with a rose or other abutment to bridge the opening, and prevent the expander and the keys from slipping back far enough to permit the keys releasing their hold upon the expander. It is also obvious that the mortise *a* may be of any suitable form so long as its mouth is smaller than its rear portion; and it is also obvious that any suitable number of keys may be used. It is furthermore obvious that many other devices than bell-pulls, such as brackets for lamps, statuary, &c., may be secured to stone, iron, and other posts, walls, &c., by means of my invention.

It will thus be seen that a bell-pull or other article may be secured by means of my invention to stone or iron posts or walls in a far more effectual manner than could be done by screws or pins entering the stone, and in a simpler manner than by molten metal poured into a cavity, or soft metal plugged into a cavity; that such device may be removed without injuring any of its parts or defacing the stone; that, although especially advantageous for securing such articles to stone supports, it is also applicable to securing them to supports of iron or other material; and that when a bell-pull is thus secured to its support the shank of the bell-pull cannot be cut by a knife or other instrument inserted between the rose and the support without first cutting the expander.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of one or more expansible keys and a screw-expander adapted for use in connection with an inwardly-expanding mortise, *a*, made in a post or block of stone or other material, substantially as and for the purpose herein set forth.

2. The combination, with the keys B, of the teats *d* and screw-socket *b*, substantially as and for the purpose herein set forth.

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Witnesses:

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