

J. SHEPARD.

Attaching Rubber-Cushions to Door-Checks, &c.

No. 160,476.

Patented March 2, 1875.

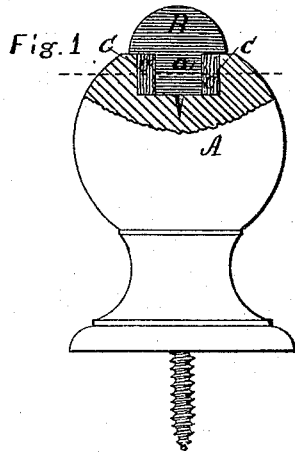


Fig. 2.

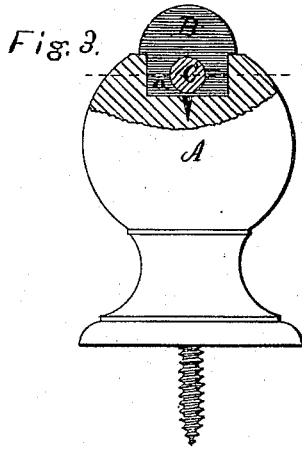
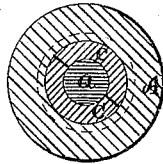


Fig. 4.

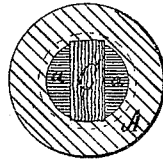


Fig. 5.

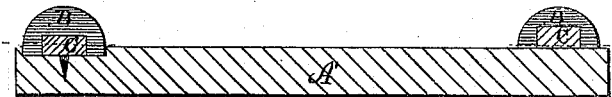


Fig. 6.



Fig. 7.

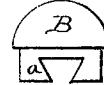
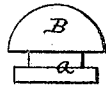


Fig. 8.



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JAMES SHEPARD, OF BRISTOL, CONNECTICUT.

IMPROVEMENT IN ATTACHING RUBBER CUSHIONS TO DOOR-CHECKS, &c.

Specification forming part of Letters Patent No. 160,476, dated March 2, 1875; application filed February 16, 1872.

To all whom it may concern:

Be it known that I, JAMES SHEPARD, of Bristol, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Attaching Rubber Cushions to Door-Checks, Slate-Frames, &c., of which the following is a specification:

It is well known to those skilled in the art that glue does not firmly adhere to rubber, and therefore various devices more or less expensive have been employed to secure rubber to door-checks, &c.

The object of my invention is to provide means by which a rubber cushion may be firmly glued to door-checks and similar articles, and thereby produce the same both cheap and substantial.

My invention consists in the art of securing rubber cushions to articles of wood by means of a glue adhesive key, first secured to the rubber cushion, and then glued to the body of the wooden article, as hereinafter described.

In the accompanying drawings, Figure 1 is a central vertical section, partly in elevation, of a door-check which embodies my invention. Fig. 2 is a transverse section of the upper part of the same, the broken lines in the preceding figure indicating the plane of section. Figs. 3 and 4 are similar views of a modified form of the same. Figs. 5 and 6 are similar views of a cushion and block, showing another modification of my invention; and Figs. 7 and 8 are side elevations of rubber cushions adapted to different forms of keys by which to secure them to articles of wood in the practice of my invention.

A designates a door-check block of any suitable form, and provided with a screw, or other proper mechanism, at its base by which to secure it in its position for use. B designates a rubber cushion of any pleasing design, and which I prefer to provide with a tenon, *a*. I also provide a key, C, of wood, or other material to which common glue will readily, firmly, and permanently adhere. If the cushion be provided with a tenon a hole is made in the outer end of the block A of a size equal to the length of the complete tenon *a*, and of a depth about equal to its length, as shown in the drawing.

The tenon *a* and its key C are either made

of such form that they will be locked together, as shown in Figs. 3, 4, 7, and 8, or the key is molded on the cushion under pressure, so as firmly adhere thereto, as shown in Figs. 1, 2, 5, and 6. Common glue, or other cheap adhesive cement, is then applied to the exposed surface of the key C, and the key and cushion placed in their proper position on the block A or A', as shown in the drawing.

In these positions, it will be noticed, that the key comes in direct contact with the block, and, as both the block and the key are of a material to which glue will readily adhere, the application of glue firmly secures the block and key together, while the key and cushion are so attached to each other that the cushion cannot be easily removed so long as the key is glued to the block.

In Figs. 1 and 2, the key C is in the form of a shell or case, which, for convenience of manufacture, is made in two parts, pressed or cut out by means of a die and punch from a block of wood, which is equal in thickness to the length of the tenon *a* and key C, and the grain thereof runs lengthwise with such thickness, and thus vertically through or with the key, as shown.

The key C is thus formed at a very small cost, and when formed is placed in a mold, in which the rubber is molded and vulcanized under pressure, so that it firmly adheres to the key C. This form of key as thus molded on its cushion may be driven into the hole in the block so snugly as to secure the cushion in place tolerably well without the aid of glue.

In Figs. 3 and 4, the key C is a simple pin, which is passed through a hole in the tenon *a*, (or it may be molded therein,) and secured in the block by gluing at each end. This form of key should be made long enough to bear firmly against the sides of the hole in the block A, and should be set near the bottom of said hole, so that when the device is subjected to use the key will not be loosened by being driven farther into the hole. This form of key if properly set secures the cushion in place in a very substantial manner.

In Figs. 5 and 6, the key is a plain block of wood molded in the rubber cushion B, and is flush with the under side thereof. It is designed for a less expensive article, and may be

secured by gluing the key C to any flat surface; or it may be set in a shallow recess, as shown in Fig. 5.

In Fig. 8 an annular groove is formed on the tenon *a*, which groove is to receive a key consisting of a strap of leather or wood bent around to fill and fit the groove, where it is glued to the sides of the holes in the block A, and the cushion is thereby firmly held in place.

In either modification before described the key is first secured to the cushion, and then the key (not the cushion) is glued or cemented to the wood.

I am aware that others have attempted to cement rubber cushions directly to wood, but

any cement that will readily and firmly adhere to the one material will not properly adhere to the other.

I claim as my invention—

The improvement herein described in the art of securing rubber cushions to articles of wood by means of a key of wood, or other material equally adapted for gluing, which key is first secured to the rubber cushion, and then glued to the wooden article, substantially as set forth.

JAMES SHEPARD.

Witnesses:

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