

(No Model.)

W. H. BURCH.

JOINT OR FASTENING FOR BALUSTERS, &c.

No. 422,712.

Patented Mar. 4, 1890.

Fig. 1.

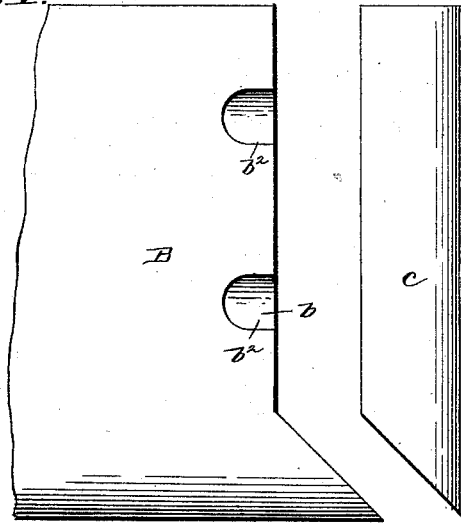


Fig. 3.

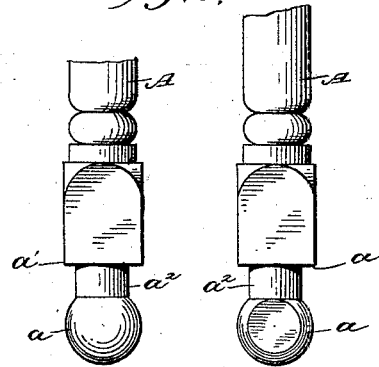


Fig. 2.

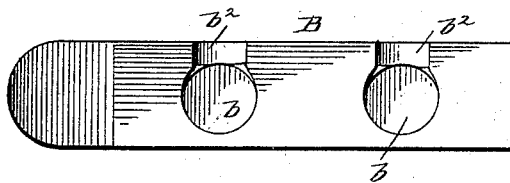
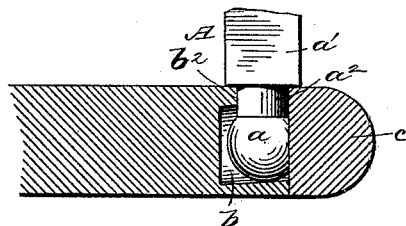


Fig. 4.



Witnesses

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JOINT OR FASTENING FOR BALUSTERS, &c.

SPECIFICATION forming part of Letters Patent No. 422,712, dated March 4, 1890.

Application filed December 12, 1889. Serial No. 333,391. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BURCH, of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain
5 new and useful Improvements in Joints or Fastenings for Balusters, &c.; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming
10 a part of this specification, and to the letters of reference marked thereon.

This invention relates to a new and improved joint or fastening for uniting and securing balusters, posts, and similar turned
15 work to a base or support; and it consists in the novel construction and arrangement of parts hereinafter described, and set forth in the claims.

In the accompanying drawings, Figure 1 is a plan view of the support, and Fig. 2 is an end or edge view of same. Fig. 3 is a side elevation of the baluster or post. Fig. 4 is a sectional view through the post and support.

Similar letters of reference in the several
25 figures indicate the same parts.

The letter A designates the post or baluster, and B the support—such as a step—to which the post is to be applied. The post is formed or provided with a spherical tenon *a*, preferably smaller than the base *a'*, and connected thereto by a neck *a²* of cylindrical or other appropriate cross-section. A cylindrical opening *b* of about the same or slightly greater diameter than the tenon *a* is formed in the
35 base B, commencing at the edge or side of said base and extending inward at a slight angle to the upper horizontal surface. Through the upper surface of the support and near the edge thereof is formed a second opening *b²*, intersecting the first opening, as shown. The openings *b b²*, forming the mortise for the reception of the tenon *a*, are each cylindrical in cross-section, and can most conveniently be made by means of an auger or other suitable boring-instrument. Thus in forming
45 the opening *b* an auger-hole is formed commencing at the edge and continued at an angle inward and downward or away from the upper face of the support, so that the material between the upper wall of said opening will increase in thickness from the edge inward to or beyond the point where the post

is to be applied. The vertical opening *b²*, for the accommodation of the neck *a²* of the tenon, is made with an auger of substantially
55 the same or larger diameter than the neck *a²*, and, if desired or necessary, the outer corners may be cut away by a chisel or otherwise to permit the neck of the tenon to enter and be seated within said opening. The mortise having thus been formed, the post, previously
60 provided with spherical tenon, is placed in position and firmly held by inserting the tenon *a* in the portion *b* of the mortise and forcing it inward, when, by reason of the inclination
65 given the opening *b*, the post will be drawn down until its base *a'* is brought firmly in contact with and seated upon the upper face of the support. When thus brought to position, or during or before its insertion, the
70 post can readily be turned on its longitudinal axis and thus adjusted, after which it may be secured in position by suitable fastenings.

A convenient, cheap, and expeditious mode
75 of securing such articles as posts or balusters to stairs and like objects when provided with the improved fastening is by forming the tenon and mortise of such relative proportions that when the post is brought to position a portion of the periphery of the spherical tenon will project beyond the edge or face
80 of the support, and when the post is adjusted to final position cutting off this projecting portion of the tenon flush with the edge of
85 the support or otherwise to form a shoulder, against which a finishing-strip *c*, applied to the edge of the support, bears and effectually prevents further rotary movement of the post.

The described fastening or joint is of great
90 practical utility, especially as applied to balusters and similar turned articles, which are usually manufactured in quantities for application where desired.

No special tools or skill on the part of the
95 workman is required. An ordinary boring-bit is all that is necessary for forming the mortise, the latter requiring but two measurements—the one for locating the vertical and the other for the horizontal inclined open-
100 ings.

The adjustment of the post by turning about its longitudinal axis may be effected after it is brought into position, and when

the finishing-strip is employed for preventing further rotation the edge of the support forms a guide for cutting off the side of the spherical tenon, so that when said strip is applied
5 it will fit snugly against the flat face of the tenon and prevent its rotation.

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

1. The combination, to form a joint or fast-
10 ening, such as described, of the post provided with a spherical tenon and a support having the inclined cylindrical opening and the vertical opening communicating therewith, forming a mortise for the reception of said tenon,
15 substantially as described.

2. The combination, with the post provided with a flat base and a spherical tenon with cylindrical neck uniting it to the base, of the support provided with a cylindrical opening
20 extending from the edge inward and down-

ward from the surface and a second opening formed in the upper face of the support and communicating with the first-named opening, as and for the purpose set forth.

3. The combination, with the support pro-
25 vided with a mortise composed of the inclined cylindrical opening and the vertical opening or slot, both of said openings extending to the edge of the support, of the post provided with a spherical tenon having a portion of
30 its periphery cut away and a finishing-strip covering the edge of the support and engaging said tenon to prevent rotation within its mortise or socket, as and for the purpose set forth.

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Witnesses:

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