A. F. BRADLEY.

CAPPING WOOD SCREWS.

No. 174,766. Patented March 14, 1876.

FIG. 3.

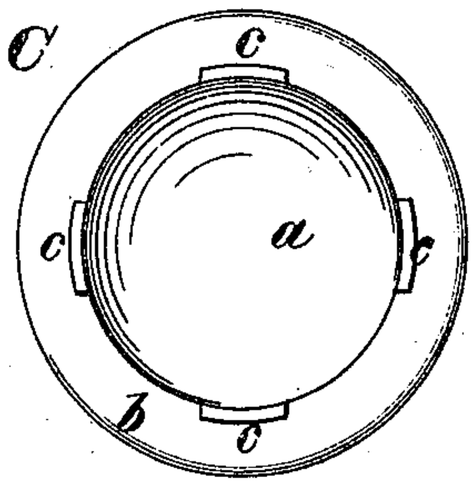


FIG. 1.

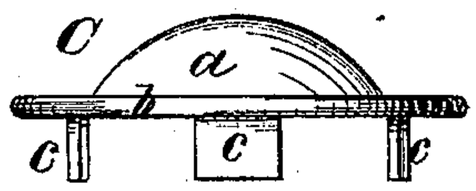


FIG. 4.

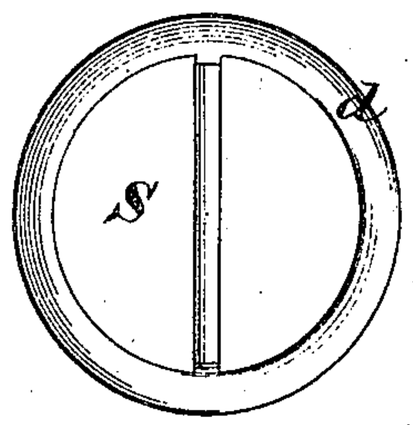


FIG. 5.

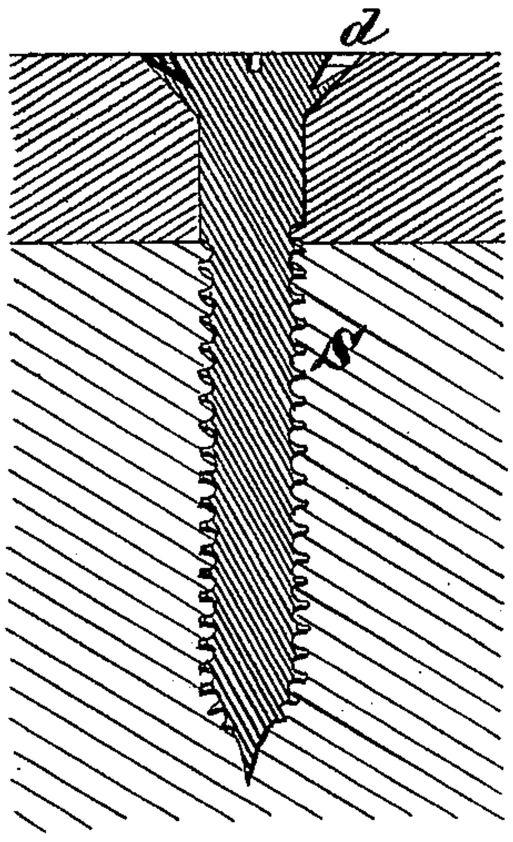


FIG. 2.

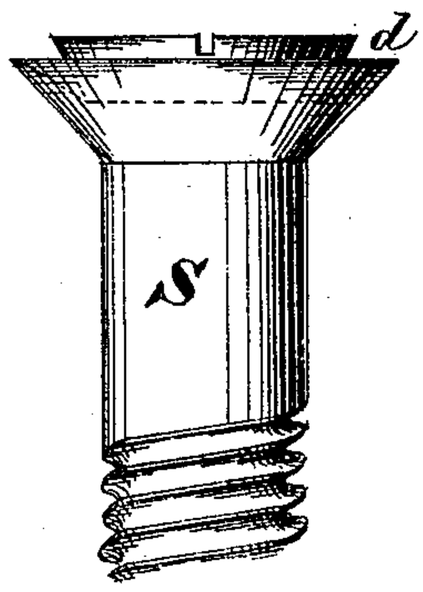


FIG. 6.

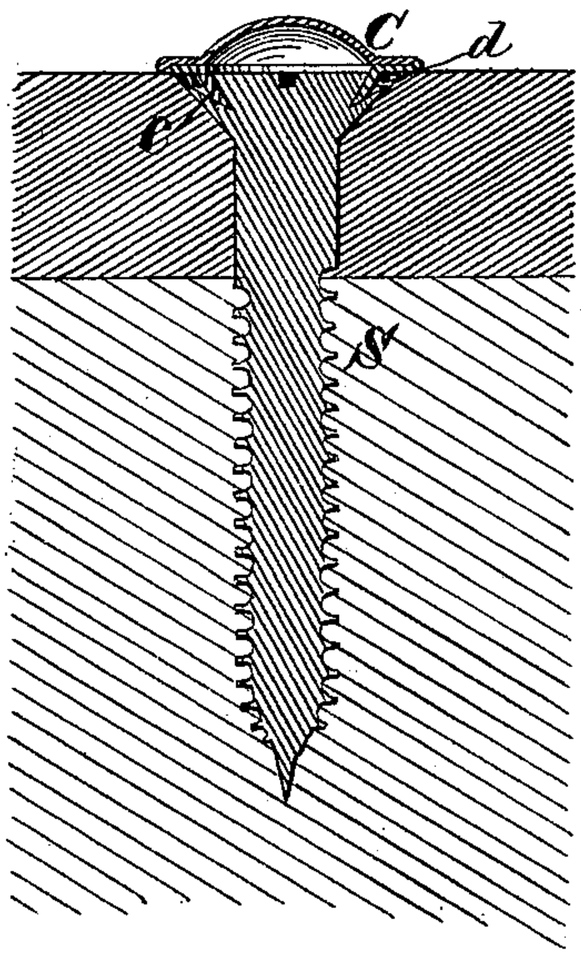


FIG. 8.

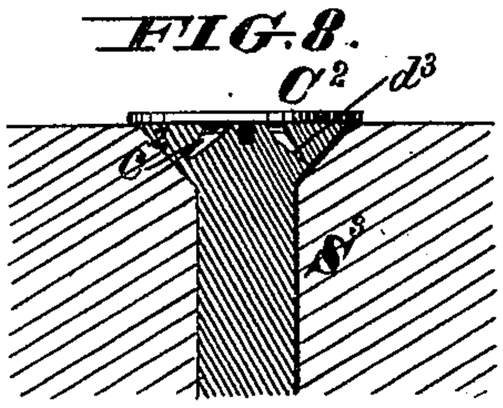


FIG. 7

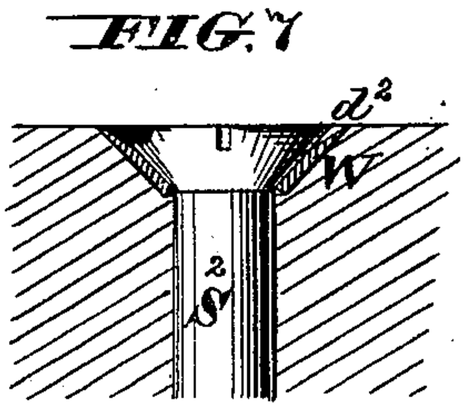
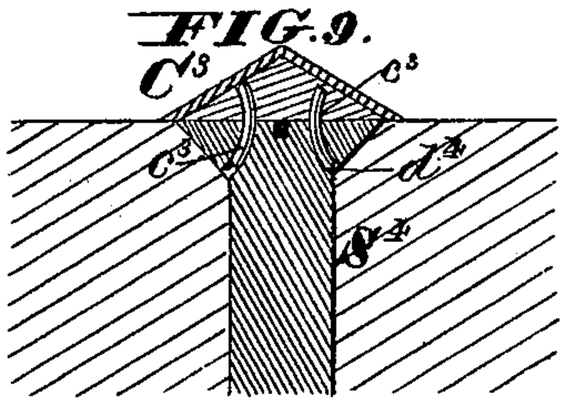


FIG. 9.



WITNESSES

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ALFRED F. BRADLEY, OF NEW YORK, N. Y.

IMPROVEMENT IN CAPPING WOOD-SCREWS.

Specification forming part of Letters Patent No. **174,766**, dated March 14, 1876; application filed December 23, 1875.

To all whom it may concern:

Be it known that I, ALFRED F. BRADLEY, of the city, county, and State of New York, have invented a new and useful Improvement in Capping Screws, of which the following is a specification:

This invention relates to the art of applying ornamental caps to the heads of screws, and, more especially, to the application of such caps to countersunk or flush-headed screws, and to the masking of such screws, both in wood and in metal work.

The objects of the present invention are, first, to provide for attaching head-caps to screws, after they are driven, by concealed means, so as to cover and hide the driver-nicks, and to present a uniform or ornamental surface; secondly, to provide for forming, by means of the caps, ornaments of any desired diameter larger than the screw-heads, when these are wanted; and, thirdly, to provide for doing the foregoing in the most simple and effective manner.

The invention consists, first, in a cap having lips, flanges, or tangs, one or more, projecting downward within the margin of the cap, perpendicular, or nearly perpendicular, to the plane of the bottom of the cap, and adapted to clinch within or around a screw-head, so as to securely attach the cap thereto; secondly, in a screw-head having an inclined groove, or its equivalent, accessible from above, to receive and clinch such lips, flanges, or tangs; and, thirdly, in the combination of lips, flanges, or tangs, one or more, projecting downward from the cap, and an inclined groove, or its equivalent, within which said lips, flanges, or tangs are clinched, so as to attach the cap to the screw-head, substantially as hereinafter set forth.

Figures 1 and 2 are elevations of a cap and the upper portion of a screw adapted to receive the same, illustrating this invention. Fig. 3 is a bottom or face view of the cap, and Fig. 4 a face view of the screw-head. Figs. 5 and 6 are sections on a smaller scale, showing the same screw driven, before and after the subsequent application of the cap. Figs. 7, 8, and 9 are sections illustrating modifications.

Like letters of reference indicate corresponding parts in the several figures.

A cap, C, illustrating the first part of this invention in a preferred form, is shown in Figs. 1, 3, and 6, and a screw, S, adapted in the preferred way to receive the same, is shown in Figs. 2, 4, 5, and 6.

The cap C is struck up out of malleable sheet metal, receiving in the dies any preferred configuration. It may subsequently be washed, plated, or bronzed, if desired, and thus, or otherwise, rendered more highly ornamental. In the illustration the cap has a hollow convex crown, *a*, of the diameter of the screw-head, or less, surrounded by a rim, *b*, sufficiently wide to cover the margin of the countersink in which the head is embedded. Depending from the bottom of the cap are lips, flanges, or tangs *c*, formed from the margin of the blank.

The screw S is adapted to receive these lips, flanges, or tangs, and to clinch them within or around the head by a deep inclined groove, *d*, extending around the screw-head, the same being cut or otherwise formed in the process of manufacture, or subsequently. The face of the head is reduced by this groove, and a projecting inclined or dished ledge or shoulder is formed beneath it.

When the cap is applied to the driven screw, as illustrated in Fig. 6, the upper surface of the said shoulder, which is the bottom of the groove *d*, receives the impact of the lips *c*, and bends them simultaneously inward, and thus clinches them beneath the flaring upper or central portion of the head, so as to securely attach the cap.

The cap is applied by a tap of the hammer through the medium of a convex punch resting on the rim *b*. Should it become necessary to withdraw the screw the cap can be readily pried off without marring the surrounding surface, but is not liable to accidental misplacement.

The lips *c* could, obviously, be multiplied or reduced in number, or united in a continuous flange, and the groove *d* be modified in shape and location without departing from the invention.

In Fig. 7 the employment of an unaltered screw, S^2, in combination with a washer, W, to receive a cap, C, according to this invention, is illustrated. The washer is held be-

neath the screw-head within the countersink, and an inclined space, d^2, (corresponding in shape and function with the groove d,) is formed around the head by the beveled upper surface of the washer, to receive and clinch the lips, flanges, or tangs c of the cap.

In Fig. 8 the location of the groove d^3 in the top of the screw-head and a reversal of its angle of inclination are illustrated, also the employment of a flat disk-like cap, C^2.

In Fig. 9 the employment of wire tangs c^3 and inclined perforations d^4, in lieu of the lips c and groove d, is illustrated, as also another modification in the shape of the cap C^3, and the employment of a filling of lead or its equivalent to render a cap of sheet metal solid.

The employment of solid caps of porcelain, wood, or composition, provided with metallic tangs, has also been contemplated.

As illustrated above, the process by which the cap or screw is manufactured is not considered essential, nor the shape or details of construction of the parts, so long as the cap is adapted to be clinched in position over the head of the screw, in the manner herein specified, after the latter is embedded in its countersink, the attaching devices being concealed beneath the cap.

The following is claimed as new and of this invention, namely:

1. The cap C, constructed with the downwardly-projecting metallic lips, flanges, or tangs c, perpendicular or nearly perpendicular to the plane of the bottom of the cap, and adapted to clinch within an inclined groove, or its equivalent, beneath the cap, in the manner specified.

2. The screw having its head provided with an inclined groove, d, or its equivalent, adapted to receive lips, flanges, or tangs c on a cap, and to clinch the same when the cap is applied, substantially as herein shown and described.

3. The combination of lips, flanges, or tangs, one or more, projecting downward from the cap, and an inclined groove, or its equivalent, within which said lips, flanges, or tangs are clinched so as to attach the cap to the screw-head, the driver-nick and the attaching devices being concealed beneath the cap, as set forth.

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