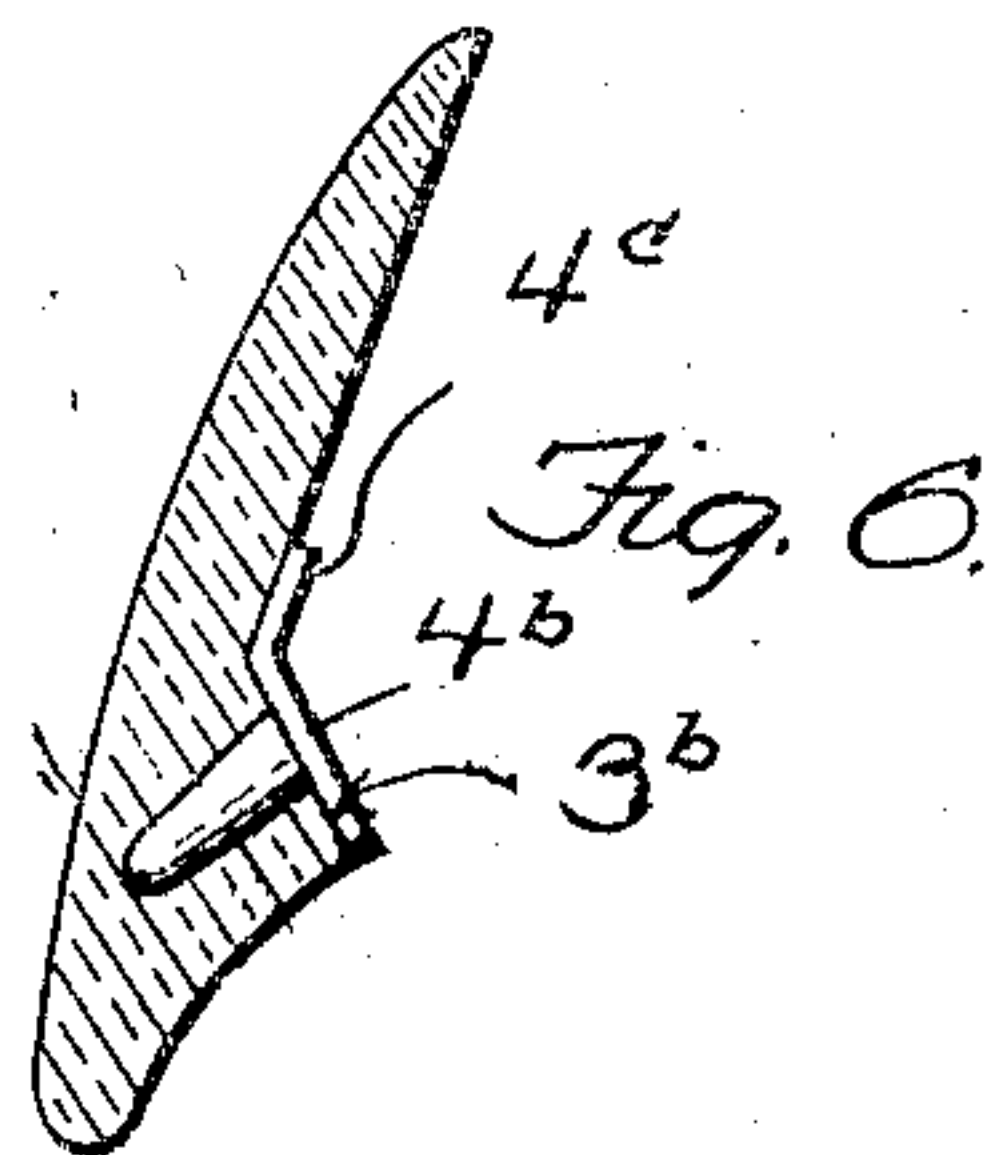
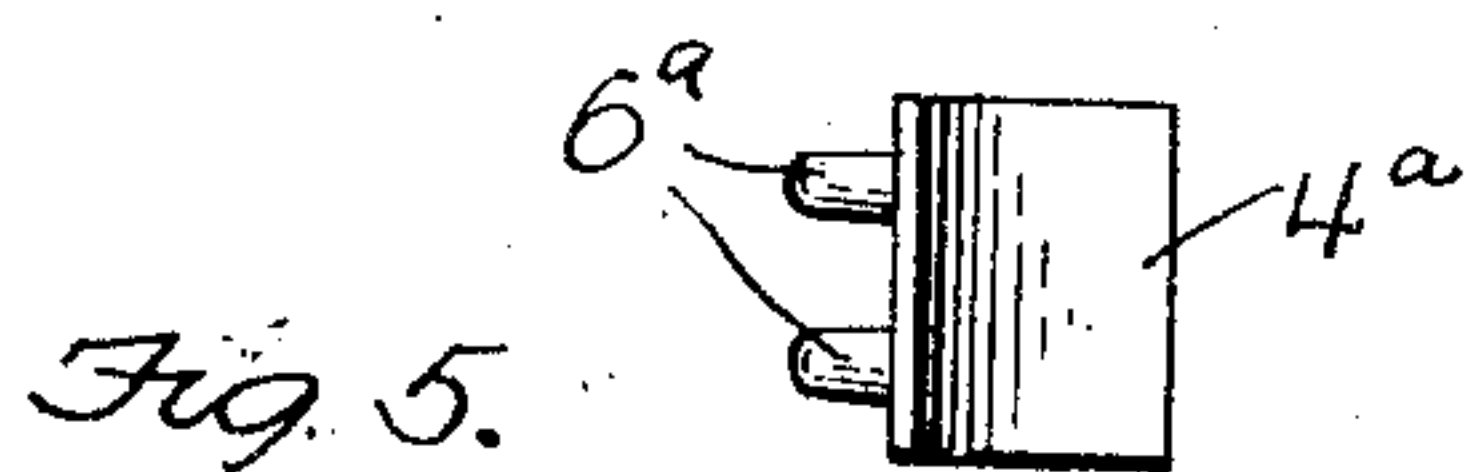
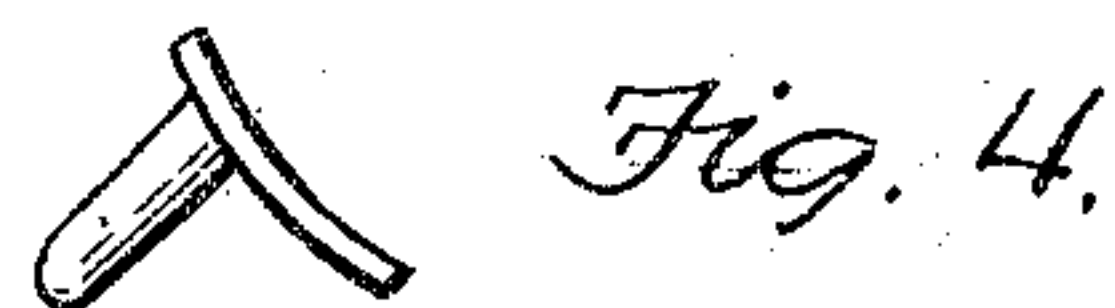
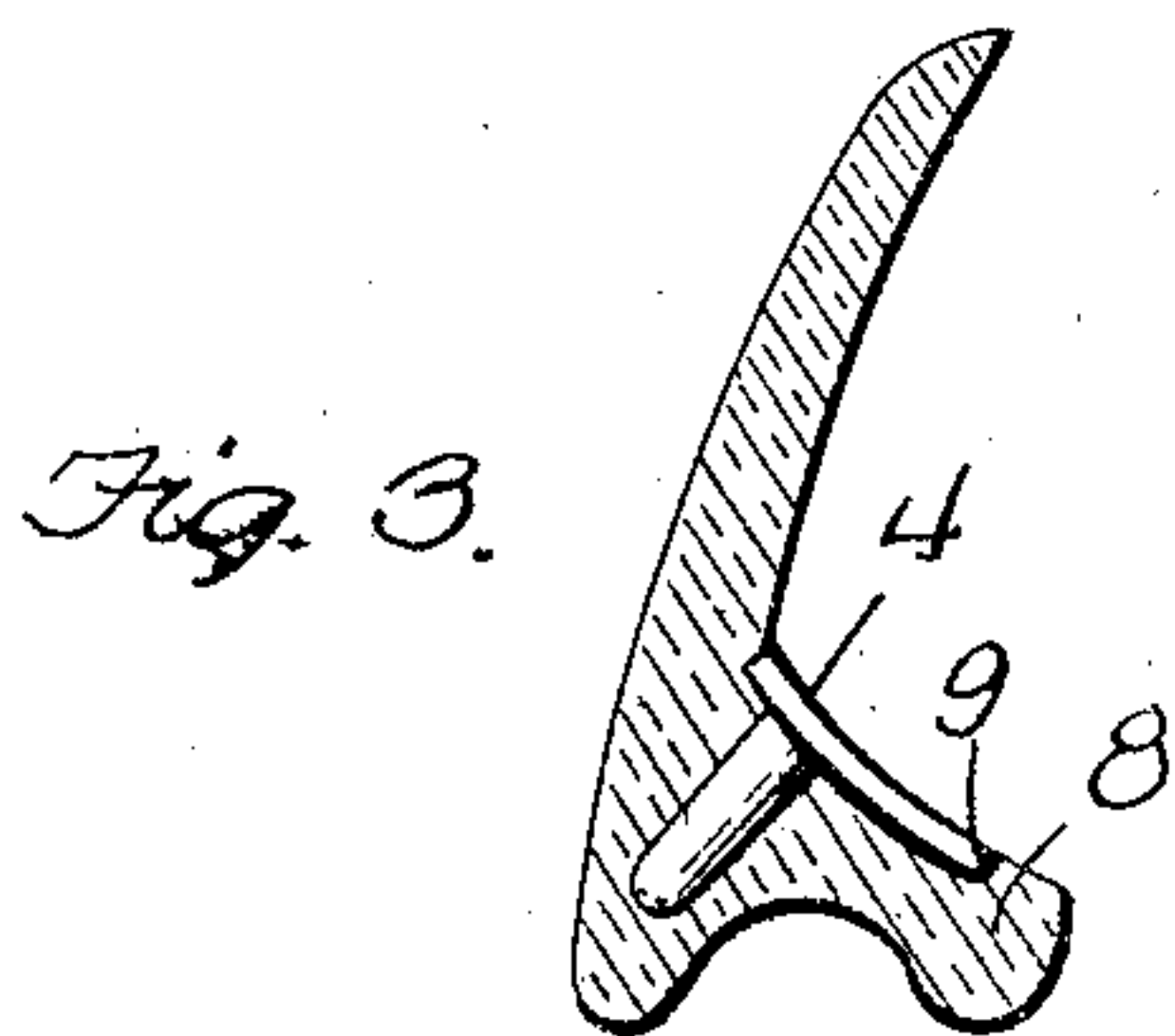
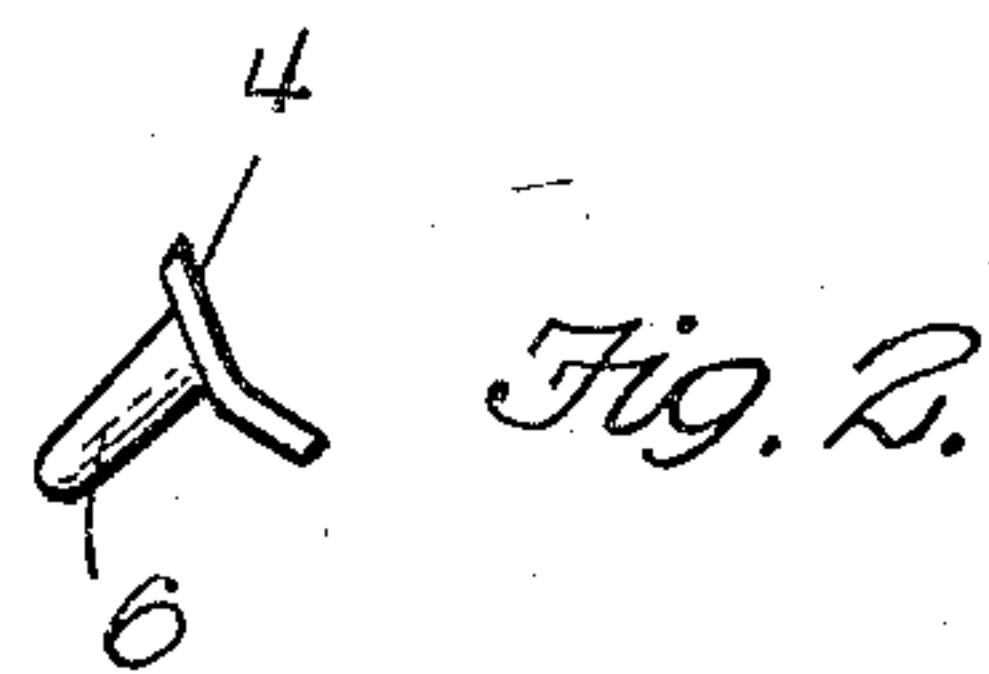
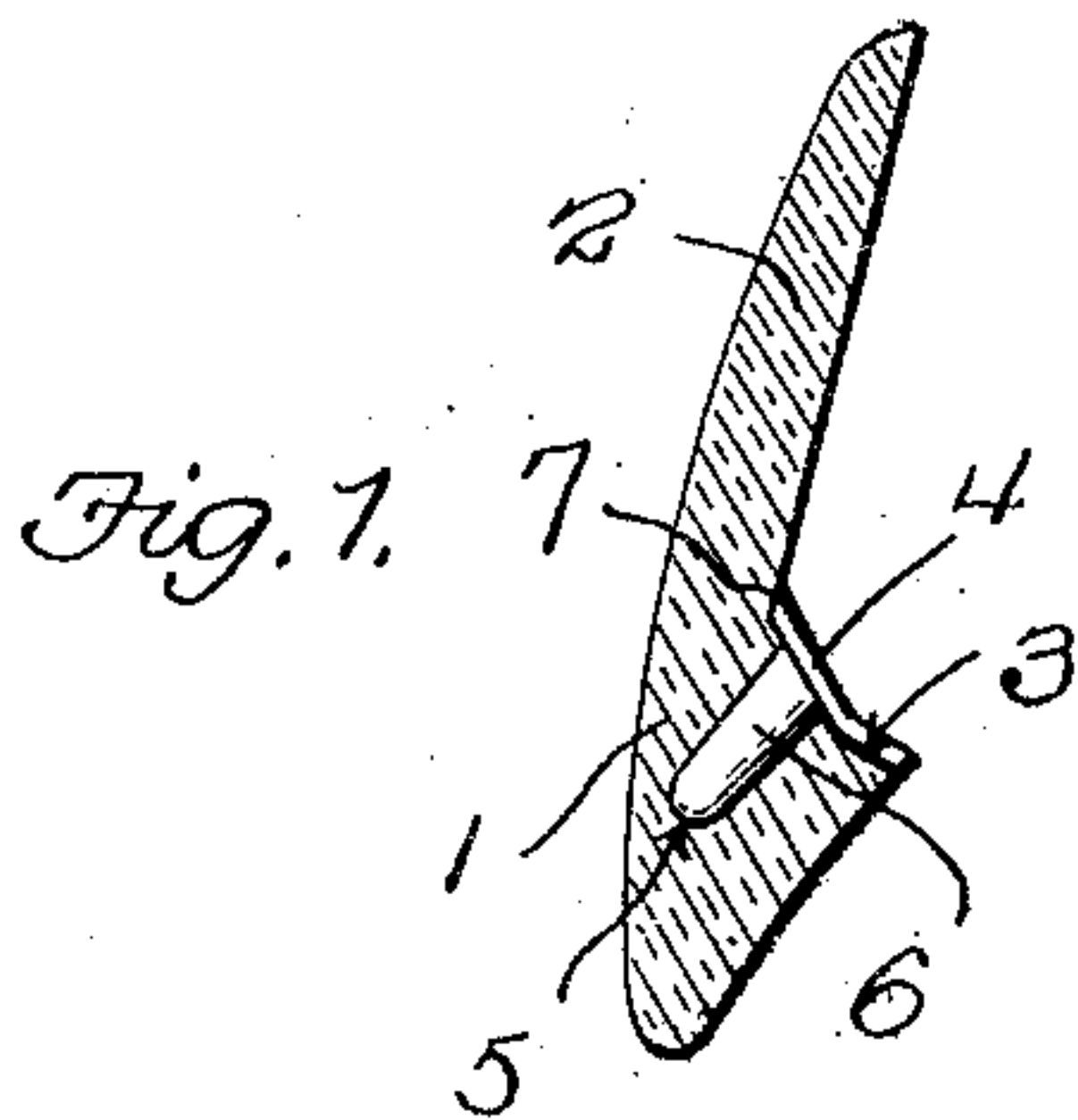


C. W. PLUMLEY.  
ARTIFICIAL TOOTH AND CROWN.  
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963,648.

Patented July 5, 1910.



Witnesses:

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# UNITED STATES PATENT OFFICE.

CHARLES W. PLUMLEY, OF PARKERSBURG, WEST VIRGINIA.

## ARTIFICIAL TOOTH AND CROWN.

963,648.

Specification of Letters Patent.

Patented July 5, 1910.

Application filed February 26, 1910. Serial No. 546,062.

*To all whom it may concern:*

Be it known that I, CHARLES W. PLUMLEY, a citizen of the United States, residing at Parkersburg, in the county of Wood and State of West Virginia, have invented new and useful Improvements in Artificial Teeth and Crowns, of which the following is a specification.

This invention relates to artificial teeth or crowns and means for attaching the same, one object of the invention being to provide a construction of tooth or crown and backing insuring increased strength and durability, greater economy in preparing and finishing a bridge, and greater ease and facility in fastening the tooth to the backing and replacing the same with a new tooth in the event of breakage.

A further object is to provide a construction whereby the exposure of metallic parts will be avoided, the teeth rendered readily detachable and interchangeable, and all liability of injury to the teeth in fastening them to the backing prevented.

The invention consists of the features of construction, combination and arrangement of parts, hereinafter fully described and claimed, reference being had to the accompanying drawings, in which:—

Figure 1 is a vertical section of an artificial tooth embodying one form of my invention, showing it applied to the backing plate. Fig. 2 is a side view of the backing plate. Fig. 3 is a vertical section of another form of artificial tooth applied to its backing. Fig. 4 is a side view of the backing plate thereof. Fig. 5 is a plan view of a backing plate for molar teeth. Fig. 6 is a view similar to Fig. 1, showing a further modification.

Referring to Figs. 1 and 2 of the drawings, 1 designates the body or cusp of an artificial tooth embodying my invention, and 2 the tooth front which projects upwardly from the upper front portion of said body 1. The upper rear surface of the body or cusp 1 is provided with a face or seat 3 for the backing plate 4, and formed in said body or cusp is a socket 5 receiving the backing post 6 extending from the plate 4, which post may be riveted or otherwise secured to the plate in any suitable manner and made with the plate of gold or other metal, or the post and plate may be made of different metals or the same or different kinds of alloys. The socket 5 projects from the face 3 at a down-

ward and forward angle on a line above the direct line leading to the cutting edge of the tooth, and opens through the seat at a point somewhat above the center thereof and between the same and the lower end of the rear face of the front tooth; at the point of intersection of which with the backing face an angle or shoulder 7 is formed.

The seat 3 and backing plate 4 are longitudinally curved or have their upper and lower portion above and below the central transverse line of the socket disposed at an angle to each other, whereby said seat and plate are strengthened to effectually withstand the strains falling upon the tooth. Preferably, as shown, the curve or bend in the seat and plate are more pronounced at a point substantially in line with the lower surface of the post, by which the concavity formed by the rear surface of the plate is deepened or in effect recessed at an intermediate point to provide a greater space for the reception of solder, thus enabling the plate to be more firmly and securely fastened to the bridge.

In practice, the backing plate is soldered or fastened to the bridge in any approved manner and the tooth cemented to the plate and post, the arrangement of the seat face and socket being such that a maximum thickness of the porcelain forming the tooth is provided between said face and socket and the front surface of the tooth to prevent any possibility of the latter being discolored by the cement employed. The upper edge of the backing plate bears against the shoulder 7, and owing to the form and arrangement of the seat and backing it will be apparent that any tendency of the tooth to tilt or cant upon the post will be effectually resisted while the longitudinal strain upon the tooth will be transmitted at such an angle as to form a truss connection between the backing and bridge, whereby the latter is adapted to withstand the imposed pressure without liability of injury. This action is promoted by the arrangement of the upwardly extending front 2 relative to the inclined seat 3, said front acting in the nature of a reinforcing extension to bear a portion of the strain.

By securing the tooth to the backing in the manner described, it will be seen that said tooth may be fastened to the bridge in a ready and convenient manner, and detached and a new tooth as conveniently sub-



stituted therefor in case of breakage. The mode of mounting obviates the necessity of molding anchoring devices of any kind within the tooth by which the strength of the tooth is liable to be impaired, and also the necessity of using reinforcing connections between the backing and tooth, although under some conditions a reinforcement of thin gold may be soldered to the backing and burnished over the neck of the tooth to give increased stability. The tooth may, however, through the construction described, be firmly fastened to the backing without additional connection, thus avoiding the necessity of having gold or other metal showing in the finished bridge.

The construction described may be employed generally for all kinds of artificial teeth but particularly for canine and incisors.

In Figs. 3 and 4, I have shown a modified form of the construction designed to give additional strength, in which construction the body portion of the tooth is provided with a rear extension 8 projecting at a downward angle from the upper rear portion thereof, the upper face of said extension increasing the length of the seat 3 to afford a firmer bearing for the backing plate 4, the lower edge of which may engage a shoulder 9 provided upon the extension, whereby the plate will be more firmly locked or anchored in position. The same general construction is employed for artificial molar teeth, each cusp of which, however, will be provided with a receiving socket for use in conjunction with a backing plate 4<sup>a</sup> of the form shown in Fig. 5, said plate having a pair of posts 6<sup>a</sup> to enter the sockets.

In some cases, the seat 3<sup>b</sup> may be disposed at an oblique angle more sharply pronounced to the inner face of the front 2, and the backing plate 4<sup>b</sup> may be provided

with an upward extension 4<sup>c</sup> bent at an angle to rest against said face of the front, as shown in Fig. 6.

Having described my invention, I claim:—

1. An artificial tooth comprising a body portion having a front extending from its forward edge, the rear surface of said body portion being sharply beveled at an outward and downward angle to provide a seat, and an angular shoulder at the juncture of said front and seat, and said body portion having a socket inclining downwardly and forwardly from said seat, at a point below said shoulder and on a line above a direct line between the mouth of the socket and cutting point of the teeth, and a backing plate of uniform thickness curved to conform to and rest against the seat and bear at its upper end against said shoulder and provided with a post to project into said socket, said tooth being adapted to be secured by cement to the plate and post.

2. An artificial tooth comprising a body portion having a front extending from its forward edge, the rear surface of said body portion being downwardly and outwardly beveled to provide a seat, and said body portion having a socket inclining downwardly and forwardly from said seat, said socket opening through the seat between the central transverse line of the seat and the base of the front, and a backing plate adapted to rest against said seat and bear at its upper edge against the base of the front, said plate being provided with a post to extend into said socket.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES W. PLUMLEY.

Witnesses:

BEN T. NEAL, Jr.,  
E. L. WAUDELING.