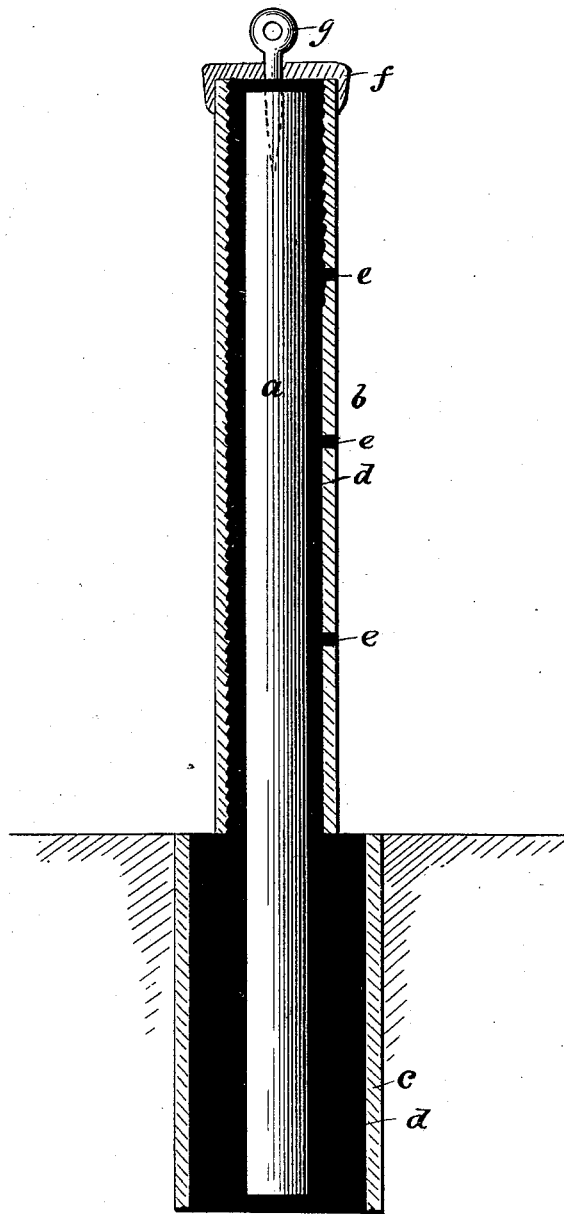


(No Model.)

W. H. LAWRENCE.  
FENCE POST.

No. 418,524.

Patented Dec. 31, 1889.



Witnesses

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Chas. H. Conhays  
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Inventor:

William Lawrence

By his Attorneys

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# UNITED STATES PATENT OFFICE.

WILLIS H. LAWRENCE, OF MILTON, PENNSYLVANIA.

## FENCE-POST.

SPECIFICATION forming part of Letters Patent No. 418,524, dated December 31, 1889.

Application filed October 1, 1889. Serial No. 325,687. (No model.)

### *To all whom it may concern:*

Be it known that I, WILLIS H. LAWRENCE, a citizen of the United States, residing at Milton, in the State of Pennsylvania, have invented certain new and useful Improvements in Fence-Posts, of which the following is a specification, reference being had therein to the accompanying drawing, in which is represented a vertical sectional view of my improved post.

In the annexed drawing, *a* designates the central wooden shaft or rod extending from one end of the post to the other, and preferably of one size throughout its length. Inclosing the upper portion of this post is a tube of terra-cotta *b*, and inclosing the lower portion of the post (the portion which is to constitute its base) is another and shorter tube *c*, this latter tube being somewhat larger than the upper tube. Between the core or shaft and outer cylinder or cylinders is a filling of hydraulic or other cement *d*, the cement serving to center the shaft and connect the parts rigidly together when set. In order that the cement may take a firm hold upon the outer terra-cotta cylinders, the same may be roughened or corrugated upon its interior, the cement filling these depressions, as shown in the drawing. In constructing these posts the central shaft is first centered and trued in the cylinders and the cement (which is in a liquid or semi-liquid form) poured in and allowed to harden or set.

The advantages in the way of cheapness and durability of posts of this character are well known, and therefore need not be enumerated here.

In the manufacture of a post of this character a serious difficulty has arisen from the fact that when the hydraulic cement is poured in around the central wooden shaft the fiber of the same will absorb a large quantity of the water in the cement, causing the shaft to swell or expand to such a degree as to often break or crack the outer terra-cotta shell, thereby entailing considerable loss of time and material and materially adding to the cost of the manufacture of the posts.

The essential object of this invention is to overcome this objection and thereby greatly cheapen the production of posts of this char-

acter; and with this end in view it consists in immersing or soaking the central wooden shaft in water, oil, or other liquid before it is inserted in the cylinders, thereby swelling or expanding it to its utmost before it comes in contact with the wet cement, so that the latter will have no tendency to expand it further. By this simple method of treating the central shaft before it is inserted in the cylinders all loss from cracking of cylinders is obviated, as has been ascertained by actual test.

It has been found in practice that the shrinkage or contraction of the post will be taken up by a consequent swelling of the cement. It will also be observed that I allow the cement to cover both ends of the post as well as its sides, thereby effectually hermetically sealing it and rendering it practically non-destructible so far as the elements are concerned.

Roughening or corrugating the interior of the terra-cotta cylinders effectually prevents all slipping of the cement when the same is set, rendering the post more rigid and durable.

Instead of swelling the central shaft before inserting it in the cylinders, I may coat it with some waterproofing material—such as tar, for instance—and thereby prevent the water of the cement entering the fiber of central shaft.

A flanged metallic or terra-cotta cap *f* may be placed over the upper end of the post to protect the cement filling.

For hitching-posts (for which this post may with equal advantage be employed) an eye-bolt *g* may be passed down through a central aperture in the cap *f* and screwed or driven into the upper end of the wooden post, if desired.

For fence-posts apertures *e* may be formed in the terra-cotta cylinder for the passage of the rail and wire-securing bolts, which are driven through the cement filling and into the wooden shaft.

When used for lamp-posts, hitching-posts, &c., it is evident that all apertures may be disused, in order that the appearance of the post will not be marred in any way.

Having thus fully described my invention, what I claim, and desire to secure, is—

1. The method herein described of constructing combined terra-cotta and wood fence-posts, which consists in first swelling or expanding the central wooden shaft to its utmost degree, then inserting this swollen wooden shaft into a terra-cotta cylinder, and finally pouring in liquid or semi-liquid cement between the said shaft and cylinder and permitting the same to harden or set, as  
5  
10 and for the purpose described.
2. A fence-post consisting of a central

wooden shaft, an outer terra-cotta cylinder or cylinders, and an intermediate filling of cement, the interior of the said terra-cotta cylinder being roughened or corrugated, substantially as described. 15

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

WILLIS H. LAWRENCE.

Witnesses:

C. D. DAVIS,

C. W. CAUBOYE.