

In the following table I have endeavored to show the estimated annual financial saving by a proper preservative treatment of poles:

| Material | Placed | Total  | Cost Foot | Years of Life |         | Annual Charge |         | Annual Saving | Quantity in Use | Total Amount Saving |
|----------|--------|--------|-----------|---------------|---------|---------------|---------|---------------|-----------------|---------------------|
|          |        |        |           | Untreated     | Treated | Untreated     | Treated |               |                 |                     |
| \$4.00   | \$3.00 | \$7.00 | \$1.50    | 13            | 23½     | \$0.78        | \$0.69  | \$0.09        | 32,000,000      | \$2,880,000         |

This table was figured from averages by the following formula:

$$a = p \frac{1.0r^n \times 0.0r}{1.0r^n - 1}$$

a = annual charge, p = investment, n = years in recurring period, r = int. on investment at 6 per cent.

In many cases the consumers require in their specifications poles of larger diameter than the actual service requires, in order that a certain amount of deterioration by decay shall be allowable before replacement is necessary. For example, it is computed that a circumference of not less than 28-ins. of sound wood in the pole at the ground line is required to support the strain to which the line is liable to be subjected, and the poles used have a circumference of 36-ins. at the ground line, then 8-ins. of deterioration or the equivalent of a depth of decay of approximately 1¼-ins. is allowable before replacement is required.

In some species otherwise durable the sapwood decays very quickly. Untreated white cedar poles in Georgia, inspected after being set in line four years, showed 45 to 50 per cent. of the number with sapwood completely decayed at the ground line, which amounted to an average deterioration of 4-ins. in the circumference equivalent to an average depth of decay of fully ⅝ of an inch. Cypress poles in Florida, inspected after being in the ground seven years, showed an average depth of decay of 0.8-in. at the ground line. The heartwood of these poles is sound and in nearly all cases is of sufficient dimensions to meet the requirements of the line in which they are used, although graded by the butt circumference they fall decidedly lower than their original class. If poles originally of the same grade represented by these poles after the sapwood has decayed, had been used, and the butts well treated with creosote so that their full size and strength would be maintained, not only would the poles be equally as strong as the ones now in use, but their ultimate length of life would be greater. The difference in cost between the two grades of poles in some cases would largely offset the cost of the treatment. It appears that pole users are paying money to secure large diameter sizes of poles in order to secure longer life, that might more profitably be spent for preservative treatment. The possibility of using lighter poles and giving them preservative treatment so as to maintain their full size and strength is one that merits the attention of all pole users.

Wood preservation, then, accomplishes three great economic objects:

- (1) It prolongs the life of the durable species in use;
- (2) It prolongs the life of the inferior and cheaper wood;
- (3) It enables the utilization of those inferior woods, which, without the preservative treatment, would have little or no value.

I believe, and most any one who has considered this important subject will agree with me, that the time is at hand when all companies will find that they are obliged to have all their poles creosoted, as at the present high prices of both labor and poles it is too expensive to have to be constantly renewing them.

## SUPERVISION OF MUNICIPAL WORK.\*

By Will P. Blair, Indianapolis, Ind.

There are many questions with which we come in close contact, or with which we actually must deal, that are mooted or about which we disagree with reason or plausible excuse, but under a wide range of experience and observation there comes to us much that is so utterly inconsistent with human reason or intelligent purpose, that, from our view point, at least, it is utterly inexcusable. Common with all, municipal matters come within these limits. Try as we will, to those of us whose business brings us into contact with, or to those who are making special study of various municipal problems, it would seem that they bear a burden of undue proportion of evils unreconciled within the bounds of reason. So many things are so inexplicably inexcusable that we sometimes want to characterize them softly because we are ashamed to speak the naked truth. But how can we hope to correct abuses unless we hold them up to view with all the daylight of truth, with severest search and utmost scrutiny? The very name of this society suggests that its purpose is to strive for progress and advancement in municipal concerns. Fault and dereliction should be replaced with corrected measures and integrity of purpose.

How shall we make competent and honest but by pointing out the awful examples—the inefficient and the unreliable? The public welfare does not suffer altogether from a single agency, or from several agencies. The public is frequently neglectful in some—perhaps many—ways of her own interests. Stupidity and carelessness on the part of the public is no less to be condemned than when found in the individual. But the sentiment that the public deserves all she gets, and possibly more, simply because we naturally expect that some one is on hand at all times in this country, stirring the public to alertness and watchfulness—oftentimes in the directions even from which comes no alarm—is the excuse of the petty grafter, and is unworthy of a trusted public official or employee. If there is to be a distinction in the honesty of dealings, let them be more honest when dealing with the public. The public is practically helpless in our hands, and for this reason alone should command our most honorable service.

Very recently, in a city of less than 75,000 inhabitants, a street was to be improved, in fact was being improved, of which the wearing surface was vitrified brick. A 10-inch concrete base, 1½-inch sand cushion and 5-inch vitrified block, cement filled, were the features of the specification.

What possible reason could be advanced for the use of a 10-inch concrete base?

Why the 5-inch block in such a city?

Why the 10-inch concrete base?

We are not, however, calling in question such a specification because there is any lack of merit. In these two particulars the specification was simply overdone; but we do question the extraordinary expenditure enforced by this specification in view of what followed in the application of the cement filler.

A member of the Board of Public Works was found upon the street supervising the construction. He permitted the expansion cushion to be poured in prior to the application of the cement filler. This hot liquid ran back into the joints more than three bricks' length, subsiding, in many cases, one-half of the height of the brick. In the application of the cement filler it was allowed to be mixed in a box that of

\* A paper before the American Society of Municipal Improvement.