

October 24, 1912.

against its use for the heavy travelled highways of this country.

If you like speed, you can have it with no "Thank-you-ma'ams" to jar you. If you enjoy beautiful pastoral scenery, you will be delighted. You will be surprised by one feature of these brick-paved country roads—their cleanliness. It is not an uncommon thing for visitors making such a trip for the first time to ask how often the roads are swept. The answer is, "They are swept constantly, but Dame Nature does the sweeping, and she uses no broom." The wind keeps them as clean as the dear old board walk out here that we all love and enjoy.

If, after being convinced, as you will be by such a trip, that the brick-paved roadway is the ideal roadway, and you want to build them in your own district, the National Paving Brick Manufacturers' Association will make it easy for you by supplying you free of charge with complete specifications in which every detail of construction is set forth in plain terms, so that any engineer or road builder can readily comprehend all that is required. If, however, any uncertainty arises, all you need do is to write the National Paving Brick Manufacturers' Association, which is an organization of boosters, which is boosting by methods of education instead of by use of boodle.

In time, brick roads will become universal throughout this country, for there is an abundance of raw materials, shales, and clays, in almost every State in the Union, from which vitrified brick may be made. In sections where paving brick are not now made they can be shipped in, as transportation charges are not prohibitive. On the contrary, brick and cement can be supplied to almost any district in the land at a reasonable price, and the other materials used are found everywhere almost. Indeed, one of the commendable things about brick roadways is the fact that common labor is used in building them, and home products are chiefly used in their construction. They are not a drain on local capital; on the contrary, they stimulate local business by affording employment for labor at fair wages. In short, brick-paved roadways are desirable and commendable from every view point.

### CREOSOTING CROSS-TIES.

The annual replacement of cross-ties in Canadian railway lines is about 10,000,000, according to statistics compiled by the Forestry Branch of the Department of the Interior. The average life of a tie, i.e., seven years, could be prolonged to seventeen years if proper preservative treatment were adopted, and an annual saving of 350 million feet, board measure, of timber, could be effected. This is equivalent to three years' cut of one of the very largest mills in the country.

While the initial expense of creosoting would bring the cost per tie from 58 to 93 cents, it would save \$1,400,000 annually.

Since 1910 two timber-treating plants have been established, treating, in 1911, 206,209 ties, or 1.5 per cent. of the total cut.

The number of ties purchased in the Dominion in 1911 was 13,683,770, an increase of 4,469,808, or 48.5 per cent. over 1910.

The rapid development of railways in the western provinces is largely responsible for this increase.

Eighteen kinds of wood were used. Jack pine, with 40 per cent.; tamarack, with 19 per cent.; Douglas fir (used to a very great extent in new electric lines in British Columbia) with 14 per cent., and hemlock, with 12 per cent., were the leaders. A remarkable change is that of cedar, in decreasing from 40 per cent. to 5.4 per cent. of the total.

## AN ELECTRIC FOUNTAIN OF UNIQUE DESIGN.

By L. M. Edholm.

In San Diego, California, a unique electric fountain has been constructed to stand in a small park on one of the principal streets of the city. The park faces the U.S. Grant Hotel, a magnificent building, and it was necessary to have the fountain harmonize with the surroundings and be an ornament to the park in the day time as well as night.

Mr. Irving J. Gill, a well-known western architect, designed the fountain after classic monuments of Greece and Rome, not a cheap imitation, but original ideas used, that would take a prominent place among the old masterpieces in art.

The details, many of which are unique, seem to have been very carefully thought out and planned by Mr. Gill.

In a concrete basin stands a granite pedestal from which rise eight marble columns of the Corinthian order. These support a dome of prismatic glass and bronze on the top of which rests a bronze lantern.



View of Fountain in Operation.

Even in the morning before the flow of water is commenced the structure is one that delights the eye, being well proportioned, graceful, quiet and dignified.

Every day at noon the water is turned on. A small electric pump forces the flow up through the marble columns to a point below the bronze lantern from which it flows over the prismatic glass of the dome. The bronze framework of the dome protrudes and causes the water to cascade and foam. Through a perforated sheet of metal under the dome the water falls downward in a shower between the columns. Eight jets shoot at an angle from the sides of the basin to meet the shower and together the waters dash, gurgling and splashing, upon the pedestal and runs into the basin in eight miniature waterfalls. It gives the strange illusion of water rising from the pedestal and terminating in the foam-covered dome.

As a matter of economy the water returns to the starting point and is used again and again.

At night the lights are turned on and the color display is very artistically arranged. All the jets and overflows are illuminated in the different colors. Holoplane reflectors are used under each cluster of lights and a flasher is worked automatically.

Clusters of colored tungsten lights are placed under the prismatic glass of the dome and the subdued glow showing through the glass and foam gives it a jewel-like effect.