

MUNICIPAL DEPARTMENT

THE IMPORTANCE AND ECONOMY OF PAVEMENT MAINTENANCE.

By S. WHITNEY, IN ENGINEERING MAGAZINE.
(Concluded.)

It ought to require no argument to establish the proposition that the same reasons that make it desirable to construct a good pavement apply as well to the keeping of it in proper repair. If it is necessary to pave a street for economic reasons, it is equally necessary that the pavement shall be maintained in such condition as to accomplish its purpose. If a pavement is desirable for sanitary reasons, it is equally desirable that, after it is secured, it shall be kept in such condition as will best attain that end. If a street is paved for the reason that it will promote the comfort of the people using it or living along it, and that it will add to the beauty and desirability of property adjoining it, certainly these ends will not be accomplished unless it is kept clean and in good repair. In short, if the pavement is considered of sufficient value to justify the expenditure of the large sum necessary for its construction, it should be of sufficient importance to be maintained in as nearly as possible its original good condition.

It is a downright waste of public funds to build good and beautiful streets, and then allow them to be ruined for the want of proper attention.

A famous saying has been so paraphrased as to read: "The price of good roads is eternal vigilance." This is forcible, but hardly accurate, the fact being that only as much vigilance and business sagacity are necessary as the good business man applies to his private business, as the efficient railroad manager applies to the care of his track, his structures, and his rolling stock, as the prudent manufacturer applies to his machinery, or as the wise landlord applies to his buildings.

It is not possible here to go into details regarding the methods of repair. These will obviously differ somewhat with the different kinds of pavement to be dealt with, and some general observations only will be attempted.

It may first be noted that, as in medicine, "an ounce of prevention is worth a pound of cure." If pavements are properly cared for and protected, the amount of repair work will be greatly reduced. They should be properly cleaned. While a blanket of street dirt may not be very injurious to some kinds of pavement, it will certainly greatly impair the life and usefulness of others. This is particularly true of wooden and asphalt pavements. There are the strongest reasons for keeping pavements clean, regardless of the fact that cleanliness is an important factor in maintaining

them, but it should not be overlooked that the life of a pavement is prolonged, and the cost of its maintenance reduced, by keeping it clean. Pavements should not be sprinkled more than is absolutely necessary to prevent the discomfort and injury to property of flying street dust. Proper cleaning will reduce the necessity of sprinkling to a minimum. The excessive use of water is a positive nuisance on paved streets. It reduces the dirt to a mantle of mud and slush that is more objectionable to those using the street, particularly pedestrians, than dust. It makes thorough cleaning impossible. These should be sufficient reasons for properly regulating the quantity of water used for necessary sprinkling. When it is added that it hastens decay, increases the effect of abrasion and wear, and thereby abridges the life and usefulness of the pavement, there is seen to be abundant reason for regulating this pernicious evil. Those who doubt its destructive effect should visit a stone-sawing establishment, where they will learn that the saws used for cutting the stone would have little or no effect were it not for the constant stream of water supplied between the saw and the stone.

Street pavements should have the usual police protection accorded to other public works. The hauling of unusual and destructive loads over them, the building of bonfires on them, the spilling on them of oils and chemicals, and the careless or accidental placing or dropping on them of gravel, broken stone or brick, and refuse of all kinds, should be prohibited under penalties. While it is impossible to avoid cutting into pavements to lay or repair pipes or other underground structures, this should be allowed only under stringent and well-defined regulations. The necessity for regulating this evil is so evident that one would think that every city would adopt and enforce the necessary legislation to control work of this character; but not so. Only a small number of American cities have taken the subject in hand properly. No official, corporation, or private individual should be permitted to make openings in any pavement except under stringent regulations providing for prompt restoration of the pavement to its original condition.

If all these and other like requirements were complied with, the necessity and cost of pavement repairs would be very greatly reduced.

The one general and important rule to follow with regard to necessary repairs is to make them promptly. If this rule be strictly followed, it will be found that the cost of maintenance will be reduced to a small fraction of what it would be were the repairs to be delayed until the slight defect had become a yawning gulf in the pavement. The saying, "a stitch in time saves nine," is nowhere more true than when applied in pavement maintenance.

The passage of an extremely heavy load may cause a slight depression in a pavement in some weak spot. The wheels of following vehicles drop into this depression, subjecting it to a blow where before only a steady pressure was exerted.

This will deepen and extend the depression, and, as the force of the blows increases more rapidly than the depth of the depression, that spot of the pavement will soon be destroyed; and, as the adjoining pavement is deprived of lateral support, the depression not only deepens, but extends in every direction, until it becomes an unsightly and dangerous hole in the street which it will cost dollars to repair, though at the beginning a few cents would have been sufficient. It is no exaggeration to say that, in every city having a considerable area of paved streets, many thousands of dollars could be saved annually by adopting and adhering to the policy of prompt repairs. —Engineering Magazine.

AN IMPORTANT AWARD.

Municipal bodies in Ontario will be interested in the arbitration just concluded to determine the amount to be paid for the next five years under the Municipal Act by the city of Ottawa to the county of Carleton on account of the jail and court house expenses. For the five years up to 1870, the city paid the annual sum of \$5,900. Then in 1890 the city was persuaded into increasing the amount to \$9,750 per annum. This year the county wanted \$10,800, which the city refused to pay, but offered the county \$10,000. The county declined to accept the sum, and an arbitration was decided upon. Judge Deacon, of Pembroke, was the county arbitrator, Taylor McVeity, the city representative, while Judge Bell, of Chatham, was appointed third arbitrator by the Lieut.-Governor of Ontario. The city's case was fought by city solicitor McTavish, with the result that the award, on which all the arbitrators are in accord, gives the county a net annual payment of \$8,104, or \$1,900 less yearly than they were offered. The arbitrators disallowed the county's claim for compensation for common use with the county by the city of the court house and jail. The decisions in county of Kent v. Chatham, and county of Lincoln v. St. Catharines had an important bearing on the award.

An amendment to the Municipal Act passed at the last session of the Legislature makes one or two important changes to which the direction of municipal authorities should be directed. The new councils elected on the first Monday in January will meet on the following Monday, instead of the two weeks interim formerly allowed; and existing councils will cease to have power to vote money for any purpose, pass any by-law or enter into any contract or bargain involving the payment of money, or dismiss or appoint any official after the 31st of December. The old council practically ceases to have any power between the first day of the month and the sitting of the new body on the second Monday, which may be as early as the eighth, or as late as the fourteenth. Another amendment requires city and town deputy-returning officers to proceed directly from the polling place to the clerk's office with the ballot boxes, on no consideration taking the box to their home.