

MUNICIPAL DEPARTMENT

CARE OF PAVEMENTS.

Everyone knows that the asphalt roadways which were formerly characteristic of Paris and London have for many years been replaced with pavements of wood-blocks; and as our own cities, which have begun, half a century behind those of Europe, to pave roadways with asphalt will probably go through the same experience of finding asphalt too slippery in bad weather, and replacing it with wooden pavement, it is interesting to follow the improvements which have been made in London and Paris in the care of such pavements. In both cities, even the wood has been found slippery when covered with a thin layer of mud. In London, where a very hard tropical timber is used for the blocks, it is found necessary to sprinkle the surface by hand every morning with gravel, which is stored for the purpose in iron bins. These bins are placed in the middle of the street, on "little islands" which have been found so useful in dividing the traffic and promoting the safety of pedestrians that their number has been very greatly multiplied within a few years. In Paris, where islands in the streets, although provided in the Champs-Elysees and other crowded thoroughfares, are much less common than in London, the streets are sprinkled from wagons with finely crushed porphyry. In either case, the surface of the blocks, in time, becomes brushy from the crushing and disintegration of the fibres. Usually, worn blocks are taken up, and relaid with a fresh side upward, but, in Paris, where it was of importance not to interrupt the traffic for this, attempts have been made to cut off the brushy surface with an adze, thus restoring the block nearly to its original condition, but with its surface a trifle lower than before. This trimming with tools, owing to the hard particles of porphyry imbedded in the wood, is a tedious and expensive operation, and the City Government of Paris has, therefore, been experimenting recently with a machine resembling a lawn mower, but a little larger and very strongly constructed, and driven by an electric motor attached to the shaft. In operation, the machine is connected either with the wires of some power circuit in the neighborhood or with a portable en-

gine and dynamo, and moved about over the pavement to be trimmed. At sixteen hundred revolutions a minute, the machine trims fourteen square yards of pavement an hour, at a total cost of three and one-half cents per square yard, while a man with an adze can trim, at most, only about one square yard per hour.—The Builder.

ELECTROLYSIS OF GAS PIPES.

A paper was read by Dr. Leybold, Hamburg, on "Electrolysis of Gas Pipes, etc.," at the Engineers' Congress in Glasgow. He said that the durability of gas pipes varied from twenty-five to fifty years. In a few cases, from particular causes, quicker destruction took place. In recent years a new and previously unthought-of enemy of our gas pipes had showed itself, viz., electrolysis. It was known that by the electric current, in the presence of saline solutions of different kinds, metals could easily be dissolved. In Hamburg the pipes were protected with canvas and boiled tar. On examination it was found that in some places the tar as well as the canvas had fallen off and the pipes were eaten through in parts to the size of a centimetre. In removing the covering it was found that the corrosion existed in every stage from the beginning until complete penetration. Apparently the wrapping with boiled tar and canvas favoured destruction, for in the blisters which were

found under the tar it quietly went while with a direct bedding of the pipe in the earth without any covering earth would have absorbed the flow. These pipes were taken up and replaced by others all covered, but after expiration of seven or eight months pipes were found to be again destroyed, penetrated with holes. Every endeavor must be made to reduce the current passing into the pipes; and when laying down electric tramways great care must be taken to prevent the current flowing into the earth. This could be done one way by the laying of well-conducting rails, the rails having sufficient transverse section and the points of contact well joined together by soldered copper wires. A further method was by fixing insulating return transmission cables in many places in order to direct the current back from the rails to the electricity works.

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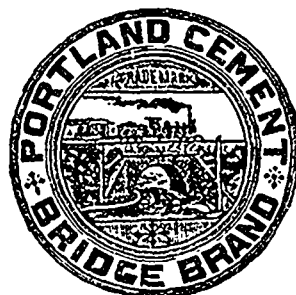
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