

as compared with 4s. 10d. (or .0096 of a penny per square yard) per day had the road been treated with ordinary water. Those who had formerly complained as to the street watering both spoke and wrote of the good results.

No record was kept of the reduced cost of cleansing, but it is probable that there would be a saving as compared with ordinary street-watering.

In Liverpool records were kept in 1902 and 1903 of the cost of treating certain macadam roads with oil. The cost appears to have varied between $\frac{1}{4}$ d. and $\frac{1}{2}$ d. per square yard, according to the amount of oil used, and Mr. Rathbone, from whose paper these particulars are gathered, states that the total reduction in the cost of cleansing and watering was from 13d. to 5.5d. per square yard for a period of twenty-one days. Apparently the treatment resulted in a distinct saving in maintenance as well as reduction of wear, but, on the other hand, the oil did not form a very pleasant surface for traffic, and the smell was complained of. In 1903 the oil was applied more carefully, and renewed at intervals of three weeks, and the cost was stated to be .0022 of a penny per square yard

per day, as compared with .0033 of a penny per square yard per day, the cost of ordinary street-watering.

The difference in results obtained in Bristol and Liverpool is probably due to factors which have not been noted, such as the kind and quantity of traffic. No two roads are exactly comparable.

It is probable that the trouble from dust can be very much palliated on existing roads by the use of calcium chloride and other similar solutions without appreciably increasing the cost of watering, if at all. On the other hand, the best way to make dustless roads is to use better material. A bad material can never be made permanently satisfactory by simply fixing the surface dust.

(b) Treating the roads with a watering solution may be possible in urban, but, as a rule, it is altogether beyond the means of rural districts, and another method must be found. The dust nuisance has been successfully tackled by coating newly-rolled metalling with boiling tar and pitch. Immediately after the road is formed the tar and pitch is applied in a flat stream from a watering-pot. It is then dressed with fine flint grit, and allowed to stand a day or two for consolidation

before the traffic passes over it. Even with mendip limestone, which is notorious for giving off dust, this method has been found to be successful.

Another example of the second way of overcoming the dust question is the use of tarred macadam. This has been tried for some years with more or less successful results. Tarred slag appears to have answered well in some of the busy thoroughfares of London. The tar, as in the previous case, is applied hot, the slag being also heated to dryness. Apparently better results have been obtained with slag than with limestone or basalt.

This method will probably be followed up still further, and there can be no reason why, in course of time, it may not become uniformly successful. It appears to aim in the right direction of substituting for dust an elastic and non-friable material as a cushion between the stones.

(c) Anyone who travels over the country will notice how much less dust there is where basaltic or silicious stone is used as compared with limestone, lias, or oolite. If every macadamized road could be made up with basalt the dust question would assume a very

Defy Competition

The Ideal Concrete Machine for the manufacture of Concrete Building Blocks makes it possible to profitably undersell all other building materials in all localities.

Ideal Blocks can be sold far below the cost of brick, lumber or natural stone. Excel them all in durability and fire and weather proof qualities. Adaptable to any possible architectural design.

IDEAL CONCRETE MACHINERY

Wonderfully simple in construction. No chains, springs or gears. Embody the only principle (face down) permitting the practical use of rich facing material with less expensive material in back of blocks. Adaptable to any size block within capacity.



The same machine makes blocks in countless ornamental designs and natural stone effects.

Write and learn how easily, rapidly and profitable **one man** can turn out Concrete Building Blocks with an Ideal Machine.

IDEAL CONCRETE MACHINERY CO.,

St. Joseph Street,
SOUTH BEND — INDIANA