

fine material that lies upon and between the metalling.

It has been pointed out by Mr. O'Gorman that the hollows and the irregularities of the surface are largely the cause of dust raised by motor-cars. It constantly happens that while one driving-wheel is making good and effective contact with the road the other wheel is skipping lightly into a hollow in which a dust puddle may be lying. When a vehicle is moving slowly the wheel has time to traverse the full contour of the hollow, but when travelling rapidly it bounds from the ridge into the midst of the hollow, spinning round meanwhile, and so acts like a brush directly it comes in contact with the dust. The effect of this action is very easily realized.

On every macadamized road there must always be some breaking down of the surface from the pounding of the horse's hoof and the grind of the tire. The only way to deal with this is to get rid of it as quickly as possible, for it does no particular good to the road to leave it there, and it certainly does no good to the road-user or to residents by the roadside. Slow-moving traffic may not disturb it, but directly a motor-car or bicycle comes along the light debris is sent flying; whilst, if there is nothing else, the wind will see that it gets thoroughly distributed.

The more that sand and silicious material is used the less will be the dust produced. Sand, moreover, cannot so easily blow about in clouds, neither can it be churned into a fine impalpable dust, like limestone can be.

There appear to be three directions along which efforts may be made to reduce dust:—

(a) By treating the macadamized surface in such a manner as to retard the formation of dust or fix it when it is formed.

(b) By introducing another substance as a cushion between the metalling in place of the grit and

dust with which the interstices are usually filled.

(c) To use as road material stone of a silicious or basaltic nature less liable to be broken down by wear or dissolved by moisture.

(a) The City Engineer of Bristol has very kindly furnished the results of experiments as to the relative cost of dressing the roads with different dust-preventing solutions. The experiments took place in Coronation-road, Bedminster.

The first preparation was spread on June 24, 1905. Subsequent applications were made on June 26 and 27 and July 4, 5 and 7, six applications in all. At the end of a week there were complaints of the dust rising, but after the fourth, fifth and

sixth applications the road stood fairly well until July 17, when the whole road had to be watered, and it was found necessary to resume the ordinary street-watering on July 29. The cost of this application worked out to 6s. 9 1/2d. (or .0136 of a penny per square yard) per day, as compared with 4s. 4d. (or .0086 of a penny per square yard) per day had ordinary watering been adopted.

The second preparation was applied from July 8 to 17, altogether five applications. The dressing stood till August 17, no water being required during this interval except in channels, which were flushed out once a day from July 28. The cost worked out to 4s. 7d. (or .0091 of a penny per square yard) per day,

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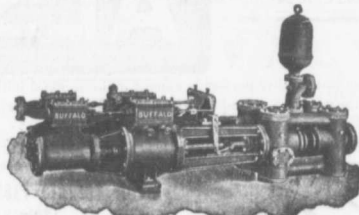
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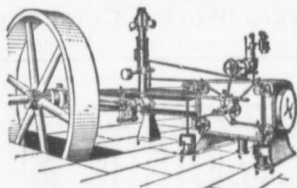
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