

**MUNICIPAL
DEPARTMENT**

IL IN STREET CONSTRUCTION

(Continued from last week.)

After the oil is put on, in any of these instances, some appliance for mixing the oil and loose road materials is run over the surface backwards and forwards until a thorough mixing is accomplished. If the road surface is very loose, a common steel lever harrow, with the teeth slanted back, is useful. This may be dragged to and fro longitudinally along the road, and back and forth spirally across the road, until a thorough mixing is secured. On firmer roads and where there is little loose covering, a lighter implement, with numerous dragging fingers suspended from an axle, is better.

All this has reference mainly to roads that have never been oiled before. When it comes to oiling a road the second, third, and later seasons, the operation is somewhat different. Should the oiled surface be cut through in places, and chuck-holes formed, (but there will be very few holes if the road has been properly looked after,) we go over these in the manner previously noted for repairing chuck-holes; and then apply a dressing of oil to the whole surface: just enough to saturate the loose material and secure a very slight penetration into the old oiled surface. Here I will call attention to a danger we may fall into, that of putting too much oil on the smooth hard oiled surface we have previously obtained, softening it, and putting it in condition to rut up, especially under heavy loads. We may in this way lose a part of the results of the previous year's work. I made this mistake on the road last summer, so can speak from experience. But enough oil should be put on to cover the entire surface as with a thin sheet. Then there will be a surplus of oil, and the road if left without further attention, would be sticky and very unpleasant to travel over, for a considerable time after the application. We therefore follow this application on hard smooth roads that have previously been oiled, with a sprinkling of sand, using fine gravel and sharp sand, such as builders use in their mortars. This takes up the surplus oil and adds to the wearing surface, and renders the road at once comfortable to travel over. The sand soon becomes incorporated with the rest of the road material, and packs down smooth and hard. The quantity of sand put on is just sufficient to take up the surplus oil, and no more.

We frequently use this sanding process also when applying oil for the first time to a hard smooth road. We have used it on a macadamised road in which the surface was too tight to absorb the oil, and obtained excellent results. It is useful also where oil is applied to a tight adobe or other clay road. With the oil and sand a wearing surface may be built up on the clay and be made to last, while without the sand, the oil has a tendency to ball up with the clay dust and carry off. We

heretofore have been doing this sanding by drawing the sand in wagons alongside the oiled surface, where two men to the load throw it out with shovels, the shovels being given the proper twist to cause the sand to fall on the surface in a thin sheet. I have now designed a machine that does this work much more evenly and at less cost. It runs on its own wheels and may be hooked on to the side of any waggon. The waggon is driven alongside of the oiled surface, while the machine runs on it, but its wheels travel on the sheet of sand which falls immediately in front of them. Two men shovel from the waggon into the hopper of the machine, and the latter grinds out the sand in a sheet of any required thickness from 1/8 inch up.

In oiling a road, whether for the first time or subsequent to previous oiling, we find it most convenient and satisfactory for carrying on the work, and to the travelling public, to fix up one side of the road at a time, keeping the travel on the other side; when the side operated on is finished (oiled, sanded, etc.), we turn the travel on that side, while the other part is worked. In this way, with the plan we now have of finishing an oiled road we have but little complaint from those travelling it.

An oiled road should be kept in repair. If properly looked after and the repairs are made at the right time, the cost is light. Wherever and whenever the oiled surface cuts through and a hole commences to form, the repair man should

start out with oil, sand and shovel, hoe and rake. He should scrape out the hole, run in the oil, and mix it with sand and the material taken out of the hole, until the latter is filled and slightly heaped up. The sand and other material should be thoroughly mixed with the oil to the point of saturation, just short of being sticky. One advantage of sand for this purpose is that, besides packing down and wearing well, it will hold more oil without being sticky than any other material. For winter repairing, when the weather is cold and rains frequent, a pile of sand already mixed with oil is very convenient to have on hand. Then if there are depressions in your oiled road where the rain water stands, and where in consequence the oiled layer is liable to be cut through and mudholes formed, take occasion when these depressions are dry to fill them up with this oiled sand, so that the water will be shed from the surface. If your oiled road is in such shape that the water will drain off its surface, soon after a rain, it will take care of itself in the winter time and go through in fine shape. But if there are depressions and catch-basins in the surface, holding the water until it evaporates, with constant travel over it, you are liable to have trouble, as with any other road under similar conditions.

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