

few depressions or irregularities. The preliminary treatment of the road surface before applying the tar consisted in thoroughly sweeping the street surface to remove as much of the dust as possible. The consistency of the tar was such as to make it necessary to heat it before it could be applied. Application was by means of sprinkling cans with broadened nozzles. Approximately one-half gallon of tar was applied per square yard of surface. The surface of the tar was covered with a thin layer of coarse limestone screenings approximately one-quarter inch in diameter, from which practically all the dust had been removed. The street was rolled with a fifteen-ton roller and was thrown open to traffic as soon as possible thereafter. After a short time, and after the excess of screenings had been worn away, the street resembled, in many respects, a sheet asphalt pavement. After the lapse of two years a second treatment was given, similar in all respects to the first, except that the quantity of tar per square yard was about one-third of a gallon. This second treatment was given primarily to cover the individual stones which projected above the general surface of the pavement and were thus not thoroughly covered by the first treatment. Several excavations made in the street since the last treatment show that the tar penetrated the surface of the road from three-quarters of an inch to



Tarviated Road in Madison, Wisconsin.

one inch, and thoroughly bound the surface. How soon it will be necessary to again apply the tar it is impossible to tell; however, it is safe to say it will not be necessary to apply another treatment for at least three years, and possibly not for five or six. The above mentioned treatment has practically eliminated the formation of dust caused by the breaking down of the stone under traffic. The street is, however, not dustless, as more or less dust is brought upon it from traffic and other outside sources, and it has been found advisable to give the street more or less sprinkling with water to keep down the small amount of dust which does accumulate on the street from the sources mentioned above. The street surface is so well bound that any ordinary rain will free the surface from dust as though it were an asphalt pavement. One objection to the above mentioned treatment is that it leaves the street slippery at those times when, due to weather conditions, other pavements like asphalt are also slippery.

The cost of the first treatment was 7 cents per square yard. In this cost is included all the items which should enter, namely, the cost of cleaning the street, the cost of the tar, of heating and applying it, the cost of the screenings and applying them, and the cost of rolling. The second treatment cost 4 cents per square yard, as the quantity of tar applied per square yard was less.

In addition to applying the heavy tar mentioned above a lighter tar (Tarvia B) requiring no heating before applying, has been used with considerable success. This tar is sufficiently fluid, under ordinary temperature, to run freely from the tank cars in which it is shipped. Before applying the tar the road surface must be cleaned of all dirt so as to expose the stone surface. The cleaner the surface of the street the better will the result be in the end. If any cakes of dirt or screenings are allowed to remain on the surface then the tar will not penetrate into the macadam, but will instead be absorbed by the layer of dirt or screenings. The first heavy rain will simply loosen the dirt layer and the street will in consequence become muddy. The street may be swept either with a rotary street sweeper or with push brooms. The former method is the more economical, but is somewhat objectionable on the part of the public on account of the raising of dust while the sweeping is being done. The raising of a dust while sweeping may be lessened somewhat by sprinkling lightly with water previous to sweeping.

The tar is hauled from the tank cars to the street in wagons equipped with a sprinkling attachment attached to the rear of the wagon. Several such attachments are on the market, the general principle of all being the same. Suitable regulating valves are provided on the attachment which makes it possible to gauge the quantity of tar to be applied. In practice about one-third of a gallon of tar is applied per square yard of street surface.

The tar, especially during warm weather, penetrates into the surface of the macadam sufficiently at the end of from six to twelve hours to enable the street to be thrown open to traffic. The efficiency of the tar as a dust preventative lies in the fact that it penetrates the surface of the street from one-fourth to one-half inch and firmly binds the stone in place.

The cost of the cold tar application described above is about 19/10 cents per square yard. In order to get the best results a second application of tar should follow the next season after the first application. These two applications will then be sufficient for the two or three following seasons.

AN OUTCOME OF THE GREAT BRITISH COAL STRIKE.

Following the distress of the recent coal strike in Great Britain, serious attention has of late been given to the immense deposits of peat in Ireland and the best method for their economical use.

The methods of preparing peat for fuel are very primitive and would have to be changed completely to make peat fuel a real competitor with coal. An attempt was made some years ago to make turf briquettes, but the scheme, though it promised well, did not turn out as successfully as was expected and the company failed. The moisture was squeezed out of the peat by compression and the briquettes when fresh seemed to be just the thing that was wanted, but whatever defect there was in the preparation of them they were not able to stand the knocking about they got in the railroad wagons and canal boats.

The problem of making peat briquettes that can travel by train without falling to pieces has, however, since been solved in Sweden and in other countries, and this fact has given encouragement to Irishmen to take the matter up again. The coal strike has brought the question within the range of practical things as nothing else could have done.