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Engineers—And

Points on Road Building

Many people regard the question of road surfaces very superficially and select for their macadamized road material the rocks that offer the greatest resistance to attrition. This, however, is a wrong view. The main source of the mud and dust arises from the inter-attrition of the stones composing the macadam and which converts them into a rounded form. All improved pavements have for their object the reduction of this interstitial wear and the confining of the wear to the upper surfaces.

Taking these improved pavements in order, granite blocks have the great disadvantage of earsplitting noise and are detrimental to vehicles.

Wood blocks are elastic, but their extension is limited by consideration of cost. The early asphalt pavements were very expensive, as they were constructed of ground up natural asphalt rock. Surface tarring was introduced about eight years ago and has been widely adopted. While tar is an excellent binding material for the particles of the surface of a macadam road, it is only elastic to a limited extent and its variation in consistency due to temperature changes makes its use a difficult matter.

Fortunately, discovery has kept pace with the demand. The residual product of the asphaltic oils in the central portion of the American continent is available in immense quantities. In distillation, after the gasoline and oils have passed over from the still, the process can be stopped at the point at which the residual substance is practically pure bitumen. This substance is most distinctly elastic and does not lose this property if mixed with an equal mass of finely ground lime, etc.

This bituminous "binder" can be mixed with the angular sand found on sea shores, river estuaries, sand pits, etc., or with crushed flint, gravel or shingle. Thus mixed, if built upon a foundation sufficiently strong to carry the traffic, it forms a road surface that is durable, resilient, non-slippery and waterproof, and it can be produced at reasonable cost.

So long as heavy traffic was confined to the principal streets of large towns, the heavy cost of asphalt or wood-block pavement was cheerfully borne, but now in this automobile era the traffic has to spread itself over the roads that radiate from the cities, and the consideration of maintaining these roads in a satisfactory condition at a reasonable cost has become the problem of the moment. It is also of peculiar importance in Canada at the present time as the Federal Government has definitely adopted the policy of improving the main arteries of communication throughout the various provinces.—"Conservation."

Ex-Surveyor to be Mayor

Mr. Charles Jones, borough surveyor and engineer at Ealing, has resigned after fifty years' service, and the council has decided to offer him the mayoralty in November.

A law has come into force in Italy making industrial instruction for children of 12 to 14 years of age, who are engaged in factories, compulsory.

Municipal employees in Paris to the number of more than 50,000 will receive an increase in their pensions.