

MAINTENANCE OF CONCRETE ROADS.

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The materials required for the repair of concrete pavements are portland cement, sand, stone, (crushed stone is better) and bitumen. Bitumen, for filling cracks and joints and for making shallow repairs, may be coal tar products, asphalt or asphaltic products. The hot bitumens at proper temperatures flow quickly and fill the parts of joints and crevices thoroughly but caution has to be exercised not to get the material too hot as this would burn or cook out some of the bitumen taking from it the elasticity which is required so that when cooled it would become brittle.

The equipment for this work depends on the extent of the repairs. If the work covers much territory, a light motor truck with a heating kettle mounted on wheels for melting the bitumen is the most convenient. A pouring can, a stiff broom, a sharp raking tool made for cleaning out the cracks and joints to be filled and a shovel for putting on the sand completes the outfit. The procedure for doing the work is very simple.

The best way I have found to proceed with this work of sealing the crevices is to have one man go before with a good stiff house broom and sweep thoroughly the surface, removing every particle of dirt. Then another follows closely with a can of the bituminous material, pouring in enough to fill the crack and a third follows with a shovel and covers the asphalt with sand. The three men should work close together till the job is completed so the work of one will not be lost. If the sand is spread as soon as the asphalt is poured, it is not necessary to close the road and stop traffic.

Sometimes it is necessary to repair a worn spot or depression in a pavement due to faulty material, improper mixing, or freezing while the concrete is green. The following steps should be followed in making a patch of this kind: first clean the hole in the surface thoroughly of all dirt and loose material; then paint the area with a thin coat of bitumen; mix enough good washed pea gravel or stone chips with enough bitumen to fill the depression a little more than level full; settle this new mixture with an iron tamp to a level with the adjoining surface; paint the patch again with the bitumen; cover with a coat of good sand and the patch is done.

For patching holes more than an inch deep, a permanent patch may be made with concrete after cutting the hole out to a depth of three inches making the edges straight down so that