

oil is pumped out of the cylinder. When the cylinder is drained a quick high vacuum is applied to withdraw the surplus oil in the block and leave in the wood the amount of oil specified, which, for interior work, will average eight pounds per cubic foot of wood; for outside paving purposes from fourteen to sixteen pounds of oil per cubic foot is left in the wood. The method described is known as the Lowry process. There are other methods, but all have the same end in view; *i.e.*, to secure a uniform penetration of the preservative oil.

The method of laying the wood block floor is somewhat similar to street paving work, the best results being obtained when a concrete base is used as a foundation, which may be as light as three inches. The thickness of the concrete base, however, will depend upon the nature of sub-soil and the floor loading. In situations where concrete is impracticable a well supported sub-floor of creosoted plank is used. In one large shop the blocks were laid upon a bed of cinders eighteen inches deep, placed in four-inch layers, and well tamped with hand pounders of varying weights, a light sand cushion being placed on top of the cinder bed, upon which the blocks were laid.

The concrete surface should be finished smoothly and in true contour to the finished floor. Upon the concrete surface is spread dry a mixture of one cement to four sand, averaging one-half inch in depth, and struck smooth and true to the finished surface, sufficient water being sprinkled over the floor surface after the blocks are laid to set the mixture (in some locations a cushion of sand may be used in place of the cement and sand mixture). The wood blocks are laid upon the cushion with the *grain vertical*.

In situations where the floor will be always dry, the block should be laid tight-jointed, but where the floor will be wet or alternately wet and dry, they should be laid with open joints of about one-sixteenth inch between the sides, and three-sixteenths inch between the ends of blocks, with expansion joints against all walls, machine foundations, etc. The joint spaces are two-

thirds filled with an asphaltic or tar filler, which forms an elastic cement around each block, thereby making the floor absolutely water-tight, and, at the same time, will allow individual blocks to expand and contract without injury to the surface. The top of the joint spaces above the filler may be filled with clean sand if necessary. A special block is manufactured for wet locations, having ribs or projections down one side and one end; the ribs may be made in any width and thickness, which, tapering to an edge, allow of equal spacing when laying, and will compress under expansion of the block.

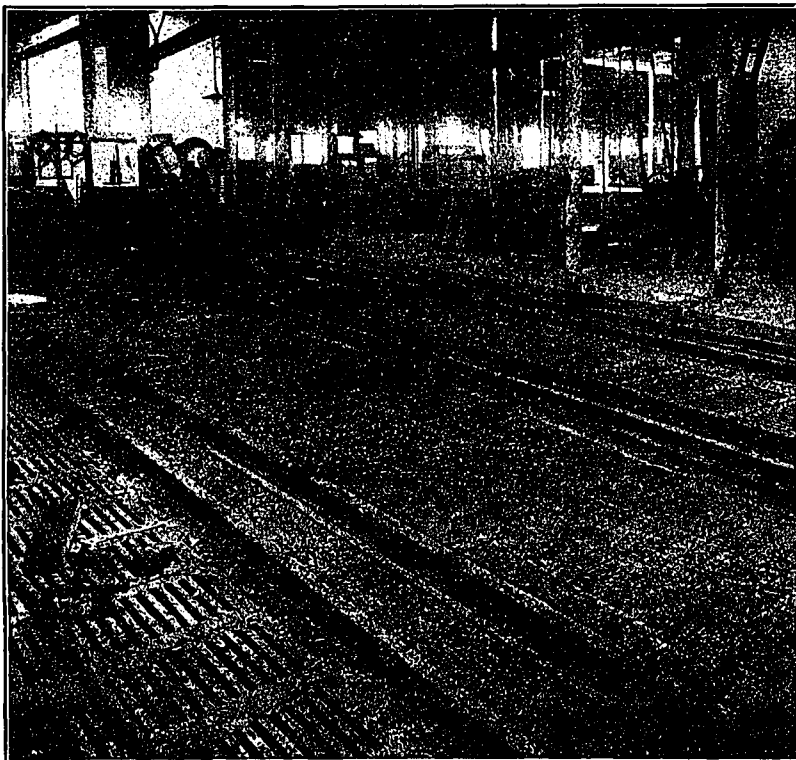
Among the essential qualities of creosoted wood block floors might be mentioned, durability, low maintenance cost, smoothness, adaptability and comfort.

Its chief advantage is durability under service, by laying the block with the grain vertical;

there is no perceptible wear after years of service, as the wood fibres compress somewhat under traffic, and form a matted, resilient surface, which does not wear off. There is no such thing as wear or splintering, as there is on a plank floor; neither is there any scaling, chipping or fracturing as on a hard, non-resilient surface. The impregnation of creosote oil will prevent the blocks from decay.

The record made with creosoted wood blocks used for street pave-

ments will apply to floors also. To cite one street in Minneapolis, where thirteen thousand five hundred square yards were laid in 1902, under heavy traffic, up to 1915 the total repairs amounted to 0.1 cent per square yard, or less than fourteen dollars for thirteen years' service. Creosoted wood block floors can readily be taken up and re-laid for repairs to pipes, etc., under the floor, or for the installation or renewal of machinery, without injury to the block. On account of the manner in which the block is laid and its uniform surface, trucking is accomplished with ease. There are no ruts or depressions to break trucks; the loads are not thrown off from jars; but a truck can be loaded and handled to its capacity with no



WOOD BLOCK FLOOR, GURNEY FOUNDRY, TORONTO.