

Railway Mechanical Methods and Devices.

Shop Kinks Used on the Canadian Northern Railway.

The accompanying illustrations show several shops kinks used at different points on the Canadian Northern Ry., which have been compiled by H. Ashton, Chief Inspector of New Equipment.

A machine shop crane for serving 90 in. driving wheel lathes in locomotive house machine shops, is shown in fig. 1. It is

feature of difference between it and the usual type of oil heater, lies in the fact that it is so made up that it is practically integral from the oil and air connections to the heater tip, precluding any difficulty from the parts being accidentally parted while in use. The body of the heater comprises a short length of $\frac{3}{8}$ in. pipe inside a slightly longer length of $1\frac{1}{4}$ in. pipe, both tapering to a fine nozzle at the same point. The inner pipe has a $\frac{3}{8}$ in. oil connection, and the outer one, a $\frac{5}{8}$ in. air connection,

in fig. 4. It comprises a copper cylinder, 7 ins. diameter and $7\frac{1}{2}$ ins. long, with a filler hole in top, and a $\frac{3}{8}$ in. discharge pipe connection running down inside the cylinder to near the bottom, connecting at the top with a nozzle, which partakes of the nature of an injector, the compressed air passing up through a pipe handle, spraying the paint through the nozzle on the work. It connects to the regular 90 lb. shop air line.

A novel design for a combination gauge for checking the contour of bearing wedges

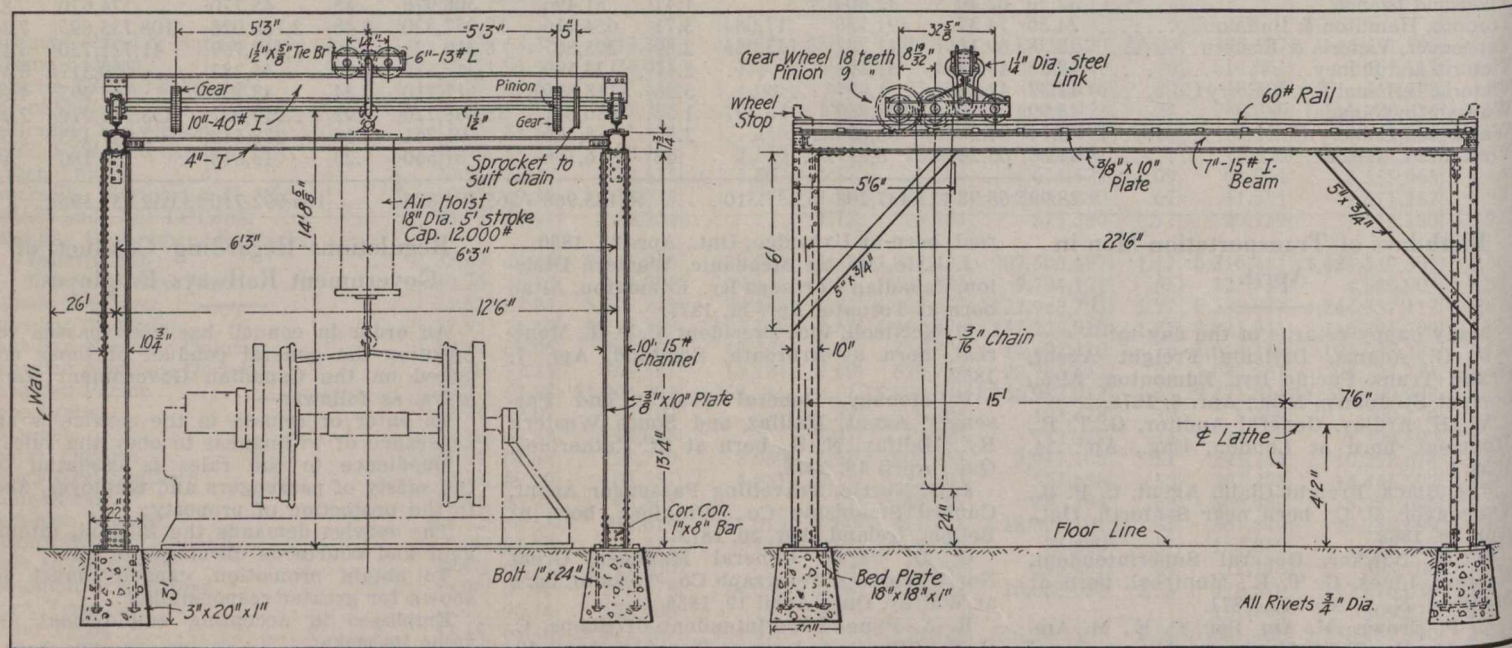


Fig. 1.—C.N.R. Locomotive House Machine Shop Crane for Wheel Lathe.

built up of structural steel, the columns being composed of two 10 in., 15 lb. channels, covered with two $\frac{3}{8}$ by 10 in. plates, carried on concrete piers. It is tied together laterally by a 4 in. I beam at each end, and longitudinally, by two 7 in., 15 lb. I beams, on each side, covered top and bottom with a $\frac{3}{8}$ by 10 in. plate, these beams each carrying a 60 lb. rail for the crane runway. Each corner is braced longitudinally by a 5 by $\frac{3}{4}$ in. steel brace. The crane span is 13 ft., and the run $22\frac{1}{2}$ ft. The crane is a 10 in. 40 lb. I beam, carried on four wheels, and is moved the length of the runway by

with its own control valve, close to the body of the heater. A sheet iron hood is attached to the tip end, to concentrate the blast. The joint between the pipe and the casing of the boiler is tightly packed with asbestos.

and brasses, is shown in fig. 5. All the inspectors on the C.N.R. are supplied with these, and have found them most useful. The gauge to the left is for the wedges, and that to the right for the brasses, the lower face for determining the wedge fit, and the upper face, the journal fit.

Mounting Air Hose.—A large number of different machines are in use for mounting air hose, several of which have been described from time to time in Canadian Railway and Marine World. A slightly different scheme is used in the C.N.R. shops, shown in fig. 6, and which, like most hose

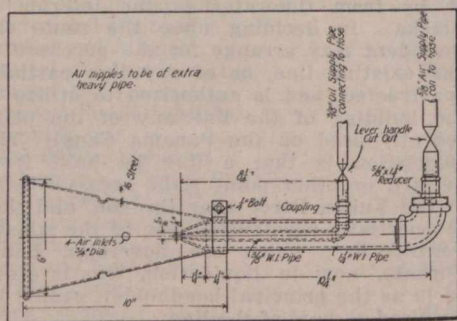


Fig. 2.—C.N.R. Oil Heater for Firebox Patches.

a hand chain. A cross carriage on the crane girder carries a 6 ton air hoist. The span is sufficient to include the narrow gauge track from the locomotive house. It is also used for handling running gear, locomotive trucks and tender trucks. The vertical lift is 5 ft.

An oil heater for small work, such as fitting mudring corners and heating firebox patches, is shown in fig. 2. The principal

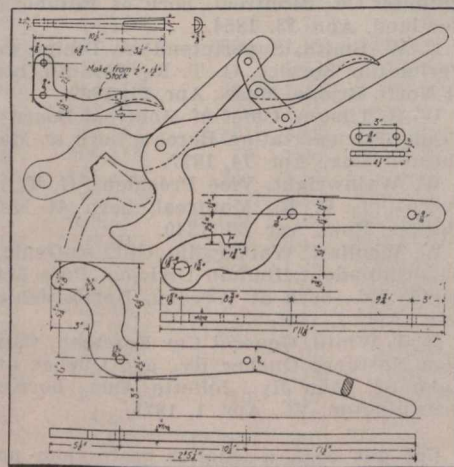


Fig. 3.—C.N.R. Wheel Tongs.

The wheel tongs, shown in fig. 3, are in somewhat general use, several wheel and foundry companies using them in addition to the C.N.R. They are plain tongs, with the added feature of the locking device on the handle, which consists of two links, one of which is a bell crank, pinned to the handle, the pressing of the bell crank to the other handle causing the links to slip past centre, locking the tongs closed.

A paint sprayer of useful design is shown

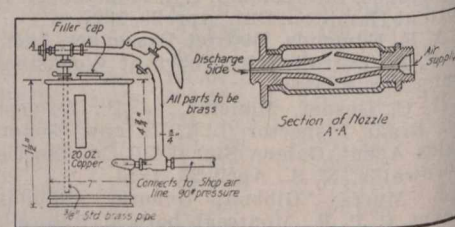


Fig. 4.—C.N.R. Car Paint Sprayer.

machines, is an improvised device. This model was finally decided on after the different types had been carefully considered. It has the advantage of requiring but small space, and needs but little material that cannot be found around any railway shop. The device consists of a four cylinder arrangement, two vertical and two horizontal, the upper vertical one for clamping the hose, the lower vertical one for squeezing the end clamp rings, and the horizontal cylinders for forcing in the end connecting pieces. On the supporting bench there are two formed blocks attached, in which the