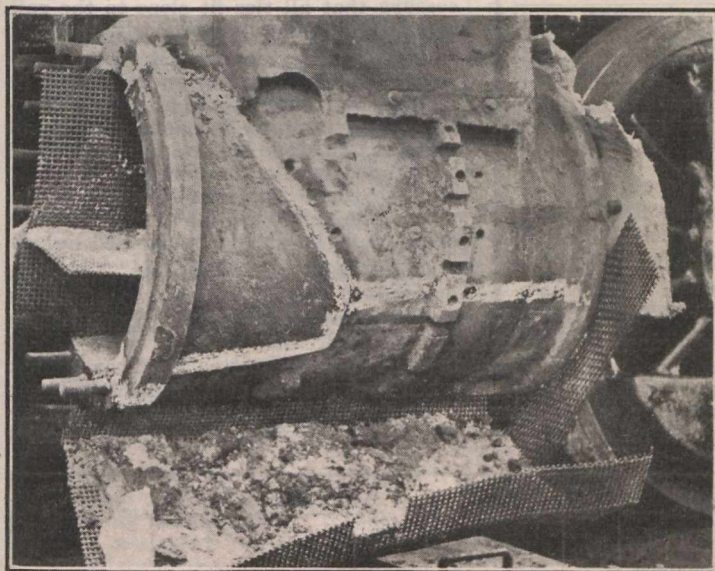


Railway Mechanical Methods and Devices.

Welding Broken Cylinder at Canadian National Railways Winnipeg Shops.

An interesting instance of the usefulness of the oxy-acetylene process in the locomotive shop, has been supplied by L. Wedge, General Foreman, Locomotive Shop, Canadian National Rys., Winnipeg. One of the locomotives had developed a crack, extending from about the center of the cylinder, in a nearly straight line, towards the rear, and bifurcating towards the front, as shown along the patched lines in the accompanying illustration. This crack had been welded several times, but apparently, from the double nature of the crack, the weld did not prove a success. In consequence, the V-shaped piece shown was entirely removed, and a pattern made of the same shape, from which a casting was made and fitted into the cylinder, the whole being welded by oxy-acetylene.



Cylinder Patched by Oxy-Acetylene Process.

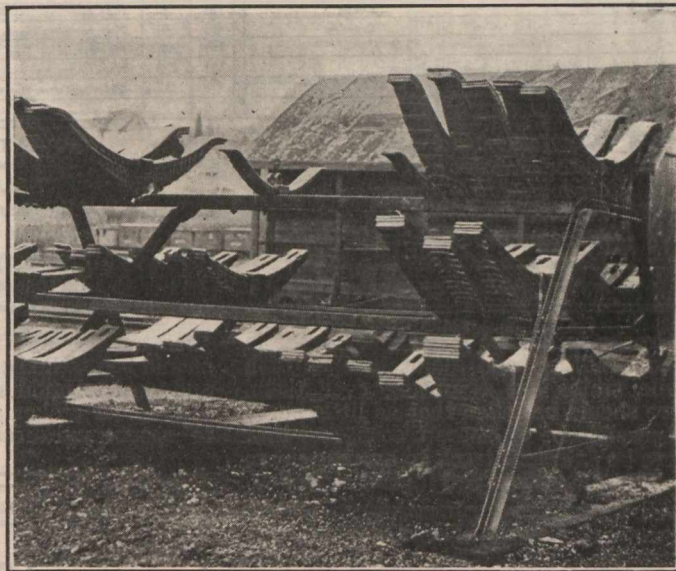
The mating edges of the new piece, and the single crack in the other end of the cylinder, were grooved in the approved manner. A charcoal fire was built under the cylinder, and the welding commenced on the rear end inside, continuing along towards the front, the welding edges meanwhile being maintained at a cherry red heat by the charcoal fire. On the completion of the inside welding, a charcoal fire was built inside on the wire netting framework shown, and the outside edges welded. The fire on the outside was rebuilt, and both fires maintained for about 12 hours, when the whole mass was allowed to cool off slowly by allowing the fire to extinguish, and the cylinder to cool down in the remaining ashes. After cooling for about 24 hours, the boring bar was applied, and the inside trued out.

National Tie and Timber Co. Ltd. has been incorporated under the Ontario Companies Act, with \$20,000 authorized capital, and office at Sudbury, Ont., to carry on the business of lumbermen. G. J. Valin, F. Woods and A. J. Manley, Sudbury, Ont., are provisional directors.

Spring Storage Rack at C.P.R. Shops, Nelson, B.C.

A simple steel rack of novel design is used at the C.P.R. shops, Nelson, B.C., for storing locomotive and car springs, a wide assortment of which it is necessary to always have on hand at such divisional points. The construction and use are exemplified in the accompanying illustration.

The end frames are A-shaped, 4½ ft. high, of 2 in. angles, resting on ties buried in the ground. At intermediate points, there are 2 cross bars of the same section. Between these end frames, are 5 shelves, 12 ft. long, made up of 2 in. angles, the legs of which are inwards and upwards, supporting between them a wooden plank, 6 in. wide. These shelves are braced at the ends and mid-way in the manner shown. The lower and middle tiers have each two shelves, while the top, has one only.



Steel Rack for Storing Springs.

The springs, being symmetrical, balance at their bands on these narrow 6 in. platforms. This is one of the special features of the rack, as it is possible to place a truck in front of the rack, and by a slight effort, upset a spring into it, for conveyance to the locomotive house or car rip tracks.

This rack was built by F. D. Warner, Locomotive Foreman, to whom we are indebted for the foregoing particulars.

A Railway Coal Freight Case—Judgment was given in the Ontario Court of Appeal May, 13, in Niblock vs. G.T.R. The original action was for \$24,053.51 for coal sold, but the New York Central Rd. intervened with a claim for freight. On Mar. 20, Justice Falconbridge directed the payment into court of \$19,283.17 with interest, less \$60 cost of an interpleader action, the plaintiff to notify the New York Central Rd. before applying for payment out. After hearing arguments, the court on May 13, allowed the appeal and gave judgment for the plaintiff, but gave leave to the G.T.R. to apply for a new trial in respect of the claim for freight.

Reclaiming High Speed Steel.

All the tool steel over the entire Atchison, Topeka and Santa Fe Railroad is reclaimed, all such steel being returned to the Topeka shop for general inspection, the portion considered serviceable being held in reserve to be made up into small tools.

The practice with regard to short lengths of high speed steel is to make tips for lathe and planer tools, although a certain part can be used with patented tool holders. The tools on which the high speed steel tips are applied, are of ordinary tire steel. The tips are faced with Norway iron, and welded to the recessed tool ends by the oxy-acetylene process. These tools are said to have proved very satisfactory in service, and made possible the continuous operation of many of the tools which would have had to close down for want of the tool steel which was difficult to secure under

war conditions.

These tipped tools are made not only in the plain forms, but also for form cutters, such as those used in wheel lathes, formed to give the finished contour of the wheel.

G.T.R. Bridge Assessment.—The G.T.R. international bridge across the Niagara River at Bridgeburg, Ont., has heretofore been assessed in that municipality at \$300,000. The assessor is reported to have increased the assessment for this year to \$1,250,000, and it is reported that notice of appeal has been served upon the town clerk, by the G.T.R. on behalf of the International Bridge Co.

Steel Rails for Russia.—A press report of May 7, stated that 3,000 tons of steel rails, which had been stored at Vancouver, B.C., for the past two years, were being loaded on a steamship for Vladivostok, Siberia, their original destination. This is part of the large orders of railway material placed in America by the Imperial Russian Government, and help up in transit at the time of the revolution pending an understanding.