

dry area next summer. In the event of this not being agreed to, it is proposed that the railways should pay one-half of the return transportation only, leaving one-quarter of the return freight to be paid by the provincial government and the remaining one-quarter by the Dominion Government. This latter arrangement will mean that the owner must ship the cattle and sheep out at his own expense, and if they are returned before Aug. 1, 1920, and the other conditions are fulfilled, they will be returned to him without charge.

The above arrangements only apply to shipments over the C.P.R., the C.N.R. and the G.T.P.R. As the railways in

Northern Alberta, the Edmonton, Dunvegan and British Columbia and the Alberta and Great Waterways are unwilling to make any freight concessions, the provincial and Dominion Governments will each pay one-half of the cost of transportation on hay, hay making machinery and live stock moved over these two lines, under the same conditions.

The order in council authorizing the Dominion Government's share in the above arrangement has been passed, and it is hoped that it will be possible to put the scheme into operation at an early date, so that the serious feed situation in the prairie provinces may be somewhat relieved.

The Conservation of Track Material

The following committee report was presented at the Roadmasters' and Maintenance of Way Association of America's last annual meeting:

All members of the committee realize the importance of the subject to be considered and the saving which can be effected by close supervision of track material, both in and out of track.

Rails—One of the largest expenditures which the railway companies make is for new steel rails. A large number of rails are permanently damaged in track on account of the maintenance forces being unable to properly take care of the rails, resulting in battered and chipped ends. On a number of roads these rails are taken out of track, a sufficient amount sawed off each end, rail re-drilled and used again on branch lines. The average cost per ton for this work, including labor, sawing, drilling, oil and saw blades, is approximately 40c a ton. The committee recommends this as good practice.

Angle Bars—Cracked angle bars can be welded by the acetylene gas process and made use of again. The cost of this work is from \$1.50 to \$2.00 a pair, and we believe that it would be better economy to scrap the defective angle bars rather than weld them. Worn and bent joints can be straightened and built up for 20c a joint and made use of again. The bar is heated in an oil furnace, placed in die and swedged under a drop hammer. In this manner bar is swelled to its original section by means of pieces of steel $1\frac{1}{2} \times \frac{1}{8}$ in. thick placed in the center of bar.

Track Bolts—A large number of good usable track bolts can be recovered wherever rail is being renewed, if bolts are oiled before renewals are made, at a cost as follows: per mile for oiling: 4 hours labor, 30c an hour, \$1.20; 1 gal. kerosene oil at 10c a gal. and 1 gal. black oil at 13c a gal., cost of labor recovering bolts $4\frac{1}{2}$ c a bolt. Bolts which are recovered to be used in sidings and industrial tracks have an approximate life of 8 years.

Track Spikes—Old spikes can be straightened and used again in sidings and industrial tracks at a cost of not to exceed 70c a 200 lb. keg. There are a number of different ways of straightening old spikes, but the most approved way and the one recommended by your committee is with a press, where from 2 to 4 spikes may be straightened at a time. This is a decided advantage over other methods, on account of bringing the head back to its original position, where with

the hand method or trip hammer it is impossible to straighten the heads up.

Worn Switch Points can be made use of in several different ways: First, by cutting off a sufficient amount of worn point and replanning same. The cost of labor for this method is not less than \$10 a point. Second, the worn point can be built up by the acetylene gas process at an approximate cost of \$2.25 a point, but a point so built up should only be used in sidings.

Frogs—Worn and broken frogs can be repaired at a large saving over the cost of new frogs. To repair these frogs in the shops cost considerably more than by the acetylene gas process. To repair 90 lb. spring rail frog in shop, bolts, rivets, new wing rail, including labor and price of rail costs, \$70. A new frog of this kind costs \$160. A no. 9, 100 lb. spring rail frog, new short point, bolts and rivets, including labor costs, \$45 to repair. Cost of new frog, \$152. Rigid frogs can best be repaired with the gas process at approximately the following cost: New point and both wing rails built up and bolted, including the gas and labor charge, from \$12 to \$14 a frog, and by shop process \$25, saving by gas process \$13 a frog, with the additional advantage that the frogs can be built up under traffic, if necessary, at a slight additional cost.

Tie Plates—No tie plates should be discarded as scrap, unless they are entirely unfit for further use, but should be made use of on storage tracks and industrial sidings. Plates of heavier section can be re-punched and used on lighter section of rail to prevent rails cutting into ties. This conserves ties.

Track Ties—To conserve ties in track they should be inspected in accordance with the association's recommended practice. Ties removed from track should be carefully sorted and those fit for sidings or temporary track piled separately. Ties fit for fuel should either be disposed of to company employees, or to outside parties, to be used for that purpose, or they can be unloaded and used for engine fuel. Good use of old track and switch ties can be made for cribbing and docking. No old ties should be burned except those which are absolutely worthless for any other purpose.

Fences—To conserve lumber supply, the committee recommends a more extensive use of wire fencing and concrete posts.

Crossing Plank—To further conserve the supply of crossing plank which is a very large item, the committee recom-

mends the following for consideration: Concrete slabs for highway crossings, macadam crossings and the paving block crossings. Either of these methods for crossings would successfully take the place of our plank crossings, if properly installed, requiring less attention and the cost would not exceed plank crossings, and in some cases would cost less.

Track Tools—In order to conserve tools, careful inspection should be made at frequent intervals, and defective tools should be sent to shop for repairs.

Coal—We are told that there will be a great shortage of coal this winter; therefore we should conserve it at every point. Coal is used by the track forces in the tool houses, labor camps, blacksmith shops, derrick cars, ditching machines and riding cars. If only a few shovelfuls are saved each day it will help to cut down the shortage. Coal can be saved in a number of different ways: Where it is used for camps, instead of unloading on the ground, a platform should be provided for it to be unloaded on and only a small amount unloaded at a time, as coal deteriorates when left out in the air any length of time and camp help will only use the lump coal. When spilled along the track it should be loaded up promptly or disposed of to outside parties and not thrown over the bank out of sight. In camps and tool-houses, fires should only be kept burning when necessary.

Other Supplies, such as wicks, chimneys, oil cups, lanterns, torpedoes and fuses should be furnished gangs in such quantities that all will be used, and not left lying around the camps and tool houses until useless.

Oils and Gasoline—Now that on a number of roads tie-tamping machines and motor cars are used, there is a great saving to be made in oils and gasoline if operators of such machines are carefully instructed in regard to their duties. We should all remember to look after the little things; the large ones will be taken care of also.

Scrap—Now that material is hard to get, a close watch should be kept on the scrap piles. Your committee recommends that all scrap be picked up by section forces weekly and placed for loading at designated points and that all scrap be loaded up on the divisions once a month, at this time the roadmaster or some competent foreman should accompany the train and all material that can be made use of again, should be sorted out and held for future use. Only material that is scrap should be disposed of. Other material scattered along the track, such as marker lamps, grease plugs, air brake hose, etc., should be shipped direct to the motive power department to be used over again.

Attempt to Defraud the C.P.R.—John Casserley, a laborer, was sentenced to three months imprisonment at Calgary, Alta., Aug. 12, for attempting to defraud the C.P.R. He checked a trunk from Edmonton to Pincher Creek, and claimed that it had been opened in transit, and that \$500, in addition to wearing apparel, had been taken. An action was brought to recover \$565, but the company, after investigation, secured an admission that there had not been any loss. The company then prosecuted Casserley for attempting to obtain money by false pretences.