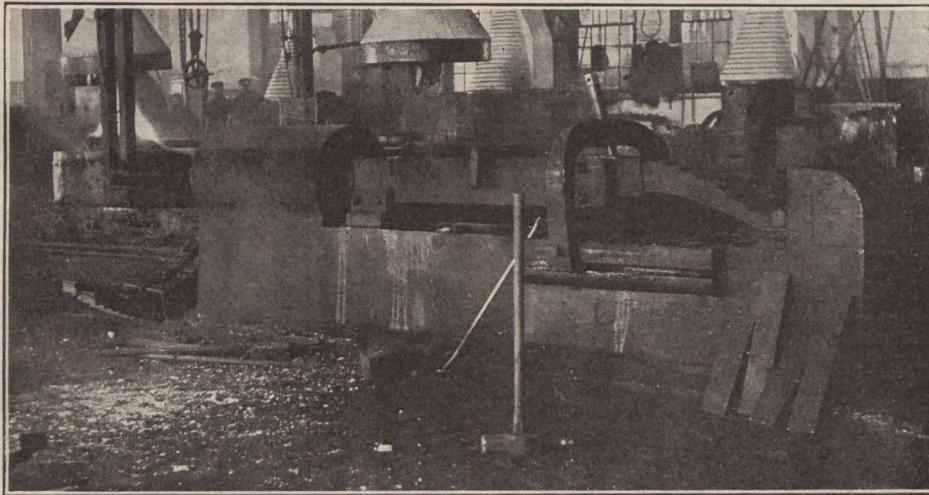


# Railway Mechanical Methods and Devices.

## Stripping Spring Buckles at Grand Trunk Railway Shops.

The accompanying illustration shows a spring buckle stripping press in use in the G.T.R. shops, Stratford, Ont., which has a capacity of about 6 springs an hour, and is, in consequence, a big im-



Machine for Stripping Buckles from Locomotive Leaf Springs.

provement on many of the generally accepted methods of stripping buckles. It consists of a heavy base and cylinder cast integral, the cylinder operating with an air pressure. At the end opposite to the cylinder there is a heavy vertical flange from the base, against which the springs rest. A crosshead, guided on ways along the upper face of the base, carries two heavy bars, which may be adjusted laterally for different widths of springs, these bars spanning the spring. They are kept close against the side of the spring, during operation, by a clamp. Spanning the base beyond these arms is a heavy forged bridge, with a heavy square threaded screw centrally in the cross arm, set at a slight angle away from the cylinder. This cross arm moves in ways along the side of the base, for adjustment for various sizes of springs, preventing the spring from vertical buckling.

The spring to be stripped is placed on the table of the base, the side arms placed against the buckle and clamped together, and the screw in the top of the cross arm tightened down. The air pressure in the cylinder then forces the band off the spring in one movement. Most of the time is consumed in setting up the spring for operation, but, even with that, the high rate of production mentioned above is easily maintained.

## Locomotive Washing at Lambton Yard, Canadian Pacific Railway.

Outside of the locomotive house at Lambton, near Toronto, about 50 ft. from the approach to the turntable, a washing floor is constructed, as shown in the accompanying plan. The ordinary practice of using a mixture of air, water and oil is followed, from a tank and hydrant, situated about the centre of the washing floor, between the two parallel tracks which run through the floor. Water and air pressure are supplied at about 60 lb. pressure, so that the nozzle throws a fine spray, which cuts off the

dirt and grease and leaves a coating of oil all over the sprayed portion.

The track bed is drained from the centre, between the rails to the outside, and a parallel trough about 6 in. deep carries the surplus water and oil to a point about 20 ft. away, where a concrete trap tank is located. This tank is 2½ ft. wide by 4 ft. deep, and is drained from the bot-

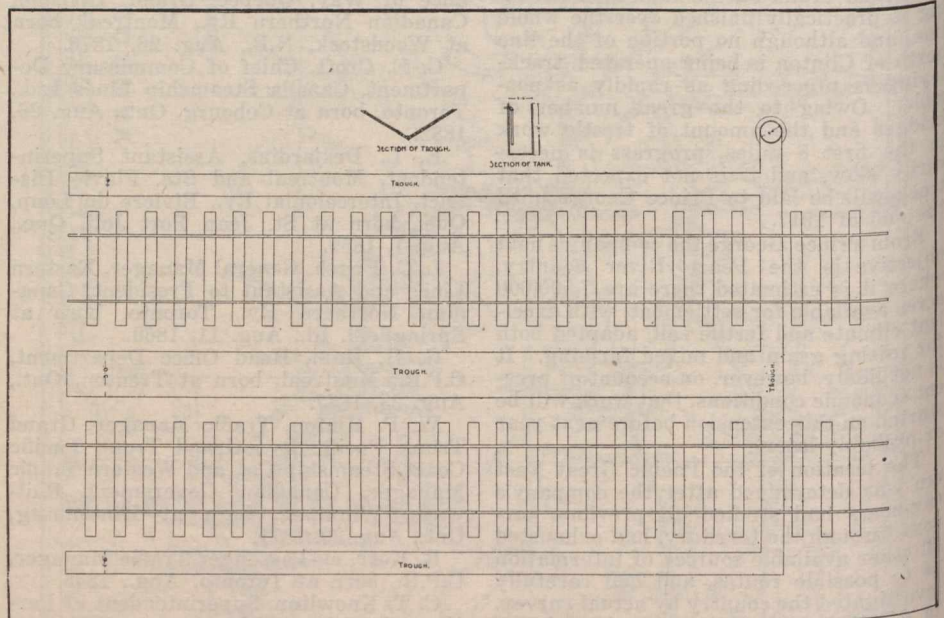
## Savings Effected by Welding in Railway Shops.

The following information has been received in response to requests from Canadian Railway and Marine World:—

G.T.R. Shops, Point St. Charles, Montreal.—A. A. Maver, Master Mechanic, writes: When we first started to use Thermit welding, about the time when it was first introduced, we were told that the parts to be welded did not require to be heated. We were also restricted to the amount of Thermit to be used; but, after having had some experience, we find that to obtain the best results plenty of Thermit had to be used, in order to give a good flow through the mould. We also found pre-heating to be necessary for successful Thermit welding, as the hotter the parts to be welded the more successful will the weld be.

For relining crucibles, magnesia tar should always be used. In some cases, when we did not have magnesia tar on hand, we have lined our crucibles with old brass crucibles, fire clay, and sand, but found the sand would mix with the metal, making a silicon, thus causing the steel to become very hard and brittle, and liable to break. In Thermit welding the most important things to be seen to are to have the crucible properly lined, to use plenty of Thermit, and to have the parts to be welded as hot as possible.

Oxy-acetylene welding has been used very extensively in the Point St. Charles shops for a large variety of work during the past seven years, motion plates, spectacle plates, etc., and locomotive frames being built up where worn away by stays or brake hangers. Flat spots on tires are successfully welded in their place, mis-drilled holes filled up, faulty castings re-



Track Troughs for Locomotive Washing.

reservoir to the washing machine, allowing the oil to run right into the machine over and over again.

It is estimated that this process reclaims 66% of the oil used for washing down, and keeps a yard much cleaner than when the oil and water are allowed to soak into the ground. We are indebted for the above information to E. J. Murphy, Locomotive Foreman, C.P.R., Lambton, Ont.

claimed, and shop machinery repaired. We have also repaired cast iron parts of machines and welded lugs on steam shovel cylinders, etc. A large percentage of the above material would have been scrapped but for our ability to reclaim it by this welding method.

All cast iron articles to be welded should have the cracks or broken parts chamfered to a 45° V, leaving just about ¼ in. fitting edge, according to the size