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Terminal Handling of Locomotives.

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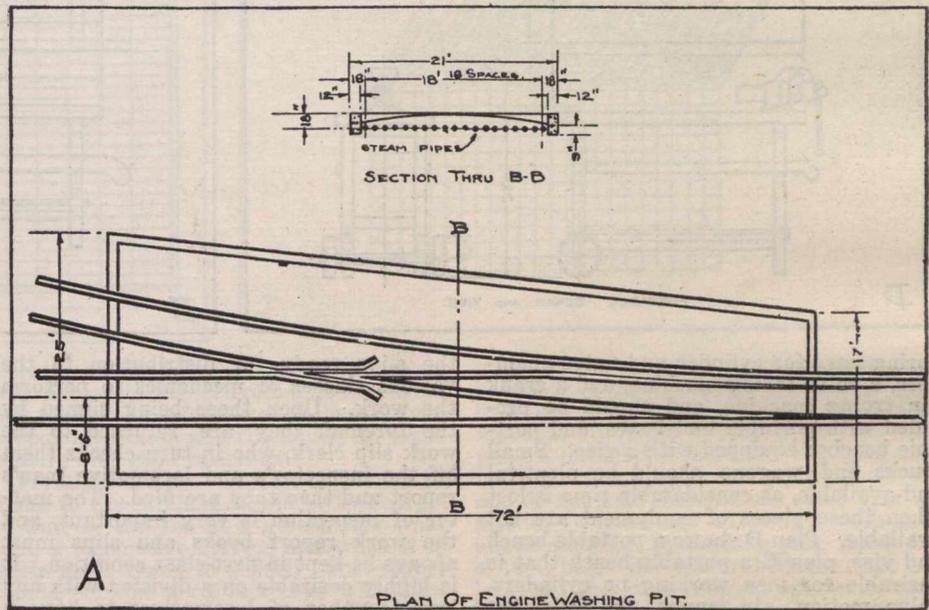
Efficiency and conservation are more expedient at this time than ever before. We are forcefully reminded at this time of the efficiency of the naval and military service, the conservation of man power, food, fuel and electric power. We are face to face with the transportation problem, the second of the country's great industries. The country needs locomotives as it does ammunition and big guns. We are engaged in a business of transporting necessities from where they are produced to where they are needed and the connection between these two places is a railway, its motive power, vehicles for conveyance, tracks, etc.

The locomotive must be kept as near 100% efficiency as possible and be detained at the terminal as little as necessary. With this view in end we offer a few suggestions: First, when the locomotive arrives at the terminal, the first operation is the cleaning of the fire, or removing it entirely from the locomotive. To conserve man power, one of the best is the water type of pit, open on one side containing sufficient water space, to extinguish the hot cinders and to be served by a gantry crane, and with this kind of pit one man can readily serve 125 locomotives per 24 hours, that is, the handling of the cinders. The labor for cleaning of the fires can be handled to the best advantage on a piecework basis.

Cleaning Locomotives—After the fire has been cleaned, the next operation is to thoroughly clean the machinery and running gear of the tender, so that it can be carefully inspected. The time of wiping locomotives, especially beneath the running board and the tender, is past history.

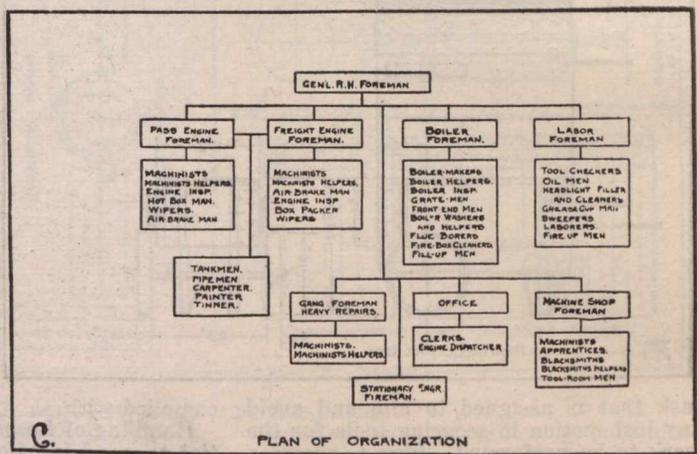
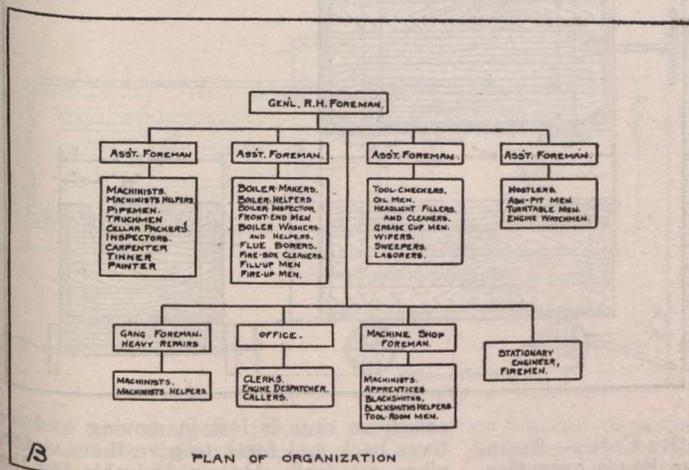
est to the lowest. Above the running board and the cistern can be successfully washed, but we recommend periodical wipings. We submit a ground plan A, showing a suitable design for a locomotive washing pit.

should be long enough to take in the entire locomotive and tender, and equipped with sufficient lighting facilities to enable the inspector to accomplish his work readily. It is more desirable to have an outside entrance, reached by a suitable



Organization—Now that we have the locomotive in the house, essential to good operation, there must be a well defined organization. Each individual terminal has its own characteristics, but basing an organization upon a terminal caring for

stairway. **Turntables**—Necessary to the handling of locomotives at a large locomotive house, is a first class turntable of ample length and sufficiently strong in design, so that it will not spring under the heavi-



By improved methods which are now on the open market, the largest types of locomotives can be thoroughly cleaned in from 7 to 10 minutes, by washing with a combination of fuel oil and water at about 90 degrees, aided by air pressure, which should be 100 lb. to derive the best result, and at the same time realize the greatest saving in labor, material and time. The success of it depends upon the enthusiasm of all the attacheses of the motive power department, from the high-

approximately 100 locomotives per 24 hours, we submit for your consideration plan B, for use where it is not desired to specialize between the different classes of power. This is covered by plan C. **An inspection pit** is desirable, immediately after the locomotive has left the washing pit, so that when it arrives on the pit in the locomotive house, the various gang foremen can promptly distribute to their workmen the reports of work required upon the locomotive. This pit

est load, and supported upon a suitable foundation. One very essential matter that is overlooked by designing engineers is the alignment of tracks across the table. Every mechanical man appreciates the layout of tracks to match up across the table so that handling locomotives in and out of the house or moving back and forth for valve setting, or switching out for back shop, or vice versa, when the tracks line up, it is a great assistance to the prompt handling of the power. When