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CONTENTS OF THIS ISSUE.

THE ELECTRIFICATION OF TRUNK LINES.

Some years ago the city street car lines and the suburban lines connecting became entirely electric roads. Recently the suburban lines have reached out until to-day they connect city to city—becoming, in fact, trunk lines, and it is not now unusual for the application for charters to ask for privileges for electric roads at least two hundred miles in length.

From a physical and mechanical standpoint the electric traction can meet all the demands and requirements of railroad service. Whether electricity will replace steam traction or not is a commercial problem, a question of cost of haulage and service.

There are certain sections of steam roads that will be converted into electric roads, not because of the monetary returns to be secured, but because of the smoke and noise attending the shunting and sorting of trains in city yards and the difficulty of keeping tunnels free of gas.

Once the electric power is being used in yards and tunnels the work of connecting up these units will commence, and the road that can offer a smokeless engine on their passenger trains will secure the traffic.

The question of cost has been carefully considered, and, although the number of installations from which accurate returns may be secured are not large, yet it is conceded that the first cost of an electric road, or the cost of electrificating a steam road would be much heavier than the cost of the steam equipment. Operating expenses will usually be less in the case of electric roads for the same service, but the demand is for quicker and more frequent passenger service. This means lighter trains at more frequent intervals. For this kind of traffic the electric locomotive appears well suited, and it is, perhaps, along this line we may expect the greatest development in the immediate future.

TYPES OF HIGHWAY BRIDGES.

In this number we commence a series of articles, entitled "Types of Highway Bridges." The author gives his idea, well illustrated by text and photo, of the type and kind of bridge suitable for particular locations.

Bridges, at one period in our country's development, were considered only as means of crossing streams. To-day, it is necessary not only to design a bridge strong enough for the traffic, but it must also appeal to one's sense of the suitable, and better if it appeals to one's idea of beauty.

Country places are to-day planned with much care. Country roads are being improved both for traffic and appearance, and the design of highway bridges must be in keeping with this improvement.

These articles show what one county engineer has done in this regard.