

TRANSPORTATION OF MATERIAL IN MODERN LARGE INDUSTRIAL PLANTS.

By H. W. Arnold, Supervisor of Power and Maintenance,
The Jeffrey Manufacturing Co.

During the last few years much has been written and spoken relative to efficiency in so far as the manufacturing end of the matter is concerned, but in very few instances has the transportation of material in and about manufacturing plants received the attention its importance deserves.

Necessarily, the transportation facilities of a plant in-

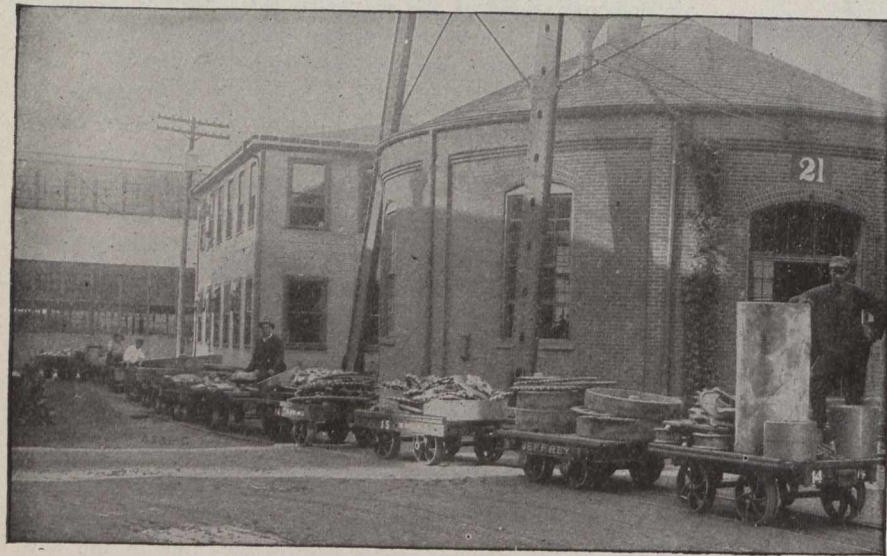
truck working on a 36-inch gauge industrial track. A careful study of existing conditions made plain the fact that a very material saving could be effected by establishing a more efficient transportation system.

After considering the problem from every angle, it was decided that the Jeffrey storage battery trucks and industrial cars offered the best and most efficient means of surface transportation. Accordingly, the industrial railway was extended to take in all departments and a systematic method of car dispatching established. The accompanying plan gives an idea of how thoroughly the different buildings are served by the industrial track.

As soon as this system was established, very rigid instructions were issued that absolutely no material was to be transported by other means than the storage battery trucks and industrial cars. It was immediately found possible to dispense with the services of a two-horse team, 28 two-wheeled warehouse trucks, 13 four-wheeled trucks, 8 wheelbarrows and 18 men whose whole time had been devoted to this purpose. This effected an annual saving of more than \$600 per month over the cost of the former system, taking into consideration the interest and depreciation on the investment, operating, maintenance, costs, etc. The monthly tonnage handled is close to 4,000 tons. Viewed from its present efficiency, it would seem almost an utter impossibility to go back to the previous or any other method of transporting material.

The Jeffrey storage battery truck is so simple in design and rugged in construction that it does not require the service of skilled operators, and the maintenance and operating costs are extremely low.

The industrial railway track shown in the illustrations



View of Part of Industrial Track System.

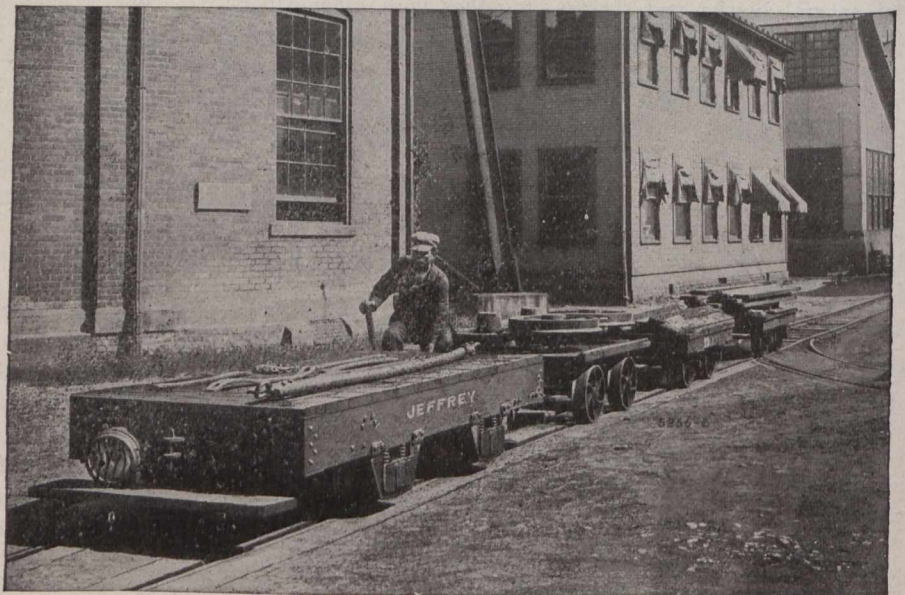
clude all the surface and overhead devices used in moving material from one point to another, but in this brief article it is proposed to consider only the surface movements of material.

In most instances large manufacturing plants present a rather difficult transportation problem. This is due to the unsymmetrical growth of plants of large proportions owing to the fact that in a great majority of cases the expansion was not anticipated or provided for in the original conception.

The Jeffrey Manufacturing Company, of Columbus, Ohio, is spread out over an area of approximately 26 acres and has 18 acres of floor space. This plant manufactures a large and varied line of electrical locomotives, electric storage battery trucks, coal mining, elevating and conveying machinery of all descriptions, structural steel work, etc., etc.

Throughout the shops of this company a high degree of efficiency has obtained for some time, but it is only several years ago that the matter of transportation of raw and finished material has received adequate consideration.

At that time our raw and finished material was being transported to and from cars in and about our various shops and departments by means of two-wheeled warehouse trucks, four-wheeled trucks and industrial cars. Also part of the territory was served by a Jeffrey storage battery



Operation of Industrial Track System.

gives a comprehensive idea of the system, and the wide range of usefulness for transporting material with the trucks. These trucks will pay for themselves in a very short period of time and especially where the industrial track system is already installed.