

**THE ELEMENTS OF RAILROADING:  
A SERIES OF SHORT  
ESSAYS REPRINTED FROM THE  
RAILROAD GAZETTE, PP. 1-152**

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**CHARLES PAINE**

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BY  
CHARLES PAINE.



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# ELEMENTS OF RAILROADING.

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## CHAPTER I.

### SURVEYING AND CONSTRUCTION.

THE SELECTION OF MEN—FINAL LOCATION—TACT—ACCURATE  
NOTES—SPECIFICATIONS—OVERSEEING—FOUNDATIONS—  
TRACKLAYING.

The organization of the engineering party for the survey of a new railroad is usually intended to be a temporary one, yet its results are often enduring in their effect upon the road and upon the persons engaged in the surveys; the men, who go as rodmen, chainmen, and axemen, naturally become attached to the road in one capacity or another, even if a long interval shall elapse between the first surveys and construction. When the ground is broken, they will surely be at hand, and persist in being identified with the fate of the enterprise.