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# Companion Volumes

SHOP TESTS ON ELECTRIC CAR EQUIPMENT. For Inspectors and Foremen.

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MISCELLANEOUS TESTS OF ELECTRIC CAR EQUIPMENT

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## MISCELLANEOUS TESTS

OF

## ELECTRIC CAR EQUIPMENT

by EUGENE C. PARHAM, M. E. And JOHN C. SHEDD, Ph.D.



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THE ELECTRIC SUPPLY COMPANY OF VICTORIA LIMITING

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### PREFACE

The present volume is the second of two, the first being entitled "Shop Tests on Electric Car Equipment." In the first volume many of the more common and some less common, but useful, equipment tests were so described as to be readily available to men of limited testing facilities and experience. The second volume continues this effort to present the testing subject in a simple and direct manner and embodies tests and explanations that could not well be included in the first book. It is believed that the two books cover a large part of the equipment-testing field in a way not previously attempted, both in the manner of presentation and in that, information hitherto scattered, has been brought within the scope of two comparatively small books. In giving numerous rules, examples, solutions, directions, notes and rehearsing questions, the authors have tried to treat the subject in a practical manner; the purpose being not only to reach nonmathematical readers, but to give mathematical readers of limited experience a line on how such tests are actually made with the facilities usually available, rather than how they might or should be made under ideal conditions. If these objects have been accomplished we feel that the mission of the book has been attained.

THE AUTHORS.

NEW YORK, April 1st, 1910.

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## CURRENT COLLECTORS

### OVERHEAD TROLLEY

1. Rough Pressure Test. The trolley wheel should safely engage the trolley wire at all heights. In tunnels and culverts, the wire may be low and the pressure of the wheel, excessive; at steam road crossings, the wire may be high and the pressure so weak that the wheel jumps—a dangerous condition. The rough pressure test is to try the pressure when the pole is almost vertical: the test is made as follows:—

2. Directions. To apply the rough test for trolley pole contact pressure, Pay out the rope and let the pole go to a vertical position; if it does so promptly, the pressure is sufficient for all conditions. If not, Increase the pressure with the adjusting nut and repeat the test.

3. Scale Pressure Test. This test is made with a spring scale on which can be read the pounds pull required to just lower the wheel from a stretch of wire of standard height.

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