

**AMERICAN METER
PRACTICE, PP. 1-195**

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LYMAN . REED

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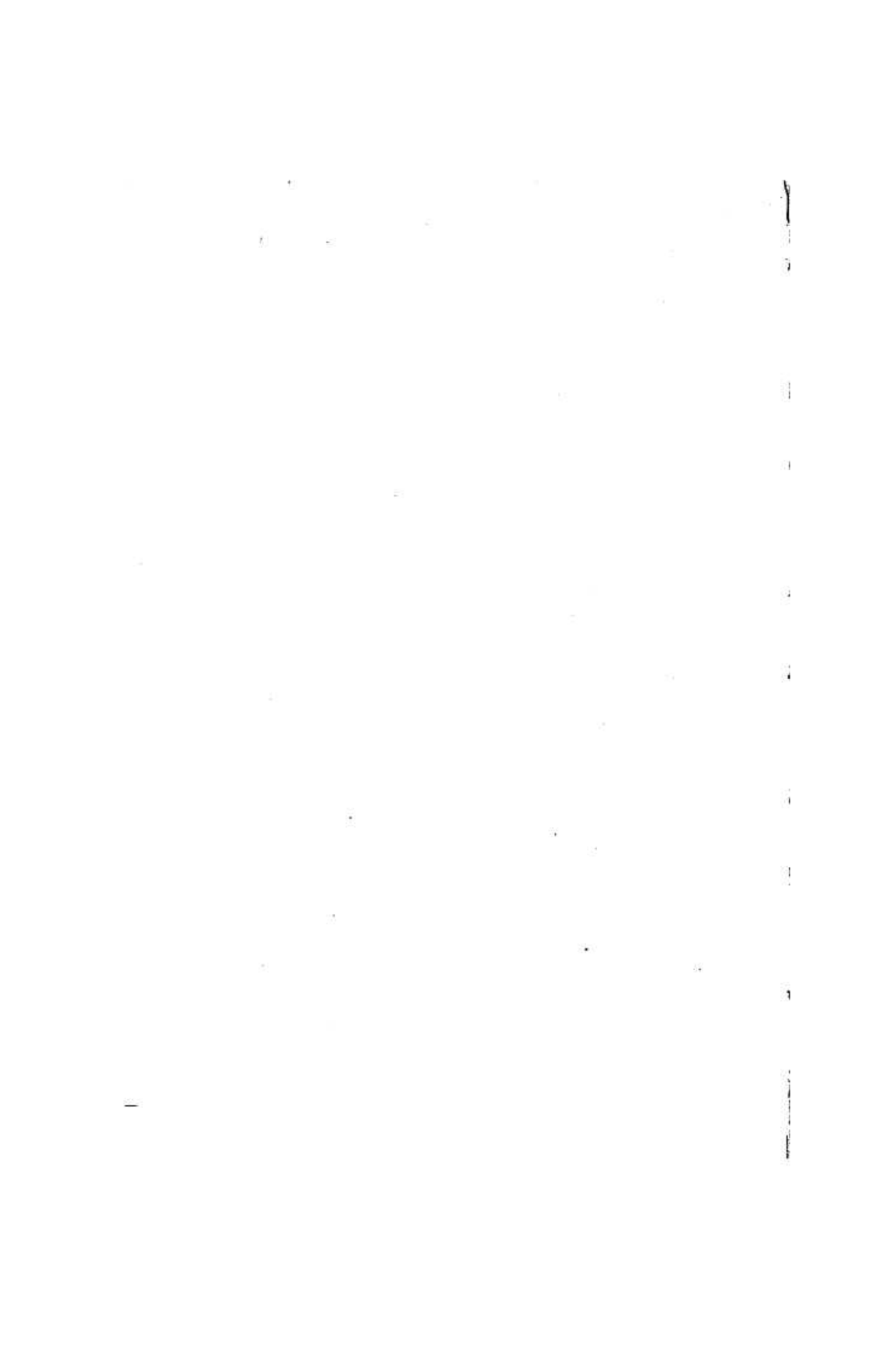
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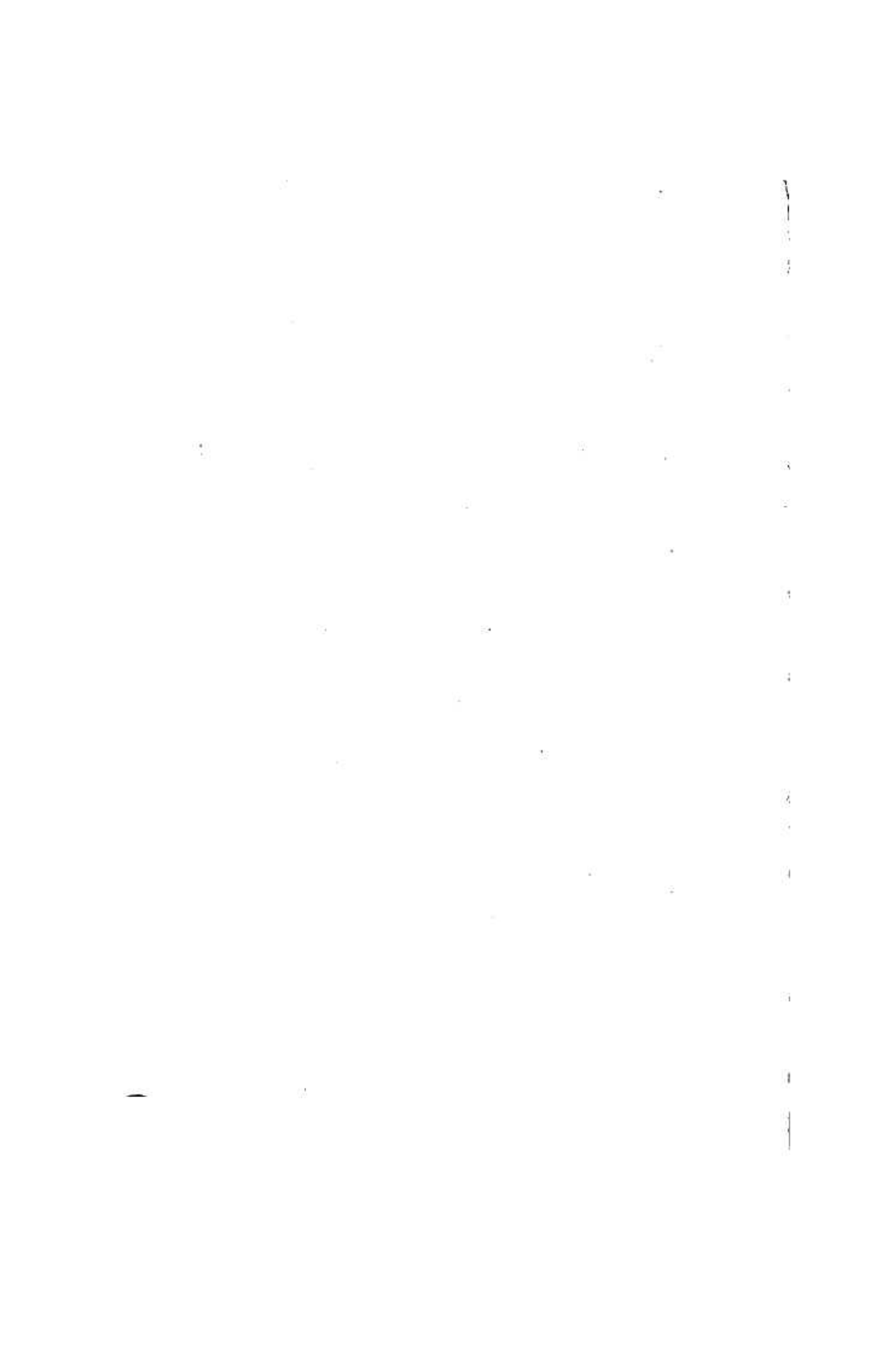
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CHAPTER I.

Measurement of Power in Direct Current Circuits.

Electrical measurements in the laboratory have been carried on for many years with great accuracy. The conditions are carefully studied when a determination of some quantity is sought, and the errors which effect the accuracy of the measurement eliminated. The study of the phenomena of electricity is rightly called an exact science, but the perfecting of an accurate commercial meter has been a slow and tedious process. At first the principles of correct design were not embodied in the meters put on the market, and no matter how perfect they were made mechanically a correct registration of the power consumed could not be obtained. But, as a rule, the mechanical features were more defective than the theoretical ones, and the combination of these defective elements has given the meter of commerce an unenviable reputation.

Such great inventors as Edison, Thomson, Shallenberger and Duncan have spent much time in trying to get together various elements in suitable combination to meet the requirements and accurately measure the current or the power in the many various applications and uses to which electricity is put. Edison gave us the chemical ampere hour meter, which has done yeoman service in the