

**THE PRINCIPLES AND
PRACTICE
OF ROENTGENOLOGICAL
TECHNIQUE**

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The Principles and Practice of Roentgenological Technique by I. Seth Hirsch

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I. SETH HIRSCH

**THE PRINCIPLES AND
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OF ROENTGENOLOGICAL
TECHNIQUE**

The Principles and Practice
of
Roentgenological Technique

By

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With Three Hundred and Forty-three Illustrations
and Twenty-two Tables

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Harvard College ✓

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TO MY MOTHER

PREFACE

"I said that in writing it took more time and trouble to get a thing short than long. It was harder not to paint a detail than to paint it, easier to put in all that one can see than to judge what may go without saying, omit it and range the irreducible minima in due order of precedence. Hence we all lean towards prolixity.

"The difficulty lies in the nice appreciation of relative importances and in the giving each detail neither more nor less than its due.

"Bearing in mind the shortness of life and the complexity of affairs, it stands to reason that we owe most to him who packs our trunks for us, so to speak, most intelligently, neither omitting what we are likely to want, nor including what we can dispense with, and who, at the same time, arranges things so that they will travel most safely and be got at most conveniently."

SAMUEL BUTLER.

What the author has earnestly striven to do is to pack the kit of the student of Roentgenology with those principles of technique which will serve him best on the difficult road to the goal—Roentgenological diagnosis and therapy.

In this aim he has been guided by an experience in teaching extending over many years. The fundamental facts and theories relating to electricity and its application to the construction of the apparatus in use in a Roentgenological laboratory have been outlined in as concise and practical a form as possible. A clear comprehension of these principles is necessary for the correct use of such instruments.

In his discussion of the technical methods, the author has sought to follow the ordinary sequence of activities involved in the making of a Roentgenological examination, omitting such theoretical considerations as have no direct practical bearing on the problem.

It is impossible for the author to render full acknowledgment to all the sources which have aided him in the preparation of this volume. The clearest thought and its most lucid expression have been gathered wherever available and presented in the form which practical experience has shown will most forcibly impress the student mind.

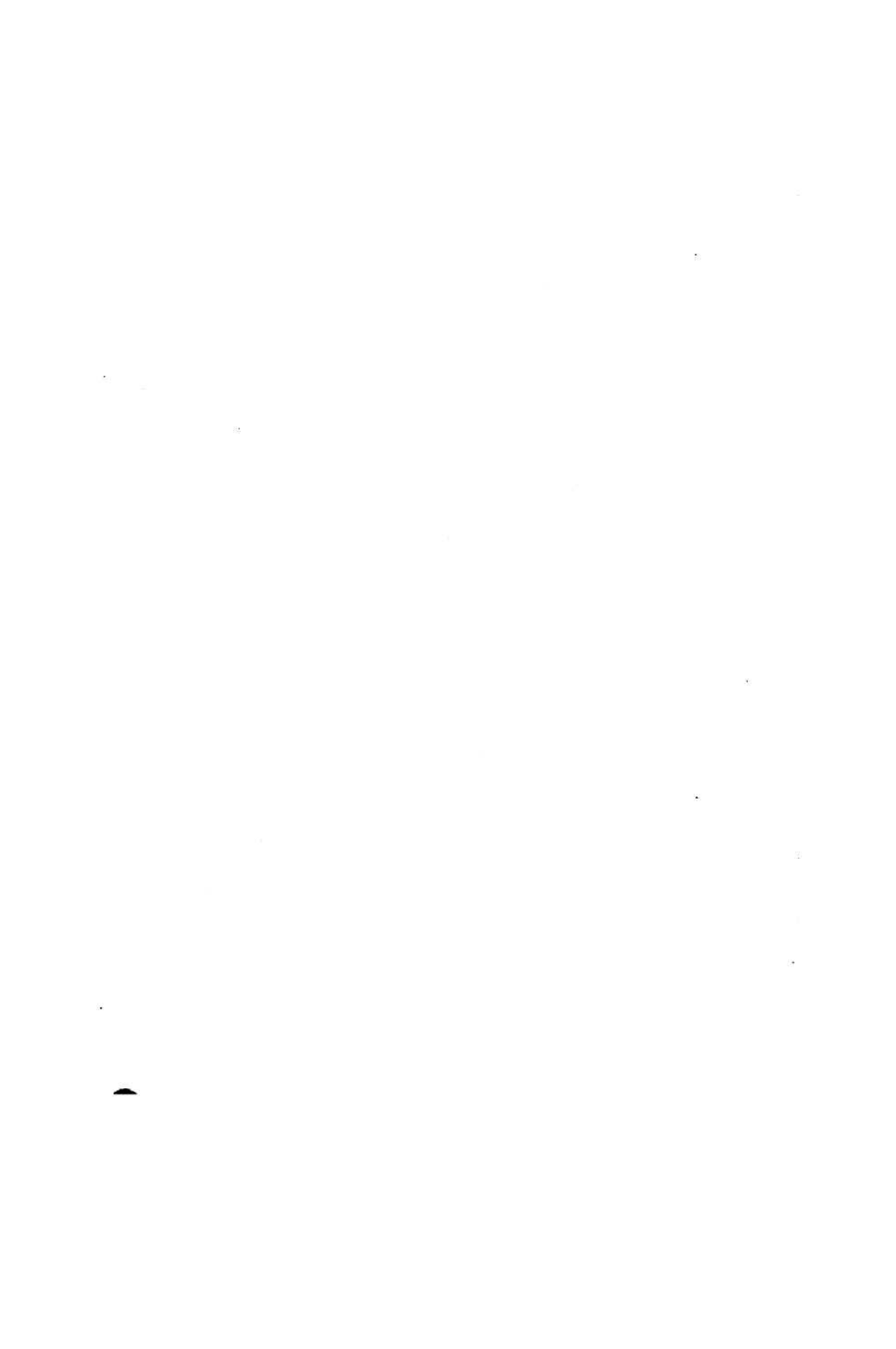
He has received much inspiration from many illuminating articles in the American Journal of Roentgenology and the Archives of Electro-Therapeutics and Radiology, by W. D. Coolidge, J. S. Shearer and others, and has derived much aid from standard textbooks in all languages.

To Mr. Morse Sable Hirsch the author extends his thanks for many invaluable suggestions and constructive criticisms.

Grateful acknowledgment is rendered to Dr. Frank Wheatley and W. W. Mowry for their capable and unselfish aid and their services in reading proof, to W. M. Morison for many photographs and to his associates at Bellevue Hospital for their cooperation.

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