

THE
SLIDE RULE

C. N. PICKWORTH

BY THE SAME AUTHOR

LOGARITHMS FOR BEGINNERS

For a full and intelligent appreciation of the Slide Rule and its various applications an elementary knowledge of logarithms is necessary. All that is required will be found in this little work, which gives a simple, detailed and practical explanation of logarithms and their uses, particular care having been taken to elucidate all difficult points by the aid of a number of worked examples.

"An extremely useful and much-needed little work, giving a complete explanation of the theory and use of logarithms, by a teacher of great clearness and good style."—*The Mining Journal*.

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FOR PUBLISHERS, SEE TITLE PAGE

THE
SLIDE RULE
A PRACTICAL MANUAL

BY

CHARLES N. PICKWORTH

WHITWORTH SCHOLAR

AUTHOR OF "LOGARITHMS FOR BEGINNERS"

"THE INDICATOR: ITS CONSTRUCTION AND APPLICATION"

"THE INDICATOR DIAGRAM: ITS ANALYSIS AND CALCULATION"

ETC.

TWENTY-THIRD EDITION

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SLIDE RULE

PREFACE TO THE TWENTY-FIRST EDITION

In the preface to the last edition of this very successful work, reference was made to an important development in slide rule design pertaining to the trigonometrical scales.

In a new electrical Slide Rule described in this edition, improved facilities for reading the values of trigonometrical functions are provided by a series of scales so arranged that, having given any one of the values θ , $\sin \theta$, $\cos \theta$, or $\tan \theta$, the others can be read off simultaneously on the face of the rule, and with one setting of the cursor. A further interesting feature is the provision of a scale by means of which the square root of the sum of two squares may be readily obtained.

The rule is of particular service in connection with calculations involving vector quantities; while the additional features, which include temperature resistance scales in both Centigrade and Fahrenheit degrees, further enhance the value of the instrument to the electrical engineer.

C. N. P.

SOUTHPORT, December, 1938.

PREFACE TO THE TWENTY-THIRD EDITION

THE present edition of this very successful work having been reset throughout, the opportunity has been taken to thoroughly revise the contents.

Under the conditions now prevailing, some of the instruments described are, for the time being, unobtainable; while some of the special slide rules included have become obsolete. But as the descriptive notes may be of service to those possessing the instruments, and are, in some degree, of general and historical interest, they have been allowed to remain in the present issue.

The author is indebted to his son, P. C. N. Pickworth, M.Sc. (Tech.), for his assistance in the work of revision and for many helpful suggestions.

C. N. P.

SOUTHPORT, October, 1942.

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