

**INDUSTRIAL  
PHYSICS  
MECHANICS**

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Industrial Physics Mechanics by L. Raymond Smith

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**L. RAYMOND SMITH**

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## MECHANICS

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INDUSTRIAL PHYSICS

**MECHANICS**

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## PREFACE

© 3-23-33 UAW.  
The present trend in education has created a demand for a series of textbooks in which the material presented is more closely connected with the every-day life of the student. This volume is the result of an attempt to provide a textbook in elementary, practical mechanics,—a textbook suitable for use in technical, industrial, vocational and evening schools.

The chief difficulty encountered in writing an educational book is the choice of material. The material presented here consists largely of notes used in class by the author. It has been tried out and has proven successful. Certain time-honored topics, usually included in similar books, have been omitted; there has been no sacrifice, however, of fundamental principles. The order of presentation has been found satisfactory. It may be changed, if desired, without impairing the value of the course. An attempt has been made throughout to keep the diction simple and understandable.

Attention is directed to the questions and problems at the end of each chapter or division. The questions depend upon the subject-matter preceding and are invaluable both for study and review. The problems are not difficult and, it is hoped, sufficiently generous in number. Experience has proven that problems are an excellent medium for clarifying misunderstandings on the part of the student. Arithmetic is sufficient for most solutions, although a knowledge of algebra and trigonometry will be helpful. A special chapter dealing with elementary trigonometry has been included.

The author makes no particular claim to originality. He has consulted various standard works freely and acknowledges his indebtedness to many of them. Care has been exercised to keep the book free from errors. In case errors have crept in, the author will be glad to have his attention called to them.

Criticism of scope and content will also be welcomed.

Certain chapters have been made possible through the hearty coöperation of various firms and manufacturing plants in furnishing information, photographs, electrotypes, etc. Grateful acknowledgment is made to the following: Brown and Sharpe Mfg. Co.; Central Scientific Co.; Cole Motor Car Co.; Curtiss Aeroplane and Motor Corp.; Dodge Sales and Engineering Co.; Edw. R. Ladew Co.; Fafnir Bearing Co.; Ford Motor Co.; Goodell-Pratt Co.; Goodyear Rubber Co.; Goulds Mfg. Co.; Hyatt Roller Bearing Co.; Keuffel and Esser Co.; L. E. Knott and Co.; Link-Belt Co.; L. S. Starrett Co.; Skinner Engine Co.; Timken Roller Bearing Co.; Whitney Mfg. Co.; Worthington Pump and Machinery Corp.; Yale and Towne Mfg. Co.

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L. R. SMITH.

JERSEY CITY, N. J.,  
June, 1922.

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