

**AN ELEMENTARY
TREATISE ON
THEORETICAL
MECHANICS; PART II**

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An Elementary Treatise on Theoretical Mechanics; Part II by Alexander Ziwet

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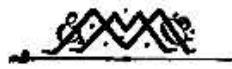
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ALEXANDER ZIWET

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THEORETICAL MECHANICS



AN
ELEMENTARY TREATISE
ON
THEORETICAL MECHANICS

BY
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PART II:
INTRODUCTION TO DYNAMICS; STATICS



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PREFACE.



THE subject of statics is here developed only so far as is absolutely necessary in order to lay the foundation on the one hand for the study of elementary kinetics, on the other for applied mechanics. From the former point of view it was desirable to bring out clearly the connection of the subject with the general science of mechanics and to determine its place as a subdivision of the larger science. The second section of Chapter III should be considered only as preliminary; the fundamental laws of dynamics can of course be fully understood only by studying kinetics. Prominence is given throughout to geometrical methods and graphical constructions because these seem to conform best to the nature of the subject. The applications given here and there are to be regarded merely as illustrations of the general principles.

The following articles might be omitted at first reading: 18, 19, 20, 34, 43, 44, 48, 52, 113, 117-127, 152-164, 180, 181, 209, 210, 214, 220-225, 257-285.

ALEXANDER ZIWET.

ANN ARBOR, MICH.,
October, 1893.

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CORRIGENDA TO PART I.

- Page 16, line 11 from the bottom, for " l " read " R ."
- Page 19, line 11 from the bottom, after "lines" insert "and one point."
- Page 29, line 8 from the top, for "50" read "25."
- Page 62, line 7 from the top, for " s " read " s^2 ."
- Page 62, line 9 from the top, for " $-\frac{1}{2}\mu^2 R$ " read " $-\frac{1}{2}\mu^2 R^2$."
- Page 74, line 6 from the top, for "6 minutes" read "6 seconds."
- Page 77, line 4 from the bottom, for " j " read " a ."
- Page 176, line 8 from the bottom, for " $\frac{1}{3}$ " read " $\frac{1}{10}$."
- Page 177, line 10 from the top, for "13 m. $32\frac{1}{2}$ s." read "34 m. 48 s."
- Page 177, lines 13-15: The answer to (5) should read:
- $$\begin{aligned} \text{" Height = } R; \text{ time of ascent} &= \sqrt{\frac{R}{g}} \left(1 + \frac{\pi}{2} \right) = \text{time of falling back} \\ &= 34 \text{ m. } 48 \text{ s.} \end{aligned}$$
- Page 177, line 18, for "2602" read "26 000."

CONTENTS.



CHAPTER III.

INTRODUCTION TO DYNAMICS.

I. MASS; MOMENTS OF MASS; CENTROIDS:	PAGE
1. Mass; density	1
2. Moments and centres of mass	4
3. Examples of the determination of centroids	11
II. MOMENTUM; FORCE; ENERGY	34

CHAPTER IV.

STATICS.

I. INTRODUCTION	45
II. CONCURRENT FORCES	54
III. PARALLEL FORCES	59
IV. THEORY OF COUPLES	76
V. PLANE STATICS:	
1. The conditions of equilibrium	83
2. Stability	92
3. Jointed frames	99
4. Graphical methods	103
5. Friction	109