

**MECHANICAL DRAWING:
A MANUAL FOR
TEACHERS AND STUDENTS**

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Mechanical drawing: a manual for teachers and students by Anson K. Cross

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A MANUAL FOR
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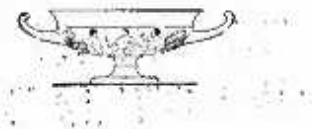
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TEACHERS AND STUDENTS

BY

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TO THE
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PREFACE.

THE following notes are intended for students, and for teachers of elementary work, particularly for public school teachers. There are many books on the subjects of projection and working drawings, but none which present the principles in ways suited to the needs of the large number of teachers who are required to give instruction in these subjects in the public schools. Most of these teachers have had little instruction in the subjects and frequently do not understand problems which they are expected to explain. This occurs because too difficult work is often planned for their grades, and also because the instruction which many public school teachers have received has been so advanced and theoretical that the simple principles which alone are necessary for elementary work have been lost in the attempt to understand descriptive geometry and the drawings of machine and other details, whose nature and use are often not known.

To understand descriptive geometry certain qualities of mind are absolutely necessary, and many find it impossible to comprehend even the simpler problems of this subject. The draughtsman or drawing teacher of advanced work who is without practical knowledge of the subject of descriptive geometry is very poorly equipped for his duties; but this knowledge is not necessary for the public school teacher, who will find it best to treat the subject of working drawings in a much simpler way.

This book presents principles and not a graded course of lessons. It covers more than many teachers may require,

though special students or classes of the high school may study work as advanced as any of that presented. Teachers of drawing in the high school should understand all the problems of the book.

It is hoped that the book may assist teachers of both grammar and high schools so to understand the subject that they may give to classes instruction suited to their capacity and needs.

The author desires to express his obligations to G. A. HILL, A.M., who has read the proof-sheets and furnished him with many valuable suggestions.

ANSON K. CROSS.

CONTENTS.

	PAGE
CHAPTER I.—MATERIALS AND THEIR USES	1
PAPER	1
DRAWING BOARDS	2
PENCILS	3
T-SQUARE	4
TRIANGLES	4
COMPASSES	5
DIVIDERS	7
NEEDLE	7
SCALES	8
FRENCH CURVES	9
PENCILING	10
CHAPTER II.—GEOMETRICAL PROBLEMS	12
CHAPTER III.—WORKING DRAWINGS	28
NATURE AND USE OF WORKING DRAWINGS	28
STUDY OF PRINCIPLES	32
MAKING WORKING DRAWINGS	35
VIEWS OF A CIRCULAR PLINTH	36
VIEWS OF AN HEXAGONAL PLINTH	37
VIEWS OF A PLINTH AND DISC	39
VIEWS OF A BOX AND PYRAMID	40
DIMENSIONING	43
LETTERING	45
CHAPTER IV.—DEVELOPMENTS	47
THE CUBE	47
PRISMS	49
THE CYLINDER	49
THE CONE	50
PYRAMIDS	51
THE SPHERE	51

	PAGE
CHAPTER V.—SHADOW LINES	54
CHAPTER VI.—INKING	58
INDIA INK	58
INKING A DRAWING	59
BLUE PRINTS	61
ERASING AND CLEANING	61
SHARPENING THE PEN	62
STRETCHING PAPER	62
CHAPTER VII.—MACHINE SKETCHING AND DRAWING	64
CHAPTER VIII.—ORTHOGRAPHIC PROJECTION	67
PROJECTION PRINCIPLES	70
AXES OF PROJECTION	71
VIEWS OF A POINT	71
POSITION OF A POINT	72
VIEWS OF A STRAIGHT LINE	74
VIEWS OF A PLANE SURFACE	75
VIEWS OF A SOLID	76
VIEWS OF A RECTANGULAR CARD	77
VIEWS OF A PYRAMID	78
TRUE LENGTH AND POSITION OF A STRAIGHT LINE	81
STATEMENTS OF PRINCIPLES	83
PROJECTION PROBLEMS	86
CHAPTER IX.—SECTIONS	89
SECTIONS OF THE SPHERE	90
SECTIONS OF THE CUBE	90
SECTIONS OF THE CYLINDER	92
SECTIONS OF THE PYRAMID	93
SECTIONS OF THE CONE	94
CHAPTER X.—INTERSECTIONS	96
INTERSECTIONS OF A LINE AND A PLANE SURFACE	97
INTERSECTIONS OF A LINE AND A CURVED SURFACE	99
INTERSECTIONS OF SOLIDS	102
CHAPTER XI.—ARRANGEMENT AND NAMES OF VIEWS	104
CHAPTER XII.—PLATES AND EXPLANATIONS	109
DEFINITIONS	184