

PREFACE

The purpose of this book is to present in ready form, (1) a source of practice exercises for the teacher of metal work, (2) work specifications for shop directions, and outside preparation for the student.

The author's many years of experimentation and observation as tool-maker, draftsman, university student, and teacher of art-metal work and machine-shop practice to high-school and university students, furnishes the background for the book.

The series of 101 metal projects, each a separate unit with complete working drawings and directions, is so arranged that the beginner starting with the first problem, upon its completion, will find that he can put this experience to practical use in the second problem, and so on through all the jobs. The sequence, however, need not be adhered to rigidly when omission seems to be advisable.

It is firmly believed that the methods of the projects and their sequence in the book are based upon principles that are pedagogically and practically sound. Each project was put through the careful test of time and experience before being given a place in the series.

By analyzing a metal trade, a list of the fundamental operations involved in it may be compiled. This list can then be used as a guide in determining what should be taught in a shop course. Accordingly, a project is selected and designed with a definite objective in view for the student, which, when attained, will smooth the way in the operations that are to follow.

The lessons given call for tools, electrical contrivances and machine equipment that are useful, and of intrinsic value. This fact is of no small consideration to the student. He will naturally study such a book with keen interest and come to the shop ready for work.