



# DENTAL MECHANICS FOR STUDENTS

BY

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*Author of*

*'ACRYLIC RESINS IN DENTISTRY'*

SECOND EDITION



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## PREFACE TO SECOND EDITION

SINCE THE PUBLICATION of the first edition, many advances have been made in prosthetic dentistry. Several new materials have come into everyday use in the surgery and laboratory, one of which, acrylic resin, has caused a revolution in both clinical and technical practice. The changes brought about by these new materials have been incorporated in this edition to the extent deemed necessary for the guidance of the junior dental student and the apprenticed or junior dental technician.

The scope of the book remains confined to laboratory practice and is primarily intended for the beginner, be he embryo dental surgeon or technician. Since several new publications now deal adequately with the metallurgy, physics and chemistry of dental materials, detailed study of them has not been undertaken, but a broad outline of their basic properties is included.

Wartime advances in the treatment of maxillo-facial injuries have produced highly specialized techniques for splint construction, location and adjustment. Consequently, it has been thought advisable to refer the student to the literature on this speciality for information regarding splint design. The general principles of casting are herein discussed and can be applied to splint construction.

My thanks are due to the individuals and firms who loaned blocks for the first edition and who have kindly done so once again. In addition, I wish to acknowledge the kindness of the Editor of the "Dental Gazette" who has given me permission to utilize illustrations that I contributed to that journal. I am indebted to Messrs. Blackwell Scientific Publications Ltd. for permission to utilize passages from my book "Acrylic Resins in Dentistry".

Mr. J. N. Anderson, B.D.S., gave me considerable help with new illustrative matter, whilst Mr. E. B. Brain, F.R.P.S., has photographed the majority of the new illustrations. For their help I am most grateful.

Dr. J. Ireland and Mr. M. Aspin have assisted me very considerably by their kindness in reading proofs and I am indebted to them for many helpful suggestions.

UNIVERSITY, BIRMINGHAM.

J. O.

*December 1946.*



## ACKNOWLEDGMENTS FOR THE FIRST EDITION

MY SINCERE THANKS are due to Professor G. L. Roberts for his encouragement and advice during the preparation of this book and for his kindness in writing the foreword. I am indebted to Mr. R. K. P. Miller, L.D.S., who has been responsible for all the original illustrations, both photographs and drawings. Without his valuable help the book would not have been written.

My thanks are due to Dr. E. W. Fish for his kindness in loaning five blocks, and to the Amalgamated Dental Co., the S. S. White Co., Messrs. Prosthetic Products, Ltd., and the Apollonia Laboratories for the loan of numerous blocks.

I am also indebted to Miss I. Millis who typed the manuscript, and lastly to my wife for her valuable help in preparing the index.

UNIVERSITY, SHEFFIELD, 10.

J. O.

*December 1939.*



## FOREWORD TO FIRST EDITION

FOR MANY MONTHS I have watched the painstaking preparation of this book with great interest and discussed many of the problems of scope and arrangement with the author and I welcome the opportunity of writing this foreword at his request.

As Mr. Osborne points out in his opening paragraph the secrets of the art and craft of mechanical dentistry have been passed on down the ages through the medium of apprenticeship and this may well be one reason for the sparsity of textbooks on the subject in an age where systematic University teaching has practically replaced the older method of instruction.

Certain it is that the majority of those textbooks which have the words "Dental Mechanics" as part of their title cover a far greater field and include the study of prosthetics and orthodontics, with the result that their appeal is to the qualified practitioner and senior student rather than the beginner seeking instruction in the basic principles of a highly technical practical craft.

In stressing this point it must not be assumed that I believe mechanics and prosthetics should be taught as separate subjects—such an attempt could only lead to disaster—but that the proper correlation of these closely associated subjects can only be brought about when the student has acquired a complete practical mastery of the former.

The author of this book has fulfilled three of the most important requirements of a successful work—it is copiously illustrated with photographs and excellently clear diagrams—it is brief and yet concise—and finally it is easy to read.

The subject matter is intended to meet the requirements of students beginning the study of mechanical dentistry and the scope of the work is based on the average University syllabus in general and this School in particular.

Mouth procedures have been omitted throughout the work as in the author's opinion there is a wealth of literature already published covering this field to which I have already made some reference; nor has any reference been made to orthodontic treatment for the reason that proper instruction would involve the teaching of the theories of treatment at too early a stage in the student's career.

In spite of the author's modest contention that this book is intended for "beginners only" I feel sure that its clarity and scope, covering modern methods and materials, will attract the interest of many practitioners and find for itself a place on their bookshelves.

I am confident that in writing this book the author has filled a gap which has existed too long in the literature of dental science and that students will welcome its publication as a long-felt want, on the presentation of which the author is to be congratulated.

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