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SYSTEM OF OPHTHALMOLOGY

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SIR STEWART DUKE-ELDER

VOL. XIV

INJURIES

PART 1

MECHANICAL INJURIES

By

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-and-

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WITH 690 ILLUSTRATIONS AND 26 COLOURED PLATES



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HENRY KIMPTON

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INJURIES

PART I

MECHANICAL INJURIES

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PREFACE

TRAUMA is one of the Captains of the Men of Death. In war he was always so, and in our own generation with the multiplication of vehicles traversing the streets of our towns and the motorways of the country at ever-increasing speeds, and the growing tendency to violence in our society, his toll of damage continually augments. The subject of mechanical injuries to the eye is immense and embraces a vast variety of lesions in all its structures as well as in the orbits, the face, the skull and the brain.

With the rapid growth in the complexity of technology in industry, non-mechanical injuries are also increasing, a tendency which can be expected to augment in the future. This is nowhere more dramatically exemplified than in the chemical industry, for the many new materials and processes appearing as each year succeeds another carry with them dangers which are difficult to assess. This applies particularly to the pharmaceutical industry which continually deluges us with a flood of new drugs. To anticipate their effects is impossible, for even if experiments on animals or their short-term use in man shows no adverse results, many of their side-effects become apparent only after their prolonged administration to many patients or in peculiar circumstances such as damage to the unborn child when given to the pregnant mother. Toxicology is thus an ever-growing subject which shows no signs of contracting. Moreover, the addition of such physical agents as light-coagulation, lasers, ultrasonic energy and more concentrated ionizing radiation to our clinical armamentarium involves potentialities for harm.

Considered as a whole, the complex subject of injuries therefore embraces all aspects of ophthalmology and assumes a constantly growing importance in the practice of our specialty; and so it is that, to be reasonably complete, one volume in my *Text-Book* has necessarily been expanded to two in this *System*.

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1972.

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THE writers of a text-book of this type, embracing a subject so large, must necessarily draw widely on the work of others. In a particular sense we must acknowledge with gratitude the valuable advice we have received in several subjects—from Professor George Dick of the Middlesex Hospital for help on immunological problems, Mr. M. A. Bedford on the ocular effects of radiation, Dr. David Cole for advice on the mechanism of chemical injuries, and Dr. M. D. Kipling of H.M. Factory Inspectorate for supplying us with much information on the incidence of industrial injuries in this country.

We have borrowed innumerable illustrations from ophthalmologists all over the world; these are all acknowledged as they appear in the text, but we are happy to thank them collectively. Special thanks, however, must be given to our greatest creditors—Professor Norman Ashton of the Institute of Ophthalmology and Dr. Helenor Wilder lately of the Armed Forces Institute of Pathology in Washington, for pathological illustrations; Dr. Glyn Lloyd of Moorfields Eye Hospital, Dr. W. Campbell of East Grinstead, and Dr. Stephen Trokel of New York, for radiographs; Dr. Stefan Jellinek for illustrations of electrical injuries from his book, *Elektrische Verletzungen* (Barth, Leipzig); and, as in other volumes of this series, Dr. F. N. L. Poynter of the Wellcome Institute of the History of Medicine for many of the photographs of illustrious pioneers which we have used to illustrate the text.

As in previous Volumes, we are very indebted to Sir Allen Goldsmith and Miss Mina H. T. Yuille for reading and correcting the proofs, and, most particularly, to Miss Rosamund Soley for her devoted work in preparing the manuscript and illustrations for publication, collecting and verifying the bibliographical references, and compiling the Index.

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