GASOLINE AUTOMOBILES

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BY

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PREFACE

THE purpose of this book is to present clearly, briefly, and interestingly the essential principles of automobile construction and operation. It is expected to furnish practical help to drivers who, when faced by ordinary operating troubles, want to know how to locate the cause and apply the remedy.

Ordinarily an owner wishes to know first of all the uses of the numerous parts of his automobile, so that he may anticipate repairs and, when repairs actually become necessary, he may know where to begin repair work, and whether, once done, such work is right and the charges therefor are reasonable.

Because of the increasing cost of materials and services there is a growing tendency among owners to keep automobiles for several seasons. There is, therefore, more incentive than formerly to keep automobiles in good repair. Automobiles generally deteriorate more because of lack of care and attention than from actual use. Much of this deterioration is due to ignorance and the consequent failure to prevent the kind of wear which, if not corrected, will lead to heavy expenses for repairs.

As the cost of repairs has greatly increased of late because of labor charges, automobile operators are becoming interested in finding ways of decreasing ordinary as well as extraordinary running expenses. They want to learn how to get the last unit of power from a gallon of gasoline and how to exact the greatest possible mileage from an automobile before it is exchanged for a new one.

A book prepared with these objects in view should also be suitable for general scientific study, if, of course, the theory is accurate and carefully explained. Such a book will give information that will be most useful to students of automotive engineering, whose schooling, obviously, should not deal too much with minor details of automobile equipment.

Many books on this subject are really catalogs of details, and books, if at all complete, must be of unwieldy size and include many dry and uninteresting data. The author believes that there is a demand for a readable book devoted only to essentials. For example, not all types of carbureters and ignition devices will be explained, but considerable space will be devoted to the explanation of the principles underlying commonly used equipment and systems. In the description of carbureters a series of symbols has been adopted which should make it easy to understand any type mentioned after the careful study of one type. Only limited space has been given to the subject of magnetos because their use on automobiles, except on trucks, is rapidly decreasing in favor of simple battery systems of ignition.

The author is especially indebted to his brother J. C. Moyer, consulting mechanical engineer, of Philadelphia, for the preparation of portions of many chapters. Special acknowledgment is also due to J. C. Vincent, Past-President of Society of Automotive Engines and Vice-President of the Packard Motor Car Company, to Charles W. Hobbs, Herbert A. Dallas, agents of the Massachusetts Division of University Extension, and to Arthur E. Ashworth, Miss Betsy McCausland, and Herbert S. Eames, instructors in the same Division.

JAMES A. MOYER.

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