

**BRITISH RAILWAY  
OPERATION**

**T. BERNARD HARE**

## **BRITISH RAILWAY OPERATION**

# BRITISH RAILWAY OPERATION

BY

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## FOREWORD

**I**T is often said that Railway Operating, like Politics, is not a Science ; and the statement is true. That, however, is no reason why it should not be the object of systematic study, and this book is intended as a contribution towards such a study.

The publication in book form of Mr. Hare's articles on Railway Operation which have appeared in *MODERN TRANSPORT* is an encouraging sign, and for two reasons. It indicates the increasing desire on the part of the rising generation of railwaymen to prepare themselves by reading and study for the operating problems which they will later be called upon to face in practice, and it indicates also an increasing readiness on the part of the present generation of practising railwaymen to rationalise and generalise their operations and to substitute, so far as may be, a statement of principles for mere rule of thumb. Both these tendencies are to be welcomed.

Mr. Hare's book is not by any means the first text-book on Railway Operation ; it is none the less a useful contribution to our educational material. We may study Railway Operation from many points of view, but the material is too diverse and too changing to lend itself to any final treatment. The most that can be hoped for is that in limited fields certain general rules and principles may be outlined.

Since there can be no such thing as an orthodox creed in Railway Operation, the field is clear for a variety

of text-books, each of which will throw its own light on the subject according to the writer's method or practical experience, and, so far as I know, Mr. Hare's is the first book published in this country which comes from the hand of a practising railwayman. This is a feature which gives special value to the publication. I believe that it will be found to be of real use to the Railway Student, and that not only for the information it imparts but also for the varied lines of thought which it suggests.

R. L. WEDGWOOD.

King's Cross Station, N.1.

*16th March, 1927.*

## PREFACE

THE very kind reception which the contents of this volume received when published in the form of weekly articles in MODERN TRANSPORT, and the many enquiries which have been made as to the intention to republish them in book form, have led to a decision to do so.

Limitations of space and the necessity for avoiding the use of diagrams and illustrations, if the cost is to be such that the selling price may be within the reach of the average student, have resulted in a good deal of matter being omitted which, from other points of view, it might have been regarded as desirable to include. Within these limits, the aim has been to provide a general outline on which the study of the subject may be based. It is for this reason that an endeavour has been made to discover and discuss the principles underlying the various practices which together may be described as Railway Operation, rather than to describe the practices of individual companies.

After rather more than twenty years' service with the same company, it is not easy to avoid a tendency to be prejudiced either for or against the methods employed by that company, though an effort has been made to overcome this. The reader is, therefore, recommended to examine any statement which may appear to be tinged with such prejudice even more critically than the others.

In conclusion, I must express my thanks to Sir Ralph L. Wedgwood, C.B., C.M.G., for the honour he



has conferred upon the writer by contributing the Foreword to this book, and to Messrs. G. Davidson, C.B.E., and C. M. Jenkin Jones, Divisional General Manager and Superintendent respectively of the North Eastern area of the London and North Eastern Railway, for their kind permission to write it. I am also indebted to Professor Hallsworth, M.A., of Durham University, on whose suggestion the work was undertaken, and to Mr. R. H. Nicholls, C.B.E., Superintendent of the Line, Great Western Railway, and Mr. J. Thornton, Superintendent of the London Underground Railways, for their kindness in granting facilities for obtaining a knowledge of certain phases of the work on their respective lines, whilst I acknowledge the help of my railway colleagues of all ranks and grades, from whom, consciously or unconsciously, I have accumulated that knowledge which is summed up in the word "experience," on which the statements in the book are based. My grateful thanks must also be tendered to Miss C. E. Taylor, who, by devoting her hours for leisure or recreation to the somewhat uninteresting business of typing the MS. and the notes of the lectures on which the MS. is based, made possible a task which would otherwise have been impossible in the amount of time available for their preparation.

T. B. H.

## INTRODUCTION

**I**T is very difficult to say exactly what should be the logical order of the different subjects which come under the general heading of railway operation. The whole thing is so interwoven that a knowledge of certain subjects which, from some points of view, should come late in the syllabus is desirable when discussing points which naturally have to be dealt with earlier. In other instances, the converse is the case. The sequence followed has, therefore, been adopted as one which is, on the whole, judged to be the most convenient for a thorough appreciation of all the points involved.

The business of working a railway is, in many respects, unique. This is unfortunate from the point of view of the student, since it is probably true that the easiest way of grasping a new subject is to compare it with something with which one is already familiar. In some degree, certain aspects of railway work may be compared with the business of the manufacturer, others with that of the wholesaler, and still others with that of the retailer of commodities. One essential difference is that transport is rather a service than an article! Turning to those concerns which provide a service, we can, to some extent, compare the service the railway gives with that given by a doctor, a barrister, or a banker. In no case, however, can we carry any such comparison very far. This point will be developed when dealing with the question of "Organisation." Confining ourselves to operating, it may be helpful, as an ideal to keep

before us, to regard a railway as one complete machine, so arranged that, while the different parts work at differing speeds, the processes are, in turn, completed at such a rate that the whole works in complete harmony and the desired results are obtained in the most economical way.

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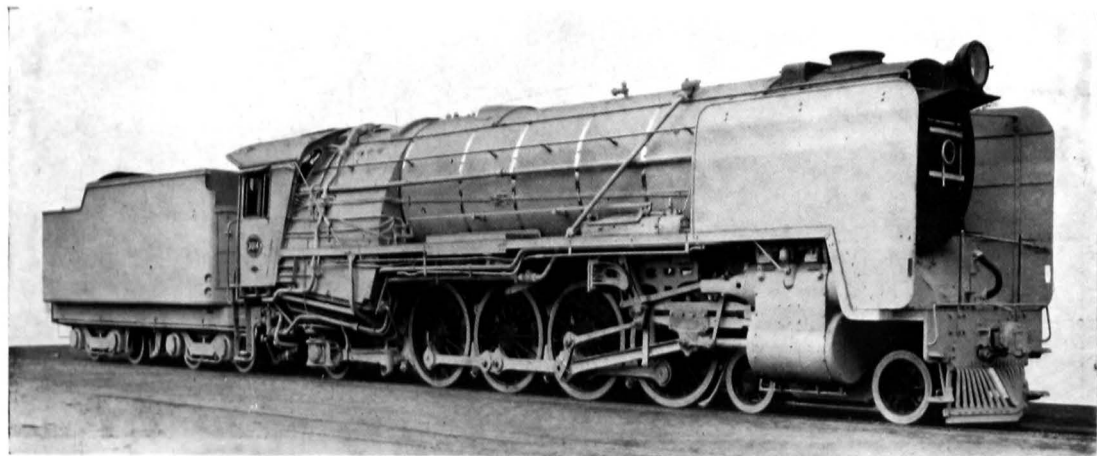
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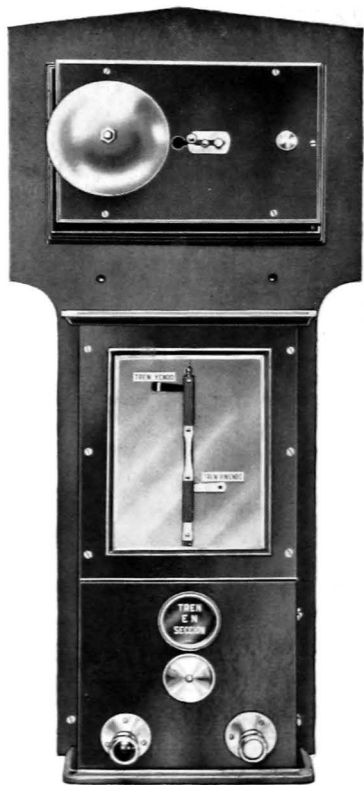
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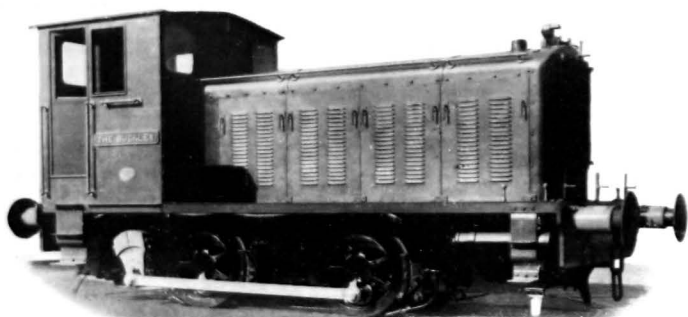
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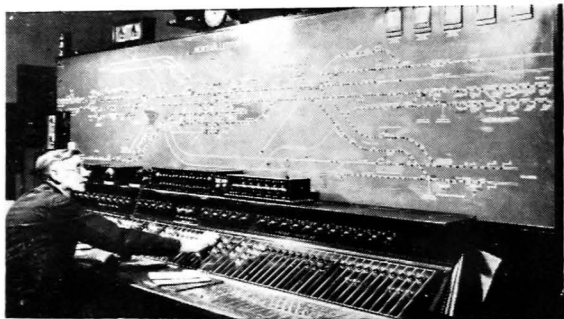
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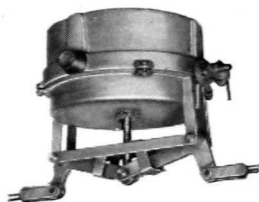
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