# SAFE RAILWAY WORKING: A TREATISE ON RAILWAY ACCIDENTS: THEIR CAUSE AND PREVENTION

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Safe Railway Working: A Treatise on Railway Accidents: Their Cause and Prevention by Clement E. Stretton

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# **CLEMENT E. STRETTON**

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Trieste

# SAFE RAILWAY WORKING

#### A TREATISE ON

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# RAILWAY ACCIDENTS: THEIR CAUSE AND PREVENTION

## WITH A DESCRIPTION OF MODERN APPLIANCES AND SYSTEMS

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CLEMENT E. STRETTON, C.E.,

VICE-PRESIDENT AND CONSULTING ENGINEER, AMALGANATED SOCIETT OF BALLWAY SERVANTS OF ENGLAND, IRELAND, SOCIEATD, AND WALES MUNDER OF THE MARCUTTVE COUNCIL OF THE INTRINATIONAL ASBOULATION FOR THE FROTECTION OF HUMAN LIFE.



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## P. S. MACLIVER, Esq., PRESIDENT,

EDWARD HARFORD, Ese.,

GENERAL SECRETARY,

AND TO THE MEMBERS

OF

The Amalgamated Society of Railway Serbants,

THIS VOLUME

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Dedicated

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THE AUTHOR.

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#### PREFACE.

SEVERAL members of both Houses of Parliament, and others interested in the safe and proper working of railways, having recently applied to the Engineering Department of the Amalgamated Society of Railway Servants for information relating to the causes of the various so-called railway accidents, also as to the alterations, improvements, and appliances which are considered absolutely essential to the safety of the general public and of the railway servants, a list of twenty-three necessary requirements has been drawn up which will have to be adopted and brought into general use before any great improvement in railway safety can be looked for or expected.

At the expressed desire of railway officials, servants, and passengers, the author has been induced to prepare the present work to explain and illustrate the various mechanical appliances which conduce to the safety of railway travelling.

Upon a very recent occasion it was stated in the House of Commons by Mr. Mundella, then President of the Board of Trade, that the railway servants were the greatest sufferers by railway accidents, since among

#### PREFACE.

them there was an amount of death and desolation which the House could hardly realise, and which was simply appalling. In eleven years, he said, 6,584 servants had been killed and 26,024 injured—a loss equal to that of many battles.

The author, since he entered the engineering profession twenty years ago, has devoted much time and attention to the examination of all appliances for railway safety; and as Consulting Engineer to the Amalgamated Society of Railway Servants, it is now his duty to examine, consider, and report upon the circumstances attending every accident, and the new or improved safety appliances necessary to prevent such occurrences in future. The views and opinions expressed in this volume are, therefore, based upon experience derived from a personal examination of the line and rolling stock after the various accidents, and the whole of the cases recorded in Chapter VII., under the heading of "Railway Servants and the Law," are those in which the author was either engaged or interested on behalf of the men implicated.

### CLEMENT E. STRETTON.

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40, SAXE-COBURG STREET, LEICESTER. November, 1886.

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