

*John W. Coffey*

# MACHINE METHODS OF ACCOUNTING



INTERNATIONAL ELECTRIC BOOKKEEPING AND ACCOUNTING MACHINES



THOS. J. WATSON

*“THERE is no saturation point in education. You must apply this motto to business. You are going to find it necessary to make a thorough study of whatever line of business you engage in. You must acquire wisdom in addition to knowledge. Wisdom is the power which enables you to use your knowledge to advantage. . . .*

*“There is only one way to gain knowledge and that is through study. Right here a good many fail because that means reading books, listening, discussing, observing and thinking. You must not overlook any one of these things. Read everything the company publishes for you in the way of instruction; discuss the business with every one with whom you come in contact; listen when any one talks about the business—be a good listener, observe, study through observation.”*

*Thos. J. Watson*  
President,

INTERNATIONAL BUSINESS MACHINES CORPORATION

# MACHINE METHODS OF ACCOUNTING

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A MANUAL OF  
THE BASIC PRINCIPLES OF OPERATION AND USE OF  
INTERNATIONAL ELECTRIC BOOKKEEPING  
AND ACCOUNTING MACHINES

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*"These two buildings will mean more to the people in our business, and to our customers, as the great importance of invention and education in connection with our work is more fully realized."*

THOS. J. WATSON

*School Building*



*Engineering Laboratory*

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## FOREWORD

**I**NDUSTRY expanded rapidly during the past quarter of a century. In that time business men everywhere were called upon to face a continuous variety of changing problems. Correspondingly, there arose an increasing demand for facts and figures. Today every business executive knows that he must constantly be in possession of vital figures and facts regarding every phase of his business in order to operate it successfully and intelligently. Modern business demands that figures and facts for proper control be furnished, in all possible detail, with speed and accuracy.

The rapid changes in business and governmental activity which our generation has witnessed have affected earlier notions of the relationship of management and accounting. The use of manual methods in manufacturing and recording had been on the decline for several decades before the World War. In the aftermath, the post-war adjustments of business hastened the revolutionary changes of processes and methods. Compliance with governmental regulations; determination of amounts subject to newer and more varied types of taxation; recognition of the importance of budgets, quotas, and standards as management tools; competition for profitable markets; and increase in the size of organizations through merger and expansion—have all combined to make the accounting departments the center of radical changes.

Accounting procedures have been critically reviewed and modernized in the past two decades. In this interval, more progress has been made than in the previous four centuries. The adoption of accounting machines to meet the growing problems of the accountant has been largely responsible for the progress in record-keeping and analysis that has occurred.

Developments in the automatic machine method of accounting have kept pace with the needs of business executives for constant control. International Electric Bookkeeping and Accounting Machines have been perfected to furnish, with a maximum of both speed and accuracy, the variety of reports so necessary for the satisfactory control of operations and for the analysis of statistical information.

Knowledge of machines and methods in current use is essential for an understanding of what is now happening and what future trends will be. The rapid increase in the use of International Electric Bookkeeping and Accounting Machines, together with the widening scope of their application and the radical developments incorporated in newer and more specialized models, makes this manual of the International Electric Bookkeeping and Accounting Machine Method a valuable and timely publication.

## ***Purpose of Book***

Primarily, this book was written to provide a single volume from which employees of International Business Machines Corporation may thoroughly familiarize themselves with the complete line of bookkeeping and accounting machines manufactured by their Company, and with the operation of such machines in furnishing figure-facts automatically.

In the preparation of the subject matter, consideration was also given to the needs of present and future users of International Electric Bookkeeping and Accounting Machines. The book not only serves as an authentic and complete record of the accounting machines and devices which may be placed at their service, but also explicitly points out how such machines and devices may be used most effectively.

A basic knowledge of the many uses to which the various automatic machines may be applied is a prerequisite for successful supervision. The machines, as such, are only tools for attaining the desired results. The facility with which these results are obtained is in a large measure determined by the efficiency of the organization and the supervision of the department in which the machines are located.

This book, therefore, has been compiled to present the basic facts and general information which are essential for the intelligent and successful adaptation of International Bookkeeping and Accounting Machines to accounting and statistical routines.

## ***Scope of Book***

The Company's entire line of business machines includes—International Electric Bookkeeping and Accounting Machines, International Electric Time Indicating Devices, Time Signaling Devices, Payroll Recorders, Job Time Recorders, Laboratory Panels, Interior Telephone Systems; Central Control Radio, Music and Speech Equipment; Property Protection Devices, International Electric Writing Machines, Industrial Scales, Piece-Work Coupon Printing Machines, Machines for Producing Graphic Analyses, and a Proof Machine for Banks. The greater part of this book, however, is concerned with an exhaustive exposition of the designs, operation, and functions of the Bookkeeping and Accounting Machines.

The book is divided into separate pamphlets, each section being within itself a complete and detailed treatise regarding either a single essential phase of the method or a type of machine. Each part, however, has a particular and definite position relative to the whole volume. This arrangement permits the use of the book as a standard text for those who are interested in progressing step by step in the acquisition of a technical

knowledge of machine accounting; and also as a reference book for those who are called upon to make decisions concerning procedures to be followed in the Tabulating Department.

The following are the phases of the method or machines separately discussed:

## C O N T E N T S

### 1. HISTORICAL

2. Principles of the Electric Accounting Machine Method.
3. The Tabulating Card.
4. The Design of Tabulating Cards.
5. The Preparation and Use of Codes.
6. Organization and Supervision of the Tabulating Department.
7. Selection and Training of Key Punch Operators.
8. Accounting Control.
- 9-10-11. Key Punch Equipment.
12. Key Verifying Machines.
13. Gang Punches.
14. Card-Operated Sorting Machines.
15. Electric Tabulating Machines.
16. Electric Accounting Machines (Adding and Subtracting).
17. Alphabetic Accounting Machines (Adding and Subtracting).
18. Automatic and Check Writing Interpreters.
19. Automatic Reproducing Punches.
20. Automatic Summary Punches.
21. Automatic Multiplying Punches.
22. Application of Machines to Accounting Functions.
23. Other IBM Products.

In view of the purpose for which this book was prepared, it is hoped that mutual benefits will be derived from its contents by the members of International Business Machines Corporation and the present and future users of its products.

INTERNATIONAL BUSINESS MACHINES CORPORATION

IBM EDUCATIONAL DEPARTMENT  
Endicott, N. Y.  
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