

MODERN METHODS

for

MODERN
BUSINESS
NEEDS



INTERNATIONAL BUSINESS
MACHINES CORPORATION

MODERN METHODS
for
MODERN BUSINESS NEEDS



**INTERNATIONAL BUSINESS
MACHINES CORPORATION**

The Tabulating Machine Company Division
International Time Recording Co. Division
International Scale Company Division
Dayton Scale Company Division

GENERAL OFFICES: 270 BROADWAY, NEW YORK, N. Y.
Canada: 300 Campbell Avenue, W. Toronto, Ontario

FOREWORD

NEW and improved methods of handling routines are constantly being introduced into office, factory and store. The concerns which keep in touch with and take advantage of these changes find themselves able to effect many new economies in their efforts to protect and increase profits.

The devices described in this booklet, which are representative types of International Business Machines, are playing an important part in this work by helping all kinds of businesses to save time and money in various departments. You no doubt are already familiar with many of them—perhaps are using some in your business. Others may have escaped your attention, and for that reason you have not considered the application of these particular ones to your own routines.

The purpose of this booklet is to bring all the various types of these machines to your desk in such form as will permit your careful and leisurely review of the many kinds of office, factory and store equipment with which the International Business Machines Corporation has been in many instances helping business for more than forty years.

Each machine is not so much a new *mechanism* as it is the source of a new *method* designed to save money and increase profits.

We suggest that you and your associates when reading this booklet keep in mind the fact that the International Business Machines Corporation is in position to render you a service that is unique in its ability to help you operate more profitably.

Our representatives will be pleased to describe to you in detail the application of any type of equipment in which you may be interested. The experience behind these men places them in a position to give real aid to business heads and executives of any kind of business.

QUICK FACTS

ABOUT INTERNATIONAL BUSINESS MACHINES

WHAT THEY ARE:

International Electric Tabulating and Accounting
Machines (Hollerith)
International Time Recorders and Electric Time Systems
International Industrial Scales
Dayton Moneyweight Scales and Store Equipment

THEIR PURPOSE:

To save time, material and money

WHERE MADE:

In eight factories located in the United States, Canada,
Germany, France and England. (See pages 44 and 45)

NUMBER OF MODELS:

More than 600

WHERE USED:

In 78 different countries

USED BY:

Business concerns of every size and kind, institutions
and governments

BACKED BY:

International Business Machines Corporation, pioneer
manufacturer and distributor of Electric Tabulating
Machines, Time Recorders and Computing Scales
In business since 1888. Capital over \$40,000,000

LOCATION OF OFFICES AND SERVICE STATIONS:

In all the principal cities of the world

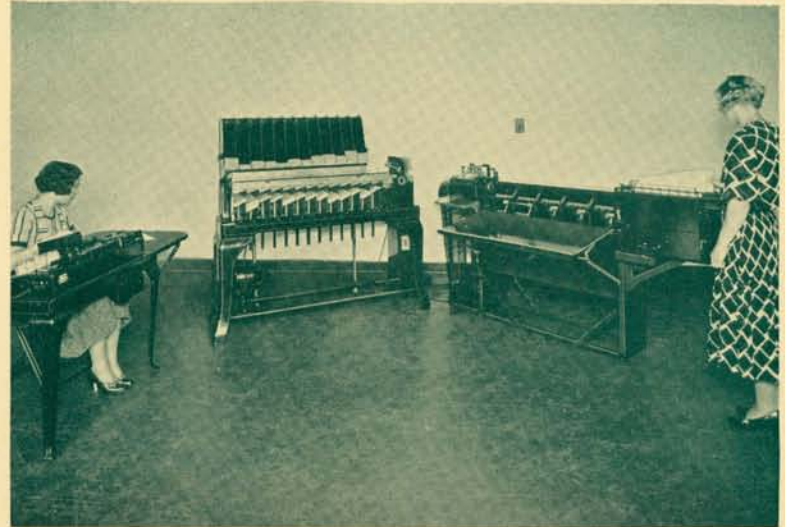
NUMBER OF FIELD REPRESENTATIVES:

More than 3,000 throughout the world

THIS BOOKLET IS DIVIDED INTO THE FOLLOWING FOUR SECTIONS:

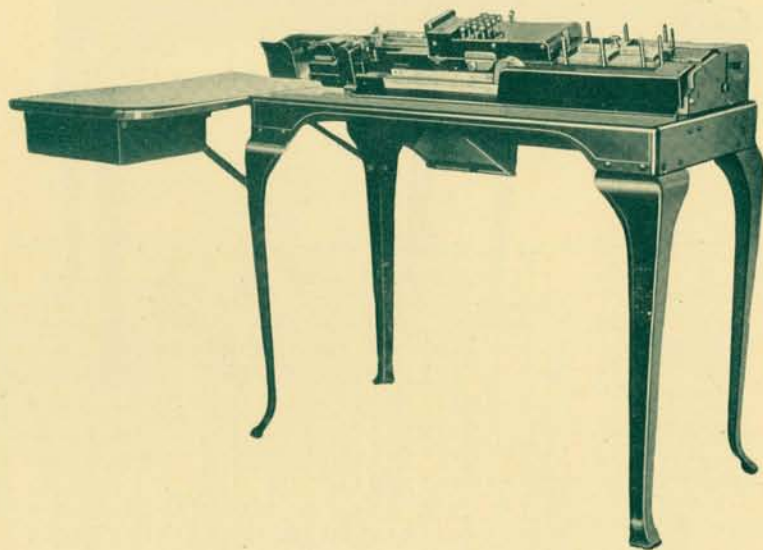
Electric Tabulating and Accounting Machines . . .	pages	7 to 30
Time Recorders and Electric Time Systems	“	31 to 52
Industrial Scales	“	53 to 68
Mercantile Scales and Store Equipment	“	69 to 84

INTERNATIONAL ELECTRIC TABULATING AND ACCOUNTING MACHINES (Hollerith)



INTERNATIONAL Electric Tabulating and Accounting Machines are devices employed for the automatic handling of accounting and statistical data. The process of operation, known as the Electric Accounting Method, comprises the use of tabulating cards—which constitute the basis of the method and on which all information is recorded in the form of punched holes—together with this electrical equipment which handles the cards in progressive stages till final results have been achieved.

The value of International Electric Tabulating and Accounting Machines lies in their phenomenal speed, their adaptability to any task wherein data can be expressed in terms of numerals, their power to accomplish results at much less cost than that entailed when identical work is manually performed, and the accurate results they produce.

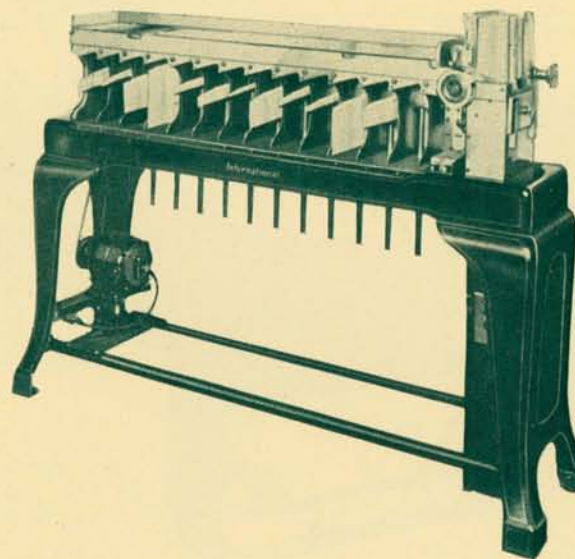


THE VERIFIER

THE Verifier is used to prove mechanically the accuracy of the punching.

Operation of this device is like that of the Key Punch. The operator proceeds as though punching the card, using the original data as the source of information. When the key action coincides with the previously punched holes the machine feeds the cards to the left. When a key can not be depressed the passage of the card is stopped, signifying an error has been made. The unverified portion of the card is invisible to the operator; no suggestion as to what was punched can affect the verification, which therefore is positive instead of negative.

Where a limited number of cards is to be verified the Mechanical Verifier is used. This is a compact device requiring no electric current.

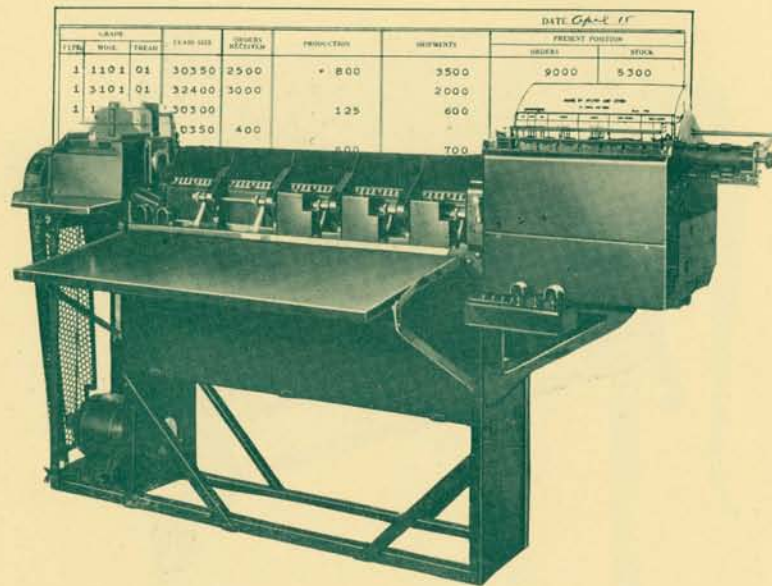


THE ELECTRIC SORTING MACHINE

THE cards are now ready for the Electric Sorting Machine which arranges them in numerical sequence, sorts them in desired classifications, and selects and rejects specific ones.

The usual procedure is to arrange the cards first in "unit" order. While in this sequence they are next arranged in the "tens" order, through the "hundreds," etc. This is done at the rate of 400 cards per minute per column sorted. If, for instance, 1000 cards are arranged in 100 classifications the total time consumed would be 5 minutes.

Several models are available,—the horizontal, illustrated above; the vertical, which is employed when floor space must be conserved; and a small capacity one used when the amount of tabulating work does not justify installing the standard equipment.



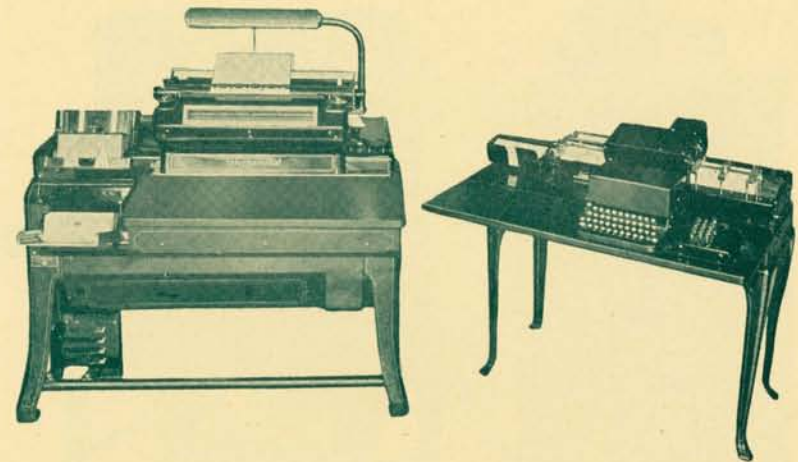
THE ELECTRIC ACCOUNTING MACHINE

THE Electric Accounting Machine automatically produces completely printed reports from punched tabulating cards.

It will list the details of every card at a speed of 75 cards per minute, or when operating as a total printing machine it handles 150 cards per minute.

As the cards pass through the feeding mechanism every change from one data group to another is recognized. At the completion of each group the machine automatically stops, records the total together with the group indication, then clears itself and starts working on the next group. Progressive totals and accumulative totals can be taken.

This device is made as a combination adding and subtracting machine, or as a straight printing tabulator in 4-, 5- and 7-bank models.



THIS IS A SAMPLE OF THE PRINTING DONE BY THE ALPHABETIC ACCOUNTING MACHINE

NUMERALS CAN BE PRINTED ALONG WITH THE ALPHABETIC CHARACTERS AS IN THE ADDRESS 345 BROADWAY

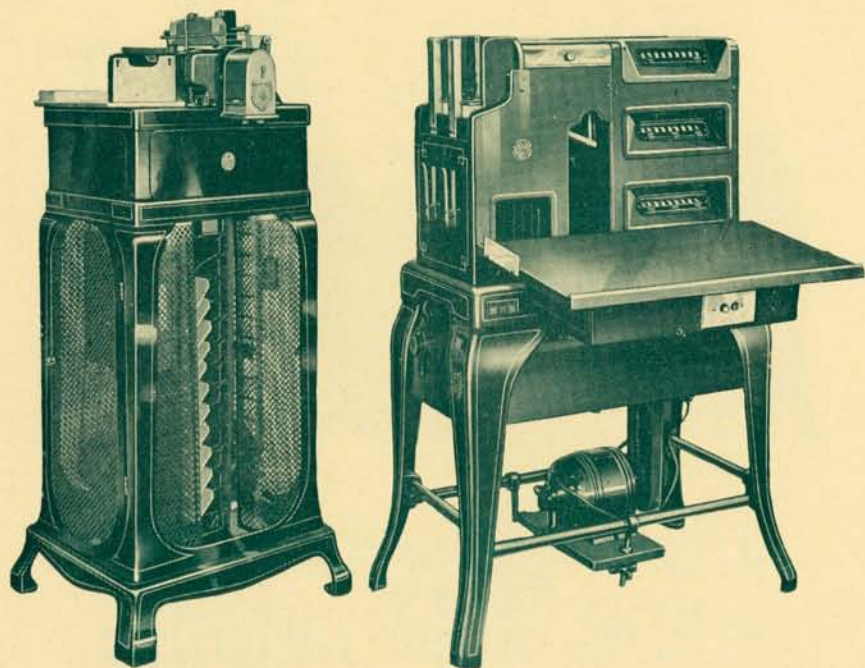
THE ALPHABETIC ACCOUNTING MACHINE

THE Alphabetic Accounting Machine is an electric device that prints names, addresses, descriptions, etc., in alphabetic characters, and thereby eliminates the use of codes to designate such items on finished reports.

Each type bar contains both alphabetic and numerical type, an arrangement that gives great flexibility in combining alphabetic and numerical data.

The type bars are in a continuous bank, which order gives a uniform spacing between characters and between words. The finished product is clear legible printing that harmonizes with the printing done on an Electric Accounting Machine.

The punch employed in preparing tabulating cards for use with the Alphabetic Accounting Machine contains a standard number-punching keyboard and a standard typewriter keyboard for recording the alphabetic characters.



THE TYPE 83 EQUIPMENT

THESE devices bring the advantages of the Electric Accounting Method to those business concerns whose accounting and statistical needs are not scaled to the large capacities of the standard machines.

The Type 83 Electric Sorter is equipped with 12 pockets which hold 80 cards each. Its speed is 150 cards per minute.

The Type 83 Electric Tabulator is a non-printing tabulating machine that adds from 1 to 3 groups of figures at the rate of 90 cards per minute. "Stop cards" are employed for stopping the machine at the end of groups to enable the operator to record the totals.

The manually operated Key Punch and the 34- and 45-column cards are used with this equipment.

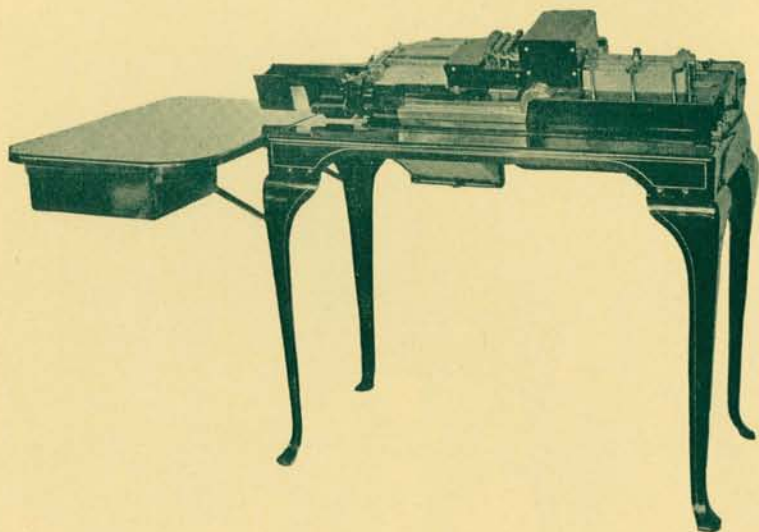


THE AUTOMATIC INTERPRETER

ALTHOUGH the practiced eye can quickly read the numerals represented by the holes punched in tabulating cards, it is often desirable, for greater ease of reading, to have these coded figures translated and printed above the fields. The Automatic Interpreter is used for the purpose.

The printed information can be shown anywhere along the top of the card. Forty-five columns of digits constitute the full printing capacity of the machine, but any 45 columns of the 80-column card may be selected. The translating and printing are done at the rate of 75 cards per minute, 4,500 cards per hour.

This device is of great aid in checking, filing, selection and reference operations.

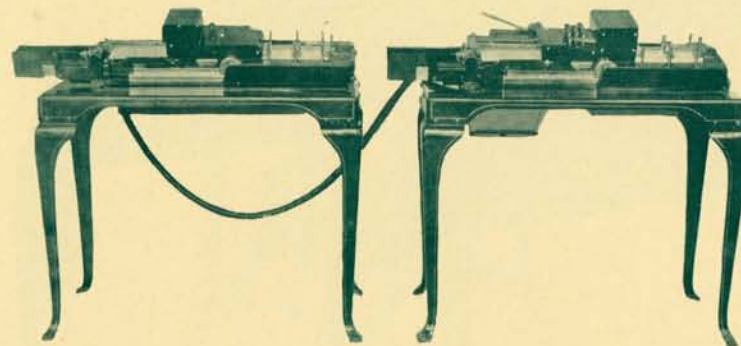


THE ELECTRIC DUPLICATING KEY PUNCH

THE Electric Duplicating Key Punch performs the same kind of work done by the Key Punch previously described and in addition automatically duplicates recorded information at high speed. Particular data belonging to a single card can be recorded by using the keys. Operation speed is approximately ten columns per second.

The machine is extremely useful as an automatic coding device. Master cards are prepunched with all the codes belonging to any given set of conditions, and then placed in the rack. These codes are transferred in punched form to the detail cards. This process eliminates a second coding operation, code checking, code punching, and checking of the code punching.

Made in two models, with or without the automatic feeding and ejecting feature.

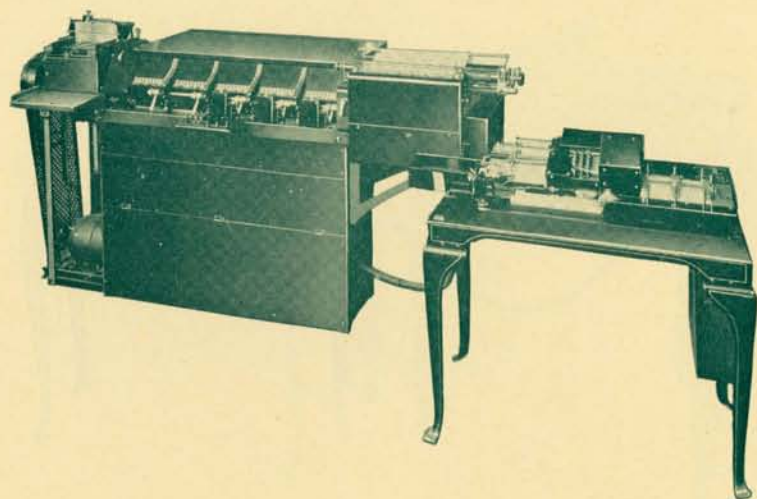


THE AUTOMATIC REPRODUCING PUNCH

BY MEANS of the Automatic Reproducing Punch an additional set of punched cards can automatically be produced from an original set. Parts of the information contained on the original cards can be omitted from the duplicates; also, data pertinent to individual cards of the latter can be introduced by manual operation of the keys.

The reproducing speed, when the machine is operating automatically, ranges from 1600 cards per hour for 10 columns per card to 440 cards per hour for 80 columns per card. 80-column cards can be reproduced from 45-column cards, 80-column cards from 80-column cards, and 45-column cards from 45-column cards.

An automatic stopping device signals the exhaustion of cards in either unit.



THE AUTOMATIC SUMMARY PUNCH

THE Automatic Summary Punch is used to punch summary or new balance cards from the indications and totals appearing on the counters of an Electric Accounting Machine—to which it is attached—during the process of tabulation.

The Accounting Machine stops at every control change; the information shown on the counters is then electrically transmitted to the Summary Punch and by it recorded on tabulating cards.

This punch automatically records the date and source of information in addition to the classifications and totals shown by the Accounting Machine. It can be used as a fully automatic Electric Key Punch when disconnected from the Accounting Machine.

The Automatic Summary Punch supplies the only known automatic method of obtaining a Balance-forward.



THE AUTOMATIC GANG PUNCH

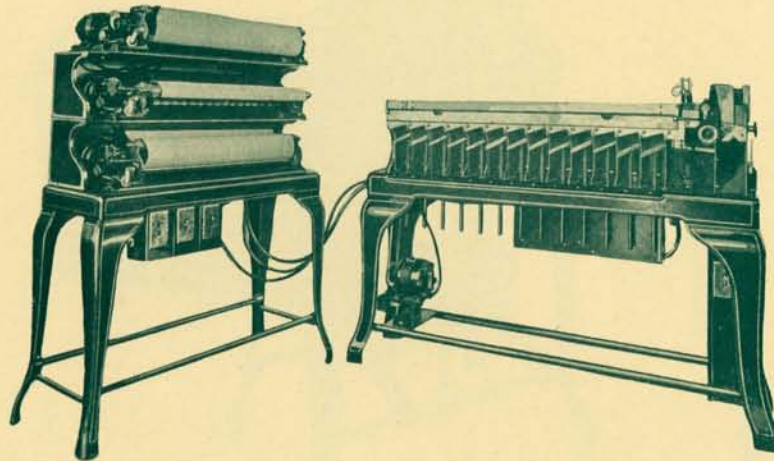
SOMETIMES it is necessary that many cards be punched in identically the same manner, either wholly or in part. A Gang Punch is then used to expedite the work.

A master card—sometimes called a pattern card—when placed on the set-up plate automatically adjusts the punching mechanism to the setting required. Or the set-up can be accomplished manually. Another method is to use both processes in combination.

This machine can be equipped with a numbering device that prints numbers consecutively or prints the same number repeatedly at the time of punching.

An additional feature is a dial which, when set, automatically stops the machine when the desired number of cards has been punched.

A manually operated Gang Punch is also made.

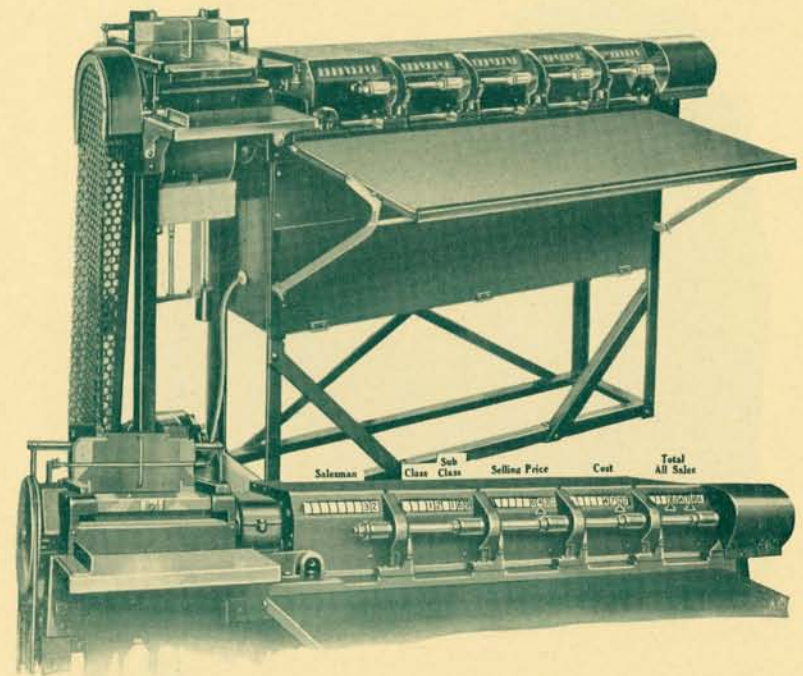


THE ELECTRIC CARD-COUNTING PRINTING SORTER

IN CASES where a tabulating card represents a unit, as in vital statistics or unit inventory control, it becomes necessary to provide a rapid means of counting and classifying simultaneously.

The Electric Card-Counting Printing Sorter is the means of accomplishing such result. This device totals the count for each position punched in any particular column of digits on the cards and prints these totals. It sorts and totals the count in the same column. It sorts in one column and simultaneously totals the count in one, two or three additional columns. It arranges punched cards in numerical sequence or in any desired groupings.

An Electric Card-Counting Non-printing Sorter is also available.

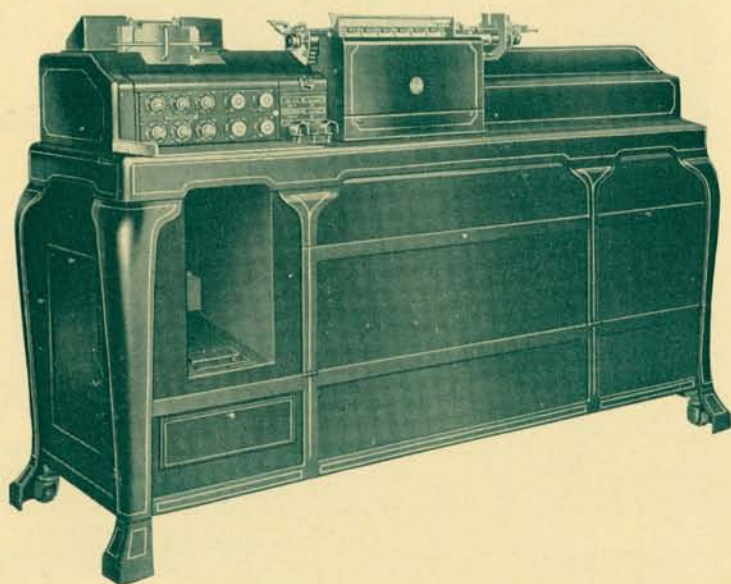


THE ELECTRIC TABULATING MACHINE

THE Electric Tabulating Machine is a multiple adding device by means of which totals are automatically secured from punched tabulating cards. It determines both sub- and grand totals, and indicates proper classifications. These accumulations and classifications are shown on reading dials and transcribed by the operator to report forms.

From two to five groups of 8-digit figures can be simultaneously added at the rate of 150 cards per minute; in other words, a 5-counter (adding device) tabulator can add 100 digits per second.

This machine is made in 3- and 5-counter models. It can be equipped with an automatic control which stops the adding mechanism at the end of each class of information, permitting the operator to record the totals on report forms. Machines not so equipped obtain the same effect with "stop cards."

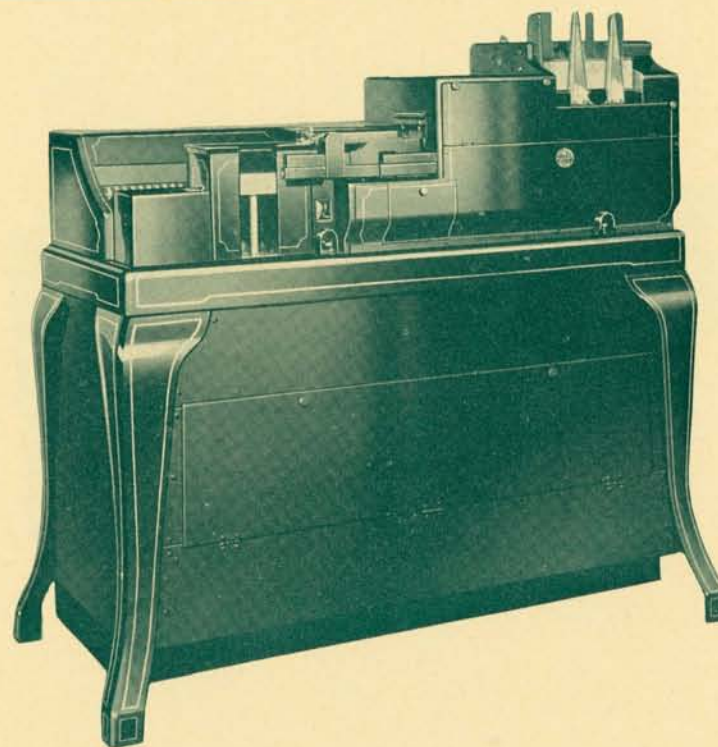


THE DIRECT SUBTRACTION MACHINE

THIS device is an electric multiple adding, subtracting and printing machine by means of which punched tabulating cards are made to yield printed tabulations. It is used to list details from individual cards, or to print classifications and to accumulate and print totals, net totals and accumulated net totals.

Group totals of from 1 to 6 classes of data are secured at the rate of 150 cards per minute. When an itemized list is required, from 1 to 7 classes, together with the totals of 6, are printed at a speed of 100 cards per minute.

A plugboard, similar in principal to a telephone switchboard, gives great flexibility to this device, enabling it to meet all tabulating needs in the preparation of printed reports.

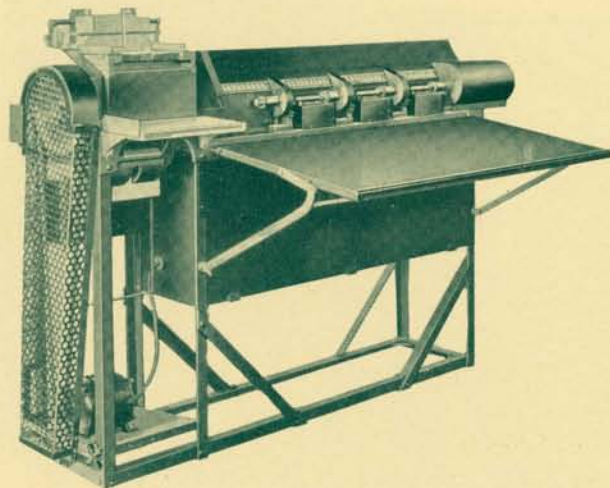


THE AUTOMATIC MULTIPLYING PUNCH

THIS machine multiplies with almost lightning speed any two amounts punched in tabulating cards, adjusts the product to the nearest whole number, and records the product on the card from which the factors were taken. It does not multiply by adding. It "reads" the multiplicand and the multiplier, and computes by the actual multiplication process.

The factors may be such items as Hours times Hourly Rate, Pieces times Piece Work Price, etc. Either factor can contain as many as eight digits. One factor can be taken from a preceding master, or pricing, card and used as a common multiplier for succeeding detail cards.

Calculating and punching are accomplished at high speed—from 720 multiplications per hour for 8-digit multipliers up to 1200 per hour for 3-digit multipliers.

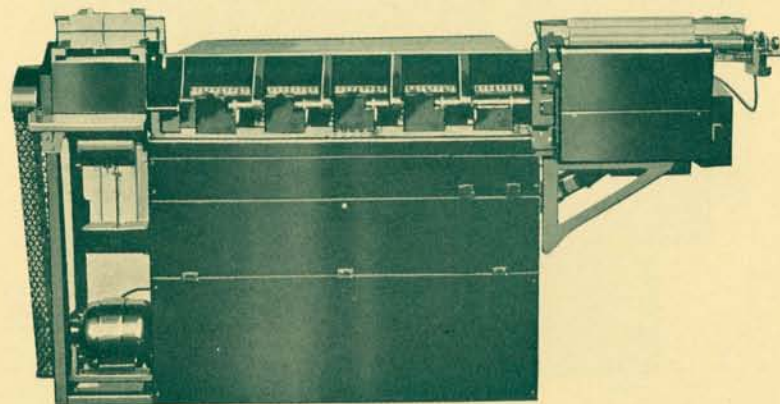


THE AUTOMATIC CHECKING MACHINE

THIS variation of the Electric Tabulating Machine cross-totals any two amounts recorded on a tabulating card and compares the result with a third amount recorded on the same card. For example: In billing for gas, electricity, or water, it adds the consumption to the previous reading and checks the result with the present reading. When a discrepancy is found the incorrect card is automatically separated from the correct cards. Its operating speed is 150 cards per minute.

One of its four counters can be used for counting cards when each card represents a unit, or for accumulating totals; the other three carry the amounts to be compared.

When not being used for checking purposes the machine can be employed as a 4-Counter Tabulator.



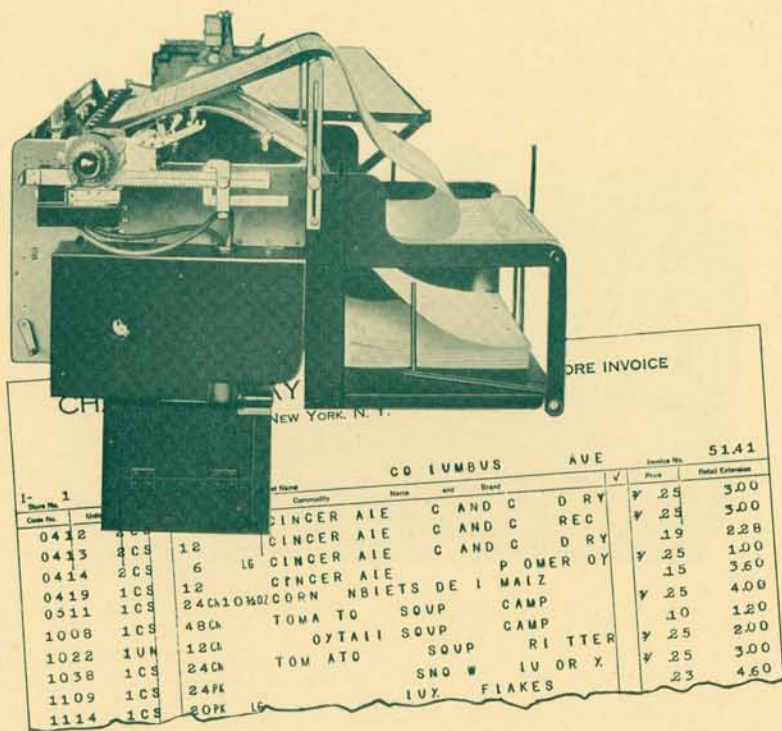
THE INVOICING TABULATOR

THE Invoicing Tabulator is applicable to billing in those cases where a unit card system for control of inventory and centralized billing is possible. It prints alphabetic commodity descriptions in legible, condensed form.

Some of its features are: high-speed listing of from 90 to 120 cards per minute, single line billing regardless of the number of cards selected per line, and a 34-column type section for printing descriptions.

The standard invoice form sponsored by the Department of Simplified Practices, Washington, D. C., can be used. A stub copy showing the commodity code instead of the article name, but including the cost, can be printed simultaneously with the invoice without the use of carbon.

Automatic dating, registration, line-finding and continuous form feeding are performed. See next page for sample of work.

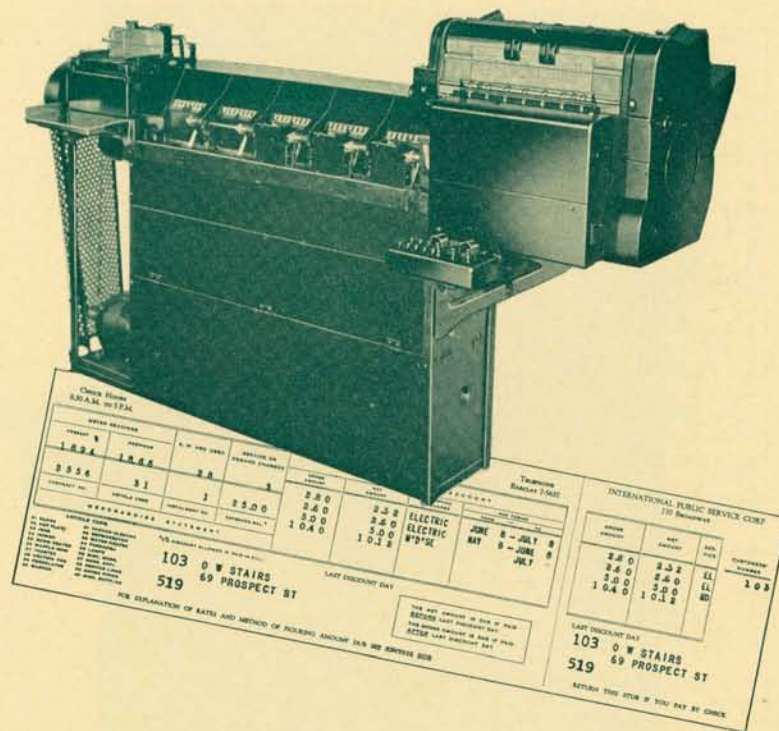


THE CONTINUOUS FORM BILL FEED

THE Continuous Form Bill Feed is a device attached to either the Invoicing Tabulator or an Accounting Machine for the purpose of automatically handling continuous forms which are fed through the printing mechanism.

It is applicable to any accounting procedure that requires individual forms or that is better handled with uniform sheets than with paper torn from a roll,—such as the preparation of accounts receivable invoices and statements, accounts payable remittance statements, general accounting ledger sheets, and insurance agency registers.

Line finding is automatically performed. Multiple continuous forms interleaved with carbon can be used. This device provides the advantages arising from the use of single sheets and yields all the savings of time and labor attending the use of paper fed from a continuous roll.



THE AUTOMATIC BILL FEED TABULATOR

THIS machine is provided with a device that automatically feeds single sheet forms, such as public utility bills, premium notices, etc., into the printing mechanism where each bill is printed with each item of charge, totaled, and then ejected. Three thousand single line bills are completed per hour. During this billing operation the totals of current delinquent and merchandise items are accumulated to balance predetermined controls.

The machine accommodates forms ranging from post card size to those 5 inches wide by 18 inches long, on which, as a general rule, the information can be printed in any desired position.

Three different models—a 4-bank, a 5-bank and a 7-bank machine—are available. Regardless of the capacity, however, the speed remains the same.

SPECIAL TABULATING SERVICES

THE potential ability of the Electric Accounting Method to aid executives in the control of business is unlimited. For more than forty years the method has been applied to the accounting and statistical work of every kind of business. The vast experience accumulated during that time is at your disposal, to help you put your accounting and statistical work on the quick, accurate, economical and flexible basis which the Electric Accounting Method assures.

With this end in view The Tabulating Machine Company Division has established two departments—a Service Bureau and a Methods Research Bureau.

The Service Bureau

This department comprises a staff of consulting and operating experts who prepare on our modern high-speed electric tabulating equipment any accounting or statistical work required by a client. Every one connected with it has had years of wide experience in applying the Electric Accounting Method to meet the requirements of every line of business.

Self-contained tabulating departments are located at various points throughout the country and are available to both non-users and users of International Electric Tabulating and Accounting Machines.

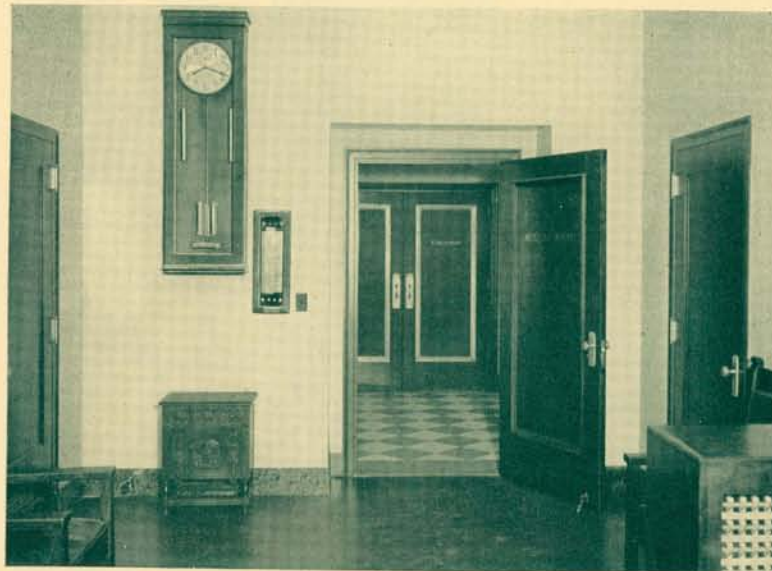
Clients may have all their work done on a monthly basis or special jobs on a per-diem or per-hour basis. Every job is completed in the shortest possible time.

In addition to the speed with which the work is done, the charges are reasonable. Users of the service obtain high production at a surprisingly low cost.

The Methods Research Bureau

This department analyzes clients' problems and develops the most advantageous usage of our tabulating equipment. It maintains files of data pertaining to each device, to each application, and to most of the country's industries. It operates for the benefit of our tabulating machine users and renders its services without charge.

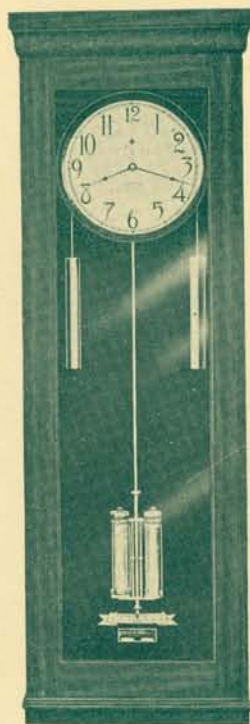
INTERNATIONAL TIME RECORDERS AND ELECTRIC TIME SYSTEMS



INTERNATIONAL Time Recorders and Electric Time Systems are used by every kind of industrial organization, business, and institution throughout the world—wherever time is indicated, measured and recorded. Since 1889, when this company developed the world's first mechanical time recorder, International has been introducing devices that increase efficiency and accuracy in time handling.

Today the line includes hundreds of different types of devices, representative models of which are described on the following pages.

All of the various time indicating, signaling and recording units illustrated will operate individually or any number of machines may be combined and operated as a system. An exclusive supervisory feature enables this system to maintain always-accurate time throughout an entire building.

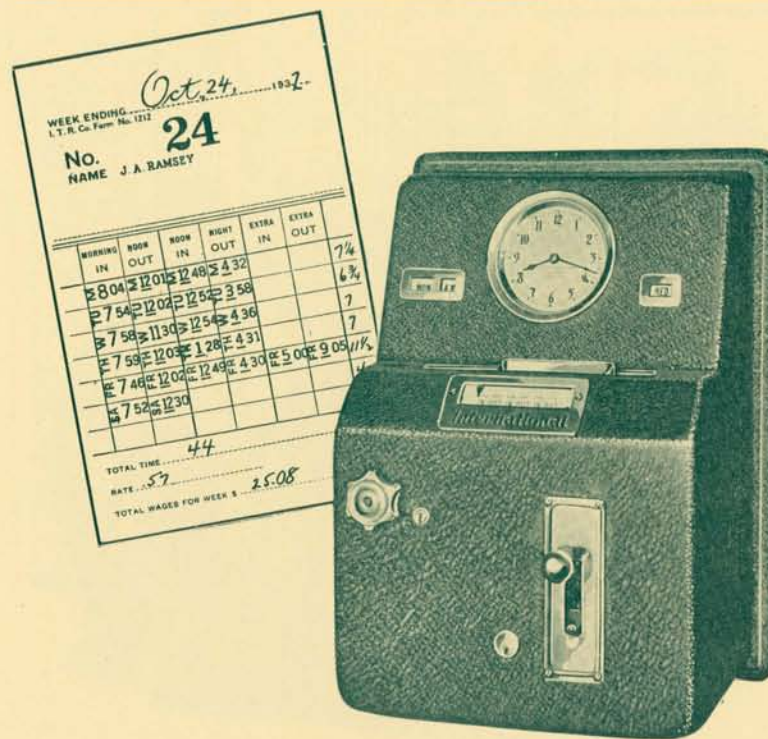


THE MASTER CLOCK

THE International Master Clock is the controlling center of an Electric Time System—the source of accurate time for the various secondary time pieces distributed throughout the system.

The International Master Clock is the finest commercial time piece manufactured and will rate within ten seconds per month of true time. Because of its ability to accumulate reserve power, it unflinchingly maintains the “heart beats” of the system it controls—unaffected by variation of voltage or power interruptions.

Master Clocks are available in many models and in a wide variety of finishes to conform with practically any decorative or architectural scheme. In addition to the numerous wall types there is a wide selection of “grandfather clock” models.



THE ATTENDANCE TIME RECORDER

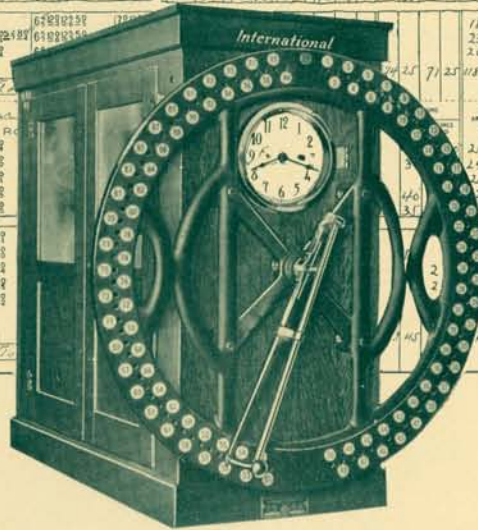
INTERNATIONAL Card Type Attendance Recorders have been used for many years by concerns all over the world. The metal case machine, illustrated on this page, is the most recent model.

It provides an accurate, indisputable, unchangeable card attendance record for each person for any pay period. It automatically selects the proper registering position for all arrivals and departures. The two color ribbon automatically indicates in red all late arrivals and early departures. Of heavy compact construction, it incorporates new features of design in keeping with modern engineering standards.

The Card Recorder may be operated individually from any electric current outlet or included as a secondary unit of the International Electric Time System. The same machine is also available in a variety of spring driven models.

Western

EMPLOYEES	NO.	PAY ROLL WEEK ENDING			JOB TIME	BASE	PAYROLL			DEDUCTIONS			NET AMOUNT DUE				
		MON.	TUES.	WED.			EXTENSION	ASSURANCE	TOTAL	INSURANCE	SAVINGS FUND						
C. G. DONNELL	1	61990122	61990122	61990122	52	54	60	32	140		82	46	50	3	09	27 90	
A. B. BROWN	1	61990122	61990122	61990122	52	54	54	29	16	1	25	30	41			30 41	
L. S. CLINTON	1	61990122	61990122	61990122	44	45	56	25	20		25	20	35	2	50	22 55	
A. M. TYLER	1	61990122	61990122	61990122	54	54	57	30	78		30	78	40			26 99	
A. C. POWERS	1	61990122	61990122	61990122	46	47	51	24	23		24	23				24 23	
F. H. DONKING	1	61990122	61990122	61990122	52	54	44	26	46		26	46		2	50	23 96	
J. D. WURFEL	1	61990122	61990122	61990122	44	44	43	21	40		21	40				20 96	
W. E. ELLIOTT	1	61990122	61990122	61990122	52	54	44	25	76		25	76		3	50	24 96	
F. H. BROWN	11	61990122	61990122	61990122												18 45	
R. C. DECKER	11	61990122	61990122	61990122												23 75	
E. C. BULLER	11	61990122	61990122	61990122												24 87	
EMPLOYEES														25	71	25	1182 04
J. P. AIRBOND	11	61990122	61990122	61990122												24 95	
T. P. THOMAS	11	61990122	61990122	61990122												24 63	
V. F. SCHMIDT	11	61990122	61990122	61990122												27 90	
L. A. CHASE	11	61990122	61990122	61990122												24 58	
E. A. McDONALD	11	61990122	61990122	61990122												27 78	
G. W. MORGAN	11	61990122	61990122	61990122												15 70	
L. B. ROOT	11	61990122	61990122	61990122												22 70	
H. S. MILLER	11	61990122	61990122	61990122												22 70	
W. B. FORTSON	11	61990122	61990122	61990122												22 70	
J. B. JONES	11	61990122	61990122	61990122												17 72	



THE AUTOMATIC PAYROLL MACHINE

THE Automatic Payroll Machine furnishes, on one sheet, the daily registrations for all employees and payroll extensions for an entire pay period. The record sheet remains inside the machine until the end of the period, when it is removed, separated into blocks of fifty employees, and filed as original pages in the payroll binder. Compilations are made alongside the registrations. In addition to the speed and convenience this record brings to compiling payrolls, it is always available for income tax or other legal references.

Automatic Payroll Machines are available in many models, covering any payroll period and in capacities of 50, 100, and 150 employees each. They may be operated individually—with either spring or electric drives—or as secondary units in the International Electric Time System.

DAILY COST CARD

No. 27 DATE 8/23/32
I. T. R. Co. Form No. 6977

NAME Joe Ralston

JOB No.	Time	Clock Time Record
	OFF	
	ON	
	OFF	
	ON	
732	OFF	AUG 23 9.0
	ON	AUG 23 8.5
	OFF	AUG 23 8.5
701	ON	AUG 23 7.3
	OFF	AUG 23 7.3
	ON	AUG 23 4.8
	OFF	AUG 23 4.8
	ON	AUG 23 3.2



THE JOB TIME RECORDER

THE purpose of an International Job Time Recorder is to furnish accurate, PRINTED records of the start and finish of every job or operation.

The complete labor cost story, in clear, legible, indisputable figures, showing to the minute actual time consumed, can be printed on any kind of job ticket or slip.

These records reveal time lost on and between jobs—render cost information immediately available and permit a constant, day-by-day close-up of time purchases and expenditures.

Many models of International Job Time Recorders are available. The one illustrated on this page (series 2000) may be had for operation either individually (from an electric light socket) or as a unit of the International Electric Time System. Several spring drive models are also available.

DATE: 4/27/32 Form No. 2144*
 NAME: T. Carlton No. 10

CLOCK	TIME	ORDER	REV. NO.	PCS.	RATE	JOB
TH	5:00	128	4	55		B6
TH	4:30	763	3			
TH	4:30	131	4	108		B4
TH	3:28	765	3			
TH	3:28	134				
TH	2:10	A				
TH	2:10	13				
TH	1:46	R				
TH	1:00	14				
TH	10:50	R3				
TH	10:50	14				
TH	9:46	S-5				
TH	9:45	14				
TH	8:30					

827 1200

IN OUT

REMARKS

THE MODEL 700 JOB TIME RECORDER

A RECENT addition to the International line of Job Time Recorders is the Model 700 illustrated on this page. It is designed to bring modern, accurate cost accounting facilities within reach of the smaller organizations.

This recorder has the same high grade mechanism, the same flexibility, and prints the same kind of record as those International Job Time Recorders used where elaborate cost systems are kept.

Each workman prints his own record of starting and stopping on all jobs. Any kind of cost card ticket or slip may be used without changing present forms.

This recorder in a neat, compact, metal case with durable crackled finish may be set up anywhere for instant operation wherever there is an alternating current outlet.

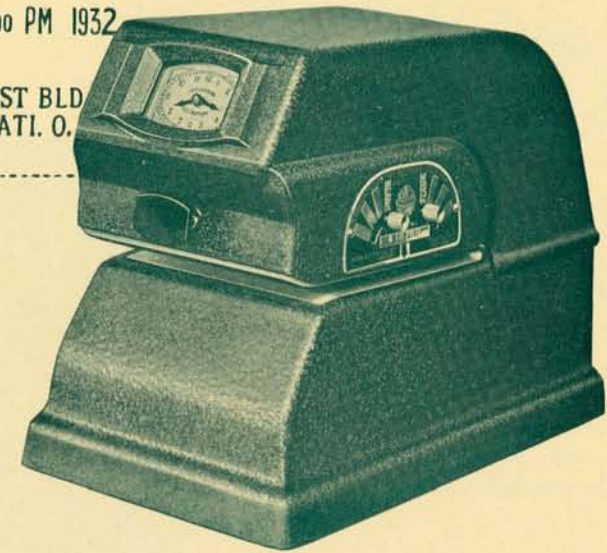
RECEIVED

COHLE & TYREE

MAR 1 2 00 PM 1932

UNION TRUST BLD
CINCINNATI, O.

BY -----



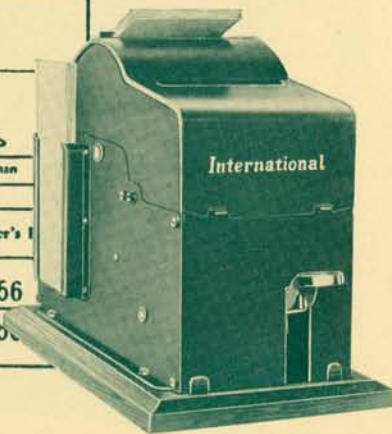
THE ELECTROPRINT TIME STAMP

THE International Electroprint leaves no chance for neglect in the handling of important papers. It speeds up routine work by putting in plain type a record of the progress of paper work through office, factory or institution.

This is the only completely automatic time stamp manufactured. Registrations, made electrically by a slight touch of the finger, show the year, month, date, hour and minute, AM or PM, along with department or individual's name. Interchangeable type cylinders print a wide variety of notations, such as "Received," "Acknowledged," "Approved," etc., along with the regular registrations.

The Electroprint is built for operation either with an International Electric Time System, or directly from an AC electric current outlet as an individual unit. Other models are provided for spring drive operation.

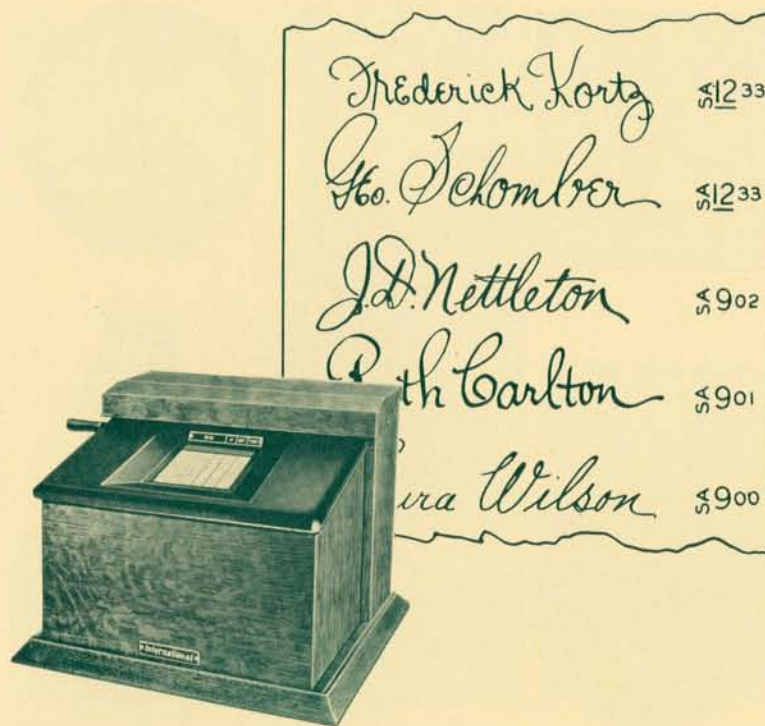
PRODUCTIVE DAY WORK				
DEPT. <i>9</i>	DATE <i>June 8/32</i>			
Order No. <i>482</i>	Part No. <i>341</i>			
Machine No. <i>6</i>	Operation No. <i>89</i>			
DESCRIPTION <i>Cutting off</i>				
Approved by <i>A. F. Nichols</i> Foreman				
DAY WORK				
	Elapsed Time	Money Value	Burden	Worker's I
Start	0.0	0.00	0.00	156
Stop	1.2	0.72	0.72	156



THE MONEY TIME RECORDER

THE International Money Time Recorder automatically computes and prints the exact elapsed time on every job or operation. When the card records reach the cost department no computations are necessary. The correct elapsed time, the labor charge, and the overhead amount have all been computed, thus eliminating several operations ordinarily performed by the cost and payroll departments. Errors are reduced to a minimum and complete cost analyses are available almost as soon as the work is completed.

This machine lends itself readily to use in conjunction with an Electric Tabulating and Accounting installation. The original records may be printed on tabulating cards, in which case, payroll compilation, distribution, and cost analyses become entirely automatic procedures.



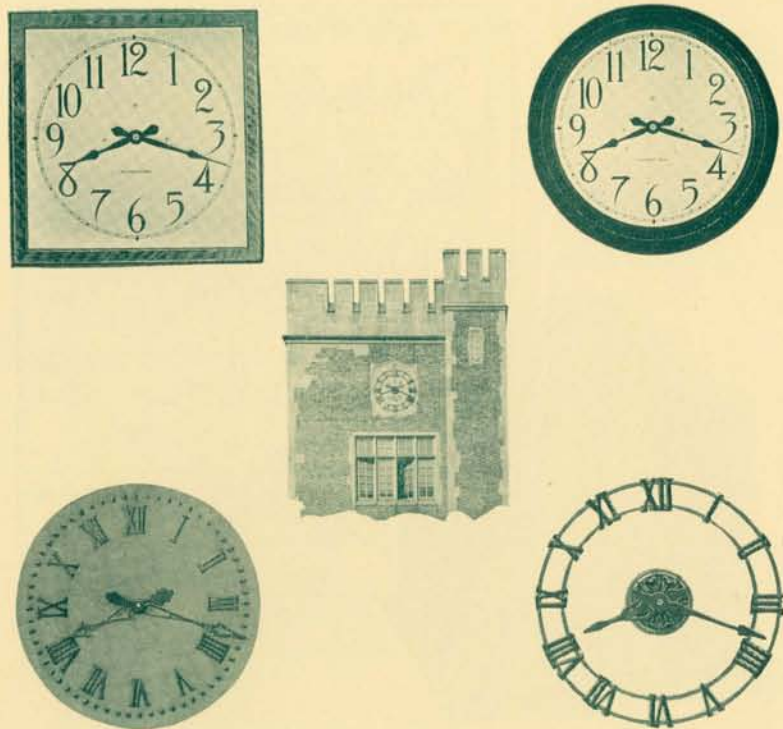
THE AUTOGRAPH TIME REGISTER

THE Autograph Time Register is a mechanical attendance recorder that combines the printed time record with personal signatures. Its operation resembles the simple signing of a book.

This recorder is a dignified, absolutely dependable means of supervising attendance. One person cannot register for another without detection.

Because of its flexibility it finds ready application in places where full time effort is essential to profitable operation. The uses are varied. It frequently serves as a watchman's station; as a register for office boys, messengers, or delivery men; to record entrances to and departures from bank vaults, tool or supply rooms, office buildings after hours, etc.

Furnished in models for International Electric Time System operation or individually with either spring or electric drives.

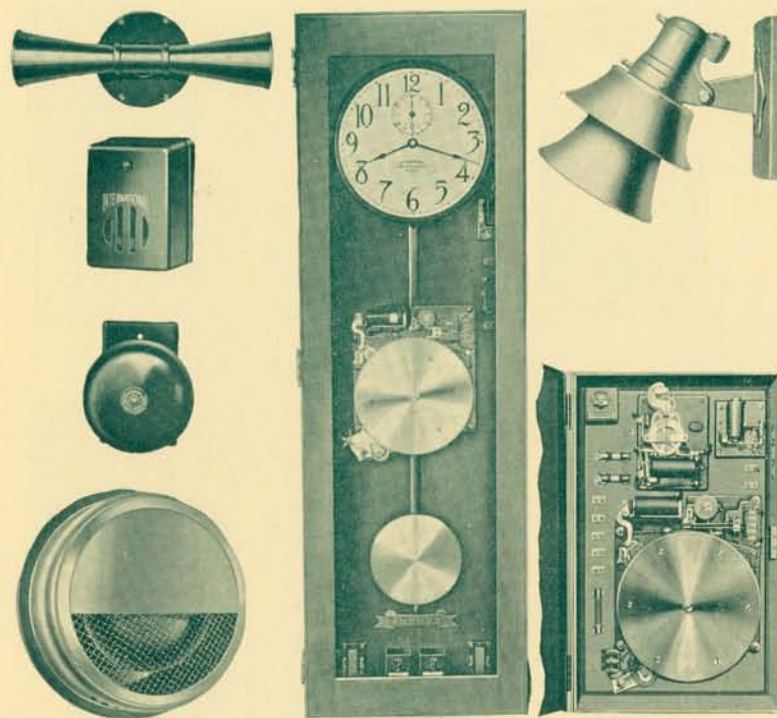


SECONDARY CLOCKS

INTERNATIONAL Secondary Clocks are the only type clocks to use where uniform time is necessary. They place accurate time wherever desired—without the bother of winding, setting or other maintenance. Operated as units in an International Electric Time System, they are automatically checked and proved at regular intervals for agreement and accuracy.

In schools, hotels, hospitals, public buildings, they are used primarily to furnish dependable time service. In business and industrial organizations they establish regularity in routines, coordinate activity and set a gauge of progress on production schedules.

There is an International Secondary wall clock for every purpose. Hundreds of designs are available for selection, including various types of suspended, outdoor and tower clocks. Special clocks may be built to suit any architectural plan.



PROGRAM SIGNALING SYSTEMS

AN International Program Machine automatically *sounds* exact time for starting and stopping of work, changing of shifts, moving of classes in schools, etc. The signals may be given by electric bells, horns, sirens or whistles.

This device consists of a drum, or wheel, which is slowly turned forward like the hands of a clock. The "schedule" of signals is set up by means of easily adjusted pins or lugs. A calendar device silences all signals during the night, Sundays, or any other required period.

The machine illustrated permits simultaneous operation of several different schedules, any combination of signal intervals and any type of signal. It operates as part of an International Electric Time System. A wide variety of other models is available to meet any specific requirement.

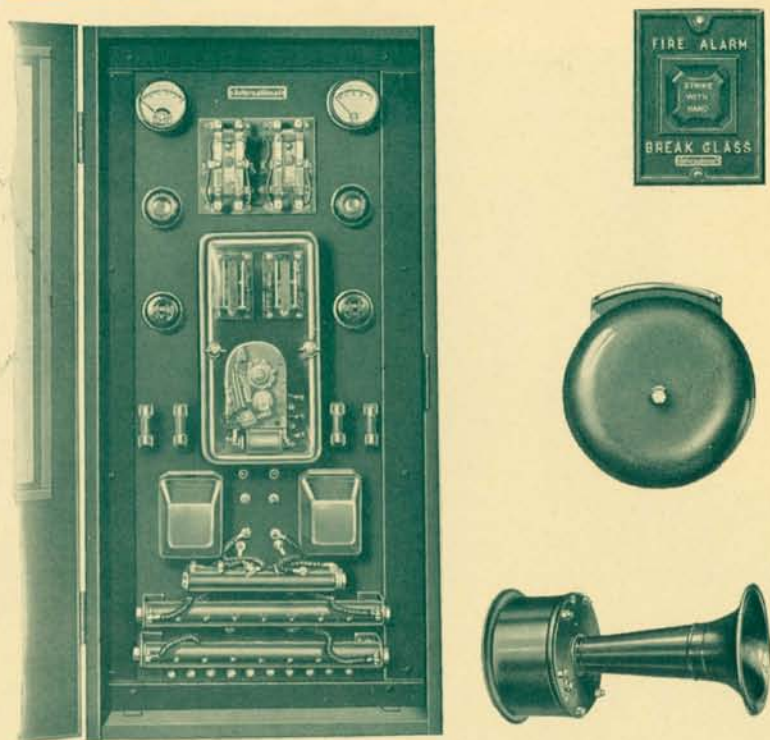


INTER-COMMUNICATING TELEPHONE SYSTEMS

INTERNATIONAL Telephone Systems are designed for interior communication. Their chief applications are in business organizations, industrial plants, schools or other institutions and residences. They provide inter-office, room or departmental communication without interfering with or congesting outside telephone systems.

Several types of systems are available. The simplest of these is a master telephone and push button board connected to a series of outlying telephones.

More elaborate systems provide switchboards or private exchanges and any number of outlying telephones operating on the same general principle as a public telephone system. Automatic Dialing systems are also provided to permit inter-office or room communication without the necessity for a "central" control board.



FIRE ALARM SYSTEMS

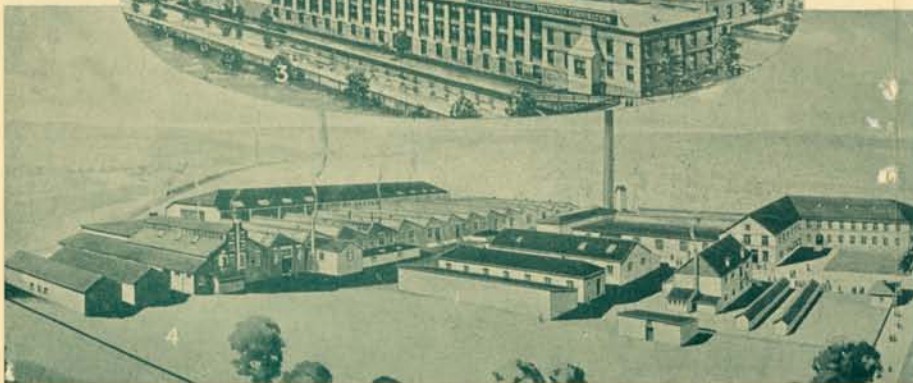
INTERNATIONAL manufactures a complete line of interior fire alarm equipment suitable for every industrial or institutional use where the utmost in protection of life and property is desired.

All the latest engineering features are incorporated in these systems. They are sold and installed under the approval of the Fire Underwriters Laboratories.

Of particular interest is a new break glass station requiring no lever or hammer to break the glass. A slight blow with the hand on a metal push plate is sufficient to start an alarm—thus eliminating the danger of broken glass.

There is a system suitable for every requirement—including all the approved circuits, whether simple or elaborate. A wide variety of fire alarm bells, horns, gongs and other sounding devices is available.

INTERNATIONAL FACTORIES

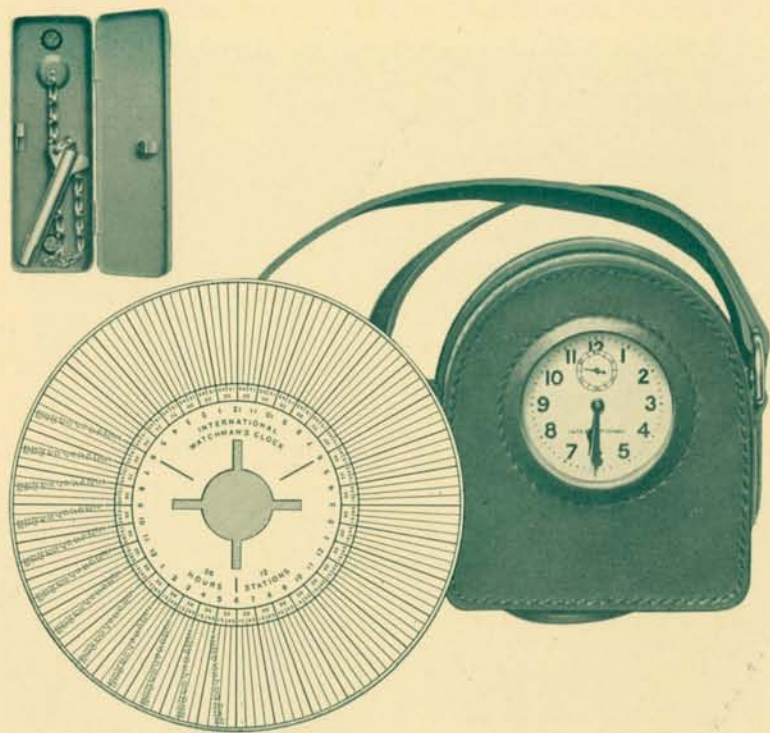


1. Endicott, New York
2. Dayton, Ohio, Plant No. 1

3. Washington, D. C.
4. Sindelfingen, Germany

5. Dayton, Ohio, Plant No. 2
6. London, England

7. Paris, France
8. Toronto, Canada



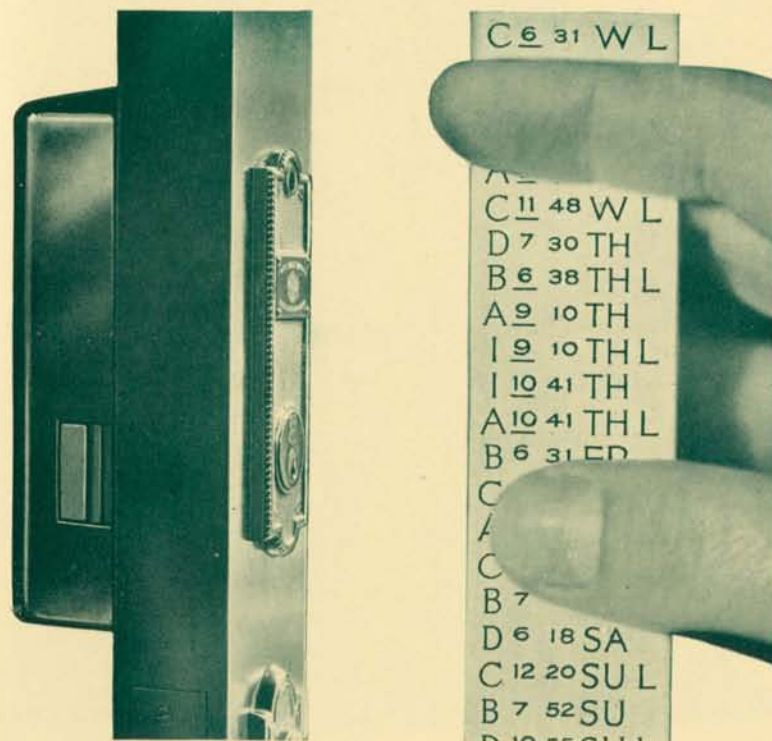
THE WATCHCLOCK SYSTEM

THE International Watchclock System consists of a portable recorder and stationary registering stations. Its purpose is to insure systematic, regular patrol of protected property. The recorder is carried to each station where an embossed tamper proof record is made of the visit. Any negligence or irregularity is revealed and demands explanation.

The record has a capacity for 36 hours continuous service, permitting the clock to be loaded on Saturday and opened Monday without changing the record in the meantime.

The clock, in a durable and attractive leather case, is of special design for this particular purpose. It will furnish eight-day service without winding.

All International Watch Clock Systems and equipment carry the label of approval of the National Board of Fire Underwriters.

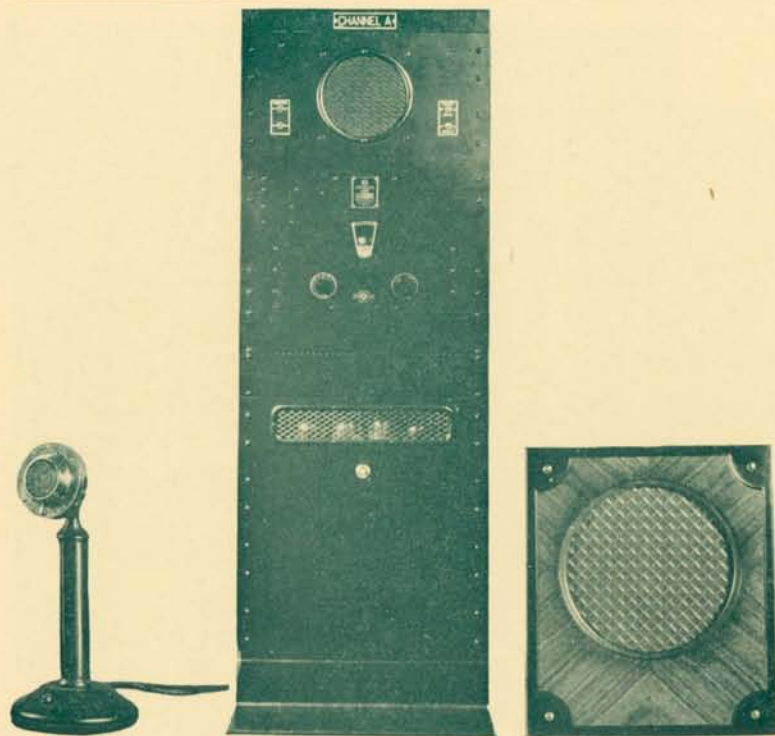


THE RECORDLOCK

THE advanced International Recordolock is a recording door lock that gives complete protection for, and greater supervision of, important doors. It is the only device of its kind on the market that gives a private, easy-to-read, printed record of: who locked or unlocked the door; the time to the minute when the locking or unlocking occurred; whether the locking was done from the inside or outside; whether all openings were securely fastened; and the time of supervisor's visits or watchman's rounds.

This valuable information, printed on a convenient paper tape, is available only to the owner. It employs no codes or symbols and no special interpretation is required.

It is the only lock of its kind that may be satisfactorily owned outright—a feature of very decided economy.



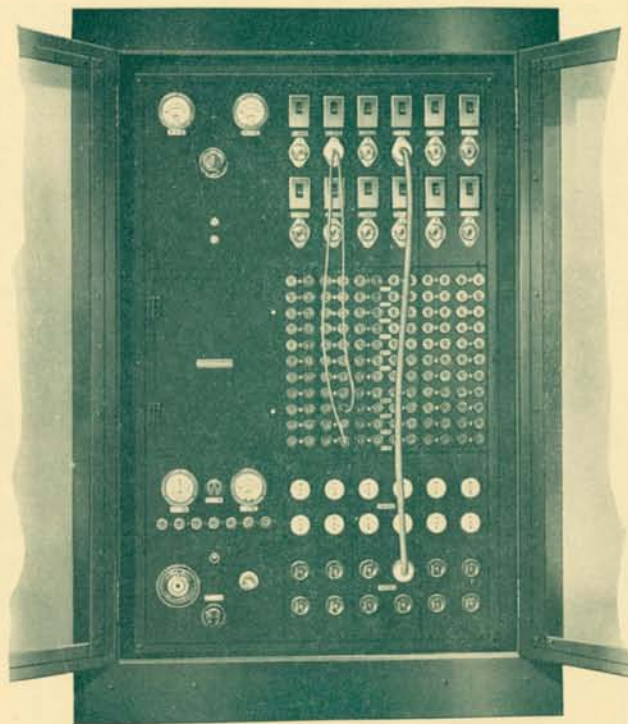
PUBLIC ADDRESS SYSTEMS

INTERNATIONAL Centralized Radio, or Public Address Systems, are used to control, amplify and reproduce either radio or phonograph sound in hotels, hospitals, schools, institutions, public buildings, and large business establishments.

These systems require a single antenna with receiving and phonograph equipment in a room convenient for supervision by proper authorities. Any number of sound reproducers (loudspeakers, head telephones, etc.) are located throughout one or more buildings. This arrangement permits a flexible use of either inside or outside broadcast programs.

In addition to musical programs, this system is used for group instruction or special bulletins, thus eliminating the necessity for assembling many groups or individuals in one room.

International is prepared to install any kind or size system according to individual needs.



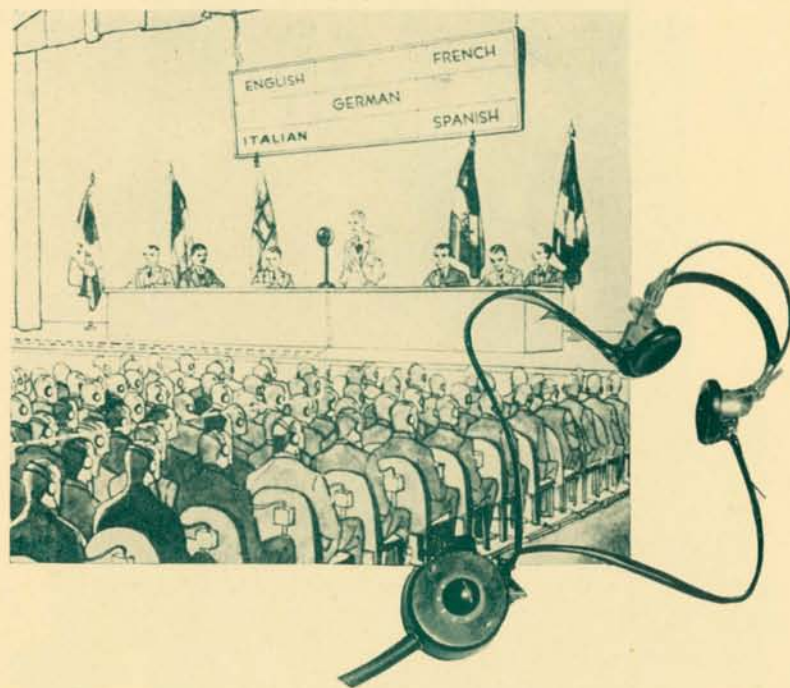
THE LABORATORY EXPERIMENTAL PANEL

FOR use in science laboratories of business or industrial organizations, schools and colleges, International has developed a modern electrical experimental panel. Any number of different voltages, in either alternating or direct current are made available for the conducting of experiments. Many experiments may be handled simultaneously regardless of the voltage required.

Special protective features are employed which make it impossible to receive accidental electrical shocks. Danger of improper connections is entirely eliminated.

The panels, furnished in units, may be supplemented at any time with additional sections. All parts and units are accessible from the front of the board.

This company is prepared to build equipment for any special requirement.



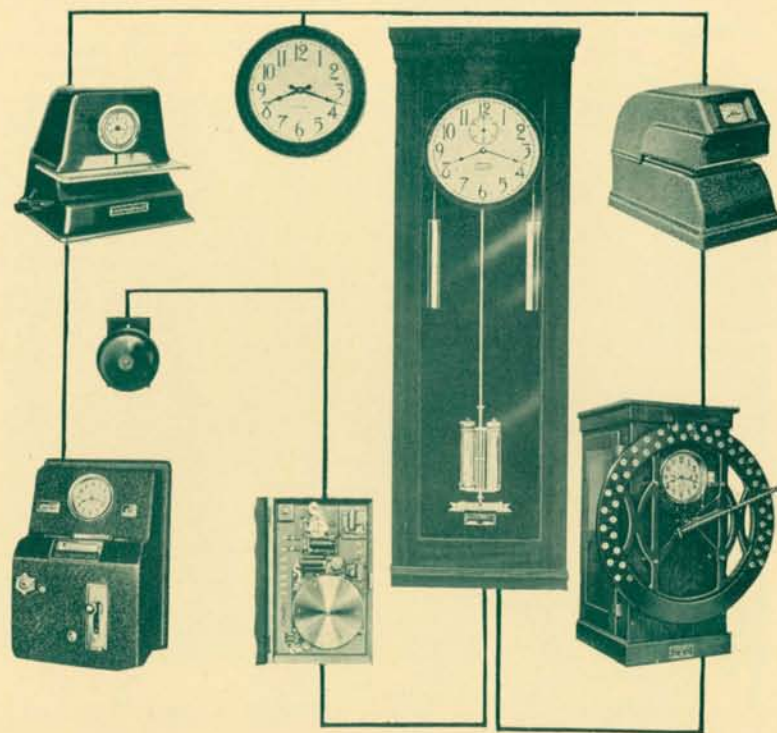
THE FILENE-FINLAY TRANSLATOR SYSTEM

NO LONGER are conferences between men of many lands doomed to be dreary affairs of interminable length where a succession of interpreters repeat every original speech made.

The International Filene-Finlay Translator System permits such conferences to proceed with as much ease as a gathering where everyone speaks the same language.

Each seat is equipped with a set of headphones and a selector device, by means of which delegates may "listen in" on any language desired. Any member of the audience may select the language he wishes without interference.

This equipment is designed for installation either in temporary or permanent form. Regular amplifying equipment also may be used in conjunction with the translator. Additional microphones may be placed to permit floor discussions.

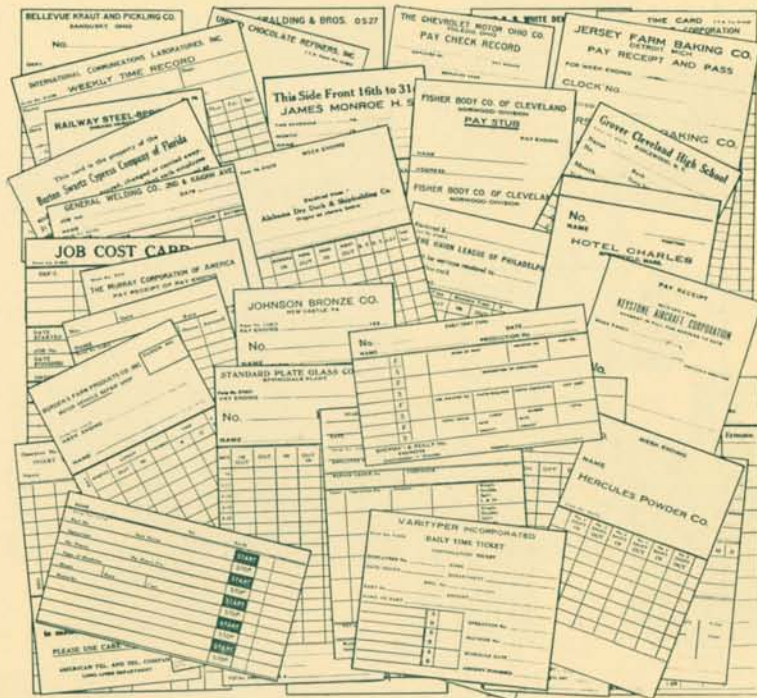


THE INTERNATIONAL ELECTRIC TIME SYSTEM

THE International Electric Time System is the most dependable means of maintaining uniform, accurate time throughout a building or group of buildings. Any number or combination of time indicating, recording and signaling devices are operated and controlled by one Master Clock which furnishes the time and supervision for the entire system.

A patented, exclusive feature causes all the time units to compare themselves with the Master Clock once every hour. If by accident any unit has gotten "out of step", correction is made before the next hour begins, thus completely eliminating the manual regulation and "step-ladder" maintenance common to ordinary electric clock systems.

Thousands of International systems are giving satisfactory service throughout the world—wherever uniform time is important.



CARD PRINTING FACILITIES

IN ITS modern factory at Endicott, New York, International maintains the largest card printing plant in the world, with a capacity of 25,000,000 cards per month.

Automatic machinery and special high speed presses designed by International engineers make it possible to produce forms at the lowest possible cost, consistent with quality.

Thousands of all kinds of forms are available—including cost cards, time cards, production cards, job tickets, dial sheets, etc. The plant is equipped to set up and print any special form to suit individual requirements.

All the paper or "stock" is made specially for this company, and is subjected to rigid laboratory tests to determine whether or not it conforms with International standards of printing quality, thickness, composition, texture, durability and tensile strength.



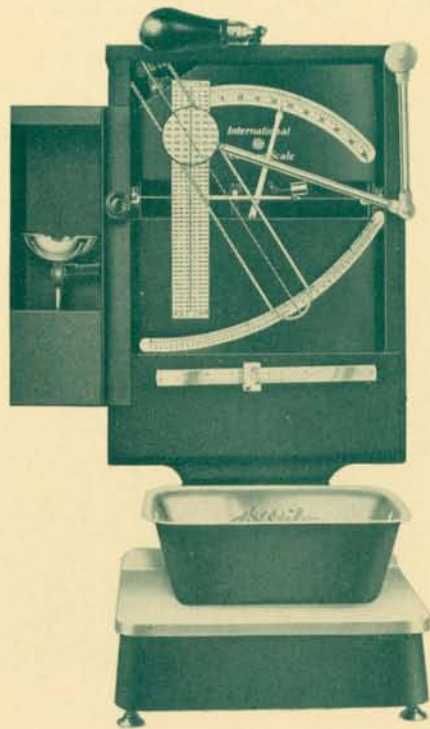
THE products of the International Scale group consist of a great variety of industrial scales, of both general and special types, that may be roughly divided into four groups when considering the purposes for which they are used:

Scales that furnish data required by the accounting department;

Scales that answer the requirements of receiving, shipping, manufacturing and processing departments, and of stores;

Scales of both standard and special types that serve special purposes.

The same engineering skill and mechanical perfection that for more than four decades have marked the other products of the International Business Machines Corporation characterize these devices.



THE ACCOUNTING SCALE

THIS scale has the distinction of being the only automatic counting scale that indicates in figures on a chart the number of pieces in the load.

No ratio table is needed. The operator makes no mental computations. The pieces to be counted are placed on a platform and a few similar ones in the unit pan. The count is immediately read on the counting chart. The counting operation can be further speeded by using standard unit-weight figures and properly setting the indicator on the unit-weight chart. The total weight of the counted parts is simultaneously shown with the count indication.

This device counts with equal facility pieces, yards, gallons, and other units of measurement. Available in counter and floor models, and various capacities.

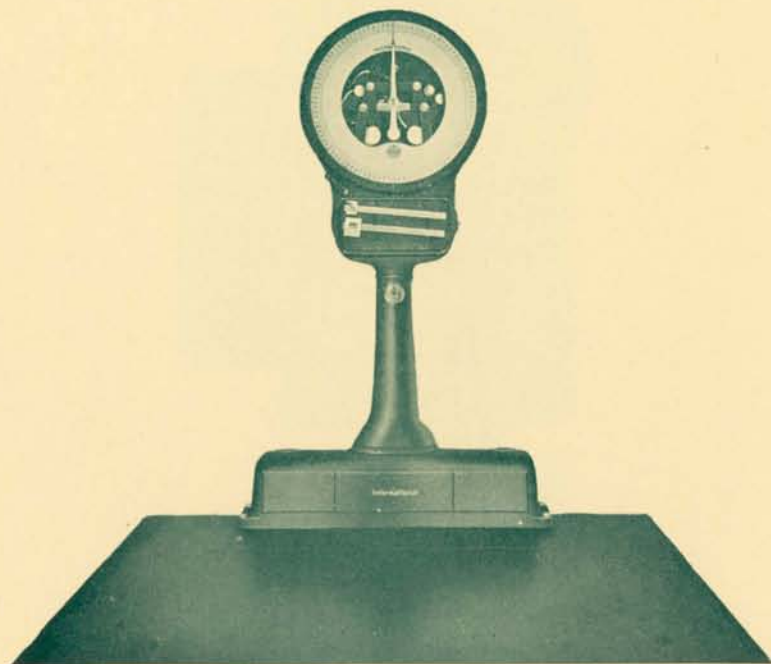


THE PORTABLE SCALE

THIS type of International Industrial Scale is an important factor in the guidance of those operations designed to protect money invested in material. Its accuracy and speed of operation assure the orderly handling and control of material in factories, mills, warehouses and stores.

The head mechanism of this and the dormant type contains only 11 moving parts, and the ribbon cam tracks are ground accurately to a tolerance of 25/100,000 inch. A full floating parallel link suspension absorbs all lateral motion before it reaches the pivots of both the portable and dormant types. This prevents the razor-like knife edges, on which accuracy depends, from being bent or sheared.

This type is made with long or short columns, the dial facing in any direction. Various chart and beam capacities are available.

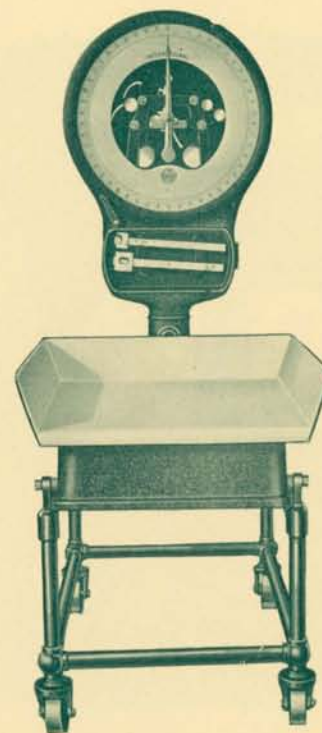


THE DORMANT SCALE

THE automatic dial platform scale of the dormant type reduces to a minimum the manual operations involved in weighing heavy drafts and assures a continuous accuracy of results.

In this and the portable type, the gear teeth of the rack and pinion are correct in form and spacing to a tolerance of 25/100,000 inch; the material used in pivots and bearings is a special grade of high carbon tool steel; the 1-piece steel platform is heavily ribbed for strength; all mechanism is enclosed in such manner as to insure maximum protection against accidental damage to vital parts; and many parts are gold or chromium plated for protection against corrosion.

The Dormant Scale is furnished in various dial capacities and platform sizes to meet general requirements.

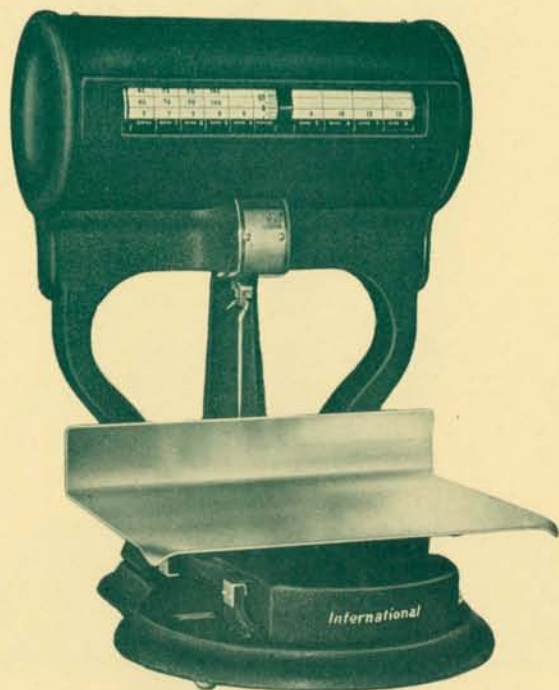


THE PACKING HOUSE SCALE

THE Packing House Scale was designed to meet the demands of modern methods in large and small packing houses, wholesale and retail markets, commissaries, and hotels. It assures an accurate record of weights of receipts and shipments.

Being of the portable type it can be easily moved to wherever the weighing is to be done. It is a short column scale supported on a rigid pipe stand, the wheels of which can be removed. The height of the levers from the floor is regulated by the stand.

It is furnished with a standard platform and with or without a pan. When used in conjunction with a conveyor system it is supplied without the pan. Various dial capacities are available to meet individual requirements.

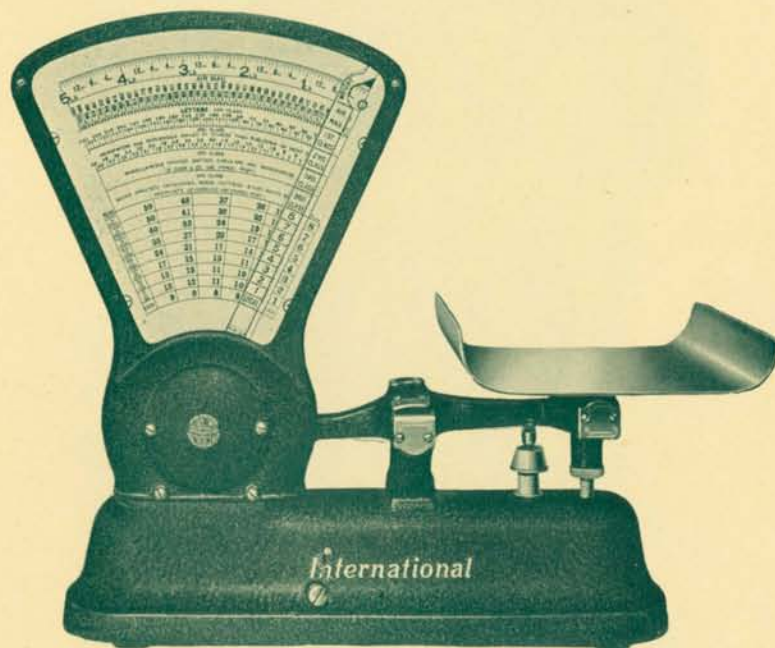


THE PARCEL POST SCALE

THE Parcel Post Scale is a 70-pound cylinder type scale that automatically computes and indicates the postage required on packages mailed to any zone. It is equipped with a clearly defined, easily read chart that shows both the weight and the postage requirement. It can also be used for general weighing and determining the weights of express shipments.

It is a dependably accurate, sensitive and sturdy scale that guards against overpostage which means waste of money, and underpostage which means delay and possible failure to meet delivery promises. Its indicating speed and easily read chart permit a rapid succession of weighings to be made. Confusion and delay are thus eliminated from rush hour work.

Four leveling feet correct surface variations on mailing tables. Finished in dark green morocco.

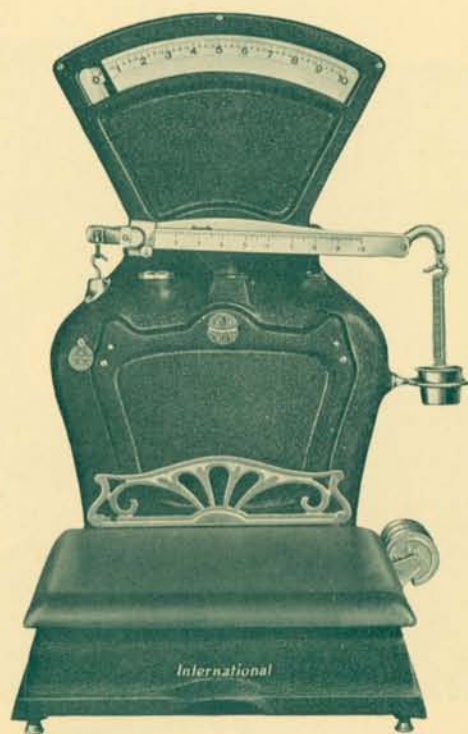


THE MAILING SCALE

THIS is a combination letter and parcel post scale that automatically indicates the weight and postage charges for air mail, 1st, 2nd and 3rd class mail, and for parcel post matter to all zones. It can be adapted for use with either a 3- or a 5-pound chart. Two other models of larger capacities are available: one is equipped with an 8-pound and the other with a 20-pound chart.

The figures indicating the postage amounts are of such size and are so clearly defined that any reading can be made at a glance.

The accuracy of this scale not only makes its purchase possible through the actual savings effected but, which is more important, protects good-will by eliminating the adverse sentiment created by under-postage.

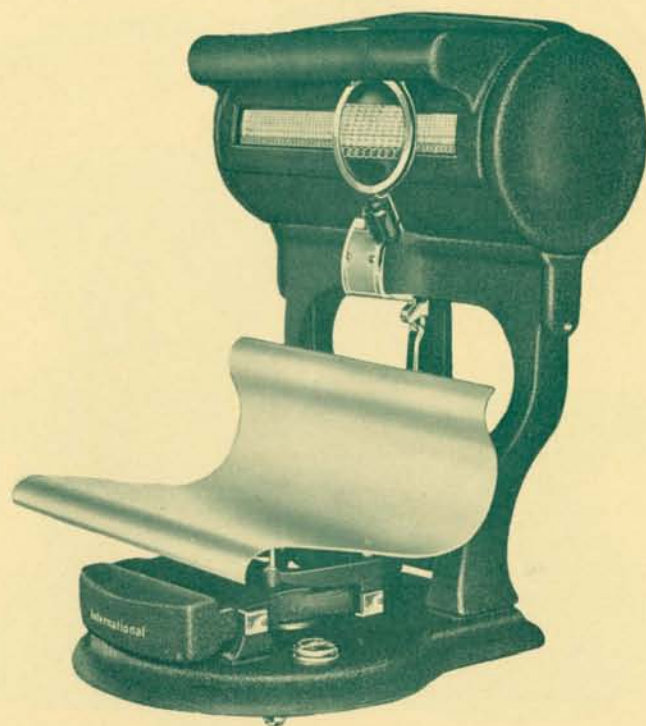


THE INDUSTRIAL BENCH SCALE

THIS is an ideal weighing device for general use in factories, mills, stock rooms, and receiving and shipping departments. It is also applicable to compounding where either open or secret formulas are used; when required for the latter its tare lever and counterpoise can be completely enclosed in an aluminum housing equipped with a Yale lock. It can also be used as a ratio counting scale.

It is sturdily constructed in all respects. Full-floating suspension links and agate bearings protect the pivot knife edges on which accuracy depends. Various charts are furnished.

A few of the numerous applications to which it is adaptable are: straight weighing, checking, testing, dye mixing, compounding, inventory counting, piece-work weighing, and receiving and disbursing material in and from stores.

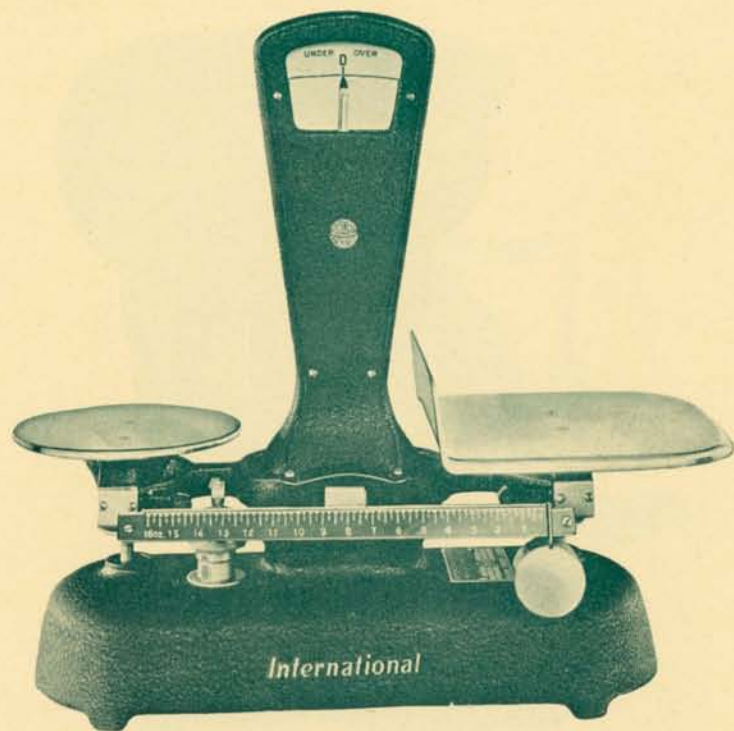


THE YIELD SCALE

THE purpose of the Yield Scale is to compute the "yield"—yards-per-pound—of rayon, cotton, silk or other kind of piece goods material.

When a bolt or roll of fabric is placed on the platform the weight of the piece, its length, in yards and fractions, and the yield are automatically indicated. Fabrics can be weighed and computed at the rate of 200 pieces per hour by anyone possessing but slight experience.

The scale is equipped with the Magniscope which magnifies the chart figures four times their actual size. Total capacity, 50 pounds. A variation of this scale is used for determining the percentage of loading in piece goods material. It eliminates the use of slide rule, ratio tables, mental and written calculations.

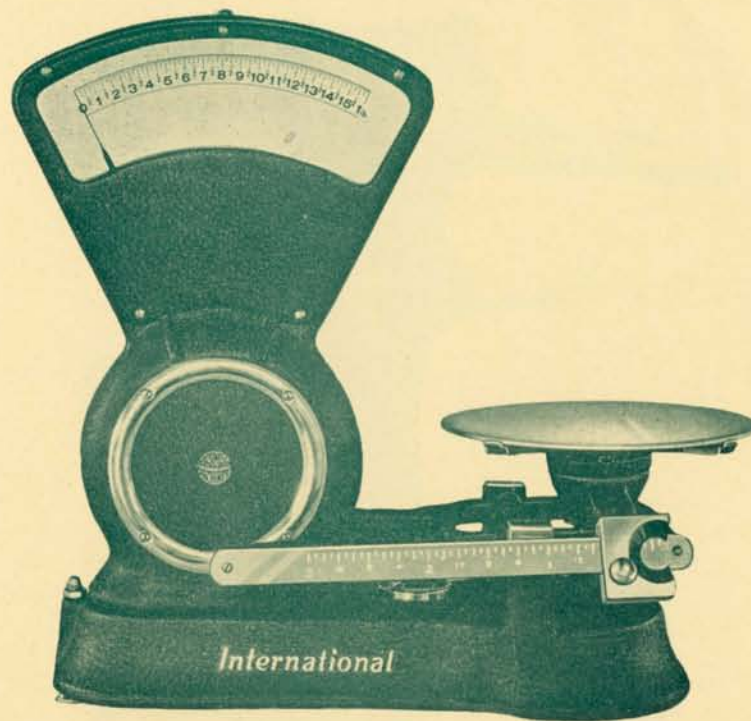


THE OVER-AND-UNDER SCALE

THIS type of scale has a wide field of applications that covers packaging, checking, testing, etc., when an even-arm scale possessing a high degree of accuracy is desired.

It is used extensively in production lines for packaging goods of uniform weight or quantity. Another important application is that of checking for standard of production such parts as have to be kept within close tolerances as regards weight, balance, or both.

The Over-and-Under Scale is extremely compact. Its light weight enables it to be carried from place to place. It is furnished with a tare beam and loose weights to meet requirements. Various types of charts are available. Its total weighing capacity is ten pounds.

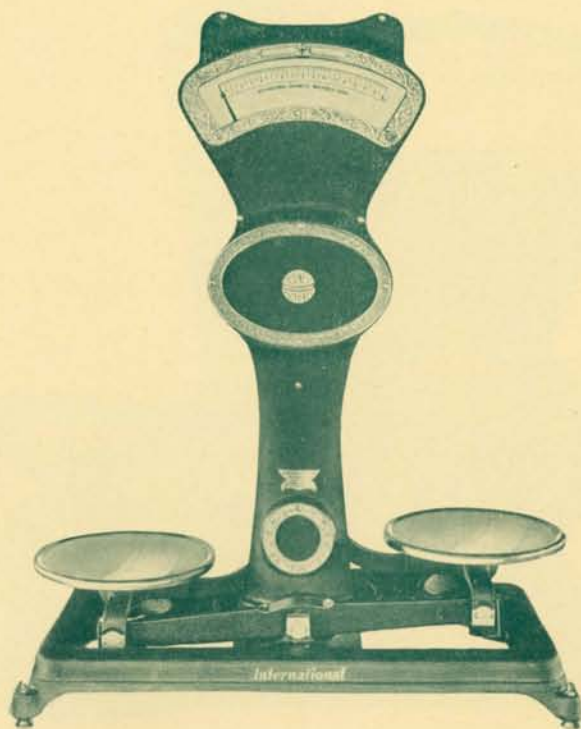


THE UNEVEN-ARM BENCH SCALE

A SCALE of this type meets the needs of the industrial field for a small instrument capable of answering the demand for great sensitivity and accuracy coincident with the handling of very light drafts.

It handles either dry or liquid commodities with equal facility. In shop and industrial work it is especially adaptable to the tasks of balancing parts, checking production standards, and testing. In the laboratory it is an invaluable asset when it is essential to weigh within close limits. For bench use it lends itself readily to a wide range of standard and special applications.

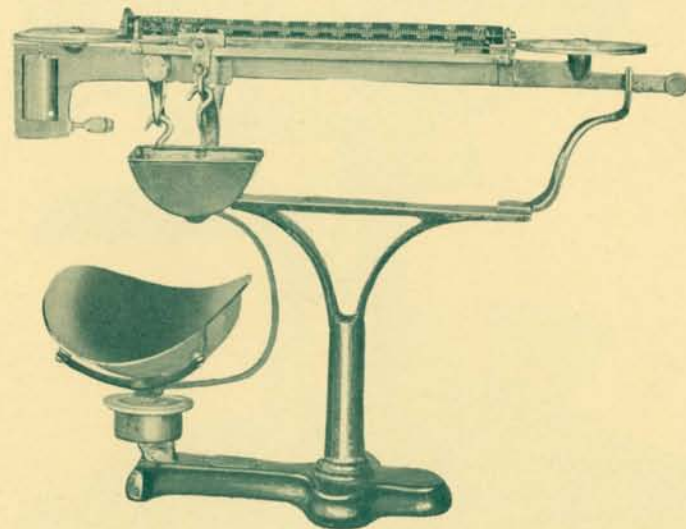
It is equipped with charts of various capacities and types to meet specific demands, including a zero chart for predetermined weighing. The scale can be supplied with or without a tare beam.



THE EVEN-ARM BENCH SCALE

THE automatic even-arm scale has a wide field of industrial applications in compounding, testing, checking, etc. It is an ideal device for laboratory use in those cases where extremely sensitive scales are required. Another important application is that of weighing precious metals used in manufacturing establishments where scales that can be depended upon for uniform accuracy must be employed.

This scale is extraordinarily sensitive because of its construction and the type of lever used. It is furnished in different capacities up to a maximum of 25 pounds, and can be supplied with or without a tare beam, commodity containers, platters, scoops, etc., and with various kinds of charts that meet the specific requirements of the user.

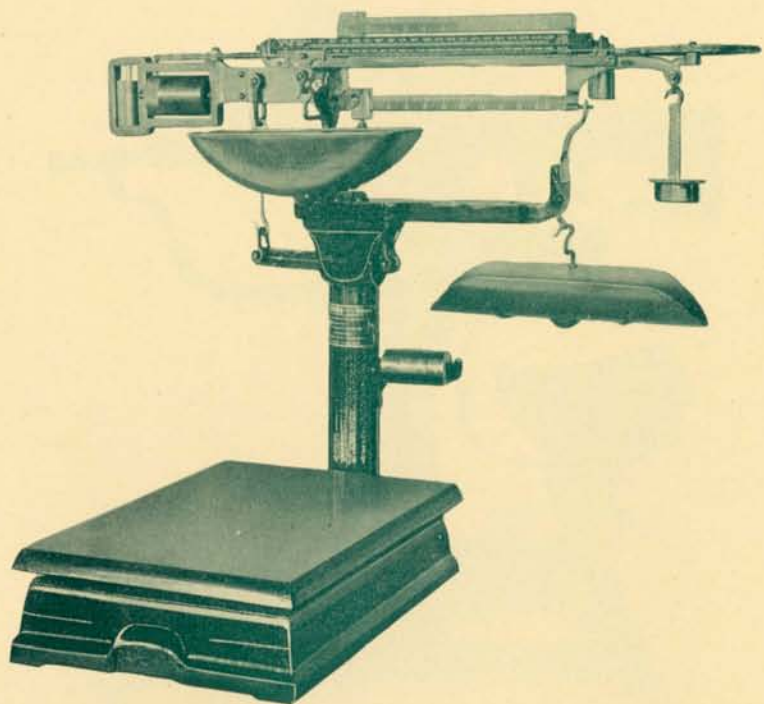


THE NATIONAL COUNTING AND WEIGHING MACHINE

THIS and the three following devices belong to the group of National Counting and Weighing Machines which are now being manufactured and distributed by the International Scale Company Division of the International Business Machines Corporation.

The small capacity bench type illustrated above is a semi-automatic machine that has been perfected for weight-counting operations to meet the practical standards of accuracy demanded by modern industry. The counting principle embodied is that of weight ratio between the unit of material in the ratio pan and the bulk of material on the platform.

Material weighing as light as 1/250 oz. can be counted on this machine. It can be equipped to count units, dozens, or gross lots. The load capacity is 5 pounds.

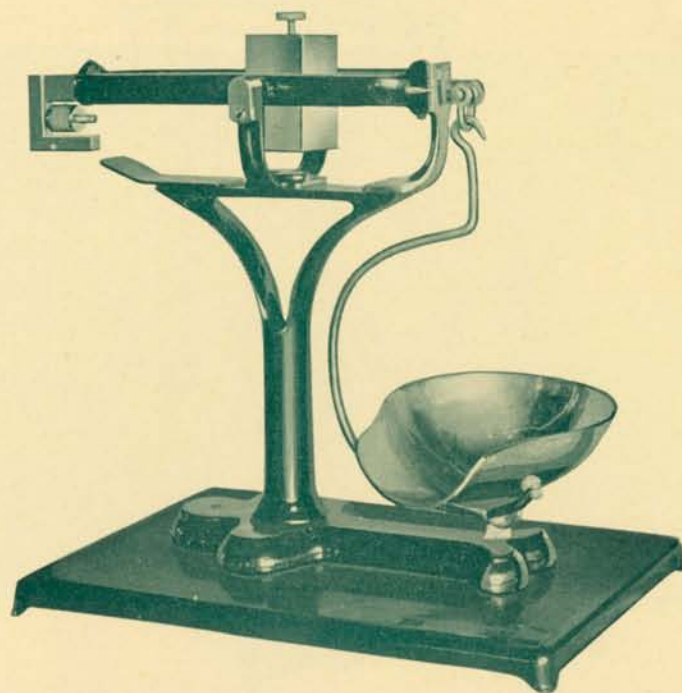


THE NATIONAL COUNTING AND WEIGHING MACHINE

A FEATURE possessed by the National machines is their simplicity of operation. Any one, no matter how unskilled in mathematics, can easily and quickly obtain from them an exact count.

They are employed for counting innumerable classes of manufactured material and material in process of manufacture, ranging from the most minute watch and radio parts to large stampings, castings, and drop forgings. The kind of material, the weight and quantities to be counted at one time determine the type that can most advantageously be used.

The large capacity bench type shown above has a maximum load capacity of 300 pounds, and counts parts and pieces weighing 1/4 ounce or more. Other models of varying load capacities are available. Scoops are furnished as standard equipment.



THE NATIONAL PACKAGING MACHINE

THE National Packaging Machine has a wide range of applications in the packaging of parts of standard size and weight. It is an extremely sensitive device that assures the proper packaging of predetermined quantities of uniform parts, such as fibre washers, ball bearings, screws, pins, clips, etc. It is regularly equipped with a double weighing beam. A hanging platform, with a platform scoop, can be furnished if desired. It is available in models of varying capacities, the maximum being 25 pounds.

The sensitivity of the National Packaging Machines is indicated by the fact that a small capacity model weighs to within 1/1000 of an ounce. This device, like all the National Counting and Weighing Machines, is a saver of time and labor; that and its absolute accuracy are features which recommend it.



THE NATIONAL PORTABLE COUNTING AND WEIGHING MACHINE

THE National Portable Counting and Weighing Machine is a valuable device for use in piece-work operations, for inspection and stock room records, for inventory counting, and in receiving and shipping rooms where parts must be accurately counted and weighed.

The standard model is graduated to count in units, but special machines can be furnished to count by the dozen or gross. Both the weight of a load and the number of pieces in it can be determined simultaneously. Mental and written computations are eliminated from counting operations.

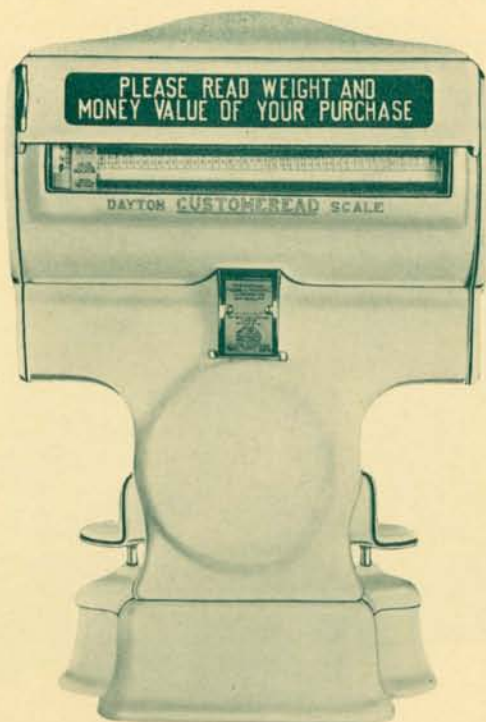
A dormant type is also included among the machines of large capacities; among this type are units weighing up to 20,000 pounds. In all models of the self-contained type pierced floor construction is furnished.

DAYTON MONEYWEIGHT SCALES AND STORE EQUIPMENT



THE Dayton Scale Company Division of the International Business Machines Corporation built and marketed the world's first computing scale in the year 1891. Since that time a complete line of retail store equipment, including electric and hand-operated Slicing Machines, Electric Meat Choppers, and Electric Coffee Mills, has been added to its constantly improved line of retail weighing scales.

As a result, the Dayton Scale Company Division, pioneer in its field, is still the outstanding leader in that field today. Dayton Scale Company products are known the world over for accuracy, efficiency and durability. The Company is proud of its position of leadership and protects that responsibility by the superior workmanship and quality that enter into every product it manufactures.

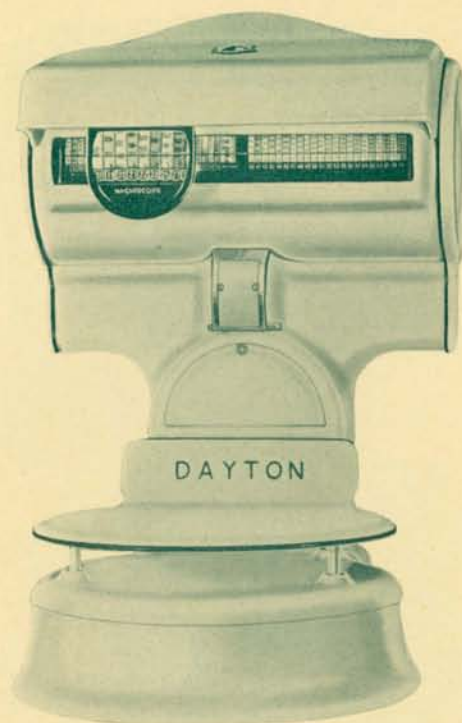


THE ELECTRIC CUSTOMERREAD SCALE

THE new Dayton Customeread Scale has a computing chart on the customer's side, as well as on the merchant's side. The customer can see not only how much the purchase weighs but also the *computed money value*.

This scale establishes good-will and confidence between merchant and customer. It offers for the first time a feature that merchants have wanted . . . that the buying public has wanted . . . and that weights and measures officials have wanted, a scale with computed value indication for the customer.

The new Dayton Customeread Scale contains all the other features that have won for Dayton cylinder scales their reputation for accuracy and durability. It is equipped with the Magniscope and interchangeable glass advertising signs. Furnished in high, medium or low columns to suit all types of counters.

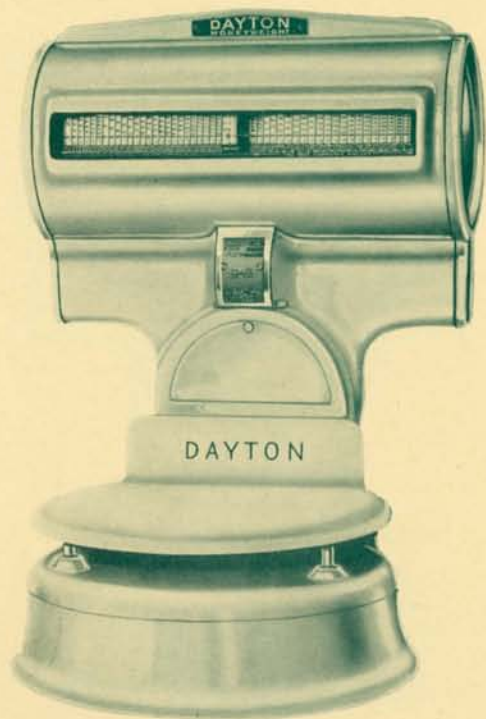


THE MONEYWEIGHT MAGNISCOPE SCALE (Electric)

THIS latest model Dayton Electric Cylinder Scale is equipped with the new Dayton Magniscope. The Magniscope enlarges figures and graduations on the chart so greatly that the scale can be read accurately and instantly from a distance as great as six feet. The clear, mellow light that automatically floods the entire chart and platform not only aids in eliminating eyestrain when reading, but adds materially to the appearance of the commodity being weighed.

The electric advertising feature is another tremendous advantage offered by this scale. Glass advertising signs that can be interchanged instantly are furnished with whatever wording is required. High, low and medium columns are available.

The highest grade porcelain finish used on all Dayton Scales insures lifetime beauty and makes them easy to keep clean.

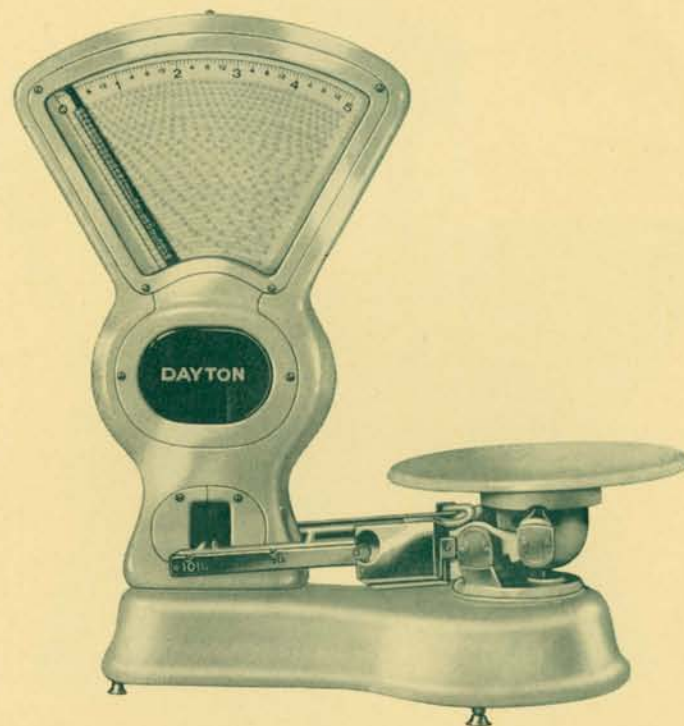


THE MONEYWEIGHT CYLINDER SCALE
(Non-Electric)

THIS scale is widely acclaimed everywhere for its lifetime accuracy, and its reputation for sensitiveness and cleanliness. The quick-stop device gives faster speed of operation while the Dayton Easyread two-color chart with its forty-six to forty-eight prices-per-pound makes possible more accurate value reading.

It has a low, unbreakable platform. The platform and grill are combined in a single piece of porcelained metal. This scale is fully enclosed, every working part being protected against collecting foreign matter which might disturb the accuracy.

Jewel agate bearings and hydraulic shock absorber construction insure accuracy at all weights. Finished in a beautiful and lasting white porcelain. Low, medium, and high columns to suit all counters.

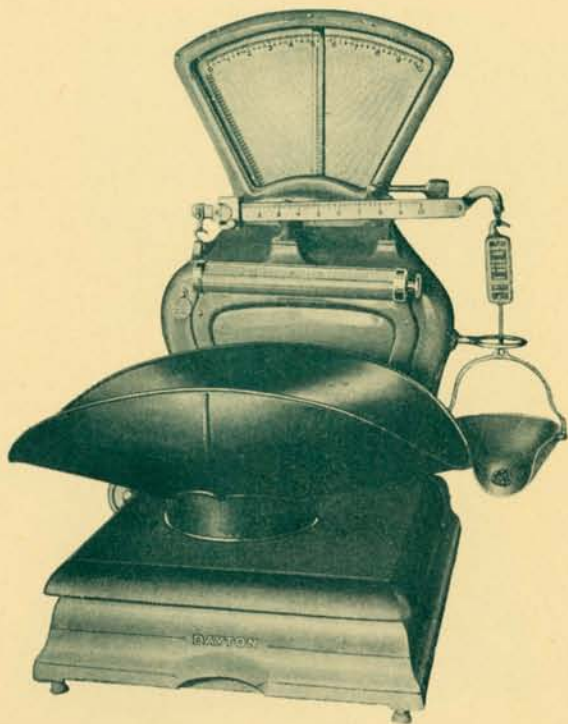


MONEYWEIGHT FAN SCALES

NOTED for their accuracy, fine appearance, and light, compact design, Dayton Fan Scales are used extensively in the weighing of commodities such as candy, butter, tea, spices, coffee, cookies, and vegetables. They utilize small counter space and are made in all sizes from a candy scale of two pounds capacity up to scales of thirty pounds capacity.

The style as shown above may be had with poise weight indication plainly visible to both customer and merchant and because of this feature it is highly recommended by weights and measures officials everywhere.

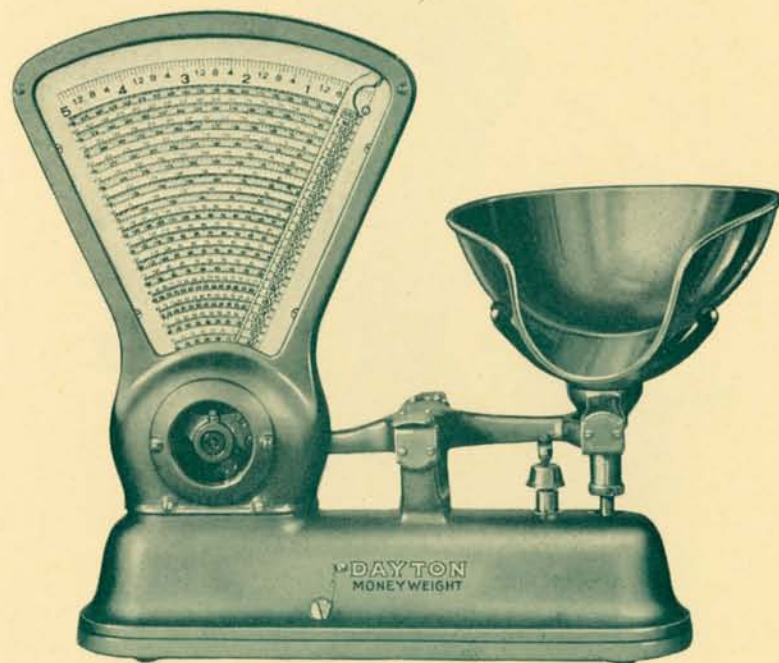
Choice of two-color Easyread computing charts of from two to ten pounds capacity, with from three to twenty extra pounds provided by tare beams. Also, choice of platform, pan or scoop. Finished in gold or white lacquer, or white porcelain, as desired.



THE MONEYWEIGHT HARDWARE AND GENERAL UTILITY SCALE

THIS scale has no peer for accuracy and durability. Its low, unbreakable metal platform, measuring sixteen by sixteen inches, and its large capacity make it especially adaptable for hardware and general store use where a wide variety of weighings are made ranging from one ounce to 110 pounds. A special hardware scoop or wire rack, and an attachment for the accurate counting of small parts can be furnished if desired.

It may be used as a computing or straight weighing scale, the computing charts being of the two-color Easyread type providing a wide range of prices. A selection of charts of ten pounds capacity, each of which is graduated by single ounces, is offered for this extremely rugged scale. Regularly finished in gray or white lacquer, or at a small additional cost, white porcelain.

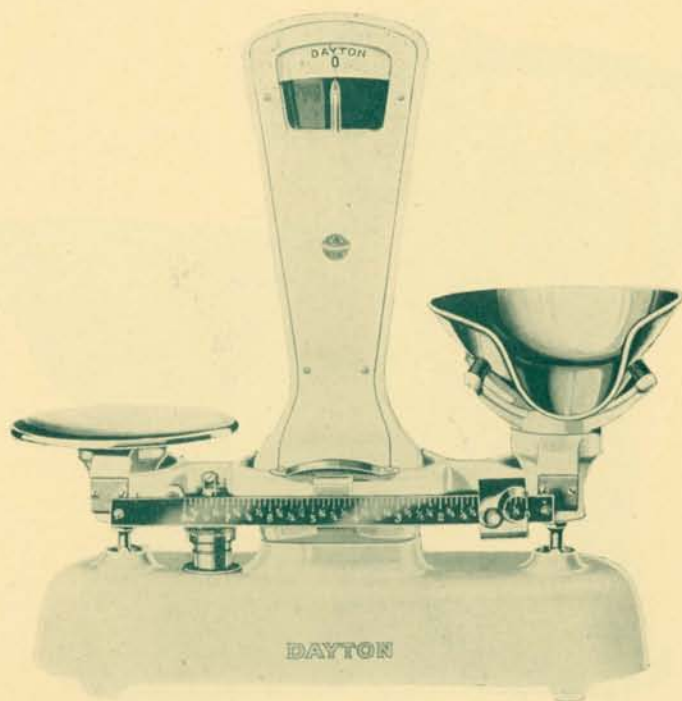


THE MONEYWEIGHT CANDY SCALE

BULK candy, tea, coffee, or spices must be weighed accurately and carefully to return a satisfactory profit and for this reason, this type Dayton scale is found on thousands of counters.

Equipped with a special candy scoop, pan or platform, it occupies a counter space of only six by eighteen inches. It employs the famous Dayton Easyread two-color chart in capacities of from two to five pounds. A store equipped with a Dayton Moneyweight Computing Candy Scale guarantees the customer sixteen ounces of candy in return for the price of each pound of candy bought, and guarantees its owner one hundred cents for every dollar's worth of candy that he sells.

Finished in gold or white lacquer, or white porcelain, its beautiful design presents a handsome appearance on any counter.

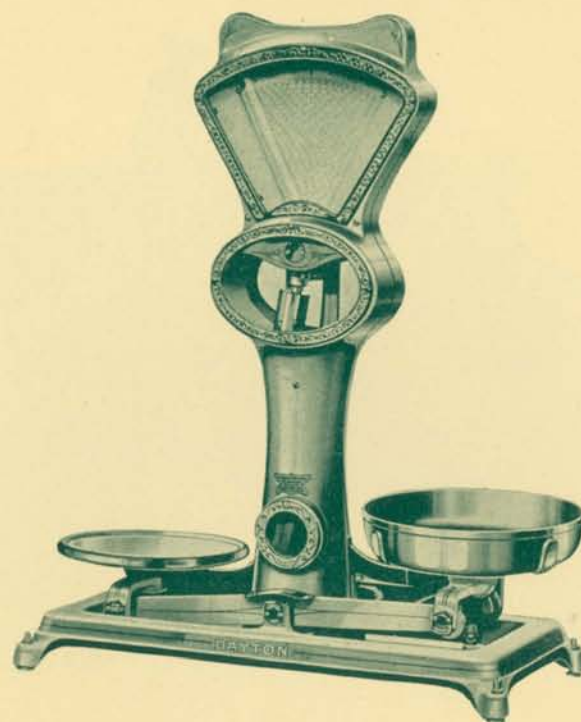


THE PACKAGING AND CHECKING SCALE

AN AUTOMATIC even balance scale that, because of its needle point indication and the speed with which it can be accurately read, is a favorite for a multitude of different uses. No leveling is necessary, for this scale will weigh correctly off of level. It is specially adaptable to weighing specific amounts of merchandise and to packaging commodities of predetermined weights.

Because of its simple construction and the fact that it is very easy to read, accurate results can be obtained by the most inexperienced help. Standard equipment as shown above. Square or round platter or pan can be furnished at no extra cost.

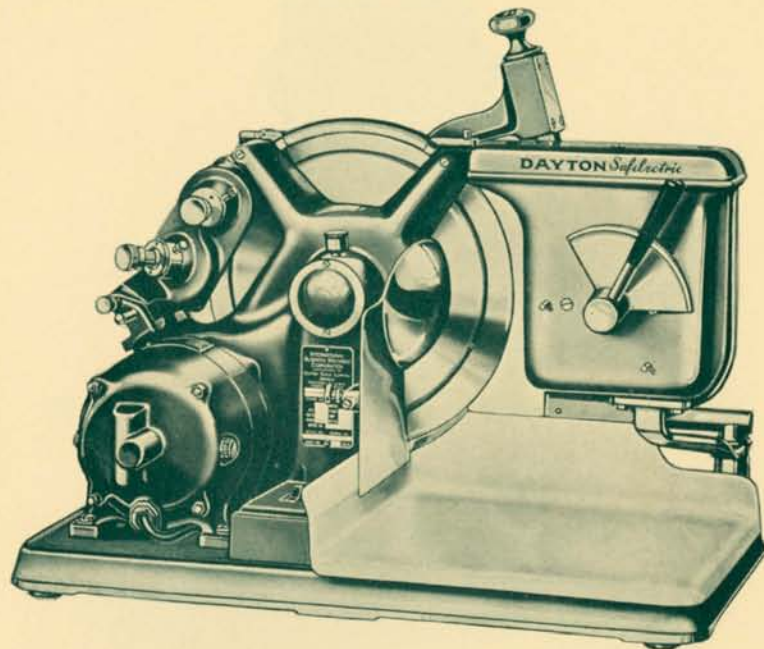
This scale is light in weight, requires small counter space and can be moved wherever needed. Finished in gold or white lacquer, or white porcelain.



THE AUTOMATIC EVEN BALANCE SCALE

MANUFACTURED by this Company for over thirty years, this type of scale is extremely sensitive and invaluable for the fine weighing of high priced commodities. The indicator travels about four times as far to register one ounce as on any other scale and thereby insures extreme accuracy in weighing. In spite of extreme sensitiveness, the Dayton quick-stop device permits speedy operation.

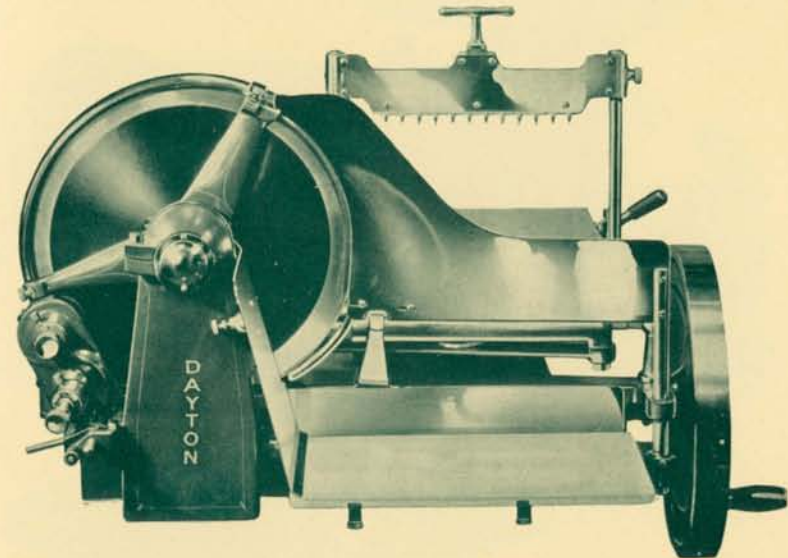
Furnished with computing or non-computing charts from one-half pound to two pounds capacity for general use and special charts for particular weighing in laboratory and experimental work with such commodities as precious metals, serums, liquids, etc. Twenty additional pounds capacity are provided over the chart capacity by means of extra weights that are furnished with the scale.



THE SAFELECTRIC SLICER

AN ABSOLUTELY safe machine, operated entirely with one hand. The knife, slice regulator, and carriage are in line, insuring straight, even slices. The Automatic Safety Feeder, an exclusive Dayton feature, permits the slicing of food without its being touched by the operator and slices ends to the last particle. All parts touching food are of gleaming white porcelain or non-corrosive metals and the sanitary construction permits easy, quick cleaning, all parts being easily accessible without the aid of tools.

The handy and quick-acting push-pull slice thickness regulator determines thickness of the commodity being sliced from 1/100 to 5/8 inches. The machine is compact in design and requires small counter space. Slices all kinds of boneless meats, cheese, breads, fruits, vegetables, etc. May be had with or without pedestal.

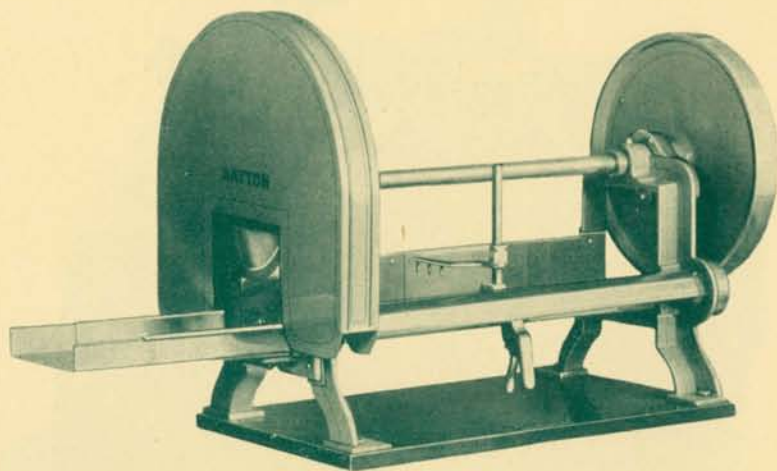


THE SAFETY HAND MEAT SLICER

THIS hand-operated safety slicer is adaptable to many special requirements . . . the slicing of hot and cold meats uniformly, speedily, neatly and safely.

Special knife guards offer positive protection to the operator. The knife is made from a solid disc of tempered tool steel and is mounted on ball bearings. It is kept sharp and true by attached and completely enclosed offset sharpening devices.

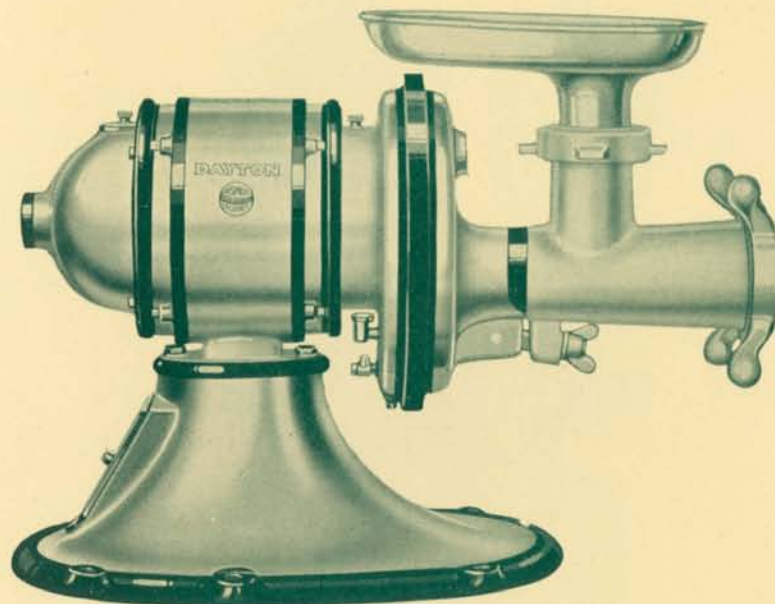
The model illustrated has a cutting capacity of full twelve inches in width with a height adjustment of seven inches, and slice thickness from 1/64 to 1/2 inches can be determined by the visible micrometer adjustment device. Sturdily constructed, sanitary and attractive in appearance. Made in two sizes to fit all requirements and furnished with or without pedestal.



THE SAFETY BREAD SLICER

THIS machine actually pays for itself by eliminating waste of both time and material. Careful tests have proved that an average of sixty-seven 24 ounce Pullman size loaves of bread, sliced on the machine, will go as far as eighty loaves of bread sliced by hand. This means a saving of 17% on the bread bill.

This machine has a convenient slice thickness regulator and an automatic loaf feed. It slices hot or cold bread, and stacks as it slices. It is furnished in blue or white lacquer with a slice tray of non-corrosive metal. Loaves up to 22 inches long by 5½ inches square are accommodated. The knife has an exceptionally keen edge. Almost no attention is required to keep this machine in perfect working order.



THE SAFETY MEAT CHOPPER

THIS fine appearing, heavy duty machine has a special ball bearing, air cooled motor, designed to carry a high overload. A new combination safety chopper bowl and meat pan with helm-wheel type adjusting ring are special features insuring safety to the operator and guaranteeing perfect chopping.

This machine is sanitary. The entire bowl may be easily detached from the gear case for cleaning by loosening a single thumb screw fitting on the convenient slot fitting clamp. This clamp also keeps the bowl from turning and provides an efficient locking and unlocking device without the use of tools.

Actual tests show that more work may be done in less time than with any other similar machine. Furnished with or without pedestal in all sizes from 1/4 to 1 H.P.

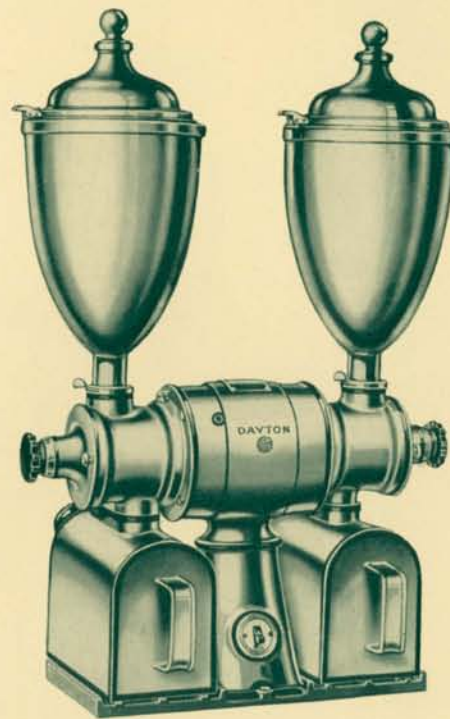


THE SINGLE END COFFEE MILL

THE Dayton Electric Coffee Mill is compact in design and equipped with special motors that will not overheat. Fast cutting burrs cut instead of crush coffee. Special cone shape insures an even granulation. The visible cutting grade adjustment permits a wide range of cutting grades to suit every customer.

It is provided with a special release that automatically throws the burrs out of grinding position when any foreign substance enters the machine. A noticeable buzzing noise warns the operator and the substance may be easily removed without harming the machine.

The many other exclusive Dayton features combined in this machine make it the finest obtainable. It is furnished with or without pedestal and is finished in either red or green lacquer.

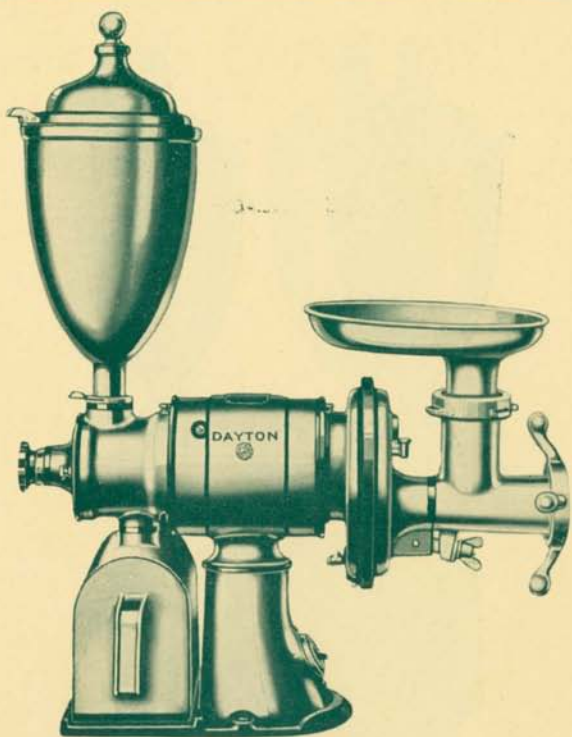


THE DOUBLE END COFFEE MILL

THE Dayton Double End Electric Coffee Mill is compact in design and equipped with a special motor. One end of this mill has a wide setting range for granulating grades to suit every customer and the other end with a pulverizer to serve the customers who prefer their coffee in this fashion. It has fast cutting burrs that, because of their special cone shape, granulate evenly, uniformly and speedily.

It is provided with a special release that throws the burrs out of grinding position whenever any foreign substance enters the machine. A noticeable buzzing noise warns the operator and the substance may be easily removed without harm to the burrs.

The removable hoppers are of heavy spun aluminum with cut-off attachments to prevent spilling unground coffee.



THE COMBINATION COFFEE MILL AND MEAT CHOPPER

THE Dayton Combination Electric Coffee Mill and Meat Chopper combines all the excellencies of the individual machines in a single unit driven by a single motor.

The new Dayton helm wheel type adjusting ring and the Dayton safety chopper bowl with safety pan are two of the features on the Chopper end, while the Coffee Mill provides a wide range of cutting grades to suit the needs of every customer.

The motor is of the ball bearing type with surplus power to operate at all times without danger of stalling. It is air cooled and will not overheat. As with all the regular Dayton Choppers and Coffee Mills, a floor pedestal is furnished if desired.

This machine is of sturdy construction and its sanitary finish is easily kept clean by simply wiping with a damp cloth. Finished in red or green lacquer.