

MACHINE METHODS OF ACCOUNTING

OTHER INTERNATIONAL PRODUCTS

INTERNATIONAL BUSINESS MACHINES CORPORATION is the outstanding manufacturer of business machines, with a record of a half-century of constant growth and world-wide expansion. Its products constitute a widely diversified range of mechanical devices which have been of tremendous value to both small and large businesses in all lines of activity—retail, large scale distribution, extractive and manufacturing industries, and governments.

All the phases of business lend themselves readily to measurement and analysis by one or more International products. Control, which is the watchword of modern business, is effectively attained through scientific management based upon an adequate knowledge of figure-facts. The measure of control achieved in current large-scale production and distribution has increased in almost direct proportion to the development of mechanical devices which have made timely analysis of figure-facts possible.

International Electric Accounting Machines are devices employed for the automatic handling of accounting and statistical data. The process of operation, known as the Electric Accounting Machine 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 the electrical equipment which handles the cards in progressive stages until final results have been achieved.

The value of International Electric Accounting Machines lies in their speed, their flexibility in handling accounting and statistical data, their accuracy, and their ability to accomplish results at much less cost than that entailed when identical work is manually performed.

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.

All the various time-indicating, signalling, and recording units illustrated may be operated individually from ordinary AC electric lighting circuits. They may also be operated as secondary units in an International self-regulating time system. An exclusive feature of this system is that it checks all secondary units every hour for agreement with a master time control, and if any are not in agreement, it corrects them individually.

International Electromatic All-Electric Writing Machines meet every office need. Carriage return, front spacer, back spacer, type shift, line spacer, and all type bars are controlled from the keyboard by a feather-light touch. Smooth, swift typing rhythm reduces fatigue and increases typing production as much as fifty per cent. The Electromatic may be adjusted to write up to 20 carbon copies.

The Electromatic line includes standard machines for general correspondence and stencils, form-writing machines, long carriage machines, front-feed machines, carbon ribbon-writing machines, Hektowriters for the production of reverse "masters," and proportional spacing machines.

International Ticketographs mechanize procedures for the preparation of coupon tags that contain repetitive descriptive data and predetermined price schedules. These machines are used to imprint variable piece-work rates for each individual operation on the coupon tags for each lot or bundle being processed.

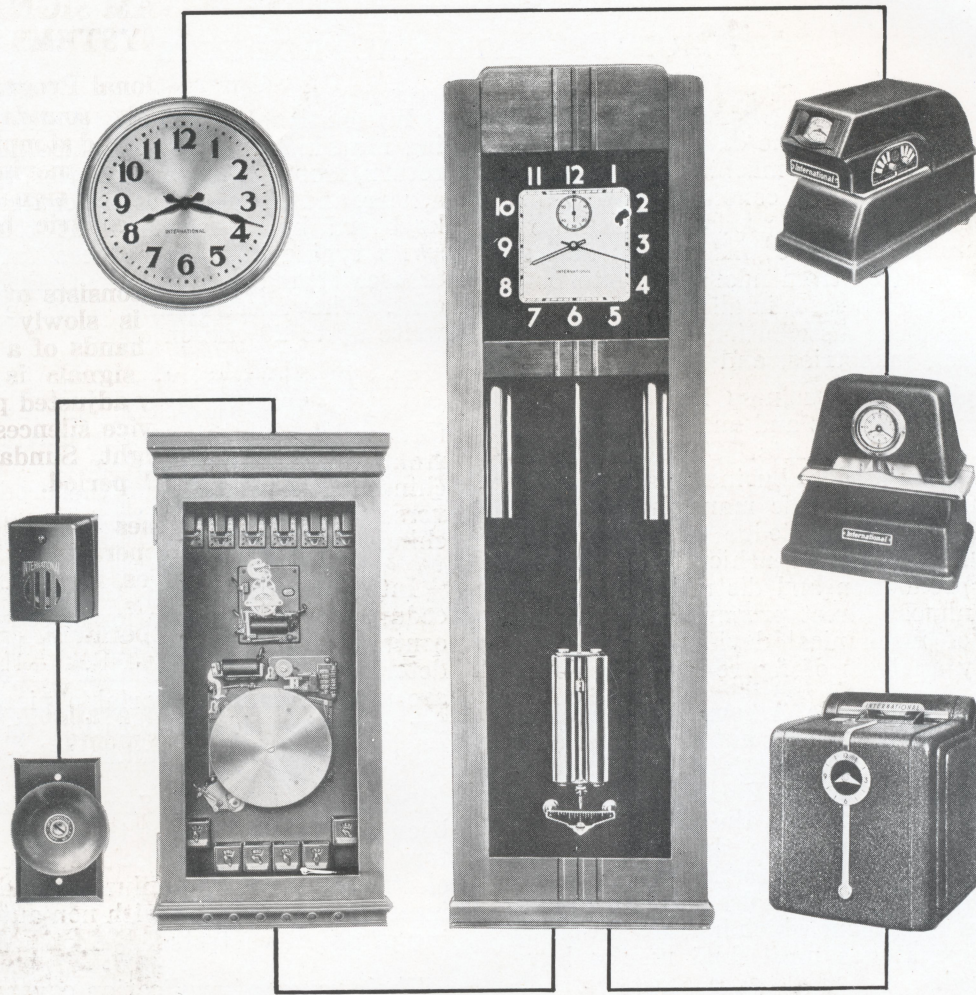
International Test Scoring Machines have been developed to meet the requests of educators and personnel specialists for a modern electrical device to eliminate the drudgery and inaccuracy associated with non-automatic grading of objective tests.

Their range of application covers the scoring of tests of academic achievement, mental traits, aptitudes, personality, vocational interests and other measures which facilitate guidance or placement. Also, item counts may be made for use in test experimentation or diagnosis of class achievement.

International Proof Machines are designed to permit rapid, efficient handling of bank checks and other business documents which require sorting, listing, proving, and endorsing. Because these four operations are performed simultaneously, considerable time is saved.

With all items listed and totalled on a master control tape, there is no waiting till the end of a run to know whether or not a balance has been reached.

When a group of documents has been run, all are properly sorted, each item has been endorsed or identified, and all classification listings are totalled on individual adding machine tapes.



SELF-REGULATING ELECTRIC TIME SYSTEMS

INTERNATIONAL Self-Regulating Electric Time Systems provide the means for coordinating the activities of men, machines, and departments in all kinds of business or industrial organizations. Any number or combination of time-indicating, recording, and signaling devices may be controlled by a single Master Clock in such a manner as to maintain complete uniformity of time throughout a building or a group of buildings.

A patented feature makes it possible for all the subsidiary units to compare themselves once each hour with the master time source. If, by accident, a unit gets "out of step," correction is made before the next hour begins. Thus the manual regulation and "step-ladder" maintenance common to ordinary electric clock systems are eliminated.

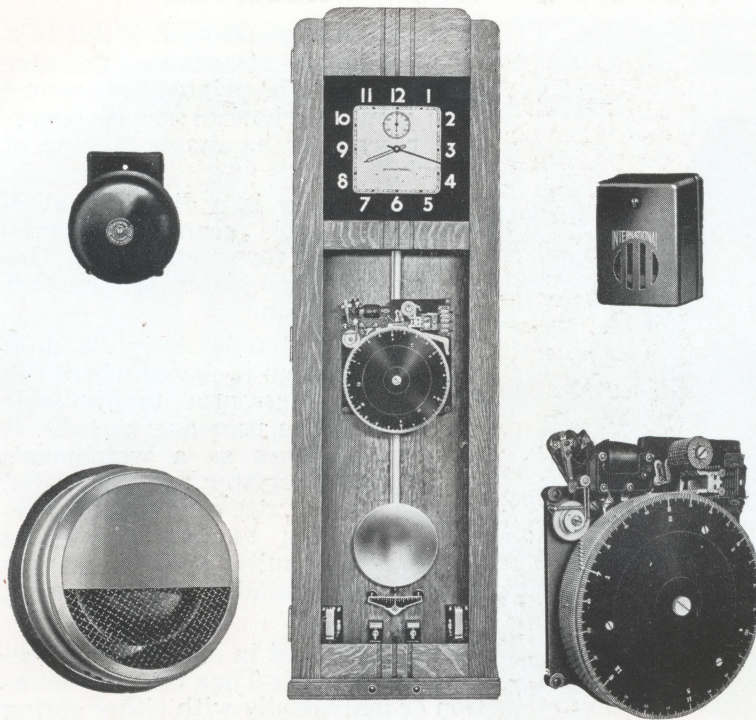
International systems give satisfactory service wherever uniform time is essential to efficient and profitable operation.

PROGRAM SIGNALING SYSTEMS

AN International Program Machine automatically *sounds* exact time for the starting and stopping of work, changing of shifts, moving of classes in schools, etc. The signals are given by means of 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 machines illustrated permit simultaneous operation of several different schedules, any combination of signal intervals, and any type of signal. They operate as part of an International Self-Regulating Electric Time System. A wide variety of other models is available to meet any specific requirements.

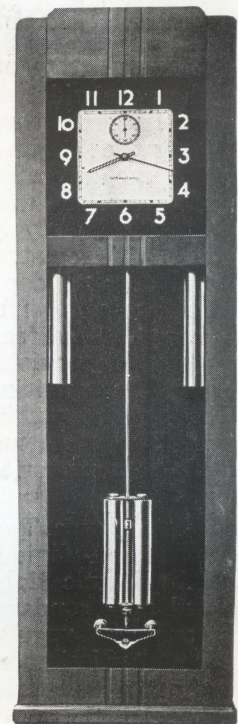


MASTER CLOCK

THE International Master Clock is the controlling center of a Self-Regulating Electric Time System. It is the source of accurate time for the various secondary time pieces distributed throughout a building or group of buildings.

This precise master clock is the finest commercial timepiece manufactured and will rate within ten seconds a month of true time. Because of its ability to accumulate reserve power, it unfailingly 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.



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 for small groups. 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.

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

TIME	NAME	IN	OUT
12:33	J.D. Kettleton		✓
12:25	Geo. Hayden		✓
10:58	R. B. Hill		✓
9:26	W. R. Hanley		
9:02	Carl Saunders		
9:01	Al Perry		
9:00	F. C. Kertz		
9:00	Ruth Carlton	✓	
9:00	Russell Jones	✓	
8:59	Joe Marks	✓	
8:58	Geo. Hayden	✓	
8:58	R. B. Hill	✓	
8:51	W. R. Hanley	✓	
8:46	J. D. Kettleton	✓	



ATTENDANCE TIME RECORDER

INTERNATIONAL Attendance Time Recorders are widely used by business organizations throughout the world. They provide an accurate, indisputable, unchangeable attendance record on a card for each person for any pay period. They automatically select the proper registration position for all arrivals and departures. The automatic two-color ribbon feature combined with the direct subtraction arrangement of registrations illustrated, simplifies auditing of the records. These new motorized machines incorporate the most modern principles in design, materials, and construction.

These Attendance Time Recorders may be operated individually from ordinary AC electric lighting outlets, or included as secondary units in an International self-regulating electric time system. Similar machines are also available in a variety of spring driven models.

318

NO. Geo Hayden
NAME

Days Worked 5 Pay Ending 10/18 to 20

R.T. 40 hrs. at .67 \$ 26.80 Total Hours 43

O.T. 3 hrs. at 1.005 \$ 3.02 Total Earnings \$ 29.82

State Federal D.A.B. Tax .30 Total Deductions \$.30

Other Deductions BALANCE DUE \$ 29.52

	1st DAY	2nd DAY	3rd DAY	4th DAY	5th DAY	6th DAY
10						
9				1730		
8				1730		
7				3		
6	1700	1701	1703	1700	1702	
5	1300	1259	1258	1300	1259	
4	4					
3	1200	1202	1201	1200	1202	
2	800	759	757	759	800	
1					4	

Daily Totals Weekly Totals

Balance due shown above is correct and receipt is acknowledged. Geo Hayden Signature

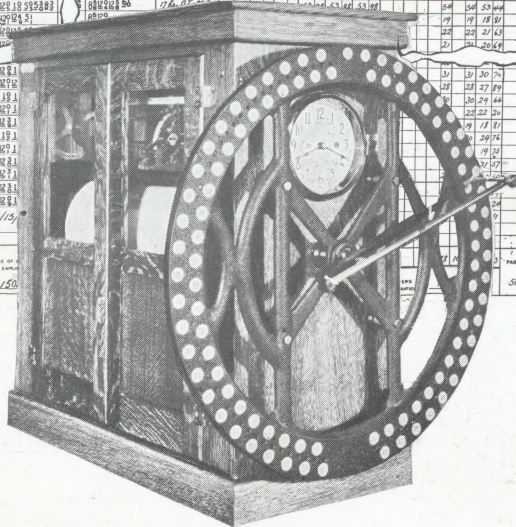
Form 00161



EMPLOYEES	INSURANCE NUMBER	COMPANY	PAYROLL WEEK ENDING			CLOCK NO.	PAYROLL COMPUTATION																
			PAID	UNPAID	TOTAL		EARNINGS			DEDUCTIONS			NET PAY			TAXES							
E. W. Fairchild	7675	Emerson Corp	082218 59	082218 59	082218 59	0818																	
R. S. Jackson	7675		082218 59	082218 59	082218 59	0818																	
J. O. Redner	7675		082218 59	082218 59	082218 59	0818																	

AUTOMATIC PAYROLL MACHINE

THE Automatic Payroll Machine provides a sheet record on which are combined the daily registrations for all employees and payroll extensions for an entire pay period. This sheet remains inside the machine until the end of the period, when it is removed and filed as an original page in the payroll ledger. Compilations are made alongside the registrations. In addition to the speed and convenience this record brings to compiling payrolls, it also meets Social Security, Income Tax and Wage Hour Law accounting requirements.



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

JOB TIME RECORDER

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

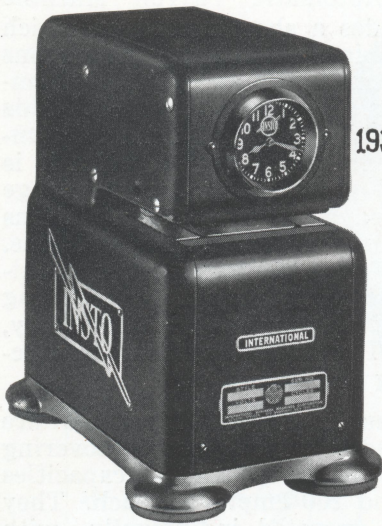
The complete labor-cost story, in clear, legible, indisputable figures, showing to the minute actual time spent, can be printed on any kind of job ticket or slip.

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

Several models of International Job Time Recorders are available. The one illustrated on this page is the trigger-trip type which features one-hand electric operation. It is also available in the lever type. Both types are furnished either as individual or secondary units.



DAILY COST CARD		
No. 27	DATE 8/23	
I. T. R. Co. Form No. 6977		
NAME Joe Ralston		
JOB No.	Time	Clock Time Record
	OFF	
	ON	
	OFF	
	ON	
132	OFF	AUG 23 9.0
	ON	AUG 23 8.5
	OFF	AUG 23 8.5
01	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



RECEIVED
VANADIUM CORP OF AMERICA

1939 MAY - 17 - PM 4 : 14

NEW YORK, N.Y.

INSTO TIME STAMPS

INTERNATIONAL time stamps speed up the handling of mail and interoffice communications. Their permanent, indisputable time and identification record printed on every letter, telegram, message, and order fixes responsibility for delays and neglect by indicating where they occur.

All International time stamps may be operated individually from an ordinary AC electric lighting outlet or they may be furnished for operation as secondary units in an International self-regulating time system.

The International Insto operates automatically when a paper is inserted. In addition to fixed printing plates and movable type cylinders for special notations, this stamp can also be furnished with a numbering head for serially numbering the impressions.

ELECTROPRINT TIME STAMP

THE International Electroprint is fully automatic for the entire year. At the end of each month it automatically sets itself to the next month and the first day. It does this regardless of variations in the length of months. It even prints twenty-nine days in February of leap years.

This stamp can be furnished to print automatically when a paper is inserted, or it can be equipped with a push button trip on the front for positioning the impression where desired on documents, etc. Movable type cylinders make possible a variety of notations such as Received, Approved, Sent to, etc. Fixed upper and lower printing plates can also be provided for company name, department, office or address.

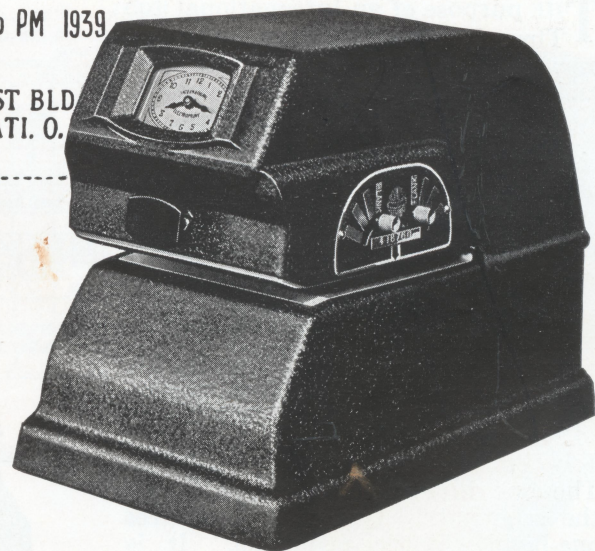
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COHLE & TYREE

MAR 1 2 00 PM 1939

UNION TRUST BLD
CINNATI. O.

BY-----





RECEIVED
The Ohio Rubber Co.
Mailing Dept.

1940 SEP 30 AM 8 : 0 0

PRINTIME TIME STAMP

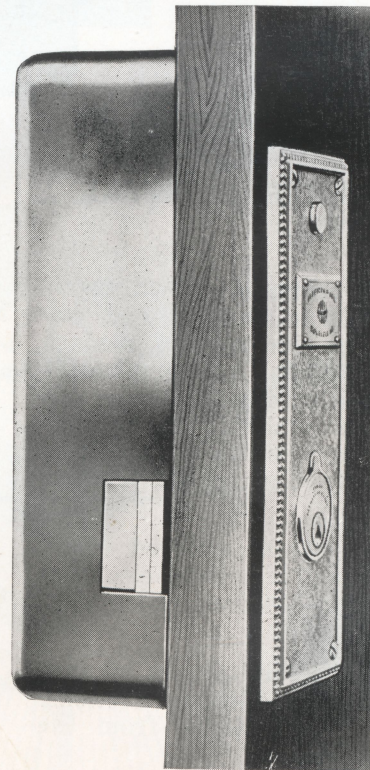
THE International Printime is a manually operated stamp designed specially for desk use. Its small size, pleasing lines, and ease of operation make it ideal for secretaries, order desks, telephone boards, etc. The date line is close to the front of the stamp, making it convenient for time-stamping tickets and small pieces of paper. The throat is large and the platen self-adjusting for stamping books and thick packages.

RECORDLOCK

THE International Recordlock is a recording door lock that gives complete protection for, and greater supervision of, important doors. It 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 the supervisor's visits or watchman's rounds.

This valuable supervisory information, printed on a convenient paper tape, is immediately available to the owner. No codes nor symbols are employed and no special interpretation is required.

The Recordlock furnishes a most economical way to protect business hours, stock, and property.



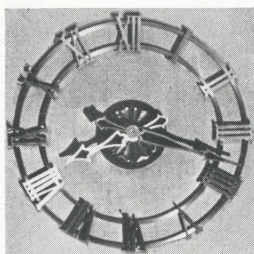
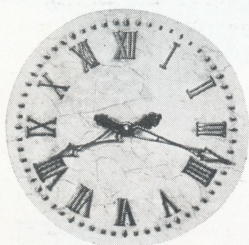
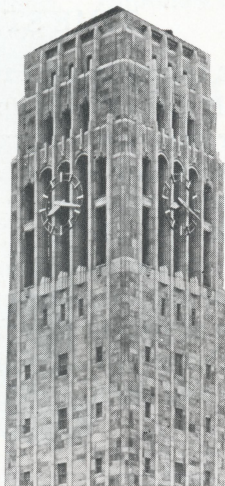
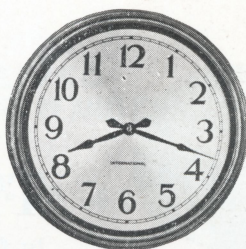
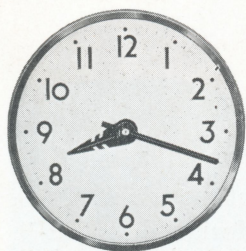
ALM	11:02
B TU	7:23
DLTU	11:44
C W	12:25
ILW	12:25
I W	1:06
CLW	1:06
B W	7:38
ILW	11:51
I W	11:55
ILW	11:55
I TH	12:05
CLTH	12:05
D TH	8:25
ILFR	12:38
I FR	12:46
ALFR	12:48
B FR	2:07
BLFR	2:23
D FR	7:26
ILFR	7:28
I FR	7:45
CLFR	11:54
B SA	6:17
BLSU	1:23
D SU	12:23
DL SU	1:12
C M	7:37

SECONDARY CLOCKS

INTERNATIONAL Secondary Clocks are designed for the purpose of furnishing a uniform distribution of time. They place accurate time wherever desired—without the bother of winding, setting, or other maintenance. Operated as units in an International Self-Regulating 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. Many designs are available for selection, including various types of suspended, outdoor, and tower clocks. Special clocks may be built to suit any architectural plan.



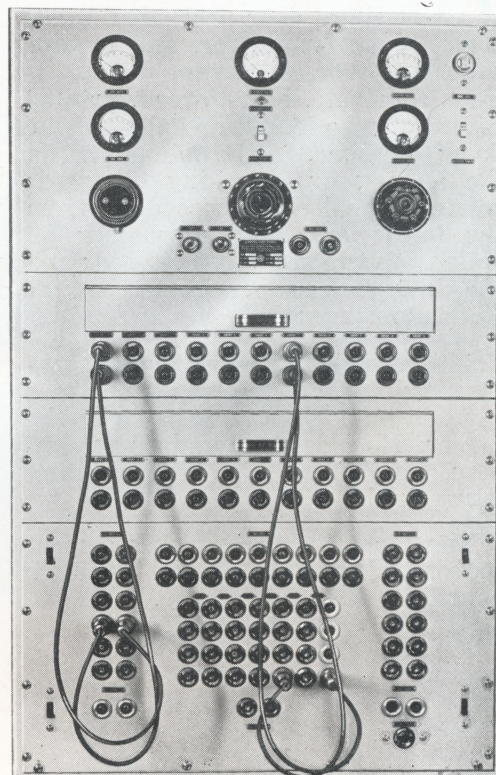
LABORATORY EXPERIMENTAL PANEL

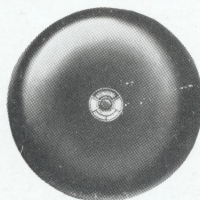
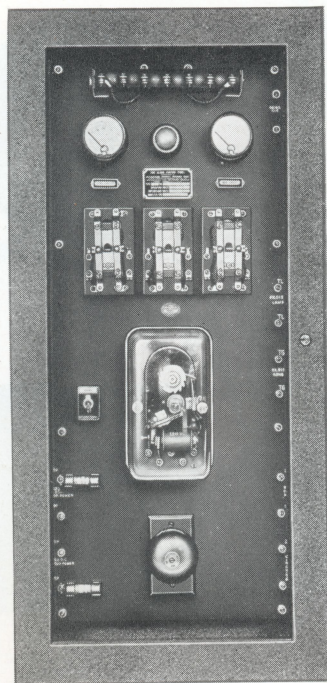
FOR use in science laboratories of business or industrial organizations, schools and colleges, International has developed a modern electrical distribution panel. Any number of different voltages, in either alternating or direct current, are made available for experimental purposes. Many experiments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

Special safety features are employed which protect the operator from accidental electrical shocks. Danger of improper connections is entirely eliminated.

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

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





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.

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 break-glass station requiring no lever nor 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 injuries from shattered 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.

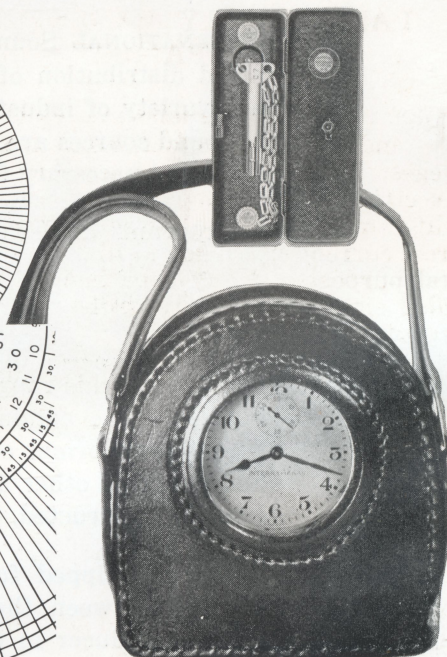
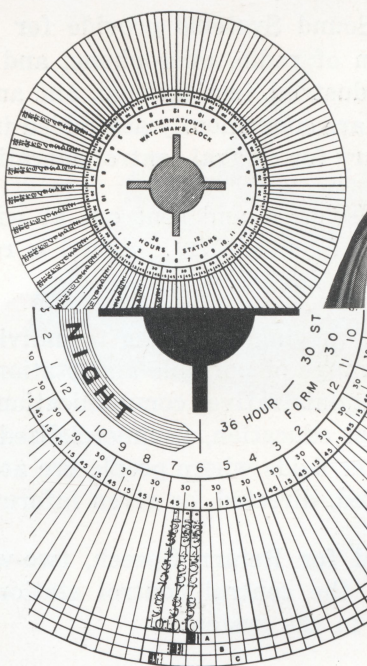
WATCHCLOCK SYSTEM

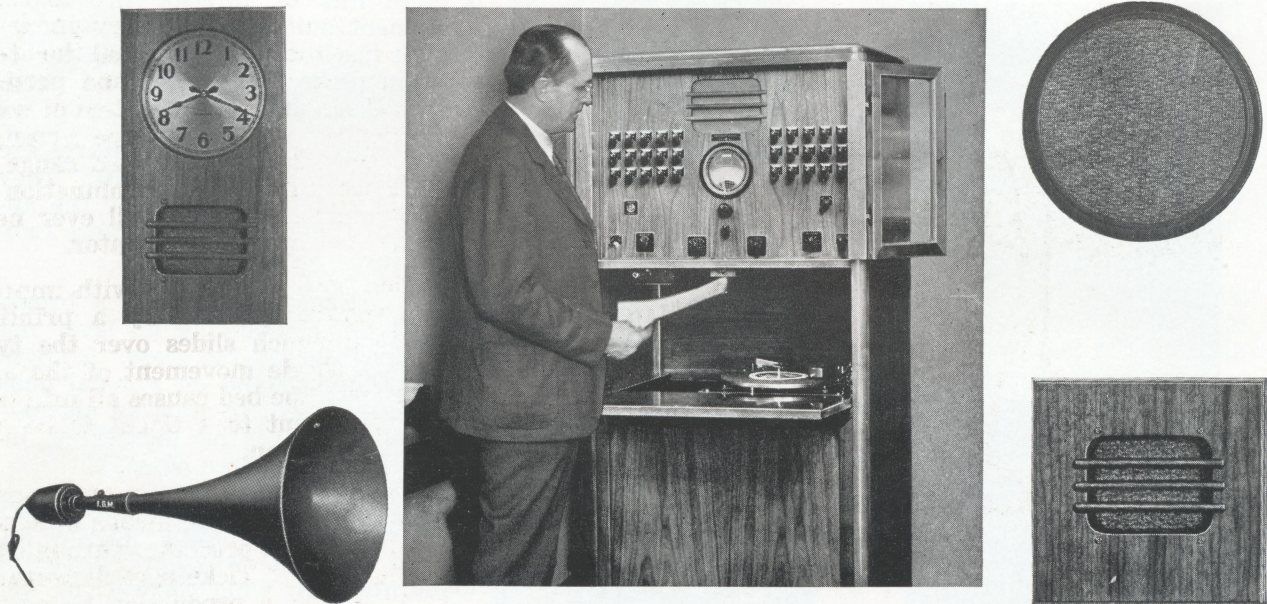
THE International Watchclock System consists of a portable recorder and stationary registering stations. Its purpose is to insure systematic, regular patrol of protected property. The recorder is carried to each station where an embossed tamper-proof record is made of the visit. Any negligence or irregularity 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 eight-day clock, mounted in a durable and attractive leather case, is of special design for this particular purpose. Two models are available: one for twelve stations and one for thirty stations.

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





SOUND DISTRIBUTION SYSTEMS

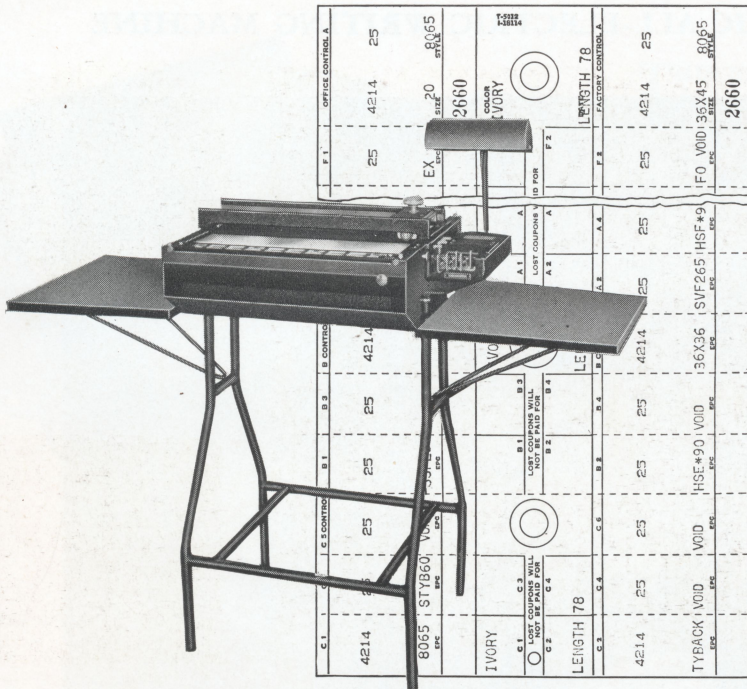
INTERNATIONAL Sound Systems provide for the controlled amplification and distribution of radio, microphone, and phonograph programs in a wide variety of industrial, institutional, and amusement organizations. All the sound sources are conveniently assembled in cabinets together with the equipment necessary for central control operation.

Programs are selected and sent out at will to any one or all rooms equipped with sound reproducers. Sound is reproduced entirely with undistorted clarity and fidelity.

These systems, varying according to individual requirements, are furnished in a wide range of portable and stationary models. They are applicable to the administrative, communication, and entertainment needs of business, formal education, commercialized recreation, religion, medicine, and of all other fields where people are assembled in groups to be entertained, instructed, directed, or given information.

When equipped for Return Speech, two-way voice communication is provided between the central control station and any permanent field sound reproducer in the system.

Simplified operation is a feature of this equipment.



TICKETOGRAPH (Style 842)

THE Style 842 Ticketograph is an economical device used for controlling job labor costs and production under the coupon system of wage payments. A flexible type arrangement provides an unlimited range of price schedules. Any combination of rates which any user will ever need can be set up by the operator.

This type is equipped with impression rollers operated by a printing carriage which slides over the type bed. A single movement of the carriage over the bed causes all information pertinent to a ticket to be imprinted thereon.

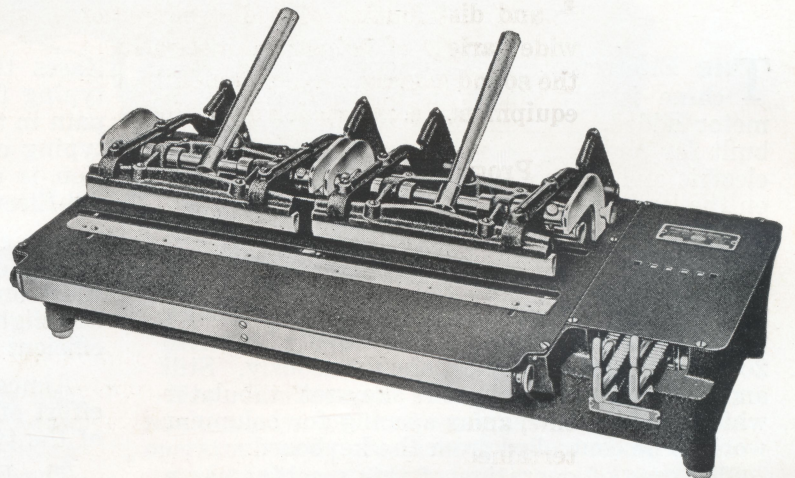
This style of Ticketograph provides a simple but positive means of supervising work in process. Through the medium of Ticketograph-prepared coupons and a production board the status of all jobs is shown at all times.

TICKETOGRAPH (Style 844)

A TICKETOGRAPH of this style is distinguished by its dual construction. One section of the machine is used for all numbering purposes while the other is employed for pricing or other printing. Each section has its individual printing lever, and one kind of information at a time is printed on all the coupons of a section-work ticket. Two-color printing can be done with this machine because of its dual construction.

Style 844 is ideally suited to those applications where the number of manufacturing operations is not sufficient to require the larger capacities of the other models.

The Ticketograph is an instrument that guarantees accurate price schedules, enables the payroll to be compared with production, effects savings, and makes for greater economy in manufacturing methods.



STANDARD ELECTROMATIC ALL-ELECTRIC WRITING MACHINE



THE Electromatic All-Electric Writing Machine is not merely a typewriter with a motor added. This machine was designed and built for power operation throughout. It is all electric and controlled by a feather-light touch on the keyboard.

Every type character on this all-electric machine receives the correct amount of pressure for ideal printing. Capitals, therefore, do not print too lightly; periods do not break through the paper. This machine can be adjusted to write 20 legible carbon copies simultaneously. Still another advantage is the key-set tabulator which enables all regular spacing for columnar work to be controlled from the keyboard.

The ease of operation of this machine saves money by enabling an operator to do more work and better work in less time. Clearly written stencils may also be written at letter-writing speed. No matter what the typist is writing on the machine the touch remains the same, for the motor does the work. The operator simply re-

leases the keys. The Electromatic eliminates typing fatigue. Electric typing does not cause pain in the shoulder blades, wrist exhaustion or typing cramps—almost all the labor of operation is eliminated by typing the Electromatic All-Electric Way.

The ease of operation of this machine is a revelation to the typist. The response of the Electromatic to every touch of the keys, even the slightest, is swift, smooth, rhythmic, and so efficient that the machine seems actually alive.

Almost all the usual manual labor and the effort of typing is transferred from the fingers of the typist to the motor.

The Electromatic increases the typist's speed and the capacity to sustain this speed with much less effort, owing to the practical elimination of fatigue. Because of the elimination of nervous strain, typists produce more accurate work, and exhaustion no longer lays a penalizing hand on concentration and normal reaction.

ELECTROMATIC ALL-ELECTRIC CARBON RIBBON WRITING MACHINE



THIS machine produces distinct uniform type impressions on originals for photographic reproductions and offset duplicating. It is completely electric and all type bars are provided with the exact amount of impression power for ideal printing.

The carbon paper ribbon-feed mechanism operates *only* when the type prints. The ribbon does not move when spacing, tabulating, or returning the carriage. It can be used twice—once on the upper half and again on the lower half. As it is 300 feet in length, frequent changes are unnecessary. There are five distinct applications for this machine—photographic masters for offset printing, direct plate masters for offset printing, executive correspondence, gelatin process masters, and engineering word drawings.

Like the standard Electromatic this machine is controlled by feather-light touch, and features a level speed keyboard on which operators readily develop a smooth typing rhythm. This means less fatigue resulting in great typing speed and accuracy.

ELECTROMATIC ALL- ELECTRIC HEKTOWRITER

BY utilizing hektograph carbon paper ribbon on the Electromatic Hektowriter, replacing the old method of sheet carbon handling, a result in savings up to 70% in carbon paper alone is effected.

The Electromatic All-Electric Hektowriter prepares an original type-written page in hektograph ink for reproducing on a liquid duplicating machine. The Hektowriter embodies the important factors necessary to produce an ideal original so that the maximum number of clean, clear, and sharp copies can be obtained from the duplicator. Up to 450 copies may be obtained from one original typed on the Hektowriter.

The hektograph ribbon economy of this machine is one of its most important advantages. The machine can be adjusted for three writing positions on a single ribbon. This assures its complete use—there is no waste of ribbon space. One hundred and sixty-two thousand type impressions are supplied from one ribbon. After type impressions are made on the page a maximum amount of hektograph ink provides as many as 450 copies from the original.



The Electromatic Hektowriter is quickly made ready for writing correspondence. The operator raises the hektograph carbon ribbon out of position without detaching it, inserts the letter head and writes. This machine produces the same high grade letter as the standard Electromatic. It can also be used for making masters for the gelatin hektograph process, and engineering word drawings for blue-print reproductions.



ELECTROMATIC ALL-ELECTRIC FRONT-FEED WRITING MACHINE

THE Electromatic Front-Feed Writing Machine is completely controlled by electricity. It is no longer necessary to juggle paper and carbon with this machine. Operators simply raise the platen and insert the form whether it is a bill, letterhead or stencil. When the platen is snapped down, the form automatically falls into the first writing line position. No further straightening is necessary. Valuable seconds are saved.

Up to 20 distinct carbon copies can be written without additional effort, for electricity does the work.

MACHINE

ELECTROMATIC LONG CARRIAGE ALL-ELECTRIC WRITING MACHINE

ELECTROMATIC All-Electric Writing Machines with long carriages are available for accounting and statistical work. The carriages are made in lengths of 16, 20, 24 and 30 inches. The power operation of the key-set tabular stops is controlled from a row of twelve keys conveniently located above the keyboard. This is an exclusive Electromatic advantage provided on all long carriage models.

The electrically powered carriage return on these long carriage machines is another feature which operators appreciate. The laborious operation of returning a heavy long carriage, and shifting for capitals is eliminated with the Electromatic—the typist touches a key with a mere flick of the finger—the motor does the work.

Electromatic All-Electric Writing Machines are provided with either gothic or typewriter type faces, in either pica or elite sizes.



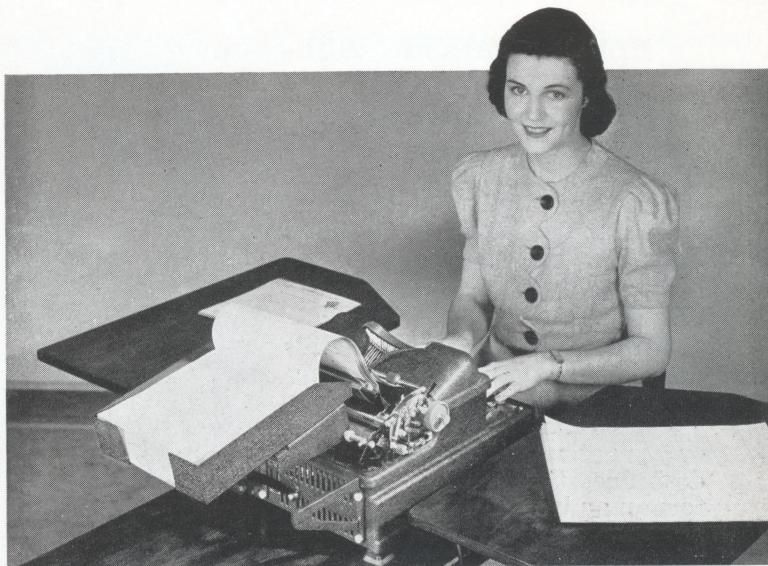
ELECTROMATIC ALL-ELECTRIC FORMSHOLDER

THE Electromatic All-Electric Formsholder embodies all the time and money saving benefits of the continuous forms-writing machine. When used for continuous forms writing, the Electromatic Formsholder effects savings in typing time and costs ranging from 10 to 70 per cent.

The Formsholder rides on its own ball-bearing track adding no additional strain to the carriage. Forms remain in perfect alignment in all carriage positions, giving positive form feeding at all times.

The Electromatic Formsholder is completely controlled by electricity. The entire keyboard, including carriage return, back spacer, tabulator, shift and space bar, is electrically powered. Operators simply release their work to the keys—electricity does the work.

Uniform density of impression is assured regardless of whether the operator strikes one key more heavily than another. This density may be increased or decreased by simply moving the "impression indicator" to the desired position



which will provide the ideal results whether they be one or up to 20 carbon copies.

Continuous letterheads may be used with the Electromatic Formsholder advantageously. This application offers a rapid method of letterwriting. At the mere touch of the carriage return key the forms automatically advance from line to line and from page to page without jogging or slipping.

ELECTROMATIC ALL-ELECTRIC FORMS-WRITING MACHINE

THE Electromatic All-Electric Forms-Writing Machine brings the advantage of electric typing to any department of modern business.

Where business forms—loose or continuous—are required, the Electromatic Forms-Writing Machine saves money.



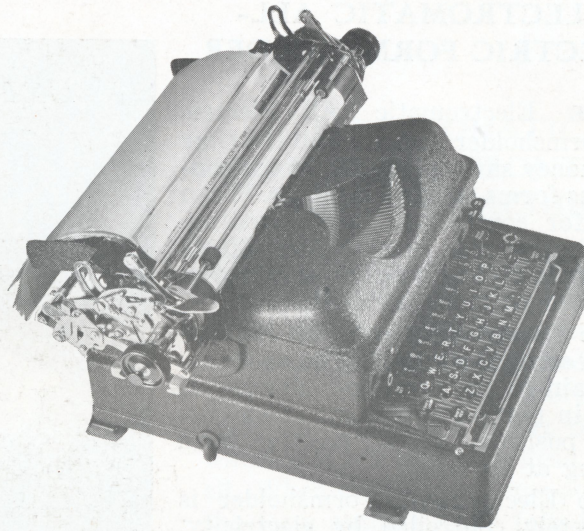
The Electric Forms-Writing Machine brings an accuracy and new speed to the preparation of important business documents. Every mechanical operation of this machine is completely electrical—the entire keyboard including tabulator, back spacer, space bar, shift key and carriage return. All types of forms, even up to 20 carbon copies, are written with speed and ease.

The special platen lifting device of this machine is instantaneous in action. A light touch of the operator's left thumb releases and operates the mechanism, removing all carbon resistance between forms when the carbons are shifted.

ELECTROMATIC ALL-ELECTRIC MANIFEST BILLING MACHINE

THE Electromatic All - Electric Manifest Billing Machine embodies all the features of the standard Forms-writing machines. It is completely electrically powered and operated by a feather-light touch.

The "manifest" feature of this machine makes possible the feeding of a "proof sheet" at single line spacing while writing an original document or form at variable line spacing. When desirable, the original document or form may be individually inserted into the machine without disturbing the alignment of the "proof sheet."

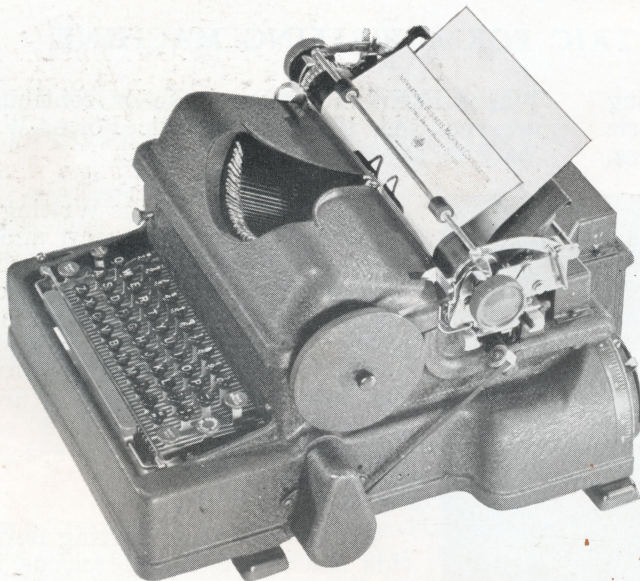


ELECTROMATIC ALL-ELECTRIC PROPORTIONAL SPACING MACHINE

THE Electromatic All-Electric Proportional Spacing Machine sets a new standard in the writing art.

The width of each escapement is governed automatically by the width of the character printed. For example the "period" will automatically space the carriage but one small unit while the capital "W" spaces the carriage 5 equivalent units.

In addition to distinctive beautiful print work, proportional spacing (as compared with conventional spacing) permits up to 25% more written information on a given page.



Increased writing speed is assured since electrical energy is coupled to every key and every keyboard feature in such a fashion that the fatigue element has been eliminated from returning the carriage, shifting the capital letters, back spacing, tabulating, spacing the paper and operating the alphabetic and numeric keys. All these functions are accomplished from the keyboard by a feather-light $\frac{1}{8}$ " stroke.

TEST SCORING MACHINE



THE International Test Scoring Machine is a device that removes the burden and much of the expense involved in the scoring of examinations. It is designed for use with objective tests, which are quite generally used today in educational and business institutions and governmental agencies for measuring academic achievement, mental traits, aptitudes, personality, vocational interests and other areas necessary for guidance or placement.

Raw scores are produced in terms of the number of right answers, number wrong, rights minus wrongs, and rights minus a fraction or multiple of the wrongs. These scores may also be recorded in terms of percentage.

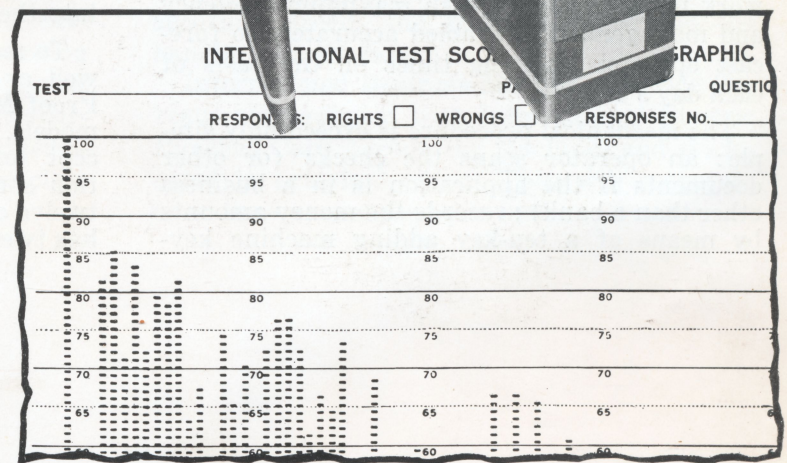
This scoring method proceeds ten times faster than manual methods and with much greater accuracy.

OPERATION depends upon the electrical conductivity of pencil marks on specially printed answer sheets. Persons taking examinations place heavy black pencil marks in numbered positions corresponding to their chosen answers.

Inside the machine is a contact plate with 750 contacts corresponding to the 750 answer positions. Each contact allows one unit of current to flow when a pencil mark is pressed against it. A scoring key separates the contacts into two groups, the rights and the wrongs. When an answer sheet is inserted, an amount of current equivalent to the total rights and an amount equivalent to the number wrong is allowed to flow. When the controls are manipulated, the calibrated meter indicates the desired scores.

A separate unit of the machine may also be used to obtain weighted averages. Another unit which may be added to the machine counts the responses to as many as 90 questions or items, on as many as 100 answer sheets, and prints on a special form inserted in the machine a bar graph record of the number of responses to each item.

SCORES		DATE OF BIRTH _____	AGE <u>14</u>	SEX <u>M</u>
1	4	GRADE OR CLASS <u>10</u> INSTRUCTOR <u>ALLEN</u>		
2	5	NAME OF TEST <u>HISTORY</u> PART <u>II</u>		
3	6			
16	15			
1	1			
2	2			
3	3			
4	4			
5	5			
45	45			
1	1			
45	44			
1	1			
41	40			
1	1			
39	39			
1	1			
32	31			



INTERNATIONAL PROOF MACHINE



WITH the International Proof Machine, bank-check proving becomes a single streamlined operation . . . rapid, accurate and economical. Handling time is reduced to a minimum. Proof is constantly maintained so that there are no difference-time delays to upset transit or clearing house schedules. Day in and day out, proof work is accomplished with maximum efficiency and management is enabled accurately to forecast operator finishing times on the basis of each day's volume.

The mechanical procedure is exceedingly simple: an operator scans the checks (or other documents if the application is in a business other than a bank); records the money amounts by means of a ten-key adding machine key-

board; depresses the proper classification sorting keys; drops the checks into a sorting chute; and touches a release bar. Each amount is listed on an adding machine tape corresponding to its classification and all amounts are listed on the main control tape. Either a full endorsement or block number and date, as desired, is automatically printed on each item as it passes into the sorting receptacle.

To meet the volume requirements of small as well as large sized banks and businesses, the Proof Machine has been made available in two models. Both are identical in every way except for capacity. One has twelve classification sorting keys, twelve sorting pockets, and twelve classification adding machines; the other has twenty-four of each.



INTERNATIONAL BUSINESS MACHINES SERVICE BUREAU

THIS Bureau will furnish detailed accounting and statistical information — in minimum time. The International Business Machines Service Bureau will prepare designated accounting and statistical records concerning Orders, Sales, Production, Expense, Payroll and other important functions of any business. This information will be available promptly after the close of any period.

With the International Business Machines Service Bureau, dependence can be placed on accuracy, speed, and strict confidence in the handling of all data.

International Business Machines Service Bureaus are equipped with International Electric Punched Card Accounting Machines and are located in principal cities. They will cooperate on a time or complete-job basis.