MACHINE METHODS OF ACCOUNTING

VERIFIERS

THE development of manual bookkeeping procedures was accompanied by the development of detailed checking routines which had to be performed at each of the steps in the various recording and transcribing operations. This detailed checking practically doubles the volume of work performed.

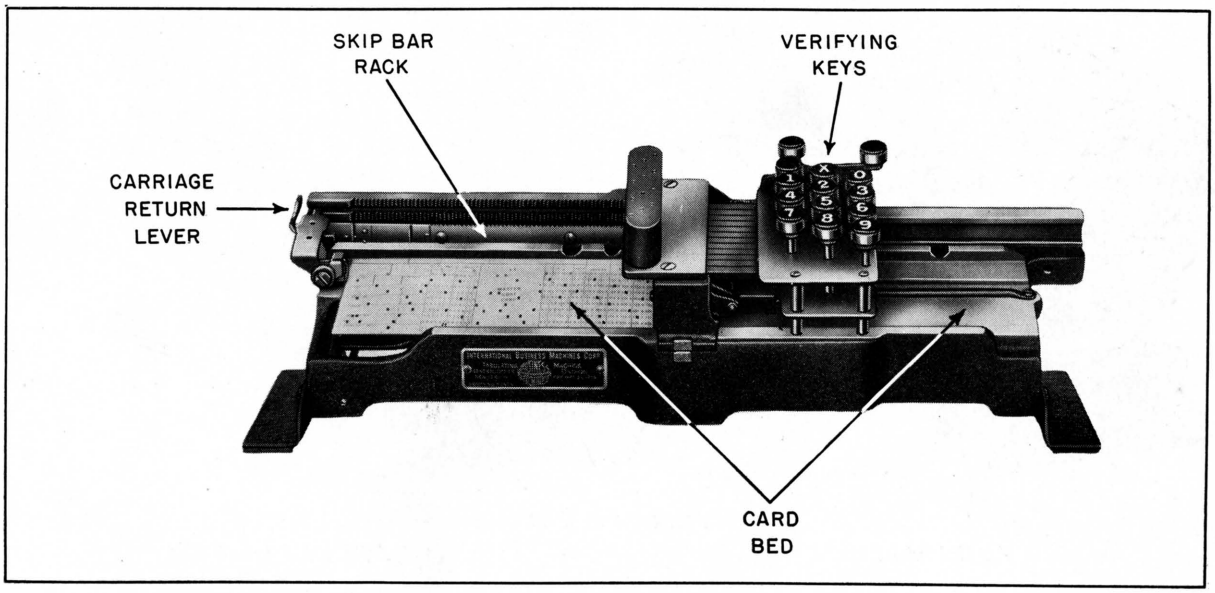
The development of systems to eliminate the time-consuming detail checking operations has effected numerous economies. More important than the savings of clerical cost are the savings of hours and days in the time required for closing the records and preparing statements which are constantly becoming more vital to management. Timeliness of reports permits the correction of wrong conditions or the immediate advantageous use of favorable conditions to increase profitable operations.

The unique methods of establishing and maintaining accuracy under the punched card method have already been described. Of these, one of the most important is the method of mechanical verification which establishes accuracy for all time of the punched unit card record immediately following its preparation. This results in the elimination of all subsequent detail checking routines.

Mechanical Verifier (Type 51)

The Mechanical Verifier is a key-driven device for proving the accuracy with which the punched tabulating card was prepared. The theory upon which it is based is identical with that of any checking procedure, viz., that repetition of the work by a different person reveals the errors made by the one who originally performed the task. The verifier is so constructed that the operator can not see the holes of the columns to be verified and any sight suggestion of correctness is therefore eliminated.

Mechanical verification greatly reduces the human element hazard in the checking procedure and gives definite assurance that the punched hole records are dependably correct.



Operation

The manual operation of the Mechanical Verifier is identical with that of the Mechanical Key Punch. The punched card is placed in the verifier and the operator, reading data from the punching source records, proceeds as though actually punching. As each key is depressed, a small plunger drops through the hole in the card and permits the card to advance one column. If the key is struck which does not correspond to a hole punched in the card, the carriage of the verifier does not advance, thus calling attention to an error. Comparison of the punched card with the original data is then made immediately to determine what correction may be necessary.

Because of the principle of operation (the advancing of the card for each column correctly punched and verified), the last column of a 45-column card must be checked in another manner, since the carriage can not advance beyond that position. Last-column verification is accomplished by sight checking or by observation of the action of the pins located to the left of the keyboard. If a hole does not appear in the position for which a key has been depressed, the corresponding pin is raised.

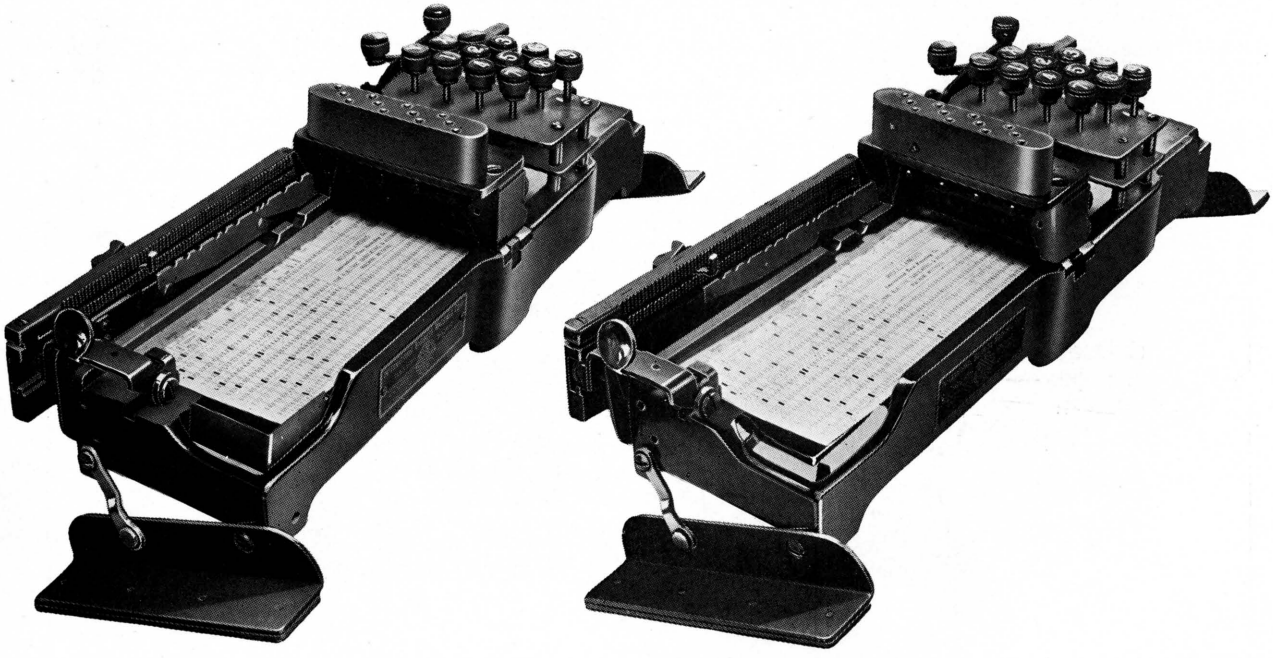
These pins may also be used to verify double-punched columns. Two keys of the verifier can be depressed simultaneously, and if a hole is punched in one of the positions the carriage will advance; but observation of the action of the pins will indicate whether or not both holes were properly recorded.

The Mechanical Verifier for the 80-column card is so designed that a mechanical gate built in the bed of the machine drops after the last column has been verified. Unless the last column has been properly checked, the gate remains in the upper position and prevents the ready removal of the card.

General

The keyboard of the Mechanical Verifier is identical with that of the Mechanical Key Punch (Type 1). Each of the keys is easily depressed, because no perforation of the card is involved. The touch system of operation may therefore be advantageously used.

A skipping mechanism, similar to that on punches, is operated by the depressing of the "X" key in the first column of the field to be skipped. If a properly cut skip-bar is in the machine, the predetermined number of col-



POSITION OF GATE

At Column 80 *After Column* 80

umns will be skipped. The same skip-bar used in the punch during the original transcription of data may be used in the verifier for the verification of the same cards.

A carriage stop, located on the back of the machine, may be set to govern the limited insertion of cards when key verification is not begun at column 1.

Motor Drive Verifier (Type 52)

The Motor Drive Verifier was developed simultaneously with the development and application of the automatic feeding and ejecting mechanism for punching equipment. The reduction in fatigue, which the Motor Drive Verifier effects by the elimination of the manual feeding and removel of cards, enables the average operator to maintain a high rate of production of verified cards throughout the entire day.

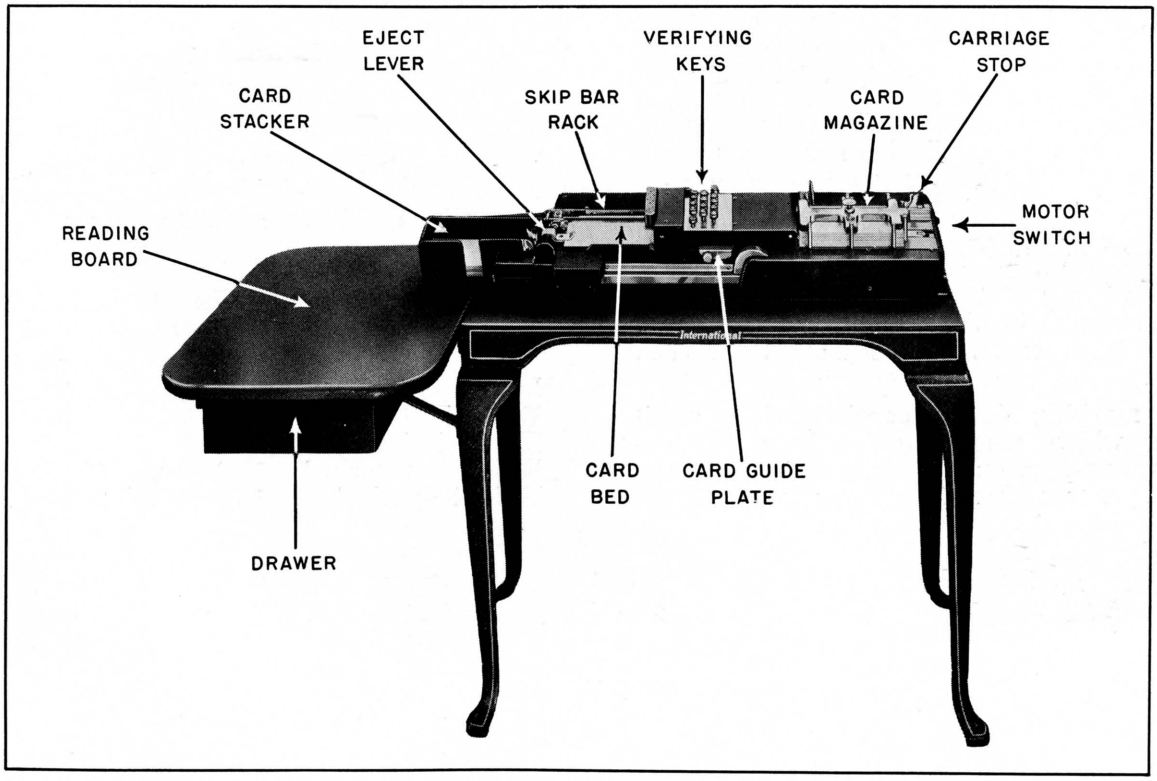
Operation

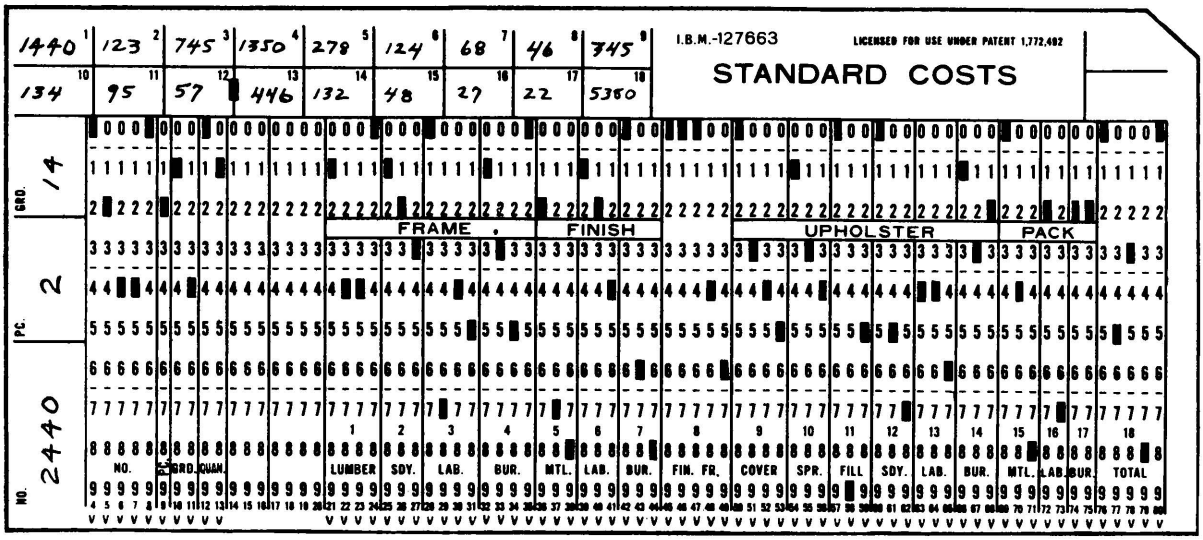
The keyboard of this machine is identical with that of the Electric and Motor Drive Key Punches. The method of operation, like that of the Mechanical Verifier, involves the reading of the data appearing on the punching source records, and the depressing of the keys as though actually punching. The touch system may be advantageously used in the verifying operation. The card advances one column after the depression of a key corresponding to the hole punched in the column being verified. Unlike the Mechanical Verifiers, the verification of the last column results in the automatic ejection of the card; and the next card is fed into position for verification. Approximately 250 cards may be placed in the magazine at one time. They should be in such order that the sequence of original documents can readily be followed. The automatic feeding of cards from the magazine and their ejection are similar to those of the Motor Drive Punches.

Skipping

The method of skipping is similar to that of Motor Drive Punches. Either X-skip or automatic skip-bars may be used. The same skip-bar used on the punch during the original transcription of data may be used in the verifier for the verification of the same cards.

This machine may also be equipped with a





special skip key which works in conjunction with an X-skip-bar even though no hole has been punched in the "X" position of the card. This special skip mechanism was developed to adapt the verifier to work in which the alphabetic punches were used.

Marking Device

The Motor Drive Verifier may be equipped with a special printing mechanism to mark each column that has been verified. The purpose of this device is to mark each column of a card being verified in order to prove that verification is complete. The depression of any key (except the "X" key) causes a small letter "v" to print along the bottom edge of the card directly under the column verified. The illustration shows the symbol printing on a completely verified card.

The printing of the symbol does not prove the correctness of the punching, but it does indicate that some key was pressed for each column.

The marking device consists of a small plunger which, when actuated by a key depression, presses on a ribbon and prints the symbol. The ribbon is arranged to advance automatically after each card is ejected from the verifier. Reversing the ribbon is a manual operation requiring the removal of the ribbon-guide cover plate and reversals of the spools. A standard 5/16" 12 yd. ribbon is used.

Symbols other than the "v" may be obtained when it is desired to identify the individual verifying machines of an installation. The design of these symbols must be left to the discretion of the engineers since some forms will not be distinct after repeated printing on a card.

Current Requirements

The Motor Drive Verifier requires direct current at either 110 or 220 volts. The current consumption at 110 volts is .70 amperes.

Dimensions and Weights

The dimensions and weights of the Mechanical and the Motor Drive Verifiers are as follows:

	Mechanical	Motor Drive
Length in inches	17¼	53
Width in inches	5½	26
Height in inches	4½	34
Weight—unpacked	13¼ lbs.	120 lbs.
Weight—packed	18 lbs.	235 lbs.