BACKGROUND INFORMATION
on
BANK OF AMERICA'S
use of
ELECTRONIC EQUIPMENT

Bank of America
San Francisco, California

May, 1961

ERMA

Bank of America's ultrahigh-speed ERMA (Electronic Recording Method of Accounting) will be regularly processing more than two and a half million commercial checking accounts for 650 of the bank's branches by May, 1961.

In general terms, ERMA is a system of connected units which, by means of its electronic components, automatically processes all bookkeeping details required to post and balance commercial checking accounts. The ERMA units are: (1) a sorter-reader, or document handler; (2) a computer; (3) magnetic tape units; and (4) a high-speed printer.

The sorter-reader sorts and reads checks, deposit slips, and other entries at the rate of approximately 750 pieces of paper a minute. The computer adds or subtracts dollar amounts to individual checking accounts and performs other bookkeeping chores at the rate of 33,000 accounts per hour. The magnetic tapes store information required for the checking account of each customer, information on each day's work, and other data required in processing commercial checking accounts. The printer, taking information from the magnetic tapes, prints customer statements and required bank reports at the rate of 600 lines, 120 characters to the line, per minute.

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ERMA reads and computes information from magnetically imprinted documents at the rate of 1200 characters per second. Details included in the bookkeeping process, in addition to adding deposits and subtracting checks from an individual's account, are: stopping payment on checks; placing holds on an account; setting up new accounts; closing accounts; computing and posting service charges. ERMA performs all these chores automatically.

ERMA CENTERS

By May, 1961, Bank of America will have 13 ERMA Centers in different locations throughout the state of California serving more than 650 branches of the statewide bank. The 13 centers will have a combined total of 30 ERMA systems and each center will have processing capacities ranging from 100,000 to more than 250,000 accounts. Staffs at the centers will include from 28 to 55 people.

ERMA is not a machine going into any one branch; it is a central installation serving many branches. A single ERMA system consists of a central processor (or computer) having three document handlers, a computer console, eight tape servos, and one high-speed printer. It entails a staff of approximately 28 people and can process a maximum of over 100,000 accounts per day.

In addition to providing space for ERMA equipment, a typical ERMA center (or installation) includes a tape storage vault, a mail receiving room, and the necessary office space for personnel. The centers operate around the clock, but do most of their work at night.

HOW ERMA READS

ERMA is able to read through the medium of the Common Machine Language which has been adopted by the American Bankers Association for

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use by banks throughout the United States. The Common Machine Language is a series of ten highly stylized Arabic numerals and four special symbols printed on checks and deposit slips in a special ink which has tiny specks of iron in it. The ink becomes magnetized as it first passes through the sorter-reader (document handler), and this gives off impulses to ERMA's electronic reader. The numbers appear along the bottom edge of each check and along the left edge of the back of each deposit slip. They are visibly readable as well as recognizable by ERMA.

PERSONALIZED CHECKS

Bank of America provides all of its commercial account customers with personalized checks; the name and address of the customer appears, in regular print, on the upper lefthand corner of each check; the customer's individual check serial number is imprinted on the upper righthand corner. Along the lower edge of the check, the basic information required for ERMA is printed in magnetic ink. This information, which never changes, includes (from left to right) the American Bankers Association and Federal Reserve number identifying the bank, followed by Bank of America's own internal branch number and the customer's account number.

The checks are issued free by the bank to all its checking account customers. If a customer should forget his check book, he can still write a check, and his branch, using an encoding machine, will imprint the account number and other information in the magnetic common machine language along the lower lefthand edge before it goes to ERMA. If someone finds a customer's check book, he cannot use it successfully because checks are paid by signature only. ERMA does not pay checks -- she does only the bookkeeping.

PROCESSING CHECKS FOR ERMA

Example: a customer carrying an account at a branch serviced by

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ERMA takes his check for $27.50 to the teller, who cashes it for him. When the teller balances his work at the end of the day, the amount of $27.50 is imprinted in magnetic ink along the lower righthand edge of the check. (As explained above, the bank's numerical number and the customer's account number are already printed along the lower left.) The amount of $27.50 is preceded by a printed number which directs ERMA to subtract this amount from the account. When all the tellers have totaled up all the checks received for the day, these checks are bundled together and delivered by motor messenger to the ERMA Center.

The checks are processed through ERMA. In this process the $27.50 check, is deducted from the customer's account, designated by number on the left side of the check. When this has been done the checks and/or deposit slips, as well as daily branch reports are packaged and returned to each branch by eight o'clock the next morning. Staff members at the branch take the checks, which are in account number sequence, and file them in a folder for each account. The person filing the check verifies the signature and the account. If the signature is invalid, the check is returned through normal channels, and an adjusting entry is submitted to the ERMA center.

The daily reports go to the appropriate departments in the branch.

Monthly, ERMA prepares and forwards customer statements for each account to the respective branches. There, the cancelled checks are taken from the files, and the statement and the checks mailed to the customer.

ERMA EMPLOYS MORE THAN 500 PEOPLE

More than 500 people will work in the 13 ERMA centers throughout California. Most of the ERMA positions are being filled, after training periods, by people now with Bank of America. Under a manual system, an average bookkeeper posts approximately 1,000 accounts. An ERMA system

(more)

can handle over 100,000 accounts. Hence, many bookkeepers are being relieved of the monotonous task of individually posting customers accounts. These people have been, and are being, assigned new and more interesting work in the branches where they once were bookkeepers. Some become tellers, others work in new services -- positions offering increased interest and challenge.

HOW ERMA WAS DEVELOPED

Soon after the close of World War II Bank of America's management determined that steps should be taken to develop a better tool for processing the increasing volume of paper work flowing in and out of the bank's branches every day. Document handling, a major part of banking activity, had assumed mountainous proportions during the war years and it was obvious that California's economic growth would continue to soar.

The resultant increased volume of paper work had its greatest impact in the area of commercial, or checking, account processing. Check book usage on a national basis doubled between the years 1943 and 1952 when the volume reached eight billion checks. In 1959 the volume was 13 billion. By 1970 the volume is expected to increase to 22 billion.

To cope with this growth a more efficient system of processing commercial accounts was imperative -- a system which would operate at a higher speed than anything known at that time, be completely accurate, eliminate routine repetitive chores, handle all sizes and quality of paper, and be economical to install and operate.

Electronics offered the most promise as a means of attaining these objectives. The electronic field in 1950 was relatively new and business machine companies were busily engaged in other activities. The bank's management felt that neither it, nor the banking profession as a whole, could wait for a normal course of development. The paper work problem was much too pressing.

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As a result, S. Clark Beise, now president of Bank of America, contacted the Stanford Research Institute in Menlo Park, California, and laid the bank's project before them. Stanford Research Institute accepted the challenge.

The objectives were an electronic system which would automatically handle all the details of commercial deposit accounting, produce a statement in a form familiar to customers, and not require a change in the style of paper checks in common use. Development and construction of the pilot equipment was divided into three phases: (1) the study of banking procedures involved; (2) general logical design of machine operation; (3) development, construction and testing of the actual machines.

Studies which would permit ERMA to read directly from source documents formed the most important portion of the research program. Stanford Research Institute, with the assistance of Bank of America, evaluated, and eliminated, a variety of "reading" techniques before undertaking the design of a system now known as "magnetic ink character recognition" (MICR). In September, 1955, the operational prototype ERMA, hand made at Stanford Research Institute, was publicly demonstrated before representatives of the press and, later, to members of the banking profession.

Satisfied that ERMA was practical and economical, Bank of America management sought a manufacturer to acquire the bank's rights, produce the system for Bank of America and others, and adapt the electronic developments of the preceding six years to the production model. After an evaluation of all factors, the bank selected the proposal of General Electric Computer Division.

General Electric made substantial improvements in the system and, later, refinements in magnetic ink character recognition resulted from the cooperative efforts of other manufacturers. This improved system has been adopted by the American Bankers Association as the "Common

(more)

Machine Language" for all banks in the country.

Bank of America's extensive use of the ERMA system is dictated by the growth of California and the growth of the bank. Twenty-one years ago, with a total state population of 6.6 million, there were 538,000 checking accounts in Bank of America branches. Today California's population approaches 16 million and the number of checking accounts in the bank is more than two and a half million. During the same period of time the number of Bank of America branches in California has increased from 495 to 711.

DATA PROCESSING

Besides ERMA, Bank of America has electronic data processing equipment which services more than one million real estate and installment loan accounts. It also performs much of the accounting and bookkeeping for many of the bank's branches and administrative departments. The basic equipment, made by International Business Machines, includes the IBM-7070 and IBM-1401 electronic computers and a paper-tape-to-magnetic-tape converter which puts taped information from branches into a form that can be processed electronically. The work horse of Data Processing is the 7070, a large-scale, general purpose computer.

HANDLES REAL ESTATE LOAN PROCESSING

In doing real estate loan processing for branches, two 7070's, one in San Francisco and one in Los Angeles, handle a combined average of 16,250 bookkeeping entries per day covering 250,000 accounts. While doing this, they automatically perform several operations. They prepare reports of loans five days or more delinquent, loans on which insurance is about to expire, and loans about to mature. They compute changes related to taxes, insurance, Federal Housing Authority premiums, and assessments. Preparing new coupon payment books each year, the 7070's also compile information on each category of loans, showing the number

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and the amount made, paid, outstanding, and delinquent. The computers produce a real estate loan certification list giving the balance, the next due date, and other pertinent information, and calculates all interest and accrual.

DOES INSTALLMENT LOAN ACCOUNTING

The 7070's make approximately 41,250 installment loan bookkeeping entries daily, covering 750,000 loan accounts carried by branches. In processing these loan accounts, it records new loans and prepares payment coupon books, and posts payments received from customers through the branches. Reviewing all loans for delinquencies, it sends out notices to customers with overdue accounts, when necessary. The computer watches for expiring insurance on boats, automobiles, et cetera, sending notices to customers if necessary. It makes daily reports on loans made, payments made, loan payment totals, and balances outstanding.

Periodically, the 7070 also reports on the detailed listings of all loans by number, balance, and due date, with totals for each category. It tells, in report form, the volume and other aspects of the particular types of loans for use of automobile, boat, and other dealers. It gives breakdowns on special categories of loans, such as loans made on new cars, used cars, and trucks.

7070 DOES OTHER TASKS

Other tasks performed by the 7070 includes accounting for branch clearings, bond investment, cost allocation, and branch activity. For branch clearings, it does the accounting necessary to settle exchanges of checks and deposits between all 714 branches throughout California. This involves handling an average of 80,000 items daily. As an aid to bond investment, the computer prepares monthly reports showing the status of the bank's government and municipal bond portfolio. It helps in cost

(more)

allocation by recording the distribution of inter-department administrative expense. For the branches, it consolidates branch activity figures, and calculates the number of people needed to operate each branch.

1401 AIDS THE 7070

The 1401 is a small computer, capable of performing many of the 7070's functions, but at a slower rate. Its primary application at Bank of America is to do preliminary work for the 7070, converting punch cards to magnetic tape as 7070 input, and serving as a printer for 7070 output. In performing these functions, the equipment keeps the larger 7070 available for a greater volume of more important work.

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ERMA

BRANCH GUIDE

Bank of America N. T. & S. A.
Training Department

and

Systems & Equipment Research Department
San Francisco Headquarters

May 1, 1959

ERMA BRANCH GUIDE

TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

TABLE OF CONTENTS (Continued)

PROCESSING WORK

RETURNED FROM ERMA

ERMA REPORTS

A. On the following pages are illustrations and explanations of reports which ERMA furnishes to the branch. When reviewing the reports, keep the following general rules in mind:

1. ERMA maintains all records in account number sequence. The entries on all reports are always in account number sequence.

2. When a report is printed in multiple copies, the original, duplicate and triplicate (if any) will be separated when the report arrives at the branch.

ACTUAL SIZE - 8½ X 11

STATEMENT OF ACCOUNT WITH

FOXWORTHY-PLUMMER BRANCH
SAN JOSE, CALIF

Bank of America
NATIONAL TRUST & SAVINGS ASSOCIATION

TYPE OF ACCOUNT: COMMERCIAL
PERIOD ENDING: FEB. 27, 1959

ACCT NO 1-21333

WALTER ADAMS
1865 DEVON AVE
SARATOGA CALIF

FOLD HERE

OLD BALANCE	CHECKS - LISTED IN ORDER OF PAYMENT - READ ACROSS				DEPOSITS	DATE	NEW BALANCE
3499	439	2000			7000	20259	8060
8060	500					20459	7560
7560	500				10400	20959	17460
17460	1776					21059	15684
15684	1207	1370		114		22769	13093

STATEMENT/LEDGER SHEET (Form ER-1)

Statement/Ledger Sheets for Commercial accounts arrive at the branch to the cycling schedule, or they may be specially requested for individual account. ERMA also issues Statement/Ledger Sheets for Commercial accounts whenever there is enough posting activity to fill one sheet. Statement/Ledgers for Tenplan accounts are issued only when there is enough posting activity to fill one sheet. The service charge, if applicable, is the last item posted on the Statement/Ledger. The footing shows a summary of activity for the period covered by the Statement.

The Statement (original copy), plus the debits covered by the Statement, plus the Follow Sheets (if the account is on Follow-Sheet status) are held for or mailed to the customer according to his instructions.

The Ledger Sheets (exact duplicates of the Statements) are held at the branch and bound periodically (with the duplicates of the Follow Sheets, if any). See the instructions on page 121. The Destruction Schedule if fifteen years.

FORM ER-1

SUMMARY OF ACTIVITY

BALANCE FORWARD	DEBITS NUMBER	DEBITS AMOUNT	CREDITS NUMBER	CREDITS AMOUNT	SERVICE CHARGE ITEMS	SERVICE CHARGE AMOUNT	NEW BALANCE
3499	7	7692	2	17400	1	1.14	13093

Please examine this statement at once. If no error is reported in ten days the account will be considered correct. All items are credited subject to final payment.

EXPLANATION OF SYMBOLS

R REVERSING ENTRY
M MISCELLANEOUS ENTRY
S SERVICE CHARGE
OD OVERDRAFT

PLEASE ADVISE US OF ANY CHANGE IN ADDRESS

USE REVERSE SIDE FOR RECONCILING YOUR ACCOUNT

ACTUAL SIZE - 8½ X 11

STATEMENT FOLLOW SHEET

BRANCH 830 DATE 3-20-59 ACCOUNT NO 7. 02

CHECKS - LISTED IN ORDER OF PAYMENT - READ ACROSS					DEPOSITS
10000M	500000	1358	3215	3500	625634
4510	9000	9223	9226	9271	
10673	85864	262275			

STATEMENT FOLLOW SHEET (Form ER-2)

Statement Follow Sheets are issued by ERMA for any account which the branch has placed on Follow-Sheet status. ERMA publishes a Follow Sheet for any day on which the account has had activity. The Follow Sheet lists each debit and credit posted and summarizes the day's activity in the footing. Only the total debits and total credits for the day are shown on the Statement/Ledger Sheets for Follow-Sheet accounts.

Unless a customer wishes to receive his Follow Sheet daily, the branch will file the original copy with the debits which are listed on it in the proper check file. These will be delivered to the customer with his Statement.

The duplicate copy of the Follow Sheet is filed and bound periodically with the Ledger Sheet.

SUMMARY OF DAILY ACTIVITY

BALANCE FORWARD	DEBITS		CREDITS		NEW BALANCE
	NUMBER	AMOUNT	NUMBER	AMOUNT	
6101202	13	879125	1	625634	8847711

ABOVE IS A DETAILED LIST OF DEPOSITS MADE AND CHECKS PAID AND CHARGED TO YOUR ACCOUNT ON DATE INDICATED.

FORM - ER-2

ACTUAL SIZE - 12 X 11

Bank of America

STATUS REPORT

PAGE 8 | BR 830 | DATE 3-5-59

ACCOUNT NO	DATE LAST ENTRY	CURRENT BALANCE	ACCOUNT NO	DATE LAST ENTRY	CURRENT BALANCE	ACCOUNT NO	DATE LAST ENTRY	CURRENT BALANCE	ACCOUNT NO	DATE LAST ENTRY	CURRENT BALANCE
3• 1094	3059	25404	1• 1095	3029	8130	9• 1096	3029	18887	7• 1097	3049	9002
5• 1098	3049	30160	3• 1099	3039	40727	8• 1100	3059	55159	6• 1101	3049	100
4• 1102	3039	30000	2• 1103	3059	350000	8• 1105	3059	18550	6• 1106	3059	16000
4• 1107	3059	18100	4• 1201	2259	00	8• 1204	3059	54152	4• 1206	3059	12504
0• 1208	3059	39836	8• 1209	3059	35114	5• 1210	3049	26329	3• 1211	3059	15386

STATUS REPORT (Form ER-3)

The Status Report arrives at the branch daily. It lists every account by account number in numerical sequence. NOTE: THE ACCOUNT NUMBERS ARE LISTED ACROSS THE PAGE RATHER THAN DOWN THE COLUMN. The report shows the current status of every account, including the date of last entry, the current balance, and whether there is an overdraft, a Hold, or a Stop Payment on the account. Each page has space for one hundred accounts. At the end of the Commercial accounts is a summary of the Commercial account activity for the day. At the end of the Tenplan accounts is a similar summary of Tenplan activity. The final page of the Status Report shows a grand total summary of activity. The Status Report is issued in triplicate, and each copy is bound into a separate book when it arrives at the branch.

The original (white) copy of the Status Report serves as the chief reference source in the branch, replacing the Statement/Ledger File. It is also used for posting to the General Ledger during the branch balancing procedure (see page 123). This copy is to be filed or boxed and retained at the branch. The Destruction Schedule is two years.

The duplicate (yellow) copy of the Status Report may be used as an auxiliary reference or as a replacement in case the original copy is destroyed or damaged. Duplicate copies may otherwise be destroyed after two days.

The triplicate (blue) copy of the Status Report is sent to the Vital Records Shelter, if the branch is under Vital Records procedure. Otherwise it may be destroyed on the second day.

REJECTED DEBITS	HOLD OVER CREDITS	TOTAL DEBITS	TOTAL CREDITS	[illegible]		[illegible]	TOTAL OVERDRAFTS	TOTAL DEPOSIT BALANCE
114835	.00	3632462	3917234			788	21348	88771647

OD-MINUS SIGN INDICATES OVERDRAFT. *H- INDICATES HOLD. S-STOP PAYMENT. B-BOTH

ACTUAL SIZE - 10 X 11

Bank of America

PAGE 7

JOURNAL

BRH 830 DATE 3-5-59

OLD BALANCE	CHECKS, OTHER DEBITS AND AMOUNT OF PAYMENT			DEPOSITS	DATE LAST ENTRY	NEW BALANCE	ACCOUNT NUMBER
8946	3387				3049	5559	3- 561
40839	4800				3049	36039	1- 562
28682	6000				3049	22682	6- 574
8739	8075				3039	664	6- 575
32618	1000	1000	1239		3049	29379	1- 581

JOURNAL (Form ER-4)

The Journal arrives at the branch daily. It is a complete record of a single day's activity. It gives the old balance, posted debits, posted credits, date of last entry, and the new balance for every account which has had an entry on that day. This is in contrast to the Status Report, which lists every account, whether it has had activity or not. The Journal serves somewhat the same purpose as the present Bookkeeper's Register. On the last page of the Journal a summary of the day's activity appears in the footing. The Journal is printed in triplicate, and each copy is bound separately when it arrives at the branch.

The original (white) copy of the Journal is used as an auxiliary reference source for the Status Report. It provides a detailed history of all posting activity between statements for any account which has had activity. The original copy of the Journal should be filed or boxed and retained at the branch. The Destruction Schedule is two years.

The duplicate (yellow) and triplicate (blue) copies of the Journal may be destroyed on the second day.

20435	3000				3049	17435	7- 625
33269	5488				3029	27781	1- 628
7236	365	1019	1741	6111	3039	10222	9- 629
16808				4880	3039	21688	4- 631
4612	4000				3049	612	0- 633

REJECTED DEBITS	HELD OVER CREDITS	TOTAL DEBITS	TOTAL CREDITS	SERVICE CHARGE COMMERCIAL		NUMBER OF ACCOUNTS	TOTAL OVERDRAFTS	TOTAL GENERAL BALANCE
93616	00	5789135	6583430	00		1181	330333	18817232

JOURNAL/STATUS BALANCE REPORT

ACTUAL SIZE - 10 X 11

Bank of America

ZERO BALANCE REPORT

872 9-12-58

OLD BALANCE					DATE LAST ENTRY	NEW BALANCE	ACCOUNT NUMBER
00					3|19		8= 406
46					2|99		0= 60355
36					2|99		3= 60634
88					2|99		6= 60678
15					2|99		5= 60706
07					2|99		1= 60708
16695					2|99		2= 60712
81					2|99		5= 60725

ZERO BALANCE REPORT (Form ER-4)

Form ER-4 is used for the Zero Balance Report as well as for the Journal. The Zero Balance Report arrives at the branch daily, listing all accounts which were reduced to zero by the current day's posting. The branch uses this report to determine which of the zero balance accounts, if any, should be closed.

The original (white) copy should be retained at the branch and bound monthly. The Destruction Schedule is one year.

The duplicate and triplicate copies may be destroyed on the second day.

ACTUAL SIZE - 12 X 11

Bank of America

REJECTED CHECK REGISTER

ACCOUNT NO.	TRAN CODE	REASON	AMOUNT OF ITEM	DRAWER OR DEPOSITOR (TO BE WILLED IN BY BRANCH)	OFFICER'S INITIAL	CURRENT BALANCE	HOLD STOP	SAV. ACCT BALANCE	DISPOSITION	CREDIT TO S.C. MISC.	CREDIT TO OTHER LOAN CHARGES
5• 7•	9	NSF	A300			656					
7• 78	9	NSF	16216			17538•					
0• 81	9	NSF	8•560			46955					
4• 368	9	NSF	10418			1356					
0• 406	9	NSF	1000300			2•200•					

REJECTED CHECK REGISTER (Form ER-5)

The Rejected Check Register arrives at the branch daily. It is a complete list of all debits rejected for bookkeeping reasons (see page 105). It shows the account number, the Tran Code of the rejected debit, the reason for rejection (in abbreviations which are explained on the back of the form and on page 106 of this manual), the amount of the rejected item, the current balance of the account (if applicable), and the dollar amount of any Holds or Stop Payments on the account. At the bottom of the form, the total amount of the rejected debits appears in the "Amount of Item" column. (There are separate totals for Commercial accounts and Tenplan accounts, as well as a grand total). The Rejected Check Register arrives at the branch in triplicate.

The original (white) copy of the Rejected Check Register is used in processing the rejected debits, as outlined on page 105. It is retained by the branch as an audit trail for rejected items, and should be bound monthly. The Destruction Schedule is two years.

The duplicate (yellow) and triplicate (blue) copies of the Rejected Check Register may be used as auxiliary forms for processing rejected debits. They may be destroyed on the second day.

A• 1431	3	NSF	3000									
6• 1431	3	NSF	5579			2567						
0• 1459	3	NSF	100			593•						
8• 1479	3	NSF	2593			A500		10000				
		CTN	355519									
		TOTAL		*REVIEWING OFFICER WILL INITIAL OPPOSITE CHECKS HE ORDERS PAID		**REVIEWING OFFICER WILL INITIAL IN APPROPRIATE SPACE WHEN HE ORDERS CHARGES WAIVED				TOTALS		

REJECTED CHECK REGISTER / HOLDOVER CREDIT REGISTER — "REASON COLUMN" ABBREVIATIONS EXPLAINED ON REVERSE SIDE

ACTUAL SIZE - 12 X 11

Bank of America

HOLDOVER CREDIT REGISTER — 453 — 4-7-59 — PAGE 1

ACCOUNT NO	TRAN CODE	REASON	AMOUNT OF ITEM	DRAWER OR DEPOSITOR (TO BE FILLED IN BY BRANCH)	OFFICER'S INITIALS	CURRENT BALANCE	HOLD STOP	SAV ACCT BALANCE	DISPOSITION	CREDIT TO S.C. MISC.	CREDIT TO OTHER LOAN CHARGES
4- 1[illegible]		TL	[illegible]								
9- 1[illegible]		TL	[illegible]								
4- 17[illegible]		TL	[illegible]								
6- 17[illegible]		TL	[illegible]								
6- 17[illegible]		TL	[illegible]								
8- 17[illegible]		TL	[illegible]								
3- 17[illegible]		TL	[illegible]								
6- [illegible]		TL	[illegible]								
7- [illegible]		TL	[illegible]								

HOLDOVER CREDIT REGISTER (Form ER-5)

The Holdover Credit Register arrives at the branch daily. It furnishes the same information about rejected credits as the Rejected Check Register furnishes about debits. It is used to process the rejected or holdover credits, as outlined on page 111.

The copies of the Holdover Credit Register are filed or destroyed in the same manner as the Rejected Check Register.

		TOTAL	[illegible]						TOTALS		

REJECTED CHECK REGISTER / HOLDOVER CREDIT REGISTER

REASON COLUMN ABBREVIATIONS EXPLAINED ON REVERSE SIDE

ACTUAL SIZE - 10 X 11

Bank of America

PAGE 1

OVERDRAWN ACCOUNTS

894

3-10-59

ACCOUNT NUMBER	NAME TO BE TYPED BY BRANCH	CURRENT BALANCE	STOP HOLD	DATE OF LAST ENTRY	DATE OVERDRAWN	TYPE OF ITEM	ITEM AMOUNT
7- 107		167-		3099	3099		
7- 305		1131-		2199	2199		
4- 316		81-		2199	3029		
2- 336		184-		3109	3109		
6- 396		37-		2199	3029		
0- 554		63-		2199	3029		
1- 582		157-		2199	2199		

OVERDRAWN ACCOUNTS (Form ER-6)

The Overdrawn Accounts Report arrives at the branch daily. This report shows the account number, the current (negative) balance, indicates any Stop Payments or Holds, gives the date of last entry, and the date the account was overdrawn. There is space for the account name to be typed in by the branch. The total of OD balances will be printed in the "Current Balance" column following the last item. The report is issued in duplicate.

The original of this report is used as a reference source for review (refer to the applicable SPM section). It must be filed and bound monthly. The Destruction Schedule is two years.

The duplicate may be destroyed on the second day.

6- 1621		1381-		2199	2199		
3- 1717		100-		3059	3029		
5- 2041		1435-		2199	2199		
5- 2089		700-		3109	3029		
8- 2332		2697-		2199	2199		
0- 2492		836-		3099	2199		
2- 2878		2303-		3049	3049		
7- 2989		1116-		2199	2199		
2- 3009		399-		2199	2199		

MISCELLANEOUS REPORT REGISTER (OVERDRAWN ACCOUNTS DORMANT/INACTIVE ACCOUNTS LARGE ITEMS REPORT)

ACTUAL SIZE - 10 X 11

Bank of America

PAGE 4

BRANCH 894

DATE 6-6-60

DORMANT/INACTIVE ACCOUNTS

ACCOUNT NUMBER	NAME TO BE TYPED BY BRANCH	CURRENT BALANCE	DATE OF LAST ENTRY	DATE OVERDRAWN	TYPE OF ITEM	ITEM AMOUNT
8- 2332		327.18	2069		INACTIVE	
0- 2492		1775.0	2069		INACTIVE	
2- 2878		2939.9	2069		INACTIVE	
7- 2989		149077	2069		INACTIVE	
2- 3009		103	2068		DORMANT	

DORMANT/INACTIVE ACCOUNTS (Form ER-6)

The Dormant/Inactive Accounts Report arrives at the branch monthly. It lists all account numbers which are currently on Dormant status and all accounts which have had no activity for three calendar months. In the column headed "Type of Item" the words "Dormant" or "Inactive" indicate which type of account is being reported. This report is issued in duplicate.

The original copy is used to audit the branch "Dormant Accounts" file, and as a source of information before placing an account on Dormant status. It should be kept in the Dormant File between inspection periods, and it may be destroyed after inspection.

The duplicate copy may be destroyed on the second day.

FORM ER-6

MISCELLANEOUS REPORT REGISTER (OVERDRAWN ACCOUNTS; DORMANT/INACTIVE ACCOUNTS; LARGE ITEMS REPORT)

ACTUAL SIZE - 10 X 11

Bank of America

PAGE 4

LARGE ITEMS REPORT

BR # 872 DATE 3-4-59

ACCOUNT NUMBER	NAME TO BE TYPED BY BRANCH	CURRENT BALANCE	CODE	DATE OF LAST ENTRY	DATE OVERDRAWN	TYPE OF ITEM	ITEM AMOUNT
6• 75						CREDIT	405181
6• 75						CREDIT	607900
6• 75						CREDIT	1959387
6• 75						DEBIT	297854
6• 75						DEBIT	337000
6• 75						DEBIT	350000
6• 75						DEBIT	496625
6• 75						DEBIT	585600
6• 75						DEBIT	853291
7• 84						CREDIT	169692

LARGE ITEMS REPORT (Form ER-6)

The Large Items Report arrives at the branch daily. It lists all items of $1000 or over, indicating in the "Type of Item" column whether the listed item is a debit or a credit. The amount of the item is listed in the "Item Amount" column.

The original copy is for reference at the branch. It must be filed and bound monthly. The Destruction Schedule is one year. The duplicate copy may be destroyed on the second day.

8• 98						CREDIT	8679683
3• 109						DEBIT	150000
3• 109						DEBIT	261760
8• 111						DEBIT	300000
6• 117						DEBIT	159544
6• 388						CREDIT	130969
6• 388						DEBIT	100000
3• 406						CREDIT	100000
3• 406						DEBIT	100000
8• 831						CREDIT	100000

MISCELLANEOUS REPORT REGISTER (OVERDRAWN ACCOUNTS; DORMANT/INACTIVE ACCOUNTS; LARGE ITEMS REPORT)

ACTUAL SIZE - 9 X 11

Bank of America

PAGE 23

NAME AND ADDRESS REPORT

BRC 872 DATE 3-5-59

ACCOUNT NUMBER	CODE	NAME AND OR ADDRESS (1 AND OR 2)	DESIGNATORS (3)	STATISTICAL (4)	SPEC. STMT. DATA (5) DATE (5) MONTH	DAY
8• 2314		ADRIAN GRAHAM OR DOROTHY GRAHAM				
		1286 SAN TOMAS AQUINO SAN JOSE 30 CALIF				
4• 2315		MILDRED SMITH				
		1661 HESTER AVE SAN JOSE 28 CALIF				
8• 2318		LT COL E B APPLEMAN OR				
		MRS ED APPLEMAN 636 MONTCLAIR DR				
		SANTA CLARA CALIF				
6• 2319		R F VANCE OR MRS RICHARD F VANCE				
		12160 WESTRIDGE DR SARATOGA CALIF				

NAME AND ADDRESS REPORT (Form ER-7)

The Name and Address Report will be sent to the branch periodically. It will list all assigned account numbers with their corresponding names and addresses, plus the statistical information which ERMA has on file pertaining to each account. (See the explanation of the statistical codes, pages 96-97).

This report will be used to audit the Signature Card File and to see that all branch records agree with the information entered in ERMA. The original of the report will be filed permanently in the branch. The duplicate will be sent to the Vital Records Shelter for those branches on Vital Records procedure; otherwise it may be destroyed.

		1949 MOORPARK AVE SAN JOSE 28 CALIF				
9• 2327		STANLEY G MILL OR				
		MRS NEDRA M MILL 406 BRENTWOOD DR				
		SAN JOSE 29 CALIF				
7• 2328		MICHAEL L O RESTORIUM 19075 RICHMOND AVE				
		SAN JOSE 28 CALIF				
0• 2331		ROBERT H OSWALD 2353 WESTFIELD AVE				
		SAN JOSE 28 CALIF				

(2) TYPE OF CHANGE CODE
1. CHANGE OF NAME
2. CHANGE OF ADDRESS

3. DESIGNATOR AREA CHANGE
4. STATISTICAL AREA CHANGE

5. SPECIAL STATEMENT DATE
6. OPENED ACCOUNT
7. CLOSED ACCOUNT

RECORD CHANGE AUDIT LISTING/NAME AND ADDRESS REPORT

ACTUAL SIZE - 9 X 11

Bank of America

RECORD CHANGE AUDIT LISTING

BRZ 872 DATE 3-5-59 PAGE 4

ACCOUNT NUMBER	TYPE OF CHANGE #	NAME AND OR ADDRESS (1 AND OR 2)	DESIGNATORS (3) STATUS	DESIGNATORS (3) TRUST CHARGE	DESIGNATORS (3) MAIL HOLD	DESIGNATORS (3) FOLLOW SHEET	STATISTICAL (4) CLASS	STATISTICAL (4) TRUST CHARGE	STATISTICAL (4) SAV ACCT	STATISTICAL (4) DEPOSIT CODE	STATISTICAL (4) ACTIVITY CODE	SPEC STMT DATA (5) DATE (5) OR DAY OF MONTH	SPEC STMT DATA (5) DAY OF WK
		SAN JOSE 28 CALIF											
1-60029	6	WINIFRED WITHERSPOON	0	0	1	0	1	59	0	0	88		
		304 S MONROE											
		SAN JOSE 28 CALIF											
8-60030	6	VIOLA M JACKSON	0	0	1	0	2	59	0	0	88		
		EMMA V CAMPBELL											

RECORD CHANGE AUDIT LISTING REPORT (Form ER-7)

The Record Change Audit Listing Report arrives at the branch daily. It lists all record changes entered in the ERMA files on that day, including accounts opened, accounts closed, accounts changed to or from Follow-Sheet Status, or any changes in account name, address, or statistical information. In the column headed "Type of Change #", a number indicates what portion of the account record has been changed. These number codes are explained at the bottom of the report. The column headed "Account Number" and "Type of Change #" are always filled in. Information is placed in the other columns only if that information has been changed. For example, if the account name only has been changed, the address and the statistical information will not be entered on the report. See pages 96-97 for the explanation of the statistical codes.

If a New Account/Record Change form is rejected by ERMA (for example, if a new account entry had no accompanying initial deposit) the reason for rejection is shown in the column headed "Account Name and/or Address".

The Record Change Audit Listing Report is used to audit the record changes submitted by the branch. The original copy should be bound monthly and may be destroyed after the next inspection period. The duplicate may be destroyed on the second day.

	2	1114 STEVENS CREEK BLVD
		SAN MATEO CALIF
	3	
	4	
4-61188	7	
0-61203	1	CLOTILDE COFFMAN

#TYPE OF CHANGE CODE
1. CHANGE OF NAME
2. CHANGE OF ADDRESS
3. DESIGNATOR AREA CHANGE
4. STATISTICAL AREA CHANGE
5. SPECIAL STATEMENT DATE
6. OPENED ACCOUNT
7. CLOSED ACCOUNT

RECORD CHANGE AUDIT LISTING/NAME AND ADDRESS REPORT

EXPLANATION OF STATISTICAL CODES APPEARING ON THE RECORD CHANGE AUDIT LISTING REPORT AND THE NAME AND ADDRESS REPORT:

Following are explanations of the columns headed "Designators", "Statistical", and "Special Statement Data". These columns will always be filled in on the Name and Address Report. They will be filled in on the Record Change Audit Listing only if the information to which they refer has been changed.

"Designators" Column:

Status:

1 - Dormant
2 - Restrained
3 - Dormant to active
4 - Restrained to active

NOTE: The information in the "Status" column does NOT reflect information submitted on LMisc-31 (Record Change/New Account form). The Status of an account is determined by encoded entries such as those placing an account on Dormant, Restrained, or Follow-Sheet status.

Service Charge:

1 - Regular
2 - Analysis
3 - Waived: current balance
4 - Waived: employee
5 - Waived: non-profit organization
6 - Waived: Bancontrol
7 - Waived: other

Mail/Hold:

1 - Mail statement
2 - Hold statement

Follow Sheet:

1 - Follow sheet
2 - No follow sheet

"Statistical" Column:

Class:
1 - Individual account
2 - Joint Tenancy account
3 - Trustee account
4 - Tenants in common account
5 - Sole ownership account
6 - Co-partnership account
7 - Corporation account
8 - Estate account
9 - Lodge, Association account

Year Opened:
(Two digits indicating year opened, as "59")

Sav. Acct.:
(This column is not used at present)

Occupational Code:
(This is the same as "Business/Industrial" code. In the next printing of the form, the column will be changed to read "Business/Industrial". For a complete table of the Business/Industrial code, see pages 6 - 8).

00 - No information

Area Code:
(This is the same as "National/Statewide" code. In the next printing of the form, the column heading will be changed to read "National/Statewide").

0 - Not applicable
1 - Statewide account
2 - National account

"Special Statement Data"

Dates of Month:
(Two digits indicating dates on which extra statements are to be issued for the account). 00 - 31.

Day of Week:
(Two digits indicating day of week on which extra statements are to be issued for the account).

01 - Monday
02 - Tuesday
03 - Wednesday
04 - Thursday
05 - Friday

ACTUAL SIZE - 9 X 11

Bank of America

PAGE 1

UNASSIGNED ACCOUNT NUMBERS REPORT

DATE 02-06-59 RPT # 300

ACCOUNT NUMBER	DATE CLOSED	ACCOUNT NUMBER	DATE CLOSED	ACCOUNT NUMBER	DATE CLOSED	ACCOUNT NUMBER	DATE CLOSED
4- 800	12-31-57	6- 800	12-31-57	8- 802	12-31-57	0- 800	3 12-31-57
2- 800	4 12-31-57	4- 800	5 12-31-57	6- 800	6 12-31-57	8- 800	7 12-31-57
0- 800	8 12-31-57	2- 800	9 12-31-57	5- 801	0 12-31-57	7- 801	1 12-31-57
9- 801	2 12-31-57	1- 801	3 12-31-57	3- 801	4 12-31-57	5- 801	5 12-31-57
7- 801	6 12-31-57	9- 801	7 12-31-57	1- 801	8 12-31-57	3- 801	9 12-31-57
6- 802	0 12-31-57	8- 802	1 12-31-57	0- 802	2 12-31-57	2- 802	3 12-31-57
4- 802	4 12-31-57	6- 802	5 12-31-57	8- 802	6 12-31-57	0- 802	7 12-31-57

UNASSIGNED ACCOUNT NUMBERS REPORT (Form ER-8)

The Unassigned Account Numbers Report is furnished to the branch periodically. It is a list of account numbers available for re-assignment, showing the date on which each account was closed. This report is issued in duplicate.

The original (white) copy of the Unassigned Account Numbers Report is used as a reference for ordering checkbook set-ups for unassigned account numbers, and for assigning numbers to new accounts. These procedures are discussed on page 28 of this manual. The original copy should be filed and kept until the next Unassigned Account Number Report arrives at the branch.

The duplicate (yellow) copy of the Unassigned Account Numbers Report is used to order new-account set-ups from Central Check Supply, according to the instructions on page 28 of this manual.

6-630	12-31-57	8-630	13 12-31-57	0-630	14 12-31-57	2-630	15 12-31-57
4-630	16 12-31-57	6-630	17 12-31-57	8-630	18 12-31-57	0-630	19 12-31-57
3-630	20 12-31-57	5-630	21 12-31-57	7-630	22 12-31-57	9-630	23 12-31-57
1-630	24 12-31-57	3-630	25 12-31-57	5-630	26 12-31-57	7-630	27 12-31-57
9-630	28 12-31-57	1-630	29 12-31-57	4-630	30 12-31-57	6-630	31 12-31-57
8-630	32 12-31-57	0-630	33 12-31-57	2-630	34 12-31-57	4-630	35 12-31-57
6-630	36 12-31-57	8-630	37 12-31-57	0-630	38 12-31-57	2-630	39 12-31-57
5-630	40 12-31-57	7-630	41 12-31-57	9-630	42 12-31-57	1-630	43 12-31-57
3-630	44 12-31-57	5-630	45 12-31-57	7-630	46 12-31-57	9-630	47 12-31-57

ACTUAL SIZE - 5½ X 11

Bank of America

PAGE 10

SERVICE CHARGE REPORT

No. 872

DATE 3-20-59

ACCOUNT NUMBER	NUMBER OF DEPOSITS	NO. OF CHECKS FOR SERVICE CHARGE	BALANCE FOR SERVICE CHARGE CALCULATION	SERVICE CHARGE AMOUNT
8- 1781	1	6	2900	107
6- 1782	2	14	45700	107
4- 1783	6	34	14000	289
2- 1784		8	1000	121
0- 1785	5	17	600	184
8- 1786	5	16	210000	ANA

SERVICE CHARGE REPORT (Form ER-9)

The Service Charge Report arrives at the branch with the Statements which are sent on their proper cycling date. The Service Charge Report lists all service charges posted to the Statements for that date. It shows the account number, the number of deposits, the number of checks for service charge, the balance used by ERMA to calculate the service charge, and the amounts of the service charge.. In the "Service Charge Amount" column, the abbreviations "WAI" or "ANA" indicate that the account has a waiver on file or that the account is to be analyzed by the branch.

The original (white) copy of the Service Charge Report is used to audit service charges and to remind the branch of those accounts which must be analyzed before service charge is made. The original should be filed and bound monthly. The Destruction Schedule is two years.

The duplicate (yellow) copy may be destroyed on the second day.

FORM ER-9

ACTUAL SIZE - 5½ X 11

Bank of America

HOLD—STOP PAYMENT:

PAGE

DAILY CHANGES

BR # 830

DATE 3-16-59

ACCOUNT NUMBER	TRAN CODE	TYPE	AMOUNT	DAYS TO MATURITY	DATE ENTERED	ACTION
5- 1079		STOP	3697	89	31659	INSERTED
6- 1248		HOLD	60000		31659	INSERTED
6- 1248		HOLD	60000		31659	REMOVED
4- 1268		HOLD	20000	4	31659	INSERTED
4- 1268		HOLD	160000	4	31659	INSERTED

HOLD-STOP PAYMENT: REPORT OF DAILY CHANGES
(Form ER-10)

The Hold-Stop Payment Report of Daily Changes arrives at the branch daily. On it are listed all Holds or Stop Payments which were entered or removed on that day, showing the account number, the Tran Code, the type, the amount, the days to maturity, and the date entered. This report is issued in duplicate.

The original (white) copy is used to audit the placement, removal, or expiration of Holds or Stop Payments, in connection with the branch Hold/Stop Payment Files. (See the procedures on page 114). The original should be filed, bound monthly, and may be destroyed after the next inspection period.

The duplicate of the report may be destroyed on the second day.

FORM - ER-10

REJECTED REASON ABBREVIATIONS IN "ACTION COLUMN" EXPLAINED ON REVERSE SIDE

HOLD—STOP PAYMENT: DAILY CHANGES / MONTHLY LISTING

ACTUAL SIZE - 5½ X 11

Bank of America

HOLD—STOP PAYMENT:

REJECTS

453

3-20-59

ACCOUNT NUMBER	TRAN CODE	TYPE	AMOUNT	DATE TO AUTOMATIC	DATE ENTERED	ACTION
7- 1818	64	UTL	00			
1- 1892	64	UTL	00			

HOLD-STOP PAYMENT: REPORT OF REJECTS
(Form ER-10)

The Rejected Hold-Stop Payment Report lists any Hold entries, Stop Payment entries, Close-Account entries, or Follow-Sheet entries which were rejected for bookkeeping reasons. The report shows the reason for rejection by abbreviations which are explained on the reverse of the form and on page 116 of this manual.

The original copy should be used to audit the Hold/Stop Payment Files at the branch, as outlined on page 116, after which it should be filed, bound monthly, and destroyed after the next inspection period.

The duplicate of the report may be destroyed on the second day.

FORM - ER-10

REJECTED REASON ABBREVIATIONS IN "ACTION COLUMN" EXPLAINED ON REVERSE SIDE

HOLD—STOP PAYMENT: DAILY CHANGES / MONTHLY LISTING

ACTUAL SIZE - 5½ X 11

Bank of America

HOLD — STOP PAYMENT

MONTHLY LISTING

3-16-59

ACCOUNT NUMBER	CT	TYPE	AMOUNT	DAYS TO MATURITY	DATE ENTERED	ACTION
8- 3247		HOLD	45588	1	31159	
0- 3246		HOLD	32488	3	31059	
1- 3250		HOLD	7918	4	31659	
1- 3255		HOLD	12452	15	31659	
4- 3263		HOLD	6701	3	31659	
4- 3268		HOLD	474498	6	31659	
6- 3281		HOLD	272	14	31659	

HOLD-STOP PAYMENT: MONTHLY LISTING
(Form ER-10)

The Hold-Stop Payment Monthly Listing Report arrives at the branch at the end of the month. It lists all Holds and Stop Payments which are currently in effect, showing the account number, the Tran Code, the type, the amount, the days to maturity, and the date entered. The Monthly Listing is issued in duplicate.

The original copy is used to audit and verify the branch's Hold and Stop Payment Records. It should be filed and kept until after the next inspection period.

The duplicate may be destroyed on the second day.

FORM ER-10

REJECTED REASON ABBREVIATIONS IN "ACTION COLUMN" EXPLAINED ON REVERSE SIDE

HOLD—STOP PAYMENT: DAILY CHANGES / MONTHLY LISTING

WELCOME TO ERMA

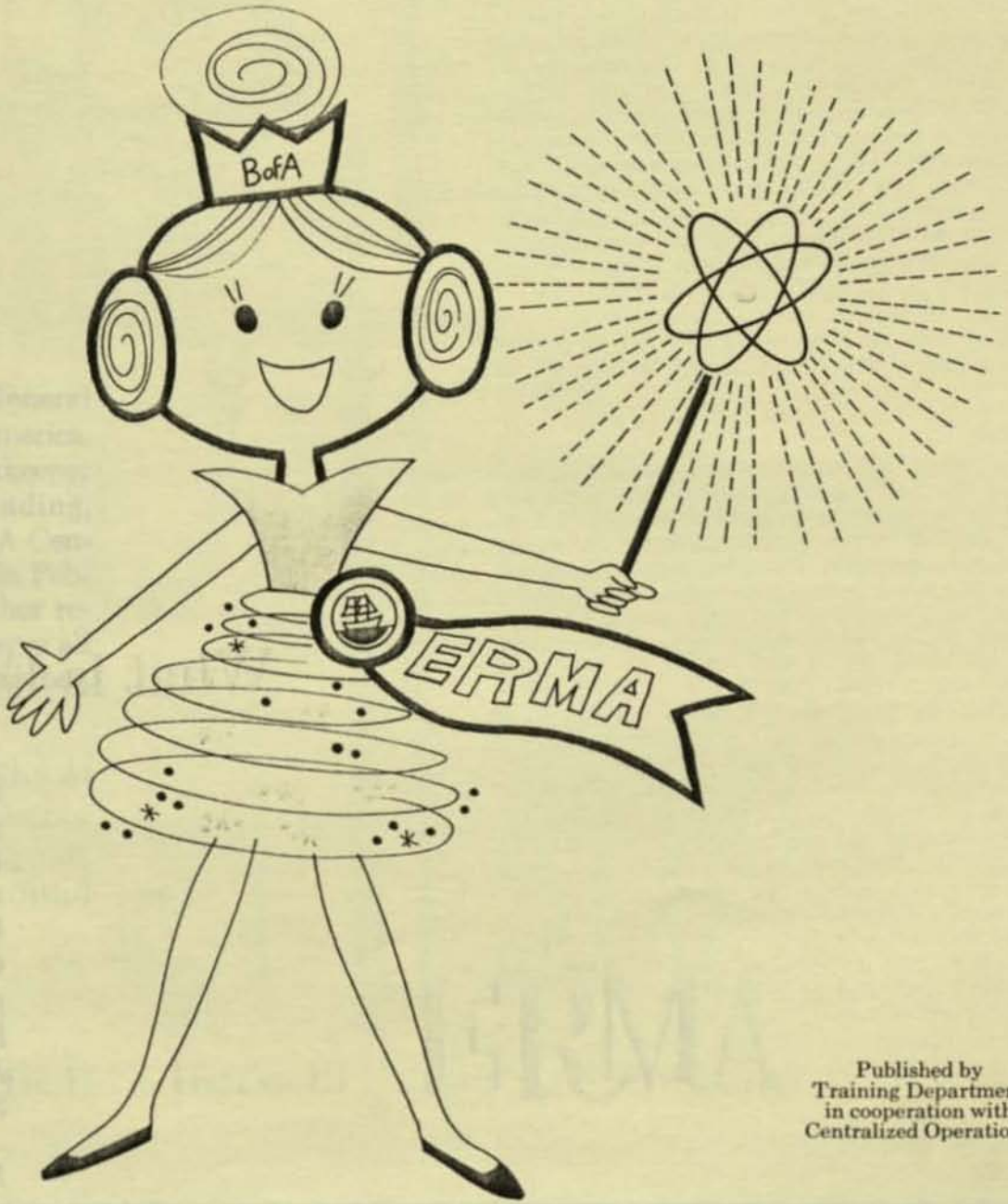
This is your first day at the ERMA Center. You're bound to be slightly confused. First days are always confusing. That's why this guide may come in handy. It was designed to help you become better acquainted with your job at the Center.

You'll find your fellow BankAmericans, supervisors and Center management anxious to help you in every way. Do not be embarrassed, and *do* ask questions... no matter how silly they may seem to you at the time. You see, we need *you*—more specifically, we need the *thinking* you.

As a BankAmerican, you are part of a total team of more than 27,000 employes of the largest bank in the world... a bank built by A. P. Giannini for the many, rather than the few.

You are now a banker—and while you won't be in direct contact with customers, your position is as important to good customer relations as a branch manager, a lending officer or a teller.

WELCOME ABOARD!



Published by
Training Department
in cooperation with
Centralized Operations

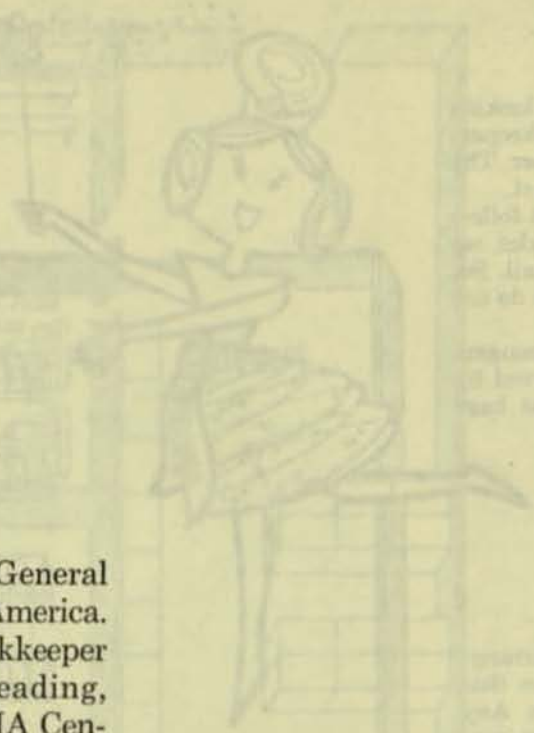
Like any girl, ERMA is somewhat mysteri
ous. Sometimes she is baffling – particularly
when we don't know all her capabilities.

What is ERMA?

In general, ERMA is a system of electronic
ally connected units which automatically
process all bookkeeping details to post and
balance checking and savings accounts.

Specifically, the ERMA system is a com-
bination of people and electronic equipment.
Over *600* BankAmericans are working to-
gether in thirteeen Centers every night to
help ERMA perform her bookkeeping chores.
And, she performs these duties at the rate of
33,000 accounts per hour.

ERMA means *E*lectronic *R*ecording
*M*ethod of *A*ccounting.



ERMA is manufactured by the General Electric Corporation for the Bank of America. She is an electronically efficient bookkeeper who has learned her three R's... reading, 'riting, and 'rithmetic. The first ERMA Center was established in San Jose early in February, 1959. There are now twelve other regional Centers, so located that they serve all but 22 of our bank's more than 830 branches.

Fasten your safety belt... here is ERMA

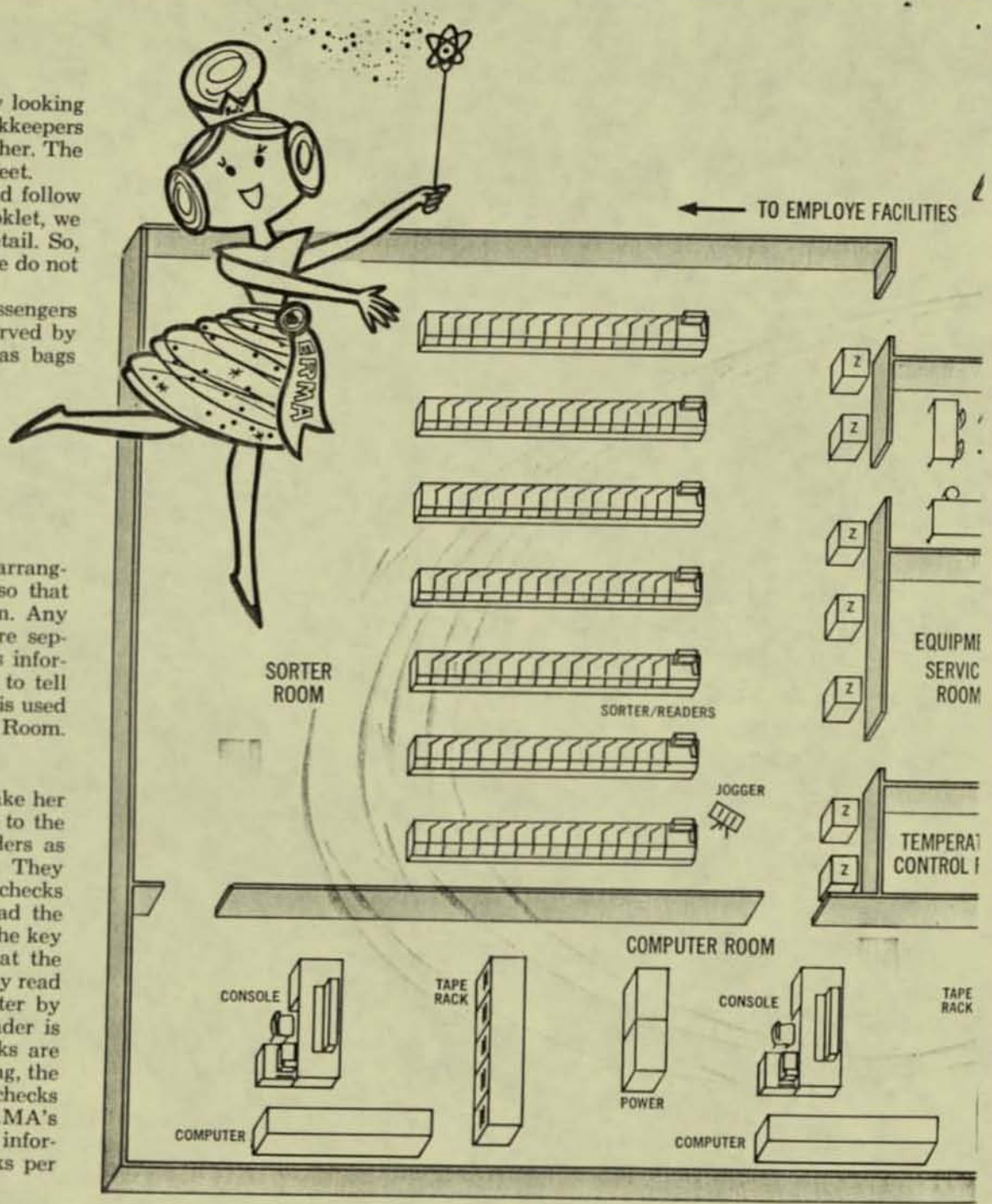
This is a typical ERMA Center. You are now looking into the home of one of the world's fastest bookkeepers which has been custom-designed especially for her. The average Center occupies about 10,000 square feet.

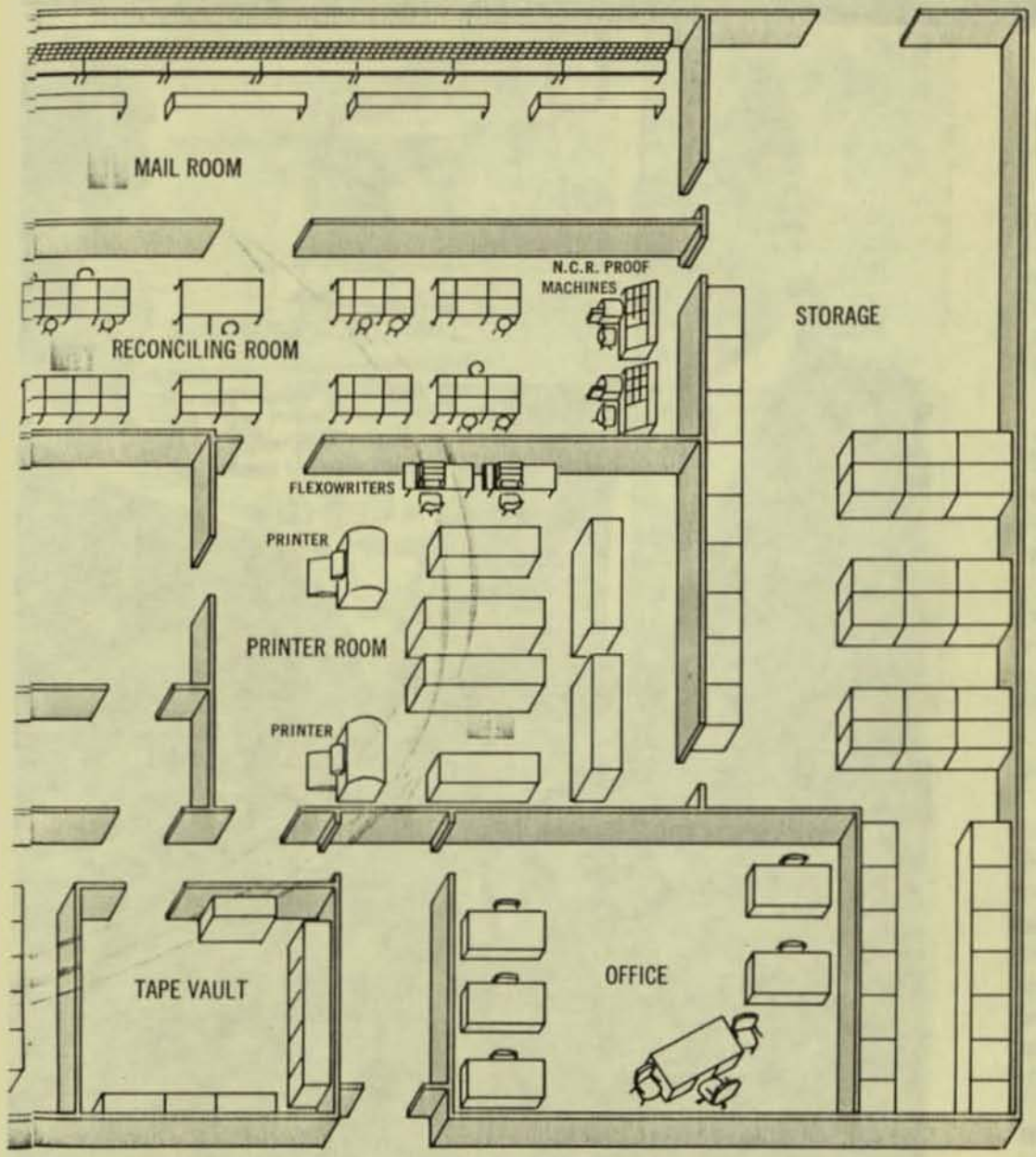
We are going to do a little eavesdropping and follow ERMA through her paces. Later on in this booklet, we will re-trace these same steps—but, in more detail. So, on this first tour, let's not be too concerned if we do not fully understand all of our lady's capabilities.

It is early evening of any banking day. Messengers are arriving from all of the bank's branches served by your ERMA Center. They are carrying canvas bags filled with checks and deposits.

Here, in the *Mail Room*, Center Clerks are arranging the checks and deposits in portable racks so that they can easily be wheeled to the Sorter Room. Any change of address, new account names, etc., are separated and sent to flexo-typists who convert this information into punched paper tape. We are going to tell you more about punched paper tape and how it is used later. The racked checks are wheeled to the Sorter Room.

In the *Sorter Room*, ERMA is waiting to take her first electronic step. The checks are wheeled up to the Sorter/Readers. Let's think of the Sorter/Readers as the "eyes" and "hands" of the ERMA System. They have mechanical "hands" that physically sort the checks and deposits, and the electronic "eyes" that read the information. This brings us to what is probably the key to the whole system; the magnetic ink coding at the bottom of each check. The Sorter/Readers actually read this information and transmit it to the Computer by electric cable. At the same time, the Sorter/Reader is reading and relaying this information, the checks are sorted into specific pockets. Later on in the evening, the Sorter/Reader operators will re-sort these same checks in branch and account number sequence. ERMA's Sorter/Readers read and transmit all important information about the check at the rate of 750 checks per minute!





You are now in the *Computer Room*. The Computer components appear to be merely a series of metal cabinets with tiny, flickering lights and an electric hum ...but here is the real heart and brain of ERMA.

The Computer has all of the qualities of the mechanical calculator (adding, subtracting, multiplying and dividing) *but*, far more important, it can "*decide*" and "*memorize*." She is given instructions on how to do her job by trained Computer "programmers." The *real* "thinking" must be done by people before her "on-button" is pushed.

The information that the Sorter/Readers have captured is now stored on the Computer's magnetic tape (similar to your home recording tape). The figures that the Computer works on come from this entry tape; the instructions as to what to do with the figures are contained in the Computer's "memory." The results are stored on other reels of magnetic tape.

In pre-ERMA days, we expected an efficient bookkeeper with a year's experience to do the sorting and posting for 245 accounts in one hour. But, ERMA can do the sorting and posting for 550 accounts in ONE MINUTE!

ERMA's last electronic step is in the *Printer Room*. Here, her High Speed Printers spell out the results of her nightly efforts. Customer statements and other reports are printed from tapes prepared by her Computer. These reports speed through her Printers at 900 lines per minute.

There are always busy people in the *Reconciling Room*. In a way, it is ERMA's nerve center where out-of-balance checks and deposits are brought into balance by staff Reconcilers.

Armed only with a simple adding machine and a sharp pencil, capable figure-skilled Reconcilers check, trace back, locate human errors, re-encode in ERMA language, correct and eventually balance all of the debit and credit items the branches sent to your ERMA Center.

It is early morning now, and the Mail Room is again the busy place it was last evening. Sorted checks, branch reports, forms, deposits, customer statements, etc., are locked in canvas bags for return to the branches.

ERMA has completed another 24-hour day.

THAT TECHNICAL LOOK

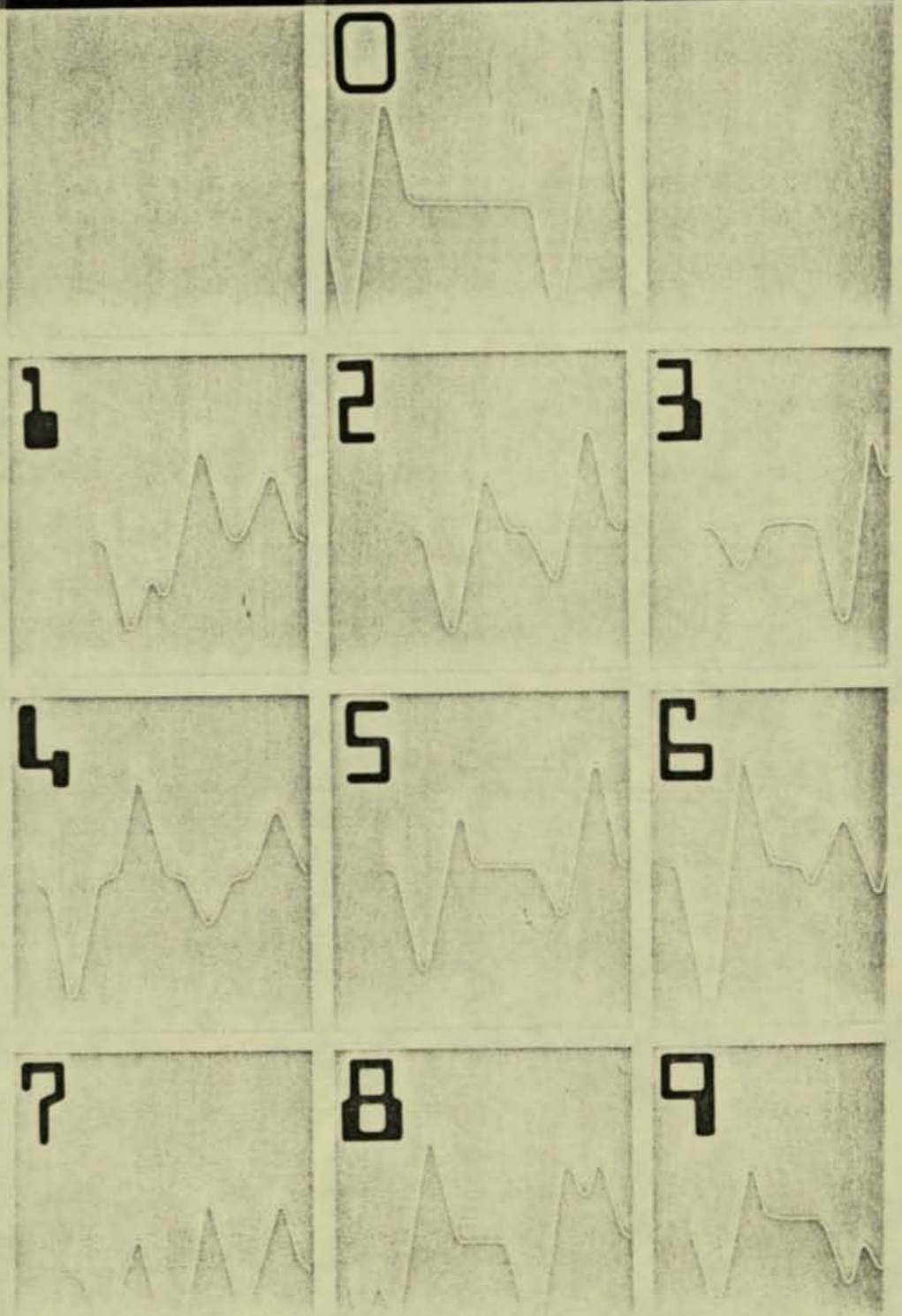
ERMA's electronic equipment does look formidable and complex—*and, it is.* But, don't let ERMA "throw you" with her technical look. In the beginning, it's best to simply accept the fact that human "know-how" has taken magnets, wires, diodes, and transistors and *taught them* how to read, write and perform mathematical computations.

As you grow on your ERMA job, you will develop more understanding of the *how* and *why*. It is our hope that as you make your second journey through the pages of this guide, *you* will become more knowledgeable on your job and how it relates to other work in the Center. There is additional material on specific ERMA functions available to you—simply ask your supervisor.

THAT TECHNICAL SOUND

You'll hear a lot of "different" words used in your Center: "Hardware, Junk-List, Scratch, Document, Peripheral"...sound mysterious? Right now, they are strange. But, you'll be using these terms before you know it. However, to help you get started, take a look at the ERMA DICTIONARY on page 23. It contains most of the words you'll hear.

As you read through the following pages, you'll see some of these "words." If you are in doubt, probably your best bet would be to look them up—so the next time you see or run across them, you'll know what they mean. You won't find actual banking terms, such as commercial account, overdraft, posting, etc. Ask your supervisor for a copy of "Bank Terminology" covering this information.



YOUR SPONSOR AND YOU

Our job in helping you learn your job is going to be a little easier, now. After you've made your quick tour of your Center and met Phil, George and Betty (names are all just names at first, aren't they?), you'll be introduced to your Sponsor. A Sponsor—as the name implies—is the person you will be working *with* during your training period. Your Sponsor may be a skilled Sorter/Reader operator, a first level Reconciler... regardless, he is responsible for *you* and *you* to *him*. A Sponsor explains all of the little and big details about your job—and works right with you until you fully understand *everything*.

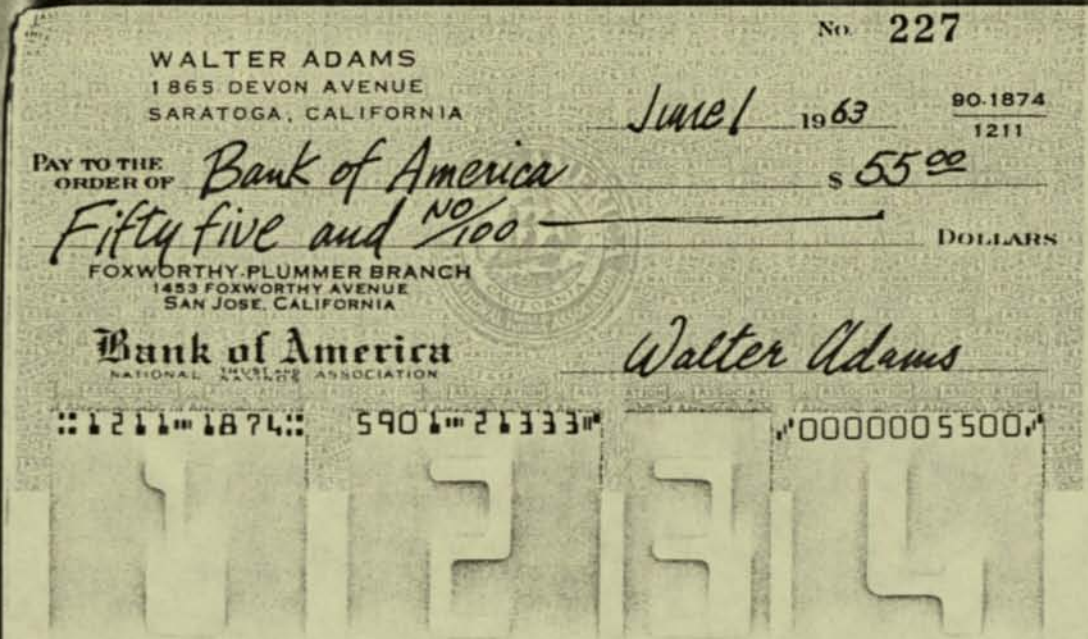
His is a job of indoctrination on the specifics. He is not "checking" on you. His job is to teach you all of the fundamentals of your specific job until you have thoroughly learned all the techniques necessary to perform them by yourself.

YOUR SUPERVISORS AND YOU

But, who am I working for? You are working for Bank of America under the direction of your Center Manager who has a personal interest in *everyone* and a professional interest in *everything* connected with the Center.

Because all Centers operate around the clock—but are primarily an after dark operation—there are three shifts: (1) day, (2) evening, (3) late. During the evening and late shifts an Assistant Manager is in charge. They, in turn, each have an assistant: the Chief Reconciler on the evening shift and the Senior Reconciler on the late shift. You will probably work more closely with either of these supervisors.

An ERMA Center Manager is responsible for the overall operation of your Center – both personnel and equipment. In most instances, he has been with ERMA since its inception back in 1958. He is both knowledgeable and understanding... he is your friend, supervisor, counselor and leader.



ERMA'S LANGUAGE—Magnetic Ink Character Recognition

If ERMA is going to process information for us, obviously we have to have some way to get information into ERMA. ERMA can't read handwriting—or tell the difference between pink and green slips of paper. She has her own "language": it is known as *M*agnetic *I*nk *C*haracter *R*ecognition.

M.I.C.R. is made up of ten arabic numbers which are recognized by ERMA and humans alike. These numbers are printed in a special ink which has tiny specks of iron oxide in it. When a document passes through ERMA's Sorter/Readers, the little pieces of iron oxide, become magnetized and send out a tiny electric impulse. Each number sends out a *different shape* of impulse. ERMA's Sorter/Readers pick up these tiny impulses and "input" is solved. The numbers are now in electronic form—and the computer can work on them.

A typical check looks like the one illustrated. Note the line of numbers along the bottom of the check. Some are pre-printed—the rest being quickly "post-printed" after the check or deposit reaches the branch. This line of information is divided into four separate areas—which are referred to as "Fields." The four fields are:

1. The Transit Field
2. Account Number Field
3. Transaction Code Field
4. Dollar Amount Field

Note also on the sample check the tiny "cue" characters appearing before and after each of the fields. While they contain no information, they have a most important function. They separate the fields so that when ERMA's Sorter/Readers are scanning along the line and pick up one of these cues, it is alerted that one kind of information is about to start, or is finished, and in a fraction of a second sets itself to receive the next parcel of information or data.

1. THE TRANSIT FIELD

Starting at the extreme left of Walter Adams' check is the transit field. 1211 is the Federal Reserve Check Routing Number and 1874 is the American Bankers Association (ABA) number identifying individual banks and branches on a nationwide basis.

2. ACCOUNT NUMBER FIELD

In the account number 5901-21333, 590 is our internal number for the Foxworthy Plummer branch in San Jose. This indicates to ERMA to sort the check to that branch. The 1 immediately following 590 is a check digit used as a safeguard against possible number copying or reading errors. This is known as a T.C.D.—or transposition check digit. Following the cue character is the number assigned to Walter Adams' checking account—21333.

3. TRANSACTION CODE FIELD

Every time we send an entry to ERMA, we must tell her Computer exactly what the item *is* and *what* to do with it. The absence of a number in the transaction code field indicates that this *is* a check and the amount should be subtracted from the balance of the account of Walter Adams. In other words, a debit. A number 5 in this field indicates a deposit or credit to the account. The ERMA system has the capacity to act on any of 100 different transaction codes that may be encoded in this field.

4. DOLLAR AMOUNT FIELD

The last group of numbers on the right side is known as the dollar amount field. This field simply contains the dollar amount of the entry (in our example $55.00) omitting decimals and the dollar sign. This field has space for ten digits. Notice that *all* the digit positions must be filled when an item goes into ERMA. In other words, the spaces to the *left* of the actual dollar amount must be filled with zeroes until all ten spaces are filled.

At this point ERMA has all the necessary information to post the check to the proper account. And ERMA can do this with any item, as long as we put the *right* information in the code line.

The banking day is just starting. ERMA messengers have delivered the previous day's work and the processed checks and deposits are being filed. There's lots of *other* activity, too. ERMA produced customer statements to mail, ledgers to be checked and many customer services to be performed.

Walter Adams—like any B of A customer—on opening his account is provided with pre-printed checks showing his name and address. Also pre-printed with magnetic ink are the transit and account number fields. As long as he maintains his account at a particular branch, these encoded numbers remain the same—hence they are pre-printed. If he should forget to bring his pre-printed checks, he can use a counter check. These first two fields are then encoded on the Account Number Encoder—about the size of an ordinary adding machine.

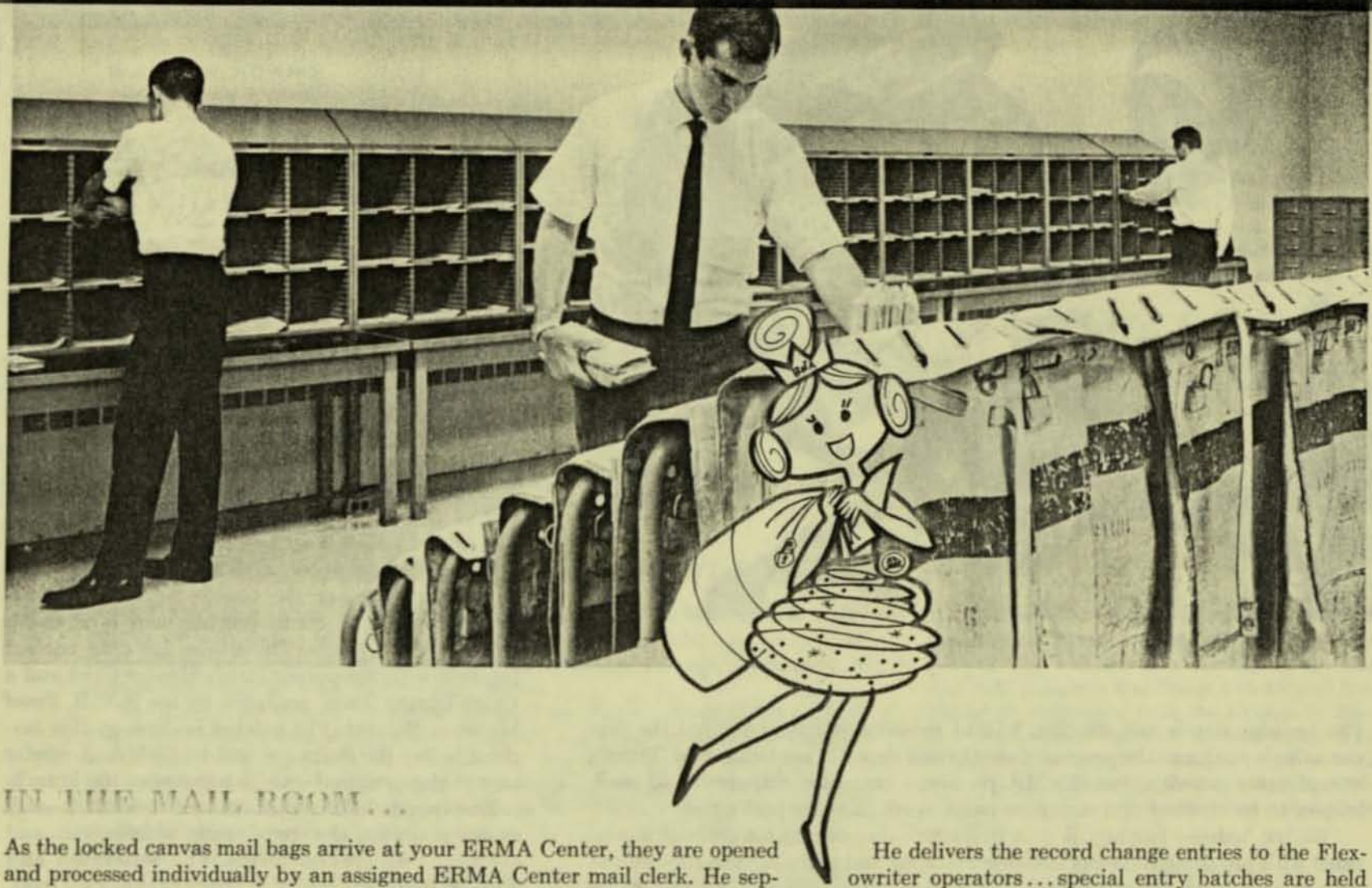
All that remains after a check or deposit slip is presented to the Teller is to add the transaction code and dollar amount. This is done on the Dollar Amount Encoder—an attachment to the N.C.R. Proof Machine, illustrated here. We call this post-printing.

Branch Proof Machine operators simply depress the keys, the document is fully encoded and automatically pocketed. Walter Adams' check is now ready for ERMA. After a pocket has a maximum of 150 items, this group of checks, deposits or special entries becomes a "batch."

She then prepares a Batch Header Card showing in ERMA language the branch number, whether these are debit or credit batches, and total dollar amount of the group. The entries are then banded together with the proper Batch Header Card and a Batch Listing Tape, produced by the N.C.R. Proof Machine. Balancing of batches is done on this machine before the items are sent to ERMA. A master tape is also prepared—which remains at the branch.

Non-encoded forms are also sent to ERMA—such as new accounts, change of name, address, etc., and are typed on special forms. The separated and bundled items are placed in heavy canvas mail bags, stenciled with the name and number of the sending branch, and picked up by ERMA motor messengers.

The responsibilities of your Center's branches are many. Documents must be correctly encoded—all batches must be ready to go to ERMA when the messenger arrives. This is where teamwork is important—at both the branch and your ERMA Center.



IN THE MAIL ROOM...

As the locked canvas mail bags arrive at your ERMA Center, they are opened and processed individually by an assigned ERMA Center mail clerk. He separates the banded batches of work into four basic groups: debit, credit, special entries and record changes.

The incoming checks and deposits are unbanded and Batch Header Cards are checked against the batch tapes. Staples, paper clips, gummed stickers, and other foreign material are removed as they could cause damage to a Sorter/Reader. Mail clerks in "fanning" through the documents occasionally find items that are upside down—or backwards. ERMA just can't read them this way...so the checks and deposits are "faced" in order that they can be read.

After Center mail clerks examine the batches and Header Cards, a set of 12 "batch separator" cards are inserted at the end of each batch. These cards carry a special batch separator identification number and tran code.

He delivers the record change entries to the Flexowriter operators...special entry batches are held until all branches work is in...and debit and credit batches are placed in portable racks containing metal trays. The checks and deposits are then wheeled to the Sorter Room.

The empty bags are racked, as illustrated, in their respective branch order. A label on the rack corresponds with branch name and number on the bag. Then the bags are ready to be filled with outgoing mail. For return of processed items the correct bag is then easily selected.

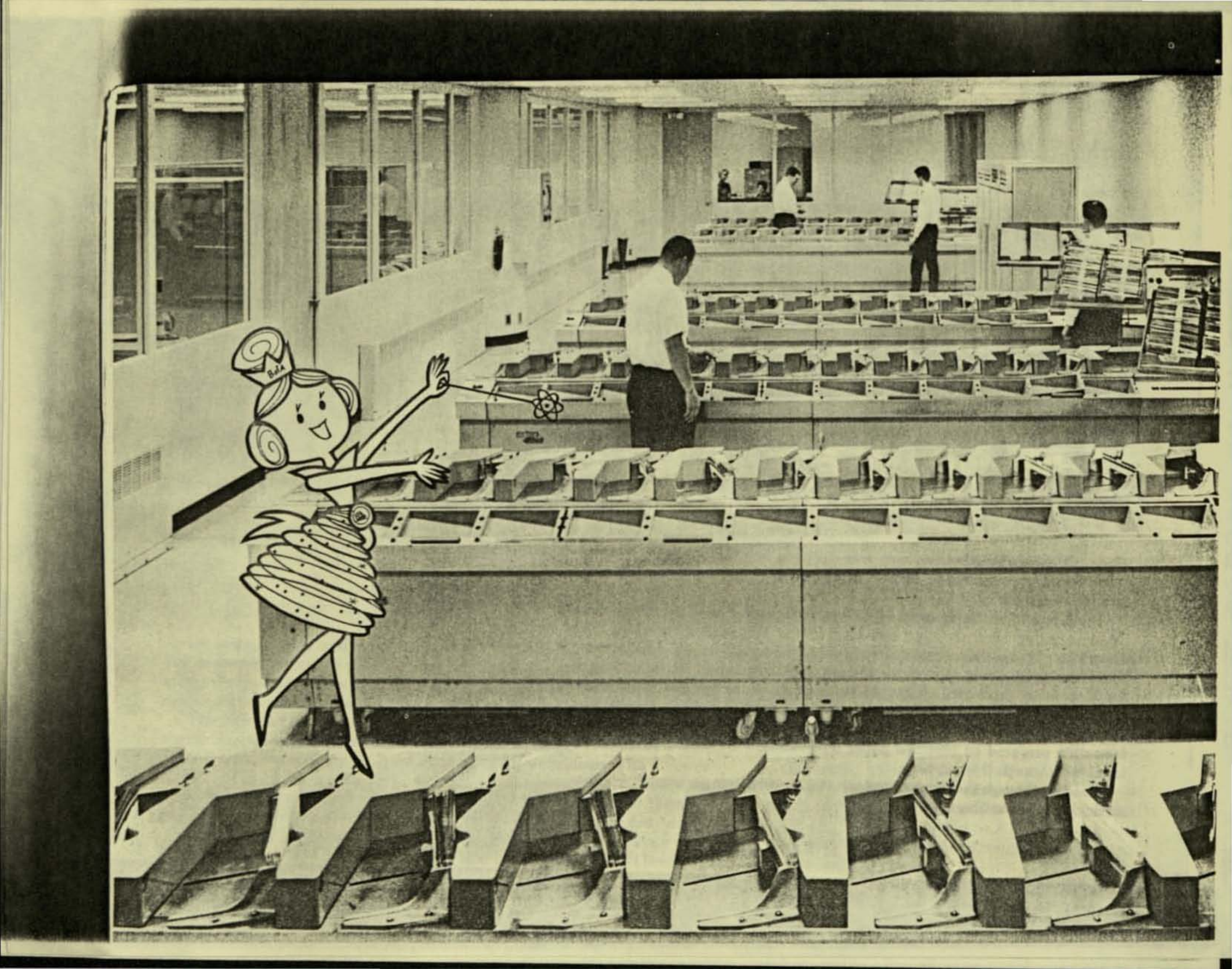
NEW ACCOUNTS AND RECORD CHANGES—

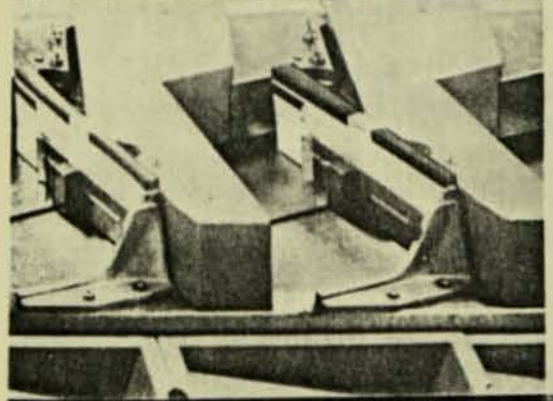
Since the Sorter/Readers can only read encoded numbers we must have another means of introducing names, addresses and alphabetical information into the Computer.

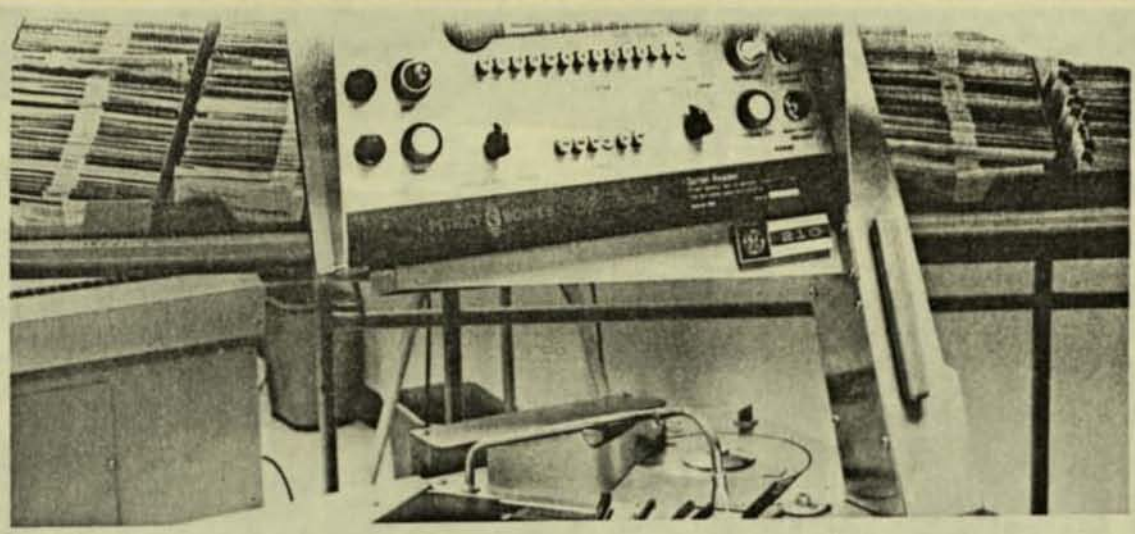
You'll recall that the branches type *special forms* for these record changes. From incoming mail, they are delivered to the Flexowriter operators. The Flexowriter is a special kind of typewriter that produces a punched paper tape. The Flexotypist checks the accuracy of her work by running the tape through the Flexowriter producing a typewritten facsimile of the punched paper tape.

Each Computer Console is equipped with a special device—known as a Photo/Reader. The new accounts, names, addresses and other statistical information prepared on punched paper tape can now be placed on magnetic tape reels through this machine.

Reading through the Photo/Reader is at 200 characters per second. Another method of input has been solved.







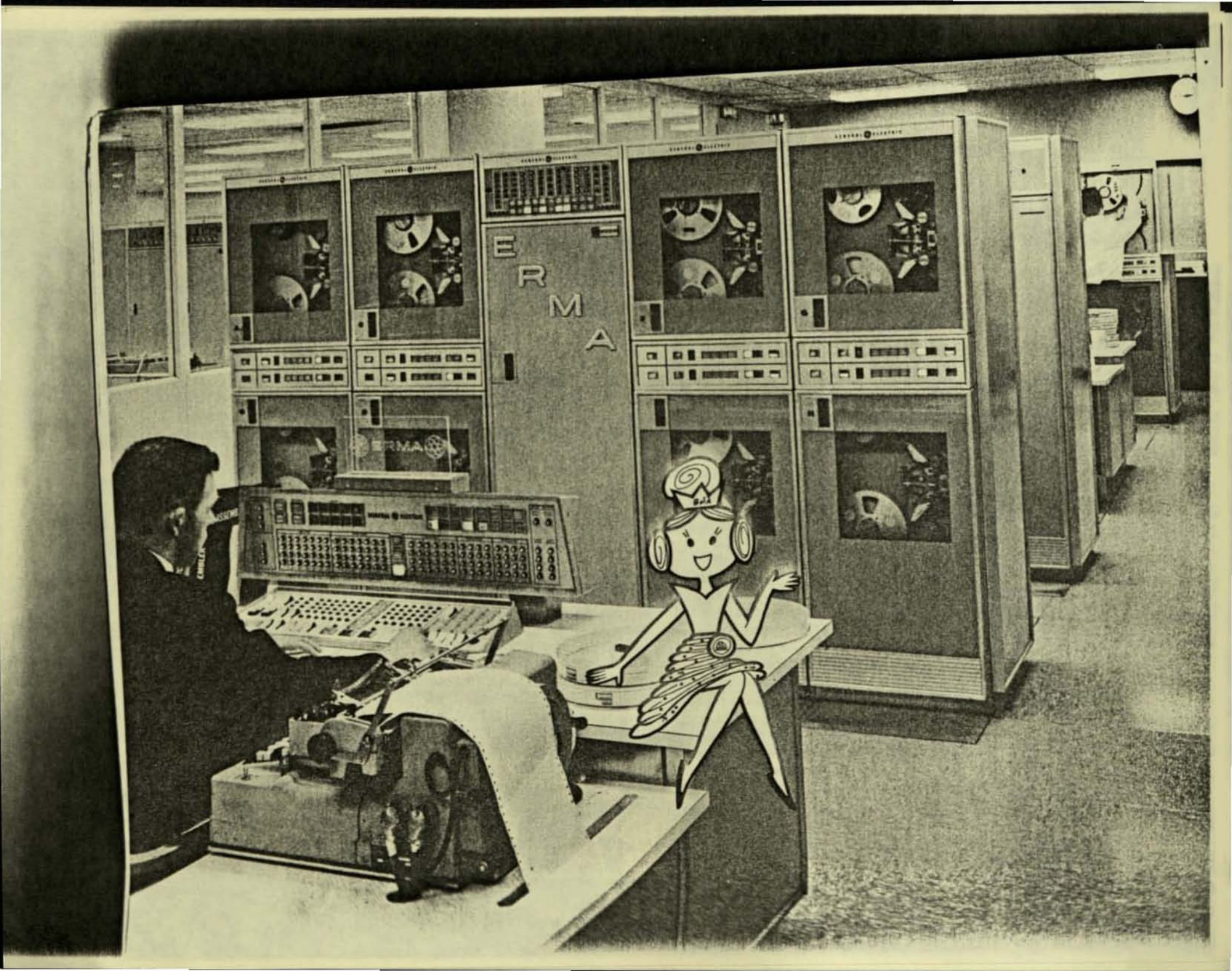
The Document Sorter/Readers, earlier described as the "eyes" and "hands" of the ERMA system, are capable of being operated in two ways. These are known as "on-line" or "off-line."

When operating "on-line" the Sorter/Readers are under direct control of the Computer. As the magnetic ink characters on each check are transmitted to the Computer, information is being captured on magnetic tape. Simultaneously, the Computer supplies the sort mechanism on the Sorter/Readers with a pocket decision. There are 12 pockets on a Sorter/Reader. In the flash of a millisecond, a gate will open on any one of the pockets, and the item has been sorted.

The initial entry of documents "on line" with the Computer is referred to as the *entry run*. Items that cannot be "read" automatically go to the end pocket as an ERMA reject. This may be due to faulty magnetic ink printing, misaligned documents, etc. Sorter operators will make re-entry runs for reprocessing of items rejected on the entry run. The sort on the *entry run* is a broad sort with pre-determined pocket assignments according to geographic areas and other ERMA Centers throughout the state of California.

During "off-line" document sorting runs, the Sorter/Readers operate independently of the Computer. Pocket decisions are supplied by the Sorter electronics—located in the "Z-Rack." Off-line is a fine-sort operation requiring the Sorter operators to make several passes in order to place the checks in branch and account number sequence. Off-line, fine sorting takes place after the Computer has received all coded information and during the time the actual bookkeeping, posting, etc., is taking place.

Sorter/Reader operators doing fine sorting make digit selections through the Control Panel, illustrated above. The Feed Hopper is directly below the Control Panel and the documents are "fanned" by an overhead air jet to facilitate single feeding of items. A Jogger —which vibrates and adjusts documents—is used prior to the items being placed in the feed hopper.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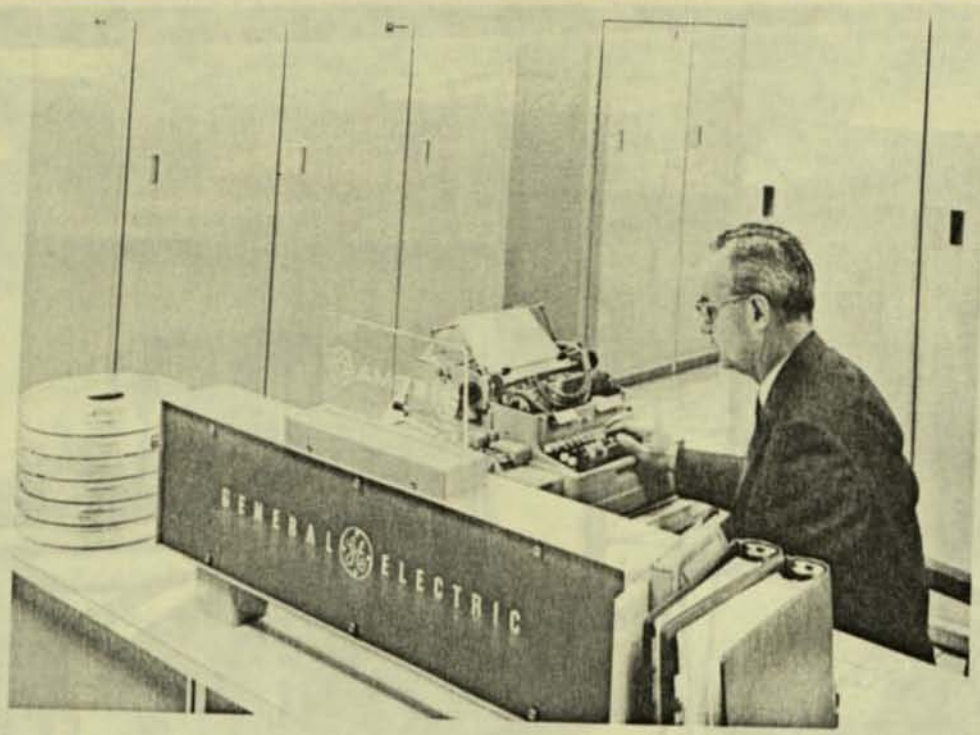


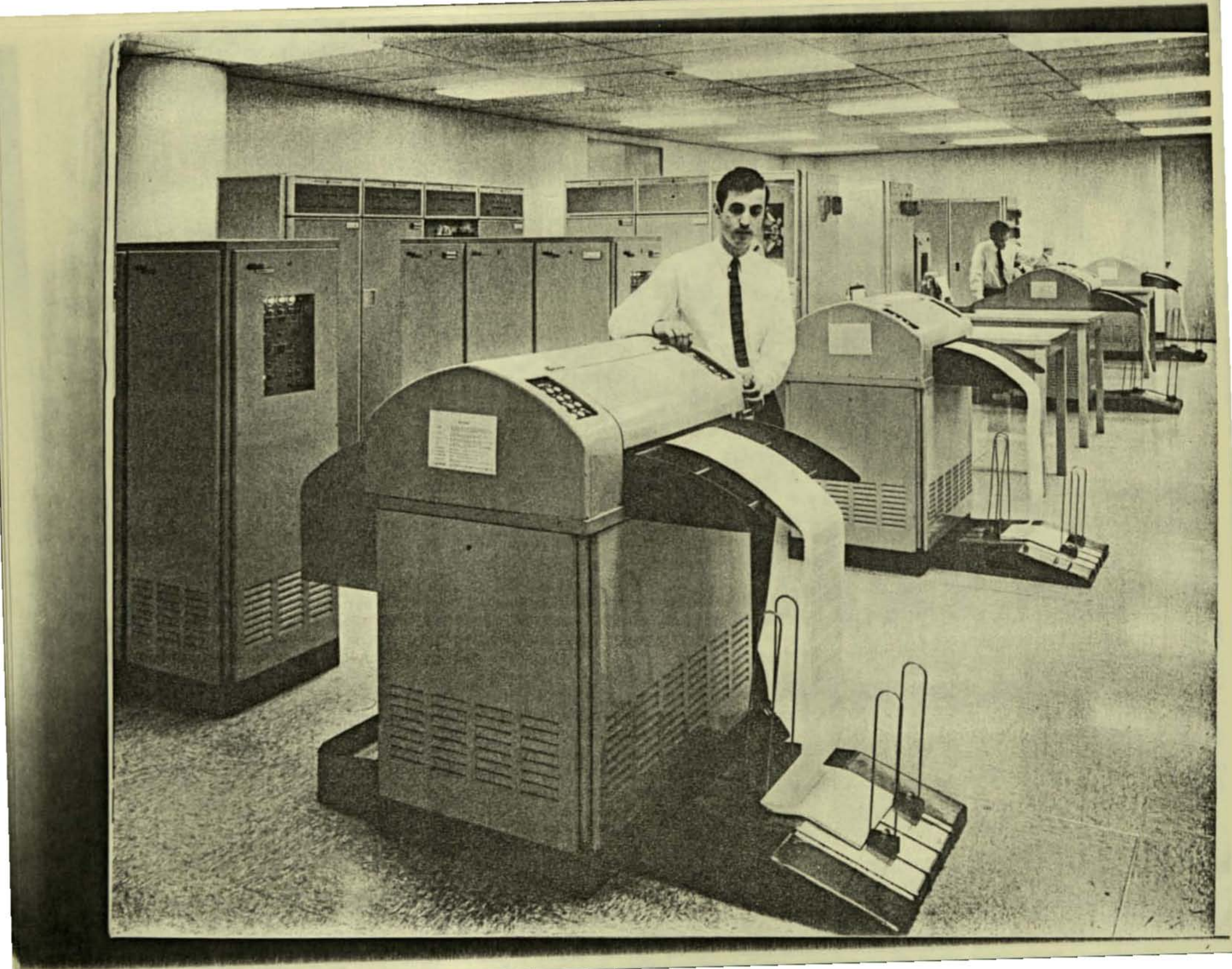
THE COMPUTER

The "heart" and "brain" of the ERMA system is the Computer, which actually does the bookkeeping. The Computer operator is seated at the Console, left. Directly in front of him is the display panel of lights and buttons that allow him to monitor the processing operation. Beyond the panel are the eight magnetic tape servos. In the photograph above, note that arithmetic circuitry and memory storage are contained in the cabinets shown in the background. Communication with the Computer, starting and stopping runs, etc., is made through the Flexowriter, on the Console.

ERMA Computer operators are trained to initiate the steps and sequence of the actual bookkeeping processes for both checking and savings accounts. They must at all times use the *full capacity* of the Computer. There are nine basic runs each night. These are the entry, editing, sorting, splitout, merging, posting, record changes, branch journal report and the main ledger runs. Each is important; each must be done in proper sequence.

Aside from operating and directing the Computer, the Console operator has many important responsibilities. He selects the programs and causes them to be inserted in memory. He recognizes and analyzes errors. Logs must be kept of operating times, lost times and equipment failures. Tapes must be labeled and routed properly to assure that no records are inadvertently destroyed. His is a tremendously big job... and a very important one.

General Electric Corporation was awarded the contract to build the ERMA System for Bank of America. Their highly trained technicians maintain a twenty-four hour vigil to assure that ERMA meets the deadlines. General Electric service personnel are provided an Equipment Service Room in each Center. They regularly follow preventive maintenance programs and make diagnostic tests to avoid possible emergencies during critical operating times. Theirs is a vital and important role.



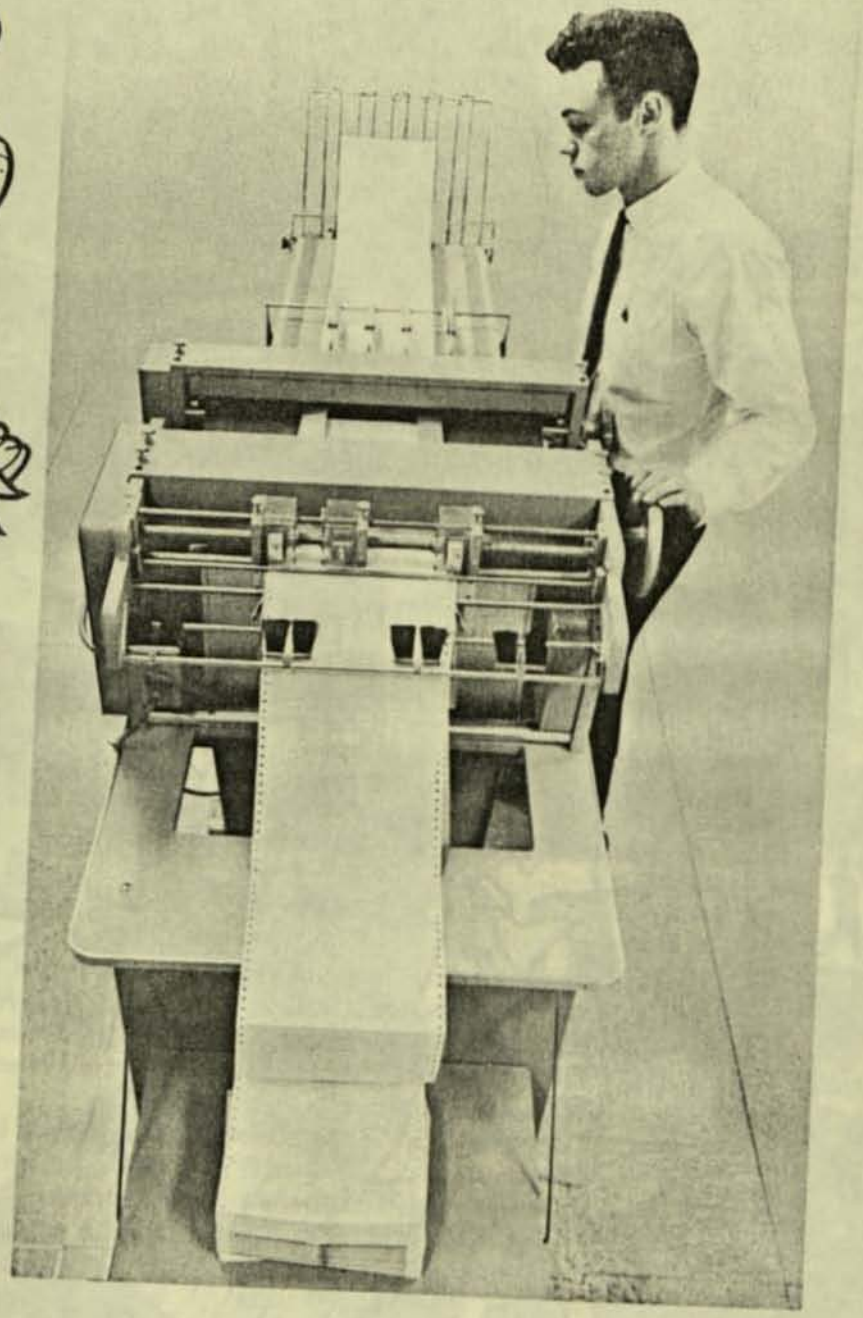
THE PRINTER

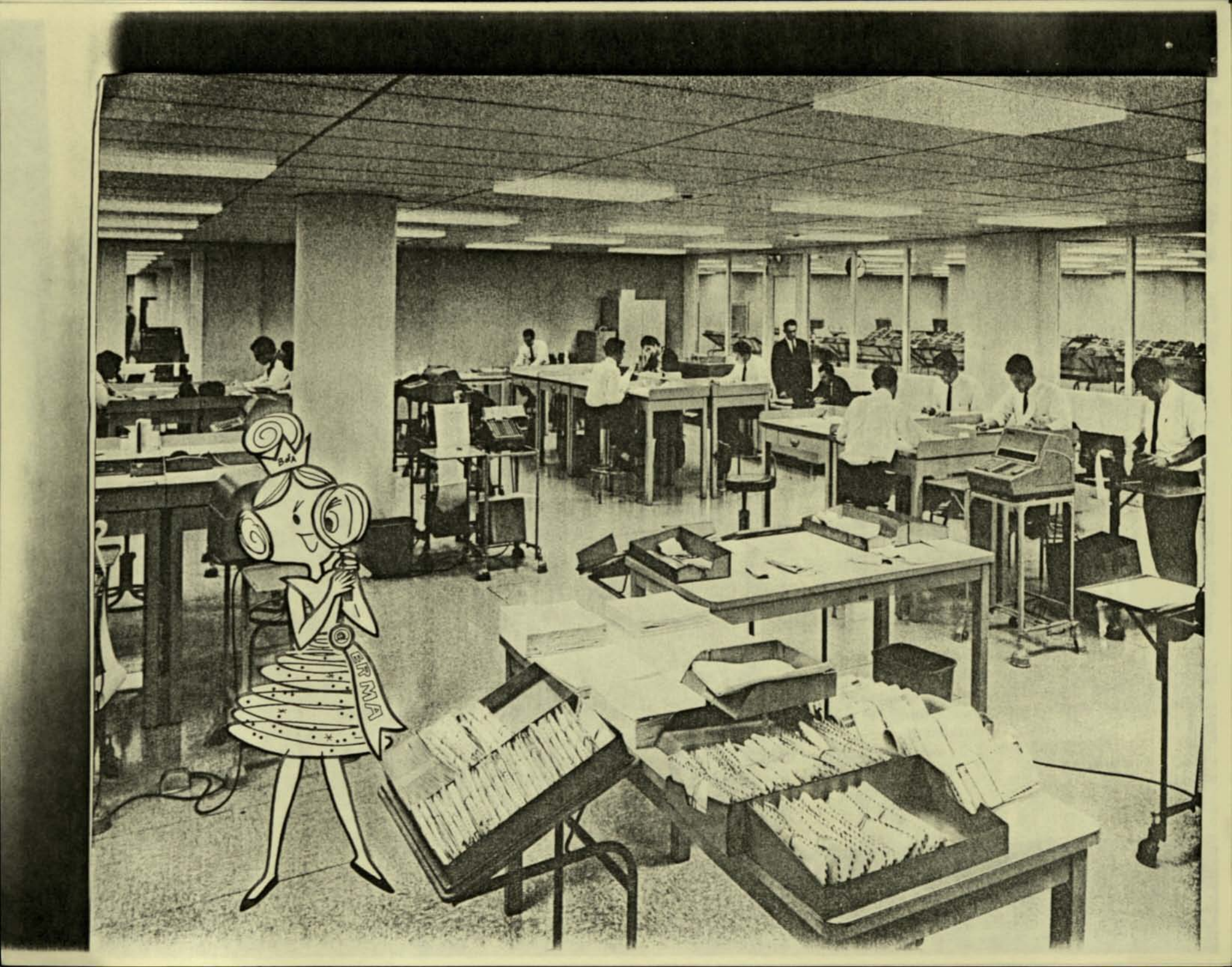
We must translate *out* the results that the Computer has compiled. This is done by skilled Printer operators on the High-Speed Printer. They prepare printed reports "off-line" from the ERMA processed magnetic tape reels.

A number of these reports are for Center use—others are for your branches—still others for our customers. Daily reports include: a *status* report containing the account number, correct up-dated balance, and the date of last activity; a *rejected items* register; and a *journal* which reflects *all* transaction details. There is a *large items* report—an *overdrawn accounts* report—accounts reaching zero balances during the night posting activity.

Reconcilers need "trace lists"... customers need monthly statements. ERMA and her capable Printer operators spell all of these out on continuous multi-copy forms. He separates originals and carbons on the "*deleaver*"; continuous forms are snapped-apart on the "burster," illustrated above.

Fast...you bet! Fifty *complete* customer statements a *minute*.

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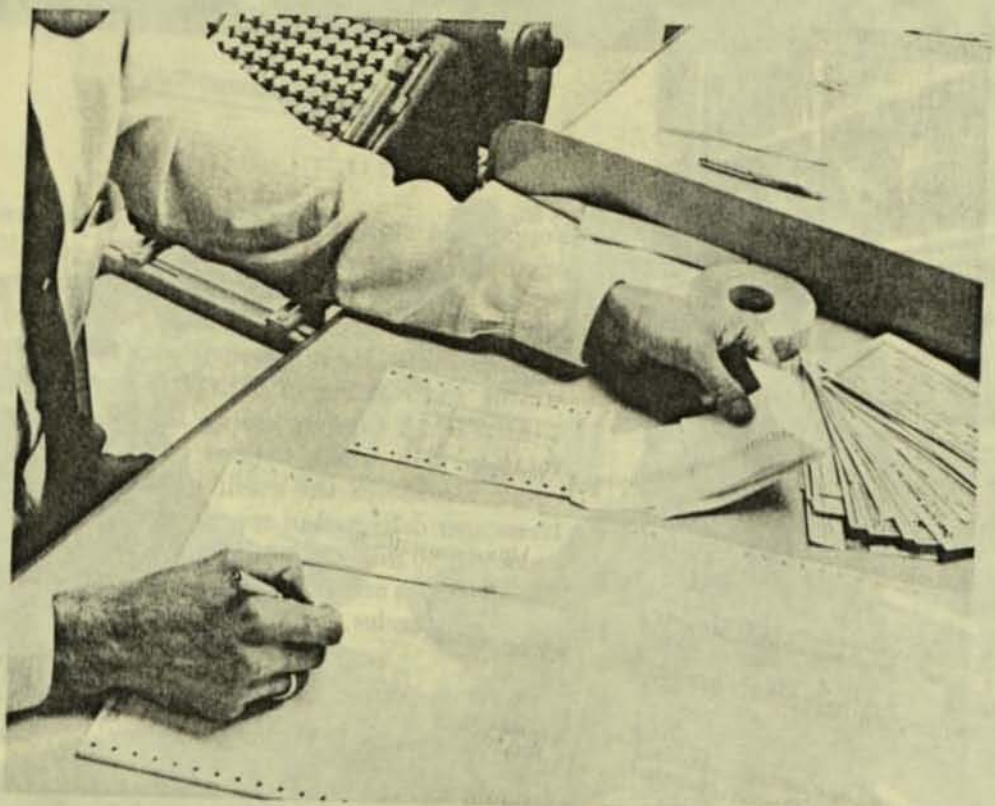
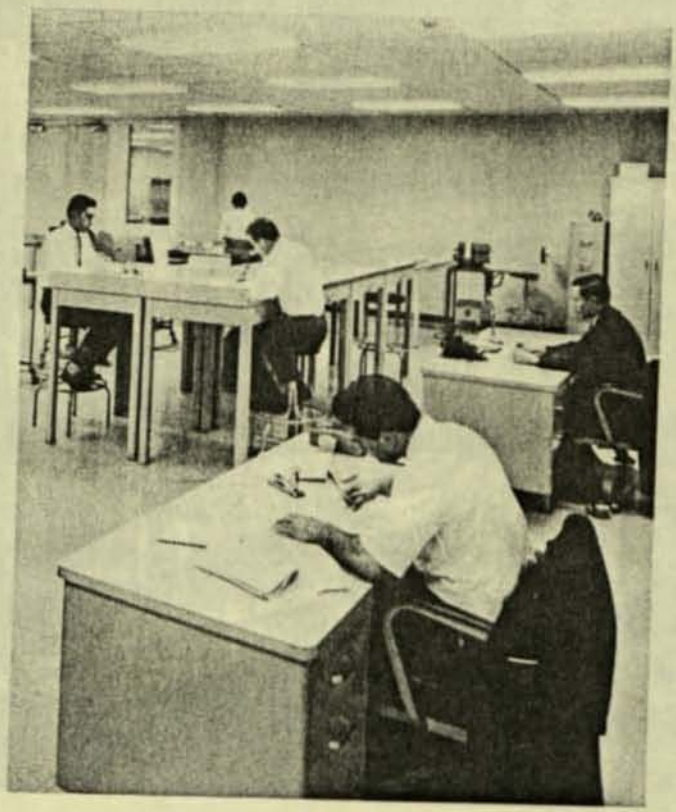




RECONCILING

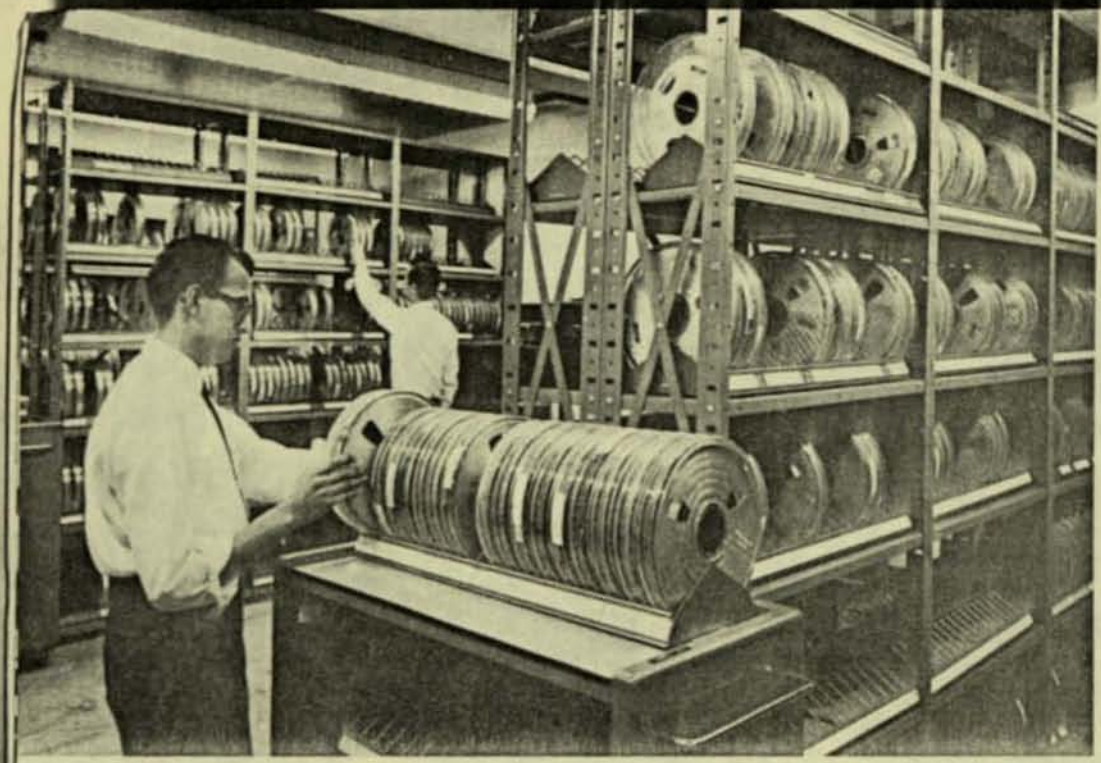
With the thousands of checks and deposits that pour into your ERMA Center each evening, it would be wonderful if they all balanced... but they don't. That is the *why* of Reconciling. Double feeds. Misreads. Nonreads. (These are all *too* familiar terms to our skilled Reconcilers.) Their's is one of the most difficult jobs of all.

You'll recall back at the branch, a Proof Machine tape total and Header Card is included with each batch of 150 debits or credits. You may also recall that Pocket "12" along with two other pockets on the Sorter/Readers are reject pockets. ERMA simply could not *read* these documents and could not, as a result, proceed with processing.

Periodically during the evening, rejected documents are returned from the Sorters to the Reconcilers. Also periodically, the Computer has noted the errors through print-outs in batch and superbatch special lists.

Our figure-skilled Reconcilers proceed to trace the path of "out-of-balance" batches. They check branch Proof Lists and ERMA Trace Lists. With adding machines and sharp pencils, batches of work are brought into agreement. Some checks and deposits are re-encoded. Some corrections and substitutions made. Eventually, items that can be re-entered are sent to the Sorter/Reader operators—and a final "on-line" re-entry run is made.

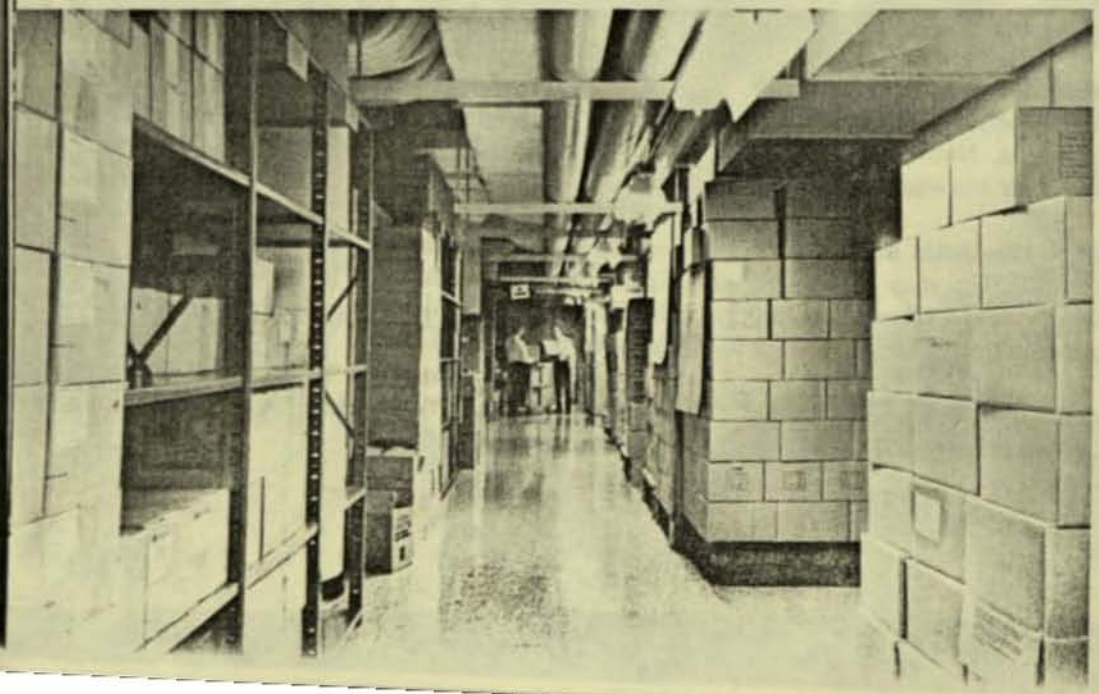
Experienced Reconcilers have acquired a unique skill, arithmetical "know-how," unlimited patience and problem-solving minds.



TAPE VAULT

Supply and storage of Magnetic tape is extremely important to the proper functioning of your ERMA System. A tape librarian is in charge of the fire-proofed and temperature-humidity controlled vault—on each shift. He is responsible for proper shelving, storing and rotating of both *data* and *blank* tapes.

All ERMA Centers are on the off-premises tape rotation plan which insures reconstruction of account records in the event of disaster. Tapes are messenger delivered in special crash boxes to vaults outside a 50 mile radius of the Center. Other Center activity tapes are air-shipped between San Francisco and Los Angeles, nightly.



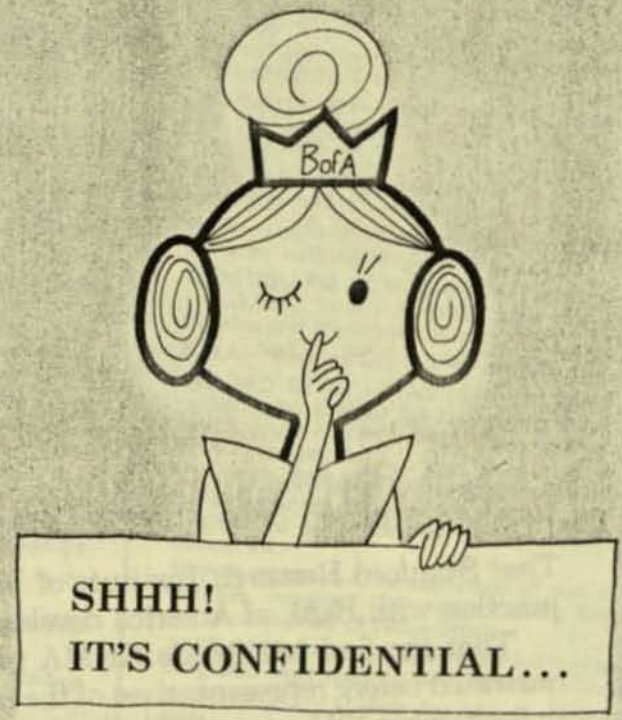
PAPER STOCK STORAGE

With some 36 different ERMA continuous paper forms to keep track of, Center housekeeping *must* be neat and orderly. Many of these forms have two or more multiple copies. Paper stock storage is located adjacent to the Printer Room so that the proper multi-copy forms are readily available. The forms are in cartons and neatly labeled so that Printer operators have the right form at the right time. The paper storage room—like other ERMA Center working space—must be kept spic and span. Won't you do your part to help us keep it that way?

ON MAKING A BREATHER...

You'll find your ERMA Center employe facilities modern, clean and comfortable. The employe lounge has a refrigerator for keeping milk and other foods chilled. Soup and coffee are always available. There is ample room for your personal belongings—hats, coats, etc. Because ERMA Centers are 'round the clock operations, we do our very best to keep our restrooms and other employe facilities spotless...please help us keep them that way.

Your Supervisor will explain the keeping of Time Sheets and provide you with a little folder called "It's The Law." As a B of A employe, you'll receive all the same benefits our branch and administrative people do. We'll mail to your home a copy of our monthly publication "The Bankamerican." You'll hear about softball tournaments, picnics and other recreational activities.



Everybody keeps something under their hat. Magicians keep rabbits. Bachelors keep phone numbers. But Bankers keep SECRETS. The very nature of banking is confidential. We don't talk about the fact we saw a check for $10,000.00—or that Mr. Brown *must* be "loaded" because you happened to see his monthly statement. Being friends with people outside Bank of America is fine but tipping your hand about information that isn't yours to give in the first place is strictly taboo. Make sure that your hat is "leakproof."

That Stanford Research Institute of Palo Alto, California, in conjunction with Bank of America developed ERMA.

That the first handmade ERMA prototype was publicly demonstrated before representatives of the press and banking profession in September 1955.

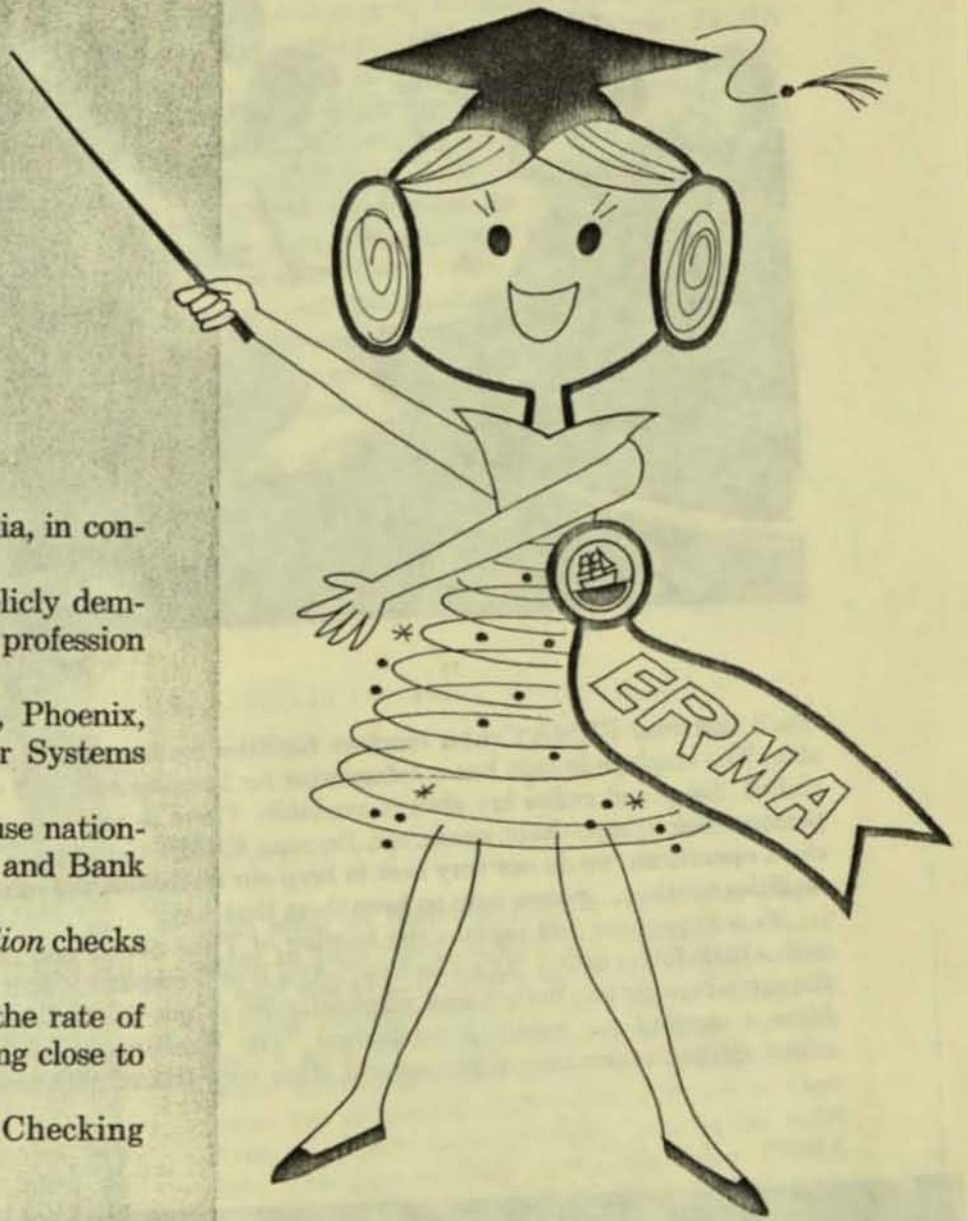
That in 1956, General Electric Computer Division, Phoenix, Arizona was awarded a contract to build 30 Computer Systems for our 13 B of A ERMA Centers.

That Magnetic Ink Character Recognition—now in use nationwide—was a joint effort of Stanford Research Institute and Bank of America.

The 13 ERMA Centers handle and process over *52 million* checks and deposits per month.

That the American public is now writing checks at the rate of 15 billion a year—by 1970 (just 7 years) we will be writing close to 22 billion.

That our 13 Centers handle 2,500,000 Customer Checking Accounts and 3,000,000 Savings Accounts.



BATCH SEPARATOR CARDS—A set of 12 colored cards numerically encoded to separate batches within a superbatch. The colors assist in quick identification of material being processed.

BLANK TAPES—Magnetic tapes that are available for reuse. These tapes will have the identifying label removed.

BRANCH BREAKOUT—Initial sorting of documents processed by the Computer on an off-line condition based on a single digit of the branch number.

C.D.A.—Commercial Deposit Accounting.

COMPUTER—Electronic equipment components capable of memory storing, input reading, logic-sorting and classifying, arithmetical computating and out-put writing all under program control.

CONSOLE—A Computer operator's monitoring desk through which he can send or receive instructions and information to and from the Computer.

CONTROL DESK—Where processed material for reconciling purposes is assembled and controlled.

COPY—To transfer information from one magnetic tape to another.

CUE CHARACTERS—Four M.I.C.R. symbols not containing information used to separate one field of information from another.

CUT-OFF CARDS—Cards which indicate the end of a superbatch group.

DATA TAPES—Magnetic tapes which contain vital information after processing. These tapes will carry an identifying label.

DELEAVER—A mechanical device used to separate originals from copies from carbon paper that are printed on continuous form paper stock.

DIGIT SELECTORS—Upper row of buttons on the Sorter Control Panel used to select individual digits within fields.

DOCUMENT—In ERMA language any encoded item such as a check, deposit slip, special entry, etc.

DOCUMENT HANDLER—A Sorter/Reader.

DOWN TIME—The elapsed time when equipment is not operating due to malfunction or equipment failure.

ENCODED—The numeric and cue characters printed in magnetic ink along the lower edge of checks and deposits.

ENTRY RUN—Initial input of information through a Sorter/Reader on-line with the Computer.

ERMA—Electronic Recording Method of Accounting.

FEED—Items flowing through a Sorter/Reader.

FIELD-A/C NUMBER—Contains the Branch number, Transposition Check Digit and the Account number identifying the particular customer account.

FIELD-DOLLAR AMOUNT—The last group of numbers on the right side of the encoded line. It contains the dollar amount of the entry and will accommodate up to ten digits.

FIELD SELECTORS—Lower row of buttons on the Sorter Control Panel used to select fields.

FIELD-TRANSACTION CODE—By the use of authorized number codes, this field instructs the Computer to handle the item in a specific manner.

FIELD TRANSIT—Contains the Federal Reserve routing symbol and the American Bankers Association transit number.

FILES—An accumulation of branch work necessary to aid receipt and distribution of work flow, such as files I, II, or III.

FIRST LEVEL—Working description of the people responsible for the initial balancing of item dollars entered into the Computer in relation to the dollars charged by the branches.

GENERAL PURPOSE SORTER—A Sorter/Reader with a specially wired plug board capable of making decisions on an entire field of information.

HARDWARE—Any electronic equipment in an ERMA Center. Also referred to as "gear."

ITEM—Any **one** of the checks, deposits or other documents.

JOGGER—A vibrator used to align the leading edge of checks and other documents so the Sorter/Reader will accept them properly.

LISTING—A manual adding machine listing of items rejected from an entry run in batch separator order.

MAGNETIC TAPE—A plastic or mylar tape with similar qualities to home recording tape on which information can be stored.

M.I.C.R.—Magnetic Ink Character Recognition.

OFF-LINE—The operation of input-output peripheral equipment not under direct control of a Computer.

ON-LINE—The operation of input-output peripheral equipment under direct control of a Computer.

PAPER TAPE LOOP—A punched paper tape which controls vertical alignment and format of forms—such as customer statements.

PERIPHERAL EQUIPMENT—Equipment separate or separable from the main Computer which is used to enter information into the Computer and translate information from the Computer—such as Sorter/Readers, Printers, etc.

PLUG BOARD—A wired panel which controls the horizontal alignment and format of forms—such as customer statements.

POCKETS—Twelve storage compartments on a Sorter/Reader into which documents are sorted.

PROGRAM—A series of coded instructions which tell the Computer what to do in order to complete a specific job.

RE-ENTRY RUN—Reprocessing of items that were rejected on the entry run.

RUN—Actually using program in processing—such as sorting, posting, etc.

SCRATCH, OR SCRATCHING—Removing an external label from a Magnetic tape reel after the information it contains is no longer needed.

S.D.A.—Savings Deposit Accounting.

SECOND LEVEL—Working description of the people responsible for balancing dollar items which could not be brought into balance by the First Level people.

STRIPPED ITEMS—Those documents that have been corrected for re-entry through the use of a gummed strip attached to the bottom of a document.

SUPER BATCH—A consolidation of one or more batches, received from one or more branches, for convenience of reconciling.

TAPE CARTS—Mobile units used for transporting Magnetic tape reels to and from the Computer.

TAPE RACKS—Shelves for storing of Magnetic tape.

TAPE RETENTION—Data tapes placed in storage on or off premises and labeled and stored for purposes of reconstruction of records. (As in a case of disaster where it is necessary to return tapes to recover information.)

TAPE UNITS, OR SERVOS—Magnetic tape transport that houses and passes the tape over a read-write head—similar to a home tape recorder.

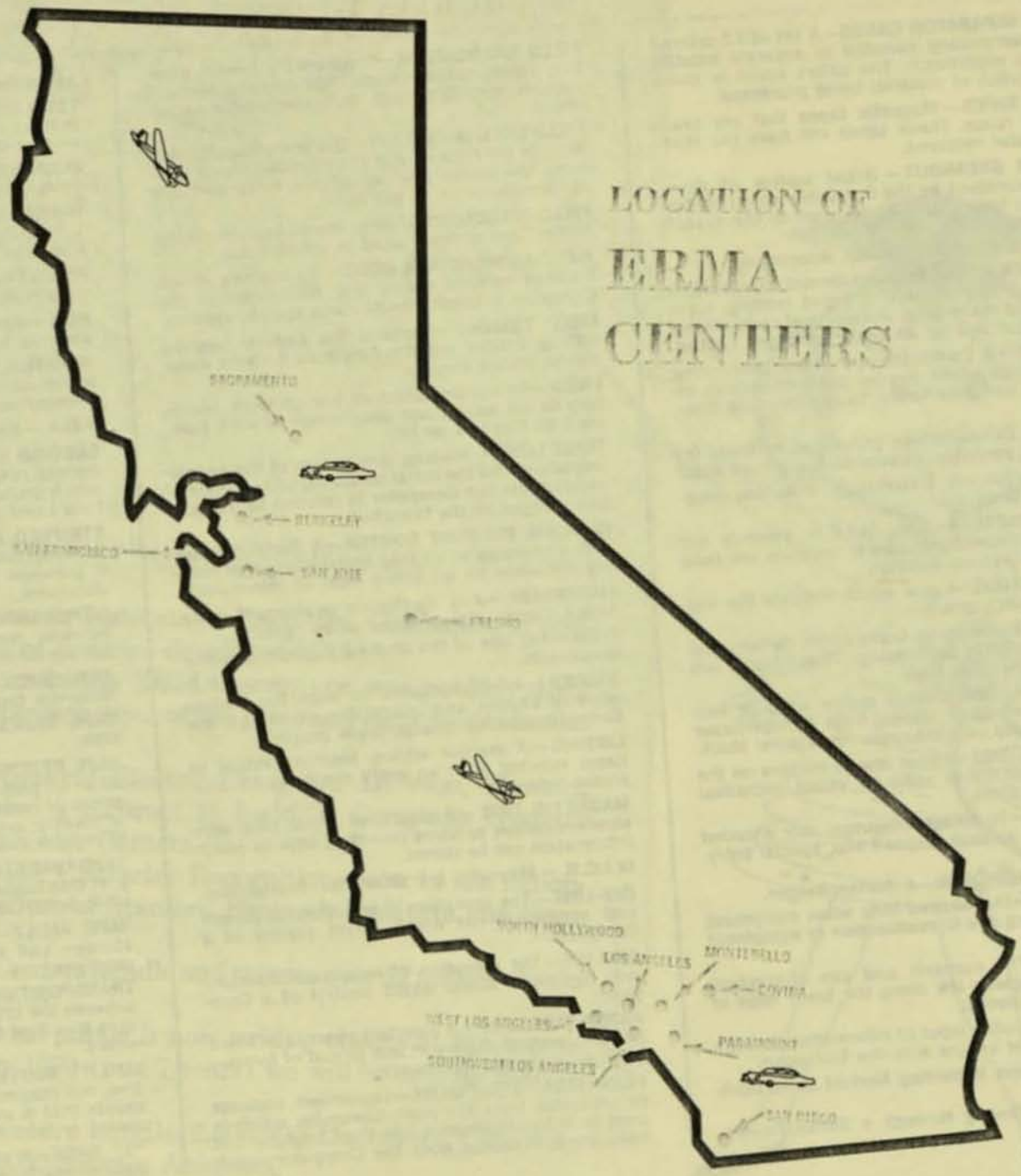
TAPE VAULT—A protected area used for the storage and retention of Magnetic tapes on premises.

TRANSPOSITION CHECK DIGIT—Is the number between the branch and account numbers. ERMA uses this digit to check against possible number errors.

UTILITY ROUTINE—A standard program, or routine, not connected with the processing of documents that is used for copying, correcting, comparing or tape editing routines.

"Z" RACK—A cabinet containing the electronic gear of the Sorter/Reader.

LOCATION OF ERMA CENTERS



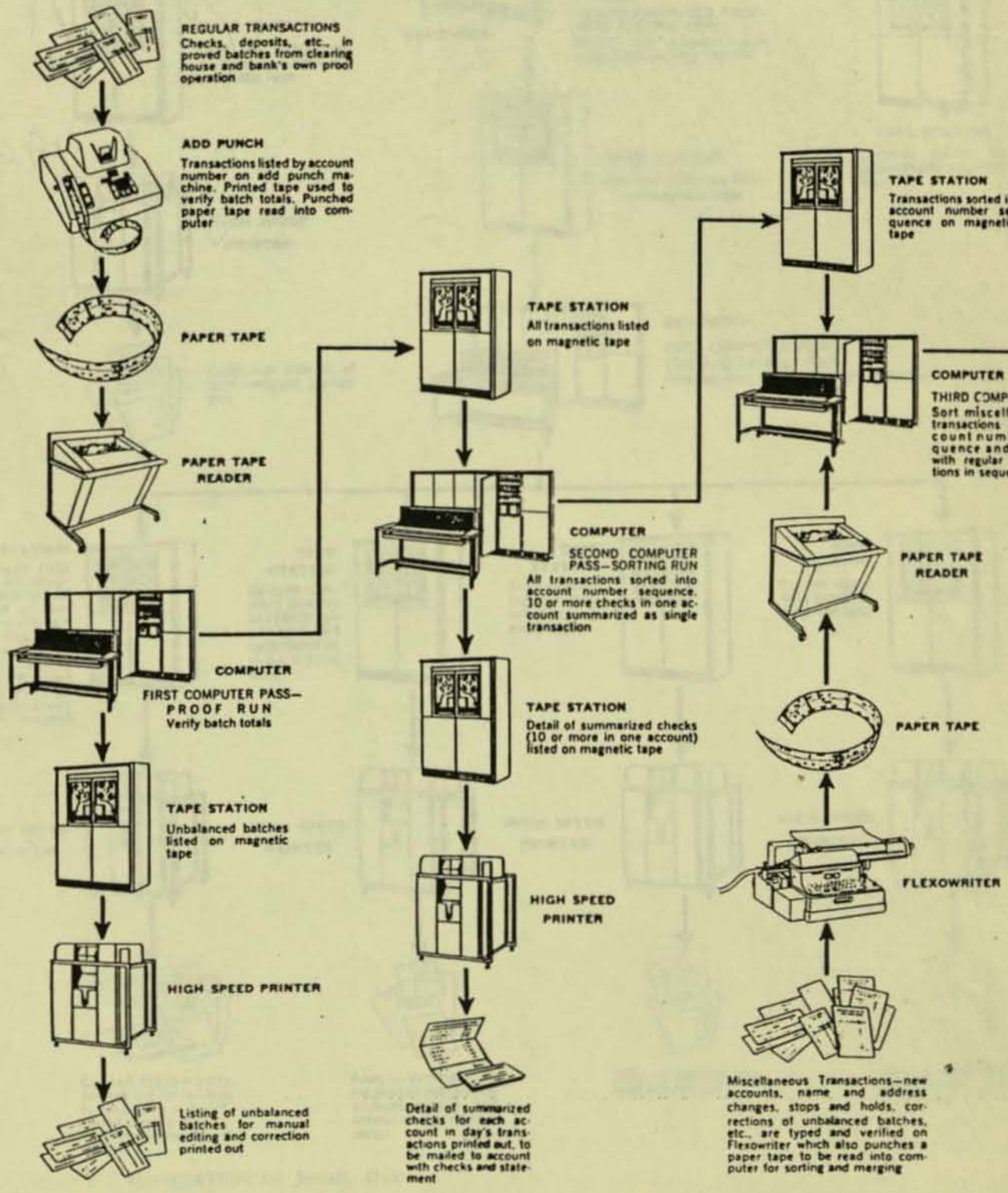
Processing An Average Of 90,000 Check And Deposit Transactions Daily

S. J. Kramer

Radio Corp. of Amer.
Camden, N.J.

Complete demand deposit accounting (the average is 90,000 check and deposit transactions a day) is being processed by the Fidelity Philadelphia Trust Company in a little more than half a shift daily on a medium-sized RCA 501 EDP System.

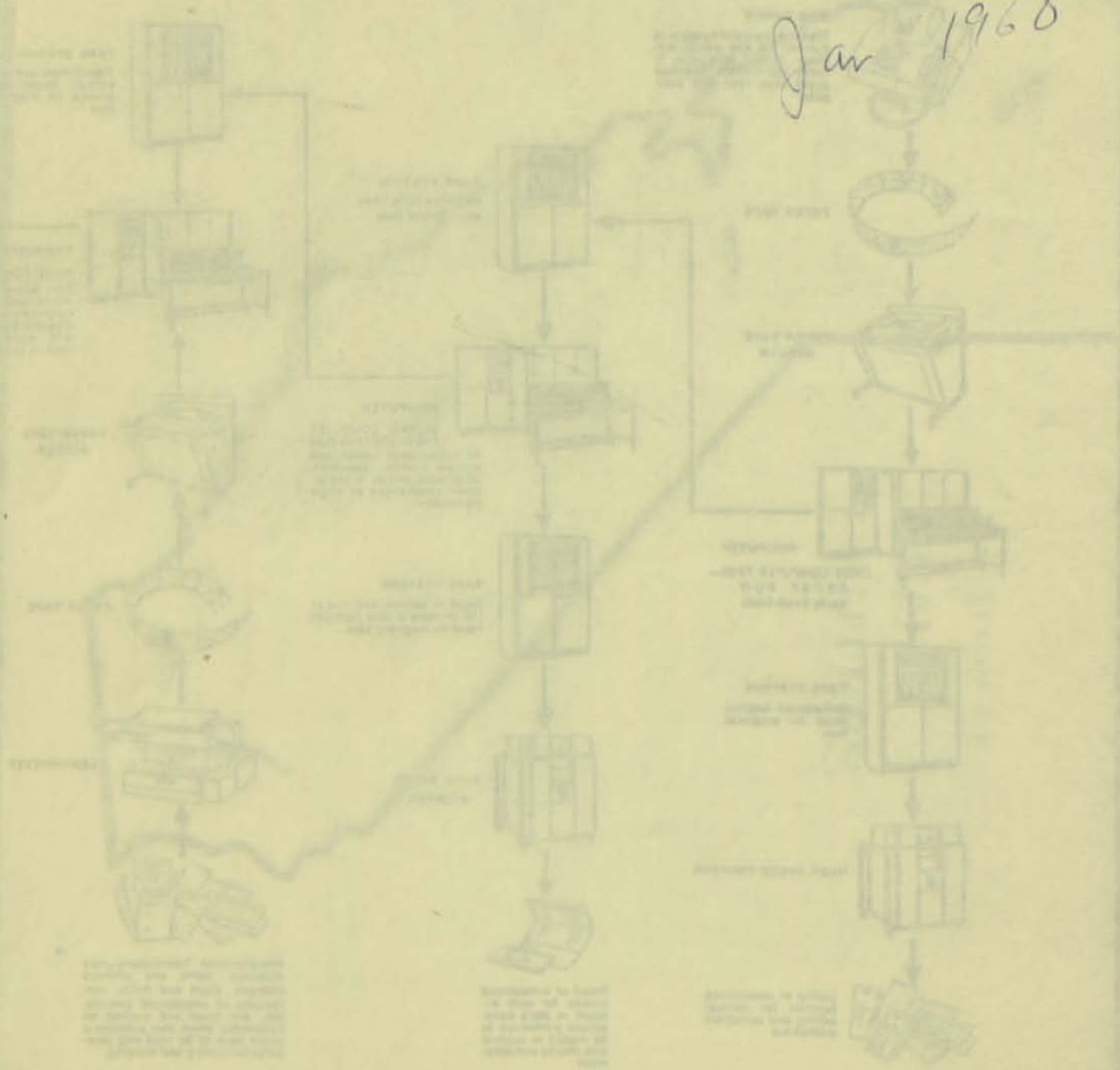
The equipment complement for this operation — fully transistorized — includes a computer and associ devices (program control, high-speed punched p tape reader, a single module of high-speed memory s age with 16,384 character locations, control cons



Vol 9

C + A

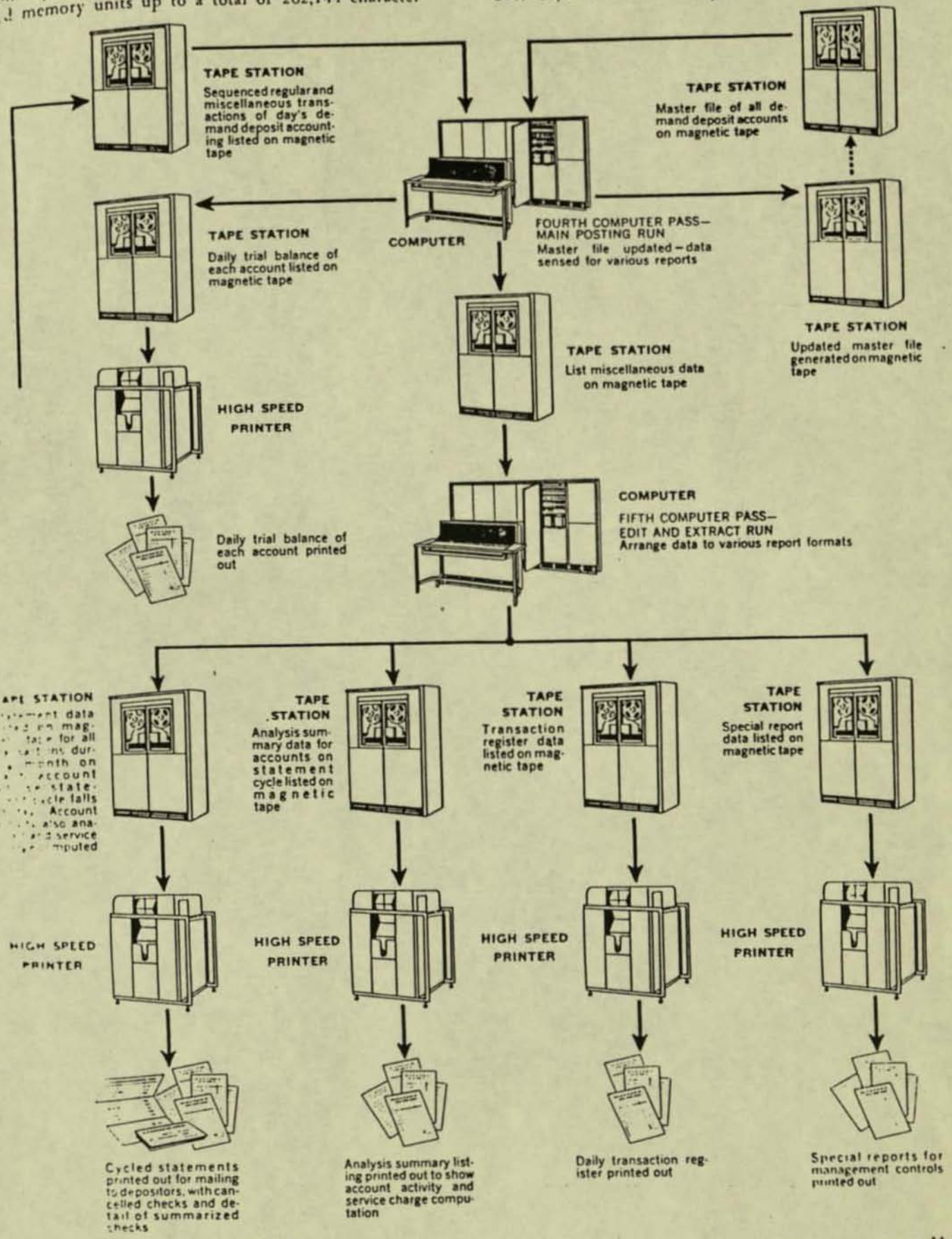
Jan 1960

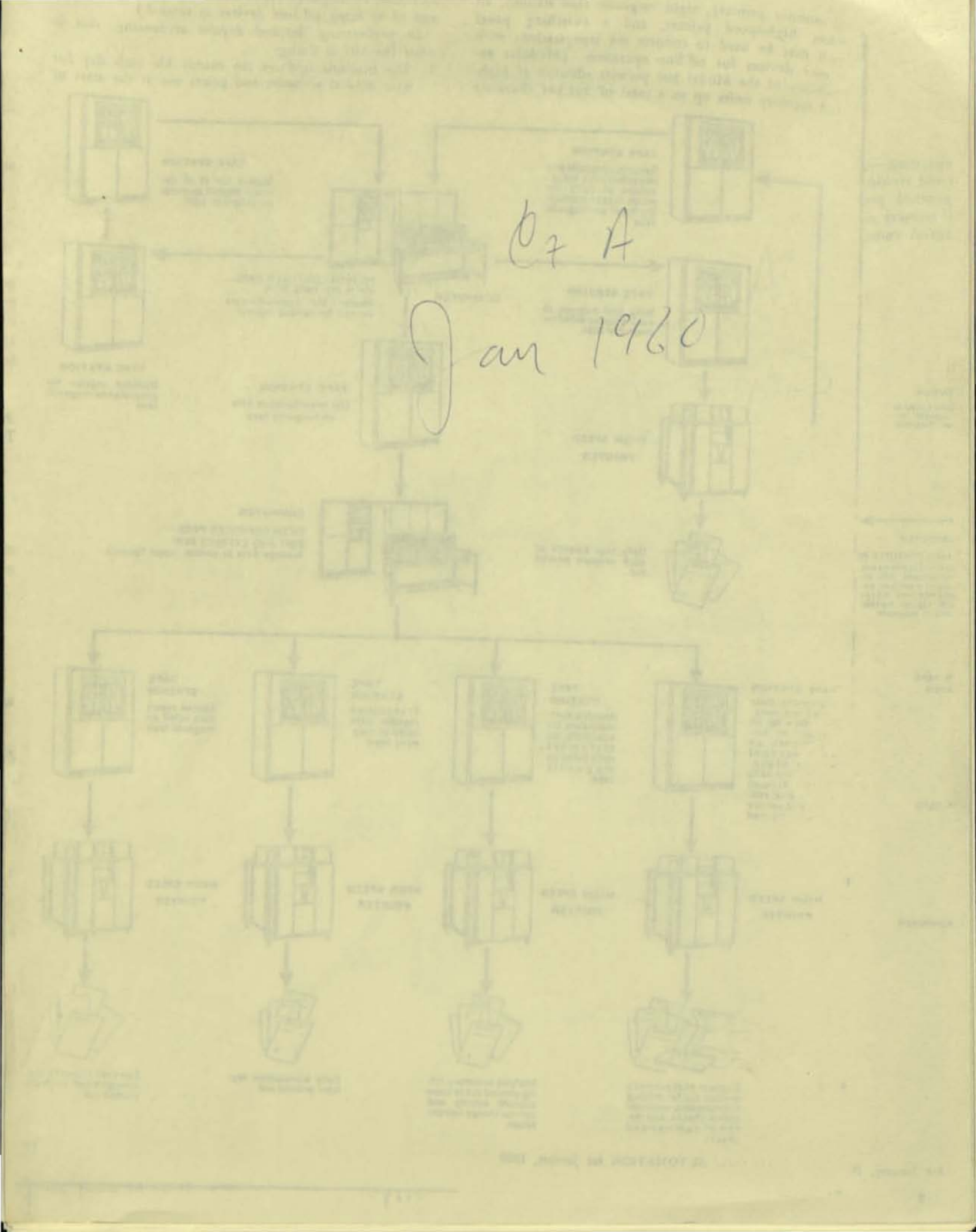


monitor printer), eight magnetic tape stations, an line high-speed printer, and a switching panel ch may be used to connect six tape stations with user devices for off-line operation. (Modular ex- sibility of the Model 501 permits addition of high- memory units up to a total of 262,144 character locations, of magnetic tape stations [illegible] and of as many off-line devices as needed.)

In performing demand deposit accounting, this is what the 501 is doing:

1. The machine updates the master file each day for over 80,000 accounts and prints out at the start of

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