

SALES CARD TABULATION																					
CUSTOMER	SALESMAN	PREFERENCE	LOT	MODEL	PRICE	QUANTITY	32	33	34	35	36	37	38	39	40	42	44	46	48	50	52
9004	11	1	5130	10	178	4							1	1	1	1					
363	08	5	5130	10	178	12						2	2	2	2	2	1	1			
2184	11	3	5130	10	178	5						1	1	1	1	1					
2920	09	1	5130	10	178	15					1	2	3	2	3	2	1	1			
1727	16	3	5130	10	178	6						1	1	1	1	1					

Fig. 3. Ledger Posting Report—Sales.

vious report are sorted by material, by model and by customer, and then tabulated on what is known as a Ledger Posting Report, of which Figure 3 is a sample. This report is presented twice each week during the selling season and serves many purposes. First it serves as a check against errors both in the original orders and in transcribing them to the cards. Next it forms a basis for records of individual salesmen. And finally the totals at the end of each model are used as the medium for posting to the ledger record of items sold in the various materials, models and sizes. Were it not for this system we should have to make a separate posting for each of the items shown in the body of the report, instead of which we need post only the items shown in the line of totals. Furthermore, these items are arranged in numerical order and in the same order in which the ledger sheets are arranged, thus eliminating the necessity of hunting through the ledger to find the right page on which to make the entry. When we consider that this process must be repeated for 500 materials in sixty model variations, the saving in time and labor becomes most impressive.

Now let us assume that a quantity of items in any material and model have been put into work. The question then arises: To what customers should these items be delivered? Again we go back to our cards, and the answer to the question is simple. We merely select the cards for the material and model in question, sort them by customers and we have a tabulated report giving all the information necessary for distribution.

These are not the only products of these detailed punched cards but they are the principal ones. What I wish to emphasize is not the value of the reports themselves, but the simplicity, speed and accuracy of obtaining them. On a recent occasion we timed a punch operator and found that in less than half a day he transferred to cards the data from 120 orders for over 11,000 items of merchandise; immediately thereafter

COMPARATIVE ORDER ANALYSIS												Page	Date
												Page No. 1	Date 11/1/11
SEASON	NO. OF ORDERS	ORDER DAYS	ORDER DAYS	ORDER DAYS	ORDER DAYS	ORDER DAYS	ORDER DAYS	ORDER DAYS	ORDER DAYS	ORDER DAYS	TOTAL ORDERS	TOTAL ORDERS	TOTAL ORDERS
THIS DAY	12	12	12	12	12	12	12	12	12	12	12	12	12
	OUT	12	12	12	12	12	12	12	12	12	12	12	12
	IN	12	12	12	12	12	12	12	12	12	12	12	12
	OUT	12	12	12	12	12	12	12	12	12	12	12	12
NEW LAST SEASON													
NEW ACCOUNTS													
TOTAL													
TOTAL DATE	12	12	12	12	12	12	12	12	12	12	12	12	12
	OUT	12	12	12	12	12	12	12	12	12	12	12	12
	IN	12	12	12	12	12	12	12	12	12	12	12	12
	OUT	12	12	12	12	12	12	12	12	12	12	12	12
NEW LAST SEASON													
NEW ACCOUNTS													
TOTAL													

Fig. 4. Comparative Order Analysis

these cards were sorted in with cards for previous totals, and tabulated for the ledger posting report. The entire job, including the punching of the cards, sorting and tabulating for two large reports required less than seven hours' time of two men. And most important of all, the reports were absolutely up-to-date, including all orders that had been delivered by mail four hours before.

Let us now turn to a somewhat different, but closely allied, group of reports—those used for purposes of comparison. For this group we punch a different set of cards, also however from the original order. On these cards we omit details of materials, models and sizes, but include amounts in money, and classify the orders by classes of product and of material, by district, size of town, by type of customer and by salesman.

From these cards we obtain a number of extremely interesting and valuable reports. For instance, let us look at the Comparative Order Analysis (Figure 4). This report is divided into two parts, the upper for the day for which the report is submitted, and the lower for the season to date. The first two horizontal headings refer only to orders from all customers who placed an order the corresponding season of the previous year. The items ordered are divided into ten subdivisions, thus allowing comparison and analysis of the orders by

The Shagbark Family, Inc. #22				Inclusive		Season	
SALES REPORT TO		NO. ORD.	AMOUNT	AMOUNT	DIFF.	%	
CLASS		REC'D	THIS YEAR	YEAR AGO			
ORIGINAL ORDERS ONLY	OLD-OLD						
	OLD-UNOLD						
	NEW						
	TOTAL ALL AC						
	REPORTED						
	"WILL NOT BUY"						
	TOTAL INCL.						
	"WILL NOT BUY"						
ORIGINAL ORDERS PLUS ADDITIONS	OLD-OLD						
	OLD-UNOLD						
	NEW						
	TOTAL ALL AC						
	REPORTED						
	"WILL NOT BUY"						
	TOTAL INCL.						
	"WILL NOT BUY"						
REVISED ORDERS	OLD-OLD						
	OLD-UNOLD						
	NEW						
	TOTAL ALL AC						
	REPORTED						
	"WILL NOT BUY"						
	TOTAL INCL.						
	"WILL NOT BUY"						
REVISIONS	NO. ORD.	AMOUNT	% ON	% ON	AMOUNT	% ON	
	REVISED	THIS YEAR	REV'D ORD.	TOT. ORD.	YEAR AGO	REV'D OR.	
	ORDERS						
	REV'NS						
TOTAL BUSINESS YEAR AGO	NO. ORD.	ORIG. ORD.	ADDITIONS	CANCELL'NS	NET	% CANCEL	ON REV'NS
WILL NOT BUY THIS SEASON	NO.	AMOUNT	LAST SEASON				
(COLD LAST SEASON NOT "YEAR AGO")	REPORTED	LAST SEASON					

Fig. 5. Comparative Sales Report.

classes of material and by types of product. The next three lines give the same analysis of orders from reclaimed accounts (old accounts who did not buy in the corresponding season of the previous year), from accounts which are only one season old, and from accounts new the present season. The last line gives the totals for all accounts, new or old. The last column, showing average number of items per order, is a convenient method of comparison between various seasons and between various kinds of customers. The lower half of the report is, of course, a duplicate of the upper part, but the figures are cumulative for the season. These figures, as well as those on other forms shown, are quite evidently fictitious.

A somewhat similar report is shown as the Comparative Sales Report (Figure 5). This is a comparison, expressed in dollars and in percentage of increase or decrease between the volume of business booked during the current season and the sales to the same customers during the corresponding season one year before. It also shows the purchase of all customers who did not buy the previous year. As the season progresses the report also shows the volume and percentage of additions to original orders as well as cancellations and revisions.

We have now briefly taken up the principal reports dealing with the receipt, handling and filling of orders. All of these reports and analyses have been based on two sets of cards punched on receipt of original orders. It is impossible to more than merely mention some of the many other results obtained by sorting and tabulating these same cards. We have, just for the asking, analyses of orders by classes of merchandise and by sizes; these are of especial value between seasons when work is taken in anticipation of orders. In a seasonal business such as the manufacture of clothing, the tendency of the production curve is toward deep valleys between seasons and marked peaks in the height of the seasons. In order to straighten out this curve it is necessary to manufacture during the slack seasons, considerable quantities of staple product for which there will be a reasonably certain demand during the busy seasons. The selection of this product requires good judgment, and the analyses just referred to enable the persons making the selection to base their judgment on actual history rather than on a personal opinion or estimate. In addition to these analyses we have special analyses of mail orders, and of inquiries, classified by district and advertising media. We have reports by salesmen and by size or town. All of these can be, and frequently are carried into complete detail as to materials and models. There are also reports showing additions to orders, cancellations, filled orders, unfilled orders, percentages of orders filled, both individually by customers and as a whole. And there are others, too numerous to mention. Most of them are furnished at regular intervals during certain parts of each season, but any one can be furnished as often as needed.

The next phase of the Statistical Division's work is in connection with work in process. All cutting or manufacturing orders issued by the Scheduling Division of the Planning Department are divided for convenience of manufacture into a number of smaller units, called batches, of from one to twenty items each, and a sub-manufacturing order issued for each batch. Copies of all manufacturing orders and sub-manufacturing orders are delivered to the Statistical Division. The main manufacturing order acts as a detailed job cost collecting medium. From the sub-manufacturing cards are punched cards containing details of the items put into work and identifying them with the manufacturing order. These cards form an active inventory of all work in process, and by mechanically sorting and tabulating them, we have at very short notice full details as to the number, kinds, and sizes of all items of work.