

offer the greatest difficulties as to control. Department heads will insist that every one of their employees is needed, that the falling off in work to be done is not proportionate to the falling off in business. And the same resistance will be found in respect to controllable items of expense referred to under the heading "miscellaneous," such as advertising salesmen's expenses, telegraph, telephone and postage charges, etc. Determination, based on conviction and often coupled with a certain unreasonableness on the part of the general manager, will accomplish what may appear like the impossible.

Let us now consider these reports in the order listed.

#### The Monthly Analysis of Expense

This statement sets forth for the period, the complete cost of operating the business, including all payrolls for wages and salaries, whether directly chargeable to products or not; the cost of all materials used, whether entering into the company's products or used as supplies incident to the operation of the various departments of the business, and all other charges for services rendered by outside agencies, including taxes, interest, depreciation, etc. This report should include three main sections:

1. *Indirect Expenses.* These cover items which are not directly chargeable to specific lots or orders for products in process of manufacture and do not increase the permanent value of the plant. Costs of such items or activities are referred to in my article in the December 1932 BULLETIN OF THE TAYLOR SOCIETY (p. 232) under Section I of the classification. The major divisions correspond to those set forth in paragraphs A, B, C, D and E on page 233.

2. *Direct Expenses.* These cover costs chargeable directly to products in process of manufacture during the period. This includes wages, materials and other items of expenses, such as work done on a product by outside parties. These direct expenses for products or work in process would be set up in the report in accordance with the classification under Section II in the article mentioned above.

3. *Additions to Capital Accounts.* These cover wages, materials and any other expenses directly chargeable to capital accounts, i. e., items which add to the permanent value of the company's plant and equipment. See Section IV in the article mentioned.

The forms on which this and other regular statements are presented should be so designed as to fold to letter size (8½ by 11 inches) with a one-inch margin on the left for binding. A sheet 16 inches wide by 11 inches deep will usually be found satisfactory. Printed forms with both horizontal and vertical rulings may possibly offer a little more difficulty in typing but are vastly superior from the user's point of view to blank-paper reports. Green and brown inks make the best rules and it is helpful if every fourth horizontal line is made slightly heavier, as a guide in following the figures pertaining to an item across the page. These are small but important details. It is generally desirable to have a set of each month's reports made up and neatly bound for each major executive. These several copies should all be made by a suitable duplicating process from a single carefully checked original. While special cases may require other treatment, the following vertical ruling has been found, with little variation, to meet the needs of a wide variety of businesses:

*First Column*—Symbol of the expense class or subdivision thereof. At the beginning a descriptive column may be necessary in addition to the symbol. When it is used at the start it generally soon falls into disuse as the users of the report become familiar with the classification. It will be referred to for definition when the meaning of the symbol is not known.

*Second Column*—Wages for the period, i. e., compensation

paid to all the employees on the hourly payroll, showing the amounts chargeable against each of the classes of expense and their subdivisions. As the amount of payroll for each period (usually each week) is charged, pending distribution, to the accounts for departmental expenses, to products (work in process) and to capital accounts, the sum of all the entries in this second column should agree with the debits to payroll account during the period.

*Third Column*—Salaries for the period, showing, as in the case of wages, the amounts chargeable against the various expense accounts and their subdivisions. The sum of these entries should agree with the salary payrolls (or the total of all salary vouchers) for the period.

*Fourth Column*—Wages and Salaries combined, as charged against each account (Column 2 plus Column 3).

*Fifth Column*—Stores (purchased materials) used and chargeable to the various expense and other accounts during the period. The sum of these entries must agree with the amount credited to stores (purchased materials inventory) account for the period.

(If the company's own products may be used as supplies by certain departments and charged to expense, there should be an additional column headed "Worked Material Used.")

*Sixth Column*—Miscellaneous charges, i. e., those not falling under any of the foregoing heads. These would include such things as services rendered by outside agencies, insurance, interest, taxes, dues and contributions, purchased power, water, depreciation, etc.

*Seventh Column*—Total of all the charges (the sum of the entries on each line) in Columns 4, 5 and 6.

*Eighth Column*—Total of all charges against each expense and other account for the previous period.

*Ninth Column*—Average per period charged against each account for the year to date.

*Tenth Column*—Averages for the corresponding periods during the preceding year.

*Eleventh Column*—Budget or expense standards for each class of expense and subdivision thereof, based upon the rate of operation for the period in question.

It should of course be understood that for certain businesses comparisons different from those indicated for Columns 8, 9 and 10 might be more useful, or even that additional comparisons might be valuable. For example, it might be advantageous to show averages for the past year, the past six months or the previous quarter. In addition to the budget figures for the current month, it might be desirable to show these figures in such a manner as to permit comparison with the average for the year to date.

In setting up this report it is desirable to show totals at the top rather than at the foot of a column of figures, as is usually the custom. For example, the head of the sheet would show the grand total of all expenses, the first thing in which the general manager is interested. Under this would appear the various major classes of expense, set up in accordance with the classification.

For the general manager's use the first sheet of this report should show a summary of the company's expenses, together with certain information which will help him in considering the figures and reaching the proper conclusions as to appropriate action. This should include such things as sales for the period—both booked and shipped; purchases of materials, etc. The summary of expenses for the period should cover only: (1) the grand total of all expenses; (2) the total of indirect expenses; (3) the total of direct expenses for work on products; (4) the total of direct expenses chargeable to capital accounts.

Supporting totals for the major divisions of the business as

outlined in the article on Classification should be shown on the summary sheet, which should present the same arrangement of columns as those described for the detailed supporting sheets. On these should be shown in the proper order each of the major divisions of expense, with totals at the top and supporting details following, in accordance with the classification.

A glance across the top line of this report might satisfy the general manager that everything was as it should be, i. e., that total expenses were in accord with the budget. This would be an unwise conclusion, however, as some one or two departments of the business might, through an unusual circumstance, show abnormally low expenses while others showed very high expenses. Yet the total might make a satisfactory appearance. He should at least carefully examine the figures on each major division shown on the summary sheet, and keep in mind as a background the information mentioned in a previous paragraph on the state of the business. He should also have in mind the proper percentages of the sales dollar for wages, salaries, materials, etc.

In theory it should only be necessary for the general manager to concern himself further with those details which appear to be abnormal as compared with previous periods. In all such cases he should continue his investigation down to the details in the division or subdivision where the irregularity exists. As a matter of fact when expenses and the activities they represent are properly classified, the task of scrutinizing the information presented is so facilitated that the chief executive may well afford the time to examine all the details. As Taylor pointed out in "Shop Management," these reports should have been gone over by an assistant who would have appended to it the answers to such questions as the figures might raise in the general manager's mind. In a modern organization this "assistant" would be the comptroller, or if the company were too small, the chief accountant. The facts presented in this report give the general manager the intelligence and confidence to discuss the expenses of the several branches of the business with the men in charge of these branches.

#### Statement of Cost of Finished Products

This report calls for little discussion. As the name implies, it simply shows each lot of product finished during the period, grouped in accordance with the product classification. By columns, it shows the quantity produced, the total cost of the lot or production order, the cost per unit. For purposes of comparison, it should show the unit cost of the preceding lot and the date of its completion, the same for the best previous period and the standard cost. In the case of special work this would be an estimated cost. If it is desired, the cost may be shown under headings for wages, materials and manufacturing indirect expense as well as in total. This is usually not necessary, however, since under a system of Scientific Management performance is checked with standards at each stage of the way. This report, apart from its service in the matter of accounting, is primarily of interest to the works manager. It is important, however, that the general manager look it over and discuss such exceptions as he thinks important with the works manager.

This report serves the accounting purpose of crediting the accounts of "work in process" and debiting the "finished product stores" accounts in the general books.

It also supplies a check on the rate of operation in addition to that furnished by the analysis of expense. For example, if we know the proportion of manufacturing cost to selling price we may, by converting the cost of goods produced into sales values, see whether these values exceed or fall short of the rate of sales.

#### The Income or Profit and Loss Statement

A complete statement of sales of the company's products for the period should be set up on this report, together with comparative figures for sales during the previous period. These figures should be set up in columns somewhat as follows:

1. *This Month:* First column—quantity sold; second column— invoiced value (selling price) of goods sold; third column—cost of goods sold. This should include the manufacturing cost (direct labor, material and manufacturing indirect or shop expense) and, in addition, selling expense, general business or administrative expense, research and development expense and any other items which are not distributed to the cost of products when manufactured. The fourth column should give the net profit or loss.

2. *Last Month:* The same columnar arrangement.

3. *Average for the Year to Date:* The same columnar arrangement.

4. *The Same Month Last Year:* The same columnar arrangement.

5. *Average for the Same Period Last Year:* The same columnar arrangement.

In addition to the columns described, it is desirable to have one more in which carefully arrived at sales budget or quota figures are shown. Unless these figures have been arrived at through market analysis for each class of product as well as for total sales, however, they had better be omitted.

In making up this report the total revenue from all sources should be shown at the top. This should be followed by the total from sales of merchandise, and the total from other sources, such as interest on investments, rents, etc. Following these, on the first sheet, should be a summary showing income from each of the principal classes of company products. These should be set up in accordance with the product classification. Back of this should be sheets showing a breakdown of each of these principle product classes supported by a further breakdown into subclasses, and if desirable a still further breakdown showing additional details even down to individual items.

For accounting purposes, the figure representing revenue from sales or other sources should agree with the debits to accounts receivable and the credits to a merchandise sales or other revenue account through a journal or other register of accounts receivable. Figures in the cost column represent credits to finished product stores or other accounts concerned and debits to merchandise sales or other revenue accounts. The figures in the profit or loss column, which show the difference between cost and revenue, are debited or credited, as the case may be, to the income or profit and loss account.

The principal values of this report are these:

1. It shows increases or decreases in the sale of the company's products as a whole, of the various classes of product, and of individual items within a given class.

2. It clearly indicates those classes which are profitable and those which are not. In other words, it shows the relative profitability, or the reverse, of the various classes of products and their component items.

The most effective use of this report, in my opinion, may be achieved by a series of conferences of the major executives concerned, called by the general manager and presided over by him, to consider: (1) those classes of product and their component items which fail to show a normal rate of profit, and (2) those classes, or their components, which show a satisfactory rate of profit but an unsatisfactory volume of sales. These conferences should be attended by the sales manager, the works manager, the executive responsible for design of product, the head of the research and development department, and the