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Cost finding in the cloak and suit industry

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COST FINDING IN THE CLOAK AND SUIT INDUSTRY

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Issued Under Direction of
THE NATIONAL CLOAK, SUIT & SKIRT MFRS. ASS'N
310-311 New England Building
Cleveland, Ohio

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COST FINDING

IN THE

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PREFACE

At the meeting of the National Cloak, Suit and Skirt Manufacturers' Association held in April, 1912, the Welfare Committee was charged with the duty of selecting and assigning Expert Cost Accountants to the compiling of a uniform cost accounting system which would be applicable to the factory of each member of the Association.

Those are long involved words, and yet they express something that each of us should be familiar with now, and undoubtedly should have appreciated long ago.

Probably had our attention been directed to a lesser degree on other problems, seemingly more important and pressing, accounting methods in our factories would be today in a more advanced state.

Style has been our overshadowing problem in the past and it is a problem that is calculated to require the full time and increasing attention of anyone who is connected with its endless variations.

Cost accounting means not only figuring out the cost of the individual garment and the getting of data which will show the cost of operation, but the analyzing of this data in such a way as will enable us to reduce those costs. The Cost Accounting System not only gives us the cost of these garments at any one time, but it enables us to compare with the costs of the same garment a year ago or six months ago, and also with a possible cost that can be achieved within the three months, or within six months in the future.

It is in the comparison of the cost records of this season with the past season and the past year with the coming year that its enormous value becomes possible.

In addition there is the further possibility of comparison with other manufacturers. Human beings differ. They differ in their skill. They differ in their abilities, and have different aptitudes. One manufacturer in his factory may be able to reduce his cost in one department and another may be able to reduce his cost in another department, due to particular interest or particular skill in those departments, and the comparison between the two will show different facts and enable each man to avail himself of the reduced cost possible in both departments. That is why it is so important that this association should have a uniform method of cost accounting.

Cost accounting will not at first glance seem easy, because there are few of us that are accountants. Therefore most of us will be tackling a problem that is new and strange. Any problem that is new and strange seems ever so much more difficult than it is, but cost accounting is so important and so valuable to each one of us, that even in those houses where there are no trained accountants, this system should be introduced at the very earliest moment possible.

So don't let us be deterred by the strangeness of it. I acknowledge freely these things have been strange to me. I never had anything to do with keeping any set of books, and I dare say there are a great many other members of our association that are in the same predicament. No matter how difficult it may seem to those of us who are inexperienced, in accounting, let each one of us select that particular member of his organization that knows most about accounting and put him in charge of this work, and if his knowledge be insufficient, let us add to it the temporary services of an expert, in order that the sys-

tem may be installed at the earliest possible moment. It will be well worth the effort.

If there be more than one individual member of any particular organization, if it is left to three or four different people, nobody will do it. Let each firm select one individual and make him responsible for the early installation of this cost accounting system. And don't let us make the time too long. Three months ought to be ample and sufficient time. The benefits will come after it has been introduced and the benefits will be increasing as the years go by, so that the slight initial effort that may be necessary to overcome our past inertia will be very wisely expended.

MORRIS A. BLACK, Chairman,
THE WELFARE COMMITTEE.

COST FINDING IN THE CLOAK AND SUIT INDUSTRY

How can the man making cloaks reduce his expenses, reduce his costs? This is the practical question. If a cost system does not help him to do this it is no good, time and money are wasted keeping it up.

In order to find out where money can be saved, we divide all expenses under three general divisions,

MATERIALS
LABOR
CHARGES

but it is important to know whether as to all garments which item costs most, materials or labor or charges. For instance, in the shoe business, a very slight saving in the use of leather is far more important than a big saving in labor charge.

In the cloak business the chief item of expense is materials not labor or charges, and usually materials constitute two-thirds and upwards of the total cost. Five per cent saving on materials would, therefore effect a greater saving than 10 per cent reduction of labor expense.

How Much Money is Spent for Materials? How Much Money is Spent for Labor? How Much Money is Spent for Charges?

A maker of men's pants was asked about his cost system and he described it:

FIFTY CENTS FOR ME
TWO DOLLARS FOR MATERIAL
FIFTY CENTS FOR LABOR
TOTAL COSTS \$3.00

But what if competition forces the price down to \$2.75?

Then—Fifty cents for me.

One dollar seventy-five cents for materials. Fifty cents for labor.

TOTAL \$2.75

But what if competition still further forces the price down to \$2.50?

Then again—Fifty cents for me.

One dollar fifty cents for materials. Fifty cents for labor.

TOTAL \$2.50

This was a good cost method.

In any cost system the first thing to find out is how much all Materials cost, how much all Labor costs, how much all Charges cost.

Material costs mean all money paid out for materials; includes, therefore, water and gas as well as piece goods and trimmings.

Labor costs mean all money given persons for services; includes, therefore, lawyers' fees.

Charges are the four items of taxes, insurance, depreciation and interest. If a man has \$10,000 invested in his business he must charge himself with at least \$600 interest, and if part of his \$10,000 is invested in materials that are losing value, he must charge himself with a depreciation charge sufficient to cover the loss.

Expenses are, therefore, subdivided into materials, labor and charges.

But it is not only the price paid for materials that counts, it is the use made of the materials.

Two men may pay exactly the same price per yard for materials, but one man makes five per cent more suits or cloaks because he watches the cutting losses. As to labor it is not only the price per hour that counts but it is the amount turned out per hour; and charges come down when more business is done.

The man making cloaks therefore, will have a very good and practical system of costs if he puts on one

page all the different expenses for Materials, on another page all the different expenses for Labor, and on a third page all the expenses for Charges.

There are four different ways he can lose on materials:

(1)

He can buy more materials than he actually needs. He might, for instance, buy 500 yards of cloth when he only needed 450.

(2)

He can use in a garment more material than is actually necessary. For instance, he might put on eight buttons, where six would do.

(3)

He may pay too much for his material, perhaps \$1.00 a yard when he ought to buy it for \$0.90.

(4)

He may make a wrong use of materials—use a pearl button where a bone button would have answered.

The duty of the cloak maker is to go over each style of garment, and check it up as to materials. Let him ask himself as he looks at the expense page for materials: Did I buy too much,—did I use too much,—did I use too high a quality?

If he does this he will find that he has made plenty of mistakes, and that these mistakes amount to much. If he has bought 100 yards when 95 would have been enough, if he has used 95 yards when 90 would have answered the purpose, if he has paid \$1.00 when he ought to have bought for \$0.90, if he has used \$0.90 material when \$0.80 material would have answered, he is losing more than \$0.25 on every dollar.

What is true of materials is also true of labor. The manufacturer should look at the sums he has paid out for labor and ask himself as to every man and woman

Have I had more labor than I needed?

Has each employe worked diligently?

Have I paid less per hour or more per piece than I ought to pay?

Have I put high priced employes on low grade work?

If he does this, he will find that he has made here and there, all four mistakes.

If he has had our experience, he will find that he is paying too little per hour and too much per piece.

As to his "Charges," which he must also carefully study, he may find that he is paying too much for taxes and insurance, that he is allowing his property to run down too rapidly, and that his interest charges are higher than if his credits were better.

To know the real facts as to materials, as to labor and as to charges is what a cost system is for.

If every expense has been looked at from these four points, if no wastes are occurring, then, and not before, is it of some value to distribute burden expenses to different departments. This may never be necessary. If, however, it is considered desirable, this is the way to do it.

Distribute all the indirect expenses, whether materials or labor or all charges to four classes:

POWER EXPENSES

MAINTENANCE EXPENSES

SUPERVISION EXPENSES

RENT EXPENSES

This Burden expense worries a great many people, accountants included.

What is most important is to keep down the Burden expense, not to apportion it, although apportionment may also be useful. Every item of Burden expense, whether Material or Labor or Charges, ought to be checked exactly as the expenses are checked. Is there too much, is too much used, has it cost too much, is too good a quality used?

But it will help mightily if expenses are subdivided a little more definitely than merely into materials, labor, and charges; it is advisable to subdivide in order to see more clearly where losses are occurring. Accordingly we divide material expenses into two main divisions or classes:

- A. (a) Materials which can be charged direct to manufacturing orders.
- (b) Materials which cannot be charged direct to manufacturing orders.

Under (a) are classified the following:

PIECE GOODS

LININGS

TRIMMINGS. ETC.

Under (b) are classified all other materials used in the business.

A similar division is possible with labor expenses, viz:—

- (a) Direct Labor, or Labor which can be charged direct to manufacturing orders.
- (b) Indirect Labor, or Labor which cannot be charged direct to manufacturing orders.

Charges.—A similar division could also be made of "Charges" but it is not practicable in a cloak factory to put this distinction into use.

The equipment in a cloak factory directly engaged on manufacturing orders, such as sewing machines, pressing machines, button hole machines, all have too low hourly rates to justify their being charged directly to manufacturing orders.

Accordingly, all "Charges" may be considered as not directly chargeable to manufacturing orders.

It is evident that such expenses as cannot be charged directly to manufacturing orders, namely,

INDIRECT MATERIAL EXPENSE

INDIRECT LABOR

CHARGES

are what is called "Overhead" or "Burden" expenses.

Such material expenses as coal, electric current purchased, etc., are classified as a Power Expense. Likewise, such Labor Expenses as engineers' wages, electricians, etc., are classified as Power Expenses.

Materials used in repairs to equipment and the labor engaged in making the repairs constitute charges to Maintenance. Any building repairs, however, are classified under Rent.

Supervision expense comprises all expenses for materials and labor which do not readily classify as Power, Maintenance, or Rent Expenses.

Rent Charges:—The term is self-explanatory, meaning the amount paid for the use of the premises. Rent charges include also janitor's wages and janitor's supplies and in general all such charges as an owner pays when he rents his building to another.

Where a factory owns its own land and buildings, the Rent Charge is arrived at by computing taxes, insurance and depreciation on the land and buildings plus the interest on the money invested in the land and buildings. To this sum is added the janitor's supplies and wages, and the cost of building repairs, and general property improvement.

We find that we have now converted the total manufacturing expenses, first stated as made up of expenses for

MATERIALS

LABOR

CHARGES

into expenses for

Direct Materials charged to manufacturing orders.

Direct Labor charged to manufacturing orders.

Power Expenses.

Maintenance Expenses.

Supervision Expenses.

Rent Expenses.

It is clear that we cannot as yet commence to get costs on individual garments.

We know the cost of direct labor, and we know this for each manufacturing department.

Our next step therefore, is to apportion

POWER
MAINTENANCE
SUPERVISION
RENT

expenses to each manufacturing department, and each of these four items is apportioned on a rational basis.

Power, for instance, may include the cost of steam heat, and electric light and power.

A rational basis for charging each manufacturing department with its share of the steam heating expense, is on the basis of floor area occupied. It is apparent that a manufacturing department occupying a large area will cost more to heat than one occupying less floor space.

To charge a manufacturing department for the electric light and power used by it, the following method is suggested:

Inventory the total number of lamps in the department with the number of watts per hour each lamp is rated to use. Divide the total watts by 746 which will give the equivalent H.P. used per hour.

In addition ascertain the H.P. of the motors used in the Department, and add the total H.P. required per hour by the motors, to that required for light.

Do this for each manufacturing department and charge pro rata.

The Curtis Publishing Co., Philadelphia, Pa., has installed meters in each department, thus securing the exact consumption of current.

It is not of great importance to spend a great deal of time accurately subdividing Power. If you know about what the Power bills or expenses for the year are, any man of good sense can divide them up pretty fairly against the different departments. Do not attempt to distribute to departments, the power expenses each month. Assess so much a month and at the end of the year find out whether the assessment is equal to the expenses. If it amounts to more you have made an extra profit, if it amounts to less there is a small loss to be taken care of which can be carried forward with the next year's power bill and the assessments be slightly raised.

Maintenance—A rational method of apportioning maintenance charges to manufacturing departments, is on the basis of value of manufacturing equipment in each manufacturing department, and charging each department pro rata.

Of course, where maintenance records have been kept for a number of years, showing just what each manufacturing department has required in the way of repairs to its equipment, then each manufacturing department can be assessed on the basis of past records, which are, however, very rarely of much value. Such departmental maintenance records should be started with the inception of such a cost plan as this.

Supervision—This expense should be apportioned to manufacturing departments as follows:

In each manufacturing department find the sum of the department payroll plus the value of the manufacturing equipment in the department.

Of course, supervision expense incurred and carried on for a specific department is chargeable wholly to that department, as for instance, clerks and foremen in a cutting room are charged to cutting room costs.

Then charge each manufacturing department with its proportion to the total general Supervision expense on the basis of payroll and equipment. By general supervision expense is meant such items of supervision expense, either labor or material, which cannot be located directly to a department as, for example,

general officers' salaries, general accounting expenses, etc.

Rent—This expense is reduced to a cost per square foot of space occupied by the manufacturing departments and each department is charged accordingly.

In addition to the manufacturing department, there are certain departments whose activities concern only the handling of materials, namely,

RECEIVING AND SHIPPING

SPONGING

PIECE GOODS STORAGE

These departments are assessed with charges for

POWER

MAINTENANCE

SUPERVISION

RENT

on the same basis as the manufacturing departments.

Operating costs can now be had by departments but as yet it is not possible to obtain costs on individual garments.

The next step is to ascertain what per cent the sum of

POWER

MAINTENANCE

SUPERVISION

RENT

assessed against the department bears to the payroll of the department.

It will vary in the different manufacturing departments.

In the cutting department, it may be 100 per cent of the Direct Labor charged to manufacturing orders.

In the tailoring department it may be 50 per cent of the Direct Labor charged to manufacturing orders.

The burdens assessed against the material departments, or those simply handling materials, to wit:—

RECEIVING AND SHIPPING DEPARTMENTS
SPONGING AND INSPECTION DEPARTMENTS
PIECE GOODS STORAGE

are not assessed as a per cent of the payroll, but instead are added to the payroll of these departments, including the Purchasing Department payroll, and the grand total, known as a Material Burden, is ascertained to be a certain per cent of the total value of all materials used in making the garments.

We are now ready to assemble the costs of an individual garment from the raw material stage to the finished product. This can be done on a card substantially as follows:

COST	CARD
Style No. 781 Size 36 Garment No. 48326	Outline No. 6 Season—Fall 1912
MATERIAL COST	LABOR COST AND BURDEN
Piece Goods yds. at \$ per yd. \$	Cutting Dept. Labor \$ Dept. Burden %
Linings yds. at \$ per yd. \$	Tailoring Dept. Labor \$ Dept. Burden %
Trimmings \$	Pressing Dept. Labor \$ Dept. Burden %
Buttons at \$ per gross \$ Silk and Cotton	Button Sew'g Dept. Lab. \$ Dept. Burden %
Soutache	Skirt Fin. Dept. Labor \$ Dept. Burden %
Weights Total \$	Tot. Labor Cost & Burden \$ '' Mat'l '' '' \$
Material Burden p c. \$	Total Manufactured Cost \$
Total Material Cost and Burden \$	Selling Expense %
and burden \$	Commercial Cost \$ Profit %
	Selling Price \$ Marked to Sell for \$

If we take the value of the materials in a garment, and add to this value the material burden per cent, we get the entire material cost.

We next take the expenses of the manufacturing departments that made the garment. These expenses show the cost of direct labor in each department with the burden or overhead in the department.

The cost figures up to this point represent only production cost. All selling expenses, commissions, traveling, etc., have been excluded from consideration.

Selling expense can be ascertained as a per cent of the production cost and added accordingly, which will give the commercial cost.

Profit can then be added as a percent on the commercial cost.

With regard to manufacturing departments; a manufacturing department is one, the time of whose employes, can be charged direct to individual garments.

The path of a garment from the piece goods stage to the finished garment is substantially as follows:

The Cutting Department secures the piece goods from the piece goods storage, and the pattern from the pattern maker, and a cutter then cuts the garment.

Cutting cost requires special consideration. At one time the cutter may be cutting 30 garments high, and at another time 3 garments high.

It is obvious that we cannot use either of the above costs which are accidental. An average cutting cost must be ascertained. It may be that 4 high is the average lay or it may be 8 high. When the average lay has been determined, the average cutting time must be ascertained, and the cost of the work divided by the number of garments cut. This gives the cutting cost per garment,—that is the Direct Labor cost of cutting the garment, to which must be added the burden per cent used in the cutting department.

The lining, trimming and sorting or assembly departments follow next in order, but it is suggested

that the labor expense in these departments be carried into the overhead or burden expenses. The reason for this is that the work performed in these departments is of such a nature as to not readily permit taking off costs, per garment; lining costs per garment, however, may be excepted from this recommendation, as physical conditions permit.

The garment is then given out to the tailors. Where the work goes to an outside tailor, the burden per cent on the direct labor cost will be less than where the work is done on the premises.

Work done outside carries a burden, but this burden is made up only of a portion of the Supervision Expenses. Outside work naturally cannot be assessed for Power, Maintenance or Rent expenses, as it incurs none of these expenses.

Work done by tailors on the premises carries a burden per cent on the Direct Labor representing cost of Power, Maintenance, Supervision and Rent assessed to the tailoring department.

In connection with the tailoring operations we have the fore pressing and the finish pressing. With most cloak factories the cost of these operations is known, due to the work being done at a set price per garment.

To this price must be added the department burden, made up of Power, Maintenance, Supervision and Rent charges assessed against the department and shown as a per cent of the Direct Labor payroll.

The next operation may be the sewing on of buttons, which cost is usually a known one, due to its being a price per 100. To the Direct Labor cost is added the burden expense of the department.

Where a skirt finishing department is separately maintained, its Direct Labor Cost and the Department Purden will indicate the total cost in that department.

The Labor Expense in the balance of the departments, that is the non-manufacturing departments, such as

DESIGNING

PATTERN DEPARTMENT

LINING (which may be made a manufacturing department)

TRIMMING

ASSEMBLY

GIVING OUT

MATCHING

FINISHED GARMENT STOCKROOM

BUSHELING

ACCOUNTING

is classified as a Supervision expense. In addition, the salaries of administrative officers, superintendents, examiners, supervising foremen, foreladies, and models are classified under Supervision.

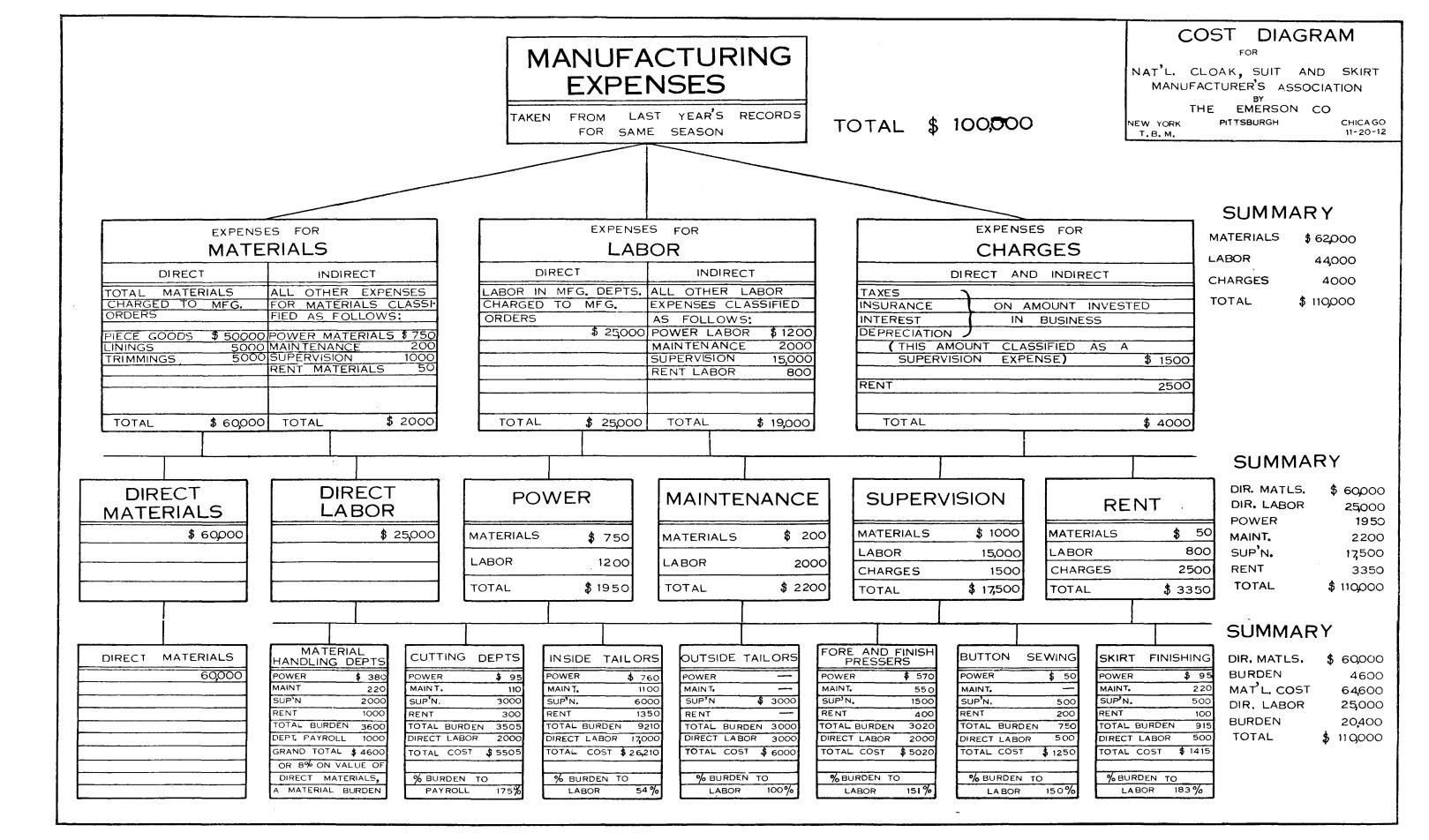
The salaries of models who are continuously in the salesroom do not enter into Production Cost, but are included in the selling expense.

The expense of an advertising department, and all advertising supplies also come under selling expense.

In figuring profit it should be borne in mind that when figuring "Charges" (or expenses neither for materials or labor) interest was allowed on the money invested, also depreciation. The rate of interest can be 6 per cent and it is suggested that a flat rate be used for depreciation. What this flat rate is, each must determine for himself. 10 per cent a year from value is often used.

When computing piece goods prices, the freight and express should be added to the net cost of the goods, that is, invoice price less discounts.

A garment may actually take three and three-fourths yards, but an allowance must be made for the following items:



SHRINKAGE IN SPONGING

INCREASED YARDAGE FOR LARGE SIZES

CUTTING WASTE

Loss Due to Imperfect Cutting

The extra yardage usually allowed varies from one-eighth vard to three-eighths yard.

See chart

The accompanying chart shows graphically the classifying of all manufacturing expenses into the three main divisions of

MATERIALS

LABOR

CHARGES

followed by the sorting of these items into six expense divisions, viz:—

COST OF MATERIAL CHARGED TO MANU-FACTURING ORDERS

COST OF LABOR CHARGED TO MANUFACTURING ORDERS

POWER EXPENSE

MAINTENANCE EXPENSE

SUPERVISION EXPENSE

RENT EXPENSE

The next line shows the manufacturing departments, the amount of direct labor in each department, the burden expenses charged the department, the latter amount being expressed as a per cent on the Direct Labor Cost of the department.

In addition, the material handling departments are shown, with the burden expenses assessed against them, and to this sum has been added the payroll of the departments—the grand total being expressed as a per cent on the value of the materials used in manufacturing orders.

The chart starts off with the total manufacturing expenses as revealed by last year's records for the same season.

Where a change in the styles indicates that there will be a considerable difference in the value of the materials used in manufacturing, compared to the value of last season, a forecast must be made of the probable amount to be used, and this amount used as the base for figuring the material burden per cent.

Similarly, if it is clearly indicated that:

POWER EXPENSES

MAINTENANCE EXPENSES

SUPERVISION EXPENSES

RENT EXPENSES

for the coming year's season are likely to increase sharply over last year's season's expenses (the increase being due either to the styles or other causes), a forecast must be made as to the amount of the increases, and the amount added to last year's season expenses, for:

POWER

MAINTENANCE

SUPERVISION

RENT

and assessed to manufacturing departments.

At the end of the season if the actual expenses paid out for

POWER

MAINTENANCE

SUPERVISION

RENT

are more than the expenses charged for these items on manufacturing orders the deficit is to be added to next year's burden. On the other hand if the actual expenses are less than the burden collected on manufacturing orders, then an extra profit has been made.

It has been assumed that the amount of Direct Labor will remain fairly constant year to year. Where a radical increase or decrease in the manufacturing force is contemplated, this fact must be taken into consideration when ascertaining the payroll of each manufacturing department.