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# The Hardwood Flooring Industry 

By John H. Worman

This article has been written in the hope of presenting the salient features of the hardwood-flooring industry in a manner which may prove interesting and possibly helpful to public accountants, in particular, and also to others having a common interest in the progress of the industry.

Exclusive of clerical and sales departments, the work of a flooring manufacturing plant may be organized generally as shown in the chart on next page.

The raw materials used in the manufacture of high grade hardwood flooring are white oak, red oak, maple, beech and birch lumber.

There are some fifty species of oaks in the United States, most of which attain a merchantable size, and many of them rank among the largest and finest of hardwoods. Most of the oak lumber marketed is sold under the name of either white or red oak. The wood of oak lumber is heavy, strong, hard and tough, with a characteristic figure, which makes it a standard flooring wood. Approximately 32 per cent. of the oak produced is manufactured into flooring and millwork, of which flooring constitutes the greater part. There are four species of maple of commercial importance, but hard maple is the only kind used for flooring and for any other product wherever strength, or resistance to wear, are the determining qualities. About 34 per cent. of all maple lumber produced for factory purposes is used in the manufacture of flooring. The sapwood of maple makes better flooring and is considered more desirable than heartwood. As in any other business the nearness of the manufacturing plant to the source of raw material is advantageous, since close proximity of source of supply lessens delays in shipment and also decreases the time between the placing of an order and the actual receipt of the goods. Since flooring is a product generally in demand by building trades in all localities, nearness to the raw material supply is more desirable than close proximity of markets; then, too, flooring is lighter and less bulky than rough lumber, and is more easily transported.

In the present discussion of manufacturing processes, consideration is given only to red and white oak lumber as raw materials.

## Flooring Mill Organization Plan

|  | Yard foreman | $\left\{\begin{array}{c} \text { Lumber storage and } \\ \text { yard sanitation } \end{array}\right.$ | $\left\{\begin{array}{l} \text { Tallymen } \\ \text { Unloaders } \\ \text { Truckers } \\ \text { Stockers } \end{array}\right.$ |
| :---: | :---: | :---: | :---: |
|  | Dry kiln foreman | $\left\{\begin{array}{c} \text { Dry kilns and } \\ \text { dry sheds } \end{array}\right.$ | $\left\{\begin{array}{l} \text { Truck loaders } \\ \text { and unloaders } \\ \text { Truckers to mill or } \\ \text { traveling convey- } \\ \text { ors } \end{array}\right.$ |
| General manager |  | Lumber lifts | Lumber lift operators |
|  |  | Rip saws | $\left\{\begin{array}{l}\text { Sawyers } \\ \text { Feeders } \\ \text { Tailers }\end{array}\right.$ |
|  |  | Trim saw | Trimmerman |
|  | Mill | Resaws | $\left\{\begin{array}{l}\text { Sawyers } \\ \text { Feeders } \\ \text { Resaw tailers }\end{array}\right.$ |
|  | superintendent | Planers and side matchers | $\left\{\begin{array}{l}\text { Feeders } \\ \text { Machine man } \\ \text { Tailers }\end{array}\right.$ |
|  |  | Grading | Graders |
|  |  | Sorting tables and racks | Sorters |
|  |  | Bundling | $\left\{\begin{array}{l}\text { Bundlers } \\ \text { Labelers }\end{array}\right.$ |
|  | Warehouse foreman | $\left\{\begin{array}{c} \text { Storage and } \\ \text { shipping } \end{array}\right.$ | $\left\{\begin{array}{l} \text { Truckers-in } \\ \text { Tallymen } \\ \text { Stockers } \\ \text { Car loaders } \\ \text { and truckers } \end{array}\right.$ |
|  | Master mechanic | $\left\{\begin{array}{c} \text { Power and } \\ \text { repairs } \end{array}\right.$ | $\left\{\begin{array}{l} \text { Engineer } \\ \text { Fireman } \\ \text { Oilers } \\ \text { Millwright } \\ \text { Machinist } \\ \text { Carpenter } \end{array}\right.$ |

The amount of other kinds of hardwoods consumed is relatively small.
Lumber, to be remanufactured into flooring, must be air-dried at least ninety ( 90 ) days, and the grades mostly used are number 1,2 and 3 A common, one inch in thickness. The poorer the grade used the greater will be the waste, through knots, checking and other defects. It is impossible to state the percentage of waste to be expected, as that is dependent upon the grade of lumber used and the care used in the processes of manufacture.
Properly air-dried lumber is first placed in the dry kilns for further drying. Dry kilns may be operated as progressive or compartment kilns. In the former case, the charge of lumber present at any time represents varying degrees of dryness from the "green" or "charge" end to the "dry" or "discharge" end of the kiln. The procedure is to remove one or more kiln truck loads of lumber from the dry end of the kilns, then to advance the remaining loaded trucks as far as possible toward the dry end; following which, trucks of lumber from the yard are placed in the charge or green end. The approximate time consumed in drying is seven days.

In the "compartment" type kiln, the entire charge remains in the chamber until dried to the desired point of moisture content, when its kiln is entirely emptied and again charged.

The progressive type of kiln is preferred in the flooring industry, because a continuous supply of dried lumber is released in reasonable quantities, according to the number of kilns in operation, requiring only a minimum of cooling or storage space; while, with the compartment type of kilns, storage space must be provided for the whole charge of each kiln in operation. This requires additional facilities in cooling or storage sheds, with attendant possibilities of moisture absorption beyond the point desirable, before being consumed in the production of flooring.

Lumber taken from the dry kiln should be allowed to cool for about thirty-six hours before being sent to the machines. Hot lumber is brittle and leads to more waste in manufacture and a higher percentage of "degrades," such as chipped and torn grain. Besides, flooring so manufactured has a tendency to "grow" or increase in size by absorption of moisture after manufacture. This condition is very undesirable, since flooring must be produced in exact sizes to meet association standards.

The loaded trucks are conveyed from the cooling shed to the lumber-lifts and raised into position in front of the rip saws. This is the first manufacturing operation.

The rip saws rip the lumber stock in narrow strips of proper width to produce the size of flooring desired. One inch stock of desired width is used in the manufacture of flooring $13 / 16$ of an inch in thickness, and one inch stock is resawed in the center, for use in producing flooring $3 / 8$ of an inch in thickness. An efficient sawyer rips the stock to produce as little as possible waste in edging strips, which must be sent to the wood pile as refuse by a conveyor system, after being cut in short pieces by saws.

The rough flooring strips, from the rip saw, are placed by the tailer-man on a conveyor, which carries them to the trimmers or knot saws. In this operation all large knots and other defects are removed. This is done because large knots would be knocked out in the planers and defective ends or split and crooked pieces may jam in the feed rolls of the planers and matchers and cause trouble and damage to the machine. At any rate such defects would have to be removed from the finished product in grading, and removing them at this point saves the time and cost of going through the machines and also the graders' time. The strips, thus prepared, are sent by conveyors to the planer and matcher, where the feeder man places them on the automatic feed table of the machine, taking care to place the straightest, cleanest side next to the guide. The automatic feed table was introduced especially for use with planers and matchers.

The formation of the tongue and groove in the edges of the flooring strip is what is known as "side matching." The $13 / 16$ inch flooring is produced with a hollow back, and the $3 / 8$ inch product has two parallel scores on the back. The machine must be set to exact dimensions and the product is constantly tested for variation with a steel gauge, by the machine man whose sole duty is to keep the planer and matcher running, as its speed sets the pace of production. A meter shows the lineal feet of strips run through the machine. The chief object in hollow backing flooring is to reduce weight, although it is some advantage to have a small air space between the sub-floor and the flooring-strip. Also, when the sub-floor is uneven, the hollow back may permit workmen to do a better job of laying the floor.

At this point there are two plans of production: one of them sends the flooring from the planer and matchers to the graders
before being sent to the end-matchers, and the other puts the product through end-matchers before being graded.

After grading, the clear strips are dropped on conveyors, which carry them direct to the end-matchers, while defective strips are conveyed back to the trim saws and thence to be end-matched. The process of end-matching is performed by a machine which automatically squares the ends of the strips and puts a groove in one end and a tongue on the other, all that the machine feeder does is to butt the end of the strip against a feeder plate and the rest of the operation is performed without further attention. When the operation is performed, the strips are completely finished and go by a conveyor to the sorting table.

The sorters stand between the table and the sorting racks, which have a separate compartment for each of the grades and the different lengths. The sorters know the distinctive symbols placed on back of the strips by the graders, and, giving consideration to the length, place them in the proper compartment of the rack. On the opposite side of the sorting rack are the bundling and marking tables, and as the compartment becomes filled by the sorters, the bundlers remove the strips, and after stamping them with the proper grade stamp and attaching the labels, they are securely bundled by tying with wire. Before being bound final inspection is occasionally made to test the accuracy of the graders and sorters.

The bundled flooring is now loaded on trucks and sent to the warehouse for storage or placed direct in cars for shipment. The flooring, stored in the warehouse, is stacked in sections according to size, grade and lengths; the amount of any size, grade and length may readily be ascertained from stock records, which show the production and sales, the balance being the inventory on hand at any given time.

In flooring mills, where parquet and block flooring is manufactured, special machines are installed, which automatically match both sides and ends of "short" flooring. When laid, the pieces are tied together with a wooden or steel spline of exact size to fit the grooves cut in the sides and ends of the squares. The blocks are made up into squares of various sizes from stock of different widths and thickness, and of course in several grades.

The flooring is bundled in various lengths two feet and longer. When a shipment is sent out, the average length necessary to meet grade requirements, i. e., an average of five feet in length for first
grade, is found by computing the total lineal feet in the shipment and dividing this figure by the total number of pieces shipped. If the average length, thus obtained, is less than required, longer pieces are substituted, until the proper average is reached. Pieces under two feet in length are known as "shorts."
By-products such as trimmings, shavings, sawdust, etc., may be sold or used as fuel. The recovery made from the sale of such products may either be considered as a part of the income of the business or applied as a reduction in the cost of the product.
The proper control of materials is a necessity to efficient production methods and furnishes accurate data to the purchasing agent and the sales department as well. Correct information helps to eliminate wasteful purchasing and the consequent tying up of capital in needless inventories; and, on the other hand, book inventories of finished flooring keep the management and sales organization apprised of available stocks of various sizes and grades already on hand to fill incoming orders.

Lumber is bought subject to inspection before acceptance, and for this reason, if no other, a car record book should be kept, which will show the cars received on company side tracks, together with the date switched in; date inspection was passed; date unloaded; from whom purchased and freight paid.

Unloading tallies should be furnished for each car unloaded, to show the kind, grade, size, feetage in the car and where stacked on the yard. These tallies served as a basis of the charges to lumber inventory accounts. The form of inventory sheet to be used is not material so long as it furnishes details regarding the inventory to begin; the purchases for the period; the amount delivered to the kilns or sold; the inventory at the end of the period. This sort of record should be available for each kind, size and grade of lumber and may be kept in thousands of feet only or show money value also.

Since all lumber going into the production of flooring must be kiln dried, it is necessary to set up a "kiln record book," supplemented by daily kiln progress reports from which the kiln record is written up. The record must show the inventory of lumber in the kiln at the beginning of the period; charges during the month; discharges to production, or sold; inventory of partly dried lumber at the end of the period in thousands of feet.

The book or perpetual inventory records will show the lumber on hand at any date, as represented by the difference between the
inventory at the beginning of the period, plus the purchases, decreased by the lumber sold or consumed in flooring, as shown by the daily production reports. This inventory will comprise lumber in the yard not yet kiln dried; lumber in kilns; kiln dried lumber on trucks, etc., in the plant not yet put into production.

The daily production report should provide information as to the kind, size, grade, etc., of lumber consumed in thousands of feet, and also the quantity in a thousand feet of flooring produced, by kind, size and grade. The production reports serve as a basis for the credits to lumber inventory accounts for consumption and for the charges to the finished flooring inventories for flooring produced.

The same type of inventory record as for lumber may be used for finished flooring, and the detail should be kept by sizes and grades for reasons previously given. The debits to the flooring inventory accounts during a period, after giving effect to waste in manufacture (sometimes as high as $30 \%$ ), will tie up with the lumber consumed as shown by production reports and the credits to the lumber accounts, while the credits should agree with the total sales in thousands of feet, as shown by the sales record.

Physical inventories are usually taken at the end of each month or operating period and the book inventories are adjusted to them.

A record of supplies should be kept in the same manner as in other kinds of business, in the custody of a stock clerk, who will issue the supplies on requisition and provide the information for their proper charge to the operating accounts affected.

For balance-sheet purposes all physical inventories should be adjusted to the basis of cost or market, whichever is the lower at the end of the accounting period.

The most common method of paying wages is on the basis of hours worked, and overtime is paid for, usually, on a time and one-half rate.

The forms of labor which lend themselves readily to piece work, or a thousand feet basis are unloading, assorting and piling lumber on the yard and stacking on kiln trucks. Other classes of labor such as rip-sawing, resawing, feeding machines, trimming and grading have often been placed on a bonus basis.

Flooring strips are ripped from stock of various widths and qualities, and retrimmed in the line of production. The normal
percentage of waste in producing flooring strips is high, often running upwards of twenty-five ( $25 \%$ ) to thirty ( $30 \%$ ) per cent. A bonus system must be planned with the view of decreasing the amount of waste instead of with the intent to increase production.

The manufacture of flooring is a continuous process type of production, with the final determination of cost on the unit of production basis of a thousand feet of flooring produced. The manufacturing expenses or overhead for any given period of operation must be absorbed in the production of that period on the basis of thousand of feet produced. The combined material and labor costs, increased by the overhead expenses applicable to the period, divided by one thousand feet of production, gives the cost of manufacture per thousand feet.

Depreciation of physical properties does not present any unusual features. Composite rates are usually used on mill machinery and equipment, although, if split into small units, different rates would apply. The problem of obsolescence sometimes arises, in cases where improved machines electrically driven may be installed to replace old type belt-driven machines at a lower operating cost, with a factor of added safety to workmen and a reduction in fire hazard due to elimination of the danger of hot bearings on line shafting, no longer necessary.

A table of depreciation rates used in the industry and allowed the commissioner of internal revenue in the preparation of federal income-tax returns follows:

|  | Rate |
| :---: | :---: |
| Buildings-wood. | \% 5-71/2 |
| Buildings-brick | 3-5 |
| Dry kilns and equipment | 5-10 |
| Machinery and equipment | 10 |
| Office furniture and fixtures. | 10 |
| Delivery equipment | 25-331/3 |
| Railroad sidings in plant yards | 5 |

A detailed plant ledger, controlled by an account in the general ledger, will facilitate the computation of depreciation. It may be further extended to provide, with other necessary details, a column each for depreciation and repairs. A separate sheet or card should be provided in the plant ledger for each machine or other property, showing details.

In many cases, it is next to impossible to obtain the necessary details for the opening of a plant ledger without appraisal. Es-
pecially is this true where the plant accounts run back several years and the separate identity of the component parts is lost. However, such a record will furnish information as to original cost and accrued depreciation on items of plant which it may become necessary to replace for one reason or another. If a record of repairs is kept in the manner suggested, as a part of the detail of the plant ledger, the complete details of all maintenance and repair charges appearing in the profit-and-loss account, will be readily available, thus furnishing information as to what types of machines or equipment are costing the most in the way of maintenance.

Distribution costs, embracing warehousing, transportation, selling, etc., together with administrative and general expenses, form no part of the manufacturing cost of the product, and none of these elements should be added to the inventory valuation of finished product. The proper unit of cost for such elements should be the cost of per thousand feet of sales.

The problems of moving lumber and lumber products to the ultimate point of consumption, either directly or through the medium of the wholesalers, middlemen or contractors, are most intricate.

Three factors which control the movement of these products to their destination are, first, demand of the market for products having certain properties; second, price at point of delivery in competition with the small manufacturers in close proximity to the market in question; third, freight rates from the manufacturing plant to point of delivery. The cost of shipping in less than carloads is so excessive as to be almost prohibitive, except when shipped in local carload lots. Manufacturers do not always understand the particular demands of each local market, as these vary greatly from locality to locality. In some markets, for instance, $21 / 4$ inch flooring only is marketable, while in another only $21 / 2$ or 2 inch flooring will be acceptable. Local customs are exceedingly important in the distribution of wood products.

The principal agencies in the distribution of wood products are, manufacturers selling agencies, wholesale dealers, commission men, retail dealers, transportation and traffic.

The retail dealer stands as the ultimate distributor of lumber products. It is estimated that 70 per cent. to 75 per cent. of all such products are distributed by retailers to the consuming public. The cost of retail distribution is usually high, varying from

15 per cent. to 25 per cent. of the purchase price. In a highly competitive field, the retailer sells to architects, contractors, builders and even home owners themselves.

The general practice of manufacturers is to make their sales price F.O.B. cars at shipping point, with freight allowed to destination, with the legal result that the buyer becomes owner, as soon as the cars are loaded and a bill of lading issued, and, in event of damage en route, he must look to the common carrier for redress.

The usual terms of credit to concerns whose rating is sufficiently high are as follows:

Prices are F.O.B. cars at destination, freight paid by purchaser on arrival.

Payments, net cash, thirty to sixty days from date of shipment, or 2 per cent. discount after deducting freight, if paid within ten to twenty days from date of invoice. Freight allowances are only made upon surrender of original or certified copy of receipted freight bill. Settlements made by trade acceptances are regularly accepted and longer terms sometimes granted.

Cost records are most useful when tied into the general accounting records by means of control accounts and subordinate ledgers, without which the cost records are memoranda only and lack the accuracy of double-entry control. Control accounts used are of three classes.

First, the inventory accounts or accounts with lumber, splines, supplies, work in process and finished stock; second, accounts used to accumulate the overhead, etc., for the year, sometimes designated as monthly closing accounts; and, third, the manufacturing overhead expense accounts, used each month to collect the charges, which are later distributed through the monthly closing account at the end of the month or other period (division of the year into four and five week operating periods is preferable to months). The tie-up of quantities in thousands of feet is as essential as a control of money value.

The rule of inventory valuation is cost or market whichever is lower at a given balance-sheet date, although inventories are valued by some operators, who do not have accurate cost records, at selling list prices, less certain percentages, but this basis, where used is not usually in accordance with either cost or market values at the selected date. A determination of unit costs is necessary, in order that these may be compared with market prices, when

## The Hardwood Flooring Industry

applying the rule of "cost or market, whichever is lower," and, it also is an absolute necessity in fixing selling prices in an intelligent manner.

A balance-sheet and a profit-and-loss statement are next presented, each followed by its respective comment, particularly with reference to items of a somewhat peculiar nature.

## Balance-sheet

Assets

## Current assets:

Cash in banks and on hand
Marketable securities
Customers' notes and acceptances recieivable
Customers' accounts receivable
Less:
Reserve for estimated freight
Reserve for bad debts.
Miscellaneous accounts receivable
Due from officers and employees
Advances on lumber purchases.
Consignments in hands of agents
Inventories:
Lumber-green and dried
Flooring in process
Flooring.
Sundry materials and supplies
Total current assets
$\$$
Prepaid expenses:
Unexpired insurance premiums
Local taxes and licences.
Interest on indebtedness
Miscellaneous supplies
Customers' notes and accounts-not current
Stock subscription notes-secured
Investments:
Life insurance-cash surrender value
Real estate (not for plant use)
Stocks and bonds of other companies
Investments in affiliated or subsidiary companies
Advances to affiliated or subsidiary companies.
Property, plant and equipment:
Land
Buildings
Machinery
Furniture and fixtures
Autos and trucks.
Less:
Reserves for depreciation
Total assets
$\$$

| Current liabilities: Liabilities |  |
| :---: | :---: |
| Notes payable-brokers. | \$ |
| Notes payable-banks. |  |
| Notes and trade acceptances for merchandise. |  |
| Accounts payable. |  |
| Trade. |  |
| Sundry. |  |
| Due to affiliated companies. |  |
| Bonded indebtedness (due within one year) |  |
| Due to officers and employees. |  |
| Accrued liabilities. |  |
| Provision for federal income taxes. |  |
| Total current liabilities. |  |
| Bonded indebtedness (maturities beyond one year) |  |
| Capital stock: |  |
| Preferred- |  |
| Authorized ........ shares of $\$ \ldots . .$. . each or no par value. |  |
| Less-unissued, pledged or in treasury. |  |
|  |  |
| Surplus. . . . |  |
| Contingent liabilities: |  |
| Additional federal taxes (state years). . . . . . . \$- |  |
| Foreign drafts in collection. . . . . . . . . . . . . . \$- |  |
| Etc.-state nature and approximate amount of each item... |  |
| Total liabilities. | \$ |

It is probable that the item "notes receivable" will be found in most balance-sheets, but flooring is not regularly sold on note terms, and such items will usually be found to represent past due accounts receivable converted into notes, mainly to obtain acknowledgment of the debt.

The reserve for estimated freight or sales freight reserve, as it is sometimes designated, is an account which may need some comment. Since the majority of flooring sold is invoiced "freight allowed to destination," this freight represents a large portion of the total invoice price and requires special attention in the accounts. When the invoice is rendered the amount of freight is estimated by the seller and included. The purchaser, however, deducts the actual amount of freight paid. There will usually be a difference between the amount of estimated freight shown on the invoice and the amount deducted by the purchaser, due to errors, shrinkage, etc. The invoices are entered in a sales journal
provided with special columns in which to show the total invoice, estimated freight, actual freight and flooring sales. At the end of the month a journal entry is made therefrom as follows:
(Dr.) Accounts receivable
\$ xxx
(Cr.) Reserve for estimated freight . . .......... \$ xxx
Flooring sales xxx

When the paid freight bill is received by the seller, it is entered in the freight journal, which has columns for the recording of actual freight; estimated freight; adjustments to debit and credit and other information necessary to a clear record of freight payments. The amount of estimated freight as shown by the sales journal is entered in the estimated freight column and any adjustments are entered in the adjustment column. At the end of the month an entry must be made from the totals, shown by the freight journal, as follows:

```
(Dr.) Reserve for estimated freight
$ xxx
(Dr. or Cr.) Freight adjustments............ xxx or $ xxx
(Cr.) Accounts receivable
xxx
```

The actual freight is entered in the sales journal opposite each car, and the open items of estimated freight must equal the balance shown in the reserve for estimated freight.

It is true that any adjustments between the estimated freight and actual freight on outstanding freight bills at the end of the accounting year affects the net income of the previous year. However, in offices that have an experienced traffic clerk, who estimates the freight from the tariffs published by the railroads, the amount of adjustments will usually be small, and the usual practice is to include them with the adjustments for the year in which the receipted freight bills are received.

Many accountants show the accounts receivable gross as an asset and the reserve for estimated freight as a liability, but this method is wrong. The company does not owe the freight to any one, and neither does it expect to receive the total amount charged on open account; therefore, the proper method of showing the reserve for estimated freight in the balance-sheet is:

Customers' accounts receivable
$\$ \mathrm{xxx}$
Less-reserve for estimated freight .......... $\quad \underline{\underline{x x x}} \$ \underline{\underline{x x}}$
Advances on future lumber purchases are often made by a manufacturer to small sawmills, and should always be shown
thus on the balance-sheet and not mingled with regular accounts receivable.

Consignments are often outstanding and a close scrutiny and analysis must generally be made to discover consignments charged out as customers accounts receivable. Consignments should be shown at cost as a separate caption or included in the inventories on the balance-sheet. The same precautions as are necessary in any other "consignment outward" must be taken in the verification of these items.

The following comment is necessary in relation to the presentation of inventories in the balance-sheet. Quantities are not susceptible to inflation where accurate cost records exist, without collusion of a number of employees, unless done in such a manner as to be easily detected in the perpetual-inventory records.

The quantities and average cost per thousand feet and also per thousand feet according to grades having been traced to the cost records, it is fairly easy to check these prices against market quotations of the balance-sheet date. In the smaller flooring mills the costs are usually carried down only to the "cost per thousand feet" of flooring produced, without further allocation of costs to production according to grade and size produced. Since different grades and sizes of product bring a variety of prices, when sold, it is desirable to allocate costs accordingly, so that the different grades and sizes will produce about the same gross profit. If this is not done, and sales are confined during a certain operating period to low grades of flooring, the operations for that period will show a loss, when gross profits are based upon average cost-and should sales for a like period have been high grades, the period would show unusually large profits. Since certain grades and kinds of flooring are much more valuable than others, the apportionment of the costs over the production in such a manner that the higher grades will carry higher proportion of the costs will make it possible to sell low grades at some measure of profit.

When the item "Advances to affiliated or/and subsidiary companies" appears in the accounts of a manufacturer, the advances must be stated separately in the balance-sheet. It may happen that the affiliated or subsidiary company has been formed to own timber tracts and to control logging and sawmill operations, which in turn furnish the company engaged in the manufacture of flooring with all or a greater part of the lumber used in its operations. Of course, the accounts of a subsidiary should, if
possible, be consolidated with those of the parent company in the preparation of a balance-sheet. In case this is not possible, a balance-sheet of the subsidiary should be presented in support of the account appearing in the balance-sheet of the parent company, in order that some opinion may be formed regarding liquidity of the account.

In case of either type of advances or of investments in the stock of affiliated or subsidiary companies it is the accountants' duty to satisfy himself as to the actual value of these accounts and to present them in the balance-sheet in a manner which clearly states their nature and will in no wise mislead any reader of the balance-sheet.

> Profit-and-Loss Statement
> For the year ended $\ldots \ldots$.
> or For the period from $\ldots \ldots$ to $\ldots$

Net sales to customers (M feet xxxxx) . . . . . . . . . . . . . . . . . . . . . . . . . . . \$ xxx
Custom millwork and kiln drying . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
Sales of sawdust, wood, etc. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
Total sales. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $\quad$ xxx
Cost of sales:
Cost of manufacture (schedule "1").................. . \$ xxx
Increase or decrease in finished goods
Inventories
xxx

Gross profit or loss . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $\quad$ xxx
Operating expenses:
Shipping and selling expenses (schedule " 2 "). . . . . . . . xxx
Administrative and general expenses (schedule " 2 "). . xxx
Net operating profit or loss. . . . . . . . . . . . . . . . . . . . . . . . . . xxx
Miscellaneous income:
Rent from dwellings. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $\quad$ xxx
Purchase discounts. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $\quad$ xxx
Interest earned. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $\quad$ xxx
Sundry
xxx
Miscellaneous charges:
xxx

Interest on bonded debt. . . . . . . . . . . . . . . . . . . . . . . . . . . $\quad$ xxx
Interest on notes payable. . . . . . . . . . . . . . . . . . . . . . . . . xxx
Amortization of bond discount. . . . . . . . . . . . . . . . . . . . $\quad$ xxx
Bad debts (less recoveries $\$ \mathrm{xxx}$ )...................... . xxx $\mathrm{xxx} \quad \mathrm{xxx}$

Net profit. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . $\quad$ xxx
Provision for federal and state income taxes. . . . . . . . . . . . . . . . . . $\quad$ xxx
Net income to surplus account. . . . . . . . . . . . . . . . . . . . . . . \$ xxx

In order to furnish sufficient detail for a proper analysis of the statement, a schedule of the cost of manufacture (schedule " 1 "), and operating expenses (schedule " 2 ") should be appended to the profit-and-loss statement in a form somewhat as follows:

| Cost of Manufacture <br> (State period) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Cost | Cost per M feet | Amo | unt |
| Lumber consumed. | xxxx | xxxx | \$ xxx | \$ xxx |
| Lumber cost per M feet flooring. . | xxxx | xxxx |  |  |
| Manufacturing expenses: |  |  |  |  |
| Productive labor. |  | xxxx |  | xxx |
| Non-productive labor |  | xxxx |  | xxx |
| Depreciation. |  | xxxx |  | xxx |
| Insurance. |  | xxxx |  | xxx |
| Taxes. |  | xxxx |  | xxx |
| Repairs and maintenance. |  | xxxx |  | xxx |
| Factory supplies. |  | xxxx |  | xxx |
| Kiln cost: |  |  |  |  |
| Salaries and labor. |  | xxxx | xxx |  |
| Repairs and maintenance. |  | xxxx | xxx |  |
| Miscellaneous supplies. |  | xxxx | xxx |  |
| Power cost: |  |  |  |  |
| Salaries and labor. |  | xxxx | xxx |  |
| Repairs and maintenance. |  | xxxx | xxx |  |
| Fuel, water, oil, etc. . |  | xxxx | xxx | xxx |
| Total manufacturing expenses. |  | xxx |  | xxx |
| Total cost of manufacture. | . . . | xxxx |  | \$ xxx |

The cost per thousand feet in the statement of cost of manufacture should be computed in dollars and cents on the thousand feet of flooring produced.

## The Hardwood Flooring Industry

| Operating Expenses $\quad$ Schedule " 2 "(State period) |  |  |
| :---: | :---: | :---: |
|  |  |  |
|  | Cost per M feet | Amount |
| Shipping and selling expenses: Shipping expenses: |  |  |
|  |  |  |
| Labor. | \$ xxx | \$ xxx |
| Switching and demurrage. | xxx | xxx |
| Depreciation. | xxx | xxx |
| Truck expense. | xxx | xxx |
| Bundling wire and supplies. | xxx | xxx |
| Total shipping expenses. | xxxx | xxxx |
| Selling expenses: |  |  |
| Commissions. | xxx | \$ xxx |
| Salaries-officers | xxx | xxx |
| Salaries-salesmen. | xxx | xxx |
| Salaries-clerical. | xxx | xxx |
| Traveling expense. | xxx | xxx |
| Advertising. | xxx | xxx |
| Depreciation. | xxx | xxx |
| Miscellaneous | xxx | xxx |
| Total selling expenses. |  | xxx |
| Total shipping and selling expenses. | xxx | xxxx |
| Administrative and general expenses: |  |  |
| Salaries-officers. | xxx | xxx |
| Salaries-clerical. | xxx | xxx |
| Stationery and office supplies. | xxx | xxx |
| Telephone and telegraph. | xxx | xxx |
| Postage. . . . | xxx | xxx |
| Dues and subscriptions. | xxx | xxx |
| Insurance. | xxx | xxx |
| Taxes. | xxx | xxx |
| Traveling expenses. | xxx | xxx |
| Automobile expenses. | xxx | xxx |
| Depreciation. | xxx | xxx |
| Donations. | xxx | xxx |
| Collection service and expense. | xxx | xxx |
| Professional services. | xxx | xxx |
| Exchange. | xxx | xxx |
| Sundry . . . . . . . . . . . . . . . . . . . . . . . . . . . . | xxx | xxx |
| Total administrative and general expenses. $\qquad$ |  |  |

The cost per thousand feet in the schedule of operating expenses should be computed in dollars and cents on the thousand feet of flooring sales.

