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Cost Accounting in the Lumber Industry

A. J. Carson

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Official Publications

Vol. VI

July 15, 1925

No. 22

**Cost Accounting in the
Lumber Industry**

BUSH TERMINAL BUILDING
130 WEST 42nd STREET, NEW YORK

NATIONAL ASSOCIATION OF COST ACCOUNTANTS

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Vol. VI, No. 22

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Cost Accounting in the Lumber Industry

A. J. CARSON,

**Klink, Bean & Co., and Lybrand, Ross Bros. & Montgomery,
Oakland, California**

**BUSH TERMINAL BUILDING
130 WEST 42nd STREET, NEW YORK CITY**

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NATIONAL ASSOCIATION OF
COST ACCOUNTANTS
JULY 15, 1925

National Association of Cost Accountants

PUBLICATION DEPARTMENT NOTE

The lumber industry presents some interesting and perplexing problems, particularly those relating to valuation. Carrying value of land stumpage and lumber inventories must be handled carefully if a proper basis is established for judging values and results of operations. This Official Publication treats in outline form the use of cost accounting in this industry and emphasizes particularly the methods of valuing lumber inventories. There is presented also a complete chart of accounts whereby proper control can be secured.

The author, Mr. A. J. Carson, credits his interest in system work to a chance meeting in San Francisco with Mr. Varton T. Bean, some twenty-three years ago. In 1912, Mr. Carson was engaged as system expert by the Pacific Commercial Company of Manila. He spent five years in the Philippine Islands installing systems for the company's enterprises there, consisting of wholesale groceries, textiles, machinery, hardware, cold storage products, retail stores, exports of all Philippine products, branches and agencies, trading steamers, sugar, hemp and cocoanut plantations and factories producing cocoanut oil, soap, candles, fertilizer, boxes, buttons and candy.

In 1917, he was transferred to Anderson, Meyer & Company, an affiliated concern in China, with headquarters at Shanghai and nine branches in various parts of that country, all with varying parities of silver money. This company imported everything from a needle to a railway system and exported practically all classes of Chinese products. He is an authority on the accounting of silver currencies and in June, 1924, presented a paper on this subject before the San Francisco Chapter of the National Association of Cost Accountants of which he is a member.

Mr. Carson left the Orient at the beginning of 1920 on account of ill health. Since his return to business in California in 1921, he has been associated with public accountants and is now a member of the system staff of the Oakland office of Klink, Bean & Company, and Lybrand, Ross Bros. & Montgomery.

COST ACCOUNTING IN THE LUMBER INDUSTRY

The great forests of the Pacific Coast are one of the biggest wealth producing resources of the West. Consequently, the cutting of these enormous stands of timber and the turning of them into merchantable lumber are of prime importance to the people, not only of the West but of the entire nation. The forests cover the mountain regions of the Coast and the Sierra Nevada mountain ranges, regions which are world famed for their scenic beauty and grandeur.

Romance and adventure are in the path of the lumber operator. Imagination and vision are necessary in order to plan the details of opening a new timber tract which may take years to cut over. First the timber cruisers make a cruise of the tract and estimate the board footage available in each section. All timber and lumber

are measured and all operation costs are computed on the basis of the board foot which is defined as a piece of lumber 1 foot long, 1 foot wide, and 1 inch thick.

The engineers make a survey of the tract to determine where the main line of the logging railway and sectional feeders should be run and estimate the cost of it. The estimated cost of logging operations of each section is calculated in order to ascertain whether each section can be profitably logged off or not.

The mill site is selected as close to water or rail transportation as physical conditions will permit. The dwellings, boarding house and general store are erected in the immediate neighborhood.

The logging railroad is authorized and logging operations commence. The first step is the preparation of the timber for handling. Here come the operations of felling the tree, peeling off the bark, and "bucking," the latter term being applied to the operation of cutting the tree trunk into logs.

The logs are now ready to be moved but are apparently lodged on inaccessible mountain sides. The question arises, "How can the logs be got to a point of loading on the logging railroad?" Here enters the ubiquitous donkey engine and the problem is solved by means of a wire cable "high line" run from the point at which the logs are located to a block near the top of a tall tree which has been prepared for this purpose at the loading station and from thence to the donkey engine and a wire cable "back line" from the engine to the starting point for the purpose of hauling back the "high line." This apparatus will haul any log anywhere and through its good services the logs are brought to the loading station. This operation is termed "yarding."

Tractors are also used in yarding operations where straight hauling can be done. The tractor and all steel wheelers with eight foot diameter wheels have practically revolutionized certain phases of logging operations. This equipment prolongs the logging season and can be successfully employed for yarding when the snow is even 18 to 24 inches deep.

The next operation places the logs on the flat-car and is known as "loading." At this point the logs are "scaled" and the board footages, log scale measurement, are marked on the logs and also entered on a report form.

The logs are hauled to the mill and dumped into the mill pond and when needed by the mill are towed to the carrier which carries them to the log deck where log scale measurements are taken again. This is done to obtain a check on the woods measurements and to determine the waste in manufacturing. The difference in the board footages of lumber as shown by the lumber tallies and the measurements made at the log deck determine the waste.

The logs are sawed to the best advantages by the sawyers. Heavy losses can take place during this operation if the sawyers are not capable men.

The lumber passes to the sorting table where it is graded, sorted and tallied and then shoved to the yard for piling or direct shipment.

A monthly Payroll Distribution Record is kept which shows daily and accumulated distributions by operations and the cost per thousand board feet for each operation daily and accumulatively. This record is compiled from the foremen's daily report of operations, the wood's report of logs loaded and the mill's report of lumber shoved to the yard. The daily labor costs per thousand board feet for each operation enable the superintendent to determine quickly the efficiency of the previous day's operation's. The accumulative operation costs per thousand board feet can be readily compared with predetermined standard costs. The Payroll Distribution Record is used at the end of the month as a posting medium for labor charges to operations and the credit to accrued payroll.

Standard systems of accounting have been devised for the lumber industry by several of the lumbermen's associations. These systems cover a considerable amount of detail and the description thereof is necessarily quite lengthy.

The accounting procedure to be described here is based on operation methods used by a number of Pacific Coast mills. The procedure can be adapted to fit local conditions in various sections of the country by adding or eliminating balance sheet and departmental operation accounts and their subclassifications.

The accompanying Chart of Accounts, pages 5 to 9, sets forth the balance sheet, profit and loss, and departmental operation accounts suitable to a mill of moderate size. The departmental operation accounts can be broken down into further classifications in accordance with individual needs.

CHART OF ACCOUNTS

BALANCE SHEET

Assets

Account

No.

Cash

- 1 Office Fund
- 2 Cash at Mill
- 3 Banks

Accounts and Notes Receivable

- 11 Accounts Receivable
- 12 Provision for Freight Allowances
- 13 Notes Receivable
- 19 Provisions for Losses on Accounts

Account

No.

- Inventories
- 21 Lumber
- 22 Logs in Pond
- 23 Material and Stores
- Standing Timber
- 31
- Other Assets
- 41 Personal Accounts
- Fixed Assets
- 51 Land
- 52 Buildings and Structures
- 53 Machinery and Equipment
- 54 Railway and Equipment
- 55 Furniture and Fixtures
- 56 Automobiles
- 59 Provision for Depreciation
- Deferred Charges
- 61 Railway Extension
- 62 Shutdown Expense
- 63 Expense on Felled and Peeled Logs
- 64 Prepaid Expenses
- 65 Prepaid Taxes
- 66 Prepaid Insurance
- 67 Payroll Advances
- 68
- 69 Operation Ledger (Control account for Accounts 1100 to 4300)

Liabilities

Current

- 71 Notes Payable
- 72 Accounts Payable
- 73 Federal Taxes Payable
- 74 Dividends Payable
- 75 Accrued Payrolls
- 76 Accrued Expenses
- Long Term Indebtedness
- 81 Bonds
- Reserves
- 91 Reserve for Appreciation

Capital

- Capital Stock
- 101 Authorized
- 102 Unissued

*Account
No.*

- Surplus
- 111 Surplus
- 112 Dividends Declared
- 113 Profit and Loss

REVENUES AND EXPENSES

- Sales
- 121 Lumber
- 122 General Store
- Cost of Sales
- 131 Lumber
- 132 General Store
- Selling Expense
- 141 Salaries
- 142 Salesmen's Expenses
- 143 Brokerage and Commissions
- 144 Conditioning and Transfers
- 149 Miscellaneous
- Administrative and General Expenses
- 151 Administrative Salaries
- 152 Administrative Traveling Expenses
- 153 General Office Salaries
- 154 Donations and Charity
- 155 Light, Heat and Water
- 156 Postage
- 157 Stationery and Office Supplies
- 158 Subscriptions and Dues
- 159 Telephone and Telegraph
- 160 Estimated Losses on Bad Accounts
- 161 Rent
- 162 Insurance
- 163 Taxes
- 164 Depreciation
- 169 Miscellaneous
- Other Income
- 171 Discounts Earned
- 172 Interest Earned
- 173 Sales of Junk
- 174 Net Revenues—Cottages
- 179 Miscellaneous
- Other Expenses
- 181 Discounts Allowed
- 182 Interest Paid
- 189 Miscellaneous

DEPARTMENTAL OPERATION ACCOUNTS

*Account
No.*

	General Operation
1100	General Plant Expense
	Service Operations
2100	Repair Shops
2200	Power Plant
2300	Electric Light System
2400	Water System
2500	Stables
2600	Boarding House
2700	Cottages
	Logging Operations
3100	Woods Cook House
3200	Woods Shop
3300	Logging
3400	Railroad Operation
3500	Railroad Maintenance of Way
3600	Transportation of Logs
3700	Log Pond
	Mill Operations
4100	Saw Mill
4200	Planing Mill
4300	Lumber Yard

SUBCLASSIFICATIONS UNDER DEPARTMENTAL OPERATION ACCOUNTS

Sub. Class.

No.

	Payroll
11	Salaries and Wages, Unclassified
12	Felling, Peeling and Bucking
13	Yarding and Loading
14	Delay Expense
15	Grading, Sorting and Tallying
16	Piling
17	Shipping Out
	Supplies
21	Fuel Oil
22	Rails, Spikes and Fastenings
23	Ties and Lumber
24	Meats
25	Other Food Stuffs
26	Supplies
27	Feed

Sub. Class

No.

Maintenance

- 31 Maintenance
- 32 Maintenance—Locomotives
- 33 Maintenance—Other Rolling Stock

Miscellaneous

- 41 Woods Railroad Expense
- 42 Freight on Logs
- 43 Yard Tractors
- 44 Departmental Charges
- 45 Miscellaneous Expense

Fixed

- 51 Pro Rata Shutdown Expense
- 52 Fixed Charges
- 53 Camp Construction
- 54 Pro Rata Road Construction

The main purpose of this article is to discuss the balance sheet accounts peculiar to the industry and the departmental operation accounts and subclassifications thereof. The descriptive text will be limited to the essential accounts.

A chart showing the flow of accounts reflecting the component costs of lumber from standing timber to finished product is shown on page 10.

BALANCE SHEET ACCOUNTS

Account 12—Provision for Freight Allowances

Lumber is sold in many instances F.O.B. point of destination. This account represents the estimated amount of freight deductible by customers, when remitting. Its balance is deducted on the balance sheet from Account 11, Accounts Receivable.

Charge this account:

With allowable deductions for freight as made by customers when remitting.

Credit this account:

At the close of each month, with the estimated deductible freight as shown by the Sales Record.

This account is to be adjusted each month to agree with the open and unsettled items of deductible freights as shown by the Sales Record, in which special provision is made for this purpose.

Account 21—Lumber

This account represents the cost of lumber on hand. The quantity of lumber on hand by board footage is shown and is to be proven from time to time by actual physical inventories.

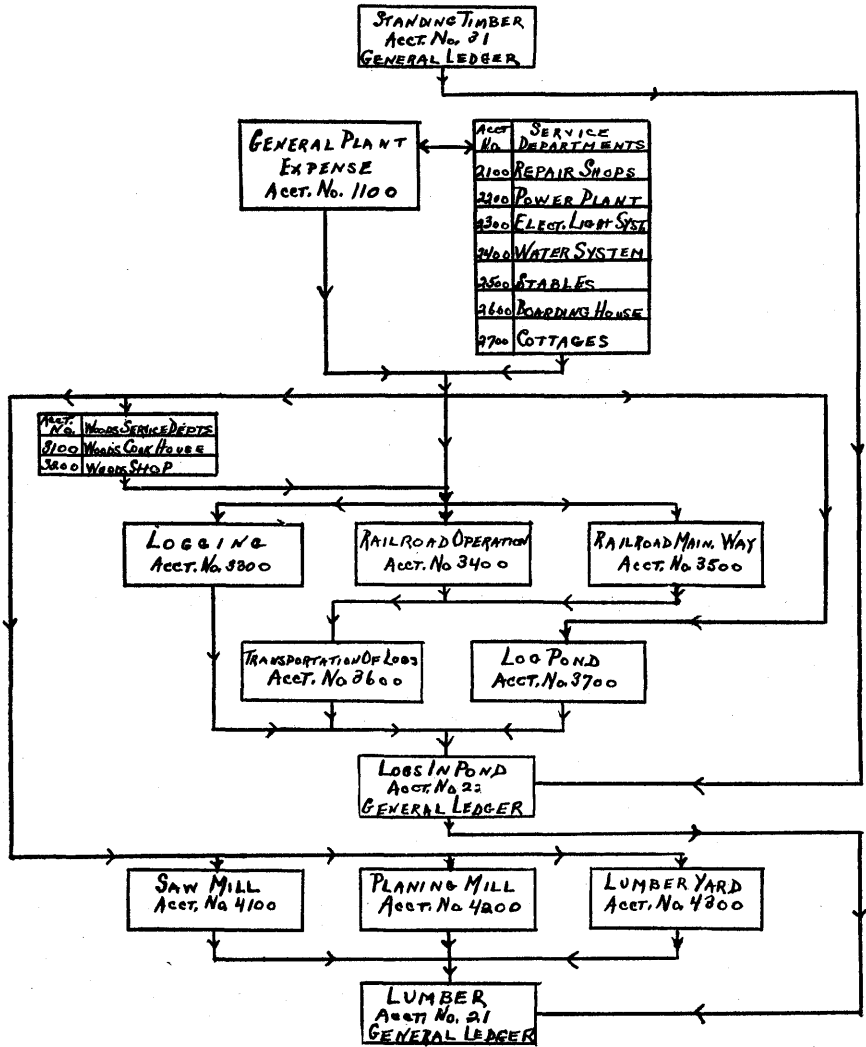


CHART SHOWING FLOW OF ACCOUNTS, REFLECTING COMPONENT COSTS OF LUMBER, FROM STANDING TIMBER TO FINISHED PRODUCT.

Charge this account:

At the close of each month, with the quantity and cost of lumber manufactured consisting of:

- (a) The value of logs used, which is taken from Account 22—Logs in Pond;
- (b) Manufacturing charges composed of:
 - (1) Saw Mill Operations, Account 4100
 - (2) Planing Mill Operations, Account 4200
 - (3) Lumber Yard Operations, Account 4300

Credit this account:

At the close of each month, with the quantity and cost of lumber sold.

When a perpetual inventory is kept by grades it is an easy matter to establish costs by grades through the use of the proportional cost method with the selling prices as the basis. Then the actual sales are costed out in accordance with perpetual inventory prices.

How the proportional cost method operates is illustrated by the two schedules which follow:

SCHEDULE A

Proportional Cost Method of Obtaining Grade Costs Using Selling Price as a Basis for Arriving at Cost of Each Grade

Grade	Board Footage Manufactured	Selling Price Per M. Board Feet	Sales Value	Percentage of Sales Value to Total Sales Value	Distribution of Cost by Grades	Cost Price Per M. Board Feet
1.....	7,000	\$15.00	\$105.00	3.004	\$79.60	\$11.37
2.....	10,000	20.00	200.00	5.722	151.63	15.16
3.....	12,000	25.00	300.00	8.584	227.49	18.96
4.....	16,000	30.00	480.00	13.734	363.95	22.75
5.....	15,000	35.00	525.00	15.021	398.06	26.54
6.....	13,000	40.00	520.00	14.878	394.27	30.33
7.....	10,000	45.00	450.00	12.876	341.21	34.12
8.....	8,000	50.00	400.00	11.445	303.29	37.91
9.....	5,000	55.00	275.00	7.868	208.50	41.70
10.....	4,000	60.00	240.00	6.868	182.00	45.50
	<u>100,000</u>		<u>\$3,495</u>	<u>100.000</u>	<u>\$2,650.00</u>	

Schedule A sets forth the distribution of a total cost of \$2,650.00 covering a production of 100M board feet of lumber.

The quantities by grades are taken from the perpetual inventory, which in turn derives its data from the daily lumber tallies.

The current selling prices are used and the sales values are calculated.

The next step is to find the percentage of the sales value of

SCHEDULE B

Perpetual Inventory

Showing Average Costs

Length	Date	Posting Reference	Size		Board Footage		Balance	Cost Per M. Board Feet	Valuation		Grade No. 4 Average Cost Per M. Board Feet
			Manufactured	Shipped	Shipped	Balance			Dr.	Cr.	
	2 28	L/T 1	16,000			16,000	\$22.75	\$363.95		\$363.95	\$22.75
	3 1	" 2	1,500			17,500					
	2	C/O 5		3,000		14,500					
	10	L/T 10	5,000		3,000	19,500					
	15	C/O 17		7,000		12,500					
	20	L/T 13	4,500			17,000					
	25	" 19	4,000			21,000					
	Total Manufactured		15,000					367.50	\$227.50	731.45	24.00
	" Shipped			10,000						503.95	
	4 2	L/T 21	2,500			23,500					
	3	C/O 25		6,000		17,500					
	7	L/T 29	2,000			19,500					
	15	C/O 33		6,000		13,500					
	23	L/T 41	3,000			16,500					
	30	C/O 54		8,500		8,000					
	30	" 55		2,500		5,500					
	Total Manufactured		7,500					157.50	546.00	661.45	21.00
	" Shipped			21,000						115.45	
	5 5	L/T 56	10,000			15,500					
	12	" 72	10,000			25,500					
	20	" 97	10,000			35,500					
	23	C/O 84		2,500		33,000					
	Total Manufactured		30,000					607.50	52.50	722.95	20.32
	" Shipped			2,500						670.45	

each grade to the total sales value. This can be easily accomplished by finding the relation of \$1.00 to the total sales value and multiplying the grade sales value by the relationship established. Example: The total sales value shown on Schedule A is \$3,495.00. The relation or factor of \$1.00 to \$3,495.00 is .000286123. The following calculation is made to find the percentage of grade No. 1.

Sales value \$105.00 \times .000286123 or 3.004%.

The factor can be used as a constant and all other sales values by grades can be treated in like manner.

After having established the percentage of sales values by grades the next step is to take a similar percentage of total cost:

Total cost	\$2,650.00
Grade No. 1	3.004 %

Proportion of cost

applicable to grade No. 1 \$2,650.00 \times 3.004% or \$79.60.

The cost of the grade being known, the cost per unit is ascertained by dividing the cost of the grade by the total of units:

Grade No. 1	Cost \$79.60
Board footage manufactured	7M
Cost per M board feet	\$11.37

Schedule B shows the manner in which the perpetual inventory is handled. The record starts with the inventory at February 28, 1925.

The quantities manufactured are entered from the daily lumber tallies. The quantities shipped are posted from the charge orders or shipping tallies. The balance on hand by board footage is calculated at the time of each entry.

At the end of the month the totals of board footages manufactured and shipped are made.

The cost of the quantity manufactured is taken from a distribution schedule of costs in accordance with Schedule A.

The costs of shipments are calculated as follows:

- (1) If shipments by board footage do not exceed the prior month's balance by board footage, the average cost at the close of the prior month is used;
- (2) If shipments by board footage exceed the prior month's balance by board footage, then that portion of the shipments equal to the prior month's balance is costed out at the average cost at the close of the prior month and the balance of the shipments is costed out at the current month's cost.

The cost of shipments under (1) is illustrated in Schedule B at the close of March and May.

The cost of shipments under (2) is illustrated in Schedule B at the close of April.

The average cost per thousand board feet is calculated at the end of each month by dividing the value of the lumber on hand by the board footage on hand. This is illustrated in Schedule B at the close of each of the months. Take the balances at the close of May as an example:

Value of lumber on hand	\$670.45
Average cost per M board feet	\$20.32
Board footage on hand	33 M board feet

The advantages of the average cost under this method are:

- (1) The actual average cost is always available for market purposes;
- (2) It is not necessary to go back to the prior month's balance and average cost when costing sales at the end of the month;
- (3) The method involves very few calculations.

If the foregoing method is not used, the alternative is the use of the average cost per thousand board feet. This method is liable to result in erroneous conclusions as to profits earned and the real value of the inventory on hand. That such is the case will be seen from the following considerations:

1. When the market is in such condition that sales of high grades predominate, these sales are costed at an average price, therefore, an abnormally high profit will be shown;
2. The value of the inventory on hand, principally representing the lower grades, will be above its actual value.
3. When the market is in such condition that sales of low grades predominate, these sales are costed at an average price, therefore an abnormally low profit or possibly a loss will be shown.
4. The value of the inventory on hand, principally consisting of the higher grades will be below its actual value.
5. When the average cost per thousand board feet is used, it is necessary at the close of the fiscal period to arrive at the approximate real value of the inventory. This may disclose serious differences in profits as shown by the monthly financial statements rendered prior to inventory adjustments.

Account 22—Logs in Ponds:

This account represents the cost of logs on hand in the mill pond. The quantity of logs on hand by board footage, log scale measurement, is shown and is to be proven from time to time by actual physical inventories.

Charge this account:

At the close of each month, with the quantity and cost of logs delivered to the mill pond, consisting of

- (a) The stumpage value of the logs delivered, which is taken from Account 31—Standing Timber;
- (b) Logging charges composed of
 - (1) Logging, Account 3300,
 - (2) Transportation of Logs, Account 3600,
 - (3) Log Pond Expense, Account 3700.

Credit this account:

At the close of the month, with the quantity and cost of logs used as shown by the mill reports, the corresponding charge being passed to Account 21, Lumber.

Account 31—Standing Timber

This account represents the value of the un-cut timber owned by the company. It is based upon cruises made of the timber available valued at a given rate per thousand feet, log measurement.

Charge this account:

With purchase of additional stumpage.

With additional stumpage upon the lands owned by the company or held through leases or contracts, which have developed to a greater footage than the amount carried in this account.

Credit this account:

At the close of each month with the stumpage value of logs delivered to the mill pond at the rate at which it is carried in this account.

Account 54—Railway and Equipment

The balance of this account represents the book value of the rolling stock and the rails of the woods railroad.

Charge this account:

With the cost value of the rolling stock as acquired, including cost of delivery and installation.

With the cost of steel rails used for extensions of the woods railroad, including cost of delivery to the woods.

Credit this account:

With the cost of machinery, tools, rails and their connections when worn out or discarded.

Small or perishable tools and repairs to machinery are not to be charged to this account.

All costs of extension, when made, are charged to Account 61

—Railway Extensions. This account is provided with segregations which set forth the cost of:

- (a) Steel rails, fish plates and bolts
- (b) Other track material, labor and miscellaneous items of cost.

Only the cost of segregation (a), steel rails, fish plates and bolts, may be transferred from Account 61 to Account 54 at the conclusion of a track extension.

Account 61—Railway Extension

The purpose of this account is to accumulate the total cost of each extension. It is divided into two sections:

- a. Expenditures for extensions of the woods railroad, exclusive of rails and their connections, which are to be prorated over the expense of logging. These expenditures are deferred charges to operations.
- b. Expenditures for rails and their connections which have been used in the extensions of the woods railroad. These expenditures are transferred to account 54, Railway and Equipment, upon completion of the extension.

Charge this account:

With the cost of constructing woods railway extensions, allocating expenditures to the appropriate divisions of this account.

With adjustments when it is determined that excess credits have been passed to the deferred charges to operation.

Credit this account:

With the cost of rails and their connections when an extension has been completed, Account 54, Railway and Equipment, being charged.

With an amount sufficient to absorb the deferred charges to operations during the useful life of such expenditures, charging Account 3500, Railway Maintenance of Way.

With adjustments when it is determined that insufficient credits have been passed to the deferred charges to operations.

The expenditures for extensions of the woods railroad, excepting rails and their connections (exclusive of rail spikes), are considered entirely as an expense of operation to be prorated over the useful life of the extension. It is necessary to have a cruise of the timber, which is accessible through the use of the road, and the plans of the management with respect to the logging of the tracts, in order to predetermine the periods over which this distribution is to be made.

Account 62—Shutdown Expense:

This account represents deferred charges to operations. It

covers expenses which are incurred during non-productive periods and includes general overhauling and repairs.

Charge this account:

At the close of non-productive months with the total expense of each of the following departmental accounts:

- Account 3300—Logging
- 3400—Railroad Operations
- 3500—Railroad Maintenance of Way
- 3700—Log Pond
- 4100—Saw Mill
- 4200—Planing Mill
- 4300—Lumber Yard

Credit this account:

At the end of each productive month with an amount sufficient to close out the account during the estimated period of production.

The procedure as described above is followed in order that these expenses, which consist principally of general overhauling and repairs, may be prorated back to the same departmental operation accounts from which they came, and be so distributed as to extend over the period of production. A distribution upon an equal monthly basis should prove to be satisfactory. It is not necessary to base the distribution upon the quantity logged or sawn. The monthly charges to the operation accounts are chargeable to sub-classification 51, Pro-Rata Shutdown Expense.

Account 63—Expense on Felled and Peeled Logs:

This account is a deferred charge to operations. It represents the estimated expense on the average footage of logs on hand in the woods.

Charge this account:

With the necessary amount to correct it, according to the estimated inventory, when such inventory proves to be in excess of the balance existing in the account, the credit thus obtained being passed to Account 3300, Logging.

Credit this account:

With the necessary amount to correct it, according to the estimated inventory, when such inventory proves to be less than the balance existing in the account, the debit thus obtained being passed to Account 3300, Logging.

DEPARTMENTAL OPERATION ACCOUNTS

Account 1100—General Plant Expense—reflects the cost of super-

intendence, mill office expense, and all other expenses which cannot be allocated to a particular department.

This account is closed monthly by distributing the cost to the departmental accounts on the basis of estimated services rendered each department.

Account 2100—Repair Shops—reflects the cost of operation of the machine and repair shops at the mill.

This account is closed monthly by distributing the cost to the departmental accounts on the basis of the services rendered each department.

Account 2200—Power Plant—This account is closed monthly by distributing the cost to the departmental accounts on the basis of the power furnished each department.

Account 2300—Electric Light System—This account is closed monthly by distributing the cost to the departmental accounts on the basis of the electric current used by each department.

Account 2400—Water System—This account is closed monthly by distributing the cost to the departmental accounts on the basis of the water used by each department.

Account 2500—Stables—This account is closed monthly by distributing the cost to the departmental accounts on the basis of the services rendered each department.

Account 2600—Boarding House—reflects the cost of operation, after board has been credited. It is closed out during all seasons to General Plant Expense—Account 1100.

Account 2700—Cottages—reflects the cost of upkeep of the cottages. This account is closed monthly into General Plant Expense—Account 1100.

Account 3100—Woods Cook House—reflects the cost of operation, after board has been credited. It is closed out monthly to accounts 3200, 3300, 3400 and 3500 in proportion to the number of men fed for each department.

Account 3200—Woods Shop—reflects the cost of operation of the repair shop maintained at the woods camp, which is distributed monthly to accounts 3300, 3400 and 3500 on the basis of the services rendered.

Account 3300—Logging—reflects the cost of logging expense from the cutting of the standing timber to, and including, the loading upon the cars.

During the productive months the balance of this account is closed monthly into General Ledger Account 22—Logs in Pond. At the close of a period of non-production, the balance of this account is closed into Account 62—Shutdown Expense.

Account 3400—Railroad Operation—reflects the cost of the woods transportation, other than that of maintenance of way.

During the productive months the balance of this account is closed monthly into Account 3600—Transportation of Logs.

At the close of a period of non-production, the balance of this account is closed into Account 62—Shutdown Expense.

Account 3500—Railroad Maintenance of Way—reflects the cost of the maintenance of the woods railroad roadway and track, including depreciation on the rails.

During the productive months the balance of this account is closed monthly into Account 3600—Transportation of Logs.

At the close of a period of non-production, the balance of this account is closed into Account 62—Shutdown Expense.

Account 3600—Transportation of Logs—reflects the total cost of the transportation of logs which are produced by the company, including both the company's logging railroad expense and freight paid to railroad companies.

The balance of this account, which should exist during months of production only, is closed monthly into General Ledger Account 22—Logs in Pond.

Account 3700—Log Pond—reflects the cost of operation and upkeep of the Log Pond at the mill.

During the productive months this account is closed monthly into General Ledger Account 22—Logs in Pond.

Account 4100—Saw Mill—During the productive months the operation costs of this account are closed monthly into General Ledger Account 21—Lumber.

At the close of a period of non-production this account is closed into Account 62—Shutdown Expense.

Account 4200—Planing Mill—During the productive months the operation costs of this account are closed monthly into General Ledger Account 21—Lumber.

At the close of a period of non-production, this account is closed into Account 62—Shutdown Expense.

Account 4300—Lumber Yard—During the productive months the operation costs of this account are closed monthly into General Ledger Account 21—Lumber. At the close of a period of non-production, this account is closed into Account 62—Shutdown Expense.

SUB-CLASSIFICATION OF DEPARTMENTAL OPERATION ACCOUNTS

Payroll

Sub-Class.

No.

11—Salaries and Wages, Unclassified, is a sub-classification common to most of the operating departments. It is charged with all salaries and wages not specifically provided for under other sub-classifications.

Sub-Class.

No.

- 12—Felling, Peeling and Bucking, is a sub-classification under Account 3300—Logging. It is charged with all labor involved in the operations of felling, peeling and bucking the logs.
- 13—Yarding and Logging, is a sub-classification under Account 3300—Logging. It is charged with all labor involved in the operations of yarding and loading the logs upon the cars in the woods.
- 14—Delay Expense, is a sub-classification under Account 4100—Saw Mill. It is charged with the cost of all idle labor due to accident or delay, the corresponding credit being to sub-classification 11.
- 15—Grading, Sorting and Tallying, is a sub-classification under Account 4100—Saw Mill. It is charged with the cost of all labor involved in the operations of grading, sorting and tallying the lumber as it is delivered on the sorting table.
- 16—Piling, is a sub-classification under Account 4300—Lumber Yard. It is charged with the cost of all labor involved in the operation of piling lumber in the yard.
- 17—Shipping Out, is a sub-classification under Account 4300—Lumber Yard. It is charged with the cost of all labor involved in the operation of shipping out lumber.

Supplies

- 21—Fuel Oil, is a sub-classification under Account 3400—Railroad Operation. It is charged with the cost of fuel oil used.
- 22—Rails, Spikes and Fastenings, is a sub-classification under Account 3500—Railroad Maintenance of Way, and Account 3700—Log Pond. It is charged with the cost of rails, spikes, track fastenings, switches and track material manufactured in the machine shop, provided these items are not for the extension of track; in the latter case the proper charge is to Account 61—Railroad Extension.
- 23—Ties and Lumber, is a sub-classification under Account 3500—Railroad Maintenance of Way, and Account 3700—Log Pond. It is charged with the cost of all ties used by these departments.
- 24—Meats, is a sub-classification under Account 3100—Woods Cook House, and Account 2600—Boarding House. It is charged with the cost of all meats used by these departments.
- 25—Other Food Stuffs, is a sub-classification under Account 3100—Woods Cook House, and Account 2600—Boarding House. It is charged with the cost of all food stuffs, other than meat, used by these departments.
- 26—Supplies, is a sub-classification under Accounts 1100 to 4300, inclusive, excepting Account 3600—Transportation of

Sub-Class.

No.

Logs. It is charged with the cost of all materials and supplies used, other than those items covered by special supply sub-classifications under Nos. 21 to 28 or material used for maintenance and repairs. Material for maintenance and repairs is charged to sub-classifications 31 to 33 under Maintenance.

27—Feed, is a sub-classification of Account 2500—Stables. It is charged with the cost of all feed used at the stables.

Maintenance

31—Maintenance, is a sub-classification common to most of the operating departments. It is charged, except where accounts of special designation have been indicated, with

1. All labor used in the current repairs of buildings, machinery or equipment, and

2. All material used in such repairs.

32—Maintenance of Locomotives, is a sub-classification of Account 3400—Railroad Operation. It is charged with all labor and material used in the ordinary repairs of locomotives of the woods railroad.

33—Maintenance of Rolling Stock, is a sub-classification of Account 3400—Railroad Operation. It is charged with all labor and material used in the ordinary repairs of rolling stock of the woods railroad.

Miscellaneous

41—Woods Railroad Expense, is a sub-classification of Account 3600—Transportation of Logs. It is charged with the balance of Account 3400—Railroad Operation and Account 3500—Railroad Maintenance of Way, in accordance with the explanation of these accounts under the heading "Departmental Operation Accounts."

42—Freight on Logs, is a sub-classification of Account 3600—Transportation of Logs. It is charged with freight paid to railroads or other transportation concerns upon logs which are transported from the logging camps of the company to the mill pond.

43—Yard Tractors, is a sub-classification of Account 4300—Lumber Yard. It is charged with the cost of operation of the yard tractors.

44—Departmental Charges, is a sub-classification under Accounts 1100 to 4300, inclusive, excepting Account 3600—Transportation of Logs. It is charged with services rendered by other departments for which no special provision has been made in any of the foregoing sub-classifications.

45—Miscellaneous Expense, is a sub-classification common to

Sub-Class.

No.

most of the operating departments. It is charged with all items not otherwise specifically mentioned.

Fixed

51—Pro Rata Shutdown Expense, is a sub-classification of the various accounts hereinafter set forth. Its purpose is to provide a means of spreading over the entire operating periods the preparatory, repairs and other charges accumulated during a non-productive period.

As explained in the description of General Ledger Account 62—Shutdown Expense, sub-classification 51 covers the following accounts:

- Account 3300—Logging
 - 3400—Railroad Operation
 - 3500—Railroad Maintenance of Way
 - 3700—Log Pond
 - 4100—Saw Mill
 - 4200—Planing Mill
 - 4300—Lumber Yard

This sub-classification will be charged in one amount with the month's pro-rata share of the shutdown expense of the respective departments.

- 52—Fixed Charges, is a sub-classification common to most of the operating departments. It is charged with a pro-rata share of depreciation, insurance, and taxes in accordance with the schedule of fixed charges.
- 53—Camp Construction, is a sub-classification of Account 3300—Logging. It is charged with all expenses incidental to the erection or the moving of the camp structures, such as log ramps, platforms and the camp's rough buildings.
- 54—Pro Rata Road Construction, is a sub-classification of Account 3500—Railroad Maintenance of Way. It is charged with a monthly pro-rata share of the cost of the extension of the woods railroad, in accordance with the description of the General Ledger Account 61—Railway Extension.

The cost system briefly outlined above will furnish data for monthly reports which will set forth the cost per thousand board feet for each operation shown in the chart on page 10, both by totals and by sub-classifications thereof. This information will enable the management:

1. To determine standard costs
2. To judge the efficiency of each operation

3. To examine the component expense items of each operation
4. To govern the controllable expense items of each operation
5. To eliminate inefficiencies in operations.

N. A. C. A. EMPLOYMENT SERVICE

Date.....

NATIONAL ASSOCIATION OF COST ACCOUNTANTS,
130 West 42nd St.,
New York City.

Gentlemen:—

We would like to have you suggest several men for the position described below:

Position

Nature of work.....

.....
.....

Special qualifications desired.....

.....
.....
.....
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.....
.....

Approximate salary.....

Signed, Company.....

Address.....

.....

By.....

NOTE:—*There is no charge for this service. It will be conducted anonymously unless you definitely instruct us otherwise.*

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