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Brewery Accounting

A STUDY OF THE ACCOUNTS OF A MODERN BREWERY.

By GEORGE WILKINSON, C. P. A.

This article which appeared in The Western Brewer a little over three years ago, attracted wide attention at that time, it being considered the ablest exposition of the subject ever written. The issues in which it appeared were soon exhausted, and the numerous and continued requests for same have led to the republication of the article in this number.



With the science of Brewing still in process of development, with many clever men and deep students devoting their lives to working out the problems that beset the practical Brewer, we find the books of account of some Breweries to be still in the medieval ages. The book-keeper jogs along from week to week, until the end of the fiscal year is reached; then come the annual inventory and the closing of the books.

A modern cost system of bookkeeping is one that will show the cost *per unit* in each department. This is easy of accomplishment in a Brewery, as the unit is always the same—A BARREL OF BEER. It is not necessary to keep a separate record of the various brewings; as far as the practical purposes of bookkeeping are concerned, the Beer is made in one kettle and stored in one vat.

The Brewmaster must surely keep track of the different brewings of beer, from the mashtub to the storage vats, even to the racking-off room; he must test the temperature and the specific gravity of the product at each different stage of the fermentation; he must know just how his formulae have resulted; he must know, for instance, how the proportion he has used of German and of Pacific Coast Hops has worked out and how the last lot of Malt from Milwaukee shows up. But it is not necessary for the Bookkeeper to keep any record of these particulars: Only the *average* cost from month to month is needed.

It will therefore be seen that most of the complications of "Cost Accounting" are eliminated. It remains a simple matter to keep the accounts of a brewery in such a manner that the *Average Cost Per Unit of Each Process* can be determined. By comparing one month with another and one period of months with the corresponding period in the previous year, extravagance or waste can be detected and stopped.

Trading and Profit and Loss Accounts.

In stating the accounts of a Brewery in proper form, the following principal factors should be dealt with, in the order named:

- **1st—Sales.
- 2d—Production.
- **3d—Distribution.
- 4th—Government Tax.
- 5th—Administration.
- 6th—Losses.
- 7th—Interest.
- 8th—Net Profit.

The first four of these principal factors are divided between the departments of the Brewery—"Beer" and "Ale and Porter," the first and third (***) between "City Trade" and "Country Trade." These divisions are again subdivided into their several elementary parts, for each of which there must be a *Separate Ledger Account*. In making the original entries on the books of account, all expenses must be segregated and charged to their proper accounts.

Distribution by Chart.

To illustrate the division above suggested and the sub-division into ledger accounts, a CHART (Fig. 1) is presented. Each account is numbered. The grouping and order of the accounts follow the production and distribution of the article made (beer) and the development of the business. There are upwards of ninety accounts in the whole series and some of these are capable of duplication in breweries where a Country Trade is done as well as a City Trade.

In opposition to such a plan it may be urged that the multiplication of ledger accounts makes more clerical work for the Bookkeeper. This is true to a certain extent, but the value of the results afforded by these extra accounts, far outweighs the cost of the added clerical work.

The Bookkeeper's duty is to record the facts of a business and to supply information. It follows that a *Good* Bookkeeper will be anxious to record all the facts and supply all the information that his books can be made to contain.

The proper distribution of the cost of materials, labor

FIGURE 1.

MODEL BREWING COMPANY

CHART Showing Distribution of Trading and Profit and Loss Accounts

MAIN FACTORS.	DIVISIONS.	ELEMENTS.	Gross Amount.	Allowances.	Net Amount.	
SALES	BEER	City Beer Sales.....	\$(1)	\$(4)	\$.....	
		Country Beer Sales.....	\$(2)	\$(5)	\$.....	
		Agency Beer Shipments.....	\$(3)		\$.....	
		Total Beer Sales.....	\$.....	\$.....	\$.....	
	ALE AND PORTER	City Ale and Porter Sales.....	\$(6)	\$(7)	\$.....	
		County Ale and Porter Sales.....	\$(6)	\$(7)	\$.....	
		Agency Ale and Porter Ship'ts.....	\$(6)	\$(7)	\$.....	
		Total Ale and Porter Sales...\$.....	\$.....	\$.....	\$.....	
	PRODUCTION	Materials	Malt	(8)	\$.....	
			Hops	(9)	\$.....	
Corn			(10)	\$.....		
Rice			(11)	\$.....		
Sugar			(12)	\$.....		
Sundry Brewing Materials.....			(13)	\$.....		
Sundry Brewery Supplies.....			(14)	\$.....		
Total Materials Used (Gross).....			\$.....			
Less Sales of Grains: (Beer Brewery)			(15)	\$.....		
Cost of Materials Used (Beer).....			\$.....			
ALE AND PORTER..		Ale and Porter Brewing Account... (16)		\$.....		
Brewing*		WAGES	Brewmaster's Salary	(17)	\$.....	
			Brewery Wages	(18)	\$.....	
			Engineers and Firemen.....	(19)	\$.....	
			Washhouse and Platform.....	(20)	\$.....	
Total Wages.....	\$.....					
FUEL, WATER, ETC.	Fuel	(21)	\$.....			
	Water	(22)	\$.....			
	Engine Room Supplies	(23)	\$.....			
	Brewery Expenses	(24)	\$.....			
	Beer Consumed on Premises....	(25)	\$.....	\$.....		
Total Cost of Brewing..... (26)	\$.....					
Maintenance of Plant†	Repairs to Buildings.....	(28)	\$.....			
	Machinery Repairs	(29)	\$.....			
	Repairs to Yard.....	(30)	\$.....			
	Repairs to Kegs.....	(31)	\$.....			
	Repairs to Casks and Vats.....	(32)	\$.....			
	Mechanics' Wages	(33)	\$.....			
	Coopers' Wages	(34)	\$.....	\$.....		
Depreciation of Plant†	On Engines and Boilers.....	(35)	\$.....			
	On Ice Machines	(35)	\$.....			
	On Casks and Vats	(35)	\$.....			
	On Brewery Machinery.....	(35)	\$.....	\$.....		
Total Cost of Production.....	\$.....					
ADJUSTMENT OF INVENTORY	Beer	Stock on Hand at Beginning of Period	(36)	\$.....		
		Stock on Hand at End of Period	(36)	\$.....	\$.....	
	Ale and Porter	Stock on Hand at Beginning of Period	(36)	\$.....		
		Stock on Hand at End of Period	(36)	\$.....	\$.....	

*Where the arrangement of the plant will allow, these factors may be kept separate for Beer and for Ale and Porter.

†Where the arrangement of plant will allow, the charges for Maintenance and for Depreciation may be kept separately for Beer and for Ale and Porter.

CHART.—Continued.

MAIN FACTORS.	DIVISIONS.	ELEMENTS.	Cost.	Totals.
		<i>Name of Ledger Account.</i>		
		Feed	(38) \$	
		Shoeing	(39) \$	
		Stable Expenses	(40) \$	
	Team Delivery (#37).....	Stablemen's Wages	(41) \$	
		Drivers' Wages	(42) \$	
		Repairs to Wagons	(43) \$	
		Repairs to Harness.....	(44) \$	
				\$
	Shipping (or Country Delivery) (#45).	Freight on Beer	(46) \$	
		Freight on Empties	(47) \$	
				\$
	Collecting Expenses (#48).....	Collectors' Salaries	(49) \$	
		Collectors' Spending Money....	(50) \$	
		Office Spending Money.....	(51) \$	
				\$
DISTRIBUTION	Agency Expenses #	A Separate Account for Each Agency, to Which All Expenses Are To Be Charged.		
		Donations and Presents.....	(54) \$	
		Work Done for Customers.....	(55) \$	
	Expenses of Holding Trade.....	Advertising	(56) \$	
		Miscellaneous Trade Expenses...	(53) \$	
		Christmas Presents	(57) \$	
				\$
	Fixtures and Signs.....	Saloon Fixture Expense	(58) \$	
		Maintenance of Beer Signs	(59) \$	
		Electricity for Signs	(60) \$	
				\$
	Depreciation of Equipment.....	Horses and Wagons	(61) \$	
		Agency Equipment	(61) \$	
				\$
		Total Cost of Distribution.....		\$
U. S. TAX.....	Revenue Stamps.....	Beer Stamps	(62) \$	
		Ale and Porter Stamps.....	(63) \$	
				\$
	Taxes.....	Taxes	(64) \$	
		Licenses	(65) \$	
		Brewers' Associations	(66) \$	
				\$
	Insurance.....	Fire	(67) \$	
		Boiler	(67) \$	
		Casualty	(67) \$	
				\$
ADMINISTRATION† (#80)	Salaries.....	Officers' Salaries	(68) \$	
		Directors' Fees	(69) \$	
		Bookkeepers' and Clerks	(70) \$	
		Miscellaneous Wages	(71) \$	
				\$
	General Expenses.....	Printing and Stationery	(72) \$	
		Legal Expenses	(73) \$	
		Table Expenses	(74) \$	
		Postage, Telegraph and Telephone	(75) \$	
		Office Expenses	(76) \$	
		Miscellaneous General Expenses.	(77) \$	
		Officers' Traveling Expenses....	(78) \$	
		Charity Account	(79) \$	
				\$
	Bad Debts.....	Provision for Bad Debts.....	(81) \$	
		Sundry Losses.....	(82) \$	
				\$
	Interest.....	Interest on Borrowed Money... less Interest Collected.....	(83) \$	
		Cash Discounts.....	(84) \$	
				\$
PROFIT AND LOSS	Income.....	Rents of Outside Properties.....	(85) \$	
		Maintenance Outside Properties.	(86) \$	
		Taxes and Insurance Outside Properties	(87) \$	
				\$
	Interest on Bonds.....		(88) \$	
				\$
NET PROFIT††.....				\$

†Charges for Administration will have to be dealt with as a whole in the accounts here named, and will be distributed between Beer and Ale and Porter on a pro rata basis on the barrels sold.
 ††After deducting all the charges and expenses enumerated in the foregoing distribution of accounts, from the total of the Sales, the Balance remaining will be the Net Profit on the Business for the period covered by the Statement.

and expenses to suitable ledger accounts, representing the several elements of cost, and the correct grouping of these elements, will lead to a true and therefore valuable record of the business. Statements prepared from books so kept will be illuminating, intelligible and instructive.

Monthly Statements.

The real object of keeping books of account is to provide information—not merely once a year, at the annual closing of the books,—but at all times. The end of each month is found to be a convenient time to review the accounts and so “Monthly Statements” are called for.

The chief difficulty in providing a “Monthly Statement,” in any kind of manufacturing business, is the impracticability of taking a monthly inventory. The so-called “perpetual inventory,” which is simply a clerical record of the coming in and going out of goods, and the consumption of Materials—merely so much more book-keeping—much talked over and written about by the Modern System Expert, is not needed here. It is seldom worth the labor it entails.

An actual inventory is readily taken every month, without any expense, in a Brewery. With this in hand the preparation of a monthly statement of earnings is really a pleasant diversion, not a hard task for the Bookkeeper. It is only one step beyond his monthly Trial Balance.

The “Monthly Statement” should not show the transactions for that one month alone, but should show the accumulated result of the business, from the first of the fiscal year to the end of the month reported. For example, in making the July statement for a Brewery closing its fiscal year on 31st December, the figures should not be for the twenty-five working days of July, but should be for the seven months ending 31st July. It follows that the “August Statement” will contain eight months’ business, and so on.

The figures on each successive “Monthly Statement” will be more dependable, as they will have a broader basis of average to stand upon.

The next step is to make these “Monthly Statements” more valuable, statistically, by comparing them with the like period in the previous year. To do this readily the actual figures for the same number of months of the preceding year should be copied onto the same sheet, in parallel columns, line for line.

An illustration of such a “Monthly Statement” is here provided, covering a period of eleven months (Figs. 2, 3 and 4). In illustrating the working of any system of accounts, the simplest forms are the most illuminating. For this reason I have selected the forms used in a Brewery where only lager beer is brewed, and where only a city trade is conducted. These exact forms are actually in use in two large Philadelphia Breweries, but, for obvious reasons, the figures are fictitious.

The grouping and order of the ledger accounts follow very closely the previously shown CHART (Fig. 1): for simplicity’s sake, the accounts that represent “Ale and Porter,” “Country Trade” and “Bottling Department” have been eliminated from this illustration.

Incidental to this “Monthly Statement” (Figs. 2, 3 and 4) will be seen a “Comparative Report of Operations” (Fig. 5), whereon are shown, each in turn (1) the NET SELLING PRICE; (2) the cost per barrel of PRODUCTION;

(3) of DISTRIBUTION; and (4) of ADMINISTRATION; also (5) the NET PROFIT per barrel.

The value of these statistics lies in comparing the operations of the current period with the like period in the previous year, item for item. This comparison should be scrutinized most carefully by the President and General Manager of the Company, or by the Head of the Firm; the reason for each divergence should be determined and such savings or economics put in force, as may be suggested by the figures thus disclosed.

Closing the Books.

It should here be stated that in closing the books of account for the year, it is designed that the balances of several accounts should be assembled in groups, along the lines shown on the CHART (Fig. 1). In turn the balance of each group will be transferred to “Profit and Loss Account.”

To illustrate the method of closing the books, four plates are shown, the figures used being taken from the “Monthly Statement” (Fig. 2, 3 and 4), although these figures are only supposed to be for eleven months.

Specifications for Distribution of Charges.

It remains now to state categorically how to distribute the cost of materials, wages and expenses of a Brewery to the several ledger accounts suggested. The grouping and order of these specifications follow the CHART and the same account numbers are used.

1. CITY BEER SALES.

Credit “CITY BEER SALES” with the monthly total Sales of Lager Beer to Customers in the City, posting the number of barrels into the ledger (in the margin) as well as the money. Beer returned to the Brewery must be charged back to this account, but allowances to Customers for “leakers” or any other causes of complaint, must be charged to “CITY BEER ALLOWANCES.” (*The object of keeping this account is to determine what the City Beer Trade has resulted in.*)

2. COUNTRY BEER SALES.

Credit to “COUNTRY BEER SALES” the total monthly sales of Lager Beer to “COUNTRY CUSTOMERS,” posting into the Ledger the number of barrels sold (in the margin) as well as the money. Beer returned to the Brewery by Country Customers for “leakers” or on any other causes of complaint, must be charged to “COUNTRY BEER ALLOWANCES.” (*The object of keeping this account separate is to learn what the Country Beer Trade has resulted in.*)

3. AGENCY BEER SHIPMENTS.

Charge the ledger account of each Agency and credit “AGENCY BEER SHIPMENTS” with each car load or consignment of Beer shipped. For the purposes of accounting these goods are treated as sold when they leave the Brewery. Subsequent entries, recording the actual sales, are made at the Agency. Beer remaining unsold at end of period is taken to account as stock on hand.

Trading and Profit and Loss Account

Statement for 11 months 30 November 1907 to 31 October 1908, inclusive

	1908	1907
Sales of Beer 8/092 Barrels		
Gross Sales	1500176.76	711100.46
Cash Sales	18927.30	423674.384
Together	517104.06	166744.85
Rebates	12088.81	443418.69
Total Net Sales	505015.25	174936.68
Average net price \$6.23 per barrel	4622.00	423674.384
Brewing		
Barrels Brewed	79712	68350
Materials Used		
Malt	68074.53	48877.20
Hops	15411.08	16252.32
Corn	11906.14	11348.47
Rice	9516.14	5285.82
Sundry Brewery Materials	2215.87	2389.57
Sundry Brewery Supplies	4784.82	6272.73
Total Materials	111908.58	90426.11
Less Sales of Grains	5736.05	5114.90
Cost of Materials	106172.53	85311.21
Cost of Materials per bbl.	13.3%	12.4%
Wages		
Brewmaster's Salary	6124.83	6844.92
Brewery Wages	17417.72	14815.74
Engineers and Firemen	6185.16	6094.98
Washhouse and Platform	323.12	304.17
Cost of Wages	30950.83	30147.81
Cost of Wages per bbl.	41%	46%
Fuel, Water, &c.		
Fuel	12055.36	11185.37
Water	4491.86	3987.53
Engine Room Supplies	564.31	701.62
Brewery Expenses	1451.40	1460.72
Cost of Fuel, &c., per bbl.	25%	23%
Average Cost of Materials and Labor— in brewing 79712 barrels equals \$2.00 per barrel	159686.31	134410.88
Stock on hand. (Adjustment)		
30 November 1907 1.23.57 bbls. @ 6.5	130101.00	111146.25
31 October 1908 4.19.87 bbls. @ 6.5	4138.50	143803.50
Revenue Stamps Used	81092.00	71110.00
Beer Used on the Premises	13822.5	11581.3
Carried Forward	24629.06	21493.895

FIGURE 2.

Trading and Profit and Loss Account (Continued)

Statement for 11 months 30 November 1907 to 31 October 1908

	1908	1907
Delivery Expenses		
Feed	4774.74	7859.43
Shoeing	2730.10	2008.73
Stable Expenses	738.89	651.38
Stablesmen's Wages	5406.64	4947.82
Drivers' Wages	1273.20	1338.68
Repairs to Wagons	329.43	2216.31
Repairs to Harness	724.54	693.10
Freight, Express and Furrage	1544.89	1179.55
Cost of Delivery per bbl.	43%	43%
Collecting Expenses		
Collectors' Salaries	7559.96	6083.26
Collectors' Expenses	18141.54	14895.63
Office Spending Money	123.80	881.00
Cost of Collecting per bbl.	30%	30%
Expenses of Holding the Trade		
Donations and Presents	4501.50	4707.60
Work done for Customers	4353.36	4483.80
Advertising	614.13	3542.5
Miscellaneous Expenses	1337.13	720.84
Christmas Presents	5060.65	4073.57
Cost of Holding the Trade	16066.97	14340.66
Fixtures and Signs		
Saloon Fixtures Expense	2248.70	3060.40
Beer Signs Maintenance	1049.36	1364.80
Electricity for Signs	1290.03	1247.00
Cost of Fixtures and Signs	4588.09	5652.60
Maintenance of Plant		
Mechanics' Wages	1452.52	1183.62
Lumber and Carpentering	123.94	2427.96
Repairs to Buildings	3259.07	2322.94
Machinery Repairs	1816.54	864.91
Repairs to Yard	205.33	1030.47
Repairs to Casks and Vats	1993.56	1030.50
Copers' Wages	3780.28	2047.96
Cost of Maintenance of Plant	15301.24	10908.36
Depreciation of Plant		
Engines and Boilers	1222.63	1329.14
Ice Machines	2661.15	2744.80
Casks and Vats	2604.49	2140.00
Brewing Machinery	3824.63	3226.36
Cost of Depreciation of Plant	10313.10	9440.30
Depreciation of Delivery Plant		
Carried Forward	3220.79	3105.78
Carried Forward	357706.98	311809.5

FIGURE 3.

Trading and Profit and Loss Account (Continued)
 Statement for 11 months 30 November 1897 to 31 October 1908

	1908	1907
Taxes and Licenses	3,577.06	98
State County and City Taxes	544.50	382.06
Licenses	1,679.50	1,514.75
Brewers' Association	1,965.02	1,500.00
	683.54	
Insurance		
Monthly Provision for Fire Insurance	2,088.00	2,075.00
Boiler Capacity &c	900.05	550.53
	2,988.05	2,625.53
Management Salaries		
Officers Regular Salaries	12,524.95	10,333.50
Directors' Fees	1,100.00	1,100.00
	13,624.95	11,433.50
Salaries		
Bookkeepers, Cashiers and Clerks	6,108.66	5,199.32
Miscellaneous Wages	2,080.46	1,810.00
	8,189.12	7,009.32
General Expense		
Printing and Stationery	308.70	1,879.10
Legal Expenses	1,222.75	1,221.00
Table Expenses	1,091.93	786.52
Postage Telegraph and Telephone	1,453.32	868.52
Office Expense	2,190.38	1,826.44
Miscellaneous General Expenses	3,540.46	3,017.70
Officers Travelling Expenses	2,550.00	2,140.00
	11,919.54	10,048.99
Bad Debts and Losses		
Monthly Provision for Bad Debts	12,163.80	10,650.00
Sundry Losses	1,280.00	452.80
	13,443.80	11,102.80
Rents of Outside Properties		
Rents Collected	6,110.04	6,476.20
Maintenance	3,557.25	2,479.86
Taxes and Insurance	784.04	1,040.80
	5,687.54	10,046.86
Interest and Discount		
Interest Collected	16,040.00	2,430.20
Cash Discounts	10,921	2,072.90
	16,132.10	2,450.37
Interest on Borrowed Money		
	5,970.11	3,027.80
Interest on Bonds		
	6,000.00	6,000.00
Net Profits for eleven months	78,764.64	61,066.66
	5,501,525	4,259,250

FIGURE 4.

Comparative Report upon Operations

months

	This Year	Last Year
Sales		
Barrels of Beer Sold	81092	71110
Average Net Selling Price	6.22 ⁷⁶ / ₁₀₀ per bbl.	5.98 ⁹⁶ / ₁₀₀ per bbl.
Production		
Barrels of Beer Brewed	79712	68350
Cost of Brewing :-		
Materials	1.33 ² / ₁₀₀	1.24 ⁸ / ₁₀₀
Wages	.41 ¹² / ₁₀₀	.46 ⁴ / ₁₀₀
Fuel, Water, &c.	.25 ⁷ / ₁₀₀	.25 ⁴ / ₁₀₀
Total	\$ 2.00 ³ / ₁₀₀ per bbl.	\$ 1.96 ⁶ / ₁₀₀ per bbl.
Distribution		
Cost of Delivery	.45 ⁶ / ₁₀₀ per bbl.	.43 ⁴ / ₁₀₀ per bbl.
Cost of Collecting	.30 ⁷ / ₁₀₀ per bbl.	.30 ⁷ / ₁₀₀ per bbl.
Cost of Holding the Trade	.19 ⁸ / ₁₀₀ per bbl.	.20 ¹ / ₁₀₀ per bbl.
Administration		
Taxes, Licenses, Insurance	.14 ³ / ₁₀₀ per bbl.	.13 ³ / ₁₀₀ per bbl.
Salaries	.26 ⁹ / ₁₀₀ per bbl.	.25 ⁹ / ₁₀₀ per bbl.
General Expenses	.14 ⁷ / ₁₀₀ per bbl.	.14 ¹ / ₁₀₀ per bbl.
Losses		
Bad Debts and Losses	.16 ⁶ / ₁₀₀ per bbl.	.15 ⁶ / ₁₀₀ per bbl.
Maintenance of Plant	.18 ⁸ / ₁₀₀ per bbl.	.15 ³ / ₁₀₀ per bbl.
Depreciation	.16 ⁷ / ₁₀₀ per bbl.	.17 ⁶ / ₁₀₀ per bbl.
Interest Charges	.12 per bbl.	.06 ⁵ / ₁₀₀ per bbl.
Net Profit for	78764.64	61066.66
Net Profit per Barrel	97¹³/₁₀₀ per bbl.	85⁸⁷/₁₀₀ per bbl.

FIGURE 5.

4. CITY BEER ALLOWANCES

Charge to "CITY BEER ALLOWANCES" all Rebates and Allowances to City Beer Trade on each month's collections of Lager Beer; also allowances (often erroneously called "Returns") made to Customers for "Spoiled Beer," "Leakers" or on other causes of complaint. (*The object of keeping this account separate is to be able to determine the exact net selling price of beer delivered to the City Trade.*)

5. COUNTRY BEER ALLOWANCES.

Charge to "COUNTRY BEER ALLOWANCES" all Rebates and Allowances to Country Trade on each month's collections of Lager Beer; also allowances made to Country Customers for "Spoiled Beer," "Leakers" or on other causes of complaint. (*The object of keeping this account separate is to be able to determine the exact net selling price of beer delivered to the City Trade.*)

6. ALE AND PORTER SALES.

"CITY ALE AND PORTER SALES."

"COUNTRY ALE AND PORTER SALES."

"AGENCY ALE AND PORTER SHIPMENTS."

(*Read paragraphs 1, 2 and 3, substituting the words "Ale and Porter" for the word "Beer."*)

7. ALE AND PORTER ALLOWANCES.

"CITY ALE AND PORTER ALLOWANCES."

"COUNTRY ALE AND PORTER ALLOWANCES."

(*Read paragraphs 4 and 5, substituting the words "Ale and Porter" for the words "Lager Beer."*)

8. MALT ACCOUNT.

Charge to this account all invoices for Malt purchased, also charge freight, hauling from rail (if any); cost of hauling, storing, etc.

Credit to this account Cash received with respect to Cash Sales of Malt, and of Screening, etc.

At the end of each month credit this account and charge "ALE AND PORTER BREWING" with the cost (*at a price sufficient to include freight and hauling*) of Malt used in making Ale and Porter.

9. HOPS ACCOUNT.

Charge to this account invoices for Hops received at the Brewery; also all amounts paid for freight and hauling Hops. In large Breweries it will be advisable to have separate accounts for "German Hops," "Pacific Coast Hops," etc., on account of the great difference in value.

At the end of each month credit this account and charge "ALE AND PORTER BREWING" with the cost (*at a price sufficient to include freight and hauling*) of Hops used in making Ale and Porter.

10. CORN ACCOUNT.**

Charge to this account all invoices for Corn, Grits, Frumentum or other Substitutes for Malt, received at the Brewery; also all amounts paid for freight and hauling Grits, etc.

11. RICE ACCOUNT.**

Charge to this account all invoices for Rice, received at the Brewery; also all amounts paid for freight and hauling Rice.

**Whatever of these materials are used for brewing ale and porter must be credited to these accounts and charged to "ALE AND PORTER BREWING ACCOUNT" (account No. 16), every month, same as in paragraphs No. 8 and No. 9.

12. SUGAR ACCOUNT.**

Charge to this account all invoices for Sugar received at the Brewery; also all amounts paid for freight and hauling.

13. SUNDRY BREWING MATERIALS. (Beer.)

This account should be charged with all invoices for materials used in brewing Beer, for which no account exists elsewhere, such as Isinglass, Beer Color and any Chemical Compounds. (*Freight and charges, if any, on such materials, should be charged to this account*). "Sundry Brewing Materials" used for Ale and Porter brewing will be charged direct to account No. 16.

14. BREWERY SUPPLIES.

Charge to this account all invoices for Sundry Supplies used in the Brewery proper, for which no account exists elsewhere, such as Ammonia for the refrigerating machine, Pitch, Candles, Brooms, etc.

15. SALES OF GRAINS.

Credit to this account all Money received for the sale of Grains. In a Brewery where Ale and Porter are also brewed a proportion of the credit for sales of Grains should be given to "ALE AND PORTER BREWING" unless the arrangement of the Brewery permits the handling of the Grains separately.

16. ALE AND PORTER BREWING ACCOUNT.

This account is designed to show the cost of brewing the Company's total output of Ale, Porter, and Stout for the fiscal year. The account may be subdivided, so as to have a separate account for each, but this seldom becomes advisable, except in Breweries making a specialty of brewing Ales, Porter and Stout.

The account is built up by monthly charges for the cost of Materials used as told in the individual material accounts, also for proportion of Wages, also for Fuel, Water, Supplies and Expenses. The cost of Sundry Brewing Materials, specially purchased for the use in brewing Ale, Porter and Stout, will be charged direct to this account.

When all the postings have been made to "ALE AND PORTER BREWING" Account, the total debit balance, divided by the number of barrels brewed, will show the cost of the materials and labor per barrel. In Plants where Ale and Porter are brewed in a separate building or department from the Beer Brewery, this account will give place to a series of Material and Labor accounts specially kept for "ALE AND PORTER BREWING."

17. BREWMASTER'S SALARY.

It is desirable to have a separate account for the BREWMASTER'S SALARY, which will include also wages of Assistant Brewmaster.

18. BREWERY WAGES.

Charge to this account Wages paid to men engaged in making and tending beer, Kettle-men, Cellarmen and others. This does not include men employed in the Washhouse, Racking-room or Platform.

Where the Breweries for Beer and for Ale and Porter are separate, it will be easy to keep the Wages distinct and in such cases there will be separate accounts.

19. ENGINEERS AND FIREMEN.

Charge to this account Wages paid to Engineers, Firemen and others in the engine room.

20. WASHHOUSE AND PLATFORM WAGES.

Charge to this account all Wages paid to men employed in washing kegs, racking-off, loading cars, helping drivers to load wagons and other general work.

21. FUEL ACCOUNT.

Charge to this account all invoices for Fuel Coal received at the Brewery also all Freight on same, hauling from rail and labor unloading, if outside labor is employed. If any Blacksmith Coal is used it must be charged to "MAINTENANCE ACCOUNT."

22. WATER ACCOUNT.

Charge to this account Water Rates paid. At the end of the year, care should be taken to include in this account the Water Rates accrued but not paid. When the true total for the year has been found, divide the amount between "BEER BREWING" and "ALE AND PORTER BREWING" in proportion to the number of Barrels of each brewed, unless a specific division is obtainable.

23. ENGINE ROOM SUPPLIES.

Charge to this account all amounts paid for Oil, Waste, Boiler Compound or other supplies purchased for use in the Engine Room or the Boiler House. At the end of the year bring down as a balance the value of stock of these supplies on hand. Do not charge to this account any supplies used for repairs to Engines, Boilers, etc.

24. BREWING EXPENSES.

Charge to this account all expenses incurred in connection with brewing, such as annual fees to Scientific Stations, Traveling Expenses of the Brewmaster on investigating trips, examinations of Yeast and of Beer in process of brewing; also miscellaneous expenses incurred in connection with the product of Malt Liquors.

The total brewing expenses during the year must be divided between "BEER BREWING" and "ALE AND PORTER BREWING" in proportion to the number of Barrels of each brewed.

25. BEER CONSUMED ON THE PREMISES.

It is desirable to conduct a ledger account for "BEER CONSUMED ON THE PREMISES," in order to determine how much this expense comes to in the course of the year. The Beer should be charged at the inventory price, generally \$3.00 a barrel.

26. BEER BREWING ACCOUNT.

This account is designed to show the cost of brewing the company's total output of Beer for the fiscal year. The balance of the following account is transferred to the *credit* of "BEER BREWING" when the books are being closed for the year, to-wit,—*"SALES OF GRAINS."*

The balances of the following accounts are transferred to the debit of "BEER BREWING" when the books are being closed for the year, to-wit,—MALT, HOPS, CORN, RICE, SUGAR, SUNDRY BREWING MATERIALS, BREWERY SUPPLIES, FUEL, BREWMASTER'S SALARY, BEWERY WAGES, ENGINEERS AND FIREMEN, BREWING EXPENSES, WATER, WAREHOUSE AND PLATFORM WAGES, ENGINE ROOM SUPPLIES.

27. MAINTENANCE ACCOUNT

The object of this account is to group together the several items of repairs in order to show in one account the cost of maintaining the Brewery property. The balances of the following accounts are transferred to the debit of "MAINTENANCE ACCOUNT" when the books are

closed for the year,—REPAIRS TO BUILDINGS, MACHINERY, KEGS, CASKS AND VATS, YARD, COOPERS' WAGES AND MECHANICS' WAGES. (*Repairs to outside properties or to Saloon Fixtures do not belong here*).

8. REPAIRS TO BUILDINGS.

To this account should be charged the cost of all repairs to the "Brewery Buildings" (*but not to outside properties*); should include the cost of Bricks, Sand, Cement, Lumber, Paints, Lime, Putty, Glass, Tin (for roof) and other Building Materials used in the maintenance of the Brewery property; also Wages paid Carpenters, Masons, Bricklayers, Plumbers, Plasterers, Painters, Tinsmiths and other Mechanics, while engaged in repairing buildings, sheds, platforms and the like; provided a "pay-roll distribution" is procurable. Otherwise these wages may be charged to "MECHANICS' WAGES". At the end of the year transfer the total amount to "MAINTENANCE."

20. MACHINERY REPAIRS.

Charge to this account the cost of all repairs to Machinery, Brewing Utensils and Equipment, also to Engines, Boilers and Ice Machines; also all Steam Fittings, Water Fittings, Machinists' Supplies and other Materials purchased for use in repairing the engines, ice plant or machinery; also Fittings, Valves and Other Hardware attached to and made part of the various machines and brewing apparatus; also Wages of Machinists' Boiler-makers, Steam-fitters and other mechanics while employed upon this work, if a "pay-roll distribution" is procurable.

EXAMPLES: Cost of phosphor bronze castings for pumps, babbitt metal for bearings, steel for hop hooks, rubber floats for filter, rubber wire cloth for filters, lamp-wick for packing.

30 REPAIRS TO YARD.

Charge to this account all Repairs to the yard, walls or fences (not buildings); Stone, Brick, Sand or Cement used for repaving yards, also Repairs to Railroad Tracks, Renewals of Rails, Ties, or Track Fastenings, also pavers', masons' or carpenters' Wages while engaged in the above work.

31. REPAIRS TO KEGS.

To this account charge all Money paid for repairing kegs, cutting them to smaller sizes, etc.; also Materials used for repairing kegs, such as Bushes, Shooks, Staves, Hoops and Coopers' Supplies, Coopers' Tools, Repairing Coopers' Tools, except where purchased for repairing casks and vats; also Wages of coopers while repairing kegs and cutting smaller, provided a distribution of the pay-roll is procurable; otherwise charge wages to "COOPERS' WAGES."

32. REPAIRS TO CASKS AND VATS.

Charge to this account all Money paid for repairing and renovating Chip Casks, Beer Vats, Fermenting Vats and other stationary brewery cooperage; also coopers' or other mechanics' Wages while employed on this work, provided a distribution of the pay-roll is procurable; otherwise charge wages to "COOPERS' WAGES"; also all Materials used for this purpose, such as:—Hoops and Staves for above, Varnish for wood, Tools purchased for coopers, Repairing storage casks, Ropes and Tackle purchased for hauling out storage casks.

33. MECHANICS' WAGES

Where it is possible to keep a record of what work

the mechanics are doing, so that a proper distribution of the pay-roll may be made, their wages should be charged specifically to "REPAIRS TO BUILDINGS", "REPAIRS TO MACHINERY" or other "MAINTENANCE ACCOUNTS". Every effort should be made to secure such a pay-roll distribution. Where such a record cannot be kept, all Wages paid to Carpenters, Painters, Plumbers, Steam-fitters and Mechanics other than Coopers, should be charged to "MECHANICS' WAGES". At the end of the year transfer the total amount paid to "MAINTENANCE".

34. COOPERS' WAGES.

Where it is possible to keep a record of the work the Coopers are doing, their Wages should be charged, specifically, to "REPAIRS TO CASKS AND VATS" or to "REPAIRS TO KEGS", according to the work they do. Where no such record can be kept, charge all Coopers' Wages to this account.

35. DEPRECIATION OF PLANT.

Depreciation of Plant and Machinery may be either written off the asset accounts, at the end of each year, and the amount charged to "DEPRECIATION ACCOUNT", or it may be carried to the credit of "DEPRECIATION RESERVE ACCOUNT".

36. INVENTORY ADJUSTMENT.

It becomes necessary to make an adjustment in respect of the varying quantity of Beer and of Ale and Porter, in the storage cellars. PROFIT AND LOSS is charged with the Beer on hand (in the cellars), at the beginning of the period and is credited with that on hand at the end of the period. The same price is used for both factors, and should be as nearly as possible the actual cost of production, which should include Maintenance and Depreciation of Plant and a fair share of Administration Expenses.

This Adjustment of Inventory has its logical place on this Chart after the cost of production.

37. TEAM DELIVERY ACCOUNT.

The object of this account is to group together the various charges entering into the cost of Delivering Beer by the Company's teams; these are,—Feed, Stablemen's Wages, Drivers' Wages, Stable Expenses, Shoeing, Repairs to Wagons and Repairs to Harness. The total amount divided by the number of barrels delivered by the Company's teams will show the cost per barrel for delivering.

38. FEED ACCOUNT.

Charge to this account all Horse-Feed (Hay, Corn, Oats, Brans, etc.), also Straw for Bedding. It is not necessary to carry a separate account for Straw and Bedding.

39. SHOEING ACCOUNT.

Charge this account with the cost of all horse-shoeing, including incidental shoeing paid for by the Drivers.

40. STABLE EXPENSES.

All Stable Supplies and Expenses are chargeable to this account, such as Brooms, Buckets, Brushes, Condiments, Medicines, Veterinary Surgeon's Fees, Bandages and all Supplies for use in the Stable other than Feed. Also Rent of the Stable if the Company does not own the building.

41. STABLE WAGES.

Charge to this account all Hostlers', Grooms' and Stablemen's Wages, also the Wages of the Stable Boss.

42. DRIVERS' WAGES ACCOUNT.

Charge to this account all Wagon Drivers' Wages, but the Hostlers' and Stablemen's Wages and the Salary of Stable Boss must be charged to "STABLE WAGES ACCOUNT". The Wages of Bottled Beer Wagon Drivers will be charged to the Bottling Department.

43. REPAIRS TO WAGONS.

All Wagon Repairs are chargeable to this account. The Materials will include:—Wheels, Springs, Shafts, Poles, Varnishes, Lettering, except where absolutely new wagons are purchased, Whiffle-trees, Wagon-seats and other Gear; all Carriage and Wagon-builders' Bills; also Wages of Wheelwright, if any be employed by the Company.

44. REPAIRS TO HARNESS.

All Harness Repairs are chargeable to this account. The materials will include:—Horse Collars and Harness to replace old, Leather for Harness Repairs, Mountings for Harness Repairs, and all Supplies for Harness Repairing; also all Harness Makers' Bills, except where actual new harness is purchased; also Wages of Harness Makers, if any are employed by the Brewery.

45. COUNTRY DELIVERY. (Or Shipping.)

The balances of the following accounts are transferred to debit of COUNTRY DELIVERING ACCOUNT, when the books are being closed for the year, to-wit,—FREIGHT ON BEER, FREIGHT ON EMPTIES

In a Brewery where the Beer has to be hauled to the railway depot by the Company's teams, a charge should be made to "COUNTRY DELIVERY ACCOUNT" and the amount credited to "TEAM DELIVERY ACCOUNT". It will generally be enough to do this annually. The amount should be computed on the total number of Barrels of Beer sold to out-of-town Customers, and the rate should be one-half the average cost of Team Delivery (per barrel), it being computed that one team and driver could take twenty barrels of Beer to the depot and load them into a car in less time than he could deliver half that number, in two or three halves at each saloon. The balance of "COUNTRY DELIVERY ACCOUNT" divided by the number of barrels of Beer sold to country customers in the year, will give the average cost per barrel of out-of-town delivery for the year.

Freight on Beer shipped to Agencies and on Empty Packages returned from Agencies must be charged to "AGENCY EXPENSE" and not to "COUNTRY DELIVERY (OR "SHIPPING")".

46. FREIGHT ON BEER.

Charge to this account Freight on Beer to Country Customers, not served by the Company's teams, but not freight on beer shipped to Agencies, which must stand their own freight charges.

47. FREIGHT ON EMPTIES.

Charge to this account Freight paid on Beer Kegs returned from Country Customers, not served by the Company's own teams, but not freight on empty packages from Agencies.

48. COLLECTING ACCOUNT.

The balances of the following accounts are transferred to the debit of "COLLECTING ACCOUNT" at the end of the year,—"COLLECTORS' SALARIES", "COLLECTORS' SPENDING MONEY", "OFFICE SPENDING MONEY". This

account remains closed during the year. Its only object is to group together the several accounts above mentioned and to show how much per barrel the total expenses of collection have amounted to.

49. COLLECTORS' SALARIES.* *

Charge to this account only the Wages paid to Collectors; do not charge traveling expenses. If any Officer of the Company acts as Collector, his Salary, or a portion of it, should be charged to this account.

50. COLLECTORS' SPENDING MONEY.* *

Charge here all Money Expended by Collectors over the bars of customers, when making collections or when calling on the trade. Do not charge to this account any donations, presents to customers, presents to bartenders or the like (for which see "DONATIONS").

51. OFFICE SPENDING MONEY.* *

Charge here all Money Expended by Cashier, Office Employes or others than Collectors, or Money Given to Customers who pay their bills at the Company's Office; also Money similarly spent by an Officer or Member of the Firm.

52. AGENCY EXPENSES.

There should be an account for the expenses of each Agency; it will not be found necessary to subdivide the expenses in a medium sized Brewery, because all the expenses really belong to "COUNTRY DELIVERY", so far as the plant is concerned. Allowances and returns must be charged to "AGENCY ALLOWANCES".

In the "AGENCY EXPENSE ACCOUNTS" the charges will be for Freight, Ice, Rent, Feed, Telephoning, Lighting, Agent's Salary, Drivers' Wages, Collecting Expenses, Agent's Traveling Expenses. At the end of the year this account should be charged with Depreciation on Agency Equipment (horses, wagons, ice-boxes and furniture).

53. EXPENSES OF HOLDING THE TRADE ACCOUNT.

Charge to this account any Miscellaneous Expenses of Holding the Beer Trade which are not provided for, specifically, in other accounts. At the end of the year transfer to this account the balances of the following accounts:—"DONATIONS AND PRESENTS", "WORK DONE FOR CUSTOMERS", "ADVERTISING" and "CHRISTMAS PRESENTS".

54. DONATIONS AND PRESENTS.

Charge to this account Donations, Presents to Customers, Presents to Bartenders and all Miscellaneous Expense of Holding the Trade, cost of all Picnics and Festivals, that may be given by the Company.

55. WORK DONE FOR CUSTOMERS.

Charge to this account the Cost of all Work done for Customers, in lieu of giving them Cash donations, such as Repairs and Improvements to Saloons (not owned by Brewery Company) Ice-boxes, Pumps, Bar Fixtures, Mending Windows, Painting, etc., where the fixtures are not owned by the Company. It is preferable to carry these in a separate account as above mentioned, rather than to charge them all to "DONATIONS" or to "COLLECTING EXPENSES".

56. ADVERTISING ACCOUNT.

Charge this account with all Newspaper or Space

Advertising, Posters, Show-cards, Calendars, Paper "Bock Beer" Signs, Advertising Cards, Programmes and the like, but do not charge here the cost of permanent beer signs. This account should not include any items paid for Charity, for which see "CHARITY ACCOUNT", which is a general expense.

57. CHRISTMAS PRESENTS.

Charge to this account all Special Allowances to Customers made in the form of Beer given away and called "Christmas Presents" or "Christmas Cards". Also Christmas Gifts to Bartenders in any form. But bona-fide, voluntary Christmas Presents to Employees of the Company, must not be charged here, but rather to the account to which the regular wages of such Employees are charged, or to GENERAL EXPENSE ACCOUNT.

58. SALOON FIXTURES EXPENSE.

Charge to this account the Cost of Maintaining and Repairing Saloon Fixtures that are owned by the Company, but not those that are owned by others.

59. MAINTENANCE OF BEER SIGNS.

Charge to this account the Cost of Repairing and Replacing Permanent Beer Signs—wood, glass, iron or electric—but do not charge paper "Bock Beer" signs or calendars. In a conservatively governed plant it is customary to charge off the entire cost of permanent signs at the time of payment. This line of expense has nothing to do with "MAINTENANCE OF PLANT".

60. ELECTRICITY FOR SIGNS.

All Expenses of Operating Illuminating Signs, whether paid for direct by the Brewing Company, or allowed to Customers as a special concession. This expense is really for advertising.

61. DEPRECIATION OF EQUIPMENT.

The Depreciation of loss through wear and tear, of Horses, Wagons, Harness and Agency Equipment is an expense that attaches to delivery (*classified in this article as "DISTRIBUTION"*) and it must not be confused with Depreciation of Plant which is a manufacturing charge, (*classified as "PRODUCTION"*)

Of all the above named properties a detailed Inventory should be taken at the close of each year and the shrinkage in the account should be written off to "DEPRECIATION OF EQUIPMENT".

62. BEER STAMPS.

Make a monthly entry in the Journal, charging "BEER STAMPS" and crediting "REVENUE STAMPS ACCOUNT" with the Cost of Revenue Stamps used for Beer (*going by the recorded number of barrels sold.*)

62½. REVENUE STAMPS.

Charge this account as Revenue Stamps are purchased. At the end of the year bring down as a balance the cost of Revenue Stamps on hand, and carry the balance of the account (if there should be any) to "PROFIT AND LOSS".

63. ALE AND PORTER STAMPS.

Make a monthly entry in the Journal, charging "ALE AND PORTER STAMPS" and crediting "REVENUE STAMPS ACCOUNT" with the cost of Revenue Stamps used for Ale and Porter (*going by the recorded number of barrels sold.*)

64. TAXES ACCOUNT.

Charge to this account City, State, School and other

**These accounts may be sub-divided into City and Country where a shipping trade is done.

Taxes on the Brewery property, also Franchise Tax or Personal Tax, in fact all Taxes except Revenue Stamps. But Taxes on houses, saloons or other properties, not part of the Brewery, must be charged to "TAXES AND INSURANCE ON OUTSIDE PROPERTIES".

65. LICENSE ACCOUNT.

Charge to this account the Cost of Securing Brewer's License for the Company, also Cost of Licenses for Saloons conducted by the Company. Money advanced to secured licenses for Customers must be charged up to them as loans.

66. BREWERS' ASSOCIATIONS.

Charge to this account all Subscriptions or Assessments paid to voluntary associations of Brewers—(National, State and City)—but not assessments to Bottlers' Associations.

67. INSURANCE ACCOUNT.

All Premiums on Insurance Policies of every description will be charged to this account, Fire, Boiler, Casualty and any other Premiums. At the end of the year bring down the unexpired portions of all premiums paid and transfer the balance of the account to "ADMINISTRATION".

68. OFFICERS' SALARIES.

Charge this account with the Salaries of Officers,—the President, Secretary, Treasurer and General Manager, unless either of these may act as Brewmaster, Bookkeeper or Collector, (Brewmaster's salary will be charged to "BREWMASTER'S SALARY ACCOUNT", Bookkeeper's salary to "OFFICE SALARIES" and Collector's Salary to "COLLECTORS' WAGES").

69. DIRECTORS' FEES.

As the title suggests, this account is to carry the Payments to Directors for their attendance at meetings of the Board. Salaried officers, who may happen to be on the Board, should not be paid Directors' Fees.

70. SALARIES OF BOOKKEEPERS AND CLERKS.

Charge all Clerical Salaries to this account (bookkeepers, clerks and stenographers).

71. MISCELLANEOUS WAGES.

Charge to this account any Wages other than those provided for by other accounts, such as Watchman, Janitor, Porter, Carriage Drivers (if any); but not painters, carpenters, coopers or mechanics.

72. PRINTING AND STATIONERY.

Charge to this account such items as Letter-heads, Bill-heads, Statements, Envelopes, Printed Forms, Writing Paper, Blank Books, Pens, Pencils, Ink, Bands, Files, Stationery, but not beer labels, bottle labels, calendars, beer signs, or the like.

73. LEGAL EXPENSES ACCOUNT.

Charge this account with all Law Costs and Attorneys' Fees, legal expenses and cost of recording deeds, mortgages, etc., taking judgment and similar expenses.

74. TABLE EXPENSES.

Charge here all Provisions, Supplies, Wines and Mineral Waters for use in the Dining Room at the Brewery, if one is maintained for officers and employes; also Wages of the Steward, Cook, Waiter or others employed for this purpose.

75. POSTAGE, TELEGRAMS AND TELEPHONE.

To this account charge all Postage Stamps purchased, cost of all Telephone Service and Tolls, also Telegrams.

76. OFFICE EXPENSES.

Charge to this account all items such as Cleaning Office, Lighting Office, Ice for office use, Dials for watchman's clock, Office Supplies, Subscriptions to Newspapers, Brewers' Magazines, Advertising Meetings of Shareholders, Matches and such petty office expenses as are not provided for elsewhere. Salaries must not be charged to this account.

Be careful not to charge items to this account that can properly be distributed to other expense accounts. Office Expense Account is often made a "dumping ground" for miscellaneous expenses that are hard to locate, or where information is not to hand. This should be carefully avoided: look well for some other account to which the item should be properly chargeable.

77. MISCELLANEOUS GENERAL EXPENSES.

Charge to this account any expenses of a general nature, that cannot, appropriately, be charged to any other account in this distribution. This account is often made a "dumping ground" for miscellaneous charges that are hard to locate. This should be carefully avoided.

78. OFFICERS' TRAVELING EXPENSES.

Charge this account with the Traveling Expenses of the President, Secretary or Treasurer, or any of the Officials when away on business. If either of the officers acts as Collector, his expense, while thus engaged, should be charged to "COLLECTING ACCOUNT".

79. CHARITY ACCOUNT.

Charge to this account money paid for Charities, Church Fairs, Hospitals and the like. This account should only be used for money given, voluntarily, in aid of charities, and should not include the cost of advertising cards in programmes or the like, nor money given away to stimulate trade or to hold Customers.

80. ADMINISTRATION ACCOUNT.

The object of this account is to group together the various expenses of Administration when closing the books at the end of the year. (*All the accounts enumerated in this distribution from "Taxes No. 64" to "Charity Account No. 79" are to be closed into "Administration Account No. 80" at the end of the year.*)

81. PROVISION FOR BAD DEBTS.

Bad Debts are inevitable in a Brewery. The charge will amount to an average of from ten to fifteen cents per barrel sold, according to the class of trade catered to. A provision should be made on the books each month, credit being given to "BAD DEBTS RESERVE ACCOUNT".

82. SUNDRY LOSSES.

Charge to this account all Losses other than Bad Debts or Uncollectible Loans; such losses for example, as Damages through Accidents to Teams or Wagons, Accidents to Employes, Dead Horses, Demolished Wagons or similar.

83. INTEREST ACCOUNT.

This account is for Interest Paid to Banks on

Loans, Interest on Bank Overdrafts, Interest on Bills Payable, Interest Charged on Temporary Advances not secured by Mortgages, Discounts (*really interest*) on Customers' notes discounted by banks.

Also (*on the credit side*) Interest Received from Customers on loans, which it will be time enough to credit when the collection is made.

84. CASH DISCOUNT.

Credit to this account all Cash Discounts received in respect of the prompt payment of invoices for materials and supplies purchased. Discounts allowed to Beer Customers are of the nature of Allowances (*for which see "Beer Allowances" Accounts*).

85. RENTS OF OUTSIDE PROPERTIES.

Credit to this account all Money Collected with respect to Rents of Houses, Saloons, Beer Gardens, Pleasure Resorts or the like owned or leased by the Company.

86. MAINTENANCE OF OUTSIDE PROPERTIES.

To this account should be charged all outlay in repairing Houses, Saloon properties, Beer Gardens, Pleasure Resorts or the like owned or leased by the Company.

87. TAXES AND INSURANCE ON OUTSIDE PROPERTIES

Charge to this account all Taxes and Insurance Premiums upon Houses, Saloons, Beer Gardens, Pleasure Resorts or the like.

88. INTEREST ON BONDS

Charge this account with the Interest Paid on any Bonds, which are secured by Mortgage on the Plant. Interest received on Mortgage will go to another account.

89. DIVIDEND ACCOUNT.

Credit this account and charge "SURPLUS ACCOUNT" with the amount of dividends declared by the Directors giving each Dividend a number and stating the date of the Directors' meeting. All Cash paid to Shareholders, with respect to dividends, will be charged to this account.

90. PROFIT AND LOSS ACCOUNT.

This account remains closed throughout the year. It is used to group together the balances of the accounts named in this distribution:

DEBITS.	CREDITS.
4 City Beer Allowances	1 City Beer Sales
5 Country Beer Allowances	2 Country Beer Sales
7 Ale and Porter Allowances	3 Agency Beer Shipments
16 Ale and Porter Brewing	6 Ale and Porter Sales
26 Beer Brewing	84 Cash Discount
27 Maintenance	85 Rents of Outside Properties
35 Depreciation of Plant	
36 Inventory Adjustment	
37 Team Delivery	
45 Country Delivery	
48 Collecting	
52 Agency Expenses	
53 Holding the Trade	
58 Saloon Fixtures Expense	
59 Maintenance of Beer Signs	
60 Electricity for Signs	
61 Depreciation of Equipment	
62 Beer Stamps	
63 Ale and Porter Stamps	
80 Administration	
81 Provision for Bad Debts	
82 Sundry Losses	

- 83 Interest
- 86 Maintenance of Outside Properties
- 87 Taxes and Insurance on Outside Properties
- 88 Interest on Bonds

The balance of "PROFIT AND LOSS ACCOUNT", when all postings have been made, represents the Net Earnings of the business for the year. It is then transferred to "SURPLUS ACCOUNT".

91. SURPLUS ACCOUNT.

The credit balance of this account represents the excess of Assets over all Liabilities and Capital. It should and generally does represent the accumulation of undivided net profits earned on the business, but not divided between the Shareholders in the form of Dividends. Transfer to the credit of this account the balance of "PROFIT AND LOSS". Charge this account with any Dividends declared by the Board of Directors.

THE BALANCE SHEET.

It remains, in this, the third and last article of this business and what it should be. Also incidentally to refer, quite briefly to the "Condensed Statement" which is an abbreviated form of Balance Sheet.

A *Chart* is presented herewith (Fig. 7) showing how the balances of a great many separate ledger accounts are reduced to a comparatively small number of items on the Balance Sheet, and a still smaller number of items on the "Condensed Statement".

By common consent and well established practice a Balance Sheet is a two-sided affair. On the left-hand side it is customary to schedule the ASSETS (properties owned), while on the right-hand side it is customary to schedule the LIABILITIES (debts owing).

The order in which the ASSETS are scheduled on the Balance Sheet, is similarly governed by custom, which decrees that this should be the order of their permanency: "LAND" first—"CASH" last.

On the other side it is customary to schedule the LIABILITIES in the order of their permanency, with CAPITAL and BONDS first, then CURRENT LIABILITIES and last SURPLUS and UNDIVIDED PROFIT.

The ASSETS should be divided into three principal classes and should be grouped together, in such a way as to show distinctly the total of each class.

- Fixed Assets.
- Current Assets.
- Deferred Assets.

In like manner the LIABILITIES should be grouped together in three distinct and corresponding classes.

- Capital and Bonded Debt.
- Current Liabilities (or Floating Debt).
- Surplus and Undivided Profits.

The customary names of the several ASSETS and LIABILITIES of a Brewery need not be set down here, as they are clearly shown on the accompanying *Chart* (Fig. 7) and on the Balance Sheets (Figs. 8 and 9).

Two complete Balance Sheets are used for illustrations; Fig. 8 is the balance sheet of *The Model Brewing Company*, a large concern, while Fig. 9 is the balance sheet of *The People's Brewing Company*, a small concern.

(Continued on page 32.)

FIGURE 7.

MODEL BREWING COMPANY
CHART Showing Distribution of Asset and Liability Accounts

Main Factors	Divisions	Elements	Details or Ledger Accounts		
Fixed Assets	Real Estate, Buildings and Machinery	Real Estate	{ Land (Brewery Property) Land (Stable Property)		
		Buildings	{ Brewhouse Malt House Wash House Stable Bottling House Office Building		
		Machinery	{ Refrigerating Machines Brewhouse Machinery		
		Brew House Equipment	Kettle, Hop Jack, Mash Tub, etc		
		Bottling House Equipment	{ Horses, Wagons and Harness Bottling Machinery		
		Machine Shop Equipment	{ Machinery Tools		
		Outside Real Estate	{ Saloon Properties Dwellings Atlantic City Depot Property Camden Agency		
		Horses, Wagons and Harness	{ Horses Harness Wagons		
		Cooperage	{ Casks and Vats Beer Kegs		
		Rolling Stock, etc.	Agency Equipment	Agency Equipment	{ Atlantic City Depot Camden Agency Pottsville Depot
Office Furniture and Fixtures	{ At Brewery At City Office				
Bar Fixtures	{ At Atlantic City Sundry Saloons				
Bottles, Boxes and Sundries	{ Bottles Boxes Stoppers Crates				
Signs	{ Glass Signs Electric Signs Wooden Signs				
Keg Beer	{ In Cellars At Agencies				
Bottled Goods	{ Bottled Beer Soft Drinks				
Stock of Beer, Materials, etc.	Materials			Materials	{ Malt Hops Grits Rice Sugar Brewery Supplies Brewing Materials
				Beer Stamps	{ Beer Stamps
Available Assets	Loans to Customers			Loans to Customers	Bills Receivable
		Accounts Receivable	{ Customers' Balances Sundry Debtors Due from Officers Due from Employees		
		Cash in Banks and on Hand	Cash in Banks	{ Mechanic's Bank Mutual Trust Company Fifth National Bank	
			Cash in Office	{ Cash in Safe Customers' Checks Held Cash at Agencies	
		Charges Paid in Advance	{ Licenses Insurance Taxes		

FIGURE 7.
CHART—Continued.

Main Factors	Divisions	Particulars	
Deferred Assets	Treasury Stock..... shares of the Co. (at cost)	
	Investment in other Companies.....	Hoboken Bottling Machine Co. shares
		National Brewers Insurance Co. shares
		Fifth National Bank..... shares
		Ontario Manufacturing Co. bonds
Good Will	Punxsutawney Canal bonds	
*	*	*	
Fixed Liabilities	Preferred Stock shares of \$ 100 each	
	Common Stock..... shares of \$ 100 each	
	First Mortgage Bonds..... bonds of \$1000 each	
Floating Debt (Current Liabilities)	Bills and Accounts Payable	Bills Payable	
		Accounts Payable	
	Accrued Charges.....	Bond Interest Accrued	
		Accrued Taxes	
		Accrued Water Rent	
	Accrued Wages		
Reserves	Contingent Reserve.....	Amount set aside, out of the profits of previous years, to provide against contingencies.	
	Reserve for Replacement of Machinery.....	Aggregate of amounts set aside, by order of the directors, out to the profits, to provide for rebuilding the plant and replacing the Machinery.	
	Reserve for Bad Debts.....	Balance of amounts set aside, out of the profits, to provide for losses and bad debts.	
Surplus	Surplus Account.....	Amount remaining out of the Surplus Earnings of the business during previous years, after paying dividends to shareholders (if any); same having been transferred to Surplus Account by order of the directors.	
	Undivided Profits.....	Balance of Undivided Net Profit on the business, during the previous year, where directors have not ordered same to be transferred to the Surplus.	
	Profit and Loss Account ...	Balance of Profit and Loss Account for current period, or for year just closed (if a profit).	

FIGURE 8.

THE MODEL BREWING COMPANY

Balance Sheet, 30th April, 1908

ASSETS	LIABILITIES
FIXED ASSETS	FIXED LIABILITIES
Real Estate, Buildings and Machinery	Capital Stock
Brewery and Stable Property.....\$ 250,000.00	Preferred Stock,
Buildings.....1,032,987.62	5,000 shares of \$100 each.....\$ 500,000.00
Machinery.....622,718.34	Common Stock,
Brew House Equipment.....67,291.58	15,000 shares at \$100 each.....1,500,000.00
Bottling House Equipment.....121,632.83	<u>\$2,000,000.00</u>
Machine Shop Equipment.....35,976.42	
Outside Real Estate.....72,462.50	Bonded Debt
<u>\$2,203,069.29</u>	First Mortgage Bonds,
	1,000 Bonds of \$1,000 each.....1,000,000.00
Rolling Stock, etc.	<u>TOTAL FIXED LIABILITIES</u>\$3,000,000.00
Horses, Wagons and Harness.....142,357.89	
Cooperage.....227,894.72	CURRENT LIABILITIES
Agency Equipment.....25,752.91	Bills and Accounts Payable
Office Furniture and Fixtures.....15,271.18	Bills Payable.....\$ 125,750.00
Bar Fixtures.....96,098.93	Accounts Payable.....74,372.41
Bottles, Boxes and Sundries.....39,897.38	200,122.41
Signs.....19,683.41	Accrued Charges
<u>566,956.42</u>	Bond Interest Accrued.....16,666.67
TOTAL FIXED ASSETS\$2,770,025.71	Accrued Taxes.....6,321.89
	Accrued Water Rent.....1,417.32
AVAILABLE ASSETS	Accrued Wages.....5,491.50
Stock of Beer, Materials, etc.	<u>TOTAL CURRENT LIABILITIES</u>230,019.79
Keg Beer—45,660 bbls. at \$3.00.....136,980.00	
Bottled Goods.....5,979.93	RESERVES
Malt, Hops and other Materials.....209,815.24	Contingent Reserve.....252,500.00
Beer Stamps.....15,793.50	Reserve for Replacement of Machinery.....174,672.51
<u>368,568.67</u>	427,172.51
Loans to Customers478,245.08	SURPLUS
Deduct Reserve for Bad Debts.....15,725.68	Balance of Surplus at April 30th, 1907.....250,000.00
<u>462,519.40</u>	Balance of Undivided Profits, April 30, 1907.....112,119.17
Accounts Receivable16,770.04	<u>362,119.17</u>
Cash in Banks and on Hand	Deduct
Cash in Banks.....59,215.72	Preferred Stock Dividend No. 14,
Cash in Office.....2,417.53	declared and paid.....30,000.00
Charges paid in advance.....8,349.62	Common Stock Dividend No. 8,
<u>61,633.25</u>	declared and paid.....60,000.00
<u>917,840.98</u>	<u>90,000.00</u>
DEFERRED ASSETS	272,119.17
Treasury Stock	Net profit for the year ended April 30th, 1908.....120,205.60
150 shares of the Company at par.....15,000.00	<u>392,324.77</u>
Investments in Other Companies	
Hoboken Bottling Mach. Co., 500 shares.....50,000.00	
Nat'l Brewers Insurance Co., 100 shares.....10,000.00	
Fifth National Bank, 100 shares.....11,650.38	
Ontario Manufacturing Co., 25 bonds..25,000.00	
Punxsutawney Canal, 50 bonds.....50,000.00	
<u>146,650.38</u>	
Goodwill200,000.00	
<u>361,650.38</u>	
TOTAL DEFERRED ASSETS\$4,049,517.07	
	<u>\$4,049,517.07</u>

FIGURE 9.

THE PEOPLES BREWING COMPANY

Balance Sheet, 30th April, 1908

ASSET		LIABILITIES
FIXED ASSETS		CAPITAL STOCK
Real Estate and Plant		1,500 shares at \$100 each..... \$150,000.
Real Estate.....	\$ 19,250.00	
Buildings and Machinery.....	302,560.25	
Brewing House Equipment.....	4,134.26	
Bottling House Equipment.....	23,529.73	
Machine Shop Equipment.....	4,121.89	
Real Estate outside of Brewery.....	500.00	
	\$354,096.13	
Rolling Stock, etc.		FIRST MORTGAGE BONDS
Horses, Wagons and Harness.....	12,922.50	200 bonds of \$1,000 each..... 200,000.00
Cooperage.....	14,853.41	
Agency Equipment.....	1,955.62	
Office Furniture and Fixtures.....	4,027.50	
Bar Fixtures.....	18,134.68	
Bottles, Boxes and Sundries.....	29,571.24	
	81,464.95	
	\$435,561.08	FLOATING DEBT
AVAILABLE ASSETS		Bills and Accounts Payable
Stock of Beer, Materials, etc.		Bills Payable..... \$78,563.24
Keg Beer on hand.....	38,210.00	Sundry Creditors..... 41,229.35
Bottled Goods.....	1,754.30	
Malt, Hops, Grits, Rice and Supplies.....	10,968.47	Interest Accrued on Bonds 2,333.33
Beer Stamps.....	326.51	Accrued Water Rent 758.61
	51,259.28	
Accounts Receivable and Cash		TOTAL FLOATING DEBT 122,884.53
Customers' Balances, etc.....	21,482.71	
Customers' Loans.....	85,937.82	RESERVE
Cash in Bank and Office.....	11,269.34	For replacement of Machinery..... 6,250.00
	118,689.87	
	169,949.15	SURPLUS
DEFERRED ASSETS		Balance of Surplus at April 30th, 1907.. 69,270.21
Stock of the Company		Undivided Profit for year ended April 30th, 1908..... 42,563.85
Held in the Treasury.....	3,500.00	
Investments in other Companies	14,725.00	111,834.06
	18,225.00	Less Dividend No. 2. declared and paid. 11,150.00
	623,735.23	100,684.06
		Net Profit for the year ended April 30th, 1908 43,916.64
		144,600.70
		623,735.23

FIGURE 10.

THE MODEL BREWING COMPANY
Condensed Annual Statement—30th April, 1908

ASSETS

FIXED ASSETS

Real Estate, Buildings and Machinery.....	\$2,203,069.29	
Rolling Stock, etc.....	566,956.42	\$2,770,025.71

AVAILABLE ASSETS

Stock of Beer, Materials, etc.....	368,568.67	
Loans to Customers.....	462,519.40	
Accounts Receivable.....	16,770.04	
Cash in Banks and in Office.....	61,633.25	
Charges paid in Advance.....	8,349.62	
TOTAL AVAILABLE ASSETS.....		917,840.98

DEFERRED ASSETS

Treasury Stock.....	\$ 15,000.00	
Investment in other Companies.....	146,650.38	
Goodwill.....	200,000.00	361,650.38
TOTAL ASSETS.....		\$4,049,517.07

LIABILITIES

BONDED DEBT

First Mortgage Bonds.....	\$1,000,000.00	
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FLOATING DEBT

Bills and Accounts Payable.....	\$200,122.41	
Accrued Charges.....	29,897.38	230,019.79

RESERVE

Contingent Reserve.....	\$252,500.00	
Reserve for Replacements.....	174,672.51	427,172.51

TOTAL LIABILITIES (including Reserves)..... \$1,657,192.30

EXCESS OF ASSETS OVER LIABILITIES..... \$2,392,324.77

MADE UP THUS

Capital Stock.....	\$2,000,000.00	
Surplus.....	250,000.00	
Undivided Profits.....	142,324.77	\$2,392,324.77

FIGURE 11.

THE PEOPLES BREWING COMPANY
Condensed Annual Statement—30th April, 1908

ASSETS

FIXED ASSETS

Real Estate, Building and Machinery.....	\$347,846.13	
Rolling Stock, etc.....	81,464.95	\$429,311.08

AVAILABLE ASSETS

Stock of Beer, Materials, etc.....	\$ 51,259.28	
Loans to Customers.....	85,937.82	
Accounts Receivable.....	21,482.71	
Cash in Bank and on hand.....	11,269.34	
TOTAL AVAILABLE ASSETS.....		169,949.15

DEFERRED ASSETS

Treasury Stock.....	\$ 3,500.00	
Investments in other Companies.....	14,725.00	18,225.00
TOTAL ASSETS.....		\$617,485.23

LIABILITIES

BONDED DEBT

First Mortgage Bonds.....	\$200,000.00	
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FLOATING DEBT

Bills Payable.....	\$78,563.24	
Accounts Payable.....	41,229.35	
Interest and Water Rents Accrued.....	3,091.94	122,884.53

TOTAL LIABILITIES..... \$322,884.53

EXCESS OF ASSETS OVER LIABILITIES..... \$294,600.70

MADE UP THUS

Capital Stock.....	\$150,000.00	
Surplus.....	100,684.06	
Undivided Profits.....	43,916.64	144,600.70
		\$294,600.70

There are two special features in the Balance Sheet shown herewith (Fig. 8).

(1st.) The amount standing to the credit of "Reserve for Replacement of Machinery Account" on the books, represents the total amount taken out of previous years' profits and placed in Reserve to be used for rebuilding any of the structures, or replacing any of the machines which may become worn out or obsolete.

This plan allows the Accounts representing the Cost of the Plant, to remain intact on the books, and is much to be preferred to the more common plan of writing down the Property Accounts.

(2d.) The amount standing to the credit of "Reserve for Bad Debts Account" on the books, is the amount set aside to provide for Bad and Doubtful Accounts and Loans. This is deducted from the face of the Customers' Loans in making up the Balance Sheet. This plan allows the Loans and Accounts to stand intact, on the books, while the value of same, as an Asset, is shown on the Balance Sheet at their real worth.

The main object of a Balance Sheet is to show the standing of the Company on a given date, but it may go a step further and show also the finished result of the business for the year. It is therefore desirable and good practice, though not obligatory, to show, on the face of the balance sheet, in addition to all other information:

1st.—The balance remaining of the previously stated *Surplus*.

2d.—The *Dividends* paid during the year.

3d.—The *Net Profit* on the business for the year.

On a Condensed Statement much of the detail, which appears on the Balance Sheet, is quite properly eliminated, the Balance Sheet being boiled down to a minimum number of items.

The object of the Condensed Statement is to show the standing of the Company in the fewest words and figures. Its use is to present to those who have a right to know, just sufficient information to enable them to form a general idea of the standing of the company, without giving rise to a lot of questions.

Two examples of suitable Condensed Statements for Breweries are here given (Figs. 10 and 11). It will be easy to see that same have been very much boiled down from the Balance Sheets shown on Figs. 8 and 9.

These Condensed Statements are all that are necessary to show to bankers from whom loans are sought, or to creditors. They show clearly the amount of Available Assets and how made up; also what are the Debts of the business and how much of these are secured (if any). On the other hand, they do not give *too much* information. These Condensed Statements are also all that is necessary to send to such stockholders as do not attend the annual meeting. In this connection it is pertinent to remember that any shareholder has the legal right to visit the Company's office and see the books. It does not follow that a detailed statement of these books should be sent abroad. A good deal of harm has been accomplished inadvertently by issuing fully detailed balance sheets, where condensed statements would have served the purpose.