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BUSINESS ADMINISTRATION

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PRINCIPLES OF ACCOUNTING

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LaSalle Extension University
Chicago
1916

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PREFACE

Within recent years there has been a noticeable growth of interest in scientific accounting. The day of the traditional bookkeeper whose principal interest was to keep his books in balance is rapidly passing, and his place is being taken by an executive—the scientific staff auditor, whose field is as wide as the extent of the business itself. Many have been attracted by the exceptional opportunities afforded by accountancy and have eagerly perused such texts as were available. During the past decade, a number of excellent books have been added to the literature of the accounting profession, but most of such works have been written as reference books for the professional public accountant.

Under these conditions, one who has been denied a long training in the school of experience, upon seeking to acquire a comprehensive grasp of accounting science, finds that most treatises on the subject are better suited for reference purposes than for mastering the working principles of accounting in a systematic and organized manner.

In the following pages the author has endeavored to develop the fundamental principles of accounting science according to a basic plan. A number of illustrations and problems are given to illuminate the textual discussion. The purpose of the book is not to promulgate the specialized treatment of any particular phase of the subject, but rather to present the basic principles of the science of accounting in a graphic and comprehendible manner.

While it is not believed that any text on accounting principles would prove inappropriate for the layman, the following pages have been written primarily for those having some training or experience in the art of bookkeeping.

The author believes that no apology is necessary for "personifying the business," since experience indicates the desirability of this approach to the subject of accounting theory. It is nowhere maintained that proprietorship accounts reflect a *legal* liability; rather they reflect a *theoretical* one, and this, after all, is the crux of the argument.

The author desires to express his appreciation and to give due credit to his father, Professor Stephen W. Gilman, A. B., LL. B., C. P. A., of the University of Wisconsin, for his invaluable assistance in reading the manuscript, and to his colleague, Mr. John B. Tanner, C. P. A., for his many helpful suggestions.

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PRINCIPLES OF ACCOUNTING

CHAPTER I

PRELIMINARY SURVEY

An individual engaged in business *might* conduct that business successfully without keeping records. He could do so only if the business was small and the transactions such as to be remembered easily. As a matter of fact, no business, however simple in its nature, does entirely without records of some sort, primitive though they may be. As business becomes complex, adequate records are essential. The reason for this is the inability of any human being to remember complicated transactions accurately. Man, therefore, symbolizes.

Symbols

Symbols of one sort or another have been in use by the human race since the beginning of recorded time. A "symbol" is that which stands for or represents something else; a visible sign or representation of an idea or quality or of another object.[1] Thus the heathen's idol is a symbol. Maps, drawings, and paintings are symbols. A baseball scoreboard is a symbol. Models of all sorts are symbols. The printed or written word is a symbol.

In the chief engineer's office in Panama there is a small-scale working model of the canal. Every detail is complete. By means of electrical control every opera-

[1] *Webster's New International Dictionary.*

tion taking place anywhere on the canal is reproduced in miniature. Ships move from one ocean to another; locks open and close. All normal functions are symbolized. The chief executive may watch this working model and exercise adequate control over the activities of his entire organization. He has the same *comprehensive* viewpoint as that which an aviator would have when flying over the canal zone. The importance of the word "comprehensive" is very great because it illustrates the chief function of a symbol.

The highly complex business must utilize this principle if it is to be managed adequately. Managers work with the aid of symbols almost entirely in order that they may obtain a *comprehensive* view of their business, which is possible in no other way.

Symbolizing the Account

Every reader is familiar with the usual bookkeeping symbol—the *account*. For the sake of bringing out certain important principles, another symbol may be temporarily adopted. This symbol is the ordinary pair of scales or balances. For illustration let us assume a very simple case and then apply this symbol to it. An individual named Brown is employed as business manager by Ames. Ames is entitled to all profits and is responsible for all losses, Brown being paid a salary.

Inasmuch as Brown is responsible for results to Ames, he must keep a record of all business transactions as an aid to administrative data. He may do so by visualizing or symbolizing the different business transactions which take place, with the aid of balances or scales and some small metal cubes, each representing one dollar.[2]

[2] This and following illustrations are for the purpose of developing the *fundamental theory* of double entry accounts and should not be taken seri-

At the beginning of business Ames may, for the purpose of this illustration of primitive transactions, be considered to have invested $15.00 in cash. This is recorded (Figure 1) and may be illustrated by depositing fifteen metal cubes in the scalepan marked and assumed to represent "assets" and another fifteen in the one marked "liabilities." By this means is recorded the fact that the business has come into the possession of certain assets ($15.00 in cash) and owes, or must account for, an equivalent amount ($15.00 to Ames).

FIG. 1.—Registering the Investment

Suppose Brown took $10.00 and bought 10 bushels of grain. How would he record this by the symbols? The difficulty is obvious, since he has simply exchanged one asset for another. If, however, we replace the scalepan on the left side, previously described, with two scalepans and label one "cash" and the other "merchandise" this transaction *can* be illustrated. (See Figure 2.)

Suppose Brown sells 5 bushels of the grain for $6.00. What adjustment of the balance must he make? Since one-half of the grain ($5.00 worth) has been dispensed, he must take five of the weights out of the "merchandise" scalepan, and since the business received $6.00, he must

ously with regard to the transactions themselves, the amounts involved, or other matters not pertinent to the development of principles.

put six weights in the "cash" scalepan. When he does this, the several scales no longer balance in the aggregate, since there are sixteen weights in the pans on one side

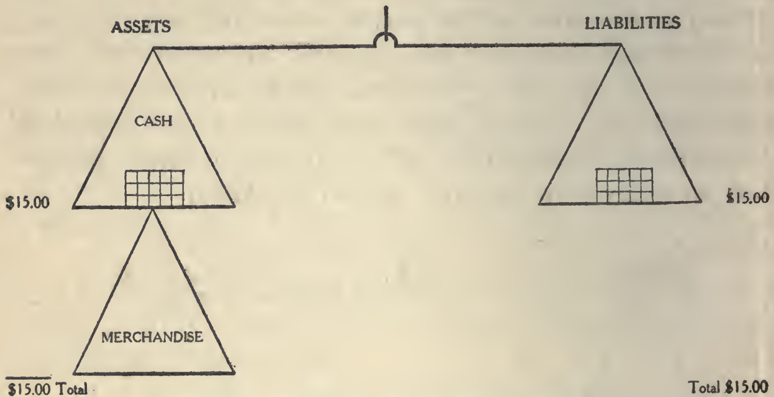


FIG. 2 (a).—Condition *before* Buying the Grain

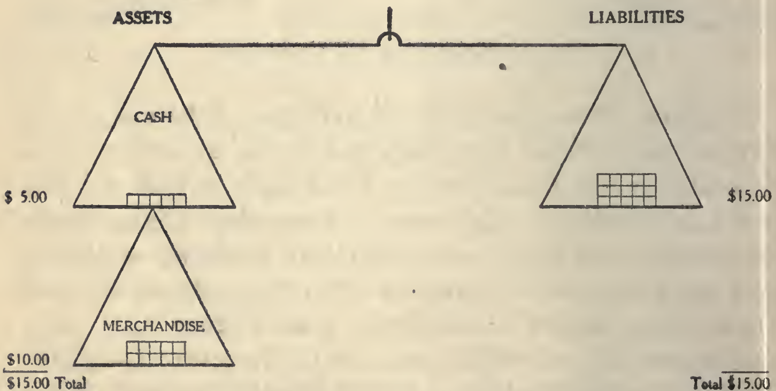


FIG. 2 (b).—Condition *after* Buying the Grain

and only fifteen on the other. This discrepancy is caused by the fact that $5.00 worth of grain was sold for $6.00, resulting in a one-dollar profit. To whom does this profit belong? To the proprietor, Ames. It is to be accounted

for by the business to the proprietor. Being in the nature of a liability it must be recorded, and this is done by putting one weight in the liability scalepan. (See Figure 3.)

Brown buys 10 more bushels of grain at $1.00 per bushel, but instead of paying for it he buys on account. He, therefore, must register an asset and a liability of the same amount, viz., $10.00. He can put ten weights in "merchandise" and ten weights in "liabilities." One

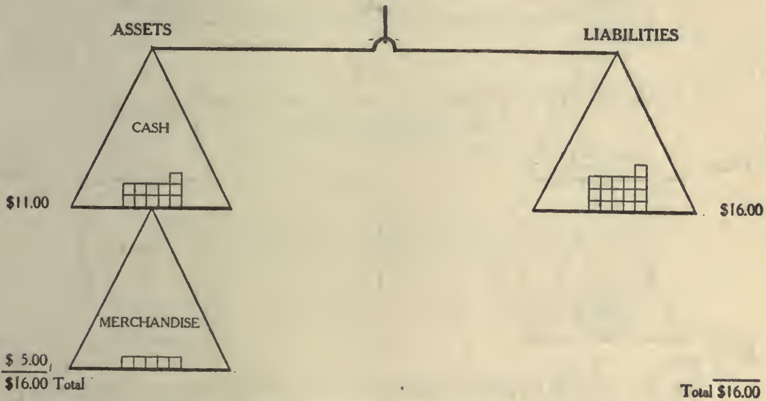


FIG. 3.—Condition after Selling Five Bushels of Grain (Cost $5.00) for $6.00

objection to this is that he is not properly distinguishing between liabilities to an outsider (for $10.00) and to the proprietor, Ames (for $16.00). Brown will want to keep them separate because Ames is entitled to all profits and is responsible for all losses, while the outsider is entitled to only $10.00 in any event. This distinction can be easily made by hanging two scalepans instead of one on the liability side. (See Figure 4.)

The business, let us assume, does not have to pay for the grain for thirty days, but Brown offers to pay $9.00 immediately in settlement of the entire account. This is

accepted. An analysis of the transaction shows that $9.00 in cash is parted with by the business; therefore nine of the weights come out of "cash." The entire liability of $10.00 has been wiped out, which means that ten weights must be taken from the scalepan, "liabilities to others." When this has been done, the scales are again out of balance, there being one more weight in the pans on the left-hand or asset side than on the right-

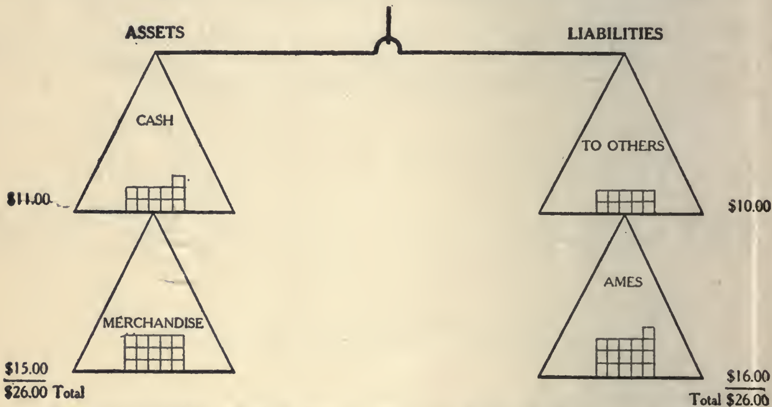


Fig. 4.—Condition after Buying Ten Bushels of Grain on Account (Cost $10.00)

hand or liability side. This is because a profit amounting to $1.00 has been made, which must be accounted for to Ames, the proprietor. When one weight is put in his scalepan representing this obligation, a balance is struck, showing that equilibrium has been re-established. (See Figure 5.)

Ten bushels of grain are now sold for $12.00, but instead of giving cash the purchaser gives his verbal promise to pay $12.00 in thirty days. Another scalepan (which may be labeled "accounts receivable") must be hung on the left-hand or asset side to register this class

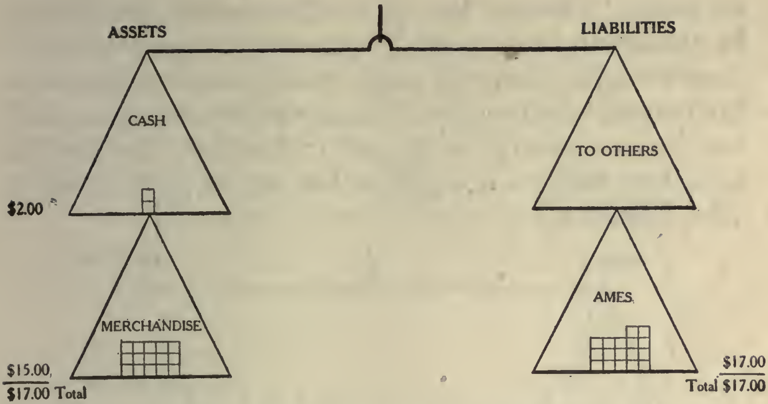


Fig. 5.—Condition after Discounting Bill of $10.00 for $9.00 and thus Gaining $1.00

ASSETS
LIABILITIES
CASH
TO OTHERS
$ 2.00
AMES
MERCHANDISE
$ 5.00
$19.00
ACCOUNTS RECEIVABLE
$12.00
$19.00 Total
Total $19.00

Fig. 6.—Condition after Selling Ten Bushels of Grain for $12.00 on Account and thus Making a Profit of $2.00

of asset ("promise to pay"). Twelve weights are put in "accounts receivable," and ten are taken out of "merchandise" as the grain is dispensed. To obtain the balance and to register properly the obligation of the business to account to Ames for the $2.00 profit on the sale, two weights are put in the appropriate scalepan. (See Figure 6.)

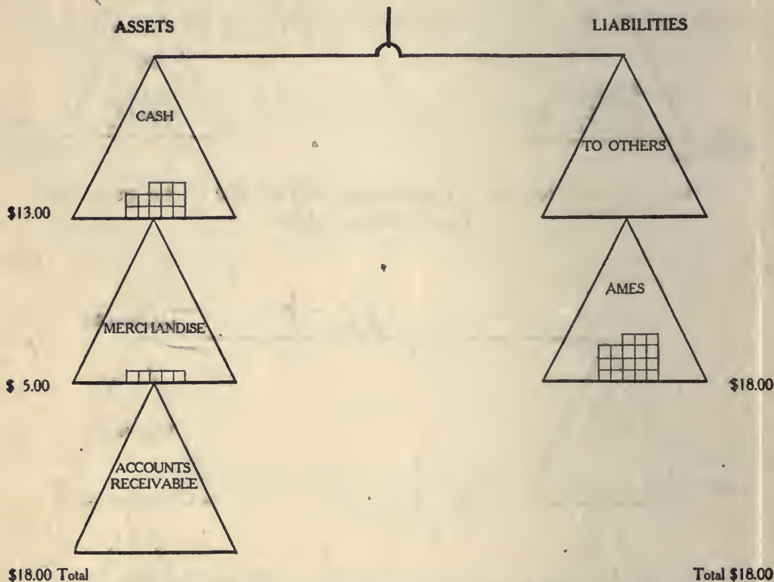


Fig. 7.—Condition after Allowing Discount of $1.00 on Accounts Receivable

Brown gives permission to discount the bill of $12.00 for $11.00 in cash. This will be registered by deducting twelve weights from "accounts receivable" (because that account is settled in full) and adding eleven weights to "cash" (because that is the exact amount received). The difference is due to the loss of $1.00 suffered in the transaction and is registered by deducting one weight from "Ames." (See Figure 7.)

Rent of $1.00 is now due and payable, and Brown therefore pays it in cash. This is handled by deducting one weight from "cash" and also one from "Ames," since he is responsible for all expenditures. (See Figure 8.)

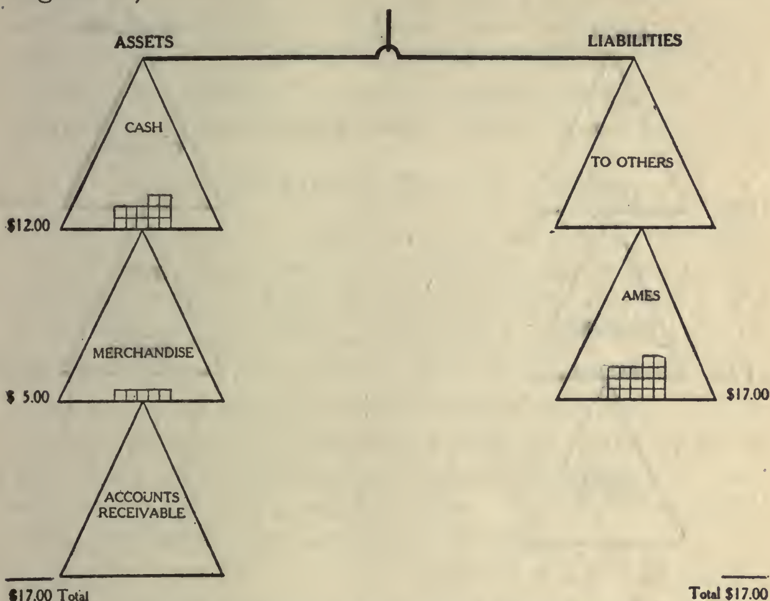


FIG. 8.—Condition after Paying Rent of $1.00

Certain fixtures amounting to $8.00 are needed and are bought on account. (See Figure 9.)

The transactions pictured in Figures 1 to 9 having been followed through, it becomes apparent that this method of "symbolizing" the business is satisfactory in a primitive way, but that it has certain grave defects. It shows, at all times, the current state of affairs as to property and debts, but it tells no history. It is an indicator of *present* conditions and not a recorder. This is because *both* additions and deductions of weights are made in each

of the various scalepans. This could be remedied by having *two* scalepans for each class of item whether it is an asset or a liability. Such an arrangement is shown in Figure 10. With this arrangement no subtractions

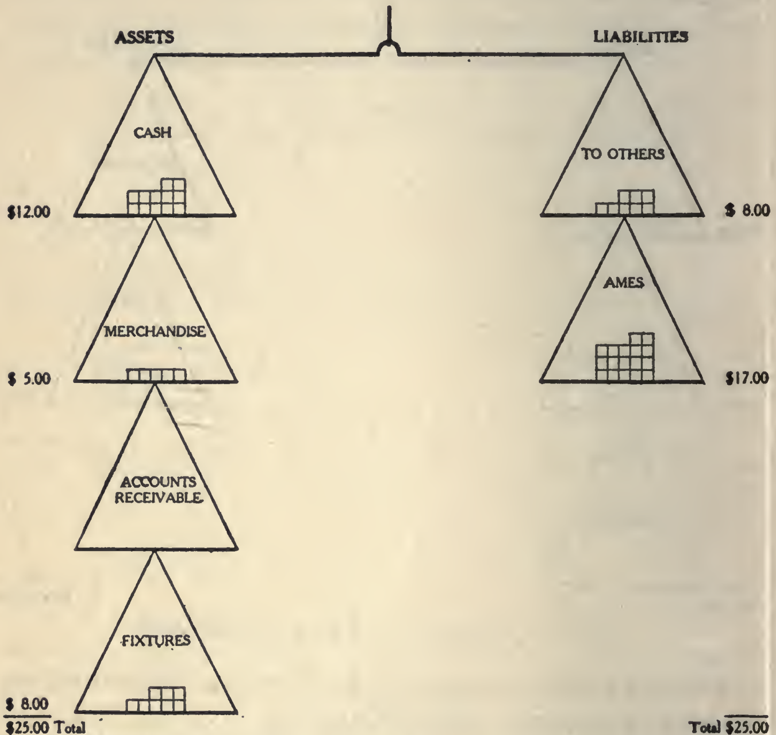


Fig. 9.—Condition after Buying Fixtures on Account for $8.00

are ever made, but *the same result is obtained by making additions on the other side.* This is a considerable improvement, since by labeling the weights with the date they were put on the balance, an examination would give a graphic picture of the history of the various transactions on any given date; of property on hand at any

given date; of the condition of Ames' (the proprietor's) account on any given date.

Having only one place to register all gains (items due to Ames) and all losses (items due from Ames) makes it difficult to analyze the sources and character of these various typified transactions of losses and gains, and it can readily be seen that if any considerable volume of business were done, it would be important to know and to analyze, in detail, the various loss and gain facts.

Disadvantages of Balance Method

This system of illustration by using a pair of scales is very good in one way; i. e., when an incomplete record is made—when all facts are not recorded—the scales get out of balance and thus *automatically* indicate an error; but there are certain obvious disadvantages about such a primitive arrangement which will be apparent. These may be remedied by doing away with the actual *physical* machinery and substituting therefor the picture or representation of such a pair of scales. We thus forego the advantage of an *automatic* loss of balance whenever an incomplete record is made but make up for it many times over by increased convenience and effectiveness, and if *figures* are substituted for the weights, we can check the correctness of our balance by footing the sides and noting whether or not they are equal. The date of the transactions can also be more conveniently recorded. Figure 11 shows such an arrangement using figures which represent the same results attained in Figure 10.

By using the pair of scales originally suggested, it is clear that various sets or *pairs* of scalepans with the numerous weights on them need not be kept hanging on the scale beam all the time. They might be kept in separate places and all brought together at periodic

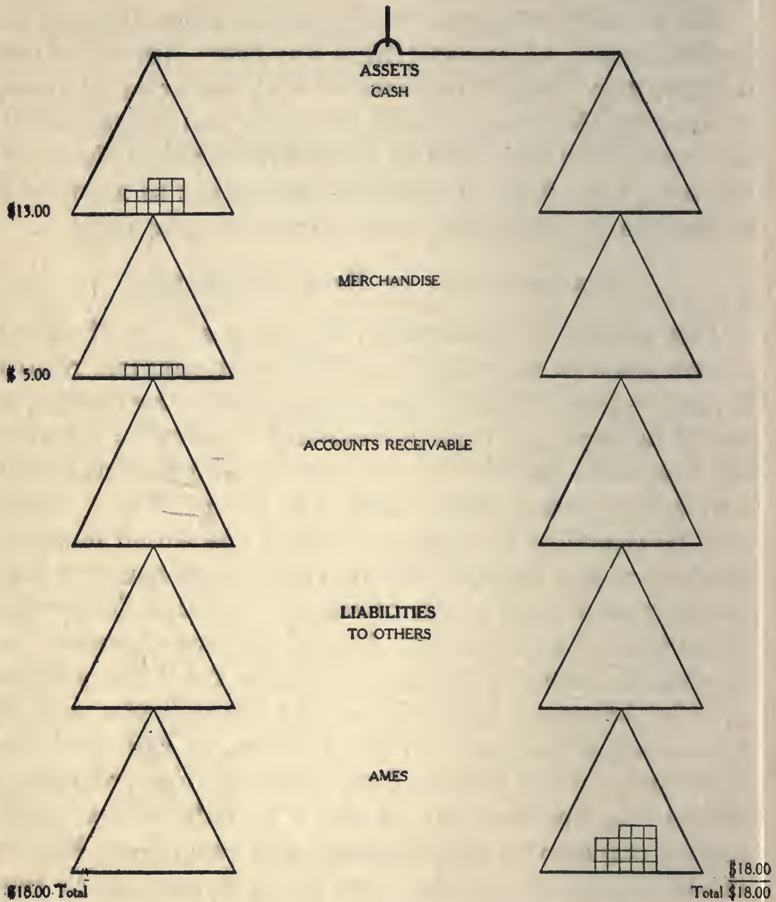


FIG. 10 (a).—Same Condition as Shown in Fig. 7, but with Different Arrangement of Scalepans

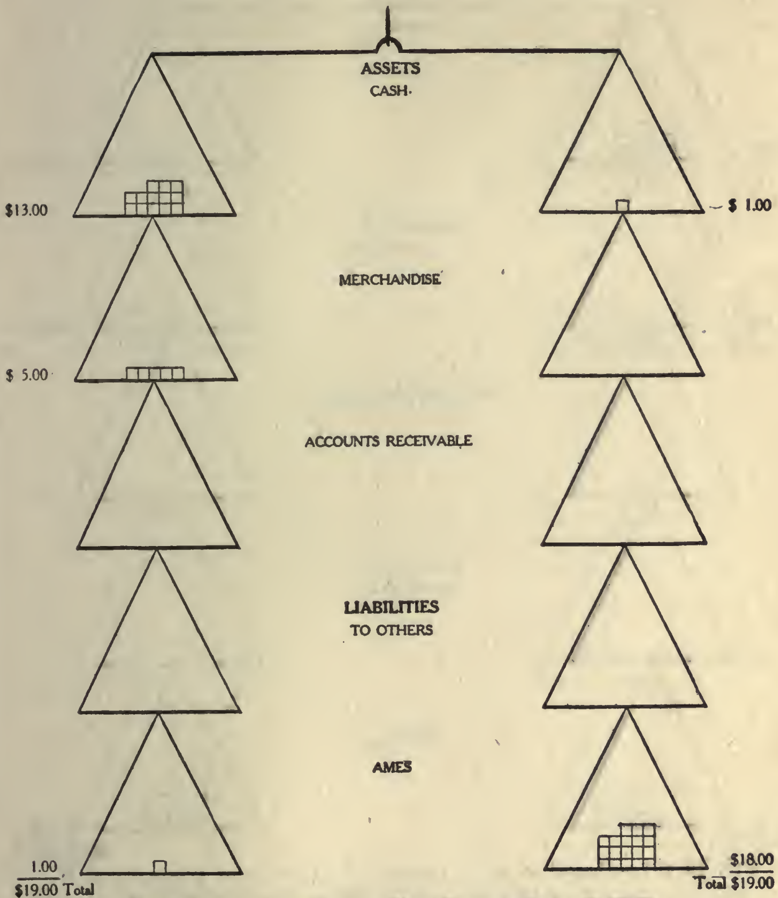


FIG. 10 (b).—Condition after Paying Rent of $1.00

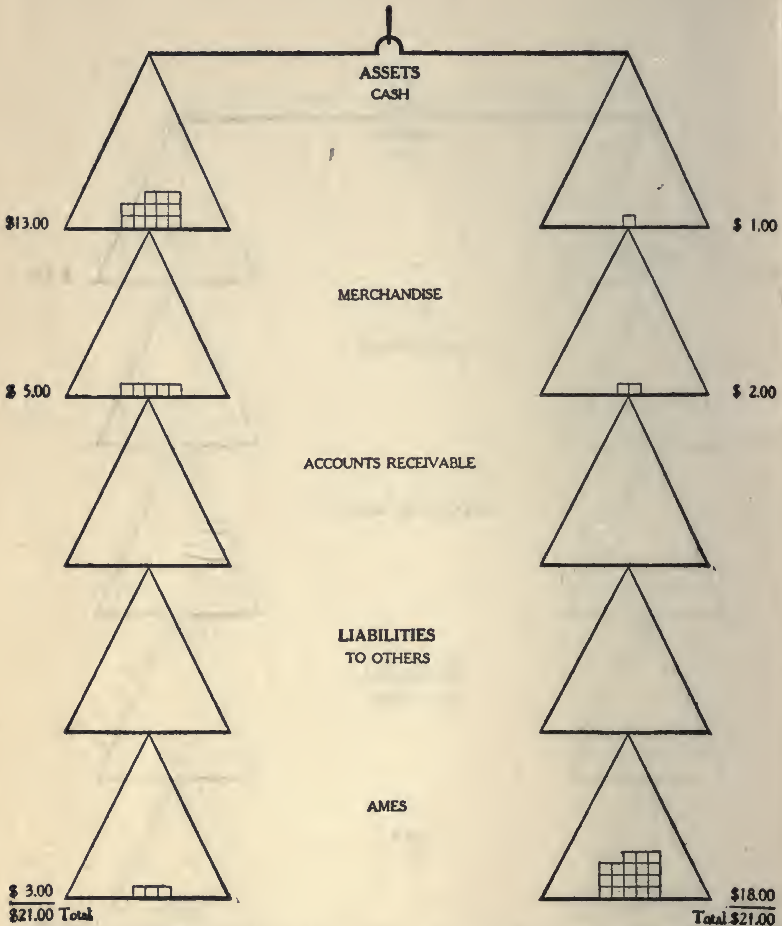


FIG. 10 (c).—Condition after Losing Two Bushels of Grain by Fire

This loss reduces Ames' credit balance by $2.00, his net worth now being $15.00 ($18.00 — $3.00) offset by assets as follows:

Cash ($13.00 — $1.00) =	$12.00
Merchandise ($5.00 — $2.00) =	3.00
Total....................	$15.00

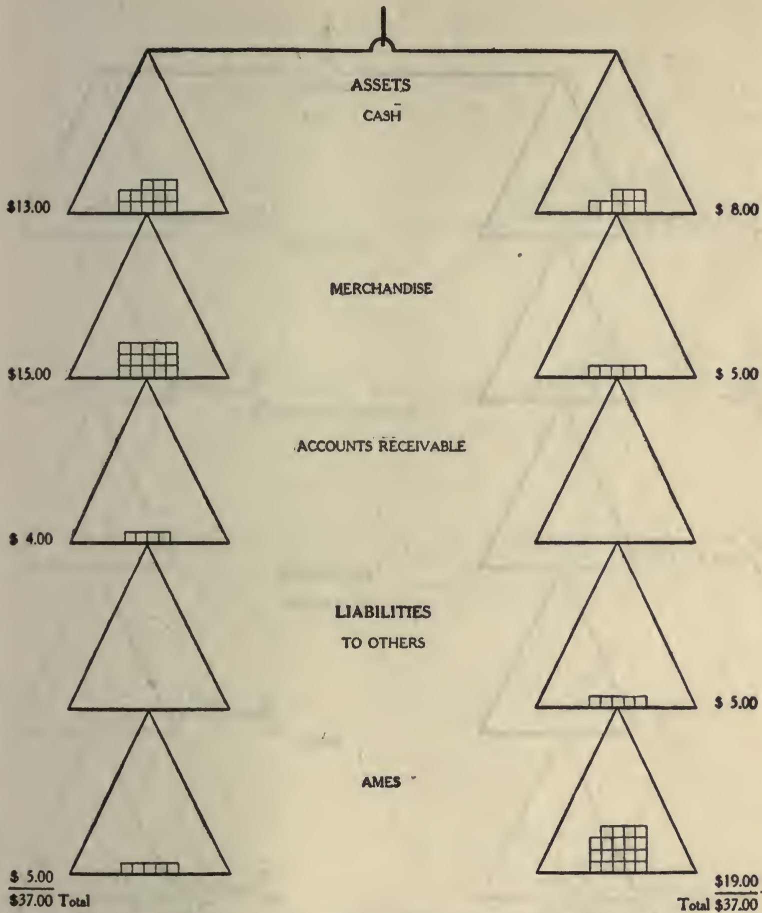


Fig. 10 (d).—Condition after Buying Five Bushels of Grain for Cash and Five Bushels on Account, Selling Three Bushels on Account for $4.00, and Paying $2.00 License Fee in Cash

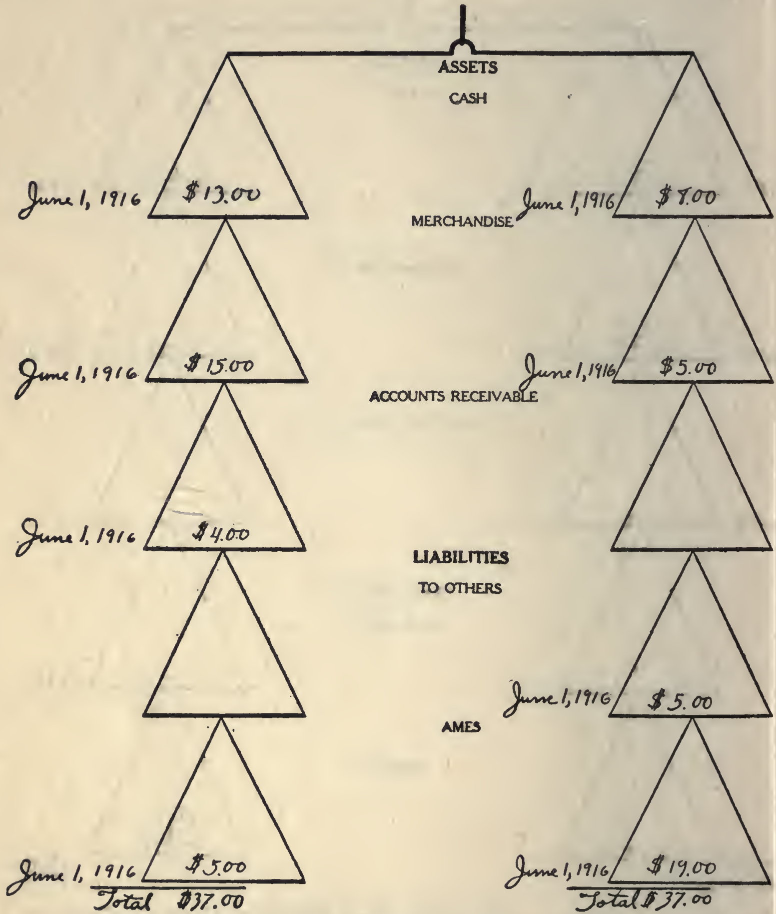


FIG. 11 (a).—Same Condition as Shown in Fig. 10 (d) (assumed date, June 1, 1916)

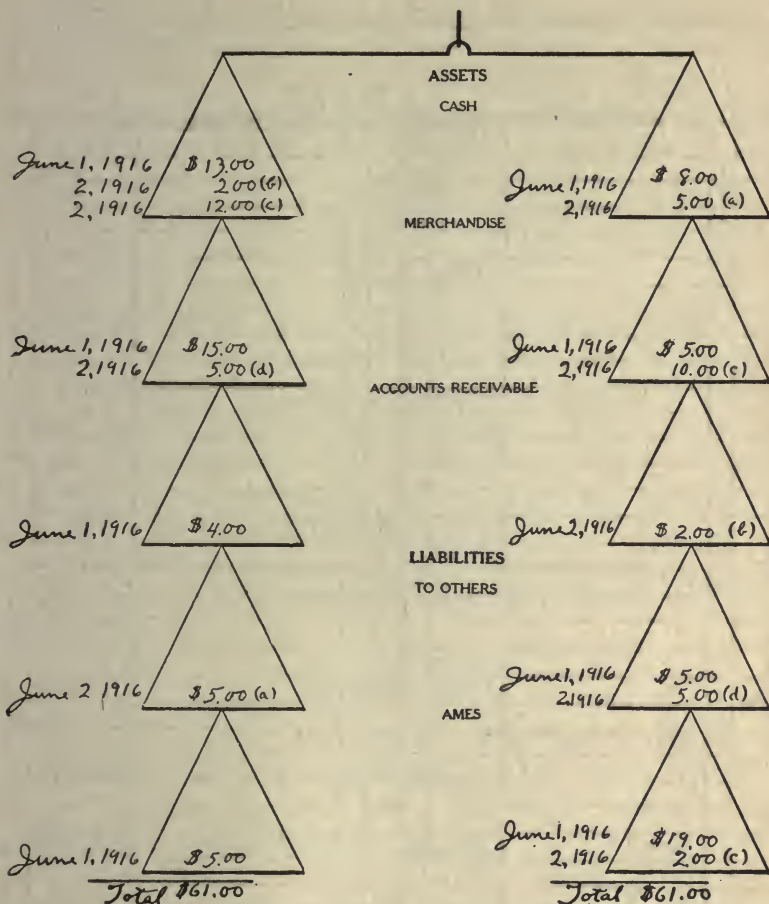


Fig. 11 (b).—Condition of June 2, 1916, after (1) Paying the Amount Owing to Others, (2) Collecting One-Half of the Accounts Receivable, (3) Selling $10.00 Worth of Grain for $12.00 in Cash, and (4) Buying $5.00 Worth of Merchandise on Account

			ASSETS						
1916			Cash						
June	1		13	00	June	1		8	00
	2		2	00		2		5	00
	2		12	00					
			Merchandise						
June	1		15	00	June	1		5	00
	2		5	00		2		10	00
			Accounts Receivable						
June	1		4	00	June	2		2	00
			LIABILITIES						
			To Others						
June	2		5	00	June	1		5	00
						2		5	00
			Ames						
June	1		5	00	June	1		19	00
						2		2	00
		Total	61	00			Total	61	00

Fig. 11 (c).—By the Addition of Certain Rulings We Convert the Balancing Arrangement into a Practical Working Form without at All Losing Sight of the Fundamental Balancing Principle

intervals to be balanced in the aggregate. It would be necessary to have them all brought together *at one time,* since it would be seldom that the individual pairs would balance alone. The *combination* balance, representing all recorded facts, is the test that is needed. In a similar way this pictorial balance (Figure 11) need not be all on one sheet of paper. A separate sheet may be headed "Cash," another one "Merchandise," another "Accounts Receivable," a fourth "Liabilities to Others," and a fifth "Liabilities to Ames," and so on. Totals of each side of each sheet may be taken, and these total figures for all the sheets may be incorporated in the balance even though the sheet headed "Cash" might be separately located from the one headed "Merchandise." This is a very important point since it allows for the greatest possible elasticity, convenience, and efficiency in the keeping of records. By bringing the figures together in one place at a moment of time at the end of regular periods for balancing, the test for completeness of record may be applied.

The Account

Each one of these information units may be called an "account." Thus we speak of the "Cash Account," the "Merchandise Account," etc. The word "account" is for convenience frequently omitted in written work, in which case it is usual to indicate the meaning as follows: *cash* referring to money but *Cash* (capitalized) referring to "Cash Account."

TEST QUESTIONS

1. What functions are served by symbols?

2. What is the fundamental characteristic of the symbol employed in this chapter?

3. How would Figure 10 (a) appear after buying 10 bushe[illegible] of grain on account for $1.00 per bushel and selling 13 [illegible] account for $2.00 per bushel and paying $5.00 [illegible]

4. What is an account?

CHAPTER II

BASES OF ACCOUNTING

The left-hand side of an account is for convenience called the "debit" side, and the right is known as the "credit" side. The law of balances is that the total figures on the left or debit side representing the aggregate of all the accounts must be exactly equal to the total figures representing the aggregate of all the accounts with amounts on the right or credit side. The working-out of this law has been illustrated in the preceding elementary examples. This fundamental conception is called the "Law of Double Entry," since the introduction of the several figures on the debit or credit side of an account is called "making entries." The book which contains the various accounts is known as the "Ledger."

The Ledger

In this Ledger we have a *device or mechanism* by the aid of which the manager of a business may obtain a comprehensive view of the situation of business as a whole, in which the activities of the business are reflected, and by which the history of the business is recorded. It is a "symbol"—a representation—a graphic picture of the business. The mechanics of operating this device is known as the "art of bookkeeping"; the act of adapting and regulating it and of interpreting its results is called the "science of accountancy." Upon the ledger page is the "account"; the collection of ledger pages is the

Ledger. In this Ledger is an account for every class of item owned by the business (assets), such as:

Cash Account.
Accounts Receivable Account.
Notes Receivable Account.
Merchandise Account.
Real Estate Account.
Buildings Account.
Machinery Account.
Etc.

These accounts may themselves be, and often are, subdivided or carved up into smaller units. Thus Machinery Account might be eliminated under this general designation, and in its place we might have

Lathes.
Milling Machines.
Planers.
Etc.

Or, if that classification were not desirable, the division might be made departmentally into

Machinery, Department A.
" " B.
" " C.
Etc.

Thus we see that the assets may be recorded either in large classes or in smaller ones, but the finer the subdivision, the greater the number of accounts in the Ledger, since each classification of assets will have an account in the Ledger to represent it.

In the Ledger we also have an account for every class of item *owed* by the business (liabilities), such as:

Accounts Payable Account.
Notes Payable Account.
Mortgages Payable Account.
The obligation of the business represented by the Proprietor's Account.
Etc.

These, like the assets, may be analyzed into their constituents. We have stated that this Ledger, this collection of accounts, has for its object the representation of the present state of the business assets and liabilities; hence it follows that when the status of any of these assets or liabilities changes, a corresponding change must be made in the proper ledger accounts. If this is not done, the accounts will no longer represent or reflect the truth as to the business and will, therefore, not be performing their proper functions.

When the business parts with $10.00 in money for $10.00 worth of merchandise, we must record this in our ledger account by entering $10.00 to the credit of Cash and $10.00 to the debit of Merchandise. When the business sells $10.00 worth of merchandise for $12.00 worth of verbal promises to pay, we must debit Accounts Receivable $12.00, credit Merchandise $10.00, and directly or indirectly credit the Proprietor $2.00, since the business owes him the profit. When a fire burns up the store, we will credit Buildings and debit directly or indirectly the Proprietor's Account, since the Proprietor's Account is chargeable with all losses.

Account Relations

The following changes are the only ones that can take place in a business and, therefore, the only ones that can be reflected by the ledger accounts.

1. An *increase in an asset,* which will always be

balanced by a decrease in another asset or an increase in some liability or both.

2. A *decrease in an asset,* which will always be *balanced* by an increase in another asset or a decrease in some liability or both.

3. An *increase in a liability,* which will always be *balanced* by a decrease in another liability or an increase in an asset or both.

4. A *decrease in a liability,* which will always be *balanced* by an increase in another liability or a decrease in an asset or both.

The reader, by referring to the graphic charts on preceding pages and making various practical experiments, may test the accuracy of this statement.

The Trial Balance

The periodic testing of the accounts to see if they are in balance is called "taking a trial balance."

A trial balance may be in two forms: a balance of totals or a balance of balances. For the ledger accounts shown on the next page the trial balance of totals would be as follows:

	Debits	Credits
Cash	$14,700.00	$12,350.00
Merchandise	19,850.00	12,200.00
Proprietor	2,500.00	12,500.00
Totals	$37,050.00	$37,050.00

A trial balance of balances for the same accounts would appear thus:

	Debits	Credits
Cash	$ 2,350.00	
Merchandise	7,650.00	
Proprietor		$10,000.00
Totals	$10,000.00	$10,000.00

CASH

Jan. 1	(a)	$1,000.00	Jan. 2	(g)	$ 850.00
5	(b)	3,000.00	6	(h)	2,000.00
15	(c)	4,300.00	16	(j)	3,800.00
20	(d)	3,500.00	21	(k)	3,200.00
30	(e)	2,900.00	31	(l)	2,500.00

MERCHANDISE

Jan. 1	(f)	$10,000.00	Jan. 5	(b)	$2,500.00
2	(g)	850.00	15	(c)	4,000.00
6	(h)	2,000.00	20	(d)	3,000.00
16	(j)	3,800.00	30	(e)	2,700.00
21	(k)	3,200.00			

PROPRIETOR

Jan. 31	(l)	$2,500.00	Jan. 1	(a)	$ 1,000.00
			1	(f)	10,000.00
			5	(b)	500.00
			15	(c)	300.00
			20	(d)	500.00
			30	(e)	200.00

In the second form of trial balance, shown on the opposite page, the difference between the two sides of each account is drawn off to determine whether or not they are in balance, while in the former the *totals* of both sides are used. Either method is correct, but the latter is perhaps preferable.

The fact is that a trial balance is not an absolute proof of correctness, but simply a proof of double entry—that for every debit there exists an equal credit or credits. The accounts might be greatly in error and yet balance perfectly. If Cash were credited and Merchandise debited for $10.00 when the Proprietor *should* have been debited, the trial balance will not necessarily reveal the mistake. The trial balance may be said to demand equal debits and credits and to have no concern with the distribution or location of those debits and credits.

Analysis of Accounts

There is nothing rigid or inelastic about accounts. They may be created, consolidated, analyzed, or annihilated, according to the needs of the business. If any one account is not illuminating, it may be analyzed into its logical parts and its contents transferred to several other accounts. The old account then may be balanced and indicated as inactive and as receiving no more entries.

Suppose, for example, that a concern owns the following:

Land and Factory at Chicago	$10,000.00
Land and Factory at New York	20,000.00
Land and Factory at Boston	5,000.00
Total	$35,000.00

In its Ledger it has one account as follows:

Real Estate

Jan. 1	$35,000.00		

On July 15 it desires to distinguish between the property in the various cities. It can close out the old account and substitute for it three new accounts as follows:

Real Estate

Jan. 1	$35,000.00	July 15 R.E.—Chicago (a)	$10,000.00
		15 R.E.—N. Y. (b)	20,000.00
		15 R.E.—Boston (c)	5,000.00
	$35,000.00		$35,000.00

REAL ESTATE—CHICAGO

July 15 ....(a) $10,000.00	

REAL ESTATE—NEW YORK

July 15.............(b) $20,000.00	

REAL ESTATE—BOSTON

July 15..............(c) $5,000.00	

As another illustration let the following represent a company's Merchandise Account:

GENERAL MERCHANDISE

Jan. 1..................	$ 600.00	Jan. 3..................	$ 500.00
5..................	65.00	11..................	400.00
7..................	110.00	21..................	22.00
10..................	155.00	25..................	301.00
15..................	211.00	27..................	67.00
20..................	540.00	31 Balance.........	709.00
25..................	308.00		
30..................	10.00		
	$1,999.00		$1,999.00
Feb. 1 Balance..........	$ 709.00		

Suppose that on February 2 it is decided to split this account into its several components: Hay, $200.00; Grain, $400.00; Ground Feed, $109.00. When this is done, the following will appear:

GENERAL MERCHANDISE

Jan. 1		$ 600.00	Jan. 3		$ 500.00
5		65.00	11		400.00
7		110.00	21		22.00
10		155.00	25		301.00
15		211.00	27		67.00
20		540.00	31	Balance[1]	709.00
25		308.00			
30		10.00			
		$1,999.00			$1,999.00
Feb. 1	Balance[1]	$ 709.00	Feb. 2	Hay (a)	$200.00
			2	Grain (b)	400.00
				Ground Feed (c)	109.00
		$ 709.00			$709.00

HAY

Feb. 2	(a)	$200.00	

GRAIN

Feb. 2	(b)	$400.00	

GROUND FEED

Feb. 2	(c)	$109.00	

[1] The operation of consolidating a number of debit and credit items in an account into one item is known as "transferring" or "forwarding the balance." It is an operation with which all those who have studied bookkeeping are familiar and, therefore, needs no description in this volume. Suffice it to say that it consists in making an entry on the smaller of the two sides of the account sufficient to equal the opposite total and thus balance it and in then ruling a single line under each column, which is followed by the total of each column. Under the total is ruled a double line. The balancing figure is then forwarded to, or brought down on, the opposite side. It requires but little thought to see that the status of the account is not changed in the least by this procedure.

'S ACCOUNT

ich this principle of subdivision been most thoroughly applied is the r's.

The Proprietor's Account is the one showing the accountability of the business to the one who furnishes the funds with which to conduct the business and who is entitled to all profits and is responsible for all losses. Whenever a profit is made, it must in the end be credited to the account representing the proprietor's investment, as in a sense it is in the nature of a special liability of the business to him. Whenever a loss occurs, it is debited to the Proprietor's Account, since he is responsible for all losses. A valid claim against the proprietor is in a similar sense in the nature of an asset of the business as any other valid claim is an asset. This conception of the business as a separate entity or individuality is particularly appropriate in a consideration of the theory of accounts. It is sometimes a little difficult to keep this separate individuality in mind, especially where the proprietor is also the manager, in which case he is *one* individual exercising dual functions. These two functions should be kept separate and distinct as an aid to any analysis of accounting principles to be made.

Inasmuch as the business has an existence apart from that of its proprietor, it is evident that the relation between the two is a matter of the highest importance. A business is instituted and carried on with one end, and only one, in view. This ultimate goal is *profit.* That business which disregards profit cannot long endure, and since the Proprietor's Account is the one that ultimately records changes resulting in profits or losses, it is the most important of all accounts. Proper analysis of the

Proprietor's Account is of the greatest importance. And we find it to be true that in modern accounting practice scientific analysis and classification have been carried to a finer point here than in any other account or set of accounts.

Subsidiary Proprietor's Account

Very few, if any, concerns are so simple in their nature and operation as to find a single Proprietor's Account sufficient for their needs. Practically every business is complex. It may trade in, not one staple article, but numerous articles. It has not half a dozen items of expense, but possibly hundreds or thousands. It may be composed not of one department, but of several. To manage such a business properly requires accurately classified knowledge for administrative guidance. It is not sufficient to know that the business as a whole is profitable. The manager must know just how profitable each department or other subdivision is. If he does not know this, how can he feel sure that his organization is not composed of several highly profitable departments and one or two very unprofitable ones whose elimination would result in a distinct increase in total profits? If several lines of merchandise are being sold, some may be contributing large profits, and some actually costing more than they produce. The manager *must* know these things, and he can get them in but one way—from the accounts in general and from the Proprietor's Account in particular. In order that this vital information may be yielded by the Proprietor's Account, a number of carefully selected subsidiary Proprietor's Accounts must be brought into existence.

For example, consider a small department store with

three selling departments. It would be proper to open ten accounts in the Ledger as follows:

1. Proprietor for Profits, Dept. 1
2. " " " " 2
3. " " " " 3
4. " " Expenses, " 1
5. " " " " 2
6. " " " " 3
7. Merchandise, Dept. 1
8. " " 2
9. " " 3
10. Proprietor's Main Account

The first two sets of accounts are pure proprietorship accounts, which will receive the entries that otherwise would go to the single proprietorship account heretofore discussed. The nature of the Proprietor's Account remains the same, but its *structure* is changed. It has been separated into appropriate parts. There still remains a single so-called "Proprietor's Account" (10 in above list), but it receives its entries *as summaries* of the data contained in the new proprietorship accounts (1 to 6 inclusive). The profit for a given period for a given department is determined by combining the two accounts—Proprietor for Profits, Dept. 1, and Proprietor for Expenses, Dept. 1. This final figure representing *net* profit is then transferred to the main Proprietor's Account, and the other two proprietorship accounts are closed. This is done with *each* set of accounts for *each* department. At the end of any accounting period it is possible to determine the profits not only of the store as a whole but of *each* department or subdivision. This principle, outlined only crudely so far, is capable of the

widest application and is the very foundation of modern accounting.

There will ordinarily be a separate Proprietor's Account for each distinct class of expenses or losses, such as:

1. Proprietor for Wages.
2. " " Rent.
3. " " Light.
4. " " Heat.
5. " " Interest.

In modern practice it is customary to drop the two words "proprietor for" and simply speak of these accounts as

1. Wages.
2. Rent.
3. Light.
4. Heat.
5. Interest.

Many have difficulty in seeing that these really represent *assets* of the business in the sense that they are accounts due from the proprietor. True, the proprietor seldom pays them, because the business usually owes him more than he owes the business, and consequently, the settlement when made is on a *net* basis. Hereafter, in this book, when we speak of those accounts that represent obligations to or amounts due from the proprietor, we will use the names which they habitually bear in accountancy, such as Rent, Wages, etc., and not the more cumbersome but more accurate titles of Proprietor for Rent, Proprietor for Wages, etc.

Nominal and Real Accounts

All these accounts due from or due to the proprietor are technically known as *"nominal accounts"* to distinguish them from all other asset and liability accounts which are called *"real accounts."*

Every nominal account may be said to have been "split off" from the original Proprietor's Account with which we started, and the results shown by each must eventually find their way back to the main Proprietor's Account.

Development of the Merchandise Account

We have seen that when a business buys merchandise, Merchandise Account is debited and Cash Account credited and that when merchandise is sold at an advanced price, Merchandise Account may be credited for the *cost price,* the Proprietor credited for the profit, and Cash (or Accounts Receivable) debited for the total. This is a theoretically correct proceeding, but there are many practical objections which make it inadvisable. With a large stock of rapidly moving merchandise acquired under varying conditions of market, it is difficult, if not impossible, to obtain the true cost price of each sale, nor is there any practical advantage gained by doing so.

A far more convenient, simple, and economical scheme is to debit Merchandise and credit Cash (or Accounts Payable) for the *cost* price of goods purchased and to debit Cash (or Accounts Receivable) and credit Merchandise for the *selling* price of goods sold. Here it is obvious that an inaccurate record has necessarily been made. Goods are debited to Merchandise on one basis—*cost,* and credited to Merchandise on another basis—*selling* price. What does the difference between the debit

and the credit side of Merchandise represent? It represents nothing. There is an element of profit or loss mixed in with merchandise, and this profit or loss *properly* belongs in the Proprietor's Account.

Inventories

We can, however, determine the facts as to profit or loss at any given time by an *inventory.* An inventory consists simply of a physical count or determination of the weight of articles and the assignment of a cost value to these articles. For example, suppose that 100 bushels of wheat are purchased at 90 cents a bushel, or $90.00, that sales amount to $120.00, and that, after having made those sales, the inventory shows 10 bushels of wheat still on hand which cost 90 cents a bushel, or $9.00. How would the profit be determined? In the first place, it is necessary to know how many bushels of wheat were *sold* and what the cost value was. If 100 bushels are purchased and 10 bushels are left, 90 bushels must have been sold. Each bushel cost 90 cents; therefore the total cost of the *goods sold* is 90 × 90 cents, or $81.00. Therefore $120.00 worth of goods were sold that cost but $81.00. $120.00 — $81.00 = $39.00 profit. This profit can then be placed to the credit of the Proprietor's Account and represents the profits on all wheat transactions for the period. This is more efficient, economical, and satisfactory than laboriously figuring the profit on each separate sale, and yet it arrives at the same final result. It is simply a short cut to the facts existing at the end of the accounting period.

MERCHANDISE

Jan. 1	Purchases	$ 90.00	Jan. 2	Sales	$ 30.00
	Gross Profit Transferred to Proprietor's Account....	39.00	17	"	50.00
			23	"	19.00
			24	"	7.00
			27	"	14.00
			31	Inventory	9.00
		$129.00			$129.00
Feb. 1	Inventory	$ 9.00			

Note.—The reader will observe that *adding* inventory on the credit side is equivalent to subtracting it from the debit side. Bookkeeping technique forbids making deductions in accounts but prescribes the equivalent of *additions on the opposite side.*

MIXED ACCOUNTS

The Merchandise Account, as above shown, is what is known as a "mixed account." A mixed account is one which is partly real and partly nominal. Mixed accounts are not looked upon with favor by the best accountants, and for that reason they are being used less and less. There is no necessity for any mixed accounts, since they may be easily analyzed into their component parts, or accounts, which are either wholly real or nominal. Thus, the Merchandise Account above shown can be discontinued and three other accounts created to take its place. These three accounts are:

1. Sales Account.
2. Purchase Account.
3. Inventory Account.

The Sales Account is credited with all sales at selling price, the Purchase Account is debited with all purchases at cost, and the Inventory Account registers the result of the periodic inventory. The profit at any time is determined by adding the inventory of goods on hand at the

beginning of the period to the total purchases made and from that sum deducting the final inventory. The balance equals the cost of goods sold, and the difference between it and the balance of the Sales Account represents gross profit.

For example, on June 1, 1916, there were goods on hand (determined by inventory) of $8,332.18. Purchases during June amounted to $27,121.90. Goods on hand, June 30, 1916 (determined by inventory), amounted to $10,883.38. Total sales during June equaled $27,115.99. To determine the profit for June the following calculation is made:

Total Sales in June		$27,115.99
Inventory, June 1	$ 8,332.18	
Add—Purchases during June	27,121.90	
	$35,454.08	
Deduct—Inventory, June 30	10,883.38	
Cost of Goods Sold		24,570.70
Gross Profit		$ 2,545.29

The Accounting Period

With the simple mechanical contrivance suggested in the early part of Chapter I it is possible to determine the condition of the business from moment to moment. The various changes since made, together with others not yet mentioned, render this impractical, if not impossible. We must be satisfied, therefore, with a *periodic* revelation of the business condition. This, however, is not a serious drawback. It is not necessary to know the exact facts hour by hour or day by day. It is sufficient to obtain them at certain regular intervals. The regular interval for any business, be it a month or a year, is called the "accounting period."

The accounting period starts with all the nominal or sub-proprietorship accounts in balance, with the exception of the main Proprietor's Account. During the accounting period certain changes in the business take place, which are registered in the accounts. At the end of the period the balances of the proprietorship or nominal accounts are transferred to the main Proprietor's Account, and the Ledger is then ready to receive entries for the next accounting period.

Balance Sheet and Profit and Loss Statements

The end of every complete accounting period is signalized by two operations: the preparation of a statement of profit and loss and the preparation of a balance sheet. The *statement of profit and loss* is simply a conventional recital of the various debits and credits which are entered in the nominal accounts representing losses or gains. This statement is constructed according to a definite plan and is a classified exhibit, not a mere list or schedule. The *balance sheet* is a trial balance of the Ledger *after* the nominal or proprietorship accounts have been closed out into the main Proprietor's Account. It is a trial balance of *balances* and not of totals, and it is taken *after*, and *not before*, the nominal accounts have been consolidated. It is thus a list of the balances of all real accounts in the Ledger, or a list of the assets and the liabilities as shown by the records (including, of course, the Proprietor's Account, which is for the purpose of the balance a liability and which itself includes the balances of all the nominal accounts).

The functions of these two statements are now plain. The balance sheet shows the condition of the business at the end of the accounting period. It is like a photographic snapshot, since it gives a permanent picture of

a rapidly changing business as of a definite moment of time. The statement of profit and loss fills in the gap between two successive balance sheets, explaining the differences existing between them and telling the story of results accomplished by the transactions.

It has been said that accounting has only two principal objects to determine: (a) at a definite period the financial position of the business and (b) the causes for such increases and decreases. The first function is that of the balance sheet and the second, that of the statement of profit and loss.

The technical preparation of these statements may well be left for treatment in a later chapter, but their importance must be fully appreciated now. Without them the book records of a business would be almost valueless.

The length of the accounting period is not essential. The important thing is that these periods should be of a uniform length. The chief use of any kind of record is for comparison and, in order that comparison of two statements of profit and loss may be valuable, they must cover the same standard period. The most commonly employed unit is the year, although many concerns now use the month. The objection to the month as a unit is that all months are not equal in time; some months contain four and some five Sundays, some months have thirty-one days and others less. A somewhat better small unit is the four weeks' period and, where it can conveniently be employed, it is coming into favor. Likewise, for comparative purposes, the two periodical statements, the statement of profit and loss and the balance sheet, should be uniform in structure with the similar statements of other periods.

The Journal

So far, the Ledger is the only book we have considered, and as a matter of fact, it is the one *significant record* in any business. It can be seen, however, that

Fig. 12.—The Traditional Journal Form

even in a simple business appalling inaccuracy would result if all entries were made directly in the Ledger. Through carelessness errors would result that would disturb the balance—the most important characteristic of the Ledger. Through the inability of the average human

mind to grasp and hold a complex situation comprehensively, it becomes necessary to draw up a memorandum of the entries before actually making them in the Ledger. The figures on this memorandum may be tested for "balance" and the amounts then *transferred* to the Ledger with a feeling of confidence that they are correct. This memorandum classifies the debits and credits and furnishes a guide and authority to make the ledger entries. It is really an order to the ledger clerk to make certain entries. If permanently kept, it affords ready means of locating errors in the Ledger should that book be out of balance, since the two can be compared for discrepancies. Such a memorandum, in whatever technical forms it may be kept, is a Journal. The traditional Journal[2] is a blank book ruled as shown in Figure 12. The extreme right-hand column receives all figures which are to be credits in the Ledger, and the column to the left of it receives figures which are to be debits in the Ledger. Since debits and credits in the Ledger must be equal, debits and credits in the Journal must also be equal. Therefore, a test is obtained by adding up these two journal columns and comparing the totals, which should agree.

Posting

The operation of transferring figures from the Journal to the Ledger is known as "posting." It is one of the rigid rules of modern bookkeeping that all ledger entries must be "posted" and never made direct. When this rule is in force, the authority for any entry can be determined by checking it back against the Journal (or

[2] The Journal, as described in this chapter, is pedagogically very important, but in its traditional form it has practically disappeared from modern practice. The journal *function* still remains, however. The modern substitutes for the Journal will be described at length in Chapter III.

one of its modern substitutes). This rule, of course, does not apply to the forwarding of balances, which involves no *new* entry.

The journal entries for the transactions in Figure 11 might appear as follows:

Date	Account	Debit	Credit
1916			
June 2	Accounts Payable	$ 5.00	
	Cash		$ 5.00
2	Cash	2.00	
	Accounts Receivable		2.00
2	Cash	12.00	
	Merchandise		10.00
	Ames		2.00
2	Merchandise	5.00	
	Accounts Payable		5.00

For convenience in tracing items between the Journal and the Ledger, it is customary to indicate in each journal entry the page of the Ledger to which the posting was made and in the Ledger Account the journal page from which it came.

Modern business conditions have brought about a subdivision of the Journal into special journals which record only particular *classes* of facts. Most of them are not called journals for fear of confusing them with the General Journal, which still is used to handle certain special or unusual transactions or adjustment entries which cannot be conveniently cared for otherwise. The usual journals employed in nearly every business are:

The Cash Journals.
The Purchase Journal.
The Sales Journal.
The General Journal.

In addition to these four there are other journals in common use. These will be discussed at length in Chapter III.

The Controlling Account and Subsidiary Ledger

So far in our discussion we have only hinted at the method of handling two of the most important accounts in the Ledger—Accounts Receivable and Accounts Payable. Accounts Receivable is the group name which is applied to the aggregate of amounts which others owe to us, while Accounts Payable is the group name for the total of all items which we owe to others.

Practically all modern business is done on a credit rather than a cash basis. Nearly all the customers who come into a store purchase goods "on account." The basis of credit is trust. Those trusted customers are permitted to purchase goods based merely on their promise to pay at some future date. Such "promises to pay" are assets. Each regular customer may have an account in the General Ledger headed with his name and, when sales are made to him, his account is charged with the amount of the sale. When he makes payments, his account is credited. His account at all times shows the actual amount which he owes.

Since a storekeeper is in business for the purpose of merchandising, and the better storekeeper he is, the more merchandising he can do, it follows that a good merchant may have a large number of such customers' accounts in his General Ledger. The more accounts there are in the General Ledger, the more chance for error exists and the more difficult it becomes to keep the Ledger in balance. The remedy for this situation is to take all the customers' accounts out of the General Ledger, substituting for them a single account entitled "Accounts Receivable." The individual customers' accounts may be bound in a *separate* loose-leaf ledger. The trial balance of such a customers' ledger should show a net figure exactly equal to the bal-

ance of the Accounts Receivable Account in the General Ledger.

Such an Accounts Receivable Account is known as a "controlling account." A controlling account is a summary account, which receives *in totals* the debits and credits which its subsidiary ledger accounts receive *in detail.* If the total debits to various customers' accounts in the subsidiary ledger should be $10,000.00 during a given month, then the Accounts Receivable Account should be charged with $10,000.00 in one lump sum at the end of the month. If the sum of credits to individual customers' accounts is $7,000.00 during that same period, then the controlling account must be credited with $7,000.00 in a lump at the end of that month. The manner of handling such postings is discussed in a later chapter.

Control Accounts and Double Entry

The important point to note is that the General Ledger is complete in itself. As many entries as desired may be made in the subsidiary records without affecting the General Ledger in the least. The double entry system revolves around the General Ledger as its unit and, in a certain sense, has no concern with any other book. As long as the General Ledger balances, we have double entry regardless of any supporting schedules, analytical records, or subsidiary ledgers.

Other Controlling Accounts

In addition to the Accounts Receivable Account there are several other controlling accounts commonly employed. The various creditors' accounts are usually kept in a subsidiary ledger and controlled by an Accounts Payable Account in the General Ledger. The Notes Receivable Account and the Notes Payable Account are

often controlling accounts. The former controls the notes themselves, and its balance must agree with the unpaid notes on file or on hand in the depository. The Notes Payable Account controls a memorandum record known as a "Notes Register."[3]

In conclusion, a controlling account is one which is supported by subsidiary detailed records. The information appears in totals, showing in one aggregate amount the net balance of its subsidiary accounts. Controlling accounts are almost universally employed in modern business and, as a matter of fact, the General Ledger of a large corporation may consist almost entirely of control accounts.

Incomplete Double Entry

Were it not for the fact that the C. P. A. examinations of the various states sometimes ask questions regarding "incomplete double entry" or "single entry," as it is often called, it would hardly be necessary to do more than mention the subject in this book. Very few large business houses use anything but double entry in these modern days.

The distinguishing feature of single entry is its personal character. It generally keeps accounts with persons and not with forces or things. It is the double entry system with property accounts and the various non-personal liability accounts eliminated.

It is clear that this incompleteness renders it incapable of proof by balance. This reason alone is sufficient argument against its use. Furthermore, no profit and loss statement can be prepared from the books, since nominal accounts are not kept. No balance sheet can be prepared

[3] Discussion of other controlling accounts will appear in following chapters in connection with the several subjects as they are reached.

since a balance sheet is fundamentally a post-closing trial balance of the General Ledger; but a substitute for the balance sheet may be prepared by taking a physical inventory of *all* property owned and of *all* liabilities and by listing the amounts so determined in balance sheet form, the difference between the assets and liabilities representing the proprietor's interest in the business. This exhibit is called a "statement of resources and liabilities."

A comparison of two successive statements of resources and liabilities will afford *some* information as to the events that took place between the two dates. A comparison of the figures on such statements will indicate the net gain or loss of the period, if all withdrawals or additional investments have been taken into consideration.

These, at best, are clumsy expedients, and single entry has no place in modern accounting, although it is still found in use with some smaller business houses, particularly in the rural districts.

The accountant should know how to change a set of books from *incomplete* double entry (or single entry) to *complete* double entry. The solution, in theory, is comparatively simple—to make complete what is incomplete something must be supplied, that which is missing must be furnished. Therefore, the various non-personal accounts must be added to the single entry system to obtain the double entry. The method of doing this is to prepare a statement of resources and liabilities and to use this statement as the basis of a journal entry. Since the personal accounts are *already* in the Ledger, it is not necessary to post them, but all the other items are posted, and the Ledger is then on a double entry basis.

Positive and Negative Inventories

We have discussed very briefly the use of a physical inventory in connection with the old-fashioned Merchandise Account. An inventory consists of a physical count (or measurement of volume or weight) of articles (or materials) together with their valuation. It is employed to correct a mixed account containing both real and nominal elements, its use being by no means confined to the Merchandise Account. For instance, assume a business having an accounting period of one year extending from the first day of January to the last day of December. The management insures the buildings and pays a premium of $100.00, the protection to cover a period of two years. Insurance may be considered as an expense, in which case the following entry [4] will be made:

1915			
Jan. 1	Insurance (a nominal account)	$100.00	
	Cash		$100.00

On December 31 the books are closed, and the balances of all nominal accounts, among which is the Insurance Account, are transferred into the Proprietor's Account. This $100.00 spent for insurance is a loss—an expense—and serves to reduce the amount of profits. On December 31 of the *next* year there will be no insurance item to take into consideration before determining profits. Because the insurance was paid for in *advance,* the first year must bear the entire burden and the second year none, although the benefit applies equally to both years. We see, therefore, that the profits of the first year have been "robbed"

[4] This entry would ordinarily be made through the Cash Journal (or the Cash Book, as it is usually designated), but in this case as in others hereafter, we shall indicate the entry *as though* it were a general journal entry. This is customary among accountancy writers, and we shall conform to the established practice.

for the benefit of the second by the amount of one-half the premium, or $50.00. The results for each year are untrue, and no fair comparison can be made between them. This can be plainly seen, since it is apparent that the business might possibly have entered into an agreement with the Insurance Company to make yearly payments. In this case $50.00 would have been debited to Insurance and absorbed by the Proprietor's Account the *first* year and another $50.00 the second year, thus making a fair and equitable division between the two periods. It is obvious, however, that cash payments cannot always be arranged in this convenient way. The device which is used in such cases is the inventory. If the business disburses $100.00 for insurance the first year, we have seen that the following entry is made:

1915			
Jan. 1	Insurance (a nominal account)	$100.00	
	Cash		$100.00

At the end of the year an inventory is taken of the insurance, and when it is found that half of the protection has been used up and that half of it is still available for another year, the following journal entry is made:

1915			
Dec. 31	Unexpired Insurance (a real account)	$50.00	
	Insurance (a nominal account)		$50.00

After this entry the balance of the Insurance Account is only $50.00, which is transferred to the Proprietor's Account.

At the end of the next year an inventory of unexpired insurance develops that no more protection is due on the policy. The asset of unexpired insurance is non-existent and must be written off. Posting of the following journal entry accomplishes this purpose:

1916
Dec. 31 Insurance (nominal account)....................$50.00
Unexpired Insurance (real account)..................$50.00

The balance of Insurance may then be transferred to the Proprietor's Account.

There are two ways of handling accounts which are partly asset and partly expense. One way is to remove the asset elements, leaving a true expense account. The other is to remove the expense element, leaving a true asset account. Either method is absolutely proper. Thus, in the example just mentioned, either of the two following entries would have been made at the end of the first year:

(a)
1915
Dec. 31 Unexpired Insurance (asset)...................$50.00
Insurance (mixed) $50.00
(The Insurance Account being left wholly "expense")

(b)
1915
Dec. 31 Expired Insurance (expense)...................$50.00
Insurance (mixed) $50.00
(The Insurance Account being left wholly "asset")

The principle involved in this discussion is that an expenditure should be justly distributed over the accounting periods benefited. Thus, if the insurance protection lasts two years, the expense incurred should bear equally upon those of two years. This involves treating the expense as an asset which will expire as time passes. It appears on the balance sheet as an asset, i. e., Unexpired Insurance, but it is not a permanent asset and with the passage of time finds its way into the nominal accounts. Such assets are known as "Deferred Assets," "Deferred Debits," or "Deferred Charges."

Liability Inventories

In addition to the asset inventories discussed in the foregoing section, there are also liability inventories. The purpose of such inventories is also to equalize charges over two or more accounting periods. For example, at the end of a given accounting period it may be noted that a certain portion of the year's taxes have accrued but have not yet been paid. Suppose experience shows that the year's taxes will be $120.00, payable at the end of the tax year. The period for which the tax will be assessed may not coincide with the concern's accounting period; wherefore, part of the $120.00 is chargeable to one accounting period and the balance to the next. If two months' taxes were chargeable to the first period, an entry would be made:

Taxes (expense)	$20.00	
Taxes Payable Accrued (liability)		$20.00

The item of taxes would then be absorbed in the Proprietor's Account for the current accounting period, while the item of taxes payable accrued would appear as a liability on the balance sheet and would be cared for in the subsequent accounting period when the taxes are actually paid.

As another illustration, suppose wages have accrued at the end of the period. If wages are payable every Saturday and the end of the accounting period falls on Wednesday, the wages for Monday, Tuesday, and Wednesday will not have been paid. For these three days they might amount to $800.00. To set this item up as an accrued liability and to insure that the proper period bears the burden, the following entry is made:

Wages (expense)	$800.00	
Accrued Wages Payable (liability)		$800.00

The item of wages $800.00, together with the balance of the Wages Account, is absorbed by the Proprietor's Account, and the item of accrued wages payable appears as a liability on the balance sheet.

If such asset and liability inventory adjustments are not made at the end of an accounting period, it is clear that the accidental circumstances of payment or non-payment of cash will affect the profits of the period either favorably or unfavorably. Either is undesirable, since a distorted and untrue picture of affairs of the business is thus given.

Conclusion

A discussion of technique is not desirable in a work on accounting principles, since these things pertain principally to the art of bookkeeping. We have, therefore, not made an attempt to go into these matters. The actual methods of consolidating the balances of nominal accounts with the Proprietor's Account should be understood by the reader before studying this text. Suffice it to say that journal entries are made which debit all nominal accounts which have credit balances and credit all nominal accounts which have debit balances, the contra entries going to an intermediate proprietorship account usually called the "Profit and Loss Account." The balance of this Profit and Loss Account, representing a profit or a loss, is then by a journal entry transferred to the Proprietor's Account.

We have now seen that, because of the structure of the human mind, man requires symbols or representations of complex things in order that they may be thereby brought within his comprehension. The symbol of the balance is the one used to represent the business. Its fundamental characteristic is its balancing feature, and from

this comes the double entry rule—the law of debits and credits. The business is represented or symbolized by a collection of accounts, which are combined into the General Ledger. Changes in the business are reflected in that ledger by appropriate debit and credit entries, which theoretically may be made directly to the accounts affected, but which for various practical reasons are "posted" from the Journal (or one of its modern substitutes). The balance of this Ledger is tested by a device called "the trial balance." The Ledger represents as debits the assets of the business and as credits the liabilities of the business. The liabilities for practical purposes are divided into liabilities to the proprietor and liabilities to others, the Proprietor's Account normally showing a credit balance but receiving debit entries for all expenses and losses. The proprietor is responsible for all losses; hence they are in a technical sense assets of the business—an account receivable from the proprietor. The proprietor is entitled to all profits; hence they are technically liabilities of the business to the proprietor—an account payable to the proprietor.

For purposes of analysis a great many separate proprietor's accounts are usually used, each one receiving only certain *kinds* of entries, but the balances of these proprietorship, or nominal, accounts are periodically transferred to some intermediate proprietor's account where the net result, whether a gain or a loss, is determined. These periods are known as "accounting periods" and should be uniform for comparative purposes. Because the results of successive accounting periods are compared with each other, it is essential that one period be not unfairly favored at the expense of another, that expenses and gains be recorded in the periods during which incurred or earned. This has

given rise to expense and liability inventories—Deferred Debit Items and Deferred Credit Items as they are sometimes technically called.

At the end of every accounting period two main exhibits are prepared—the statement of profit and loss and the balance sheet. The latter shows the balances of the ledger accounts at a definite moment of time; the former presents in a systematic way a summary of the debits and credits made to the various nominal or proprietorship accounts during the accounting period.

TEST QUESTIONS

1. What is the Ledger?
2. What is the relation of the proprietor to the business?
3. Why is a trial balance of balances as good as a trial balance of totals in testing for completeness of record?
4. What is the fundamental distinction between real and nominal accounts?
5. What are the elements of the mixed merchandise account?

CHAPTER III

DEVELOPMENT OF THE SPECIAL JOURNALS

In the preceding chapter we found that a business is symbolized or represented by a collection of accounts in a record which is called "the Ledger" and that current changes in the business are reflected by changes in the general ledger accounts. The method of showing such changes in the Ledger is called "making ledger entries." In an ideally simple business requiring only a few simple accounts, these entries might be made directly in the Ledger, but the complexity of modern business renders such procedure absolutely impossible, and it is now universally the custom to make a formal preliminary memorandum of each ledger entry. This memorandum acts as an order on the ledger clerk to make certain entries and should be permanently retained, since it may be desirable at any time to investigate the authority for the entries. Such a collection of memoranda is called "a Journal."

Function of the Journal

The modern, inflexible rule of bookkeeping is that no ledger entry shall be made, unless it is posted from a record performing the function of a journal.

The Journal classifies all business transactions into debits and credits, and from it the debit and credit figures are posted to the appropriate debit or credit sides of the specified ledger accounts. The number of the ledger page

is then shown on the Journal in the space provided, called "the folio column," and the number of the journal page is also shown on the Ledger, thus facilitating cross references.

Example: June 1, 1916, John Smith bought merchandise on account from Arthur Ramsey amounting to $200.00. June 1, John Smith gave his note for $150.00 @ 6% to Arthur Ramsey in part payment of the account. June 30, John Smith paid the note, the interest, and the balance of the open account in cash, less discount of 1% on the open account.

JOURNAL—JOHN SMITH

1916				
June 1	Merchandise Purchases	(a)	$200.00	
	Accounts Payable	(a)		$200.00
	(Arthur Ramsey—$200.00)[1]			
June 1	Accounts Payable	(b)	150.00	
	(Arthur Ramsey—$150.00)[1]			
	Notes Payable	(b)		150.00
June 30	Accounts Payable	(c)	50.00	
	(Arthur Ramsey—$50.00)[1]			
	Notes Payable	(c)	150.00	
	Interest Paid	(c)	.75	
	Cash	(c)		200.25
	Purchase Discounts	(c)		.50

The transactions shown above in journal entry form are now ready for posting to the General Ledger. (The postings to the subsidiary Purchase, or Creditors', Ledger need not be illustrated at this time.) The ledger ac-

[1] The items in parentheses are posted only to the subsidiary Purchase Ledger. This Purchase Ledger has Accounts Payable as its general ledger controlling account. The method of handling controlling accounts illustrated in the above journal entry is not in ordinary use, since certain labor-saving devices, to be explained hereafter, are usually employed.

counts, after postings from the above journal entries have been made, appear as follows:

MERCHANDISE PURCHASES

1916	
June 1................(a) $200.00	

ACCOUNTS PAYABLE

1916	1916
June 1..............(b) $150.00	June 1................(a) $200.00
30..............(c) 50.00	

NOTES PAYABLE

1916	1916
June 30..............(c) $150.00	June 1................(b) $150.00

INTEREST PAID

1916	
June 30.................(c) $ .75	

PURCHASE DISCOUNTS

	1916
	June 30.................(c) $ .50

CASH

	1916
	June 30...............(c) $200.25

COLUMNAR JOURNAL

The combination of a single Journal and a General Ledger (with two subsidiary ledgers for recording de-

tails of Accounts Receivable and Accounts Payable) is sufficient to handle any kind of business transaction, no matter how complex it may be. A little thought, however, will show that there will be a great many transactions to be recorded which are similar in nature, although not in amount. Even in a small business there will be a great many debits and credits to the Cash Account during any one accounting period; there will be many entries to Merchandise Purchases, to Merchandise Sales, to Accounts Receivable, and to Accounts Payable Accounts.

It would be perfectly proper in the case of cash transactions to post day by day from the Journal to the Ledger all debits and credits *except* those to the Cash Account; at the end of the month the bookkeeper could pick out of the Journal all debits to Cash, total them on an adding machine, and post *that total in one lump sum* to the debit of the Cash Account. In a similar way he could pick out all journal credits to Cash and post *the total* to the credit of the Cash Account. If there were fifty debits and credits to Cash scattered through the Journal, the bookkeeper would save forty-eight general ledger entries by the above plan. The one danger to be feared is that he will overlook one or more items in arriving at his total. This, of course, would throw the General Ledger out of balance. To avoid this possibility of error, two extra columns may be put in the Journal, one headed "Cash-Dr." and the other, "Cash-Cr." All cash items will appear in these *special* columns instead of in the regular debit and credit columns. At the end of the month the "Cash-Dr." column is footed and the total posted to the debit of the Cash Account in one lump sum. The "Cash-Cr." column is also footed and the total posted to the credit of the Cash Account.

A journal page in simplest form is shown in Figure 13,

Date	Day	Account	Ref.	Debit		Credit	
1916 June	1	Cash	(a)	5,000	00		
		John Smith	(a)			5,000	00
		For investment in business started this date					
	2	Merchandise Purchases	(b)	3,000	00		
		Cash	(b)			3,000	00
	3	Merchandise Purchases	(c)	1,000	00		
		Accounts Payable	(c)			1,000	00
	5	Accounts Receivable	(d)	500	00		
		Merchandise Sales	(d)			500	00
	7	Accounts Payable	(e)	1,000	00		
		Cash	(e)			980	00
		Purchase Discounts	(e)			20	00
	9	Cash	(f)	250	00		
		Accounts Receivable	(f)			250	00
	15	Cash	(g)	900	00		
		Merchandise Sales	(g)			900	00
	18	Cash	(h)	100	00		
		Accounts Receivable	(h)			100	00
	21	Accounts Receivable	(j)	1,150	00		
		Merchandise Sales	(j)			1,150	00
	30	Cash	(k)	1,127	00		
		Sales Discount	(k)	23	00		
		Accounts Receivable	(k)			1,150	00

FIG. 13.—Illustration of Transactions Using Regular Journal Form
Compare with Fig. 14 for a better method of handling same transactions.

and one exactly the same, except that all cash items are segregated as explained, in Figure 14.

John Smith's cash account after posting the journal entries shown in Figure 13 appears as follows:

CASH—JOHN SMITH

1916			1916		
June 1	(a)	$5,000.00	June 2	(b)	$3,000.00
9	(f)	250.00	7	(e)	980.00
15	(g)	900.00	30 Balance		3,397.00
18	(h)	100.00			
30	(k)	1,127.00			
		$7,377.00			$7,377.00
July 31 Balance		$3,397.00			

John Smith's cash account after posting journal entries shown in Figure 14 appears as follows:

CASH—JOHN SMITH

1916		1916	
June 30	$7,377.00	June 30	$3,980.00
		30 Balance	3,397.00
	$7,377.00		$7,377.00
July 1 Balance	$3,397.00		

It can easily be seen that this is a great labor-saver where a number of cash items appear in the Journal. It is, of course, equally labor-saving when used with other classes of items. If a great many credit sales are made, two more columns may be added to the four already in the Journal. One of these may be headed "Accounts Receivable-Dr." and the other, "Merchandise Sales-Cr." The first column collects all amounts debitable to Ac-

JOURNAL

DATE		EXPLANATION	L. F.	CASH Dr.		CASH Cr.		SUNDRY Dr.		SUNDRY Cr.	
1916 June	1	Cash		5,000	00						
		John Smith	✓							5,000	00
		For investment in business									
	2	Merchandise Purchases	✓					3,000	00		
		Cash				3,000	00				
	3	Merchandise Purchases	✓					1,000	00		
		Accounts Payable	✓							1,000	00
	5	Accounts Receivable	✓					500	00		
		Merchandise Sales	✓							500	00
	7	Accounts Payable	✓					1,000	00		
		Cash				980	00				
		Purchase Discounts	✓							20	00
	9	Cash		250	00						
		Accounts Receivable	✓							250	00
	15	Cash		900	00						
		Merchandise Sales	✓							900	00
	18	Cash		100	00						
		Accounts Receivable	✓							100	00
	21	Accounts Receivable	✓					1,150	00		
		Merchandise Sales	✓							1,150	00
	30	Cash		1,127	00						
		Sales Discounts	✓					23	00		
		Accounts Receivable	✓							1,150	00
	30	Cash Account—Debit.	✓	7,377	00			7,377	00		
		Cash Account—Credit	✓			3,980	00			3,980	00
		General Totals (not posted)						14,050	00	14,050	00

FIG. 14.—Illustration of Transactions Using Columnar Journal
Compare with Fig. 13.

counts Receivable Account and holds them until the end of the month, at which time the *total* only is posted. In the same way "Merchandise Sales-Cr." collects and holds all credits for the Merchandise Sales Account until the end of the month, *total* only being posted.

A similar pair of columns can be used for Merchandise Purchases and Accounts Payable.

Any number of such special columns may be employed, limited only by the size of the Journal Book, which should not be too large for comfortable handling.

A Journal containing special columns for (1) Cash, (2) Accounts Receivable, (3) Accounts Payable, (4) Merchandise Purchases, and (5) Merchandise Sales, together with "general" columns for all items that cannot be "lumped" into any of the above five classes, will be ruled as shown in Figure 15.

You will note that the method of posting the columnar totals is to bring them into the "general" column. There are two reasons for this: (1) A test of balance is obtained by footing the two "general" columns, which should be equal *after* the special column footings have been transferred to them, and (2) it is in accord with a good rule which says that nothing shall be posted from a columnar journal save items in the "general" columns. Adherence to this rule prevents errors.

Specialized Journals

As the Journal continues to expand and new columns are added, the book becomes unwieldy and difficult to handle. Furthermore, as the business grows, the transactions increase to a number greater than one bookkeeper can handle and yet the Journal, so far as we have now developed it, can be used by only one bookkeeper at a time. What is more natural, under these circumstances,

JOURNAL

Sales Dr.	Purchase Dr.	Cash Dr.	Accounts Payable Dr.	Accounts Receivable Dr.	General Dr.	L. F.	June, 1916	L. F.	General Cr.	Accounts Receivable Cr.	Accounts Payable Cr.	Cash Cr.	Purchases Cr.	Sales Cr.
							-1-							
		5,000 00					Cash							
							John Smith	✓	5,000 00					
							-2-							
	3,000 00						Merchandise Purchases							
							Cash					3,000 00		
							-3-							
	1,000 00						Merchandise Purchases							
							Accounts Payable				1,000 00			
							-5-							
				500 00			Accounts Receivable							
							Merchandise Sales							500 00
							-7-							
			1,000 00				Accounts Payable							
							Cash					980 00		
							Purchase Discount	✓	20 00					
							-30-							
		1,127 00					Cash							
					23 00	✓	Sales Discount							
							Accounts Receivable			1,150 00				
	4000 00	7,377 00	1,000 00	1,650 00	23 00				5,020 00	1,500 00	1,000 00	3,980 00		2,550 00
							Sales	✓	2,550 00					
					4,000 00	✓	Purchases							
					7,377 00	✓	Cash	✓	3,980 00					
					1,000 00	✓	Accounts Payable	✓	1,000 00					
					1,650 00	✓	Accounts Receivable	✓	1,500 00					
					14,050 00				14,050 00					

FIG. 15.—Columnar Journal

than to split this journal into two separate journals, so that two men can work at one time? You should notice that even though it is split into two books it is still the same journal with which we started. There is a *physical* difference, but *not* a difference in function.

It is clear that little or nothing will be accomplished by making the two new journals exact duplicates of the original journal, since each would still have too many special columns. The better way is to limit one of the journals to recording one class of facts. In other words, take two of the special columns away from the original journal and make a new journal out of them. In a business where the number of sales on credit is very large, the new journal might be called the "Sales Journal," and its use would be confined to recording sales to customers. (See Figure 16.)

During the month the individual items should be posted to the Customers' Ledger (a subsidiary ledger controlled by the Accounts Receivable Account in the General Ledger), thus, $383.75 would be debited to Myron Van Gorder's account and $30.30 would be debited to C. F. Denison's account. At the end of the month the *total* sales $414.05 would be debited to Accounts Receivable and credited to Sales in the General Ledger. You will now begin to perceive how the controlling account and the subsidiary ledger are handled in actual practice. The subsidiary ledger is posted from day to day, and the general ledger accounts are posted at the end of the month in totals.

The regular Journal has now been shorn of some of its importance, since all sales are handled through a special journal reserved for the purpose. In much the same way we may use a Purchase Journal for all purchases from others on credit. This journal resembles

the Sales Journal in appearance, although it has an entirely different function. The individual purchases are credited to the individual accounts in the Creditors'

SALES JOURNAL

DATE		ACCOUNTS DEBITED TERMS		L. F.	EXTENSIONS		TOTAL	
1916 Jan.	8	Myron Van Gorder	30 days	✓			383	75
		4536 S. State St., Chicago, Ill.						
		50 bbls. flour, 200 bags @	1.70		340	00		
		25 bxs. soap @	1.75		43	75		
	25	C. F. Denison	30 days	✓			30	30
		316 W. 61st St., Chicago, Ill.						
		10 bags flour @	1.65		16	50		
		20 bars soap @	.05		1	00		
		40 lbs. steak @	.32		12	80		
	31	Accounts Receivable—Dr.		✓			414	05
		Merchandise Sales—Cr.		✓			414	05

FIG. 16.—Sales Journal

Ledger (a subsidiary ledger controlled by Accounts Payable in the General Ledger), and at the end of the month the total is debited to Purchases and credited to Ac-

counts Payable in the General Ledger in one lump sum. (See Figure 17.)

If the reader can once grasp the idea that the Ledger is complete in itself and independent of all detailed subsidiary records, he will have but little difficulty in understanding even the most complex types of journals. Each

PURCHASE JOURNAL

DATE		ACCOUNT CREDITED	TERMS	L. F.	AMOUNTS		TOTAL	
1916 Jan.	3	Sprague, Warner & Co.	2/10, N/30	✓	1,250	00		
		186 N. Michigan Ave, Chicago, Ill.						
		Invoice #342, Jan. 2.						
	6	Marshall Field & Co.	3/10; N/30	✓	2,000	00		
		Adams & Fifth Ave, Chicago, Ill.						
		Invoice #572, Jan. 3						
	10	Frank Weber & Co.	5/10; 1/30, N/60	✓	500	00		
		63rd & Lowe Ave., Chicago, Ill.						
		Invoice #31, Feb. 1						
	31	Merchandise Purchases—Dr.		✓	3,750	00		
		Accounts Payable — Cr.		✓			3,750	00

FIG. 17.—Purchase Journal

journal must act as the basis for at least two general ledger entries as in the Sales Journal shown, where Accounts Receivable was debited $414.05 and Sales Account was credited $414.05. Two *other* entries were made (to the subsidiary ledger) from the Sales Journal, but these in no way affected the General Ledger, although they aggregated the same amount that is charged the general ledger control account.

Thus we see that the modern journal, such as the Sales

Journal or the Purchase Journal, has at least two functions. It acts as a posting medium for the General Ledger, and for that purpose its debits and credits must be equal. It *also* acts as a posting medium for a subsidiary ledger, which simply furnishes the detail of one general ledger account. Thus, the general ledger account and the

CASH RECEIPTS JOURNAL

DATE		ACCOUNT TO BE CREDITED	L. F.	AMOUNT	
1916 June	1	Interest	✓	5	00
	5	Accounts Receivable (Walter Jones)	✓	45	00
	7	Rent	✓	30	00
	9	Accounts Receivable (John Dale)	✓	108	00
	15	Accounts Receivable (Joseph Smith)	✓	51	00
	21	Accounts Receivable (Arthur Brown)	✓	22	00
	30	Interest	✓		50
	30	Cash Account — Dr.	✓	261	50

FIG. 18.—Cash Receipts Journal

subsidiary ledger "check" and prove each other. If there is any discrepancy between the two, it must be traced down, since it indicates the existence of at least one error in posting.

Another important class of transactions which may be segregated are those that refer to cash. One journal may be reserved for cash receipts and another for cash disbursements. A simple form of Cash Receipts Journal is shown in Figure 18.

During the month the various general ledger accounts are credited, and at the end of the month the Cash Account is debited. No provision is made in the ruling of this Journal for postings to subsidiary ledgers. This can be remedied by inserting another column in this Journal to take all credits to Accounts Receivable controlling account.

CASH RECEIPTS JOURNAL

DATE		EXPLANATION	L. F	ACCOUNTS RECEIVABLE Cr.		CASH Dr.	
1916 June	1	Interest	✓			5	00
	5	Walter Jones		45	00	45	00
	7	Rent	✓			30	00
	9	John Dale		108	00	108	00
	15	Joseph Smith		51	00	51	00
	21	Arthur Brown		22	00	22	00
	30	Interest	✓				50
	30	Accounts Receivable—Cr.	✓	226	00		
	30	Cash—Dr.	✓			261	50

FIG. 19.—Columnar Cash Receipts Journal

In regular journal form the general ledger entries for the transaction shown in Figure 19 would appear as follows:

Cash	$261.50	
Interest		$ 5.00
Rent		30.00
Interest		.50
Accounts Receivable		226.00

and, in addition, the following credits would have to be made in the subsidiary Customers' Ledger.

Walter Jones	$ 45.00
John Dale	108.00
Joseph Smith	51.00
Arthur Brown	22.00

The Cash Disbursements Journal may be in the simple form like the first Cash Receipts Journal, but preferably a column will be provided to receive the detailed items which make up the lump sum charge to Accounts Payable controlling account.

CASH DISBURSEMENTS JOURNAL

DATE		EXPLANATION	L. F.	ACCOUNTS PAYABLE Dr.		CASH Cr.	
1916 Jan.	2	John Simons		63	00	63	00
	4	Labor	✓			50	00
	10	morris Johnson		121	00	121	00
	11	Frederick Hampton		87	62	87	62
	15	Charles Morton		10	00	10	00
	17	Postage	✓			5	00
	19	Express Inward	✓			13	50
	25	Richard Sexton		23	00	23	00
	29	E. C. Herron			30		30
	30	Carfare	✓				25
	30	Accounts Payable – Dr	✓	304	92		
	30	Cash – Cr.	✓			373	67

FIG. 20.—Cash Disbursements Journal

Put in the conventional journal form shown in Figure 20, the general ledger entry to be made would appear as follows:

Labor	$ 50.00	
Postage	5.00	
Express Inward	13.50	
Carfare	.25	
Accounts Payable	304.92	
Cash		$373.67

and, *in addition,* the following debits would be made in the subsidiary Creditors' Ledger.

John Simons	$ 63.00
Morris Johnson	121.00
Frederick Hampton	87.62
Charles Morton	10.00
Richard Sexton	23.00
E. C. Herron	.30

In a business of sufficient size it is quite satisfactory to have separate journals for cash receipts and cash disbursements, but the proprietor of a small establishment often desires to have the two combined into one Cash Journal. No change in the arrangements hitherto proposed is necessary, except that in the combined book the left-hand page will then register the cash receipts and the right-hand page will register the cash disbursements, as shown in Figure 21.

Many bookkeepers claim that when the Cash Journal is kept in this form, it is not necessary to carry a General Ledger Cash Account at all—that the Cash Journal itself takes its place. In this they are unquestionably right. The author, however, feels that very little is gained thereby, since the monthly posting of totals to the Cash Account consumes little time and, if it were omitted, no

CASH JOURNAL

RECEIPTS								DISBURSEMENTS							
DATE			L. F.	ACCOUNTS RECEIVABLE Cr.		CASH Dr.		DATE			L. F.	ACCOUNTS PAYABLE Dr.		CASH Cr.	
1916 June	1	Interest Gained	✓			5	00	1916 June	2	John Simons		63	00	63	00
	5	Walter Jones		45	00	45	00		4	Labor	✓			50	00
	7	Rent Earned	✓			30	00		10	Morris Johnson		121	00	121	00
	9	John Dale		108	00	108	00		11	Frederick Hampton		87	62	87	62
	15	Joseph Smith		51	00	51	00		15	Chas Morton		10	00	10	00
	21	Arthur Brown		22	00	22	00		17	Postage Stamps	✓			5	00
	30	Interest Gained	✓				50		19	Express Inward	✓			13	50
	30	Accounts Receivable — Cr	✓	226	00				25	Richard Sexton		23	00	23	00
	30	Cash — Dr	✓			261	50		29	E C Herron			30		30
									30	Carfare	✓				25
									30	Accounts Payable — Dr	✓	304	92		
									30	Cash — Cr.	✓			373	67

FIG. 21.—Cash Journal Which Is Used Purely as a Posting Medium

Compare this exhibit with Fig. 22.

CASH JOURNAL

RECEIPTS								DISBURSEMENTS							
DATE		NAME	L. F.	ACCOUNTS RECEIVABLE Cr.		CASH Dr.		DATE		NAME	L. F.	ACCOUNTS PAYABLE Dr.		CASH Cr.	
1916 Jan.	1	Balance Brought Down				1,000	00	1916 Jan.	2	John Simons		63	00	63	00
	1	Interest Gained	✓			5	00		4	Labor	✓			50	00
	5	Walter Jones		45	00	45	00		10	Morris Johnson		121	00	121	00
	7	Rent Earned	✓			30	00		11	Frederick Hampton		87	62	87	62
	9	John Dale		108	00	108	00		15	Chas Morton		10	00	10	00
	15	Joseph Smith		51	00	51	00		17	Postage Stamps	✓			5	00
	21	Arthur Brown		22	00	22	00		19	Express Inward	✓			13	50
	30	Interest Gained	✓				50		25	Richard Sexton		23	00	23	00
	30	Accounts Receivable — Cr.	✓	226	00				29	E C Herron			30		30
									30	Carfare	✓				25
									30	Accounts Payable — Dr	✓	304	92		
										Total				373	67
									30	Balance Forwarded				887	83
		Total				1,261	50							1,261	50
Feb.	1	Balance Brought Down				887	83								

FIG. 22.—Cash Journal Which Is Used as a Posting Medium and Which *Also* Serves as a Cash Account

Such an exhibit is usually known as a "Cash Book." Compare with Fig. 21.

complete trial balance could be taken from the General Ledger.

A Cash Journal which will take the place of the Cash Account is shown in Figure 22. Observe that the totals of the cash columns are not posted, but that the two sides are balanced and that the cash balance is carried forward, just as it is in a ledger account.

Throughout this book we will assume that a Cash Account is carried in the General Ledger and that the Cash Journal is purely a posting medium. This is in accordance with the best accounting theory as well as good practice.

We have now created four special journals for

1. Sales.
2. Purchases.
3. Cash Receipts.
4. Cash Disbursements.

Thus our original journal is relieved of most of its entries. Through these special journals practically all necessary entries to the Accounts Receivable and the Accounts Payable Accounts can be made, although the original journal still handles a few of such items, for instance, when notes are given or received or special adjustments made. Instead of a highly columnarized book, the Journal (Figure 23) has become simple, and only a few entries pass through it monthly. It can never be entirely dispensed with, however, since there are always many special items which can be handled through no other medium.

The Accounts Receivable and the Accounts Payable columns are retained in the Journal in order to receive the occasional debits and credits affecting these accounts.

These entries may arise from allowances, returns, notes, and other sources.

Cash Discounts

In almost every business it is customary to grant discounts to those customers who pay their bills promptly. The discount is usually a percentage of the total invoice

JOURNAL

Accounts Payable Dr.	Accounts Receivable Dr.	General Dr.	L. F.		L. F.	General Cr.	Accounts Receivable Cr	Accounts Payable Cr.

Fig. 23.—Columnar Journal When Used as a Posting Medium for Notes Received and Given

price f. o. b. shipping point, and is only allowed to customers if they make payment in cash within a definite time from the date of shipment. Such a discount is, in reality, a bonus for promptness and not a reduction in the selling price, although many people are confused into thinking so because it is a percentage of the sales price.

The method of booking such discounts is very simple if all transactions are passed through the original jour-

nal. For example, we ship $1,000.00 worth of goods to A. S. Morton and grant him the privilege of a 2% discount if the bill is paid within ten days from date of shipment.

Journal entry made at time of sale:

Accounts Receivable	$1,000.00	
(A. S. Morton $1,000.00)		
Sales		$1,000.00

Journal entry when bill is paid and discount taken:

Cash	$980.00	
Sale Discounts (nominal account)	20.00	
Accounts Receivable		$1,000.00
(A. S. Morton $1,000.00)		

On the other hand, suppose that we bought $500.00 worth of goods from Riley & Co. on the same terms. At the time of the purchase we would make the following journal entry:

Merchandise Purchases	$500.00	
Accounts Payable		$500.00
(Riley & Co. $500.00)		

When we pay the bill and take the discount, we will make a journal entry as follows:

Accounts Payable	$500.00	
(Riley & Co.)		
Cash		$490.00
Purchase Discounts (nominal account)		10.00

If many such transactions occurred, we might adopt the columnar expedient in the Journal: one column headed "Sales Discounts—Dr." and the other "Purchase Discounts—Cr."

How shall purchases and sales discounts be recorded in the system where several journals, instead of one, are employed?

It is clear that they *may* be handled through a special column in the Journal, but since they are intimately associated with receipts from customers and payments to creditors, which are handled through the Cash Receipts Journal and the Cash Disbursements Journal respectively, it is plain that economy and efficiency will not result from such a plan. A complete transaction including credit to Accounts Receivable and debits to Cash and Sales Discounts should be made through *one*

CASH RECEIPTS JOURNAL										
DATE		EXPLANATION	FOLIO	SALES DISCOUNT Dr.		ACCOUNTS RECEIVABLE Cr.		CASH Dr.	
1916 July	1	Rent—14th St. Property	✓					275	00
	5	Paul Goodwin & Co.		30	52	1.526	19	1.495	67
	7	Arnold Supply Corp.		1	14	57	00	55	86
	16	Matt Ross				112	00	112	00
	19	Zion Iron Works		19	80	990	15	970	35
	23	Morgan, Cooley & Co.		5	02	251	00	245	98
	27	Margale Cellulose Co.				92	22	92	22
	27	Interest Earned	✓						46
	31	Sales Discounts — Dr.	✓	56	48				
	31	Accounts Receivable — Cr	✓			3,028	56		
	31	Cash — Dr.	✓					3,247	54

FIG. 24.—Cash Receipts Journal, Showing Method of Handling Sales Discounts

If put in conventional journal entry form it would appear as follows:

Sales Discounts	$ 56.48	
Cash	3,247.54	
Rent—14th St. Property		$ 275.00
Interest Earned		.46
Accounts Receivable		3,028.56

journal, and that one will naturally be the Cash Receipts Journal.

The entire transaction of paying an account and taking the discount, involving a debit to Accounts Payable and credits to Cash and Purchase Discounts, should be made through the Cash Disbursements Journal. The two Cash Journals in revised form will then appear as in Figures 24 and 25.

CASH DISBURSEMENTS JOURNAL

DATE		EXPLANATION	L. F.	CHECK No.	PURCHASE DISCOUNT Cr.		ACCOUNTS PAYABLE Dr.		CASH Cr.	
1916 July	2	American Iron Corp.		576			1,200	00	1,200	00
	5	Joliet Equipment Co.		577	15	67	522	76	507	09
	8	Drayage & Hauling	✓	578					15	00
	15	Wages Payable	✓	579					772	87
	17	American Iron Corp.		580			865	00	865	00
	19	Interest Lost	✓	581					10	21
	23	Hubbert & Smith		582	3	40	170	00	166	60
	25	Rand Sand Co.		583	6	72	336	00	329	28
	26	Atlas Cement Co.		584	1	09	54	50	53	41
	29	Taylor Steel Co.		585			2,122	12	2,122	12
	31	Taylor Steel Co.		586	9	84	492	20	482	36
	31	Purchase Discounts—Cr.	✓		36	72				
	31	Accounts Payable—Dr.	✓				5,762	58		
	31	Cash—Cr.	✓						6,523	94

FIG. 25.—Cash Disbursements Journal, Showing Method of Handling Purchase Discounts

Putting it in journal entry form we get the following:

	Dr.	Cr.
Drayage and Hauling	$ 15.00	
Wages Payable	772.87	
Interest Lost	10.21	
Accounts Payable	5,762.58	
Purchase Discounts		$ 36.72
Cash		6,523.94

This method of handling purchases and sales discounts is simple. Its chief disadvantage is that it introduces non-cash items into the Cash Journals, but this is a matter of small moment compared with the convenience and *efficiency* that result from such treatment. Strictly speaking, the Cash Journal should receive only such entries as refer to the receipt or the disbursement of cash, and discounts, either purchase or sale, are not cash items, but refer to allowances or premiums for promptness in paying. When a customer pays $980.00 in cash as full payment for a $1,000.00 account, the transaction, upon analysis, appears as follows:

Cash	$980.00	
Accounts Receivable		$980.00
Sales Discount	20.00	
Accounts Receivable		20.00

In the second entry, no cash transaction occurred, and since, by definition, the Cash Journals receive only such items as refer directly to cash receipts or to cash disbursements, it is clear that purchases and sales discounts do not, by nature, belong in these two journals. To repeat, however, it is a matter of economy and efficiency to pass such discounts through the Cash Journals, and practically all accountants do so.

Notes and Bills Journals

In a business where the number of notes given or received is small, it is customary to pass them through the Journal in the same way that other infrequent entries are made, but where a large volume of note transactions occur, it is better to have special journals for handling them. These journals are the Notes and Bills Receivable Journal and the Notes and Bills Payable Journal. These

are two separate journals, although they are often bound into one book. A sample ruling of a Notes and Bills Receivable Journal is shown in Figure 26. The general ledger postings are made from the *totals* of columns 21 and 22 at the end of the month. The subsidiary ledger

NOTES AND BILLS RECEIVABLE JOURNAL
1916

(1) Date		(2) No.	(3) Maker	(4) Acceptor	(5) Indorser	(6) Int. Rate %	Maturity (7) Jan.	(8) Feb.	(9) Mar.	(10) Apr.	(11) May	(12) June
April	1	1,014	Stevens J.P.			5					465 25	
	12	1,015	Troy Realty Co.			6						
	25	1,016	City Soap Co.	Warning & Co							530 00	
	27	1,017	Ames B. F.			5						
	29	1,018	White Co.			5						
											995 25	

NOTES AND BILLS RECEIVABLE JOURNAL
1916

Maturity (13) July	(14) Aug.	(15) Sept.	(16) Oct.	(17) Nov.	(18) Dec.	Customers (19) Name	(20) L. F.	(21) Accounts Receivable Cr.	(22) Notes Receivable Dr	(23) Where Payable	(24) Remarks
						Stevens J.P.	✓	465 25	465 25	First Nat'l Bank	
319 40						Troy Realty Co.	✓	319 40	319 40	Peoples Trust Co.	
						City Soap Co.	✓	530 00	530 00	City Nat'l Bank	
1,260 00						Ames B. F.	✓	1,260 00	1,260 00	Merc. Nat'l Bank	
		293 30				White Co.	✓	293 30	293 30	Second Nat'l Bank	
1,579 40		293 30				Accounts Receivable—Cr	✓	2,867 95			
						Notes Receivable—Dr	✓		2,867 95		

FIG. 26.—Posting Medium for Notes and Bills Receivable

(Notes Receivable Ledger) postings are made day by day to the customers' accounts shown in column 19. Columns 7 to 18 inclusive are designed to show due dates of the various notes and are not posted at all. There is no standard practice as to the use of these columns. They may show only the day of the month thus: a note due on August 5 would be handled by inserting the figure 5 in column 14. The use of these columns in this way

facilitates the preparation of schedules to show the amount of cash to be expected in any future month.

The columns may be used as money columns. If so, the *amount* of the note is put under the proper "month" heading. For example, a note receivable for $75.00 due July 30 will be handled by putting $75.00 in column 13. This procedure enables the treasurer to obtain the exact amount to be expected from Notes Receivable during any one month by simply reading the columnar total.

It *may* be still further elaborated by providing for both the day of the month *and* the amount under the name of each month. The illustration on the opposite page is ruled in accordance with the second plan. From the columnar totals we see that during the month of May $995.25 can be expected to come in to the treasury; in July, $1,579.40; and in September, $293.30.

The Notes and Bills Payable Journal is constructed according to the same general plan as the form just discussed.

If these two journals are bound in the same volume, care should be exercised in order that entries may not be made in the wrong journal. One of the journals may be printed and ruled in red ink and the other in black ink, and different styles of type may be used to emphasize the differences between the two.

Special Journals and Control Accounts

When the principle is thoroughly grasped that journal items referring to the same account may be set aside unposted in a special column until the end of the month and then posted *in one lump sum* and the further principle has been established that special journals may be split off from the General Journal to record particular classes of facts, it requires no imagination to see that great

elasticity results. Special journals and special columns for those journals may be designed to fit any business, large or small. These journals and special columns have for their main purpose the collection and classification of financial facts in shape for posting to the General Ledger control accounts by *totals* and to subsidiary ledgers by *items*. This does not mean, of course, that every general ledger entry represents the total of a column in some journal. Certain kinds of items occur so infrequently that it would be unwise to provide special columns for them. We have seen that this is provided for in all journals by means of general columns. Figures appearing in these general columns are posted item by item to the designated general ledger accounts.

The Ledgers

Before considering the more complex types of journals it will be well to discuss, in some detail, the ledgers. The General Ledger is *the* book of the business, being the ultimate development of the "balance," which was discussed in Chapter I. The General Ledger is a bound volume containing the accounts of the business. In it are recorded, in a more or less summarized form, the facts which are collected and classified by the journals. The General Ledger is the keystone of the whole accounting system. Subordinate to it are certain other ledgers, such as the Accounts Receivable Ledger and the Accounts Payable Ledger, each of which gives the detail of *one* of the accounts in the General Ledger.

It is clear that any clerk having access to the General Ledger is in a position to know as much about the results of the business as the owner or manager. Some bookkeeper must have access to it, since postings must be made to it and the owner can hardly be expected to do the bookkeeping work himself. Most of the general

ledger accounts, however, are not confidential; only a few of them are *strictly* so.

The General Ledger may be split into two books, one large enough to contain all except private accounts and the other for all accounts which contain confidential figures. The function of the General Ledger is certainly not changed by binding it in two volumes instead of one, and a very substantial advantage is gained, namely, that the larger of the two volumes in which most of the clerical work must be done can be freely turned over to the office force while the confidential ledger remains in the sole possession of the proprietor, manager, or a trusted employee. These two books are called the General Ledger and the Private Ledger, although in reality the General Ledger consists of the *two books taken together.*

The Private Ledger

It is usual to include in the Private Ledger only those accounts which are really significant, from which the true profit or loss is ascertained or the true values of fixed assets are determined. These accounts are not the ones which require much bookkeeping work, but they reflect the really vital facts of the business. In a trading partnership, the following accounts would probably be found in the Private Ledger:

Land & Buildings.
Furniture & Fixtures.
Investments.
Inventory of Merchandise.
Capital Account—Jones.
Capital Account—Smith.
Trading Account.
Profit and Loss Account.

All other accounts would be found in the General Ledger.

Since these two books are, in reality, merely separate volumes of the same book, it is clear that they may be so regarded when the time comes to take a trial balance. A trial balance taken from either one alone will be incomplete. When they are considered together, a complete trial balance results.

For various practical reasons it is often desirable to take a trial balance of these two books separately, and to facilitate this, a "balancing" account is included in each ledger. Thus, the Private Ledger will contain a General Ledger Account, and the General Ledger will contain a Private Ledger Account. When this is done, a complete trial balance may be taken from either of these books alone. The method of operating these "balance" accounts is simple. Suppose, for example, that the Cash Account is carried in the General Ledger and that Jones' Capital Account is carried in the Private Ledger. What happens when Jones draws $200.00? In the General Ledger the following entry may be made:

Private Ledger Account	$200.00	
Cash		$200.00

and in the Private Ledger this entry may be made:

Jones' Capital Account	$200.00	
General Ledger Account		$200.00

The effect, eliminating the balance account, is to debit Jones' Capital Account and credit Cash.

When an entry affects accounts in the *same* ledger, whether it be Private or General, nothing need be posted to the balancing accounts, but when one account in the General Ledger and one account in the Private Ledger are affected, the balancing accounts will receive entries.

For the sake of illustration, we will assume the case

of a company desiring to start a Private Ledger and indicate the procedure necessary.

The balance sheet of Cutter & Wilson on December 31, 1915, is as follows:

	Assets	Liabilities and Capital
Cash	$ 5,000.00	
Accounts Receivable	18,000.00	
Notes Receivable	15,000.00	
Merchandise Inventory	30,000.00	
Land & Building	25,000.00	
Furniture & Fixtures	8,000.00	
Accounts Payable		$ 6,000.00
Notes Payable		15,000.00
Mortgage Payable		5,000.00
Cutter—Capital Account		50,000.00
Wilson—Capital Account		25,000.00
	$101,000.00	$101,000.00

As of January 1, 1916, they desire to open a Private Ledger, which will be kept in the possession of Mr. Wilson, and they desire that the following accounts shall be included in that ledger:

Merchandise Inventory	$30,000.00
Land & Building	25,000.00
Furniture & Fixtures	8,000.00
Mortgage Payable	5,000.00
Cutter—Capital Account	50,000.00
Wilson—Capital Account	25,000.00
(Trading Account)	
(Profit and Loss Account)	

If the General Ledger could be taken apart and rebound in two volumes, one containing the above accounts and marked "Private Ledger" and the other containing the remaining accounts and marked "General Ledger," nothing further would be required save to open a balance account in each, which would be debited or credited with

amounts sufficient to bring the books to balance. Assume, however, that the original General Ledger is a substantially bound book, as it should be, and that it is better to close out the private accounts which appear in it, leaving the other accounts as they are, and to open a new book for the Private Ledger. To accomplish this, the following entry should be made in the General Journal and posted to the General Ledger:

1916			
Jan. 1	Mortgage Payable	$ 5,000.00	
	Cutter—Capital Account	50,000.00	
	Wilson—Capital Account	25,000.00	
	Merchandise Inventory		$30,000.00
	Land & Building		25,000.00
	Furniture & Fixtures		8,000.00
	Private Ledger Account		17,000.00

When this entry has been made, a trial balance of the General Ledger will appear as follows:

Cash	$ 5,000.00	
Accounts Receivable	18,000.00	
Notes Receivable	15,000.00	
Accounts Payable		$ 6,000.00
Notes Payable		15,000.00
Private Ledger Account		17,000.00
	$38,000.00	$38,000.00

To open the Private Ledger, a Private Journal is appropriate. In that Private Journal the following entry will be made:

1916			
Jan. 1	General Ledger Account	$17,000.00	
	Merchandise Inventory	30,000.00	
	Land & Building	25,000.00	
	Furniture & Fixtures	8,000.00	
	Mortgage Payable		$ 5,000.00
	Cutter—Capital Account		50,000.00
	Wilson—Capital Account		25,000.00

When this private journal entry has been posted to the Private Ledger, a trial balance may be taken. This trial balance of the Private Ledger will appear as follows:

General Ledger Account	$17,000.00	
Merchandise Inventory	30,000.00	
Land & Building	25,000.00	
Furniture & Fixtures	8,000.00	
Mortgage Payable		$ 5,000.00
Cutter—Capital Account		50,000.00
Wilson—Capital Account		25,000.00

No definite statement can be made as to just what accounts should appear in the Private Ledger. This is a matter for the owner or manager of the business to decide. From the practical viewpoint no accounts should be included in the Private Ledger that receive more than a few entries a month, since it would be unwise to burden a high-priced manager or confidential secretary with routine bookkeeping work. The Trading Account, the Inventory Account, and the Profit and Loss Account should appear in the Private Ledger, at any rate.

Other Uses of the Private Ledger

In corporations it is customary to have a private salary roll for the executives, so that clerks and subordinates may not be advised what salaries their superiors are receiving. This may be accomplished in several ways. One way is to carry a Private Cash Account in the Private Ledger and make salary payments from this. When the private cash runs low, a replenishing check may be issued from the general cash and debited, in the General Ledger, to the Private Ledger Account. In the Private Ledger the amount is debited to Private Cash and credited to General Ledger Account.

The use of a Private Ledger is highly desirable in

a large corporation and appropriate in a smaller one. There is little or no advantage in it for a very small business under normal circumstances. There is nothing mysterious about it if the reader bears in mind that it represents nothing more than a few accounts which have been taken away from the General Ledger and that, to obtain a complete trial balance, showing all accounts, both books must be used. The use of balancing accounts between the two books permits the taking of an independent trial balance of each.

Hereafter when we speak of the General Ledger, we shall be referring not to one specific bound volume but to the collection of general ledger accounts, whether part of them are in a private volume or whether they are all contained within the same binding. It is absolutely immaterial so far as accounting theory is concerned whether the collection of accounts, which we call the General Ledger, is loose leaf or on cards or firmly bound in one volume or two volumes. The General Ledger exercises certain functions, and the interest is in these functions and not in the physical form which this collection of accounts assumes.

The Ledger Account

In the preceding chapter we traced the development of the account and showed the standard form of ruling for a ledger account. This form is the one most constantly used for the General Ledger. The general ledger accounts, as we have seen, receive many of their entries in lump sum totals at the end of each month. The general ledger accounts which are not represented by special columns in the journals, and hence do not receive postings by totals, are not particularly active. The result is that posting to general ledger accounts involves but a small

percentage of the total time of bookkeepers and clerks. The comparatively small number of general ledger entries renders unnecessary the introduction of special forms of account ruling. This is far from being true of the subsidiary ledger accounts where the volume of transactions may be very large. For example, suppose

	DATE	NUMBER	ITEM	DEBIT	CREDIT	BALANCE	

FIG. 27.—Accounts Receivable Ledger Page

There is little difference between this and the standard ledger ruling, save that the debit and credit items are placed side by side and next to them a balance column. It is often desirable to ascertain a customer's balance quickly. If the account is a long one, it will require some time to determine the balance, unless the balance is continuously brought forward in a special column, as shown in this illustration.

a company made five hundred sales on credit during a given month. For these sales the general ledger entries might number only two—a debit to Accounts Receivable and a credit to Sales Account for the total credit sales of the month as shown by the Sales Journal. In the subsidiary Accounts Receivable Ledger there will be five

hundred entries to be made. This makes a total of five hundred and two postings, only two of which are made to the General Ledger.

In a similar way five hundred receipts of cash from customers recorded in the Cash Receipts Journal would

	DATE	ITEM	DEBIT	CREDIT	BALANCE	OLD BALANCE	

FIG. 28.—Accounts Receivable Ledger Page

This form of account provides for a current balance and also an old balance. This old balance column is used only when bookkeeping machines are employed. To the figure shown in that column the debits are added and the credits subtracted to secure the new balance.

involve five hundred postings to the subsidiary Accounts Receivable Ledger and only two to the General Ledger; i. e., debit Cash and credit Accounts Receivable for the total cash received from customers as shown by the columnar totals in the Cash Receipts Journal.

It is because of the great amount of clerical work involved in keeping the subsidiary Accounts Receivable and Accounts Payable Ledgers that attention has been

given to the problems of reducing bookkeeping cost and increasing accuracy.

The manufacturers of adding and bookkeeping machines do not intend that their products shall operate on the General Ledger, where the postings are comparatively few, but on the subsidiary ledgers, where the

	FOLIO	DATE	MEMO	CHARGES	√	CREDIT	√	BALANCE	√	

FIG. 29.—Accounts Receivable Ledger Page

This is a somewhat more elaborate form of account ruling. The narrow columns are used for "checking" purposes.

postings are many, the errors are frequent, and the opportunity for cost reduction is apparent.

For the same reasons the general ledger accounts are in the standard account form, but the subsidiary ledger accounts are especially ruled and often bear no resemblance to the standard form. Standard rulings for such accounts are shown in Figures 27, 28, and 29.

The Columnar Ledger

The columnar ledger is a useful device under certain restricted circumstances where the number of customers is large and the monthly transactions are few, such as the electric light business. The ledger page may contain

PURCHASE JOURNAL

Date		Name	Address	L. F.	Terms	Merchandise Purchases Accounts: Dept. A Dr.	Dept. B Dr.	Dept. C Dr.	Dept. D Dr.	Dept. E Dr.	Accounts Payable Cr.
1916 Jan.	2	John Smith	Chicago, Ill	145	30	500 00			200 00	100 00	800 00
	2	Wilson Co.	Chicago, Ill	233	10		125 00		52 00		177 00
	2	Chas Sexton	Birmingham, Ala.	191	30	250 00		120 00			370 00
	4	Cline & Ayer Co.	Atlanta, Ga.	35	30			1,150 00			1,150 00
	5	E. C. Herron	Birmingham, Ala.	81	30	20 00			25 00	18 00	63 00
	5	Ross Bros	Jackson, Miss.	183	30		225 00				225 00
	7	Marshall Field	Chicago, Ill.	130	30	290 00					290 00
	29	Frank Valker	Chicago, Ill	225	10	189 00					189 00
	30	Morrison Bros.	Jackson, Tenn.	133	30			62 00			62 00
	31	Tupelo Cotton Co.	Tupelo, Miss.	209	30					900 00	900 00
		Totals				8,521 00	998 00	4,006 00	1,250 00	3,081 00	17,856 00
		Ledger Folios				91	92	93	94	95	122

Fig. 30.—Columnarized Purchase Journal

as many as fifteen or twenty accounts. Each account consists of one or more lines, depending upon circumstances. Banks formerly employed the columnar ledger, but have just about abandoned it because of the introduction of modern mechanical bookkeeping methods which give better results. Where used by banks, the columnar ledger is often called the "Boston Ledger."

Owing to the fact that this form is falling into disuse, we will neither illustrate or describe it.

The Columnar Purchase Journal

The Purchase Journal, which we have already discussed, has two functions: (1) Its total is posted to the debit of Merchandise Purchases and credited to Accounts Payable Account in the General Ledger. (2) Its detail is posted, item by item, to the various personal accounts in the Accounts Payable Ledger. If it seems desirable to show greater detail on the General Ledger, the single debit to Merchandise Purchases may be split into several debits to several *classes* of Merchandise Purchases Accounts.

Suppose, for example, that a business has five departments and carries in its General Ledger five departmental Merchandise Purchase Accounts. In order to charge purchases direct to the proper accounts, it will require a columnar Purchase Journal. Such a Purchase Journal might be ruled as shown in Figure 30.

Putting the same items in conventional journal entry form we have the following:

Merchandise Purchases Account, Dept. A............	$8,521.00	
" " " " B............	998.00	
" " " " C............	4,006.00	
" " " " D............	1,250.00	
" " " " E............	3,081.00	
Accounts Payable		$17,856.00

In addition to the above general ledger entries, there will be the usual credits to the individual creditors' accounts in the subsidiary Accounts Payable Ledger.

The Voucher Register

A form of journal like this may be greatly expanded, of course, by the insertion of extra columns. It may

also be changed in character somewhat, since it forms an ideal medium for the distribution of charges not only in connection with purchases, but of other items which are to be paid out in money. By including debit columns for expenses such as wages, salaries, selling expense, general overhead expense, etc., and columns for the various charges to capital accounts, such as Machinery, Tools, etc., we change the character of the Purchase Journal, forming another journal commonly called the "Voucher Register." This name arises because of the common use of vouchers in modern business.

According to *Webster's New International Dictionary*, a voucher is "a book, paper, or other thing which serves to vouch (affirm) the truth of accounts."

Where the voucher system is in use, every invoice or bill that is received must be vouchered before the disbursing office may pay it. By this we mean that it must be O. K.'d or approved by two or more responsible persons as to:

1. Authentification of purchase
   (approved by purchasing agent).
2. Quantities, prices, grades, sizes, quality, etc.
   (approved by purchasing agent).
3. Actual receipt (approved by receiving clerk).
   (a) Quantity.
   (b) Sizes.
   (c) Class.
   (d) Kind.
   (e) Quality.
   (f) Condition.
4. Mathematical accuracy of extensions
   (approved by checking clerk).

5. Terms of payment
   (approved by purchasing agent).
6. Distribution
   (approved by bookkeeper or auditor).

The usual method is to have a standard form of voucher, which is technically called a "voucher jacket." (See Figures 31 and 32.) The data shown on the invoice or bill is entered on the voucher jacket, and the invoice itself is pinned to the voucher jacket and temporarily filed, alphabetically, in the accounting department. From time to time other invoices from the same creditor may be received. If so, they are entered on and pinned to the same voucher jacket. At the end of the month or the week the voucher [2] with all invoices attached is sent to the proper employees and department heads for their O. K., after which it comes back to the accounting department, where it is entered in the Voucher Register. It is then refiled until a check is issued in payment. This check may be accompanied by the voucher jacket (the invoices being detached), which must be signed and returned by the payee as a receipt. Paid vouchers are permanently filed in the accounting department numerically by voucher numbers.

The technique of handling the Voucher Register is a matter of bookkeeping and has no place in this volume. It may be a matter of some interest, however, to illustrate some typical transactions and the manner of booking them.

The following transactions are illustrated in the

[2] When a discount is obtainable, it is customary to voucher the invoice and make payment without actually waiting until the end of the month or week.

CHICAGO, ILL.________________191__

THE BLANK COMPANY

TO________________________

DATE		EXPLANATION	ITEMS		SUB-TOTALS	

CORRECT AS TO: EXTENSIONS______PRICES______
TERMS______QUANTITIES______RECEIPT______
AUDITED AND O.K.'D BY:
____

APPROVED: VOUCHER NO.______
______ DATE BY______
______ DATE ______
______ DATE ______

FIG. 31.—Front of Voucher Jacket

For reverse, see Fig. 32.

VOUCHER No.______
THE BLANK COMPANY
CHICAGO, ILL.
NAME
ADDRESS
VOUCHERS PAYABLE, CR. $______
ENTERED V.R.______ PAID BY CHECK No.______

CHARGEABLE TO	ACC'T No.	AMOUNT
PRODUCTIVE LABOR	541	
MATERIALS	25	
FACTORY EXPENSE	54	
SELLING EXPENSE	53	
ADMIN. EXPENSE	51	

FIG. 32.—Reverse of Voucher Jacket Shown in Fig. 31

Voucher Register and in the Cash Disbursements Journal:

March 2, 1916 Invoice for raw material, $1,122.19, received from Simmond's Steel Co., Chicago, Ill.

March 4 Invoice for $10,000.00, covering machinery received from the Automatic Machinery Co., of Cincinnati, Ohio.

March 6 Invoice for small tools, $218.92, from the Tungsten Tool Co., Tupelo, Miss.

March 15 Payroll for half-month totals, $2,392.38, chargeable as follows: Productive Labor, $1,265.98; Factory Expense (non-productive labor), $298.18; Administrative Expense (office payroll), $301.00; Selling Expense (salesmen's salaries), $527.22.

March 19 Invoice for raw material, $763.00, from Simmond's Steel Co.

March 22 Bill for month's rent of factory and office, amounting to $400.00, from Acme Real Estate Co. This is chargeable as follows: Factory Expense, $300.00; Administrative Expense, $100.00.

March 24 Bill for repairs to office adding machine received from Rapid Adder Co., Detroit, Mich., amounting to $10.00.

March 27 Invoice for raw material, $381.00, subject to 1% discount if paid within ten days, received from the Cleveland Rubber Co.

March 29 — Invoice for raw material, \$100.277, subject to 3% discount within ten days, received from John Stewart Co., Baltimore, Md.

March 31 — Payroll for half-month totals, \$2,477.15, chargeable as follows: Productive Labor, \$1,325.71; Non-productive Labor, \$301.19; Office Payroll, \$327.06; Salesmen's Salaries, \$523.19.

When payments are made, they are recorded in the Cash Disbursements Journal to the credit of Cash (and Purchase Discounts, if taken) and to the debit of Voucher Payable, thus:

CASH DISBURSEMENTS

DATE			VOUCHER No.	L. F.	CHECK No.	PURCHASE DISCOUNTS Cr.		VOUCHERS PAYABLE Dr.		CASH Cr.	
1916 Apr.	1	Payroll	108		985			2,477	15	2477	15
	2	Cleveland Rubber Co.	106		986	3	81	381	00	377	19
	6	John Stewart & Co.	107		987	1	00	100	27	99	27

FIG. 33.—Cash Disbursements

When all postings have been made, it will be seen that the balance of the Vouchers Payable Account represents the total amount owing not only for purchases of merchandise, but for unpaid wages and salaries and purchases of all sorts of supplies and tools, rent, interest, etc., whereas the old Purchase Journal was only used for purchases of merchandise.

VOUCHER REGISTER

MONTH OF March 1916

Date	Voucher No.	In Favor Of	Explanation	541 Productive Labor Dr.	25 Materials Dr.	54 Factory Expense Dr.	53 Selling Expense Dr.	51 Admin. Expense Dr.	31 Vouchers Payable Cr.	Sundry Accounts — Dr.: Name	Acct. No.	Amount	√	Paid: Date	Check No.
2	100	Simmonds Steel Co.	Castings—C.1017		1,122 19				1,122 19						
4	101	Auto Mach. Co.	Machinery Purchased						10,000 00	Machinery	115	10,000 00	√		
6	102	Tungsten Tool Co.	Small Tools—Dept 5						219 92	Tools	116	219 92	√		
15	103	Pay Roll		1,265 98		298 18	527 22	301 00	2,392 38					March 16	984
19	104	Simmonds Steel Co.	Castings—C.232		763 00				763 00						
22	105	Acme Real Estate Co.	Rental for Month			300 00		100 00	400 00						
24	106	Rapid Adder Co.	Repairs to Adding Mach.					10 00	10 00						
27	107	Cleveland Rubber Co.	Belting		381 00				381 00					April 2	986
29	108	Jno. Stewart Co.	Bolts—7/16" x 2½"		100 27				100 27					April 6	987
31	109	Pay Roll		1,325 71		301 19	523 19	327 06	2,477 15					April 1	985

FIG. 34.—Voucher Register

Where the Voucher Register is used, it is customary to do away with the formal Accounts Payable Ledger. When checks are issued in payment of a voucher, a notation is made on the Voucher Register itself in the space provided for that purpose. All unpaid vouchers are alphabetically kept in a separate file, so that they may easily be located, if necessary. The Vouchers Payable Account in the General Ledger is the controlling account over the unpaid vouchers in this file. When a voucher is paid, it is filed, according to the voucher number, in another cabinet. An alphabetical card index of these paid vouchers is kept so that it is possible to locate all vouchers to any one firm by obtaining the voucher numbers from the card index and thus locating the vouchers themselves. Such an index card might appropriately appear as follows:

Cleveland Rubber Co., Cleveland, Ohio				
1912	12/11			
1913	3/24	5/32	8/45	12/58
1914	7/72	9/83		
1915	2/98	4/106		

This card shows vouchers for the Cleveland Rubber Company, as follows:

Voucher	No.	11	drawn	in	December	1912
"	"	24	"	"	March	1913
"	"	32	"	"	May	1913
"	"	45	"	"	August	1913
"	"	58	"	"	December	1913
"	"	72	"	"	July	1914
"	"	83	"	"	September	1914
"	"	98	"	"	February	1915
"	"	106	"	"	April	1915

If, at any time, it is desired to make a complete survey of past dealings with the Cleveland Rubber Company, the various voucher numbers may be ascertained from this card and the vouchers themselves drawn from the numerical file of "paid vouchers."

From the foregoing it can be seen that there is no need of an actual bound Accounts Payable Ledger. The vouchers themselves form such a ledger in loose-leaf form.

The Status of the Journal

In the early portion of this chapter, we based the entire discussion upon the Journal. In the beginning all general ledger entries were passed through the Journal, but for certain reasons heretofore discussed it has been found desirable to abstract, segregate, or split off certain journal *functions,* using separate books for handling each class of items. The original journal, by this process of abstractions, has been robbed of practically all the entries which formerly passed through it on their way to the Ledger. Only a few transactions are of such a nature that they must be handled in the Journal; the great majority flow naturally through one of the following special journals:

Cash Receipts Journal.
Cash Disbursements Journal.

Sales Journal.
Notes and Bills Receivable Journal.
Notes and Bills Payable Journal.
Voucher Register.

The items which must be journalized, although few in number, are very important. In the main they consist

THE BLANK COMPANY
ACCOUNTING DEPARTMENT

D AND C MEMO.

CHICAGO, ILL., ... 19 ....
No...............

DEBIT			
CREDIT			
REMARKS			

CORRECT: .... APPROVED FOR ENTRY: ....

Fig. 35.—Front of Journal Voucher
For reverse, see Fig. 36.

of opening and closing entries and adjustment and correction entries. Such important entries must be accompanied by full and complete explanations written as an integral portion of the journal entry itself. As a substitute for these cumbersome, formal, and long-winded explanations, a journal voucher is now largely used. (See Figures 35, 36, and 37.) To the journal voucher are

fastened supporting schedules, papers, letters, and memoranda, and from this journal voucher the journal entry is made. The journal voucher is, of course, numbered, and the journal entry shows that number.

DATE OF ENTRY______ 191__

JOURNAL VOUCHER No.______

Name

Address

DEBIT ACCOUNTS	AMOUNTS		CREDIT ACCOUNTS	AMOUNTS	
Accounts Receivable			Accounts Receivable		
Accounts Payable			Accounts Payable		
GRAND TOTAL			GRAND TOTAL		
Folio / Accounts Rec. Pay. Items			Folio / Accounts Rec. Pay. Items		
TOTAL			TOTAL		

Fig. 36.—Reverse of Journal Voucher Shown in Fig. 35

The journal entry may be brief, since it is supported by the complete journal voucher, containing all the information, which may be drawn from the file when needed.

With the foregoing arrangement it is clear that files must be provided for two kinds of vouchers: (a) expenditure vouchers which support voucher register entries and (b) journal vouchers which support entries in the Journal. Journal vouchers must be filed and safeguarded with as much care as vouchers for expenditures. There is nothing illogical, therefore, in filing both in the same filing cabinet. The numbering system

MILWAUKEE WATER WORKS
JOURNAL VOUCHER

No.______

DATE______191__

MEMORANDUM	DEBIT	✓	CREDIT	✓	ACCOUNT NUMBER

APPROVED ______ CHIEF ACCOUNTANT

CORRECT ______ BOOKKEEPER

Fig. 37.—Journal Voucher Which Is to Be Bound and Used as a Posting Medium

Supporting papers are filed in ordinary letter files.

must be handled so that no duplicate numbers will appear.

If the vouchers can be handled in this way, it is natural to ask why the Journal and the Voucher Register cannot be similarly combined. Progressive accountants have done this, and the results are satisfactory. It is required only to add more columns to the Voucher Register. These columns are used for journal entries and do not interfere in the least with the functions of the Voucher Register.

If there were many journal entries, such a plan would

prove cumbersome; when only a few appear each month, it is highly desirable because of:

1. Uniform handling of all vouchers.
2. Eliminating one book (the Journal).

Figure 38 shows a Journal containing certain entries. Figure 39 shows the Journal combined with the Voucher Register in the manner suggested.

This last step eliminates the Journal entirely as a separate book. In fundamental *theory* the Journal is the book that receives all entries which are to be posted to the General Ledger. In *practice* the Journal is not a book at all. It is nothing more than a *function* which is exercised by a collection of books which we have called "special journals." As long as their common "journal" function is understood, it makes no difference what they are called. As a matter of fact, most accountants refer to the Cash Book instead of the Cash Journal; to the Sales Book rather than the Sales Journal, etc.

Because of the fundamental importance of the idea, it will bear repetition to say that the Journal is a collection of all the books which have the common function of serving as mediums for posting to the General Ledger.

The Journal embraces:
- Cash Book
  - Cash Disbursements Book.
  - Cash Receipts Book.
- Sales Book.
- Notes and Bills Receivable Journal
- Notes and Bills Payable Journal.
- Voucher Register.
- General Journal.
- Etc.

Posting Technique

Webster's New International Dictionary defines the word "post" as follows: "To transfer or carry (an

DATE		EXPLANATION	ACCOUNT No.	✓	DEBIT		CREDIT	
1916 Mar.	3	Administrative Expense	51	✓	12	00		
		Furniture & Fixtures	114	✓			12	00
		To correct entry V.R. page —,						
		Vo. No.— erroneously charging						
		cost of refinishing two desks						
		to Furniture & Fixtures						
		Account						
	17	Factory Expense	54	✓	2	00		
		Administrative Expense	51	✓			2	00
		To correct entry V.R., page —,						
		Vo. No.— charging total Salary						
		of office janitor, F. Fulton,						
		to Administrative Expense,						
		One day's pay, $2.00, is						
		chargeable to Factory Expense						
		for services as trucker						
		on — — 1916						
	28	Sales	61	✓	18	00		
		Accounts Receivable	22	✓			18	00
		To correct entry S.B., page —,						
		containing error of this amount						
		against Milward Machine						
		Company, of Augusta, Ga.						
		Corrected invoice mailed						
		3-28-16						

FIG. 38.—Journal Page
Compare with Fig. 39.

VOUCHER REGISTER

MONTH OF March 19 16

				CREDITS							DEBITS								
				SUNDRY LEDGER ACCOUNTS				31 VOUCHERS PAYABLE	PAID		341 PRODUCTIVE LABOR	23 MATERIALS	34 FACTORY EXPENSE	33 SELLING EXPENSE	31 ADMIN EXPENSE	SUNDRY LEDGER ACCOUNTS			
DATE	VOUCHER No.	IN FAVOR OF	EXPLANATION	Name	Acct No	Amount	√		Date	Check No						Name	Acct No	Amount	√
2	100	Simmonds Steel Co.	Castings—C. 1017					1,122 19				1,122 19							
3	101		Correcting Entry Vo 86	Furniture & Fixtures	114	12 00	✓								12 00				
4	102	Auto Machine Co.	Machines Purchased					10,000 00								Machinery	115	10,000 00	✓
6	103	Tungsten Tool Co.	Small Tools—Dept 5					218 92								Tools	116	218 92	✓
15	104	Pay Roll						2,392 35	Mar 16	984	1,265 98		298 18	527 22	301 00				
17	105		Adjustment Expense Pay Roll	Administrative Expense	51	2 00	✓						2 00						
19	106	Simmonds Steel Co.	Castings—C. 232					763 00				763 00							
22	107	Acme Real Estate Co	Rental for month					400 00					300 00		100 00				
24	108	Rapid Adder Co.	Repairs to adding mach					10 00							10 00				
27	109	Cleveland Rubber Co.	Belting					381 00	Apr. 7	986		381 00							
28	110		Correcting Entry Commissions mach to Sales Dept	Accounts Receivable	22	18 00	✓									Sales	61	18 00	✓
29	111	Jno. Stewart Co.	Bolts—7/16" x 2½"					100 27	Apr 6	987		100 27							
31	112	Pay Roll						2,477 15	Apr 1	985	1,325 71		301 19	523 19	327 06				

FIG. 39.—Voucher Register and Journal Combined

Compare with Figs. 34 and 38.

entry or item) from an auxiliary book to a more formal book, as from the Journal to the Ledger."

This is correct so far as it goes, but proper posting implies at least two things not mentioned in this definition. When a ledger posting is made, it is not sufficient merely to post the date and amount. The nature of the "contra" item should also be indicated. Thus, if Cash is credited and Notes Payable debited, the word "cash" should appear in the explanation column of the Notes Payable Account. This procedure is even more important on the subsidiary ledger accounts than on the general ledger accounts. The second important point is in connection with the use of the "folio" columns which appear in all the books, both journals and ledgers. They are primarily intended for "check" marks to indicate the items that have been posted. As soon as a posting is accomplished, a "check" is made in the Journal, opposite the item and in the "folio" column. This removes all danger that the item will be posted twice in error. Instead of using the simple "check mark" it is now customary to insert the number of the ledger page to which the item was posted and in the ledger folio column the page of the Journal from which the item is inserted. This "cross-indexing" makes it very easy to trace items through the books, and if these figures are not inserted in the "folio" columns until *after* the item has been posted, they also serve as a check against double posting it.

Conclusion

In order to develop the fundamental theory of the Ledger, the subsidiary ledgers, and the journals properly, it is essential to avoid the complex. If this is not done,

the proper perspective will be lost, with resulting failure to create a vivid picture in the reader's mind.

In order to develop the really vital ideas, it has seemed wise not to obscure the presentation by elaborately ruled forms or many special journals. One who understands the essentials of a journal or the purpose of a form can design special journals and forms to fit particular situations and can analyze those he finds in any accounting department. Every book or sheet from which postings are made to the General Ledger is a journal, and any book which does not serve as a posting medium, but rather gives complete details of a general ledger account, is a subsidiary ledger. Using the General Ledger as a basing point, it is easy to determine just what relation any other book bears to it.

TEST QUESTIONS

1. What two functions are served by special journal columns?
2. Define the Private Ledger and explain its relation to the accounting system as a whole.
3. (a) What is the function of the Voucher Register?
   (b) How may the formal Accounts Payable Ledger be eliminated?
4. What are the essentials of posting technique?

CHAPTER IV

THE BALANCE SHEET

The trial balance has been mentioned as a device for determining whether the General Ledger is in balance. It is the means of testing for *incompleteness of entry.* It does not pretend to indicate whether all postings have been correctly made, but merely whether the law of double entry has been observed.

The Trial Balance

A trial balance results from listing the names of all general ledger accounts, carrying out opposite the name of each account, first the total of the debit, and then the total of the credit items. If desired, only the balance of each account may be used, debit balances being inserted in one column and credit balances in an adjacent column to the right. The aggregate of totals of the left, or debit column, should be exactly equal to the aggregate of totals of the credit column. If this balance is "struck," it may be assumed that the General Ledger from which the figures have been taken is also in balance.

A trial balance taken from the General Ledger of Arthur B. Clark on December 31, 1915, is as follows:

Trial Balance—Arthur B. Clark
December 31, 1915

	Debits	Credits
Cash	$ 3,263.78	
Accounts Receivable	350.00	
Notes Receivable	1,050.00	
Furniture & Fixtures	450.00	

	Debits	Credits
Accounts Payable		$ 306.47
Arthur B. Clark..		9,000.00
Sales		3,012.49
Purchase Discounts		29.21
Merchandise Purchases	6,998.28	
Expense	223.11	
Sales Discounts	12.00	
Interest	1.00	
	$12,348.17	$12,348.17

Examining this trial balance critically we perceive that it means little without additional data. It is apparent that the business has on hand $3,263.78 in cash. Presumably this figure has been verified by an actual count or inventory of the cash itself. Can the same thing be said of the next item, Accounts Receivable $350.00? Probably not, since it represents claims against debtors, some of whom may conceivably fail to pay in full.

Furniture and Fixtures Account represents a tangible asset. This account was charged with the cost price of the furniture and fixtures at the time of purchase. Probably this account does not represent the exact truth at the time of this trial balance, since the value of such assets continually diminishes due to the ravages of time and ordinary wear and tear.

Accounts Payable may be assumed correct since an incentive to overstate it is lacking and an understatement of the total may be developed by examination, or audit of the books.

The items of Sales, Purchases, Discounts, Expenses, and Interest are nominal or proprietorship accounts, which, after the inventory has been applied, must be combined or merged in order to obtain the net figure representing an *increase* or *decrease* in the proprietor's

interest. This balance must then be credited or debited to the A. B. Clark (proprietor) Account. The final balance of the proprietor's account will represent the *total* of his interest in the business, or to phrase it differently, the amount which the business appears to owe the proprietor.

Merchandise Purchases $6,998.28 represents the cost of the total material purchased during the accounting period. This figure, less the inventory of merchandise remaining on hand, at cost, must be equal to the cost of the goods which have been sold.

The inventory on December 31, 1915, equals $4,500.00

Purchases	$6,998.28
Less—Inventory	4,500.00
Cost of Merchandise Sold	$2,498.28

In order to obtain the net amount due to or from the proprietor, a calculation may be made as follows:

Expenses or Losses			Income or Gains	
Purchases	$6,998.28		Sales	$3,012.49
Inventory	4,500.00	$2,498.28	Purchase Discounts	29.21
Expense		223.11		$3,041.70
Interest		1.00		
Sales Discounts		12.00		
		$2,734.39		2,734.39
Amount to be credited to A. B. Clark's Account				$ 307.31

Is this figure correct?

The answer must be "No," since it has been admitted that two of the assets are really worth less than the balance shown by their ledger accounts.

The Furniture and Fixtures Account shows a balance

of $450.00. This represents, we will suppose, the cost of these assets at the time of purchase. They are unquestionably worth less at a later date. If they are appraised at $400.00 on December 31, 1915, but are still carried in the account at original cost, $450.00, it is evident that this account does not tell the truth. A loss of $50.00 has been suffered and should be debited to the Proprietor's Account (or, better still, to one of his classified subsidiary accounts).

It has also been agreed that Accounts Receivable may not be worth $350.00. Suppose that a critical examination of the several customers' accounts develops that one of the customers, H. I. Joy, who owes the business $10.00, has become insolvent. The balance of the Accounts Receivable Account $350.00 does not reflect the truth. The amount should be $340.00, and the $10.00 loss is properly a debit to the proprietor.

The calculation previously made for determination of the proper amounts to be charged or credited to the proprietor is not complete. The following figures will result in the correct amount if good judgment has been exercised in appraising the two assets, Accounts Receivable and Furniture and Fixtures.

Expenses or Costs			Income or Gains	
Purchases	$6,998.28		Sales	$3,012.49
Inventory	4,500.00	$2,498.28	Purchase Discounts	29.21
Expense [1]		283.11		$3,041.70
Interest		1.00		
Sales Discount		12.00		
		$2,794.39		2,794.39
Amount to be credited to A. B. Clark's Account				$ 247.31

[1] The $10.00 loss on Accounts Receivable and the $50.00 loss on Furniture and Fixtures have been included in Expense.

The above calculation is appropriate to reach a net figure representing the profit which is creditable to A. B. Clark's Account. In the General Ledger the balances of the various accounts would be transferred, in accordance with the rules of double entry, to the Proprietor's Account. Since no posting should be made to a general ledger account, save through a journal, the first task is to frame up proper entries which, when posted, will result in a final credit of $247.31 to A. B. Clark's Account. Such entries are technically known as "closing entries."

Profit and Loss Account

It is customary to open a temporary account called the "Profit and Loss Account," to which are posted the sundry debit and credit balances of the nominal or proprietorship accounts. The final balance of this Profit and Loss Account will then represent the net amount to be debited or credited to the main Proprietor's Account.

Adjustment Journal Entries—A. B. Clark

1915			
Dec. 31	Expense	$50.00	
	Furniture & Fixtures		$50.00
	To provide for the shrinkage in value of the asset, Furniture & Fixtures, by means of a transfer of the amount representing loss, to the nominal, or proprietorship, account, Expense		
Dec. 31	Expense	$10.00	
	Accounts Receivable		$10.00
	(Also credit H. I. Joy's account, in the Accounts Receivable Ledger, $10.00.)		
	The above entry provides for the shrinkage in the value of Accounts Receivable by means of a transfer of the amount representing loss to the nominal account, Expense		

After these two journal entries have been posted, a trial balance of the General Ledger will appear as follows:

TRIAL BALANCE, DECEMBER 31, 1915

	Debits	Credits
Cash	$ 3,263.78	
Accounts Receivable	340.00	
Notes Receivable	1,050.00	
Furniture & Fixtures	400.00	
Accounts Payable		$ 306.47
Arthur B. Clark		9,000.00
Sales		3,012.49
Purchase Discounts		29.21
Merchandise Purchases	6,998.28	
Expense	283.11	
Sales Discounts	12.00	
Interest	1.00	
	$12,348.17	$12,348.17

The following journal entries will then be made for the purpose of transferring the balances of the nominal accounts to the Profit and Loss Account which will be opened in the General Ledger.

1915			
Dec. 31	Sales Account.........................(a)	$3,012.49	
	Profit and Loss Account.............(a)		$3,012.49
Dec. 31	Purchase Discounts Account...........(b)	29.21	
	Profit and Loss Account..............(b)		29.21
Dec. 31	Merchandise Inventory Account........(c)	4,500.00	
	Profit and Loss Account.............(c)	2,498.28	
	Merchandise Purchases Account.......(c)		6,998.28
Dec. 31	Profit and Loss Account...............(d)	283.11	
	Expense Account......................(d)		283.11
Dec. 31	Profit and Loss Account...............(e)	12.00	
	Sales Discounts Account.............(e)		12.00
Dec. 31	Profit and Loss Account...............(f)	1.00	
	Interest Account.....................(f)		1.00

The general ledger account called "Profit and Loss"

will appear as follows after the postings have been made from the Journal:

PROFIT AND LOSS ACCOUNT

1915			1915		
Dec. 31	Cost of Sales. (c)	$2,498.28	Dec. 31	Sales ......(a)	$3,012.49
31	Expenses ...(d)	283.11	31	Purchase Dscts. ....(b)	29.21
31	Sales Dscts.. (e)	12.00			
31	Interest ....(f)	1.00			

The total of the debits in this account equals $2,794.39, and the total of the credits equals $3,041.70, or a difference of $247.31, which equals the net profit. If the debit total had been larger than the credit total, it would indicate that a loss had been suffered.

A trial balance of the General Ledger after posting will appear as follows:

	Debit	Credit
Cash	$3,263.78	
Accounts Receivable..............................	340.00	
Notes Receivable................................	1,050.00	
Merchandise Inventory............................	4,500.00	
Furniture & Fixtures..............................	400.00	
Accounts Payable................................		$ 306.47
Arthur B. Clark.................................		9,000.00
Profit and Loss Account...........................		247.31
	$9,553.78	$9,553.78

The final closing journal entry transfers the balance of the Profit and Loss Discount to the Proprietor's Account.

1915			
Dec. 31	Profit and Loss Account....................	$247.31	
	A. B. Clark—Capital Account......................		$247.31

This entry having been posted, the following trial balance may be taken from the General Ledger.

	Debit	Credit
Cash	$3,263.78	
Accounts Receivable..................................	340.00	
Notes Receivable.......................................	1,050.00	
Merchandise Inventory...............................	4,500.00	
Furniture & Fixtures...................................	400.00	
Accounts Payable.......................................		$ 306.47
A. B. Clark—Capital Account........................		9,247.31
	$9,553.78	$9,553.78

The above exhibit is technically known as "balance sheet." Strictly, a balance sheet is a trial balance of the General Ledger *after* the nominal or subsidiary proprietorship accounts have been closed directly into the Proprietor's Account or into some main subdivision of that account.

The figures which appear in a balance sheet are taken from the general ledger accounts. This must be borne in mind, since in a later chapter we shall discuss similar exhibits which are not balance sheets, simply because they do not obtain their figures from the General Ledger.

The difference between a trial balance and a balance sheet is that a trial balance is taken from the Ledger *before* the nominal accounts have been closed; a balance sheet is taken from the Ledger *after* the nominal accounts have been closed.

Form of Balance Sheet

It is not essential that a balance sheet be in trial balance *form.* Some latitude as to *arrangement* of the figures is permissible; thus, the above balance sheet may be presented in other forms and still be correctly termed a "balance sheet."

BALANCE SHEET—ARTHUR B. CLARK

December 31, 1915

Assets		
Cash	$3,263.78	
Accounts Receivable	340.00	
Notes Receivable	1,050.00	
Merchandise Inventory, Dec. 31, 1915	4,500.00	
Total Current Assets		$9,153.78
Furniture & Fixtures		400.00
Total Assets		$9,553.78
Liabilities		
Accounts Payable		306.47
Net Resources		9,247.31
Represented by—		
A. B. Clark—Capital Invested	$9,000.00	
Profits—period ended Dec. 31, 1915	247.31	$9,247.31

There are several other standard methods of arrangement and presentation of balance sheets. A more detailed discussion of proper balance sheet construction will appear later in this chapter.

English accountants regard the balance sheet as a statement of account rendered by the business to the proprietor. This is a strictly logical, but somewhat narrow, point of view. A balance sheet is of interest to three classes of persons:

1. The proprietor of the business.
2. The creditors of the business.
3. The management of the business.

The proprietor's interest in the balance sheet is evident. He has invested his money in the business and is entitled to know what is happening to it, whether it is being increased through wise management or decreased through poor judgment and extravagance.

The one who extends credit to a business is also entitled to know whether his interests are properly safeguarded. The yearly balance sheet affords him an opportunity to confirm his good judgment in extending the credit and to offer further accommodations if it seems wise. Most creditors are now demanding yearly copies of their customer's balance sheets, and that debtor who will not furnish them must be in a very strong financial position to escape the suspicion that he has something to conceal from his creditors.

It is to the manager that this exhibit is of greatest value. It gives him a bird's-eye view of the condition of the business at a given time, and a comparison of this with similar statements of previous years affords invaluable information as to the progress made. Based on such significant history as is afforded by these comparative statements, the manager's plans for the future are formulated.

Limitations of the Balance Sheet

A balance sheet may be compared to a snapshot photograph of an object. It is a "still" picture and, therefore, does not tell a complete story. No element of action is present, and action is the most noticeable characteristic of a business. At every tick of the clock some change takes place. Assets are constantly altering in value—either depreciating or appreciating. Every turn of a wheel in the shop, every shovel of coal in the boiler, every ounce of a workman's energy has its own direct influence on the values of the business. Every day may see hundreds and thousands of events tending to alter the previously established business status. Even at the dead of night when all activity has apparently ceased, there are powerful and inevitable forces at work,

increasing and decreasing profits. Interest and taxes accrue, instant by instant—unexpired insurance is lessened with every swing of the pendulum.

If it were humanly possible to construct balance sheets with microscopic accuracy and to draw one off at the end of every hour in the day, it would still be impossible to obtain a *complete* running history of the business from them. How much more crude and rough are the results when a balance sheet is taken from the books once a month or once a year.

The Working Balance Sheet

In analyzing a trial balance for the purpose of framing up closing journal entries, accountants and auditors use a working sheet or working balance sheet, which is very similar to the six-column statement used in the teaching of bookkeeping. As an introduction to the working balance sheet, we show in Figure 40 a six-column statement, using the trial balance already given.

Every item appearing in the trial balance columns may be extended into the other columns. The only difficulty is to select the proper column. Sometimes the amount has to be split between two columns, as in the case of Furniture and Fixtures Account, which stood as $450.00 in the trial balance but, because of a lessening in value due to wear and tear, the items were really worth only $400.00. This figure is extended into the "Assets" column and the difference, $50.00, is extended into the "Loss" column. Such an account which is part real and part nominal is known as a "mixed account." Modern accountants demand the elimination of the mixed account and the substitution therefor of other accounts which are unmixed.

It is not possible to avoid mixed accounts absolutely,

SIX-COLUMN STATEMENT

Accounts	Trial Balance		Assets and Liabilities		Loss and Gain	
	Dr.	Cr.				
Cash	$ 3,263.78		$3,263.78			
Accounts Receivable	350.00		340.00		$ 10.00	
Notes Receivable	1,050.00		1,050.00			
Furniture & Fixtures	450.00		400.00		50.00	
Accounts Payable		$ 306.47		$ 306.47		
Arthur B. Clark		9,000.00		9,000.00		
Sales		3,012.49				$3,012.49
Purchase Discounts		29.21				29.21
Merchandise Purchases	6,998.28		4,500.00		2,498.28	
Expense	223.11				223.11	
Sales Discounts	12.00				12.00	
Interest	1.00				1.00	
	$12,348.17	$12,348.17	$9,553.78	$9,306.47	$2,794.39	$3,041.70
			9,306.47			2,794.39
		Net gain..	$ 247.31			$ 247.31

FIG. 40.—Six-Column Statement

as will be noted from the illustration of the Furniture and Fixtures Account. If the value of this asset is lessening day by day, the figure of $400.00, which was correct on Dec. 31, will be untrue on Jan. 1, and still less true on Jan. 2, etc. The "asset" element is continually diminishing and the "loss" element increasing at the same rate, so that a pure asset account on Dec. 31 has become a mixed account the following day.

Adjusting Entries

It is necessary, therefore, at the end of each accounting period to make certain so-called "adjusting entries," which transfer the nominal element of "mixed" accounts to the purely nominal accounts. The phrase "adjusting entries" also is applied to entries for the correction of errors, either clerical or otherwise. These adjusting entries are for the purpose of bringing the accounts into agreement with the facts. Adjusting entries are also used to handle accruals.[2]

These various adjusting entries should all be made before the closing entries are made, and a sharp distinction drawn between the two. Adjusting entries are for the purpose of setting up accruals and of correcting intentional errors, or errors of omission, commission, or principle. Closing entries are used solely for the purpose

[2] The Committee on Accounting Terminology of the American Association of Public Accountants offers the following authoritative definitions:

Accrual—(1) The act of accruing.
(2) That portion of an accruing account not yet due, applicable to the accounts of the period under consideration.

Accrue—(1) To accumulate automatically through the lapse of time.
(2) To set up or record a debit or credit automatically accumulating through lapse of time.

Accrued interest receivable or payable—the amount of accruals of interest on various classes of assets or liabilities.

Accrued taxes—the amount of accruals of taxes.

WORKING BALANCE SHEET, DEC. 31, 1915

Accounts	Trial Balance		Journal Adjustments		Loss and Gain		Assets and Liabilities	
	Dr.	Cr.	Dr.	Cr.				
Cash	$ 3,263.78						$3,263.78	
Accounts Receivable.......	350.00			$ 10.00(a)			340.00	
Notes Receivable..........	1,050.00						1,050.00	
Furniture & Fixtures......	450.00			50.00(a)			400.00	
Accounts Payable.........		$ 306.47						$ 306.47
Arthur B. Clark, Cap. Acct.		9,000.00						9,000.00
Sales		3,012.49				$3,012.49		
Purchase Discounts........		29.21				29.21		
Purchases	6,998.28				$6,998.28			
Expense	223.11		$ 60.00	(a)	283.11			
Sales Discounts...........	12.00				12.00			
Interest	1.00				1.00			
Inventory, Dec. 31, 1915...			4,500.00	(b)			4,500.00	
Profit and Loss...........				4,500.00(b)		4,500.00		
	$12,348.17	$12,348.17	$4,560.00	$4,560.00	$7,294.39	$7,541.70	$9,553.78	$9,306.47
						7,294.39	9,306.47	
Net Profit for the Period..						$ 247.31	$ 247.31	

FIG. 41.—Working Balance Sheet

of transferring balances of nominal accounts to the Proprietor's Account or one of its main subsidiaries.

The working balance sheet which modern accountants and auditors employ differs from the simple six-column statement mainly in that provision is made for handling adjustments. A simple form of working balance sheet is illustrated in Figure 41, using the same trial balance as before.

As a further illustration of the principles involved in constructing a balance sheet from a given trial balance, the following problem and solution are offered:

TRIAL BALANCE—J. J. WILLIAMS

December 31, 1915

	Debit	Credit
Cash	$ 7,860.00	
Accounts Receivable	32,550.00	
Merchandise Inventory 1-1-15	22,000.00	
Furniture & Fixtures	3,300.00	
Accounts Payable		$ 9,722.00
Notes Payable		12,000.00
Williams—Capital Account		19,824.00
Sales		132,298.00
Returned Sales	2,619.00	
Interest Earned		612.00
Purchases	84,200.00	
Returned Purchases		1,106.00
Salesmen's Salaries	11,204.00	
Rent	600.00	
Salesmen's Expense	3,009.00	
Office Salaries	4,032.00	
Office Expense	1,618.00	
Interest Expense	721.00	
Sales Discount	1,849.00	
	$175,562.00	$175,562.00

INVENTORIES, DECEMBER 31, 1915

Merchandise	$25,180.00
Rent Paid in Advance	55.00
Taxes Accrued	290.00
Office Salaries Due but Not Paid	263.00
Interest Accrued on Notes Payable	96.00

It is estimated that Furniture and Fixtures have depreciated about 10%.

After the adjusting entries are posted a trial balance should be taken of the Ledger. This trial balance will contain the same figures as are shown in columns (5) and (6) of the working balance sheet (Figure 42).

The next step is to make and post the closing journal entries.

EXPLANATION OF ADJUSTMENTS

Adjustment entry (a) is for the purpose of setting up the new inventory ($25,180.00) as an asset and eliminating the old inventory ($22,000.00). In journal entry form this adjustment would appear as follows:

Dec. 31, 1915, Merchandise Inventory 12-31-15	$25,180.00	
Profit and Loss		$25,180.00
Profit and Loss	22,000.00	
Merchandise Inventory 1-1-15		22,000.00

or better still the following form:

Dec. 31, 1915, Merchandise Inventory 12-31-15	$25,180.00	
Merchandise Inventory 1-1-15		$22,000.00
Profit and Loss		3,180.00

Adjustment entry (b) is for the purpose of setting up Rent Paid in Advance ($55.00) as a deferred expense item (an asset). This is the same as $55.00 in cash so far as meeting the rent expense of the next accounting period is concerned. Because it was paid in this period does

WORKING BALANCE SHEET
As of

Accounts	Trial Balance		Adjustments	
	(1)	(2)	(3)	(4)
Cash ....$	7,860.00			
Accounts Receivable......	32,550.00			
Merchandise Inventory, 1-1-15	22,000.00			$22,000.00(a)
Furniture & Fixtures.....	3,300.00			330.00(f)
Accounts Payable........		$ 9,722.00		
Notes Payable...........		12,000.00		
Williams' Capital Account		19,824.00		
Sales		132,298.00		
Returned Sales..........	2,619.00			
Interest Earned.........		612.00		
Purchases	84,200.00			
Returned Purchases......		1,106.00		
Rent	600.00			55.00(b)
Salesmen's Salaries......	11,204.00			
Salesmen's Expense......	3,009.00			
Office Salaries..........	4,032.00		$ 263.00	(d)
Office Expense..........	1,618.00			
Interest Expense.........	721.00		96.00	(e)
Sales Discount..........	1,849.00			
	$175,562.00	$175,562.00		
Merchandise Inventory, 12-31-15			25,180.00	(a)
Profit and Loss..........			22,000.00	25,180.00(a)
Rent Paid in Advance....			55.00	(b)
Taxes			290.00	(c)
Taxes Payable Accrued..				290.00(c)
Accrued Office Salaries Payable				263.00(d)
Accrued Interest Payable				96.00(e)
Depreciation — Furniture & Fixtures............			330.00	(f)
Net Profit to Balance...				
			$48,214.00	$48,214.00

FIG. 42.—Working Balance Sheet

—J. J. WILLIAMS
December 31, 1915

Trial Balance		Assets, Liabilities and Capital		Loss and Gain	
(5)	(6)	(7)	(8)	(9)	(10)
$ 7,860.00		$ 7,860.00			
32,550.00		32,550.00			
2,970.00		2,970.00			
	$ 9,722.00		$ 9,722.00		
	12,000.00		12,000.00		
	19,824.00		19,824.00		
	132,298.00				$132,298.00
2,619.00				2,619.00	
	612.00				612.00
84,200.00				84,200.00	
	1,106.00				1,106.00
545.00				545.00	
11,204.00				11,204.00	
3,009.00				3,009.00	
4,295.00				4,295.00	
1,618.00				1,618.00	
817.00				817.00	
1,849.00				1,849.00	
25,180.00		25,180.00			
	3,180.00				3,180.00
55.00		55.00			
290.00				290.00	
	290.00		290.00		
	263.00		263.00		
	96.00		96.00		
330.00				330.00	
			$42,195.00	$110,776.00	
			26,420.00	26,420.00	
$179,391.00	$179,391.00	$68,615.00	$68,615.00	$137,196.00	$137,196.00

Fig. 42.—Continued

not mean that it is necessarily chargeable against this period. In conventional journal entry form this would appear as follows:

Dec. 31, 1915, Rent Paid in Advance.......................$55.00
Rent $55.00

Adjustment entry (c) is for the purpose of setting up an accrued liability. If the tax period does not coincide with the accounting period, such an adjustment will always have to be made; otherwise one period will be unfairly favored at the expense of the other. Such an item as this is a *liability inventory.*

Journal entry form:

Dec. 31, 1915, Taxes....................................$290.00
Taxes Payable Accrued.............. $290.00

Adjustment entry (d) is for the purpose of setting up as a liability (an account payable) the amount due to office employees for services, but unpaid because the end of the accounting period (December 31) came before the regular pay day.

Journal entry form:

Dec. 31, 1915, Office Salaries...........................$263.00
Accrued Office Salaries Payable...... $263.00

Adjustment entry (e) is for the purpose of setting up as a liability the interest accrued, on notes payable. This interest must be paid during the following accounting period, but it is chargeable to the expenses of this accounting period.

Journal entry form:

Dec. 31, 1915, Interest Expense..........................$96.00
Accrued Interest Payable............... $96.00

Adjustment entry (f) is for the purpose of reducing the value of the asset account, Furniture and Fixtures,

10%, to accord with its estimated loss. This amount is chargeable to the nominal account. "Depreciation—Furniture and Fixtures."

CLOSING JOURNAL ENTRY

1915			
Dec. 31	Sales	$132,298.00	
	Interest Earned	612.00	
	Returned Purchases	1,106.00	
	Purchases		$84,200.00
	Returned Sales		2,619.00
	Rent		545.00
	Salesmen's Salaries		11,204.00
	Salesmen's Expense		3,009.00
	Office Salaries		4,295.00
	Office Expense		1,618.00
	Interest Expense		817.00
	Sales Discount		1,849.00
	Taxes		290.00
	Depreciation—Furniture & Fixtures		330.00
	Profit and Loss		23,240.00

After this entry has been posted the balance of the Profit and Loss Account will be $26,420.00. This represents the profit of the period and should be transferred to the Proprietor's Account. A trial balance of the Ledger at this point will be, in reality, a balance sheet.

POST-CLOSING TRIAL BALANCE

	Debit	Credit
Cash	$ 7,860.00	
Accounts Receivable	32,550.00	
Furniture & Fixtures	2,970.00	
Merchandise Inventory	25,180.00	
Rent Paid in Advance	55.00	
Accounts Payable		$ 9,722.00
Notes Payable		12,000.00
J. J. Williams		46,244.00
Taxes Payable Account		290.00
Accrued Office Salaries Payable		263.00
Accrued Interest Payable		96.00
	$68,615.00	$68,615.00

From these unarranged figures the finished balance sheet is constructed as shown in Figure 43.

Underlying Principles

From the problems and solutions so far considered certain general principles may be derived. These governing principles are few in number and of theoretical simplicity,

BALANCE SHEET -- J. J. WILLIAMS

Dec. 31, 1915

ASSETS			LIABILITIES AND CAPITAL		
Cash	7,860 00		Accounts Payable	9,722 00	
Accounts Receivable	32,550 00		Notes Payable	12,000 00	
Merchandise Inventory	25,180 00		Accrued Taxes Payable	290 00	
Total Quick Assets		65,590 00	Accrued Office Salaries Payable	263 00	
Furniture & Fixtures	2,970 00		Accrued Interest Payable	96 00	
Deferred Expense	55 00		Total Current Liabilities		22,371 00
Other Assets		3,025 00	J. J. Williams Cap. Acct.	19,824 00	
			Net Profit for the Period	26,420 00	
			Total Proprietorship		46,244 00
Total Assets		68,615 00	Total Liabilities and Capital		68,615 00

FIG. 43.—Balance Sheet of J. J. Williams

but their practical application is oftentimes difficult, owing to the complexity of modern accounting practice.

1. *An asset may be exchanged for another asset of equal value without affecting Proprietorship, i. e., Capital Invested, Expense, and Income Accounts.*

(Example A)

TRIAL BALANCE

Debit		Credit	
Cash	$ 1,000.00	Liability	$ 2,000.00
Land	5,000.00	Capital Invested	12,000.00
Other Assets	10,000.00	Income	5,000.00
Expense	3,000.00		
	$19,000.00		$19,000.00

If land is purchased for $600.00 in cash, Land Account will be debited for $600.00 and Cash credited for $600.00 with the following result:

TRIAL BALANCE

Debit		Credit	
Cash	$ 400.00	Liabilities	$ 2,000.00
Land	5,600.00	Capital Invested	12,000.00
Other Assets	10,000.00	Income	5,000.00
Expense	3,000.00		
	$19,000.00		$19,000.00

This change took place without affecting proprietorship. The principle holds good in this simple example and is, of course, equally true in every case even though there might be a large number of subsidiary proprietorship accounts, i. e., nominal accounts.

2. *A liability may be exchanged for another liability of equal amount without affecting proprietorship.*

(Example B)

TRIAL BALANCE

Debit		Credit	
Cash	$ 1,000.00	Accounts Payable	$ 1,000.00
Land	5,000.00	Notes Payable	1,000.00
Other Assets	10,000.00	Capital Invested	12,000.00
Expense	3,000.00	Income	5,000.00
	$19,000.00		$19,000.00

One of the accounts payable for $100.00 may be extinguished by issuing a note for the same amount. This might involve a debit to Accounts Payable and a credit to Notes Payable for $100.00. After this entry has been made, the following trial balance results:

TRIAL BALANCE

Debit		Credit	
Cash	$ 1,000.00	Accounts Payable	$ 900.00
Land	5,000.00	Notes Payable	1,100.00
Other Assets	10,000.00	Capital Invested	12,000.00
Expense	3,000.00	Income	5,000.00
	$19,000.00		$19,000.00

This change took place without affecting proprietorship. The principle holds true regardless of the number or kind of proprietorship accounts.

3. *An asset may be used to extinguish a liability of equal amount without affecting proprietorship.*

(Example C)

TRIAL BALANCE

Debit		Credit	
Cash	$ 1,000.00	Accounts Payable	$ 1,000.00
Land	5,000.00	Notes Payable	1,000.00
Other Assets	10,000.00	Capital Invested	12,000.00
Expense	3,000.00	Income	5,000.00
	$19,000.00		$19,000.00

If $300.00 in cash is used to settle a note payable of the same amount, Cash must be credited and Notes Payable debited for $300.00. The resulting trial balance appears as follows:

TRIAL BALANCE

Debit		Credit	
Cash	$ 700.00	Accounts Payable	$ 1,000.00
Land	5,000.00	Notes Payable	700.00
Other Assets	10,000.00	Capital Invested	12,000.00
Expense	3,000.00	Income	5,000.00
	$18,700.00		$18,700.00

Proprietorship was not affected by this change. The principle holds true regardless of the number or kind of proprietorship accounts.

4. *Every change in the status of general ledger accounts, except the three above noted, must affect one or more of the proprietorship accounts.* This is a perfectly logical conclusion, since by the fundamental law of double entry a change in one account must be reflected by a counterbalancing change in another. There are only two basic classes of accounts—real accounts and nominal accounts. A change in a real account must, therefore, be balanced by an opposite equal change in (1) another real account or (2) a nominal account.

5. *Whenever a real account is credited, extreme care should be exercised in making the proper debit. If a real account is erroneously debited in place of a nominal account, the result will be an overstatement of assets resulting in an overstatement of profits (or an understatement of expense which amounts to the same thing). If a real account is erroneously credited in place of a nominal account, the result will be an understatement of assets resulting in an understatement of profit (or an overstatement of expenses which has a similar effect).*

(Example D)

TRIAL BALANCE

Debit		Credit	
Cash	$ 1,000.00	Accounts Payable	$ 1,000.00
Land	5,000.00	Notes Payable	1,000.00
Other Assets	10,000.00	Capital Invested	12,000.00
Expense	3,000.00	Income	5,000.00
	$19,000.00		$19,000.00

If $250.00 in cash is paid for salaries, the proper booking is to credit Cash and debit Expense (or one of its

subsidiary accounts). This would be reflected in the following trial balance:

TRIAL BALANCE

Debit		Credit	
Cash	$ 750.00	Accounts Payable	$ 1,000.00
Land	5,000.00	Notes Payable	1,000.00
Other Assets	10,000.00	Capital Invested	12,000.00
Expense	3,250.00	Income	5,000.00
	$19,000.00		$19,000.00

But if an error is made and in place of debiting Expense, the Land Account is debited instead, the trial balance would show figures as follows:

TRIAL BALANCE

Debit		Credit	
Cash	$ 750.00	Accounts Payable	$ 1,000.00
Land	5,250.00	Notes Payable	1,000.00
Other Assets	10,000.00	Capital Invested	12,000.00
Expense	3,000.00	Income	5,000.00
	$19,000.00		$19,000.00

The error, therefore, has caused two misstatements in the trial balance—land is overstated $250.00, and expense is understated $250.00. The balance sheet made from the correct trial balance would appear thus:

CORRECT BALANCE SHEET

Cash	$ 750.00	Accounts Payable	$ 1,000.00
Land	5,000.00	Notes Payable	1,000.00
Other Assets	10,000.00	Capital Invested	13,750.00
	$15,750.00		$15,750.00

The balance sheet resulting from the incorrect trial balance must itself be incorrect.

INCORRECT BALANCE SHEET

Cash	$ 750.00	Accounts Payable	$ 1,000.00
Land	5,250.00	Notes Payable	1,000.00
Other Assets	10,000.00	Capital Invested	14,000.00
	$16,000.00		$16,000.00

6. *Each accounting period must be charged with only its proper proportion of expense and credited with only its proper proportion of income.*

Suppose that a certain firm has an excess of cash and that a favorable opportunity is offered for it to pay its rent for five years in advance, the total amount involved being $500.00. The journal entry for booking this transaction would be as follows:

Expense	$500.00	
Cash		$500.00

If, at the end of the accounting period, the total balance of the Expense Account were to be transferred to the main Proprietor's Account a serious mistake would appear. The current accounting period would be charged with all the rent for the whole five years, and the four following years would be charged with none. This means that the profits of the current period are wrongfully reduced by $400.00 and that those of each succeeding period will be wrongfully inflated by $100.00 each. The comparison of the results of successive years would be valueless if the profits for one year were thus robbed in favor of other periods. The proper procedure would be to distribute this $500.00 equitably over the five accounting periods. Each period should obviously be

charged with $100.00 rent. The proper method of handling such a situation on the books would be to take an *inventory* of the Expense Account at the end of each accounting period and to set this inventory up as an asset. Such an asset is usually called a "Deferred Asset," or a "Deferred Debit Item," or a "Deferred Expense Item."

At the end of the first period, the inventory indicated that $400.00 of the Expense Account is a deferred asset. An adjusting entry is, therefore, made, crediting Expense and debiting Deferred Expense.

JOURNAL ENTRY

Deferred Expense	$400.00	
Expense		$400.00

At the beginning of the next accounting period, i. e., the following day, a reverse entry is made throwing Deferred Expense back into Expense.

JOURNAL ENTRY

Expense	$400.00	
Deferred Expense		$400.00

At the end of *that* period another expense inventory is taken, amounting to $300.00, and is handled in the same way. This is continued until the end of the five years. The result is that the prepaid expense has been justly distributed over the proper accounting periods instead of being dumped into the first one.

As a further illustration, it often happens that Insurance premiums are paid in advance. Suppose that on September 1, 1915, a year's policy is taken out and the year's premium of $48.00 is paid in cash. On December 31, 1915, at the close of the accounting period, it would be entirely improper to consider the entire $48.00 as an expense. Only 4/12 of it, or $16.00, should be so

considered, and the balance of $32.00 should be handled as a deferred asset. This deferred asset will, of course, expire in the following period.

Such deferred asset accounts as have been discussed represent the prepayment of expense, and their purpose is to adjust properly profits between the various accounting periods. They represent assets since they are the same as cash in so far as meeting future expenses is concerned.

The principle which we have elaborated is equally applicable to the credit side of the books. Income received in advance must not be absorbed into the current period's profits. It represents an advance payment and is a deferred liability until it is earned.

Accrued assets and accrued liabilities are just the opposite of deferred assets and deferred liabilities so far as their creation is concerned.

If an expense is *paid in advance,* a deferred asset is formed, but if an expense *belongs to a period and has not been recorded,* an accrued liability must be set up. The entry in such a case is to debit the proper expense account and to credit an accrued liability account. An example of this is seen in connection with taxes. If the accounting period does not coincide with the tax year, part of the taxes must be charged against one accounting period and part against the one following. Since taxes are paid at the end of the tax year, it means that an accrued liability must be set up at the end of the first accounting period.

Journal Entry

Taxes (expense).....................................$......
    Accrued Taxes Payable (liability)...........................$......

This entry will be reversed at the beginning of the following fiscal period.

Deferred liabilities and accrued assets are opposite in character and effect. A deferred liability relates to income received before it is earned, while an accrued asset indicates that income has been earned but not received. The accrued asset will be set up by means of an entry, crediting the income account and debiting the accrued asset account.

Summary

The most important use of an accounting system is that of *comparison.* The figures of one period alone mean little. The figures of successive accounting periods, when arranged in comparative form, are invaluable. The importance of seeing that these figures represent the truth is self-evident. They will be valueless for comparative purposes, unless each accounting period bears no more than its proper share of expense and takes credit for no more than its proper share of income. They will be of inestimable value if the accounting rule that "every expense shall be distributed over the accounting periods benefited by that expense" is adhered to.

The problems used so far in this chapter have been elementary in order that proper presentations of the principle might not be obscured. Many readers will desire to follow through a more complex set of figures, and to that end the following trial balance and working balance sheet are submitted.

Problem

(Adapted from Michigan C. P. A. Examination, June 25, 1910)

The trial balance of The Michigan Manufacturing Company's General Ledger on May 31, 1910, appeared as follows:

	Debit	Credit
Cash on Hand and in Bank	$ 430.15	
Notes Receivable	7,907.62	
Customers' Accounts	20,797.80	
Land & Buildings	35,333.83	
Machinery & Equipment	12,344.88	
Horses, Wagons, etc	1,265.40	
Power Machinery Co	727.77	
Inventory of Manufacturing Materials 6-1-09	27,214.41	
Purchases of Manufacturing Materials	106,634.12	
Miscellaneous Factory Supplies	1,631.09	
Productive Labor	63,842.23	
Freight, Express and Cartage "In"	1,734.70	
Stable Expense	1,694.11	
Miscellaneous Non-Productive Labor	1,993.50	
Fuel	5,554.82	
Insurance	3,872.32	
Repairs to Machinery	507.73	
Water Tax	140.53	
Advertising	378.58	
Discount Allowed to Customers	3,362.19	
Postage	264.42	
Salaries	6,170.00	
Stationery and Office Supplies	296.02	
Miscellaneous Main Office Expense	241.08	
Interest Paid	3,386.80	
Accrued Pay Rolls		$ 487.66
Notes Payable		22,344.81
Accounts Payable		5,512.34
Sundry Creditors		2,511.89
Allowance for Bad Debts		1,059.51
Capital Stock		85,000.00
Sales		187,540.38
Discounts Earned on Purchases		2,081.59
Interest Earned		463.17
Miscellaneous Earnings		724.75
	$307,726.10	$307,726.10

The inventory of Manufacturing Material on hand May 31, 1910, was $51,358.58; of Finished Goods, $3,210.00; of Factory Supplies, $200.00; of Fuel, $2,188.40; of Horse Feed, $14.22; and of Goods in Process, $1,820.00. The

WORKING BALANCE SHEET
As of

	Trial Balance Dr.	Trial Balance Cr.	Journal Adjustments Dr.	Journal Adjustments Cr.	
Cash on Hand and in Bank	$ 430.15				
Notes Receivable	7,907.62				
Customers' Accounts	20,797.80				
Land and Buildings	35,333.83				
Machinery and Equipment	12,344.88				
Horses, Wagons, etc.	1,265.40				
Power Machinery Co.	727.77				
Inventory of Mfg. Materials 6-1-09	27,214.41			$ 27,214.41	(a)
Purchases of Mfg. Materials	106,634.12			106,634.12	(a)
Miscellaneous Factory Supplies	1,631.09			200.00	(b)
Productive Labor	63,842.23				
Freight, Express and Cartage "In".	1,734.70				
Stable Expense	1,694.11			14.22	(d)
Miscellaneous Non-Productive Labor.	1,993.50				
Fuel	5,554.82			2,188.40	(c)
Insurance	3,872.32			1,720.18	(e)
Repairs to Machinery	507.73				
Water Tax	140.53				
Advertising	378.58				
Discount Allowed to Customers	3,362.19				
Postage	264.42				
Salaries	6,170.00				
Stationery and Office Supplies	296.02				
Miscellaneous Main Office Expense	241.08				
Interest Paid	3,386.80		$ 134.83		(f)
Accrued Pay Rolls		$ 487.66			
Notes Payable		22,344.81			
Accounts Payable		5,512.34			
Sundry Creditors		2,511.89			
Allowance for Bad Debts		1,059.51		9,128.11	(h)
Capital Stock		85,000.00			
Sales		187,540.38			
Discounts Earned on Purchases		2,081.59			
Interest Earned		463.17			
Miscellaneous Earnings		724.75			
	$307,726.10	$307,726.10			
Ultimate Credit to Trading Account.				3,210.00	(m)
Ultimate Credit to Mfg. Account				1,820.00	(k)
Manufacturing Materials Used			$ 82,489.95		(a)
Inventory of					
Manufacturing Materials 5-31-10			51,358.58		(a)
Factory Supplies 5-31-10			200.00		(b)
Goods in Process			1,820.00		(k)
Fuel 5-31-10			2,188.40		(c)
Finished Goods			3,210.00		(m)
Horse Feed 5-31-10			14.22		(d)
Unexpired Insurance 5-31-10			1,720.18		(e)
Accrued Interest Payable				134.83	(f)
Accrued Taxes Payable				376.75	(g)
Taxes			376.75		(g)
Bad Debts			9,128.11		(h)
Depreciation. Mach. and Equip			1,234.49		(j)
Allowance for Depreciation.					
Machinery and Equipment				1,234.49	(j)
Net Profit to Balance					
			$153,875.51	$153,875.51	

FIG. 44.—Working Balance Sheet

MICHIGAN MANUFACTURING COMPANY
May 31, 1910

Trial Balance the Journal Dr.	After Posting Adjustments Cr.	Losses	Gains	Assets	Liabilities
$ 430.15	....	....	....	$ 430.15	....
7,907.62	....	....	....	7,907.62	....
20,797.80	....	....	....	20,797.80	....
35,333.83	....	....	....	35,333.83	....
12,344.88	....	....	....	12,344.88	....
1,265.40	....	....	....	1,265.40	....
727.77	....	....	....	727.77	....
....	....	....	....	....	....
....	....	....	....	....	....
1,431.09	....	$ 1,431.09	....	....	....
63,842.23	....	63,842.23	....	....	....
1,734.70	....	1,734.70	....	....	....
1,679.89	....	1,679.89	....	....	....
1,993.50	....	1,993.50	....	....	....
3,366.42	....	3,366.42	....	....	....
2,152.14	....	2,152.14	....	....	....
507.73	....	507.73	....	....	....
140.53	....	140.53	....	....	....
378.58	....	378.58	....	....	....
3,362.19	....	3,362.19	....	....	....
264.42	....	264.42	....	....	....
6,170.00	....	6,170.00	....	....	....
296.02	....	296.02	....	....	....
241.08	....	241.08	....	....	....
3,521.63	....	3,521.63	....	....	....
....	$ 487.66	....	....	....	$ 487.66
....	22,344.81	....	....	....	22,344.81
....	5.512.34	....	....	....	5,512.34
....	2,511.89	....	....	....	2,511.89
....	10,187.62	....	....	....	10,187.62
....	85,000.00	....	....	....	85,000.00
....	187,540.38	....	$187,540.38	....	....
....	2,081.59	....	2,081.59	....	....
....	463.17	....	463.17	....	....
....	724.75	....	724.75	....	....
....	3,210.00	....	3,210.00	....	....
....	1,820.00	....	1,820.00	....	....
82,489.95	....	82,489.95	....	....	....
51,358.58	....	....	....	51,358.58	....
200.00	....	....	....	200.00	....
1,820.00	....	....	....	1,820.00	....
2,188.40	....	....	....	2,188.40	....
3,210.00	....	....	....	3,210.00	....
14.22	....	....	....	14.22	....
1,720.18	....	....	....	1,720.18	....
....	134.83	....	....	....	134.83
....	376.75	....	....	....	376.75
376.75	....	376.75	....	....	....
9.128.11	....	9,128.11	....	....	....
1,234.49	....	1,234.49	....	....	....
....	1,234.49	....	....	....	1,234.49
....	....	11,528.44	....	....	11,528.44
$323,630.28	$323,630.28	$195,839.89	$195,839.89	$139,318.83	$139,318.83

FIG. 44.—Continued

unexpired insurance premiums amounted to $1,720.18. The accrued interest on Notes Payable amounted to $134.83, and the accrued taxes amounted to $376.75.

Of the Customers' Accounts, $9,128.11 was very doubtful of collection. Depreciation of 10% should be provided on Machinery and Equipment. The item, Power Machinery Co. $727.77, represents an advance payment for machinery in process of installation.

With the working balance sheet solution (Figure 44) as a basis, the adjusting entries may be drafted, entered in the Journal, and posted to the Ledger.

ADJUSTING JOURNAL ENTRIES

Date		L. F.	Debit	Credit
1910				
May 31	Inventory of Manufacturing Material 5-31-10	(a)	$51,358.58	
	Manufacturing Materials Used	(a)	82,489.95	
	Purchases of Manufacturing Materials	(a)		$106,634.12
	Inventory of Manufacturing Materials 6-1-09	(a)		27,214.41
31	Inventory—Goods in Process 5-31-10	(k)	1,820.00	
	Ultimate Credit to Manufacturing Accounts [3]	(k)		1,820.00
31	Inventory—Finished Goods 5-31-10	(m)	3,210.00	
	Ultimate Credit to Trading Account [3]	(m)		3,210.00
31	Inventory—Factory Supplies 5-31-10	(b)	200.00	
	Miscellaneous Factory Supplies	(b)		200.00
31	Inventory—Fuel 5-31-10	(c)	2,188.40	
	Fuel	(c)		2,188.40

[3] For the purpose of ready cross reference between the journal entries and the working balance sheet (Figure 44) a somewhat artificial plan has been followed. In actual practice the adjusting and the closing entries would not be separated quite as distinctly as in this case and would not attempt to follow the working balance sheet as closely. The purpose of the latter is to furnish correct figures, and it is not intended to control the arrangement of the journal entries themselves. In solving this problem it has been thought best to "link-up" the various exhibits as closely as possible for the convenience of the reader.

ADJUSTING JOURNAL ENTRIES

Date 1910		L. F.	Debit	Credit
May 31	Inventory—Horse Feed 5-31-10......	(d)	14.22	
	Stable Expense..................	(d)		14.22
31	Unexpired Insurance...............	(e)	1,720.18	
	Insurance	(e)		1,720.18
31	Taxes	(g)	376.75	
	Accrued Taxes Payable...........	(g)		376.75
31	Bad Debts........................	(h)	9,128.11	
	Allowances for Bad Debts........	(h)		9,128.11
31	Depreciation—Machinery & Equipment	(j)	1,234.49	
	Allowance for Depreciation—Machinery & Equipment.............	(j)		1,234.49
31	Interest Paid......................	(f)	134.83	
	Accrued Interest Payable.........	(f)		134.83

After these journal entries are posted, a trial balance of the Ledger will show the figures contained in the third pair of columns in the working balance sheet.

The Ledger is now adjusted and ready to receive the closing journal entries, which are made from the figures shown in the fourth pair of columns in the working balance sheet.

CLOSING JOURNAL ENTRIES

Date 1910		L. F.	Debit	Credit
May 31	Ultimate Credit to Manufacturing Account [4]		$ 1,820.00	
	Manufacturing Account........			$ 1,820.00
31	Manufacturing Account.........		156,740.64	
	Manufacturing Materials Used.			82,489.95
	Freight, Express and Cartage "In"			1,734.70
	Productive Labor.............			63,842.23
	Miscellaneous Factory Supplies.			1,431.09
	Miscellaneous Non-Productive Labor			1,993.50
	Repairs to Machinery..........			507.73

[4] See the footnote to Exhibit of Adjusting Journal Entries.

CLOSING JOURNAL ENTRIES

Date		L. F.	Debit	Credit
1910				
May 31	Depreciation — Machinery & Equipment			1,234.49
	Fuel			3,366.42
	Water Tax..................			140.53
	Trading Account..		154,920.64	
	Manufacturing Account.......			154,920.64
	To close the latter account......			
31	Sales		187,540.38	
	Ultimate Credit to Trading Account [4]		3,210.00	
	Trading Account..............			190,750.38
31	Trading Account		35,829.74	
	Operating Profit and Loss Account			35,829.74
31	Operating Profit and Loss Account		9,029.99	
	Advertising			378.58
	Salaries			6,170.00
	Stationery & Office Supplies....			296.02
	Stable Expense...............			1,679.89
	Postage			264.42
	Miscellaneous Main Office Expense			241.08
31	Operating Profit and Loss Account		26,799.75	
	Profit and Loss Allocation Account			26,799.75
31	Purchase Discounts.............		2,081.59	
	Interest Earned		463.17	
	Miscellaneous Earnings		724.75	
	Sundry Profit and Loss........			3,269.51
31	Sundry Profit and Loss..........		18,540.82	
	Insurance			2,152.14
	Discount Allowed to Customers.			3,362.19
	Interest Paid			3,521.63
	Taxes			376.75
	Bad Debts			9,128.11
31	Profit and Loss Allocation Account		15,271.31	
	Sundry Profit and Loss........			15,271.31
31	Profit and Loss Allocation Account		11,528.44	
	Undivided Profits			11,528.44
	This entry to be made upon authority of the Board of Directors.			

[4] See the footnote to Exhibit of Adjusting Journal Entries.

If it is assumed that the directors have authorized the last entry, a trial balance of the Ledger at this point will appear as follows:

	Debit	Credit
Cash	$ 430.15	
Notes Receivable	7,907.62	
Customers' Accounts	20,797.80	
Land & Buildings	35,333.83	
Machinery & Equipment	12,344.88	
Horses, Wagons, etc	1,265.40	
Deposit on Machinery (Power Machinery Co.)	727.77	
Inventory of Manufacturing Materials	51,358.58	
Inventory of Factory Supplies	200.00	
Inventory of Goods in Process	1,820.00	
Inventory of Fuel	2,188.40	
Inventory of Finished Goods	3,210.00	
Inventory of Horse Feed	14.22	
Unexpired Insurance	1,720.18	
Accrued Pay Rolls		$ 487.66
Notes Payable		22,344.81
Accounts Payable		5,512.34
Sundry Creditors		2,511.89
Allowance for Bad Debts		10,187.62
Capital Stock		85,000.00
Accrued Interest Payable		134.83
Accrued Taxes Payable		376.75
Allowance for Depreciation—Machinery & Equipment		1,234.49
Undivided Profits		11,528.44
	$139,318.83	$139,318.83

This exhibit, which we have called a "trial balance," is, in reality, an after-closing or "post-closing" trial balance. Strictly speaking, a balance sheet is nothing more nor less than a post-closing trial balance. This is a highly important point and should be fully understood by the student, because he will see many statements or exhibits labeled "Balance Sheet" that are not balance

sheets within this strict definition, although they are balance sheets to all intents and purposes. The term "balance sheet," as it is used most commonly, refers to a statement or exhibit *constructed* from a post-closing trial balance. Such a balance sheet is shown as follows:

BALANCE SHEET

As of

ASSETS					
Current and Trading Assets					
Cash on Hand and in Bank		430	15		
Accounts Receivable	$20,797.80				
Less--Allowance for Bad Debts	10,187.62	10,610	18		
Notes Receivable		7,907	62		
Finished Goods--Inventory		3,210	00	22,157	95
Working Assets					
Manufacturing Material--Inventory		51,358	58		
Goods in Process--Inventory		1,820	00		
Factory Supplies--Inventory		200	00		
Fuel--Inventory		2,188	40		
Horse Feed-- Inventory		14	22	55,581	20
Fixed Assets					
Machinery and Equipment	$12,344.88				
Less--Allowance for Depreciation	1,234.49	11,110	39		
Deposit on Machinery Purchase		727	77		
Land & Buildings		35,333	83		
Horses, Wagons, etc.		1,265	40	48,437	39
Deferred Expense Item					
Unexpired Insurance				1,720	18
				$127,896	72

FIG. 45.—Balance Sheet in Account Form

FORM OF THE BALANCE SHEET

A balance sheet may, and usually does, classify and summarize the figures given by the post-closing trial balance in an endeavor to present the facts and tell its story in the most effective way. There are almost as many ways of constructing a balance sheet as there are accountants, but there are, at least, two forms of presentation that are fairly well standardized. The first method (Figure 45) is to list the assets in the order of realization, starting with the most liquid asset "cash," and closing with deferred expense items or other assets which probably will never be realized in cash. The liabilities follow the same order, running from the most current, such as accounts payable, to capital invested which probably will never be paid.

Quick assets.	Current liabilities.
Fixed assets.	Secured liabilities.
Deferred expense items.	Capital liabilities.
	Undivided profits or surplus.

MICHIGAN MANUFACTURING COMPANY

May 31, 1910

LIABILITIES AND CAPITAL				
Current Liabilities	5,512	34		
Accounts Payable	487	66		
Accrued Wages Payable	134	83		
Accrued Interest Payable	376	75		
Accrued Taxes Payable	2,511	89		
Sundry Creditors	22,344	81	31,368	28
Notes Payable				
Capital and Undivided Profits				
Capital Stock Outstanding	85,000	00		
Undivided Profits	11,528	44	96,528	44
			$127,896	72

Fig. 45.—Continued

The second standard form of balance sheet arrangement (Figure 46) is almost the reverse of the above.

Fixed assets.	Capital liabilities.
Quick assets.	Secured liabilities.
Deferred expense items.	Current liabilities.
	Undivided profits or surplus.

Either of these forms permits of easy comparison between the amount of quick assets and current liabilities, or the amount of fixed assets and secured and capital liabilities. If the "report form" of balance sheet (Figure 47) is adopted, it is customary to list the assets in the order of realization and the liabilities running from current to permanent. The report form has found popularity due to the ease with which it may be typewritten on a standard carriage machine.

Construction of the Balance Sheet

This operation of remolding and reconstructing the post-closing trial balance into the finished balance sheet

BALANCE SHEET

As of

ASSETS					
Fixed Assets					
Machinery & Equipment	$12,344.88				
Less--Allowance for Depreciation	1,234.49	11,110	39		
Deposit on Machinery Purchase		727	77		
Land & Buildings		35,333	83		
Horses, Wagons, etc		1,265	40	48,437	39
Working Assets					
Manufacturing Material--Inventory		51,358	58		
Goods in Process--Inventory		1,820	00		
Factory Supplies--Inventory		200	00		
Fuel--Inventory		2,188	40		
Horse Feed--Inventory		14	22	55,581	20
Current and Trading Assets					
Cash on Hand and in Bank		430	15		
Accounts Receivable	$20,797.80				
Less--Allowance for Bad Debts	10,187.62	10,610	18		
Notes Receivable		7,907	62		
Finished Goods--Inventory		3,210	00	22,157	95
Deferred Expense Items					
Unexpired Insurance				1,720	18
				127,896	72

Fig. 46.—Balance Sheet in Account Form

affords the accountant an excellent opportunity to exhibit his skill, but it also opens the way to serious misrepresentation by improper classification. For example, the post-closing trial balance might show as assets "U. S. Steel Corporation bonds, $1,000.00" and "Wild Cat Mining Co. bonds, $32,000.00." If the accountant is honest, he will carry them separately on the balance sheet, but if he is morally weak, he may be persuaded to lump the two items for balance sheet purposes in some such way as this:

U. S. Steel Corporation and other bonds....................$33,000.00

This would be strictly true but very misleading to the balance sheet readers, i. e., the stockholders or creditors of the company.

MICHIGAN MANUFACTURING COMPANY

May 31, 1910

LIABILITIES AND CAPITAL				
Capital Invested				
Capital Stock Outstanding			85,000	00
Current Liabilities				
Notes Payable	22,344	81		
Accounts Payable	5,512	34		
Sundry Creditors	2,511	89		
Accrued Wages Payable	487	66		
Accrued Interest Payable	134	83		
Accrued Taxes Payable	376	75	31,368	28
Surplus and Undivided Profits				
Undivided Profits			11,528	44
			127,896	78

Fig. 46.—Continued

The fine points of balance sheet construction and presentation can best be learned by the consistent study of corporation balance sheets, as published in the financial manuals, financial journals, and yearly reports. Such manuals, journals, and reports are to be found in any good public library.

The Seven Steps

The steps involved in making up a balance sheet are *seven* in number.

1. Take a trial balance of the General Ledger after all postings for the accounting period have been made.

2. Draw up a working balance sheet in the form sug-

MICHIGAN MANUFACTURING COMPANY

Balance Sheet as of May 31, 1910

ASSETS					
Current and Trading Assets					
Cash on Hand and in Bank		430	15		
Accounts Receivable	20,797.80				
Less - Allowance for Bad Debts	10,187.62	10,610	18		
Notes Receivable		7,907	62		
Finished Goods - Inventory		3,210	00		
Total Current and Trading Assets				22,157	95
Working Assets					
Manufacturing Material - Inventory		51,358	58		
Goods in Process - Inventory		1,820	00		
Factory Supplies - Inventory		200	00		
Fuel - Inventory		2,188	40		
Horse Feed - Inventory		14	22		
Total Working Assets				55,581	20
Fixed Assets					
Machinery & Equipment	12,344.88				
Less - Allowance for Depreciation	1,234.49	11,110	39		
Deposit on Machinery Purchase		727	77		
Land & Buildings		35,333	83		
Horses, Wagons, etc.		1,265	40		
Total Fixed Assets				48,437	39
Deferred Expense Items					
Unexpired Insurance				1,720	18
Total of All Assets				127,896	72
LIABILITIES					
Current Liabilities					
Accounts Payable		5,512	34		
Accrued Wages Payable		487	66		
Accrued Interest Payable		134	83		
Accrued Taxes Payable		376	75		
Sundry Creditors		2,511	89		
Notes Payable		22,344	81		
Total Liabilities				31,368	28
Net Worth				96,528	44
Represented by					
Capital Stock Outstanding		85,000	00		
Undivided Profits		11,528	44	96,528	44

FIG. 47.—Balance Sheet in Report Form

gested, making the adjusting entries and distributing the resulting figures into the four columns:

1. Loss.
2. Gain.
3. Asset.
4. Liability.

Then foot all columns and prove the accuracy of the work by comparing the debit and credit footings of the

"Journal Adjustment" columns, which should be equal, and by adding the footing of the "Loss" and "Assets" columns and comparing that total with the sum of the footings of the "Gain" and "Liability" columns. The sum of "Losses" and "Assets" should equal the sum of "Gains" and "Liabilities."

3. Construct, enter, and post to the Ledger the adjusting journal entries.

4. Construct, enter, and post the closing journal entries. These closing journal entries should debit all nominal accounts with credit balances and credit all nominal accounts with debit balances. The contra entries go to intermediate proprietary accounts, such as the Manufacturing Account, Trading Account, Operating Profit and Loss Account, Miscellaneous Profit and Loss Account, and Profit and Loss Allocation Account. It is not strictly necessary to close the nominal accounts by sections, since all the items *may* be transferred direct to the Profit and Loss Account. It is considered much better practice, however, to close out the various loss and gain accounts by classes. (See Chapter VII.) The figures to be used in the closing journal entries may be obtained from the "Loss" and "Gain" columns on the working balance sheet.

5. All balancing accounts are ruled off. All other accounts are balanced and brought forward.

6. A post-closing trial balance is taken from the Ledger.

7. A balance sheet is constructed from the post-closing trial balance.

Nature of Depreciation

The balance sheet, at best, is no more than an approximation. It cannot even tell the exact truth. It is nothing more than a guess at the truth, albeit, a scientific guess.

It wanders farthest from accuracy in its representations as to the values of fixed assets, such as buildings and machinery; it is approximately accurate as to the value of working assets such as inventories of raw material, semi-finished and finished goods, and its figures as to cash should be absolutely true.

The reason for these unavoidable inaccuracies is obvious. Suppose a machine is bought new for $10,000.00. The proper entry is:

Machinery	$10,000.00	
Cash		$10,000.00

At the end of the year the trial balance shows "Machinery $10,000.00." If it is assumed that the machine was worth $10,000.00 new, is it still worth $10,000.00 at the end of the accounting period?

The machine has been operated steadily, it is slightly worn, some of the paint has been scratched—it has undoubtedly deteriorated. It is no longer worth $10,000.00.

What is it worth?

That is an important question and one that no person can ever answer with absolute accuracy. One man's guess may be as good as another's. The junk man will only pay a few hundred dollars for it. The second-hand machinery dealer will pay $4,000.00 for it. Another manufacturer might pay $6,000.00 for it. Its value to the company itself is approximately the same as at date of purchase.

Whatever value is assigned to it is, at best, no more than an expert guess. There are a number of different methods of estimating its value at a given time, and these will be discussed more fully in Chapter XII. One way is to estimate the "life" of the machine, that is, the

length of time it will last. Such an estimate should be based on experience. If a hundred manufacturers have found that it was not necessary to "scrap" and replace similar machines until they were nine years old, at which time the machines could be sold for an average of $1,000.00 each, sufficient evidence is at hand to warrant a guess that *this particular machine* will last nine years and will have a remainder value of $1,000.00.

If the machine is worth $10,000.00 when purchased and $1,000.00 nine years hence, it is plain that it has lost $9,000.00 value in nine years. What is more natural than to say that its loss in value is $1,000.00 per year?

Value	=	$10,000.00	when purchased.
Value	=	9,000.00	end of first year.
Value	=	8,000.00	end of second year.
Value	=	7,000.00	end of third year.
Value	=	6,000.00	end of fourth year.
Value	=	5,000.00	end of fifth year.
Value	=	4,000.00	end of sixth year.
Value	=	3,000.00	end of seventh year.
Value	=	2,000.00	end of eighth year.
Value	=	1,000.00	end of ninth year.

At the end of each year an adjusting journal entry will be made, debiting the nominal account, "Depreciation," and crediting the asset account, "Machinery." The closing entry will then throw the balance of the Depreciation Account into Profit and Loss where it will serve to reduce the credit balance, or profit, of the year. At the end of the ninth year the Machinery Account might appear as shown in Figure 48.

On January 1, 1909, this asset of "machinery" will appear on the balance sheet as being worth $7,000.00, but this is a crude guess after all. The only two times that

MACHINERY ACCOUNT

Date		Amount	Date		Amount
1906			1906		
Jan. 1	Purchased..........	$10,000.00	Dec. 31	Depreciation	$ 1,000.00
			31	Balance forwarded..	9,000.00
		$10,000.00			$10,000.00
1907			1907		
Jan. 1	Balance forwarded..	$ 9,000.00	Dec. 31	Depreciation	$ 1,000.00
			31	Balance forwarded..	8,000.00
		$ 9,000.00			$ 9,000.00
1908			1908		
Jan. 1	Balance forwarded..	$ 8,000.00	Dec. 31	Depreciation	$ 1,000.00
			31	Balance forwarded..	7,000.00
		$ 8,000.00			$ 8,000.00
1909			1909		
Jan. 1	Balance forwarded..	$ 7,000.00	Dec. 31	Depreciation	$ 1,000.00
			31	Balance forwarded..	6,000.00
		$ 7,000.00			$ 7,000.00
1910			1910		
Jan. 1	Balance forwarded..	$ 6,000.00	Dec. 31	Depreciation	$ 1,000.00
			31	Balance forwarded..	5,000.00
		$ 6,000.00			$ 6,000.00
1911			1911		
Jan. 1	Balance forwarded..	$ 5,000.00	Dec. 31	Depreciation	$ 1,000.00
			31	Balance forwarded..	4,000.00
		$ 5,000.00			$ 5,000.00
1912			1912		
Jan. 1	Balance forwarded..	$ 4,000.00	Dec. 31	Depreciation	$ 1,000.00
			31	Balance forwarded..	3,000.00
		$ 4,000.00			$ 4,000.00
1913			1913		
Jan. 1	Balance forwarded..	$ 3,000.00	Dec. 31	Depreciation	$ 1,000.00
			31	Balance forwarded..	2,000.00
		$ 3,000.00			$ 3,000.00
1914			1914		
Jan. 1	Balance forwarded..	$ 2,000.00	Dec. 31	Depreciation	$ 1,000.00
			31	Balance forwarded..	1,000.00
		$ 2,000.00			$ 2,000.00
1915					
Jan. 1	Balance forwarded..	$ 1,000.00			

FIG. 48.—Machinery Account

the value of the machine will be actually known is at the time of purchase and at the time when it is sold for scrap. It is convenient for bookkeeping purposes to say that its value decreases *uniformly* each year, but few would claim it strictly true. Many assets other than machinery are just as difficult to value correctly, the result being that many accounts do not show the truth. The proprietary accounts will be out of agreement with facts by the net amount that the other accounts are inaccurate.

Recognizing the foregoing arguments, the modern accountant does not attempt the impossible. It is now almost universally the rule to charge the asset account with the cost of the asset, leaving that figure unchanged until the business has parted with it. Instead of crediting the asset account itself each year with a figure supposed to represent the amount of value which the asset has lost, a separate and distinct account is created to receive such credits. This account [5] may be called "Depreciation Not Written Off" or "Allowance for Depreciation." It really takes the place of the credit side of the asset account and is called a "valuation account."

By using an Allowance for Depreciation Account to register the shrinkage in value of the $10,000.00 machine, the following situation appears at the end of nine years:

MACHINERY ACCOUNT

Debit	Credit
1906 Jan. 1 .... $10,000.00	

[5] The term "Reserve for Depreciation" is often erroneously used in this connection. See page 333.

ALLOWANCE FOR DEPRECIATION ACCOUNT

	1906		
	Dec. 31	Depreciation...J	$1,000.00
	1907		
	Dec. 31	Depreciation...J	1,000.00
	1908		
	Dec. 31	Depreciation...J	1,000.00
	1909		
	Dec. 31	Depreciation...J	1,000.00
	1910		
	Dec. 31	Depreciation...J	1,000.00
	1911		
	Dec. 31	Depreciation...J	1,000.00
	1912		
	Dec. 31	Depreciation...J	1,000.00
	1913		
	Dec. 31	Depreciation...J	1,000.00
	1914		
	Dec. 31	Depreciation...J	1,000.00

The *difference* at any time between the asset account and the Allowance for Depreciation Account is approximately equal to the value of the asset itself at that time. The asset account represents the original cost and the Allowance for Depreciation Account represents the approximate diminution in the value of the asset.

The reader should bear in mind, therefore, that asset accounts usually reflect the *cost of the assets when purchased* and that any particular asset account conveys no information as to the *present worth* of the asset until the proper Allowance for Depreciation is deducted from it. Even then it cannot state the exact truth, since the shrinkage in value of the asset, as registered in the Allowance for Depreciation Account, is only an estimate at best, being a doubt cast as to the accuracy of the asset account.

INCOMPLETE DOUBLE ENTRY

In a system of incomplete double entry or single entry it is impossible to obtain a balance sheet. A substitute

for the balance sheet is seen in the exhibit known as the "Statement of Resources and Liabilities." This statement is not drawn from the books as is the balance sheet. It is nothing more than a list or written inventory of the various items of assets and liabilities and may be made independently of the records. The arrangement of such a statement may be identical with that of a balance sheet, and it may be *more* accurate. But, as a general rule, a post-closing trial balance of a double entry Ledger, rearranged and properly classified in balance sheet form, is to be preferred because it is supported by all the records, journals, and subsidiary ledgers. It is thus subject to verification or audit.

Conclusion

Under the elementary system of accounts, proposed in Chapter I, where every loss is debited to the Proprietor's Account as soon as the loss occurs and every gain is credited to that account when the gain is made, the trial balance will always show exactly the same figures as the balance sheet. With such a system all changes in the assets and liabilities are permanently recorded *when they happen*. Therefore, the balance of the Proprietor's Account at any time represents the amount due to the proprietor by the business.

Such a simple system involves no adjusting entries because the adjustments are made day by day. It calls for no closing entries because there is but one Proprietor's Account.

When the Proprietor's Account is split up into numerous classified subaccounts (nominal accounts), and when adjustments are *not* made day by day, it becomes necessary to obtain the facts at the close of certain periods, known as "accounting periods." At the end of

one of these periods adjustments are made and the nominal, or sub-proprietary, accounts are closed into the one main account representing the proprietor's interest.

If a man carries all his money in one pocket, he will have no difficulty in determining his financial standing *at any time.* If he has twenty pockets each containing money, he cannot determine what the total is *at any time* but must wait until he can transfer the money from all the various pockets into one pile. The *several expense and income* accounts correspond to the different pockets —the net figure representing loss or gain for the period cannot be ascertained until the various expense and income items are brought together.

TEST QUESTIONS

1. Why may a prepaid expense be considered in the nature of an asset?

2. Why is it impossible to obtain a balance sheet in a single entry system?

3. Suppose an expense account is improperly charged instead of an asset account. What will be the effect on the balance sheet? On the net profit?

4. What is an accrued liability? A deferred asset? A deferred liability? An accrued asset?

5. What are the seven steps leading up to a balance sheet?

CHAPTER V

ASSETS AND THEIR VALUATION

The preceding chapters have developed the fact that the left-hand side of a properly arranged balance sheet is made up of assets and deferred charges,[1] and it has already been hinted that the assets differ from one another in (1) nature, (2) ease of liquidation, and (3) accuracy of valuation.

Some writers make a fundamental distinction between assets, asserting that any asset must represent either actual property owned or valid and enforceable claims to property.

This distinction is unquestionably sound. A man's house and lot differ fundamentally from accounts receivable, notes receivable, or other forms of claim which he also regards as assets. However, a valid and enforceable claim to property is, under modern economic conditions, fully as valuable as the property itself. Such a claim is often negotiable in its nature. That is, it may be passed from one person to another by indorsement or by mere delivery to effect a negotiation. An example of such a negotiable claim is the bank check, promissory note, or accepted draft. It is characteristic of such a negotiable claim that it is represented by a document of some sort.

[1] To make this statement inclusive it should be amended to read "assets, deferred charges, and losses not written off." It occasionally happens that an extraordinary loss is allowed to stand on the books with the idea of writing it off from year to year out of profits. If such a loss item is clearly labeled, it may properly be shown on the asset side, although it is actually a valuation account offsetting the capital accounts.

A non-negotiable claim may, nevertheless, have approximately equal convertibility to a negotiable instrument. A good example of such a claim is an ordinary debt receivable, which is often no more than an *implied* promise on the part of one person to deliver property, usually cash, to another person.[2]

Such a *claim* to property, owing to the convenience with which it may be turned into property, is properly regarded as the equivalent of property. Any extended treatment of this subject would involve an examination of the nature of credit, which seems hardly desirable here.

Money is the universal medium of exchange. All property is commonly translated into terms of money—its value is estimated in dollars and cents. Money itself, however, except to the goldsmith and the silversmith, is nothing more than a medium of exchange. The olden-time storekeeper traded commodity for commodity, and even in comparatively modern times many transactions took place by barter, pure and simple. The cobbler may trade or barter five pairs of shoes for one overcoat, or he may trade five pairs of shoes for $25.00 and then trade the $25.00 for the overcoat. The use of a medium of exchange, therefore, is a matter of convenience. The dollar is the fiscal yardstick by which the value of goods is measured.

Money is, in itself, nothing more than a universal claim to property—a claim not against one person, but against all the civilized world. Accounting, by its very nature, must employ the monetary unit in recording all transactions. The accountant must express all values in terms

[2] The use of the word "person" in this sense refers, not only to an individual human being, but to an artificial entity, such as a copartnership or corporation.

of such a unit. This is so obvious as to require no elaboration and, yet, it sets the stage for discussion of some of the most difficult problems in accounting theory, viz., the valuation of assets.

Primary Classification of Assets

The conventional treatment of assets is to classify them first as positive and negative, the negative asset being a liability, but the accounting problems in connection with liabilities are comparatively simple and will not be discussed until a later section.

The usual and most convenient classification of the positive assets is the one normally employed by the accountant in drawing up a balance sheet.

Assets:
- Fixed assets.
- Working assets.
- Current assets.
- Deferred assets.

Definitions

Very roughly these four classes of assets may be defined as follows:

Fixed assets consist of tangible or intangible properties which are more or less essential to the continuation of the business which owns them and which, therefore, may reasonably be expected to remain in the possession of that business for an indefinite period. It is usual to classify as fixed assets such items as "land," "buildings," "machinery," "equipment," "franchises," and "goodwill."

A current asset is one which is readily convertible into cash and which, by its nature, probably *will* be converted into cash. Such assets are often spoken of as being liquid, and this adjective is a good one, since it

conveys the impression of a ready convertibility and implies "flowing," as in a stream. Examples of such assets are cash itself, certain types of negotiable instruments, such as bank checks, which are normally regarded as cash by the average business man, accounts receivable, and notes receivable.

Working assets usually consist of supplies and materials of various sorts. They are not readily convertible into cash without some loss in liquidation, but in a going business they ultimately are converted into cash through the ordinary operations of manufacturing and selling. It is often difficult to make a clean-cut line of demarcation between working assets and current assets. Some working assets may be converted into cash before certain of the current assets. The idea back of the name "working assets" is that they are "in process" —that something remains to be done to them before they can be properly classified as "current." Raw materials, work in process, and supplies of various sorts are ordinarily embraced in working assets.

Deferred assets have been rather elaborately treated in the preceding chapter. A deferred asset represents an expense paid in advance. Such deferred items are properly classed as assets, because they serve equally as well as cash itself so far as payment for the expenses of a future period is concerned.

The Economic Cycle

The function of the normal business is that of adding utility to commodities. These are economic phrases, which may be more broadly defined as follows: "Utility" is the quality of being desired and must always be sharply distinguished from "usefulness." Water is useful, but has no utility. Absinthe is not useful, but

has utility. Utility in a commodity may usually be obtained by effort or sacrifice. In a natural state, water may be obtained without effort; hence it has no utility and cannot be bought or sold. A harmful liquor, on the other hand, has a distinct utility, because effort must be exerted in order to produce or obtain it.

The function of business, therefore, is that of adding utilities to commodities. There are a number of different kinds of utilities, such as "place" utility, "time" utility, and "form" utility. The railroad adds "place" utility to commodities. A cold storage company adds "time" utility to the commodities which are stored. The manufacturer adds "form" utility to his raw materials.

With the foregoing in mind, it is easy to trace the ordinary business cycle. At the beginning of a business, a certain amount of cash may be provided by the proprietor. A portion of this cash is invested in fixed assets, a portion in commodities to which utility is to be added, and the balance of the cash is expended or outlaid in the process of adding utility to the commodities, this being done with the expectation that sales at an advanced price will more than repay all such outlays. Raw material comes into the business and is a working asset. It is acted upon by the use of fixed assets such as machinery, and by labor which is purchased for that purpose. It remains a working asset until it has gone through the regular routine of manufacture, storage, or transportation. Sales are then made of this finished product which, therefore, disappears as an asset, and in its place appears a current asset, such as an account receivable, a note receivable, or actual cash. These current assets are again utilized for the purchase of more raw material, for the services of labor, etc., and this cycle repeats itself all during the life of the business, the entire basic purpose

of this activity being the acquisition of profit. Each time the cycle is made, a profit should normally be made, and this profit consists of the difference between the selling price and the amount which it cost to purchase the commodity and add utility to it.

It may clearly be seen that no arbitrary standards of value may be adopted in connection with assets. What is a working asset today may be a current asset tomorrow, subject to transformation into a deferred asset, or perchance a fixed asset, the following day. It is necessary, however, in order that a basis may be afforded for further analysis that all assets be classified in the manner proposed. At any given instant of time such a classification may be made and, since the balance sheet is a picture of the business at a given instant of time, the items on the balance sheet may be quite accurately classified.

Primary Basis of Valuation

It is now almost uniformly recognized that the only proper basis of valuation of an asset is that of its cost to the "going" business. The value at which it appears on the balance sheet should *not* be equivalent to the price which would be obtained for it if sold "under the hammer" at an auction. If, for balance sheet purposes, assets were valued at the amount they would bring at a forced sale, it is safe to say that no business could claim to be solvent on the basis of its yearly report. In every case the value of the asset must be viewed from the standpoint of the "going" business, not a liquidating business.

Valuation of Current Assets

There is one asset which is automatically self-valued. That asset is money. It does not have to be translated

into terms of dollars and cents, because it *consists* of dollars and cents. The ordinary business man, however, looks upon money as consisting, not only of gold and silver, but of certain very liquid forms of claims, i. e., promises to pay made by others to him. First and foremost are various kinds of paper money which, in reality, are nothing more than governmental promises to pay upon demand a given amount of gold or silver. These promises may be direct governmental obligations or indirect as in the case of national bank notes. The note issues of national banks are secured by depositing United States bonds with the government. Under normal economic conditions, with a stable form of government, such promises are worth their face value. There is no question as to valuation.

Under abnormal economic or governmental conditions, paper money may be worth much less than its face value. This occurred at the time of the Civil War in the case of the Confederate paper money, which depreciated very badly. We may, however, disregard such abnormal fluctuations in the value of paper currency and for balance sheet purposes regard it as being equivalent to gold and silver.

Bank checks are commonly regarded by the business man as the equivalent of cash. Checks are the principal media of exchange in this country. Nearly all purchasing and selling is done by the use of checks. A "check" is a written order on a bank by a depositor to pay to another person a certain amount in cash. The use of checks is so prevalent that they are readily accepted in lieu of cash where the maker or indorser is favorably known.

Cash, as it appears on the balance sheet, does not necessarily refer to gold, silver, paper money, and checks

on hand. Cash may be on hand, or it may be in the bank. Cash in the bank is really not cash at all. It is an account receivable—a claim against the bank—but, as a matter of fact, cash at the bank is regarded equal in status to cash on hand. Often no distinction is made between the two. This comes about, owing to the confidence which the average citizen has in the average bank. Bank deposits are usually safeguarded so carefully that the accountant feels justified in regarding the bank deposit as being the equivalent of cash on hand.

Debts Receivable

Debts receivable form a somewhat different class of asset. The value of cash is expressed in terms of itself. A debt receivable is expressed in terms, not of itself, but of cash, and the problem is at once presented as to the valuation of such assets. Debts receivable *really* include both open accounts and notes, but we find it convenient to confine the title to those items which are receivable in the immediate future and which are unsecured beyond the implied, verbal, or informal promise of the debtor to pay. The time of payment is governed by the terms of sale. Thus, if goods are sold on thirty days' time, it means that the purchaser impliedly, verbally, or informally contracts to pay in thirty days. This promise may not be evidenced except by the original signed purchase order for the goods and subsequent correspondence. Furthermore, such a promise of payment is not always strictly observed as to amount and as to time. A debt may be due for payment in thirty days, but any man who was ever engaged in business knows that there is a very strong probability that many of his debts receivable will not be paid when due. Some customers will take sixty days, others ninety days, some a year or more, and some,

perhaps, will never pay. A debt receivable is a legal and enforceable claim, hence it is considered as an asset under the title of "Accounts Receivable," but credit is granted so loosely by the ordinary business man that it is not safe to take all these "promises to pay" at their face value.

Insolvency and bankruptcy are common in this country, which simply means that losses on accounts receivable are constant. Knowing that such losses are constant, the business man may make provision for them. His past experience shows him that, on the average, 5% of the total face value of his debts receivable will prove worthless. He, thus, has an adequate basis for properly valuing this asset. At the end of each fiscal period he may arbitrarily reduce the value of this asset by 5%. This, of course, implies a debit to the account usually called "Bad Debts" and, theoretically at least, a credit to the asset account. We have already seen, however, that it is not customary to credit the asset account, but rather to credit another account, which is technically known as a "valuation account." The effect of such a valuation account is that of subtraction. It simply represents the credit side of the asset account, and includes only those deductions from the value of the asset account which have been charged to proprietorship. For example, if accounts receivable stood on the books at $100,000.00, either of the following two entries would be correct in case it was desired to charge off 5%.

Bad Debts (an expense account) $5,000.00
  Accounts Receivable (an asset account) $5,000.00

or

Bad Debts (an expense account) $5,000.00
  Allowance for Bad Debts (a valuation account) $5,000.00

After the first entry was posted the Accounts Receivable Account would show a debit of $100,000.00 and a credit of $5,000.00. This would leave a balance of $95,000.00 as representing the value of accounts receivable. If the second entry were made instead of the first, the Accounts Receivable Account would show on the debit side $100,000.00 and on the credit side nothing at all, but there would have been set up a valuation account with a credit for $5,000.00. To arrive at the actual value of accounts receivable, it would be necessary to make a combination of the two accounts, viz., the Accounts Receivable Account and Allowance for Bad Debts. The net result of these two taken into combination would be $95,000.00.

It is important to bear in mind that a valuation account is not a liability, nor is it a proprietary account. It is an account set up for valuation purposes, which does nothing more than register the deduction which may have to be made from the corresponding asset account. It is always wrong, for balance sheet purposes, to show the balance of such a valuation account on the liability side. Such a balance should be deducted from the asset account in an interior column of the balance sheet and extended into the regular column at the net figure.

Debts receivable are always booked at their face value. In addition to the fact that the face value does not tell the truth, owing to possible losses by bad debts, it also is inaccurate because payment of the account in cash is deferred until some future time. Everyone is familiar with the force called "interest," and everyone knows that a present dollar is worth more than a future dollar. If an interest rate of 6% is assumed, a present dollar is worth $1.00, but a claim for $1.00, payable a year from the present time, is worth approximately only 94 cents. It

is, therefore, clear that all accounts receivable are worth less than their face value, but inasmuch as the time of payment is not definitely known, it would prove an impossible task to obtain the present value of such a future promise to pay. It is, therefore, an inaccurate, but common and entirely justifiable, custom to ignore this slight difference existing between the face value of such a claim and its discounted value.

Notes Receivable

Notes receivable differ from accounts receivable in that they are *formal* written promises instead of implied verbal or informal promises to pay. A note receivable contains a definite promise in written form and is frequently negotiable. It specifies the date of payment and the place of payment, and lawsuit can be brought on the note itself as prima facie evidence of debt, wherein it differs from an account receivable. An action at law to enforce payment of an account receivable item requires the production of evidence that a service has been actually performed or value given. A note receivable imports consideration, that is, that value has been given and, except under special conditions, requires no collateral evidence. The Statute of Limitations in the several states *may* be different for notes and accounts.

A note receivable may or may not be paid, just as in the case of any debt, but it is usually unnecessary to make as large a provision for uncollectible notes as it is for ordinary debts. This is because a man very often will buy a bill of goods without knowing exactly how he is going to get the money to pay for them, but that same man will usually be much more careful about signing a note, since it is a formal instrument, and he is far more likely to make provision for paying it at the due date.

In the case of ordinary debts receivable it was observed that no accurate determination could be made of their discounted value, that is, the difference between their value now and their face value. This was found to be true because the due date was not definitely known. In the case of a note, however, the due date is specifically a part of the note itself, and by use of mathematical processes or formulae it is possible to make an accurate determination of the present value of notes receivable, always assuming they will be paid when due. Thus, the present value of a non-interest bearing note for $103.00, payable in six months, is exactly $100.00, if the current rate of interest is 6%. The rule which is used in determining the present value is as follows:

To find the present worth of an amount due at a future date, divide the amount by the amount of $1.00 placed at interest for the given time. For example, a non-interest bearing note for $1,000.00 due in two years has a present value of approximately $890.00, if the current and accepted rate of interest be 5%. The formula for obtaining this figure is as follows:

$$\frac{\text{Amount due in two years}}{\text{Value of \$1.00 in two years at compound 5\% interest}} = \frac{\$1{,}000.00}{\$1.1236} = \$890 \text{ Approximate present worth}$$

Theoretically, such a determination of present worth of all notes receivable should be made at the end of every accounting period. This, however, is often omitted, since the amounts involved may not be large. For practical purposes it is more convenient to omit the detailed calculation on each note. Where the notes receivable are for large amounts and where they run for a considerable period, such a determination should be made.[3]

[3] Where a note receivable is interest bearing, it is obvious that the present worth is equal to the face value. It is only in the case of non-interest bearing notes that this calculation would ever have to be made.

Bills Receivable

Bills receivable are unconditional written orders by one person upon another (or by us upon a debtor) to pay us a sum of money named. They are negotiable instruments of exchange which must be "accepted" by the debtor before being set up on our books as an asset. The time of payment is "on demand" or at a fixed future date.

Until "accepted" such orders have no standing so far as the books of account are concerned. After being accepted they may be set up as assets. Accepted bills, or acceptances, as they are called, are considered the equivalent of notes and are governed by the same general principles of valuation.

Merchandise or Finished Goods Account

There is still another kind of current asset which might be considered. Various names are applied to the account which represents this asset. It is frequently spoken of as the Merchandise Account or the Finished Goods Account, and it represents commodities which are on hand ready for sale. Although a discussion of the problems incident to the valuation of this asset properly belongs here, it is deemed better to consider them later in connection with the valuation of working assets.

Working Assets

The items that appear on a balance sheet under the classification of "working assets" consist of inventories of raw material, supplies, and partly finished goods. The generally accepted policy with regard to the valuation of such items is that they shall be carried at cost price and, furthermore, that this cost price shall represent, not only

the bare material cost, but all other costs which have been incurred in

1. Getting the material to the factory.
2. Labor in unpacking and uncrating material.
3. Labor and overhead expense directly assignable to partly finished goods.

It must be further recognized in valuing such assets that the basis of valuation is not the liquidation value but that to a *going* concern.

Fluctuating Values

It sometimes happens in the case of raw material that the market price fluctuates so greatly, owing to speculative conditions of the commodity markets, that the original cost price will sometimes be greater than the current market quotations. For example, copper might be purchased at 16 cents a pound and within a few weeks the market for copper might slump down to 11 cents a pound. From the standpoint of pure theory, this should not affect the price at which the copper would be carried on the books, but from a practical standpoint, it is deemed wiser to inventory the copper at the lower of the two prices. It is practically an unwritten law [4] among accountants, in the case of the valuation of merchandise, that the cost price must be used as the basis, unless the market price happens to be lower. This appears to be a somewhat unfair and unreasonably conservative doctrine. It means that a company must value each asset at the lowest possible figure—that it must recognize fluctuations when they are

[4] It should be noted that many cost accountants quarrel with this doctrine, insisting that material should be shown on the books at cost, regardless of fluctuations.

unfavorable in their nature, but that it may take no account of any favorable fluctuations.

It is conceded by accountants to be a dangerous thing to take appreciation into consideration. The accountant argues that human beings are too optimistic any way—that they will, out of sheer hopefulness, overvalue their holdings if given a chance. Experience certainly proves that it is much wiser to be ultra-conservative with respect to balance sheet valuations, particularly in so far as the working assets are concerned.

Elements of Book Cost

Incoming freights, incoming express, and incoming drayage costs are all proper additions to the cost of merchandise, since it is clear that their cost to the purchaser is not the f. o. b. cost, but rather the cost laid down in his own warehouse.

Materials and merchandise are often quoted for sale at a list price subject to a trade discount. These trade discounts are often large in amount, sometimes as much as 50%. Such trade discounts must always be deducted from the value of merchandise purchased. If a certain material was listed at $20.00, subject to a 25% trade discount, the proper charge to the Material Account would be $15.00 and not $20.00. Trade discounts amount simply to reductions in price.

There is considerable diversity of opinion among accountants as to the treatment of cash discounts on purchases. Should such discounts be considered as deductions from the cost of material purchased? This question can be answered with a "yes" or "no," depending upon the viewpoint. It is certainly true that if the amount of the discount is not deducted from the cost of the goods that an anomalous situation results.

Suppose $20.00 worth of merchandise is purchased and a cash discount of 2% is taken. If this cash discount is *not* considered a reduction in the cost price, the books will show that $19.60 in cash was paid out for certain goods which were charged in to the Material Account at $20.00. It would seem, however, that the accountants who support such procedure have the best of the argument. They claim that cash discounts, given or taken, are financial in their nature and that they measure the adequacy or inadequacy of the capital invested in the business. If a company has capital enough to take advantage of purchase discounts, the credit is due to the sufficiency of capital, which makes such savings possible. The company which has insufficient capital cannot take advantage of such opportunities. A cash discount may be taken by that concern which is financially able, but *the sufficiency or insufficiency of cash should not be allowed to affect the value of merchandise.* If such a cash discount is considered a deduction in price, then the concern which had sufficient capital to take a discount of 40 cents on a $20.00 invoice, would be penalized by being forced to value the purchase at only $19.60, while the other concern with insufficient capital would, because of its sheer inability to take the discount, be privileged to value the *same merchandise* at $20.00.

Materials in Process

The problems entering into the valuation of materials in process are peculiarly those of the cost accountant. The same general rules, however, apply to their valuation as in the case of raw material and supplies. Cost price only must be used, the one exception to this rule being in the case of a business which handles long-time contracts. It is then sometimes allowable for a certain proportion

of the estimated profit to be taken into the accounts each period. Conservative auditors always view such a procedure with a suspicious eye, however, and are prone to guard carefully against the danger of "anticipating profits."

Suppose, for example, that a contractor had a $100,000.00 contract, which would require three years for completion. It would seem unreasonable and unfair to insist that for the first two years he should show no profits at all and for the last year a very large profit. In such a case, which would occur but rarely, the accountant feels justified in permitting the contractor to take credit for a reasonable proportion of the profits each year and at the same time carefully safeguards him by establishing ample reserves for contingencies.

Material and Supply Accounts

There are two general ways of handling material and supply accounts: *The first method* is to charge all incoming material to a purchases account. To determine the *amount used* and the *balance on hand* under this system, it is necessary to take a physical inventory. The taking of such an inventory is a laborious task; hence this system is not ordinarily employed where there is a shorter accounting period than one year. *The second method* of handling such accounts is to charge all incoming materials and supplies to material and supply accounts and to credit those accounts, at cost, whenever materials and supplies are withdrawn for use. Such a procedure as this contemplates a modern system of keeping stores with some responsible person in charge of the stores. This individual, who is usually known as the "storekeeper," is held strictly responsible for the supplies and material in his care. He is required to give a receipt for all incoming

material and supplies and to take a receipt for all material or supplies which he relinquishes.

By operating under such a system as this, it is comparatively easy for the storekeeper to keep what is known as a "perpetual inventory system" or a "Store's Ledger." In its simple form a Store's Ledger may be very much like an ordinary ledger. One sheet in this ledger is assigned to each kind or class of stores. Whenever material is received, it is debited to the proper account in the Store's Ledger. Whenever a quantity of the same material is issued, it is credited to the Store's Ledger Account. The balance of that account, therefore, should always coincide with the amount of material actually left on hand for which the storekeeper is responsible. In a large storeroom of a manufacturing plant there may be thousands of kinds of materials and supplies with an account for each size or grade of each kind. The Store's Ledger is a subsidiary ledger and is represented in the General Ledger by a controlling account called "Materials Account." (Instead of one control account there may be several classified control accounts.)

Accounting for Materials

One common method of accounting for materials may be outlined as follows: Each stock ledger account (Figure 49) should indicate the maximum and minimum quantity which it is desirable to keep in stock. When the supply of any article runs below the minimum, the storekeeper should

1. Notify the proper department head of the shortage.
2. Take a physical inventory of the goods.
3. Reconcile the stock ledger account balance with the true balance.
4. Send an overage or shortage report to the auditor.

Description ______________________________ **Acct. No.** ______
______________________________ **Ref. No.** ______
Low Limit ______
Section ______ **Bin** ______ **Symbol** ______ **Unit Quantity** ______ **Quantity to be Ordered** ______

ORDERED		RECEIVED					RESERVED			ISSUED ON REQUISITION					BALANCE			
															IN STOREROOM			
Date	Quantity	Date	Order No.	Quantity	Unit Cost	Total Cost	Memo. No.	For Order No.	Quantity	Date	Req. No.	Quantity	Unit Price	Price	Quantity	Unit Cost	Total Cost	Quantity Available

Article ______ **Stock No.** ______
Maximum Quantity ______
Minimum Quantity ______

RECEIVED		DELIVERED			RECEIVED		DELIVERED			RECEIVED		DELIVERED		
Date	Quantity	Req. No.	Quantity	Balance	Date	Quantity	Req. No.	Quantity	Balance	Date	Quantity	Req. No.	Quantity	Balance

Commodity ______ **Unit** ______ **Size** ______ **Weight** ______
Symbol ______ **Maximum Quantity** ______
Location ______ **Minimum Quantity** ______

RECEIVED					ISSUED					BALANCE			
Date	Order No.	Quantity	Price	Value	Date	Ref. No.	Quantity	Price	Value	Date	Quantity	Price	Value

FIG. 49.—Common Forms of Stock Ledger Accounts

RECAPITULATION OF REQUISITIONS

FROM ________ DEPT. TO STORES DERT.

DURING MONTH OF ________ 191

REQUISITIONS		CREDITS TO STORES ACCOUNTS						
DAY	NUMBER	SUPPLIES	RAW MAT'L No. 1	RAW MAT'L No. 2	RAW MAT'L No. 3	FINISHED GOODS	PARTS	MISC.

DATE ________ 191__ SIGNED ________
STOREKEEPER

FIG. 50.—Recapitulation of Requisitions

When the department head receives the notification, he may make a requisition upon the purchasing agent, who will order a new supply. This purchase order may be made up with one original and four carbons, disposable as follows:

1. Mailed to the supplying company.
2. Filed in the "Unfilled Orders File."
3. Filed in the office file.
4. Sent to receiving clerk.
5. Sent to receiving clerk.

Copies 4 and 5 are made with short carbons. They may show the price but not the quantities.

When the goods are received, they are checked against these carbons and the receiving clerk's count or weight is inserted. One of the carbons then goes to the auditor, where it is attached to the proper voucher jacket. The other one forms the basis of the storekeeper's charges to the stock ledger accounts.

When materials or supplies are needed in the shop, they are requisitioned from the storekeeper. The storekeeper should *never* release materials to the shop except upon requisition, the latter being his receipt for the goods. From the requisitions, the storekeeper makes his credits to the stock ledger accounts. At the end of each month a Recapitulation of Requisitions (Figure 50) is made up and sent to the Cost Department. From this the General Ledger control accounts receive credits for the total requisitions.

CONTROLLING ACCOUNTS

Charges	Credits
From Voucher Register	From Requisition Recapitulation

STOCK LEDGER

Charges	Credits
From copy of original purchase order, which has been "checked" by receiving clerk	From original requisitions

The general ledger entries are made monthly in lump sums.

Materials Account[5]	$.........	
Vouchers Payable		$.........
For the monthly total of vouchered material purchases		
Work in Process	....	
Materials Account[5]		....
For the total material requisitioned from the storeroom during the month		

The method of handling discrepancies between book and actual inventories is for the storekeeper to adjust his book inventories to bring them into accord with the facts, reporting the overages and shortages to the auditor. The latter then makes the following general ledger entry for each shortage:

Over and Short Account	$.........	
Materials Account		$.........

A reverse entry is made for overages which will be infrequent. The Over and Short Account should not be absorbed into "Operation," but should remain on the books as an index of the storekeeper's efficiency.

When the balance reaches a certain fixed account, the storekeeper should be called upon for explanation or, perhaps, discharged. It is well to keep the existence of this Over and Short Account a secret from the storekeeper since, otherwise, he might be tempted to falsify his reports. It is also a good idea for periodical "surprise"

[5] These entries are only suggestive. As a matter of fact, there would probably be a number of classified material control accounts in the General Ledger.

inventories to be made of selected classes of stores for the purpose of checking the storekeeper's reports.

A detailed description of the methods used in handling materials and supplies more properly belongs to a treatise on factory accounting than to the present work, but a general description of it at this point seems necessary because of the problem which comes up in connection with the valuation of working assets under any perpetual inventory scheme. The cost price must be used, but this must be an *averaged cost price.* For instance, suppose that 1,000 pounds of copper were purchased for 11 cents a pound f. o. b. destination and that 600 pounds of that copper were used. The entry in the Copper Account in the subsidiary store ledger would consist of a debit of $110.00 (representing 1,000 pounds of copper at 11 cents a pound) and a credit of $66.00 (representing 600 pounds of copper at 11 cents a pound). The balance of copper on hand according to that material account would then be 1,000 pounds minus 600 pounds, or 400 pounds. The value of the copper left on hand would be $110.00 minus $66.00, or $44.00. Suppose that 100 pounds of copper were now purchased at 16 cents a pound. What would be the value of the copper on hand? The value would obviously be the sum of 400 pounds at a cost of $44.00 and 100 pounds at a cost of $16.00, or 500 pounds costing $60.00—a "unit price" of exactly 12 cents a pound. This is the price which should be used in recording the issuance of further copper. In determining this price of 12 cents a pound it will be noted that a weighted average was taken and not a straight average. Taking the straight average would result in a unit price of 13½ cents, but it is clear that this figure would be incorrect.

When we speak of the necessity of using cost prices in valuing working assets, we mean that actual cost prices

must be used. Unless this is done, serious misrepresentation will result. Two policies should be strictly avoided:

1. All the material and supplies should not be valued at the cost price of the last lot purchased. This is important since otherwise a dishonest or unwise manager might purchase 40,000 pounds of copper at 10 cents a pound and later purchase 100 pounds at 20 cents a pound. If he were allowed to value all the copper on hand at the cost of the last consignment, the result would be a gross inflation of the inventory and, consequently, a better balance sheet showing. In the particular illustration used, the misrepresentation would amount to $4,000.00.

2. Prices should not be averaged according to the method of straight averages instead of weighted averages. The average unit cost of 40,000 pounds of copper at 10 cents and 100 pounds of copper at 20 cents is not 15 cents, but only a very small fraction over 10 cents.

Precisely the same principles which apply to the valuation of working assets also strictly apply to the valuation of finished goods, although finished goods may be classified as a current asset.

Fixed Assets

Fixed assets may be roughly classified into tangible and intangible. Tangible fixed assets include such items as

1. Land.
2. Buildings.
3. Machinery, Furniture and Fixtures.
4. Investments.

Intangible fixed assets include

1. Goodwill.
2. Franchises.
3. Patents.

The general principle underlying the valuation of fixed assets is that they shall be carried at cost regardless of current fluctuations in value, but that accounting devices to measure lessening value must be taken into consideration. There is always some justification for arguments that favor a recognition of the market price in the case of working assets, but no sound arguments can be brought forward in justification of a similar treatment of fixed assets. The reason for this is clear. Working assets consist either of materials or of supplies. The materials are intended for ultimate resale in some altered form, while the supplies are consumed in making the materials marketable. Both materials and supplies, therefore, are transitory and are either directly or indirectly intended for resale. The state of the commodity markets has a direct effect upon the prices which will be ultimately realized for the finished goods and the merchandise into which the working assets are to be transformed. Hence there is a logical justification for a partial recognition of commodity market fluctuations.

The status of fixed assets is entirely different. A fixed asset is a permanent holding and ordinarily may not be parted with until dissolution of the business. Fixed assets are essential to and inseparable from the business which owns them. Since they are not intended for resale, market fluctuations in their value will have no effect upon the current profits of the business.

There is a corollary to the foregoing. Market fluctuations may be ignored, *but* it is of prime importance that

some well-considered plans of depreciation and amortization[6] be followed. Certain classes of fixed assets depreciate more than others. This, however, does not affect the rule as above laid down. It only affects the rate.

Sometimes a peculiar situation results from a rigid adoption of these two policies. For example, let us consider the case of an industry purchasing real estate on the outskirts of a city, and building thereon a factory. The total investment in land might be $10,000.00 and in buildings $20,000.00. If they followed a conservative practice such as has been outlined, they would charge off each year a certain percentage of their Buildings Account to Depreciation (note that land, in and of itself, is not usually subject to depreciation, although it *may* be under certain circumstances). In twenty years they may have charged off the entire $20,000.00 represented by their Buildings Account, and the books would then show real estate valued at $10,000.00 and buildings valued at nothing. Owing to the growth of the city during the twenty-year period, the management might decide to sell its property and move elsewhere. It is far from inconceivable that, in such a period of time and under favorable

[6] The following definition is the one proposed by the Committee on Accounting Terminology of the American Association of Public Accountants under date of August 31, 1915.

Amortization—The gradual extinguishment of the amount of an asset, liability, profit, or loss by prorating it over the period, during which it will exist or during which its benefit will be realized. Specifically,

1. The gradual extinction of a debt as, for instance, by means of a sinking fund.

2. The gradual reduction in the valuation of an asset, thus anticipating the time when it shall eventually become worthless; as distinguished from provision for depreciation or replacements.

3. The absorption in the income or profit and loss accounts during the pending of the debt, of a discount incurred or of a premium realized in the sale of an obligation, which discount or premium may be carried in the meantime, in a debit or in a credit suspense account.

circumstances, real estate values might have increased several hundred per cent and that the land which they bought for $10,000.00 might be sold for $75,000.00.

Sales price of land	$75,000.00
Original cost of land	10,000.00
Profit on sale of land	$65,000.00

It would clearly be improper to treat this $65,000.00 as a profit of the last accounting period. What it really is, is the accumulation of twenty years' profits, due to a regular appreciation in value of the land. This figure of $65,000.00 must be credited not to Profit and Loss of the current period, but direct to some capital account such as Capital Surplus. Accountants realize that such occurrences are not improbable, but they deem it more conservative to ignore the gradual appreciation in value of real estate and to take no credit for such gains until the profit is *actually realized.* It is then creditable directly to a capital account instead of one of the current income accounts.

Managers and owners often protest bitterly when told that they must make provision for depreciation of the fixed assets, but they are not allowed to offset this by an increased value of land. If a building is depreciating at a rate of $2,000.00 a year and land is appreciating at a rate of $3,000.00 a year, it seems reasonable to the owner or manager to consider that a $1,000.00 gain has been made.

There appears to be some justice in the claim that an unfair showing of profit and loss is made when current depreciation is required and current appreciation is ignored. The rule is, however, a very sound one. To a going concern, rapidly appreciating real estate has no

more value than when it was first purchased, and on the principle of regarding assets from the viewpoint of the going business, real estate and similar assets must plainly be valued at cost.

As a further justification for the conservative practices recommended in connection with the valuation of fixed assets, it should be noted that it is very difficult to appraise real estate properly. To make such an appraisal every year for the purpose of taking credit for anticipated profits due to appreciation of the land would lead to inaccuracy, particularly if different appraisers were employed each year, since the judgment of one real estate expert might be widely different from that of another.

Fixed tangible assets, other than real estate, should be subject to a well-considered depreciation policy.

As indicated in the case of other classes of assets, fixed assets, both tangible and intangible, should be booked at cost price—the cost to the "going" concern.

In the light of the foregoing principles we may now consider the case of particular kinds of assets.

Land

Land should be valued at the cost of acquisition. This may not necessarily be equal to the purchase price. Grading, street improvements, etc., may be necessary before the land is ready for use, and such items may be included in the book cost of the land. Broadly speaking, the various items of expenditure which are necessary to bring the land into condition for use are properly elements of the book cost. When the land is in use, subsequent expenditures should be very carefully scanned to determine whether they are properly chargeable to the asset account or whether they are items of expense. An expenditure should never be charged to a fixed asset

account such as Real Estate, unless it unquestionably adds real value to the asset.

Ordinarily neither appreciation nor depreciation of land should be taken into consideration. This, however, may not be true under certain special conditions. For example consider the case of a mining property where the amount of mineral is known. Every ton that is brought to the surface decreases the value of the mining property. Such a property is known as a "wasting asset," and it is clear that a consistent plan of amortization must be followed in such cases. If a mining property cost $100,000.00 and a careful estimate indicates one million tons of ore, then for every ten tons of ore taken out of the mine the property would decrease $1.00 in value. If mining is conducted at the rate of 100,000 tons a year, then the property has an approximate life of ten years and depreciates $10,000.00 every year.

In such cases as this the rate for amortizing all the other fixed assets must be based upon the "depreciation rate" of the wasting asset. In the case above mentioned the mine buildings and equipment might have an average life of twenty-five years, but if the mine has only a life of ten years, the amortization of the mine buildings must also be based upon a ten-year life, since they will have no value when the mine is exhausted.

The rule, therefore, in connection with wasting assets like mines, is that the depreciation rate of accompanying fixed assets having an estimated life *less* than the life of the mine may base their depreciation rate upon estimated life, but that fixed assets having an estimated life *greater* than the life of the mine must be amortized at the same rate as the mine itself. Should this rule not be strictly followed it is clear that the profits of any one year may consist partly of real profits and partly of the original

capital invested. Dividend declarations based on such apparent profits would be illegal in many states, since it is a fairly well-settled rule that a dividend may be declared only out of profits.

Land Purchased with Stocks or Bonds

Land is not always purchased for cash. It is sometimes purchased with stocks and bonds. When this is done, a very difficult problem arises as to what the *actual* cost of the property is. Theoretically, at least, a double valuation must be made, since the property is valued in terms of the securities and the securities are valued in terms of cash. The proper theoretical procedure, since securities are seldom, if ever, worth exactly par, would be to calculate the cash value of the securities and then to book the land at the cash value of the securities with which it was purchased. While theoretically correct, such a procedure is not followed in actual practice. The situation usually occurs in connection with corporations, and the law accepts the judgment of the directors as to the value of the asset so acquired. In the absence of fraud the judgment of the directors is considered final.[7]

Buildings

The problems in connection with the valuation of buildings are very similar to those discussed in the foregoing

[7] There seems to be some difference of opinion among lawyers regarding the exchange of capital stock for property. At common law there are two general rules—the "good faith" rule and the "true value" rule—but these may be modified by statute in the several states. The "good faith" rule simply requires good faith on the part of the directors in valuing the property, but a gross overvaluation is held to be presumptive evidence of bad faith. The "true value" rule states that the fair market price is the one to be used and, on behalf of the creditors, the court may "go back" of the directors' valuation, regardless of their good faith. The basis of this rule is the idea that the capital stock of a corporation is a trust fund for the benefit of the creditors.

section, except that where the land account represents a wasting asset, depreciation should be considered, otherwise land should be kept on the books at original cost. A building, on the other hand, must *always* be depreciated.

With buildings, as in the case of land, a very careful distinction should be made as to the proper charges for expenditures. After the property has been acquired, no expenditure should be charged to the asset account, unless it represents an actual betterment and increase in the value of that asset. This distinction is sometimes very difficult to make. In a going business improvements to buildings are constantly made, repairs and replacements are always under way, and expenditures for such purposes should be carefully examined to determine whether they are in the nature of upkeep and, therefore, chargeable to expense or are bona fide improvements properly chargeable to the asset account. The only safe rule to follow is the one previously laid down; viz., where the expenditure results in increased operating facilities which will permanently increase the net profits of the business or permanently increase its real value or permanently increase its rental value, the proper charge is direct to the asset account, but where the only effect of the expenditure is to *maintain* the property, the proper charge is to an expense account. Where renewals of assets are more valuable than the property replaced, the excess is properly and legitimately chargeable to property accounts.

Buildings which are constructed by the company owning them should be valued at the actual cost of construction and not at the price which they would have cost if purchased from outside parties. The difference between the construction cost and the purchase price of a building is not a profit but a saving.

The original amount at which a building should be booked is its value to the "going" concern. The proper elements of that cost include any expenses necessarily involved in constructing or purchasing the building, plus the expenditures which must be made in order to put it into condition for use. Examples of such expenditures are building permit fees, legal fees, insurance during construction, interest on investment during construction, wages of night-watchman during construction, etc.

Leaseholds

It frequently happens that buildings are erected on leased ground. Depreciation should, of course, be charged on such buildings based on their estimated life, unless the life of the lease is *less* than the estimated life of the building. In such a case the cost of the building should be written off over the life of the lease. For example, assume that John Doe on Jan. 1, 1915, leased certain land for twenty-one years and that he erected a $40,000.00 building, which was completed Jan. 1, 1916. He estimated that the life of the building would be about thirty years. What provision should he make for depreciation?

1. Yearly depreciation charge based on life of building $= \dfrac{\$40{,}000.00 \text{ (cost)}}{30 \text{ (years of life)}} = \$1{,}333.33$

2. Yearly depreciation charge based on life of lease $= \dfrac{\$40{,}000.00 \text{ (cost)}}{20 \text{ (years to run)}} = \$2{,}000.00$

Under the first plan the Buildings Account will show a balance of $13,333.34 on December 31, 1936, whereas the actual value of the building to John Doe will be zero, indicating that his accounts have failed to tell the truth.

Under the second plan the cost of the building will be distributed over the life of the lease, and when the latter expires, the cost of the building will be entirely wiped off the books.

If a lease is purchased, its purchase price may be set up as an asset, to be amortized over the number of years the lease has to run.

The reader should understand that this discussion of the valuation of land and buildings assumes that such assets are *fixed* in their nature. The treatment of similar items on the books of a real estate company which deals in land and buildings as personal property is entirely different. In that case land and buildings are in the nature of merchandise and should be handled in a similar way.

Machinery

Machinery, as a fixed asset, is subject to the same general rules as have been given for the valuation of land and buildings. Machinery should be charged to the Machinery Account at cost, and this cost may very properly include the f. o. b. cost, plus the freight, plus the expense of installation. As in the case of other assets, the value of machinery is its value to the "going" concern; hence all expenditures which must necessarily be made before the machine can be put in operation are properly included in the cost of that machine.

Adequate provision for depreciation should be made as in the case of buildings. The rate of depreciation depends upon a great many factors and will in certain cases have to be determined by a qualified expert for each individual case.

Machinery, which is built by a company for its own use, must be booked at actual cost, i. e., materials, labor, and

factory expense. The fact that such cost is less than the price at which the machinery could be purchased is no argument in favor of charging the asset account with the latter. The difference between actual cost and the market price is not a profit but a saving.

Machinery that is purchased primarily for resale is not a fixed asset but is equivalent to merchandise and is subject to the same rules of valuation.

Investments

Two general classes of investments may be recognized; i. e., those that are fixed assets in their nature and those held for the purpose of resale.

The United States Government bonds, which are held by national banks, are permanent investments. The bank cannot continue its note-issuing function if the bonds are disposed of. Similarly, the investment which a railroad company has in smaller tributary lines is a fixed asset.

From the foregoing two examples we see that investments may be regarded as fixed assets if they are essential to the business in the same way that land, buildings, and machinery are essential to the business. Securities that are purchased for speculation are not fixed assets—they more nearly resemble current assets. Securities which a bond-dealer has on hand for the purpose of resale are merchandise.

Investments may be roughly divided into two broad general classes—stocks and bonds—and the accounting treatment of these two classes is very different.

The treatment of stock purchased is simple. It may be booked at actual cost, regardless of par value—the fluctuations in its value may be ignored if it is an asset actually "fixed" in its nature. If stocks are purchased for speculative purposes or as short-time investments

DIFFERENCES BETWEEN STOCKS AND BONDS

Stocks	Bonds
Stocks are not liabilities but certificates of ownership	Bonds are secured liabilities
Stockholders may share in profits in the form of dividends	Bondholders do not share profits but receive interest at a definite rate
Stockholders may share in assets upon dissolution of the company	Bondholders expect return of investment intact at maturity according to the terms of the agreement
A share of stock represents a proportionate share of assets	A bond is a limited interest in a corporation
Stockholders have control of the corporation	Bondholders as long as they receive regular interest and principal at maturity have no voice in the management
A stockholder is a part owner	A bondholder is a creditor

for idle funds or for purpose of resale, they are equivalent to merchandise, and the rule of "cost or market price, whichever is lower," applies.

Bonds which are purchased for a permanent investment and which are equivalent to fixed assets, may be bought either at par, below par, or above par. If they are bought at par, they are booked at cost and allowed to remain at that figure until maturity. If they are bought above par (at a premium), they may be booked at cost; but the excess of cost over par value must be amortized—written off during the life of the bond. The theory underlying this doctrine is that the premium merely represents bond interest purchased in advance which must be applied against the actual interest received during the life of the bond. For example, suppose a $1,000.00 bond, running for 25 years with interest rate of 5%, is purchased at a price of $1,250.00. The yearly interest which will be received is $50.00, but the actual or effective interest which will be earned is $40.00, because each year the book value of the bond must be depreciated $10.00, so that at the end of last year its book value will only appear

as $1,000.00. This is the amount which will be received in cash when the bond is called for payment. The reason why the bond sold for more than par is because a 5% return was considered too high a return on a bond of such class. The holder of such a high-class bond is not willing to sell it at par because it gives him such good return for his money. If, however, he sells it for $1,250.00, he implies that a 4% return is sufficient and, therefore, sells it on a 4% basis. The purchaser of the bond by paying such a premium impliedly admits that a 4% basis is correct but, since the bond actually returns 5% on par, he pays the holder of the bond an amount sufficient to make the return on his own investment approximately 4%. When the bond is paid off by the company issuing it, it will pay only $1,000.00. Therefore, the $250.00 premium must be equitably spread over the life of the bond, and the yearly amount written off must be treated as a deduction from the income received.

To be strictly logical, bonds purchased at a discount, i. e., below par, should be marked up each year, and there is no particular reason from a theoretical point of view why this may not be done. Many accountants object, however, to such procedure on the ground that it is dangerous to permit marking up the values of fixed assets. They always insist on taking depreciation into account but seldom, if ever, are willing to allow appreciation. Hence, it is usually customary to book such bonds at actual cost and to hold them at that figure until the bonds are paid; thus, a $1,000.00 bond due in ten years at 5% interest if purchased for $880.00 will be left at that figure for the entire ten years. At the end of the last year, in addition to the $50.00 interest, there would be a $120.00 increase in the value of the asset, bringing it up to par value. Such an extraordinary profit occur-

ring in one accounting period should, under no circumstances, be treated as profit of that period, but should be credited direct to a capital account.

The accountancy of investment is a science in itself, and it would serve no useful purpose to discuss it here. There have been several excellent manuals written on the subject, the principal one being *Accountancy of Investment,* by Chas. E. Sprague, which gives a detailed presentation of the calculation of interest, annuities, bond valuations at varying rates, and amortization.

Deferred Assets

Very little difference of opinion can exist as to the principles of valuing deferred assets. A deferred asset is a prepayment, and its original value is equal to its cost. If correctly handled, each deferred asset appears at a value which constantly diminishes as time goes on until it is finally extinguished altogether. Development expense in connection with mines and experimental expense in factories are good examples of deferred assets. In every case, deferred assets should be written off against the accounting periods to which the expense is properly chargeable.

Intangible Fixed Assets

When a business is sold, it frequently happens that the price received for it is considerably in excess of its net worth as shown by the books. The difference between the net worth and the price actually received is often spoken of as "goodwill." Goodwill is made up of a number of elements. It takes into consideration the loyalty of constant customers and the force of habit which causes them to continue trading at one place. When an individual gets into the habit of trading at

one particular place of business, he is a far more valuable customer than the one who must be attracted by means of expensive advertising and selling effort. Concerns that have been in business for a long time gradually accumulate a clientele of satisfied customers. The business which has such a well-established patronage is worth considerably more than a business with a similar net worth which has none.

Goodwill

Goodwill is defined by *Webster's New International Dictionary* as "the custom of any trade or business; the favor or advantage in the way of custom which a business has acquired beyond the mere value of what it sells, whether due to the personality of those conducting it, the nature of its location, its reputation for skill, promptitude, etc., or any other circumstance incidental to the business and tending to make it permanent." The Treasury Department of the United States has given the following short definition, "Goodwill represents the value attached to a business over and above the value of the physical property." Goodwill represents the value of the physical organization of a business, its trade-marks, its advertising, and its relationship with others.

When a business is purchased for more than its net worth, the difference between its net worth and the purchase price may be charged to the Goodwill Account. This goodwill then appears on the Ledger as an asset, and it may rightfully be so considered. It represents the purchase of something which would otherwise have to be acquired by the expenditure of money for advertising, salesmen, etc. That concern which is able to purchase a crowd of satisfied customers—customers who will be

likely to continue trading where they have traded in the past—will certainly have to spend less money in advertising than a concern which has to build up an entirely new clientele.

Theoretically, goodwill should appear on the books of a concern as an asset when that concern begins to make more than a normal rate of return on the capital invested, and as the concern gets more prosperous and its actual goodwill increases, it would be theoretically justified in increasing its Goodwill Account. This, however, is regarded as a very dangerous procedure, and no reputable accountant would permit it. A well-established rule is that goodwill shall not appear as an asset, unless it has been purchased. John Jones may have a business with a net worth of $10,000.00. That business may be actually worth $30,000.00 from an income-producing standpoint, but Jones will not be allowed to set up goodwill of $20,000.00. However, if Smith purchases the business from him for $30,000.00, Smith may book goodwill as being worth $20,000.00 without being criticized. The reason for this is that Smith has demonstrated his belief in the existence of goodwill by paying cash for it.

Some question exists as to whether goodwill should remain permanently an asset or whether it should be charged off against profits year by year until finally extinguished. There are several ways of looking at this matter. Some accountants declare that goodwill should be charged against the profits for which it is responsible. This assumes that the only value which goodwill has is that of a profit-producer. As extraordinary profits are made which are clearly due to goodwill, then that goodwill should be charged against those profits.

Some accountants consider it allowable to retain goodwill indefinitely upon the books; they claim that its

appearance in the balance sheets deceives no one, that it represents very little more than a bookkeeping convenience, and that it should not be allowed to disturb profits.

Still other authorities consider that goodwill should be charged off during prosperous years and not during lean years. This is fallacious, since if no profits are made it is apparent that goodwill is valueless and should, therefore, be charged off. If extraordinary profits are made, it is pretty good evidence that the goodwill is worth face value or more and should, therefore, not be charged off at all. Following such a logical line of reasoning it leads to the absurdity of charging off goodwill during unprofitable years and thus further increasing the loss and of not charging it off during the years when the business could best afford it.

The author submits the following as being a logical method of treating goodwill. When goodwill is purchased, it is paid for on the same basis as any other asset, namely, its inherent value to the purchaser. The purchaser either does or does not get his money's worth. If he does get his money's worth, it will be indicated by substantial profits, since goodwill that does not produce profits has no value. If large profits are made during the first few years, then the goodwill should be amortized during those years. If the expected profits do not materialize, it is a sign that the investment was an unfortunate one and that the purchaser did not get value received for his money, or that he did get value received but that the goodwill disappeared because of some fault of his own. In either case the goodwill should be charged off *not against current profits* but against the capital invested. The situation is analogous to the purchase of a business purporting to own certain assets which do

not exist. When it is determined that these assets do not actually exist, they will not be charged against current profits but will be charged against the capital account. The question as to the period of time over which goodwill should be written off resolves itself back to the question "What has been purchased?" Clearly nothing has been purchased save anticipated profits. The purchase of a business at a premium is very much like the purchase of a bond at a premium. The bond premium represents future interest; the business premium or goodwill represents future profits. Since the rate of amortization of bond premium is dependent upon the time factor, the life of the bond determines the yearly amount to be charged off. In the case of goodwill the number of years' profits which have been purchased determines the number of years over which goodwill shall be charged off.

No one can afford to be dogmatic about the treatment of goodwill. So many excellent authorities disagree absolutely as to the treatment of goodwill that it would seem as if almost any of the methods discussed would be justifiable.

Franchises and Patents

Franchises and patents are usually classed with goodwill. Payment for a patent is nothing more than payment for protection. It may be set up as an asset, but it normally should be written off in equal, annual installments over the life of the patent. The payment for a franchise is also an asset which should be written off in equal annual installments during the life of a franchise. Franchises may be perpetual in their nature, in which case they need not be amortized; but when a franchise has a definite number of years to run, sound accounting policy calls for its amortization.

Organization Expense

When a corporation is organized, certain expenses are always necessary before the corporation is in shape to do business. Fees must be paid, expenses must be met, stationery and printing must be paid for. All these are legitimate charges to asset accounts, since they must be incurred before the corporation can begin business. Such pre-existence expenses are bona fide assets which need never be amortized or charged off, since they are perpetual in their nature, unless the life of the corporation is limited to a definite number of years, in which case they should be charged off during the life of the corporation. The proper method of booking such charges is to debit them to an account called "Organization Expenses." Many concerns do not like to show this item quite so openly and, therefore, make the charge to one of the fixed asset accounts, such as Land, Buildings, or Machinery. This is not considered the best practice but it is allowable, owing to the sanction which custom has given it.

TEST QUESTIONS

1. What is the fundamental rule of asset valuation?
2. Outline the procedure for material accounting.
3. Differentiate between weighted and straight averages.
4. What are the components of raw material value?

CHAPTER VI

LIABILITIES

It has already been stated that liabilities are negative assets. A positive asset is *owned*. A negative asset is *owed*. For purposes of discussion liabilities may be classified into

1. Current.
2. Long time.
3. Deferred.
4. Contingent.
5. Proprietary.

The first four items are true liabilities. The fifth is a liability only in the bookkeeping sense, as has previously been explained. Treatment of proprietary liabilities will be deferred until the following chapter.

Current Liabilities

Current liabilities usually are those having an early due-date. In other words, they are liabilities which must be paid shortly after date of the balance sheet upon which they appear, although this is not *necessarily* true. Strictly speaking, all debts that are not raised for *permanent purposes* are current liabilities. From the viewpoint of the banker or credit man, however, any liability is current that has an early due-date. All other liabilities, whether funded or not, are considered "long-time" obligations.

In the ordinary business, current liabilities will consist

mainly of two general classes of items, i. e., accounts payable and notes payable. An "account payable" is an implied, verbal, or informal promise to pay. A "note payable" is a definite written promise to pay. Practically no problems of importance need be discussed with reference to the Accounts Payable Account. Normally this is a controlling account over a creditor's ledger (which may be in ledger form or in the form of a voucher file). No question of valuation is present, since liabilities do not diminish in value with the passage of time. The figures at which they are booked remain the same until payment is made (either in cash, notes, or allowances).

Accrued Liabilities

In the preceding chapter the subject of accrued assets was discussed at some length. Accrued liabilities are of the same general nature except that they are negative instead of positive. Accrued liabilities are those depending upon the passage of time regardless of the due-date, and they consist of such items as accrued wages payable, accrued salaries payable, accrued interest payable, accrued taxes payable, etc. Accrued liabilities are booked by means of an adjusting journal entry at the end of each accounting period. This entry charges the expense accounts and credits the accrued liability accounts.

The purpose of such entries is to include among the expenses of any accounting period all items which are properly chargeable against that period and to include among the liabilities at the end of the period the amounts which have accrued to that date, even though the time for payment has not arrived. For example, it may be the practice to pay employees every Saturday, but the yearly accounting period may end on Wednesday. The wages

earned by employees on Monday, Tuesday, and Wednesday would be properly chargeable as expenditures of the accounting period. They would also be liabilities, since they have unquestionably been earned *by* the employees and are due *to* them. If these accrued wages equaled $300.00, the adjusting journal entry would debit Wages Account (an expense account) and credit Accrued Wages Payable (liability account) for $300.00. It should be noted that such accrued items are in the nature of negative, or liability, inventories.

It is usually customary at the beginning of the following accounting period to reverse the entries by which the accrued liabilities were booked and then to charge the actual cash payment to the expense account instead of to the accrued liability account. This need not be done, however, since it is equally proper to charge the disbursement of cash to the accrued liability account.

Other Current Liabilities

When a corporation declares a dividend, that dividend is a liability of the corporation to the stockholders and must be set up on the books. This is done by means of a debit to Profit and Loss (or Undivided Profits or Surplus) and a credit to Dividends Payable Account. When the dividends are actually paid in cash, Dividends Payable Account will be debited, thus wiping out the liability, and Cash will be credited. Dividends Payable might be classified as "accounts payable," but for balance sheet purposes it is usually desirable to show it as a separate item.

Deferred Liabilities

A deferred liability is nothing more than a deferred credit to Income. The philosophy underlying this class

of liabilities is similar to that discussed in connection with deferred assets. They represent liabilities not ultimately payable in cash but in goods or services. Such items as sales paid for in advance, deposits on contracts, etc., are classified as deferred liabilities. They will ultimately appear as items of Income but are liabilities until earned.

Contingent Liabilities

A contingent liability, as its name implies, is uncertain. It represents a possibility that an amount will have to be paid, or a responsibility which may lead to the creation of an unconditional liability. The best example of a contingent liability is found in the case of discounted notes receivable. A company which receives many notes from its customers may find that it is tying up a goodly portion of its capital in these notes receivable. Since notes receivable are a real asset, they may be sold, in which case it would seem natural to debit Cash for the amount received and to credit Notes Receivable (disregarding the loss due to discount). Such an entry, however, will not tell the exact truth. The notes are sold, but a responsibility still exists in connection with those notes. In disposing of them the seller must indorse them, and in law such an indorsement acts qualifiedly as a guarantee. This means that if the maker of the note does not pay it, the indorser may have to do so. The entry, debiting Cash and crediting Notes Receivable, does not show the existence of this contract of indorsement.

One way to handle this is to make the entry as above indicated but to insert a footnote to the balance sheet calling attention to the fact that a contingent liability exists for "Notes Receivable Discounted." A still better

plan is to indicate this current liability right in the Ledger itself. This may be done by omitting the entry charging Cash and crediting Notes Receivable and substituting therefor an entry debiting Cash and crediting Notes Receivable Discounted. The Ledger will then show two misstatements. It will overstate the amount of notes receivable as an asset and will also show an equal amount set up as an offset thereto on the liability side. For balance sheet purposes the balance of Notes Receivable Discounted Account should not appear as a liability but as a deduction from the total of Notes Receivable, the net amount being extended into the asset column.

(First Method)

BALANCE SHEET BEFORE DISCOUNTING NOTES

Cash	$ 2,000.00	Accounts Payable	$ 7,000.00
Notes Receivable	20,000.00	Capital	40,000.00
Other Assets	25,000.00		
	$47,000.00		$47,000.00

JOURNAL ENTRY

Cash	$12,000.00	
Notes Receivable		$12,000.00

BALANCE SHEET AFTER MAKING ABOVE ENTRY

Cash	$14,000.00	Accounts Payable	$ 7,000.00
Notes Receivable	8,000.00	Capital	40,000.00
Other Assets	25,000.00		
	$47,000.00		$47,000.00

The contingent liability of $12,000.00 for notes receivable discounted is not shown on this balance sheet.

(Second Method)

BALANCE SHEET BEFORE DISCOUNTING NOTES

Cash	$ 2,000.00	Accounts Payable	$ 7,000.00
Notes Receivable	20,000.00	Capital	40,000.00
Other Assets	25,000.00		
	$47,000.00		$47,000.00

JOURNAL ENTRY

Cash	$12,000.00	
Notes Receivable Discounted		$12,000 00

BALANCE SHEET AFTER MAKING ABOVE ENTRY

Cash	$14,000.00	Accounts Payable	$ 7,000.00
Notes Receivable	20,000.00	Notes Receivable Discounted	12,000.00
Other Assets	25,000.00	Capital	40,000.00
	$59,000.00		$59,000.00

or a better form of balance sheet presentation would be

BALANCE SHEET

Cash		$14,000.00	Accounts Payable	$ 7,000.00
Notes Receivable	$20,000.00		Capital	40,000.00
Less — Notes Discounted	12,000.00	8,000.00		
Other Assets		25,000.00		
		$47,000.00		$47,000.00

There are other kinds of contingent liabilities which occur less frequently than notes receivable discounted, and it is usual to indicate their existence only by means of footnotes on the balance sheet. Such contingent lia-

bilities occur in connection with guarantees of various kinds.

Bonded Indebtedness

When a corporation desires to raise money, it may place a mortgage on certain of its properties. Such a mortgage is the same instrument that the ordinary individual executes, but owing to the difficulty of selling mortgages in inconvenient amounts it is customary for corporations to make the mortgage payable to a trust company who acts as a trustee. Bonds are then issued in round amounts, i. e., $100.00, $500.00, or $1,000.00. These bonds are promises to pay secured by the mortgage held by the trustee.

A bond contains a promise to pay a definite sum of money at the end of a certain period, and the interest rate is named on the face of the bond. When bonds are sold, the bond account is credited, and Cash is debited for the amount realized.

It is clear that the face or par value of the bond may not be equal to its real value. The purchaser of a bond after taking into consideration the number of years it has to run and the interest rate, may feel that the bond is not worth par value to him. It may be only worth 95% of par value. On the other hand, a bond may be easily worth more than par value, particularly when the specified interest rate is high. The price of a sound bond is determined by its actual return of rate, and there is always *some* interest rate at which *any* bond can be sold for exactly par. The interest rate being fixed, the only way to obtain a different rate on the investment is to adjust the price paid for the bond. Suppose a hundred-year bond was issued with a par value of $1,000.00 at an interest rate of 4%, the annual return will evidently be

$40.00. If the current rate for money is 5%, the bond can be sold for approximately $800.00, since $40.00 a year is 5% of $800.00.

Suppose, on the other hand, that the same bond was offered for sale at a specified interest rate of 6%. The income from such a bond would be $60.00 a year, but if the current market rate for money was in the neighborhood of 5%, the company issuing this bond could probably sell it for more than par, or around $1,200.00. The reader should, therefore, discriminate between the two kinds of interest rate. The nominal interest rate is the one indicated on the face of the bond. The effective or real interest rate is the actual rate of return on the investment and is roughly obtained by dividing the annual cash income by the actual cash investment. In the last example shown above the nominal interest rate was 6%, and the effective interest rate was 5%. The reader should have no difficulty in realizing that if he buys a bond for less than the par value, which guarantees a fixed yearly rate, the annual rate of interest on his actual investment will be greater than the nominal interest specified on the face of the bond.

The company issuing a bond must book it at par value, since the par value always constitutes the real ultimate liability. The entry to Cash for the proceeds of the bond sale will probably be either more or less than the credit to the Bond Account, since we have seen that few bonds are really sold at exactly par. The difference between the liability thus set up and the cash received must certainly be recorded on the books. This can best be illustrated by a series of examples. Suppose a company has the following balance sheet:

BALANCE SHEET

Cash	$ 4,000.00	Accounts Payable	$15,000.00
Plant	50,000.00	Capital & Surplus	59,000.00
Other Assets	20,000.00		
	$74,000.00		$74,000.00

The company decides to sell bonds in order to raise money for an extension of its plant. After proper legal formalities, it issues $25,000.00 worth of 5% ten-year bonds. Let us suppose that it is able to sell these bonds for only $20,000.00.

Cash will be debited $20,000.00, Bonds Payable will be credited $25,000.00, and $5,000.00 entry will have to be made to the debit of a new account which we may call "Discount on Bonds."

The journal entry for this transaction will appear as follows:

Cash	$20,000.00	
Discount on Bonds	5,000.00	
Bonds Payable		$25,000.00

When the entries have been posted, the following balance sheet will result:

BALANCE SHEET

Cash	$24,000.00	Accounts Payable	$15,000.00
Discount on Bonds	5,000.00	Bonds Payable	25,000.00
Plant	50,000.00	Capital & Surplus	59,000.00
Other Assets	20,000.00		
	$99,000.00		$99,000.00

This item of discount on bonds is a deferred charge to the Interest Account. The company assumed a liability of $25,000.00 but received only $20,000.00. This would indicate that the rate of return specified on the

face of the bond was insufficient to attract the purchaser. The issuer of the bond, therefore, was obliged to increase the rate of interest. This was done by paying a certain portion of the interest *in advance.* This will be readily grasped after we analyze the above journal entry. It consists of a sale of $25,000.00 worth of bonds for $25,000.00 in cash *and* the payment of $5,000.00 in cash to the purchaser of the bonds in prepayment of interest.

In journal entry form this will appear as follows:

	Dr.	Cr.
Cash	$25,000.00	
Bonds Payable		$25,000.00
To record sale of bonds		
Discount on Bonds	5,000.00	
Cash		5,000.00
To record the prepayment of interest		

The interest on such bonds is, therefore, paid in two ways: (1) A portion of it, amounting in this example to $5,000.00, is paid in advance, and (2) the balance is paid at the rate of $1,250.00 a year (a total of $12,500.00 during the life of the bond). The total interest on these bonds actually paid in cash is $17,500.00, $5,000.00 of it being paid in advance and the balance being paid in yearly installments. The important thing is that this item of discount on bonds represents nothing more than a prepayment of the interest and can, therefore, be classed as a deferred asset which must be charged off during the life of the bonds in equal annual amounts.[1] At the end of each year, therefore, two entries will have to be

[1] It has not been thought desirable to discuss the intricacies of this subject but to confine the discussion to an exposition of underlying principles. Whether this item of discount on bonds is charged off in *equal* annual installments or according to some other plan has no effect on the principle involved, and for purposes of clear presentation it is much simpler to assume uniform amortization.

made, one entry will credit Discount on Bonds and debit Interest Account for the annual amount written off, and the other entry will credit Cash and debit Interest for the installment paid in cash.

Interest on Bonds	$500.00	
Discount on Bonds		$500.00
To charge off yearly installment on bond discount		
Interest on Bonds	1,250.00	
Cash		1,250.00
To pay the nominal interest at the rate of 5% on par value of bonds outstanding		

The account, Interest on Bonds, represents real or effective interest, the item of $1,250.00 being the nominal interest.

Bonds issued at a premium are handled according to the same principles that have been outlined for bonds issued at a discount. For purposes of illustration, we may use the same starting balance sheet that was shown on the preceding page.

BALANCE SHEET

Cash	$ 4,000.00	Accounts Payable	$15,000.00
Plant	50,000.00	Capital & Surplus	59,000.00
Other Assets	20,000.00		
	$74,000.00		$74,000.00

The same 5% ten-year bonds are sold, but the price obtained for them is $30,000.00. It is clear that Cash must be debited with the amount of cash received and that the liability account, Bonds Payable, must be credited for the par of the bonds sold or $25,000.00. The difference between these two figures represents premium on bonds and is a deferred credit item, representing income received but not earned.

Balance Sheet

Cash	$ 34,000.00	Accounts Payable	$ 15,000.00
Plant	50,000.00	Bonds Payable	25,000.00
Other Assets	20,000.00	Premium on bonds	5,000.00
		Capital & Surplus	59,000.00
	$104,000.00		$104,000.00

Analysis indicates that the nominal rate of interest specified on the face of the bonds was in excess of the amount of interest it would actually be necessary to pay for the use of the money. Instead of reducing the nominal interest rate they sell the bonds for more than par. The difference between the sales price, $30,000.00, and the par value, $25,000.00, represents money that the purchasers of the bonds have paid to the company. It really represents *a refund* by them *of interest which they expect to receive.* The company is then in a position of having received as a refund, interest which it has not yet paid but has only promised to pay. It must set the amount up as a deferred liability and write it off during the life of the bond in equal annual installments. Each year one-tenth of the premium will be debited to Premium on Bonds and credited to Bond Interest. At the same time Cash will be credited and Bond Interest debited for the interest actually paid at the nominal rate (which is greater than the real, or effective, rate).

In journal entry form these entries will appear as follows:

Interest on Bonds	$1,250.00	
Cash		$1,250.00
To pay the nominal interest at the rate of 5% on the par value of bonds outstanding		
Premium on Bonds	500.00	
Interest on Bonds		500.00
To credit yearly installment of bond premiums to Interest Account		

The account, Interest on Bonds, shows, on the debit side, interest actually paid in cash and, on the credit side, the yearly installment of the deferred liability, Premium on Bonds. The difference between the two sides represents the real or effective interest.

Considering these discounts and premiums as deferred charges and credits to the nominal account, Interest on Bonds, renders it easy to see that when bonds are issued at less than par, the discount represents neither an immediate loss nor a charge to permanent asset accounts. When bonds are sold above par, the premium does not represent an immediate profit, and it is clearly improper to credit it either to Surplus or to Profit and Loss.

In the past certain corporations have treated bond discount as similar to organization expense, merging it with one of the fixed asset accounts. Under the proper theory of bond discounts this procedure is self-evidently vicious. It tells two falsehoods—it falsely inflates the value of the fixed assets, and it fails to tell the truth about the real cost of financing.

In the past it has not been unusual to treat premiums realized on bond sales as immediate profits, crediting them either to Profit and Loss or to Surplus. In the light of the fundamental theory of bond premiums it is clear that such procedure is absolutely wrong. It results in a misstatement of profits or net worth and a misrepresentation as to the actual cost of financing.

There are several methods of handling bond premiums and discounts which vary according to the terms of the bond itself, i. e., as to its redemption. It is very often provided that the concern issuing the bonds must redeem a certain number of them each year either at current market price or at a fixed amount above par. Thus a twenty-year $1,000.00 bond may contain the provision

that it is redeemable or callable in ten years at 105. This means that the holder of the bond must surrender it for $1,050.00 at any time after ten years if he is called upon to do so. If, however, the corporation can buy its own bonds in the open market for less than $1,050.00, it will do so. Assuming that a reserve has been built up for the purpose of buying back bonds at 105, you will find that each purchase in the market at a less price will result in a profit which may very properly be credited to the Interest Account. The accounting treatment of redeemable and convertible bond issues need not be elaborated here. Readers who are interested in this branch of accounting will find an excellent treatise on the subject written by Charles E. Sprague entitled, *The Accountancy of Investment.* This volume can be obtained at almost any good public library.

Only one further point need be considered in connection with bonded indebtedness. Bonds which have been repurchased may be either held alive in the treasury or cancelled. If the former course is adopted, they will appear on the balance sheets as assets, although many accountants favor showing them in an inside column as deductions from the total bonded indebtedness, extending only the net amount of outstanding bonds into the liability column.

Balance Sheet

All Assets	$62,000.00	Accounts Payable		$ 3,000.00
		Total Bonds	$40,000.00	
		Less—Bonds in Treasury	8,000.00	
		Outstanding Bonds		32,000.00
		Capital & Surplus		27,000.00
	$62,000.00			$62,000.00

If the bonds are cancelled after having been repurchased, they should no longer appear on the books. The Bond Account should be debited, and Treasury Bonds should be credited for the par value of the cancelled bonds.

Apparently the best practice is to reserve the term "treasury bonds" for bonds that have been reacquired either through purchase or through gift. Bonds which have never been issued may, if desired, be recorded in an account entitled "Unissued Bonds," but on the balance sheet they should not appear as an asset but as a deduction from the total amount of authorized bonds on the liability side, since the best authorities do not consider unissued bonds a real asset.

TEST QUESTIONS

1. What are current liabilities?
2. What is the nature of accrued liabilities?
3. What is the best way to treat notes receivable discounted?
4. What is a bond?
5. (a) What is the nature of premium on bonds?
   (b) What is the nature of discounts on bonds?
6. Are unissued bonds a real asset?

CHAPTER VII

PROPRIETORSHIP

The *primary* classification of accounts is into two subdivisions—real and nominal. Real accounts are the asset and liability accounts. Nominal accounts are the proprietorship accounts.

When a business is created, a proprietorship account is also created. For the net worth with which the proprietor started in business, represented by the difference between the assets and liabilities, a credit is set up in his account. As expenses are incurred, losses suffered, and profits earned, appropriate debits and credits *may* conceivably be made daily to the original Proprietor's Account. With such a simple system it would be possible to determine the relation between the proprietor and his business *at any time* by glancing at the balance of his account. To determine the profit or loss during a given period, a comparison could be made of successive balance sheets. Thus, if one balance sheet showed a net proprietorship credit of $1,000.00 and the one of a year later indicates $1,200.00 as being due the proprietor, it is clear that the condition of the business has improved by $200.00.

Mixed Elements of Proprietorship

Just how valuable is this information? It has very little value unless certain other facts are known, namely, the proprietor's withdrawals or additional investments during the year. The profit from operation might have been $500.00 and the withdrawals $300.00, or the loss from

operations might have been $100.00 and the additional investment $300.00. Each period the balance of the account represents the *net* investment, distinguishing in no manner between the original investment of capital, subsequent investments or withdrawals, and operating surplus or deficit.

In order to determine the profit or loss of a given period something more than comparative balance sheets is needed. A balance sheet shows the condition of a business at a given moment of time, but it gives no information as to the causes leading up to that condition. *Since every transaction resulting in a loss or a gain results ultimately in a debit or credit to the Proprietor's Account, an analysis of that account will supply the missing information.* Such an analysis, in proper form, is known as a "profit and loss statement."[1] In its most primitive form it is a list of the various proprietorship credits and debits made during a given accounting period, the difference between the total debits and the total credits being the profit or loss. A better form of statement would not list *all* the items, but would eliminate those referring to withdrawals and investments. In order to do this easily the single original Proprietor's Account may be replaced by four main proprietorship accounts.

1. Capital Investment Account.
2. Surplus or Deficit Account.
3. Profit and Loss Allocation Account.
4. Profit and Loss Account.

The Profit and Loss *Account* must not be confused with the profit and loss statement, since the former is a general

[1] Also spoken of as an income statement, a revenue statement, or a loss and gain statement. Owing to the unsatisfactory condition of accounting terminology, these names are used interchangeably and indiscriminately.

ledger account and the latter a schedule or exhibit. To the Profit and Loss Account is credited the income of the period, and it is charged with the operating expenses of the period. The balance of the account is the net operating profit (or loss), which is transferred to the Profit and Loss Allocation Account. This account is debited with all the current profits taken from the business by the proprietor. Its balance represents the profits which are to remain in the business, and is transferred

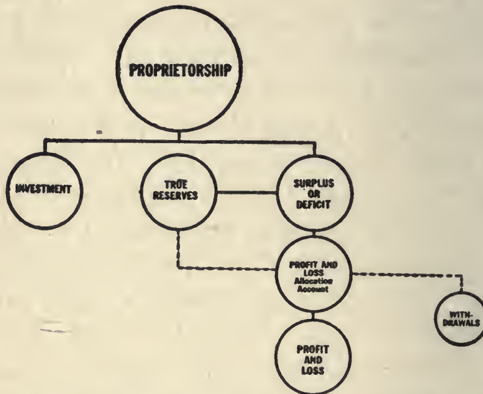


Fig. 51.—Chart Showing Primary Subdivision of Proprietorship

to the Surplus Account as an additional investment. If this figure should represent a loss, it would be carried to the Surplus Account as a debit, representing a reduction in the investment. Should it happen that the Surplus Account had no credit balance, the loss would be charged to the Deficit Account.

The Capital Account represents the investment and is credited with the original and all subsequent investments in the business. It may be debited with all withdrawals of capital (not of profits).

Under such an arrangement (Figure 51) the profit and

loss *statement* may be constructed from the Profit and Loss Account, since this account represents the income and costs of the accounting period, other factors, such as withdrawals of profits, not being included. It is clear that the *total* net profit is the significant figure, not the net profit less withdrawals.

Proprietorship Entries

If it is assumed that all proprietorship debits and credits are made direct to one of these four accounts, the question which will immediately arise in any particular case is, "which one shall receive the entry?" Losses may be roughly divided into two classes—capital losses such as are caused by the destruction of property by fire, hurricane, flood, etc., and current expenses which are incurred for the purpose of obtaining an increased income at a later time, such as salaries paid to salesmen, rent, etc. It is clear that these two classes of loss should not be confused. The loss of a capital asset is a misfortune, but it does not necessarily indicate operating inefficiency. If, however, *current operating expenses* are high as compared with current operating income, inefficiency may be the cause.

There is no difference between the dollar which comes into the business as the result of the sale of merchandise and the dollar which results from the sale of a fixed asset, but careful distinction must be made between these two classes of income. The first is normal, and the second is abnormal. To lump them together would obscure results and make it impossible to compare the statements of different accounting periods. If, therefore, we restrict the Profit and Loss Account to the booking of current expenses and income only, the profit and loss statements which are prepared from such accounts can be com-

pared for successive accounting periods. Extraordinary profits, not applicable to any particular accounting period such as might arise from the sale of fixed assets, should not be credited to the Profit and Loss Account at all, but should go direct to the Surplus Account. All expense which is actually applicable to the accounting period may be debited to the Profit and Loss Account, but extraordinary losses not consequent upon operation and not applicable to any particular period such as losses by fire, flood, shipwreck, or war, should be debited to the Surplus Account. Such extraordinary losses and gains may be infrequent, but *because* of their infrequency it would be wrong to lump them with the operating profits and losses for the period. This distinction between capital profits and losses and current profits and losses must be carefully observed, otherwise no enlightening information can be obtained from a comparison of results for successive accounting periods.

Subsidiary Accounts

To *analyze* the Profit and Loss Account is a wasteful and unnecessary procedure. The daily changes in proprietorship may be entered in temporary subsidiary proprietorship accounts. At the end of each accounting period these accounts will be closed into Profit and Loss. Thus, instead of debiting rent to the Profit and Loss Account whenever rent is paid, it may be debited to a Rent Account, wages may be debited to a Wages Account, salaries to a Salaries Account, heat and light to a Heat and Light Account, etc.

It is when such classified expense and income accounts are kept that there is no need for analysis. The balances of these accounts may be used in constructing the profit and loss statement and, at the end of the accounting

period, transferred by means of closing journal entries to Profit and Loss, which is now only a summary account. The balance of that account represents the net profit (or loss) for the period. This figure may then be transferred to the Profit and Loss Allocation Account, offsetting any debit entries contained therein due to premature withdrawal of profits. The balance of the Profit and Loss Allocation Account then represents the amount which may be transferred to the Surplus or Deficit Account.

Three Classes of Proprietorship

With this skeleton plan of classification in mind various forms of proprietorship may be discussed. There are three common forms:

1. The sole proprietor.
2. Co-partners.
3. Stockholders.

Sole Proprietorship

Sole proprietorship is very common in the small business. The fruit peddler, the bootblack, and the cobbler may be examples of sole proprietors. Nearly all small grocery stores and butcher shops have but a single owner.

Partnership

The somewhat larger business is more commonly a partnership, involving two or more proprietors. Insufficient funds often lead the sole proprietor to take another individual to share gains and losses with him. Frequently the partners have an equal investment in the business and share all profits and losses equally. Sometimes their investments are unequal, and profits and losses are divided upon an agreed basis.

"Partnership" has been defined as "the contract relation subsisting between persons who have combined their property, labor, or skill in an enterprise or business as principles, for the purpose of a joint profit."

A partnership ordinarily has the following elements:

1. It is a relation created by the agreement of the parties, not by law.
2. Ordinarily each member contributes to the establishment of a common fund.
3. It has in view the carrying-on of some lawful business.
4. Its purpose is the profit of the associates.
5. Each partner has the implied power to bind all other members within the scope of the business.
6. It holds a joint liability to outside parties for all debts and contracts of the firm. This means that any partner may be forced to pay the whole debt of a firm out of his private means.

Some very interesting accounting problems arise in connection with partnership, but these will be discussed in a later chapter. The proper accounting procedure in connection with a partnership is to open separate capital, surplus, and drawing accounts for each partner. The net profit or net loss at the end of each accounting period is credited or debited to the Profit and Loss Allocation Account and from there transferred to the partners' drawing accounts in accordance with an agreed-upon ratio.[2]

[2] In reality partnership accounting is not on a truly scientific basis. While accountants agree as to the desirability of keeping the investment separate from accumulated profits and losses due to operation, it is found that, in actual practice, nearly all partnerships omit the Profit and Loss Allocation Account, transferring the net profit for the period direct from the Profit and Loss Account to the partners' drawing accounts. The unwith-

In forming a partnership it is usual to draw up an agreement, which is commonly known as the "articles of partnership." A clause is usually incorporated in this document, stating how the partners shall share losses and gains. When no such agreement is in existence or where it does not state the ratio in which the partners shall divide losses and gains, it is a rule of law that they shall be divided equally among all the partners, regardless of the capital invested.

Corporations

"A corporation is an artificial being, invisible, intangible, and existing only in contemplation of the law."[3] It is composed of persons who are known as "stockholders." The interest of the stockholders is regarded as divided into equal shares, called "shares of stock." When a person purchases, or otherwise acquires, an interest in the capital stock, he is spoken of as owning a certain number of shares of stock. These stockholders, however, are not the corporation. A corporation has a name, an individuality, and an existence apart and distinct from its stockholders. It may conduct business, bring actions at law, or make contracts. A corporation carries on its business through officers and agents, and it may even enter into contracts with its stockholders and sue them and be sued by them just as any individual.

Corporation accounting represents the most advanced type known. A corporation usually conducts a much

drawn portions are then transferred to the partners' capital accounts. For convenience in presenting the subject of proprietorship, it will be assumed that proposed classification is actually in common use. In Chapter IX the subject of partnership will be more fully discussed and actual procedure explained.

[3] The definition of Chief Justice Marshall in the case of the Trustees of Dartmouth College v. Woodward.

more extensive business than a sole proprietor or a partnership. It controls larger amounts of capital, and its business is more complex. All these things affect the accounting system. Some of the special problems connected with corporation accounting will be treated in Chapter X.

Corporation Proprietorship

In the corporation, there may be a number of main proprietary acounts. The principal one is, of course, Capital Stock. This account is credited with the par value of all shares of stock issued. Its debits, if there be any, are caused by the cancellation of stock. Its balance, therefore, represents the total number of shares of stock outstanding expressed in terms of money, since each share of stock has a par value,[4] usually $100.00.

It is clear that a distinction should be made between capital stock and capital. The *capital* is the sum total of assets owned by the corporation. The *capital stock* represents the interest which the stockholders have in those assets. The capital stock remains as fixed by legislative sanction, while we have already seen that the value of assets changes due to appreciation, depreciation, profits, and losses. The capital of the corporation and the capital stock of the corporation may be, and usually are, represented by very different figures.

The net capital of the corporation, i. e., the total assets less the total outside liabilities, equals the proprietary interest. The proprietary interest may be greater or less than the capital stock, although at the beginning of business it would ordinarily be equal to the capital stock. As time goes on, however, profits may be made, and if

[4] This is a matter of statutes, and some of the states, notably New York, permit the issue of stock without par value.

they are not all withdrawn, they serve to increase the proprietary interest. They cannot be credited direct to the Capital Stock Account, since it is fixed in amount. Another proprietary account is, therefore, provided for that purpose. This is known as the "Surplus Account," and according to best usage it includes only undivided profits which may be declared as dividends.

If the venture proves to be a disastrous one and surplus having been exhausted, losses are greater than profits, they should be debited to a Deficit Account, the balance of which will appear on the left-hand or debit side of the trial balance. It is not an asset but a negative surplus account, explaining the difference between the assets and the sum of the liabilities plus investment, and it must be taken into combination with the other proprietorship accounts to determine the net worth of the corporation. Practically never is the net worth of the corporation equal to the balance of the Capital Stock Account; therefore nearly every corporation carries either a Surplus or a Deficit Account on its books. In addition to these accounts, there may be other proprietary accounts, such as Undivided Profits or Reserves. Undivided profits, as the name implies, represent profits which have not yet been distributed. Undivided profits may be paid out as dividends, may be reserved for contingencies, or may be credited to Surplus.

A reserve is surplus appropriated for a specific purpose. It is often desirable to "earmark" a certain portion of the surplus in order that it may not appear available for dividends. Such reserves are usually "set up" to care for contingencies, such as possible losses from bad debts or accidents, such as floods, fires, or shipwrecks.

Classification of Nominal Accounts

Every trading business has for its fundamental function the acquisition of goods at one price, having in contemplation the object of selling at a greater price. If a business could be run without any expense, its profit for any period would be equal to the difference between the total sales of merchandise during the period and the total purchase cost of the goods that were sold. No business ever does operate without expense; hence the selling price of merchandise must be sufficient to pay for the goods, to pay for the expense incurred in operating and selling, and still leave a profit. If at the end of an accounting period it is discovered that no operation profit has been made, there may be two reasons; i. e., either the goods cost more than they could be sold for or the expenses of the business are too high or both. For that reason it is desirable to show on the profit and loss statement separate tables for

1. Trading activities.
2. Expenses.

That section of the profit and loss statement which reflects the trading activities is known as the "trading statement." The fundamental structure of the exhibit is simple, consisting of:

Sales minus cost of sales equals gross trading profit.

The cost of sales, or the cost of goods sold, is arrived at by adding the purchases of merchandise during the accounting period to the inventory of merchandise at the beginning of the period and from the total thus obtained, deducting the inventory at the end of the period. The gross profit furnished by the trading statement is

the profit *before* the expenses of the business have been considered. It is a figure which means very little, since it only expresses the relation between sales and cost of sales. According to the strict meaning of the word "profit," its title is a misnomer, but since it is in common use, we may adopt it here.

Total Sales		$.......
Inventory beginning of period	$.......	
Purchases during period	....	
	$.......	
Deduct—Inventory end of period	....	
Cost of Goods Sold		....
Gross Profit		$.......

The first section of any profit and loss statement is, therefore, one which gives the gross profit, and from this figure must be deducted the expenses, the result being the net operating profit. It is clear that this may not be the total net profit of the business as a whole, since there may be other forms of income than that derived from the sale of goods. Interest may be received, and purchase discounts may be taken. These are both items of income, strictly connected with the business, which cannot be classified as income *from sales*. Therefore, to the net operating profit (or prime operating profit) is added the other income, and from the resulting total is deducted the sundry income charges, such as interest paid, sales discounts allowed, etc. These are items which must be taken into consideration before the net profit for the period can be obtained, and yet they cannot be classified as either selling, administration, or general expenses. They are often referred to as financial items.

Expense Classification

The expenses may be classified by the *objects of expenditure,* one group of expense accounts being used for the business as a whole. Such a method of classifying expenses might yield the following subaccounts:

Salaries.
Wages.
Supplies Used.
Heat and Light.
Rent.
Depreciation of Equipment.
Sundry Expenses.

The chart shown in Figure 52 illustrates graphically the system of proprietorship accounts classified according to such a plan.

The defects of this sort of classification are obvious. Efficiency in operation cannot be obtained when the accounts are classified only according to objects of expenditure, neglecting the various departmental lines. The manager wishes to know the *reasons* for high or low expenses. He wants to give credit to the departmental manager who operates on minimum expense and to censure that one whose expenses are too high.

Nearly every business is made up of certain broad functions. Thus, in the ordinary trading concern the purely merchandise operations are recorded in the Trading Account, and the expenses naturally classify themselves under the three heads of

1. Selling.
2. Administration.
3. General.

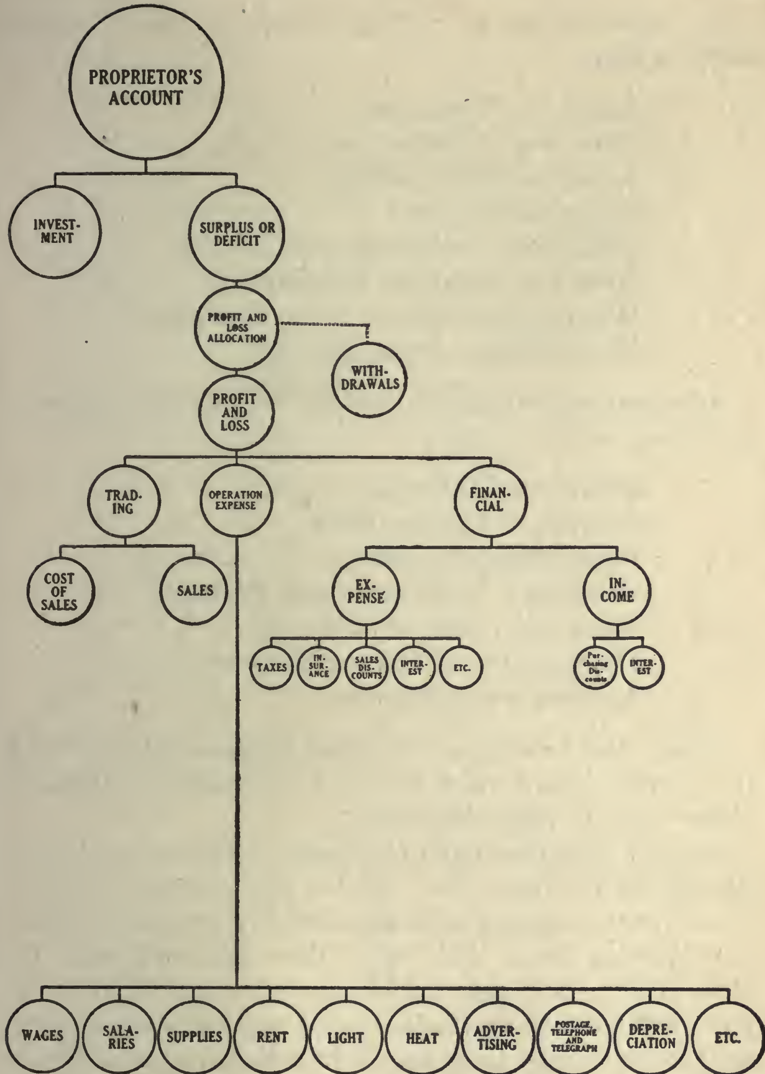


FIG. 52.—Chart Showing Classification of Expense Accounts According to Objects of Expenditure

As subaccounts to Selling Expense, the following might appear:

Salaries of Salesmen.
Expenses of Salesmen.
Advertising Purchased.
Shipping Expenses.
Telephone, Telegraph, and Postage.
Heat and Light for Salesroom.
Depreciation of Sales Office Equipment.
Miscellaneous Sales Expense.

Administration Expenses include all the costs of administration, such as

Salaries of Officers.
Salaries of Clerical Help.
Office Supplies Used.
Telephone, Telegraph, and Postage.
Heat and Light of Office.
Depreciation of Office Equipment.
Miscellaneous Expense.

Under the heading of General Expense are included the various items which cannot be classified as items of either sales or administration.

Such a classification of expense accounts as this is illustrated in Figure 53. Under this scheme it will be seen that the expense accounts assume a somewhat different function from that which they assumed when the classification was only by objects of expenditure. The total selling cost as distinguished from the administration expense may be obtained by properly grouping the several subaccounts. The general scheme of classified expense accounts having been developed, the funda-

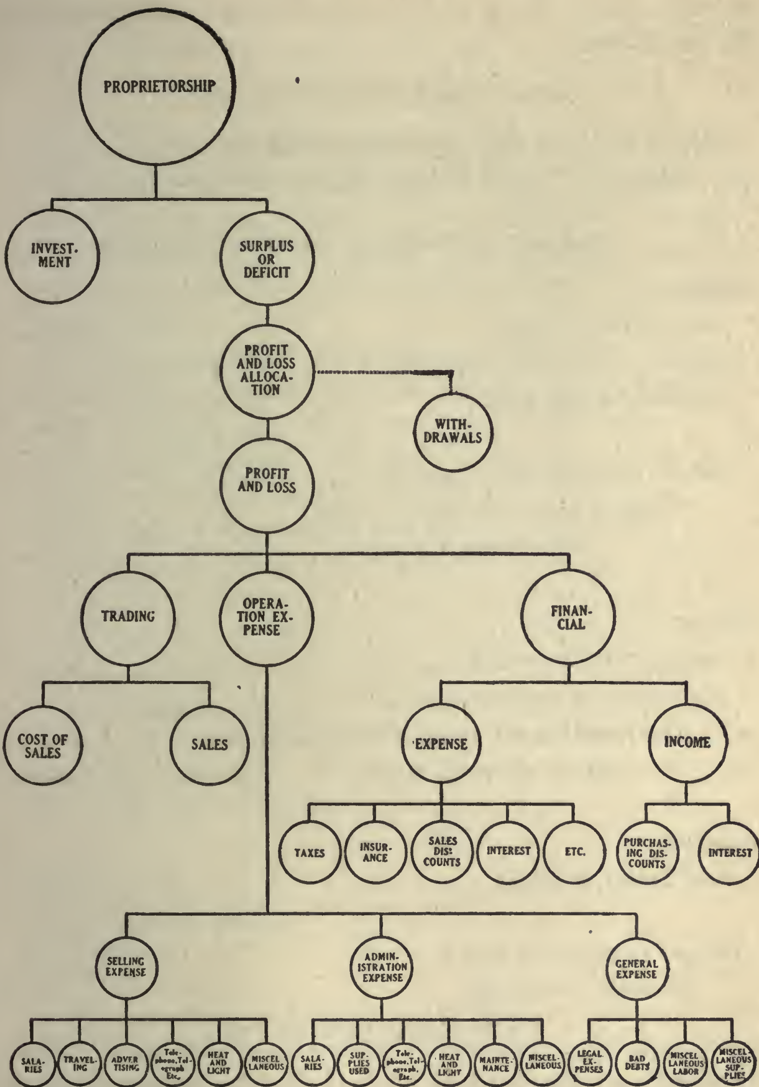


FIG. 53.—Chart Showing Common Classification of Expense Accounts

mental construction of the profit and loss statement may be considered.

Profit and Loss Statement

When a trial balance is taken from the General Ledger, the balances of all the classified expense accounts appear

SKELETON OF TRADING AND PROFIT AND LOSS STATEMENT

Trading		
Sales during period		$---.--
Inventory beginning of period	$---.--	
Purchases during period	---.--	
	$---.--	
Deduct-Inventory end of period	---.--	
Cost of goods sold during period		---.--
Gross profit for period		$---.--
Expenses		
Selling Costs of period	$---.--	
Administration Costs of period	---.--	
Total Selling and Administration Costs		---.--
Prime Operating Profit		$---.--
Financial		
Other Income of period		---.--
		$---.--
Charges to Income of period		---.--
Net Profit for period		$---.--

Fig. 54.—Model Statement Form

thereon and are used as a basis for the construction of the profit and loss statement. We have seen that the Profit and Loss Account may have three subaccounts, viz.:

Trading Account.
Operating Expense Account.
Financial Expense and Income Account.

It is natural, therefore, that the profit and loss statement should follow these general divisional lines: the first section of the profit and loss statement, consisting of the trading items, the second section of the operating expense, and the third section of the financial income and expense items.

The skeleton form of a profit and loss statement such as has been explained in the foregoing paragraphs is given in Figure 54. For the present this may be regarded as a standard form, since all profit and loss statements are based upon this fundamental plan.

Sales during the period are the net sales after all returns of merchandise by customers have been deducted. It is sometimes desirable to show the gross sales for the period *and* the net sales in order that the amount of customers' returns may be compared for consecutive periods. As a subaccount to the Trading Account there may be carried a Returned Sales Account. Instead of charging Sales and crediting Accounts Receivable for returned goods, the entry may be

Returned Sales.......................................$.......
    Accounts Receivable.......................................$.......
  For merchandise returned
  by customers

On the trading statement the balance of returned sales will be deducted from gross sales to obtain the figure representing net sales.

Guided by the skeleton form of the profit and loss statement in Figure 54, we may construct a model profit and

loss statement (Figure 55) in detail form from the following trial balance accounts:

SECTION OF BLANK COMPANY'S TRIAL BALANCE

DECEMBER 31, 191—

	Debit	Credit
Total Sales		$133,300.00
Returned Sales and Allowances	$ 200.00	
Purchases	73,000.00	
Inventory of Merchandise, Jan. 1, 191—	15,000.00	
Salaries—Sales Dept	7,000.00	
" Advertising Dept	4,800.00	
" General Office	11,500.00	
Traveling Expense—Sales Dept	3,000.00	
Telephone, Telegrams, and Postage—Sales Dept	700.00	
Telephone, Telegrams, and Postage—Advertising Dept	450.00	
Telephone, Telegrams, and Postage—General Office	1,500.00	
Depreciation—Sales Office Equipment	200.00	
" Advertising Office Equipment	350.00	
" General Office Equipment	500.00	
Shipping Expense	1,500.00	
Light and Heat—Sales Dept	700.00	
" " " Advertising Dept	500.00	
" " " General Office	2,500.00	
Miscellaneous Sales Dept. Expense	500.00	
" Advertising Dept. Expense	300.00	
" General Office	1,500.00	
Advertising Purchased	10,000.00	
Supplies Used—General Office	2,500.00	
Purchase Discounts		200.00
Interest Received		300.00
Miscellaneous Income		100.00
Insurance	800.00	
Taxes	700.00	
Interest Paid	100.00	
Sales Discounts	200.00	
Bad Debts	300.00	
Surplus Adjustment Account	1,800.00	
Surplus, Jan. 1, 191—		85,000.00

Note.—The Merchandise Inventory Dec. 31, 191—, equals $14,000.00.

MODEL

INCOME AND PROFIT AND LOSS STATEMENT -- BLANK COMPANY

Year Ending December 31, 191_

Trading			
Total Sales		$133,300.00	
Deduct--Returned Sales and Allowances		200.00	
Gross Income			$133,100.00
Inventory of Merchandise, Jan.1,191_		$15,000.00	
Purchases during period		73,000.00	
		$88,000.00	
Deduct--Inventory of Merchandise, Dec.31,191__		14,000.00	
Cost of Goods Sold			74,000.00
Gross Profit			$ 59,100.00
Selling Costs			
Salaries	$ 7,000.00		
Traveling Expense	3,000.00		
Telephones, Telegrams, and Postage	700.00		
Depreciation--Sales Office Equipment	200.00		
Shipping Expense	1,500.00		
Light and Heat--Sales	700.00		
Miscellaneous--Sales	500.00		
Advertising Purchased	10,000.00		
Advertising Dept. Salaries	4,800.00		
Advertising--Telephones,Telegrams,and Postage	450.00		
Depreciation--Advertising Office Equipment	350.00		
Light and Heat--Advertising	500.00		
Miscellaneous--Advertising	300.00		
Total Selling Cost		$30,000.00	
Administration Costs			
Salaries--General Office	$11,500.00		
Supplies--General Office	2,500.00		
Postage,Telephones, and Telegrams--General Office	1,500.00		
Light and Heat--General Office	2,500.00		
Depreciation--Office Equipment	500.00		
Miscellaneous--General Office Expense	1,500.00		
Total Administration Costs		20,000.00	
Total Selling and Administration Costs			50,000.00
Prime Operating Profit			$ 9,100.00
Other Income			
Purchase Discounts		$200.00	
Interest Received		300.00	
Miscellaneous		100.00	
Total Other Income			600.00
			$9,700.00
Charges to Income			
Sales Discounts		$200.00	
Interest Paid		100.00	
Insurance		800.00	
Taxes		700.00	
Bad Debts		300.00	
Total Charges to Income			2,100.00
Net Profit for Year			$7,600.00
Surplus			
Balance Sheet Surplus, Jan.1,191_		$85,000.00	
Deduct--Debit Balance of Surplus Adjustment Account		1,800.00	
			83,200.00
Balance Sheet Surplus, Dec.31,191_			$90,800.00

FIG. 55.—Statement for a Merchandising Organization

It will be noted that the company whose profit and loss statement is given in Figure 55 *purchases* all the merchandise which it later resells at a profit. Let us

MODEL

INCOME AND PROFIT AND LOSS STATEMENT--BLANK COMPANY

Year Ending Dec.31, 191_

Trading			
Total Sales		$133,300.00	
Deduct--Returned Sales and Allowances		200.00	
Gross Income			$133,100.00
Inventory of Merchandise, Jan.1, 191_		$ 15,000.00	
Goods Manufactured during period		73,000.00	
		$ 88,000.00	
Deduct--Inventory of Merchandise, Dec.31, 191_		14,000.00	
Cost of Goods Sold			74,000.00
Gross Profit			$ 59,100.00
Selling Costs			
Salaries	$ 7,000.00		
Traveling Expense	3,000.00		
Telephones, Telegrams, and Postage	700.00		
Depreciation--Sales Office Equipment	200.00		
Shipping Expense	1,500.00		
Light and Heat--Sales	700.00		
Miscellaneous--Sales	600.00		
Advertising Purchased	10,000.00		
Advertising Dept. Salaries	4,800.00		
Advertising--Telephones, Telegrams, and Postage	450.00		
Depreciation--Advertising Office Equipment	350.00		
Light and Heat--Advertising	500.00		
Miscellaneous--Advertising	300.00		
Total Selling Cost		$30,000.00	
Administration Costs			
Salaries--General Office	$11,500.00		
Supplies--General Office	2,500.00		
Postage, Telephones, Telegrams--General Office	1,500.00		
Light and Heat--General Office	2,500.00		
Depreciation--Office Equipment	500.00		
Miscellaneous General Office Expense	1,500.00		
Total Administration Costs		20,000.00	
Total Selling and Administration Costs			50,000.00
Prime Operating Profit			$ 9,100.00
Other Income			
Purchase Discounts		$200.00	
Interest Received		300.00	
Miscellaneous		100.00	
Total Other Income			600.00
			$ 9,700.00
Charges to Income			
Sales Discounts		$200.00	
Interest Paid		100.00	
Insurance		800.00	
Taxes		700.00	
Bad Debts		300.00	
Total Charges to Income			2,100.00
Net Profit for Year			$7,600.00
Surplus			
Balance Sheet Surplus, Jan.1, 191_		$85,000.00	
Deduct--Debit Balance of Surplus Adjustment Account		1,800.00	
			83,200.00
Balance Sheet Surplus, Dec.31, 191_			$90,800.00

FIG. 56.—Statement for a Manufacturing Organization

Compare with Fig. 55.

suppose that instead of purchasing the goods it acquired the factory which made them. The two organizations would then be separate units under one ownership. The factory would make the goods, and the wholesale house

would handle them. The only difference that would *necessarily* be made in the profit and loss statement would be to change the trading section, eliminating the word "purchases" and substituting "goods manufactured." This revised statement is shown in Figure 56.

Manufacturing Statement

The managers and owners would, doubtless, be interested in knowing the detailed costs of producing the

Production Costs				
Inventory of Raw Materials, Jan.1,191_	$ 9,000.00			
Purchases, Including In-Freight	41,000.00			
	$50,000.00			
Deduct--Inventory, Dec.31, 191_	10,000.00			
Materials Put in Process		$40,000.00		
Inventory of Supplies, Jan.1,191_	190.00			
Purchases, Including In-Freight	1,320.00			
	$1,510.00			
Deduct--Inventory, Dec.31, 191_	210.00			
Supplies Used		1,300.00		
Productive Labor		17,700.00		
Prime Cost			$59,000.00	
Non-Productive Labor		$2,400.00		
Salaries, Chargeable to Factory		2,200.00		
Power		2,100.00		
Light and Heat, Chargeable to Factory		1,500.00		
Depreciation--Machinery		500.00		
Repairs and Maintenance--Machinery		950.00		
Depreciation--Buildings		400.00		
Repairs and Maintenance--Buildings		800.00		
Depreciation--Factory Office Equipment		150.00		
Miscellaneous		1,000.00		
Factory Expense			12,000.00	
Cost of Manufacturing			$71,000.00	
Inventory of Work in Process, Jan. 1, 191_		$8,000.00		
Deduct--Inventory of Work in Process, Dec.31, 191_		6,000.00	2,000.00	
Cost of Goods Manufactured				$73,000.00

Fig. 57.—Manufacturing Statement

Compare with Fig. 56.

goods. This would amount to an *analysis* of the item, "goods manufactured during the period, $73,000.00." Such an analysis could take the form of a supplementary statement as shown in Figure 57. This supplementary statement shows in great detail the cost of manufacturing the goods which were turned over to the wholesale department for selling.

It might be desired to incorporate this information in the profit and loss statement itself, and this could easily be done by striking out the item "goods manufactured

MODEL

MANUFACTURING, TRADING, AND PROFIT AND LOSS STATEMENT--BLANK COMPANY

Year Ending Dec.31, 191_

Trading					
Total Sales				$133,300.00	
Deduct--Returned Sales and Allowances				200.00	$133,100.00
Inventory of Merchandise, Jan.1, 191_				$ 15,000.00	
Inventory of Raw Materials, Jan.1, 191_	$ 9,000.00				
Purchases of Raw Materials	41,000.00				
	$50,000.00				
Deduct--Inventory of Raw Materials, Dec.31,191_	10,000.00				
Materials Put in Process		$40,000.00			
Inventory of Supplies, Jan.1, 191_	$ 190.00				
Purchases of Supplies, Jan.1, 191_	1,320.00				
	$ 1,510.00				
Deduct--Inventory of Supplies, Dec.31,191_	210.00				
Supplies Used		1,300.00			
Productive Labor		17,700.00			
Prime Cost			$59,000.00		
Non-Productive Labor		$ 2,400.00			
Salaries, Chargeable to Factory		2,200.00			
Power		2,100.00			
Light and Heat, Chargeable to Factory		1,500.00			
Depreciation--Machinery		500.00			
Repairs and Maintenance--Machinery		950.00			
Depreciation--Buildings		400.00			
Repairs and Maintenence--Buildings		800.00			
Depreciation--Factory Office Equipment		150.00			
Miscellaneous		1,000.00			
Factory Expense			12,000.00		
Cost of Manufacturing			$71,000.00		
Inventory of Work in Process, Jan 1,191_		$8,000.00			
Deduct--Inventory of Work in Process, Dec.31, 191_		6,000.00			
Add--Decrease in Inventory			2,000.00		
Cost of Goods Manufactured				73,000.00	
				$ 88,000.00	
Deduct--Inventory of Merchandise, Dec.31,191_				14,000.00	
Cost of Goods Sold					74,000.00
Gross Profit					$59,100.00
Selling Costs					
Salaries			$ 7,000.00		
Traveling Expense			3,000.00		
Telephones, Telegrams, and Postage			700.00		
Depreciation--Sales Office Equipment			200.00		
Shipping Expense			1,500.00		
Light and Heat--Sales			700.00		
Miscellaneous--Sales			500.00		
Advertising Purchased			10,000.00		
Advertising Dept.Salaries			4,800.00		
Advertising, Telephones, Telegrams and Postage			450.00		
Depreciation of Advertising Office Equipment			350.00		
Light and Heat--Advertising			500.00		
Miscellaneous--Advertising			300.00		
Total Selling Cost				$30,000.00	
Administration Costs					
Salaries--General Office			$11,500.00		
Supplies--General Office			2,500.00		
Postage, Telephones, and Telegrams--General Office			1,500.00		
Light and Heat--General Office			2,500.00		
Depreciation--Office Equipment			500.00		
Miscellaneous--General Office Expense			1,500.00		
Total Administration Costs				20,000.00	
Total Selling and Administration Costs					50,000.00
Prime Operating Profit					$ 9,100.00
Other Income					
Purchase Discounts				$200.00	
Interest Received				300.00	
Miscellaneous				100.00	
Total Other Income					600.00
					9,700.00
Charges to Income					
Sales Discounts				$200.00	
Interest Paid				100.00	
Insurance				800.00	
Taxes				700.00	
Bad Debts				300.00	
Total Charges to Income					2,100.00
Net Profit for the Year					7,600.00
Surplus					
Balance Sheet Surplus, Jan.1,191_				$85,000.00	
Deduct--Debit Balance of Surplus Adjustment Account				1,800.00	83,200.00
Balance Sheet Surplus, Dec.31, 191_					$90,800.00

FIG. 58.—Complete Statement for Manufacturing Organization

Compare with Figs. 56 and 57.

MODEL

PROFIT AND LOSS STATEMENT -- BLANK COMPANY

Year Ending December 31, 191_

Inventory of Raw Material, Jan.1, 191_	$ 9,000.00		Total Sales		$133,300.00
Purchases	41,000.00		Deduct-Return & Allowance		200.00
	$50,000.00		Gross Income		$133,100.00
Inventory of Raw Material Dec. 31, 191_	10,000.00	$40,000.00	Inventories, Dec 31, 191_		
Supplies Used		1,300.00	Work in Process		6,000.00
Productive Labor		17,700.00	Finished Goods		14,000.00
Prime Cost		$59,000.00			
Non-productive Labor	$ 2,400.00				
Factory Salaries	2,200.00				
Power	2,100.00				
Light and Heat-Factory	1,500.00				
Depreciation-Machinery	500.00				
Rep.& Maint.-Machinery	950.00				
Depreciation-Buildings	400.00				
Rep.& Maint.-Buildings	800.00				
Depreciation-Office Equip.	150.00				
Miscellaneous	1,000.00	12,000.00			
Cost of Manufacturing		$71,000.00			
Inventories, Jan.1, 191_					
Work in Process		8,000.00			
Finished Goods		15,000.00			
Gross Profit (red)		59,100.00			
		$153,100.00			$153,100.00
Selling			Gross Profit		59,100.00
Salaries (Sales)	$ 7,000.00				
Traveling Expense (Sales)	3,000.00				
Tel.,Tel.,& Postage (Sales)	700.00				
Depreciation-Office Equip. (Sales)................	200.00				
Light and Heat (Sales)	700.00				
Miscellaneous (Sales)	500.00				
Shipping Expense	1,500.00				
Advertising Purchased	10,000.00				
Salaries (Adv.)	4,800.00				
Tel.,Tel.,& Postage (Adv.)	450.00				
Depreciation-Office Equip. (Adv.)................	350.00				
Light and Heat(Adv.)	500.00				
Miscellaneous (Adv.)	300.00				
Selling Cost		30,000.00			
Administration					
Salaries	$11,500.00				
Supplies	2,500.00				
Tel.,Tel.,& Postage	1,500.00				
Light and Heat	2,500.00				
Depreciation-Office Equip.	500.00				
Miscellaneous	1,500.00				
Administration Cost		20,000.00			
Operating Profit (red)		9,100.00			
		$59,100.00			$59,100.00
Sales Discounts	$ 200.00		Operating Profit		$ 9,100.00
Interest Paid	100.00		Purchase Discounts	$200.00	
Insurance	800.00		Interest Received	300.00	
Taxes	700.00		Miscellaneous	100.00	
Bad Debts	300.00		Other Income		600.00
Charges to Income		$ 2,100.00			
Net Profit for year (red)		7,600.00			
		$ 9,700.00			$ 9,700.00
Surplus Adjustments		$ 1,800.00	Net Profit for year		$ 7,600.00
Surplus, Dec. 31, 191_		90,000.00	Surplus, Jan 1, 191_		85,000.00
		$92,600.00			$92,600.00

FIG. 59.—Statement for Manufacturing Organization in Account Form

MODEL

MANUFACTURING, TRADING, AND PROFIT AND LOSS STATEMENT --BLANK COMPANY

Year Ending December 31, 191__

Item				
Gross Income				
Total Sales			$133,300.00	
Deduct--Returned Sales and Allowances			200.00	
Gross Income				$133,100.00
Production Costs				
Inventory of Raw Materials, Jan.1, 191__	$ 9,000.00			
Purchases, Including In-Freight	41,000.00			
	$50,000.00			
Deduct--Inventory, Dec.31,191__	10,000.00			
Materials Put in Process		$40,000.00		
Inventory of Supplies, Jan.1,191__	$ 190.00			
Purchases Including In-Freight	1,320.00			
	1,510.00			
Deduct--Inventory, Dec.31,191__	210.00			
Supplies Used		1,300.00		
Productive Labor		17,700.00		
Prime Cost			$59,000.00	
Non-Productive Labor		$2,400.00		
Salaries Chargeable to Factory		2,200.00		
Power		2,100.00		
Light and Heat Chargeable to Factory		1,500.00		
Depreciation--Machinery		500.00		
Repairs and Maintenance--Machinery		950.00		
Depreciation--Buildings		400.00		
Repairs and Maintenance--Buildings		800.00		
Depreciation--Factory Office Equipment		150.00		
Miscellaneous		1,000.00		
Factory Expense			12,000.00	
Cost of Manufacturing			$71,000.00	
Inventory of Work in Process, Jan.1,191__	$8,000.00			
Deduct--Inventory of Work in Process, Dec.31,191__	6,000.00	$2,000.00		
Inventory of Finished Goods, Jan.1,191__	$15,000.00			
Deduct--Inventory of Finished Goods, Dec.31,191__	14,000.00	1,000.00		
Add--Decreases in Inventories			3,000.00	
Cost to Produce Goods Sold				74,000.00
Gross Profit				$59,100.00
Selling Costs				
Salaries		$ 7,000.00		
Traveling Expense		3,000.00		
Telephones, Telegrams, and Postage		700.00		
Depreciation--Sales Office Equipment		200.00		
Shipping Expense		1,500.00		
Light and Heat--Sales		700.00		
Miscellaneous--Sales		500.00		
Advertising Purchased		10,000.00		
Advertising Dept. Salaries		4,800.00		
Advertising--Telephones, Telegrams, and Postage		450.00		
Depreciation--Advertising Office Equipment		350.00		
Light and Heat--Advertising		500.00		
Miscellaneous--Advertising		300.00		
Total Selling Cost			$30,000.00	
Administration Costs				
Salaries--General Office		$11,500.00		
Supplies--General Office		2,500.00		
Postage, Telephones and Telegrams--General Office		1,500.00		
Light and Heat--General Office		2,500.00		
Depreciation--Office Equipment		500.00		
Miscellaneous--General Office Expense		1,500.00		
Total Administration Costs			20,000.00	
Total Selling and Administration Costs				50,000.00
Prime Operating Profit				9,100.00
Other Income				
Purchase Discounts			$ 200.00	
Interest Received			300.00	
Miscellaneous			100.00	
Total Other Incomes				600.00
				$9,700.00
Charges to Income				
Sales Discounts			$200.00	
Interest Paid			100.00	
Insurance			800.00	
Taxes			700.00	
Bad Debts			300.00	
Total Charges to Income				2,100.00
Net Profit for the Year				$7,600.00
Surplus				
Balance Sheet Surplus, Jan.1,191__			$85,000.00	
Deduct--Debit Balance of Surplus Adjustment Account			1,800.00	
				83,200.00
Balance Sheet Surplus, Dec.31,191__				$90,800.00

FIG. 60.—Statement for Manufacturing Organization in Somewhat Different Form

during the period, $73,000.00," and putting in its place this entire manufacturing statement. (See Figure 58.)

The reader should note that Figures 56 and 58 are the same except that one item, "goods manufactured during the period," has been expanded so as to show the details composing it. Such a statement as the latter is known as a "manufacturing, trading, and profit and loss statement." Very often such a statement does not look at all like the simple forms heretofore illustrated, but they are exactly the same in their fundamental structure.

A company that buys its goods is not interested in the cost of their production, but when it manufactures them, it should incorporate in the profit and loss statement a detailed statement of production costs.

There are other standard forms of presenting such statements. Figures 59 and 60 show other arrangements of the same data which we have been using. The report form (Figures 58 and 60) is somewhat preferred because it can be typewritten more easily than the account form. Furthermore, it has the advantage of being more easily understood by the layman.

Balance Sheet and Profit and Loss Statement

The profit and loss statement is equal in importance to the balance sheet. The latter is a snapshot of the assets, liabilities, and proprietorship of a business at a definite instant of time. The former shows the causes which have led up to that condition and bridges the gap between two successive balance sheets. The two exhibits are always considered together, and they form the two goals of the accountant. The one without the other is incomplete. The balance sheet shows the condition of the business and reveals its solvency, but it does not show its profit-making ability. The profit and loss statement shows the

current profits and may show the functional efficiency of the business, but it does not show its condition at any definite time.

The Functional Idea

We have seen that a profit and loss statement whether in account form or in report form generally starts with "gross earnings from sales." This amount should include only the income resulting from *direct operation.* A dry goods firm might make total sales of a million dollars and might have an additional income of $200,000.00 from stocks and bonds which it owned. In the profit and loss statement, the income from its investments *should not* be merged with the figure representing gross sales. Here we have the functional idea very clearly illustrated. A house which has income from sales of merchandise and income from investments is engaged in *two* lines of business instead of one. The profits from its trading activities should not be confused with the profits from its investments, otherwise the results of all activities would be obscured. This principle of "keeping separate" the various classes of income and expense is of fundamental importance. One engaged in two different lines of business will desire to know the results of each of those lines independently. If he gets only a lump sum representing profit or loss in his total activities, he cannot know which business is profitable and which business is causing him a loss.

An excellent illustration of this principle of "keeping separate" occurs in dairy farming. Until very recently the ordinary farmer was content to know whether his herd of cows as a whole gave him satisfactory returns. When the era of scientific farming began, it was discovered that a great difference exists between individual

cows. The dairy farmer today keeps a record for *each* cow. He charges *each* with her total costs and credits her for the total value of milk produced, and when he finds that the animal is not up to high standard, he disposes of her, the result being that his herd produces a very much greater total profit than under the old system. This same principle of efficiency has been applied in business for many years. A man engaged in two, three, or four lines of business figures their expenses and profits separately.

Model Form of Statement

Mr. A. Lowes Dickinson, a prominent certified public accountant, submitted the following model form of profit and loss statement to the St. Louis Congress of Accountants in 1904:

Gross Earnings From Sales	$.......	
Less—Returns, Allowances, and Discount	....	
Net Earnings from Sales		$.......
Deduct—Cost of Production or Service		....
Gross Profit		$.......
Deduct—Cost of Selling	$.......	
Expenses of Management	....	....
Net Profit from Operations		$.......
Net Profit from Operations	$.......	
Other Income	....	$.......
Deduct—Interest on Bonds	$.......	
Other Fixed Charges	....	....
Surplus for Year		$.......
Extraordinary Profits (detailed)		....
Surplus Brought Forward from preceding year		....
		$.......

Deduct—Extraordinary Charges....................	....
Total Surplus Available..............................	$.......
Dividends on Stocks..................................	....
Surplus Carried Forward............................	$.......

This form has been rather generally adopted by accountants, although individual variations are only to be expected. While not absolutely necessary, it is always desirable to reconcile the figure representing net profits for a period with the surplus as shown by the balance sheet of the same period. This surplus figure will be fully accounted for in this way. The proper method of handling such a reconciliation on the profit and loss statement is to append a supplementary section, as has been shown in the previous illustrations.

Trading Account

There are many widely different opinions as to just what items should be included in the trading section of the profit and loss statement. Authorities differ on this subject more than on any other. Professor Henry Rand Hatfield's standard work, *Modern Accounting,* speaks of the Trading Account as follows: "Ignoring variations and mere detail, two divergent customs are found. One includes in the Trading Account all the expenses connected with trafficking as distinct from the general expenses of management—the second and more rigid method excludes from the Trading Account all items except those representing the direct cost price and the net selling price of the goods handled; the balance then carried down is generally called gross trading profits."

Dr. Joseph J. Klein in his book on accounting includes all selling expenses in the trading sections of his profit

MICHIGAN MANUFACTURING COMPANY
MANUFACTURING, TRADING, AND PROFIT AND LOSS STATEMENT
Year ending May 31, 1910

Income from Sales			
Total Sales			$187,540.38
Cost of Goods Sold			
Prime Cost of Goods Finished during period			
Inventory—Manufacturing Materials, June 1, 1909	$ 27,214.41		
Add—Purchases	106,634.12		
Freight, Express & Cartage "In"	1,734.70		
	$135,583.23		
Deduct—Inventory of Manufacturing Materials, May 31, 1910	51,358.58	$ 84,224.65	
Purchases—Manufacturing Supplies	$ 1,631.09		
Less—Inventory of Manufacturing Supplies	200.00	1,431.09	
Production Labor		63,842.23	
Total Prime Cost		$149,497.97	
Factory Expense			
Non-Productive Labor		$ 1,993.50	
Depreciation—Machinery and Equipment		1,234.49	
Repairs to Machinery		507.73	
Fuel Purchased	$ 5,554.82		
Deduct—Inventory, May 31, 1910	2,188.40	3,366.42	
Insurance Expired		2,152.14	
Water Tax		140.53	
		$ 9,394.81	
Total Manufacturing Cost for period		$158,892.78	
Deduct—Inventory of Goods in Process, May 31, 1910		1,820.00	
Manufacturing Cost of Goods Finished		$157,072.78	
Deduct—Inventory of Finished Goods		3,210.00	
Manufacturing Cost of Goods Sold		$153,862.78	153,862.78
Gross Profit			$ 33,677.60
Selling Expense			
Advertising		$ 378.58	
Administrative Expense			
Salaries		$ 6,170.00	
Stationery and Office Supplies		296.02	
Miscellaneous Office Expense		241.08	
Postage		264.42	
		$ 6,971.52	
General Expense			
Stable Expenses		$ 1,679.89	
Total Selling, Administrative, and General Expense		$ 9,029.99	9,029.99
			$ 24,647.61
Additional Income			
Miscellaneous Earnings		$ 724.75	
Purchase Discounts		2,081.59	
Interest Earned		463.17	
Total Additional Income		$ 3,269.51	3,269.51
Total			$ 27,917.12
Deductions from Income			
Taxes		$ 376.75	
Bad Debts		9,128.11	
Interest Paid		3,521.63	
Sales Discounts		3,362.19	
Total Deductions from Income		$ 16,388.68	16,388.68
Net Profit for year ending May 31, 1910			$ 11,528.44
Undivided Profits as per Balance Sheet			11,528.44

Fig. 61.—Illustration of the Profit and Loss Statement for the Problem Discussed in Chapter IV, pages 134 to 141

Compare with Fig. 44.

and loss statements. Professor Wm. Morse Cole's *Accounts, Their Construction and Interpretation,* does not follow any of the ordinary accounting practices. What most accountants would call the Trading Account, he designates as "Merchandise Account," and in the Trading Account includes items of rent, wages, insurance, depreciation, advertising, losses from bad debts, and general expenses.

In spite of the divergent opinions of certain eminent authorities, it would seem that the majority of accountants favor the practice of including in the trading statement only those items representing the cost price and the net selling price of the goods sold.

Treatment of Errors

If errors should be made in an accounting period and certain items of income or expense should not be discovered until after the books had been closed, they should not be considered as the income or expense of the subsequent period. The reason for this is clear. Each accounting period must stand alone. A profit and loss statement for one period should include all income applicable to that period and all expenses for which that period is responsible. If the income or expense of one period is treated as the income and expense of a subsequent period, the results of *both* accounting periods will be wrong. The profits for one period will be understated and for the other period overstated by the same amount, and should the error involve a substantial sum, no just comparison can be made between the two periods.

Should such omissions and errors be detected, the corrections should be made by means of charges or credits to the Surplus Account. If a $100.00 item of expense for one period is omitted, the profits for that period will be

overstated and the final credit to the Surplus Account will be too large by $100.00. When the error is discovered, the correction should be made to the account in which the error is reflected—the Surplus Account. Even the best bookkeepers make such errors, and where they are likely to prove numerous, it is considered good practice to open up a Surplus Adjustment Account, in which such correcting entries are assembled. The balance of the Surplus Adjustment Account is then transferred to the Surplus Account as one item. This prevents the Surplus Account, which is an important one, from being loaded up with a number of minor adjustments.

Materials and Supplies

In a profit and loss statement it is customary to show the starting inventory, the net purchases, and the final inventory in order to arrive at the cost of materials and supplies used. This form is universally employed because of its clearness. Where the Purchase Account is not kept, being replaced by a Materials Account—a controlling account over perpetual inventory records—it is necessary to restate the Materials Account in order to obtain the figures for the profit and loss statement.

In a perpetual inventory system the controlling account is charged with purchases at cost and is credited with withdrawals of materials *at cost.* The balance of such an account is equivalent at all times to materials actually on hand. Figures 62 and 63 show the Raw Materials Account and the Supplies Account of the Blank Company. Postings are made to these accounts, in monthly totals, from the voucher register and the requisition journal.

A comparison of the profit and loss figures shown in Illustration 58 with these two accounts, will indicate the

Raw Materials Account											
191—											
Jan	1	Balance	✓	9000	00	Jan	31	Put in Process	RJ	3330	00
"	31	Purchases	VR	8200	00	Feb	28	"	RJ	3520	00
May	31	"	VR	9188	00	Mar	31	"	RJ	3,162	00
June	30	"	VR	5505	00	Apr	30	"	RJ	3099	00
Aug	31	"	VR	4527	00	May	31	"	RJ	2878	00
Sept	30	"	VR	9004	00	June	30	"	RJ	2953	00
Nov	30	"	VR	4576	00	July	31	"	RJ	3001	00
						Aug	31	"	RJ	3427	00
						Sept	30	"	RJ	3415	00
						Oct	31	"	RJ	3489	00
						Nov	30	"	RJ	3714	00
						Dec	31	"	RJ	4012	00
						Dec	31	Balance	✓	10000	00
				50000	00					50000	00
Jan	1	Balance	✓	10000	00						

Fig. 62.—Raw Materials Control Account

Supplies Account

Jan	1	Balance	✓	190	00	Jan	31	Put in Process	RJ	98	00
	31	Purchases	VR	264	00	Feb	28	" "	RJ	106	00
Apr	30	"	VR	259	00	Mar	31	" "	RJ	108	00
July	31	"	VR	287	00	Apr	30	" "	RJ	104	00
Sept	30	"	VR	240	00	May	31	" "	RJ	92	00
Dec	31	"	VR	270	00	June	30	" "	RJ	95	00
						July	31	" "	RJ	103	00
						Aug	31	" "	RJ	89	00
						Sept	30	" "	RJ	109	00
						Oct	31	" "	RJ	112	00
						Nov	30	" "	RJ	127	00
						Dec	31	" "	RJ	157	00
							31	Balance	✓	210	00
				1510	00					1510	00
Jan	1	Balance	✓	210	00						

FIG. 63.—Supplies Control Account

method used where the perpetual inventory system is used.

Prime Cost

It is fairly well agreed among cost accountants that prime cost consists of direct materials and direct, or productive, labor. Direct supplies may also be included under certain conditions. The figure representing prime cost is an important one from the cost accountant's viewpoint. Direct materials are those which are to be manufactured into finished goods. Direct labor is that of the workmen who are actually engaged in the process of manufacturing. Direct supplies are those which are so intimately connected with the manufacturing process that they can be directly charged against a given job or order number. Non-productive labor is misnamed, since it is very often productive and the adjective "indirect" is much more appropriate. A superintendent is certainly engaged in productive work, but his salary is not a "direct" charge.

Manufacturing Expense

Manufacturing expenses or "overhead" consist of the various items of expense which cannot be directly charged to a given job. In the ordinary factory most of the expenses are of this nature. Depreciation of plant, depreciation of machinery, heat and light, water, power, etc., may all be items of factory or overhead expense.

Factory Profits

Many accountants argue that if the factory is considered a function, separate and distinct from other functions, it is entitled to a profit on the goods which it makes and turns over to another department to sell. If the factory should make an article at the cost of $1.50, the

current market price of which was $2.00, these accountants argue that the factory should bill this article to the sales department at $2.00, thus making a factory profit of 50 cents. This has good points to recommend it, since the total factory profit for a given accounting period will show the total amount which the concern has saved by manufacturing, instead of purchasing, its goods.

The principal objection is that this procedure serves to anticipate profits. An article that is manufactured for $1.50 is transferred to the finished goods warehouse at $2.00 and appears in the inventory of finished goods at the same figure. The inventory, therefore, does not value goods at cost price, but at cost price plus the manufacturing profit.

We have seen in Chapter V that merchandise must be valued at its actual cost to the going concern. The taking of a factory profit is clearly improper from the standpoint of the business as a whole, since it is not in line with this principle of valuation. A company which insists on such a procedure may overcome this difficulty by setting up a reserve for an amount equal to the anticipated profits on unsold goods. The author sees no reason why a factory profit should ever be recognized on the general books. The factory cost is always known from the manufacturing statement, the market price can easily be determined, and supplementary exhibits may be prepared to show what the factory profits *would* have been.

It may, therefore, be stated without fear of successful contradiction that the best method is to book all finished goods at actual manufacturing cost.

Depreciation

While the subject of depreciation will be more extensively treated in Chapter XII, it is well to state at this

point that depreciation of machinery, tools, factory equipment, factory fixtures, and factory buildings are *costs* and should be included in the manufacturing statement. They form part of the cost of production and should never be considered as deductions from profits. Many otherwise well-informed accountants fail to treat depreciation as a cost. They set up a reserve for depreciation, which is in the nature of appropriated surplus—profits which have been set aside or "earmarked." Depreciation has no reference whatever to profits and must be booked even if no profits should be made. It is as much an expense as coal which is burned under the boilers.

Depreciation of general office equipment is an administration expense and should be so booked. Depreciation of sales office equipment is a selling expense and should be so treated.

Purchase and Sales Discounts

There is a lack of agreement between prominent accountants as to the proper treatment of purchase and sales discounts, one group claiming that a purchase discount is equivalent to a reduction in the cost of goods purchased, while others consider a purchase discount a financial gain due to the possession of ample capital. If the former viewpoint is adopted, merchandise purchases will be booked at the cost laid down at the purchaser's warehouse, less the amount of purchase discount. In the former case they will be charged to the Purchases Account, *less* the amount of purchase discount. In the latter case they will be charged to the Purchases Account at the cost laid down in the warehouse.

These two different viewpoints involve different treatments in the profit and loss statement. If the purchase discounts are regarded as reducing the cost of goods pur-

chased, then they will appear in the manufacturing or trading section of the profit and loss statement, but if they are regarded as items of "other income," they will appear in the financial section of the profit and loss statement. In order to illustrate the difference in treatment let us assume two different concerns with the same profit and loss figures. It will be noted that Company A treats purchase discounts as a reduction in the cost of purchases, while Company B regards them as additional income.

PROFIT & LOSS STATEMENT
A Company
Year ending Dec. 31, 1915

Sales			$10,000.00
Inventory 1/1/15		$1,000.00	
Purchases	$8,000.00		
Less—Discounts	200.00	7,800.00	
		$8,800.00	
Inventory 12/31/15		1,300.00	
Cost of Goods Sold			7,500.00
Gross Profit			$ 2,500.00
Selling Expense		$1,000.00	
Admin. Expense		800.00	1,800.00
			$ 700.00
Other Income			
Interest			80.00
			$ 780.00
Income Charges			200.00
Net Profit for year			$ 580.00
Surplus 1/1/15			3,000.00
Surplus 12/31/15			$ 3,580.00

PROFIT & LOSS STATEMENT
B Company
Year ending Dec. 31, 1915

Sales		$10,000.00
Inventory 1/1/15	$1,000.00	
Purchases	8,000.00	
	$9,000.00	
Inventory 12/31/15	1,300.00	
Cost of Goods Sold		7,700.00
Gross Profit		$ 2,300.00
Selling Expense	$1,000.00	
Admin. Expense	800.00	1,800.00
		$ 500.00
Other Income		
Interest	$ 80.00	
Purchase Discounts	200.00	280.00
		$ 780.00
Income Charges		200.00
		$ 580.00
Surplus 1/1/15		3,000.00
Surplus 12/31/15		$ 3,580.00

The final net profit is the same whichever method of handling purchase discounts is adopted, but the "cost of goods sold" and "the gross profit" for the two companies differ.

The analysis of the nature of such discounts leads us inevitably to the conclusion that they are offered for the purpose of making prompt collections. A business offers a cash discount in order that its customers will remit *promptly.* As an inducement for promptness in making payment, the cash discount implies a need for money.

The value of its merchandise certainly cannot be dependent upon the quantity of working capital which a concern possesses.

Consider the case of two concerns each buying a bill of merchandise amounting to $100.00. One is in strong financial condition, has sufficient funds to discount its bills, and takes advantage of the 2% discount offered. It, therefore, will book this merchandise at $98.00 (disregarding incoming freight and drayage). The other is short of working capital and does not take the discount. It, therefore, books the same merchandise at $100.00. It is unreasonable to claim that the concern which is in strong financial condition should value its merchandise at a lower figure than the concern which is in straightened circumstances. The value of that merchandise to each is the same and should be booked at the same figure, namely $100.00. The one in strong financial condition must consider the $2.00 discount as being income due to its possession of adequate capital. It seems inevitable, therefore, that purchase discounts must be considered as "other income" rather than as a reduction of the purchase price.

Sales discounts to the seller are purchase discounts to the buyer. If the purchase discount must be regarded as "other income" which is financial in its nature, the same discount from the viewpoint of the seller must be considered as a financial cost and not as a deduction from sales. Sales discounts are offered for the purpose of making prompt collections and thus renewing the cash capital of the seller. It is an amount paid for the use of capital and is clearly the same kind of an item as interest paid and must be treated in the same way, namely, as a financial cost.

Insurance and Taxes

Just what disposition should be made of insurance and taxes on the profit and loss statement is sometimes rather puzzling. Many accountants argue that inasmuch as insurance is a cost incurred for the protection of capital, it would be an error to charge it as a manufacturing expense. They would treat expired insurance as a reduction from income. Taxes are regarded in much the same way as a charge incurred because of the possession of capital, and not as a factor in the cost of manufacturing.

Some accountants hold that these items should be treated as a manufacturing expense, and it should be noted that this is the viewpoint of the cost accountant and the engineer, rather than the ordinary commercial accountant. The goal of the cost accountant, as has been so ably expressed by A. Hamilton Church, is to load all expenses on work in process "at the point of the tool." The effect of this is to swell inventory values of finished and partly finished goods, and for this reason the auditor is inclined to look askance on such procedure.

The disposition of such items as insurance and taxes must not be treated dogmatically; but as a general proposition it may be said that expired insurance premiums on raw materials and work in process may be legitimately treated as a manufacturing expense. Insurance on buildings, machinery, and other fixed assets may be regarded as a financial cost and handled as a reduction of income. It is probably better practice to regard taxes as a reduction of income, i. e., a financial cost.

Bad Debts

Shall losses from bad debts be regarded as a sales expense, an administration expense, or a reduction from

income? The answer to this question will determine how the item is to be treated on the profit and loss statement. No definite answer can be given until we have definite information as to the responsibility for granting credit. If the sales department determines credits or if the credit department is subsidiary to the sales department, this item can be properly treated as a charge to the selling function.

Usually the credit department is installed to act as a check upon the sales department, restricting its activities. The credit department's function is to increase profits by reducing losses from bad debts, but if a credit department is so strict that it has no losses whatever, it is clearly evident it has not performed its functions properly. It has probably turned away desirable business. Theoretically, therefore, the credit department is engaged in increasing net results through a wise selection of customers. The credit department is usually superintended by the financial officer of the company, i. e., the treasurer or secretary, and since all his departmental expenses are treated as administration costs, it would seem proper to include losses from bad debts in the same category. There are also good arguments in favor of treating them as financial costs.

Closing the Ledger

At the end of each accounting period when the nominal accounts are to be closed out, it is convenient to have on the books a Trading Account, Profit and Loss Account, Income Account, and Profit and Loss Allocation Account and to make the closing entries to these summary accounts instead of to a general classified profit and loss account. By closing in sections the figures are preserved in the General Ledger itself in convenient form. This is more a matter of technique than of principle, but it is

in line with modern practice. Many accountants consider it a waste of time actually to open these accounts and prefer to close all nominal items out into the Undivided Profits Account or the Surplus Account. An illustration of closing journal entries and the resulting general ledger accounts are shown in Figures 64 and 65.

Statement of Receipts and Disbursements

A very careful distinction should be made between a profit and loss statement and a statement of cash receipts and disbursements. The latter is merely a classified rearrangement of the Cash Book in statement form, showing all items of cash receipts classified according to their sources and cash disbursements classified according to their application, the balancing figure representing cash on hand at the end of the period. A statement of cash receipts and disbursements can in no way take the place of a profit and loss statement, since earnings and income received in cash during a certain period may be represented by entirely different figures. Liabilities incurred and liabilities paid would very seldom be equal in amount for a given accounting period. While a statement of cash receipts and disbursements is often desirable in connection with an annual report, it can be considered as a mere formal rearrangement of the information contained in the Cash Book.

Railroad Income Statements

Railroad accounting is a distinct subject in itself, and it is not proposed to discuss it in this volume. The classifications and treatments are prescribed by the Interstate Commerce Commission, and a thorough familiarity with their regulations is essential to the man who desires to acquaint himself with this branch of accounting.

JOURNAL—BLANK COMPANY

Date	Account	Debit	Credit
191..			
Dec. 31	Total Sales	$133,300.00	
	Merchandise—Inventory, Dec. 31, 191—	14,000.00	
	Returned Sales and Allowances		$ 200.00
	Merchandise—Inventory, Jan. 1, 191—		15,000.00
	Purchases		73,000.00
	Trading Account		59,100.00
	(Although from this journal entry only one posting to the Trading Account is required, it is customary actually to show all the details, as though they had been posted)		
31	Trading Account—To Close	59,100.00	
	Selling—Salaries		7,000.00
	" Traveling Expense		3,000.00
	" Tel., Tel., & Postage		700.00
	" Depreciation of Equipment		200.00
	" Shipping Expense		1,500.00
	" Light and Heat		700.00
	" Miscellaneous		500.00
	Advertising Purchased		10,000.00
	" Dept.—Salaries		4,800.00
	" Tel., Tel., & Postage		450.00
	" Depreciation of Equip.		350.00
	" Light and Heat		500.00
	" Miscellaneous		300.00
	Administration—Salaries		11,500.00
	" Supplies		2,500.00
	" Tel., Tel., & Postage		1,500.00
	" Light and Heat		2,500.00
	" Depreciation of Equipment		500.00
	" Miscellaneous		1,500.00
	Profit and Loss Account		9,100.00
Dec. 31	Profit and Loss Account—To Close	9,100.00	
	Purchase Discounts	200.00	
	Interest Received	300.00	
	Miscellaneous	100.00	
	Sales Discounts		200.00
	Interest Paid		100.00
	Insurance		800.00
	Taxes		700.00
	Bad Debts		300.00
	Income Account		7,600.00
31	Surplus Account	1,800.00	
	Surplus Adjustment Account		1,800.00
31	Income Account—To Close[5]	7,600.00	
	Surplus Account		7,600.00

[5] This amount might properly be closed into the Profit and Loss Allocation Account and from there to Surplus, but this step may be eliminated when there is no allocation to be made.

Fig. 64.—Closing Journal Entries

LEDGER—BLANK COMPANY

TRADING ACCOUNT

Dec. 31	Ret. Sales & Allowances ....(j)	$ 200.00	Dec. 31	Gross Sales....(j)	$133,300.00
31	Mdse.—Inv. ...(j)	15,000.00	31	Mdse.—Inv. ...(j)	14,000.00
31	Purchases .....(j)	73,000.00			
31	P.&L.—To Close(j)	59,100.00			
		$147,300.00			$147,300.00

PROFIT AND LOSS ACCOUNT

Dec. 31	Selling—Salaries (j)	$ 7,000.00	Dec. 31	Trading Acct. ..(j)	$59,100.00
31	Traveling Exp...(j)	3,000.00			
31	Selling—T., T., & P. .....(j)	700.00			
31	" Depn. Equip.(j)	200.00			
31	" Ship'g Exp.(j)	1,500.00			
31	" Lt. & Heat (j)	700.00			
31	" Misc. Exp. (j)	500.00			
31	Adv. Purch.....(j)	10,000.00			
31	Adv.—Salaries ..(j)	4,800.00			
31	" T., T., & P.(j)	450.00			
31	" Depn. Equip.(j)	350.00			
31	" Lt. & Heat..(j)	500.00			
31	" Misc. ......(j)	300.00			
31	Adm.—Salaries .(j)	11,500.00			
31	" Supplies ..(j)	2,500.00			
31	" T., T., & P.(j)	1,500.00			
31	" Lt. & Heat.(j)	2,500.00			
31	" Depn.Equip.(j)	500.00			
31	" Misc. .....(j)	1,500.00			
31	Income—To Close(j)	9,100.00			
		$59,100.00			$59,100.00

INCOME ACCOUNT

Dec. 31	Sales Discounts..(j)	$ 200.00	Dec. 31	Profit & Loss....(j)	$9,100.00
31	Interest Paid.....(j)	100.00	31	Purch. Dscts.....(j)	200.00
31	Insurance ....(j)	800.00	31	Interest Rec'd....(j)	300.00
31	Taxes ....(j)	700.00	31	Misc. Income ....(j)	100.00
31	Bad Debts.......(j)	300.00			
31	Surplus ....(j)	7,600.00			
		$9,700.00			$9,700.00

SURPLUS ACCOUNT

Dec. 31	Adjustments ...(j)	$ 1,800.00	Jan. 1	Balance ....(j)	$85,000.00
31	Balance ....√	90,800.00	Dec. 31	Income a/c.....(j)	7,600.00
		$92,600.00			$92,600.00
			Jan. 1	Balance ....√	$90,800.00

FIG. 65.—Ledger Accounts after Closing

INCOME STATEMENT—NORTHERN PACIFIC RAILWAY COMPANY

For fiscal year ending June 30, 1912

Revenue from Transportation		
Freight	$43,332,918.23	
Passenger	17,278,812.52	
Other Revenue from Transportation	3,456,962.01	
Total		$64,068,692.76
Revenue from Operation Other Than Transportation		844,139.13
Total Operating Revenue		$64,912,831.89
Operating Expenses		
Maintenance of Way and Structures	$ 8,065,462.47	
Maintenance of Equipment	7,911,231.46	
Traffic Expenses	1,127,233.05	
Transportation Expenses	21,601,477.48	
General Expenses	1,024,356.05	
Total		39,729,760.51
Net Operating Revenue		$25,183,071.38
Outside Operations		
Sleeping, Parlor, Observation, Dining, and Café Cars and Restaurants		441,802.83
Total Net Revenue		$25,624,874.21
Taxes Accrued		3,296,797.49
Operating Income		$22,328,076.72
Other Income		
Dividends and Interest on Securities, Interest on Deposits and Miscellaneous	$ 2,705,981.83	
Rentals Received	2,027,352.75	
Hire of Equipment	607,094.46	
Total		5,340,429.04
Gross Income		$27,668,505.76
Deduct		
Rentals Paid	$ 561,149.26	
Interest on Funded Debt	6,665,090.00	
Dividends on Stock	17,360,000.00	
Total		24,586,239.26
Net Income for Year		$ 3,082,266.50

Fig. 66.—Railroad Income Statement

The first item to appear on the Income Statement (see Figure 66) of a railroad is revenue. This is divided into "Revenue from Transportation" and "Revenue from Operation other than Transportation." Revenue from Transportation is of three kinds:

1. Freight revenue.
2. Passenger revenue.
3. Other revenue from transportation.

From the *Total* Operating Revenue is deducted the Operating Expenses. Operating Expenses are considered under five general heads:

1. Maintenance of Way and Structures.
2. Maintenance of Equipment.
3. Traffic Expenses.
4. Transportation Expenses.
5. General Expenses.

The figure obtained by deducting Operating Expenses from Total Operating Revenue is designated as "net operating revenue" and to this is added Income from Outside Operations, such as "sleeping, parlor, observation, dining, and cafe cars and restaurants," giving the "Total Net Revenue." Taxes are then deducted from this amount giving "operating income" to which is added "Other Income," such as:

1. Dividends and Interest on Securities, Interest or Deposits, Miscellaneous.
2. Rentals Received.
3. Hire of Equipment.

The figure obtained from adding Other Income to Operating Income may be called "Gross Income." From

Gross Income will be deducted Rentals Paid and Interest on Funded Debt.

The reader who is desirous of making further study of railroad accounting is advised to obtain a list of the various documents, bulletins, and rulings which have been published by the Interstate Commerce Commission. Such a list may be obtained from the Superintendent of Documents, Washington, D. C.

TEST QUESTIONS

1. In a primitive situation where only one proprietorship account is used, of what distinct elements may its balance be composed?
2. What are the elements of the trading account?
3. What are the three common fcrms of proprietorship?
4. What are the elements of a partnership?
5. What is the difference between capital and capital stock?
6. Make two outlines or charts showing classification of proprietorship accounts.
7. What is prime cost?
8. What is the difference between a statement of profit and loss and a statement of receipts and disbursements?

CHAPTER VIII

PROPRIETORSHIP—Continued

The most natural expense classification is according to objects of expenditure (Figure 52), but its usefulness is financial and limited to judgment of the efficiency and accuracy of purchasing. Such a scheme of expense accounts furnishes no guide as to the departmental or functional costs, no effective means of control—matters of vital importance under modern industrial conditions.

Very few enterprises employ this classification rigidly—they modify and functionalize it to some extent. Ordinarily the segregation of expense is under the general heads of

1. Selling.
2. Administration.
3. General.

Each of these may control a group of classified subaccounts. Thus postage occurs as a sales cost and also in the administration accounts. The reason is that postage used for selling purposes should be kept distinct from postage used for administrative purposes. There is no more reason for lumping them into one Postage Expense Account than there is for lumping all salaries and wages into one Salaries and Wages Account. It is not particularly important to know the *total* amount for postage in any one year, since the figure by itself means very little.

The postage should be charged to the functions benefitted by the postage.

Then the total of all the expense accounts for a function may be compared with the results which it has achieved. Such information is of the highest value. The total amount spent for wages and salaries is of but mild interest, compared with the total expense of a function (*including* salaries and wages). A profit and loss statement is valuable in so far as it gives illuminating information as

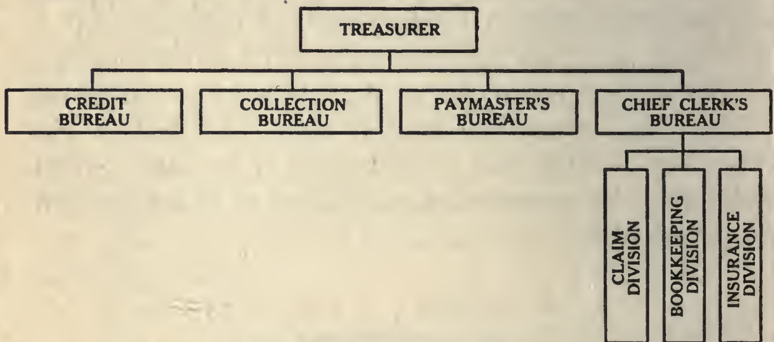


Fig. 67.—Organization Chart

to the costs and results of the various functions of a business. A profit and loss statement giving purely statistical information such as the *total* spent for postage, the *total* spent for wages, the *total* spent for light and heat, etc., is not productive of efficiency in operation, and its usefulness is strictly limited.

If the plan of functional classification is carried to its logical conclusion, as it has been in some of the larger industrial and municipal units, the result will be that a large number of detailed accounts will be installed under the general head of Expense. The classification will closely follow the organization plan of the business—first

by departments and then by departmental functions. Under each function are found the detail accounts for

Salaries.
Wages.
Supplies Used.
Maintenance.
Miscellaneous.

As an example of functional classification, we may consider the case of the treasury department of a large business. An analysis of its organization might indicate the existence of various bureaus or functions as follows (see Figure 67):

1. Credit Bureau.
2. Collection Bureau.
3. Paymasters Bureau.
4. Chief Clerk.
   (a) Claim division.
   (b) Bookkeeping division.
   (c) Insurance division.

Then for each of these organization units will appear a set of expense accounts classified according to objects of expenditure.

Treasury Department
  General Unapportioned Expense
    Salaries Account
    Supplies Used Account
    Maintenance Account
    Miscellaneous
  Credit Bureau Expense
    Salaries Account
    Supplies Used Account

- Agency Service Used Account
- Traveling Expense Account
- Maintenance Account
- Miscellaneous

Collection Bureau
- Salaries Account
- Traveling Expense Account
- Supplies Used Account
- Maintenance Account
- Miscellaneous

Paymaster's Bureau
- Salaries Account
- Private Car Expense Account
- Supplies Used Account
- Maintenance Account
- Miscellaneous

Chief Clerk's Bureau
- General (to be apportioned)
  - Salaries Account
  - Supplies Account
  - Miscellaneous
- Claim Division
  - Salaries Account
  - Supplies Used Account
  - Traveling Expense Account
  - Maintenance Account
  - Apportioned General Expense Account
- Bookkeeping Division
  - Salaries Account
  - Supplies Used Account
  - Maintenance Account
  - Apportioned General Expense Account
  - Miscellaneous
- Insurance Division

Salaries Account
Traveling Expense Account
Supplies Used Account
Maintenance Account
Apportioned General Expense Account
Miscellaneous

By proper combination of such detailed information units it is possible to obtain costs

1. For the Treasury Department as a whole.
2. For the various functions.
3. By objects of expenditure.

From accounts on this basis detailed functional reports in comparative form may be prepared and shown to the bureau chiefs. Nothing brings efficiency quite so quickly as the enforcement of responsibility for results by means of prompt detailed functional reports whose accuracy is checked by general ledger control. This is particularly true when the figures can be reduced to a "unit-cost" basis. When each department, or subdepartment, head understands that his performance is a matter of record, he has an incentive to strive for larger results. The general plan of functional expense classification will be observed in Figure 68.

General Ledger Control

Of course, all these detailed accounts will not appear in the General Ledger. Instead they will be kept in subsidiary ledgers controlled by general ledger accounts. Thus, in the foregoing example, the general ledger control might be the Treasury Department Expense Account, all the subordinate accounts being kept in a Treasury Department Expense Ledger.

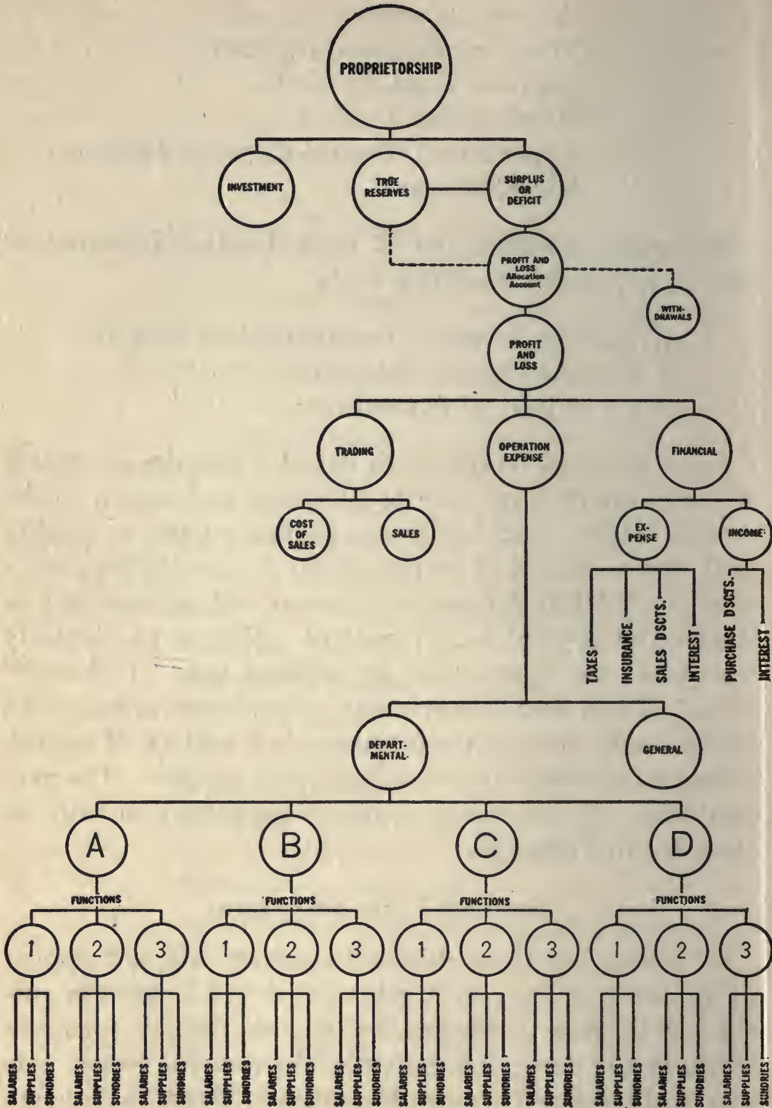


FIG. 68.—Chart Illustrating Functional Classification of Accounts

Or the General Ledger might contain the following accounts:

Treasury Department Unapportioned Expense.
Credit Bureau Expense.
Collection Bureau Expense.
Paymaster's Bureau Expense.
Chief Clerk's Bureau Expense.

Each of these would be a controlling account over a subsidiary ledger. As a matter of fact, *each* summary heading is in the nature of a control over the details composing it.

In spite of this seeming complexity no particular difficulty or additional labor is to be feared in the bookkeeping work. It is as easy to charge a detailed account as a general account, and the controlling account receives its postings in columnar totals at the end of the period in the regular way.

Apportionment Accounts

Obviously some items of expenditure are of such a nature that they cannot be charged direct to a detailed account. Where an employee divides his time between two or more functions, it has been found best to charge his salary to a departmental apportionment account and then distribute it, at the end of the period, to the various subaccounts. The basis of distribution might be arbitrary or determined from his Time Report, showing the time he spent working for the various functions. An illustration of such an item is the chief clerk's salary in the classification illustrated. It might be charged to the first account under "General (to be apportioned)" and later distributed over the Claim, Bookkeeping, and Insurance

divisions in proportion to the amount of time he spent with each.

Whether such items are to be distributed or left unapportioned is a matter of policy. In some cases it pays to make accurate apportionments, and in others it is unnecessary.

Treatment of Supplies

The charges for supplies may be made from the requisitions themselves or from the storekeeper's periodical Recapitulation of Requisitions. Where the ultimate destination of the supplies is not known, they may be temporarily charged to the departmental stores' accounts and later charged out to the functional accounts.

The introduction of a detailed classification of accounts in an organization presupposes the existence of a thoroughly worked-out plan of organization. You cannot departmentalize your accounts without first departmentalizing the organization. Many organizations are so loosely knit together, with lines of control so vague and poorly defined, that responsibility can hardly be determined. If a properly planned organization is assumed, the accounting system may be designed to fit it and give invaluable information to the administrator.

A complex set of classified accounts almost demands the use of account numbers. There are several account-numbering schemes in common use, and any of them may be profitably employed even in a moderately small organization. The use of numbers instead of account names is a time-saver and is almost essential in the larger organization.

Clearing Accounts

When the various functions of a business are properly recognized in its profit and loss statement, it is clear that certain classes of expenditure such as postage, light and heat, janitor service, power, etc., must be distributed equitably among the various departments or functions to which they are properly chargeable. Charges may be made direct to the departmental or functional expense accounts, or they may first be charged to the clearing accounts and then distributed to the various departmental accounts. Either method is proper, and individual circumstances will indicate which one will be used.

For an illustration of a clearing account, let us assume that the total expense for electric light during a given accounting period was $2,000.00. The various charges making up this total would be debited to an expense account entitled "Electric Light Used." If the business has five departments, one of which used one-half of the total light and the other four one-eighth each:

Department A uses ½ total light
Department B uses ⅛ total light
Department C uses ⅛ total light
Department D uses ⅛ total light
Department E uses ⅛ total light

the distribution of the entire $2,000.00 would be made as follows:

Department A chargeable with ½ of $2,000.00	$1,000.00
Department B chargeable with ⅛ of 2,000.00	250.00
Department C chargeable with ⅛ of 2,000.00	250.00
Department D chargeable with ⅛ of 2,000.00	250.00
Department E chargeable with ⅛ of 2,000.00	250.00
	$2,000.00

The proper method of making this distribution in the books is by means of the following journal entry:

Electric Light Used—Department A	$1,000.00	
Electric Light Used—Department B	250.00	
Electric Light Used—Department C	250.00	
Electric Light Used—Department D	250.00	
Electric Light Used—Department E	250.00	
Electric Light Used (clearing account)		$2,000.00

(Note:—In this journal entry there is only one credit item shown. It is often customary to post such a credit as this in five items in order that the clearing account will be self-explanatory. Such a posting is shown in the accompanying ledger accounts.)

ELECTRIC LIGHT USED (CLEARING ACCOUNT)

Aggregate charges for period	$2,000.00	Department A........(a)	$1,000.00
		Department B........(b)	250.00
		Department C........(c)	250.00
		Department D........(d)	250.00
		Department E........(e)	250.00
	$2,000.00		$2,000.00

ELECTRIC LIGHT USED—DEPARTMENT A

Clearing Account.....(a)	$1,000.00		

ELECTRIC LIGHT USED—DEPARTMENT B

Clearing Account.......(b)	$250.00		

ELECTRIC LIGHT USED—DEPARTMENT C

Clearing Account.......(c)	$250.00		

Electric Light Used—Department D

Clearing Account.......(d) $250.00	

Electric Light Used—Department E

Clearing Account.......(e) $250.00	

Bases of Distribution

Where a single kind of expense is to be distributed over departments or functions, it is imperative that a proper basis of distribution be ascertained. This is sometimes difficult to determine.

Where an electrical meter can be installed in each department to measure the amount of current consumed, the distribution of electric light charges is based on the proportion between the total electricity consumed by any one department and the total electricity consumed by the entire establishment. Often it is impossible or inexpedient to adopt such a method, and some other basis must be sought. One that is frequently used is the proportion between the total candle power of lamps in the department and the total candle power of all lamps in the establishment. Thus, if the latter figure were 500 and the total candle power of all lamps in Department B were 250, then Department B would be chargeable with one-half of the electric light expense. This basis, while fairly satisfactory, is not necessarily accurate, since some kinds of lamps consume more electricity per candle power than others.

Another basis of distribution may be that of the "test-run." If an accurate test of the total current consumed by a given department is made covering a sufficient period

of time, a figure may be obtained that can be used as a basis for future distributions.

It is customary to distribute heating expense over departments according to the cubic feet of space they occupy, since it has been found by experiment that a room uses heat in proportion to its cubic contents. If steam heat is used, the basis of distribution might be the number of square inches of radiating surface in a given department as compared with the total number of square inches of radiating surface in the entire establishment

Power is distributable by meter or by test. It is usually necessary to make a series of "test-runs" in order to determine the proportion of power which each department consumes. Power may be distributed on a basis of the total horse power requirements of the machines in each department, or where electric power and individual motors are used, the power may be metered and a very accurate distribution obtained.

Distribution of postage expense involves difficulties. Where a central mailing-room is used, the distribution may be on the basis of daily or weekly reports by the mailing clerk. It is usually rather difficult to make a fair distribution of this item of expense except in a business where a large amount of postage is used. In the average office it is probably sufficient to make a "test-run" covering a period of a few weeks, utilizing the proportion thus obtained as standard.

The danger of establishing such a standard basis is that conditions may change. When the "test-run" method of ascertaining bases of distribution is in use, it is essential that the test be repeated periodically to find whether the ratio has remained constant.

It is impossible to treat the subject of apportionment very fully, because many of its problems need to be solved

anew for each organization. No one method is accurate in every case. Apportionment should always be made, based on actual facts; and on this basis there are many methods for different kinds of expense. Under normal circumstances nearly every expense item can be distributed departmentally on one of the following bases:

Number of square feet (rent)
Number of cubic feet (heat)
Number of sales slips (waiting room)
Number of square inches (advertising space)
Number of items delivered (delivery expense)
Value of supplies used (stores expense)
Number of bills entered (billing expense)

but special bases can often be determined that will fit individual cases better.

In railroad work special bases of apportionment are used in connection with various attempts to obtain the cost of passenger service and freight service separately, such as

Revenue train-miles.
Ton-miles.
Car-miles.
Gross earnings.
Train-hours, etc.

As an example of the use of clearing accounts, the item of power, $2,100.00, appearing on the profit and loss statement in Figure 58 may be discussed. Where purchases of power are made from an independent utility, the monthly power bills may be charged direct to a power expense account, but where a concern manufactures its own power, a very different situation develops. The production of power is a function separate and distinct

from manufacturing or selling. An industry which manufactures its own power is in the power business, although it has only one customer, i. e., itself.

An industry manufacturing its own power must determine through a properly classified set of expense accounts the total cost of all power produced during the accounting period. If all the power thus generated is used in the factory for machine operation, the problem is comparatively a simple one; but where it is also used for the purpose of supplying electricity and heat, the figure representing total cost of power must be distributed so as to arrive at the cost of lighting and heating and the cost of power consumed in the factory. The figure representing "light and heat" will then have to be redistributed over the various departments.

Let us assume that the books of the Blank Company show the following power accounts:

Coal Used	$3,150.00
Water Used	250.00
Supplies Used	300.00
Wages	1,200.00
Salaries	1,500.00
Depreciation of Buildings	350.00
Repairs to Buildings	50.00
Depreciation of Equipment	400.00
Repairs to Equipment	100.00
	$7,300.00

The total of these figures is $7,300.00 and represents the cost of power production. At the end of the accounting period the balances of these accounts will be transferred by journal entries to a clearing account entitled "Cost of Power Production." It is now necessary to distribute this figure of $7,300.00 over two other accounts:

Cost of Power Production

Dec	31	Coal Used	a	3150 00	Dec	31	Light & Heat	b	5200 00
	31	Water Used	a	250 00		31	Power Used by Factory	c	2100 00
	31	Supplies Used-Power House	a	300 00					
	31	Wages Power House	a	1200 00					
	31	Salaries "	a	1500 00					
	31	Depreciation "	a	350 00					
	31	Repairs "	a	50 00					
	31	Depreciation " Equip	a	400 00					
	31	Repairs " "	a	100 00					
				7300 00					7300 00

Light & Heat—General

Dec	31	Cost of Power	b	5200 00	Dec	31	Light & Heat-Factory	d	1500 00
							" " Sales	e	700 00
							" " Adv	f	500 00
							" " Adm	g	2500 00
				5200 00					5200 00

Light & Heat—Factory

Dec	31	Light & Heat-General	d	1500 00					

Light & Heat—Sales

Dec	31	Light & Heat-General	e	700 00					

Light & Heat—Advertising

Dec	31	Light & Heat-General	f	500 00					

Light & Heat—Administration

Dec	31	Light & Heat-General	g	2500 00					

Power Used By Factory

Dec	31	Cost of Power	c	2100 00					

FIG. 69.—General Ledger Clearing Accounts

1. Power Used by Factory.
2. Light and Heat—General.

We may assume that the basis of distribution used is such that the Light and Heat is chargeable with $5,200.00 and Power Used by Factory is chargeable with $2,100.00.

Dec. 31	Light and Heat—General	$5,200.00	
	Power Used by Factory	2,100.00	
	Cost of Power Production		$7,300.00

The account, which we have called "Light and Heat—General," is also a clearing account, and its total must be distributed over the factory, the sales department, the advertising department, and the general offices. Figure 69 shows the various accounts concerned in this procedure.

It will be noted that the original power expense accounts were all closed into Cost of Power Production and that this total was then distributed into two other accounts, thus closing the Cost of Power Production, and that the Light and Heat also is closed, its total being distributed to the four departmental accounts. See Figure 69 in connection with the profit and loss statement shown in Figure 55.

TEST QUESTIONS

1. (a) What two general plans of proprietorship account classification are in general use?

   (b) What are the characteristics of each?

2. Construct an organization chart for a business or a department and design an appropriate expense account classification to fit it.

3. (a) What are departmental apportionment accounts?

   (b) How are they used?

4. What are the advantages of using account numbers?

CHAPTER IX

PARTNERSHIP

The problems connected with partnership accounting [1] vary but little from the general accounting principles which we have heretofore discussed. The principal sources of difficulty in partnership accounting refer to the partnership relation, i. e., the formation of the partnership—disposition of profits and losses—dissolution of the partnership. The first point which should be emphasized is that, in a properly organized partnership, the relation of the partners one to another, and to the

[1] On page 218 in Chapter VII was outlined a general classification of proprietorship accounts, and the statement was made that partnership accounting, as commonly practiced, was not in entire harmony with correct principles. It is generally conceded that investments in a business should be booked separately from the subsequent accumulation of losses or undivided profits due to operation. It is exceedingly desirable to know the original investment, and this may be difficult to determine if the investment account also receives the entries for profits and losses. On this account the use of a Surplus Account has been recommended.

Another point of somewhat less importance is the use of a Profit and Loss Allocation Account, whose sole function is that of a distribution account for the net loss or gain of a period.

In partnership bookkeeping both these points are habitually ignored. It is common practice to distribute profits or losses to the partners' capital accounts. Thus the partners' investments in the business *may* be changed at the close of every fiscal period and the amount of the original investments lost sight of.

Few, if any, partnerships distribute net profits or loss through a Profit and Loss Allocation Account. Rather they distribute directly from the Profit and Loss Account itself. While this is a rather minor point of technique, it is essential that it be kept in mind when discussing or solving partnership problems.

business, is governed absolutely by the terms of the articles of partnership. This document should cover all the important contingencies which may cause internal disputes among the partners.

Articles of Partnership

A properly drawn-up agreement should contain at least the following clauses:

1. Name and location of the business, nature of the business.
2. Life of the partnership.
3. Duties and power of each partner.
4. Capital contribution—if made in property other than cash, the basis of valuation should be stated.
5. Interest on capital, on loans, on excess or deficiencies of capital.
6. Withdrawals of profit.
7. Apportionment of profits and losses.
8. Salaries of partners.
9. Keeping of partnership accounts.
10. Provision for unforeseen termination of partnership.

When articles of partnership are properly drawn, the problems connected with partnership accounting are much simplified; but it is very often that the agreement is verbal or, at least, indefinitely stated in writing.

The articles should unquestionably specify how profits and losses are to be apportioned. They may or may not be distributed among the partners in the same ratio as capital contributed. Capital may be contributed according to one ratio, profits may be distributable according to another, and losses according to still a third, all depending upon the terms of the partnership agree-

ment. In the lack of a partnership agreement the rule of law is that profits and losses are to be shared equally by the partners, regardless of their capital investment. Where the partnership agreement specifies how profits should be divided but does not mention the disposition of losses, it is assumed that the same ratio will apply.

It very often happens in the formation of a partnership that partnership contributions are not always in cash. When other assets or services are accepted in lieu of cash, their value should be determined once for all. After they have once been accepted, any losses in the value of such assets must be borne, not by the contributing partner, but by all the partners in accordance with the agreed-upon ratio of profit and loss sharing.

Very often a partner contributes certain assets for the *use* of the partnership, but which still remain his exclusive property. Such assets should not be booked as partnership resources. Upon dissolution such assets belong to the partner who has loaned them.

Junior Partners

In certain of the larger partnership organizations, such as legal firms, stock and bond houses, private bankers, etc., it is customary to take promising young men as junior partners. The arrangement is usually one whereby the incoming junior partner is promised a share in the profits only. He may or may not share in the losses. The arrangement is ordinarily revocable by the senior partner at any time, or at the expiration of a stated period. From the internal point of view such an arrangement is, in reality, nothing more than a special contract of employment, but, in the case of proceedings by creditors, it *may* result in an actual legal partnership.

This would be a matter for the courts to determine. On the partnership books the arrangement may be considered as a special profit-sharing employment contract and the junior partner as an employee.

Formation of a Partnership

A careful distinction should be made in the case of an incoming partner as to whether he purchases a share of the profits of the business or an interest in the business. Suppose that the balance sheet of A. A. Ames appeared as follows:

Balance Sheet

Merchandise Inventory...	$25,000.00	Ames—Capital Account..	$25,000.00

He may admit Brown to partnership if he contributes $20,000.00 in cash, and the partnership agreement may specify that profits and losses are to be divided equally, in spite of the fact that one partner has invested $25,000.00 and the other only $20,000.00.

If Brown had bought a one-half interest in the business with his $20,000.00, the balance sheet would appear as follows:

Balance Sheet

Merchandise Inventory...	$25,000.00	Ames—Capital Account..	$22,500.00
Cash	20,000.00	Brown—Capital Account..	22,500.00
	$45,000.00		$45,000.00

An alternative arrangement would have scaled down the value of merchandise to $20,000.00, thus cutting Ames' Capital Account to the same figure in the following balance sheet:

BALANCE SHEET

Merchandise	$20,000.00	Ames—Capital Account	$20,000.00
Cash	20,000.00	Brown—Capital Account	20,000.00
	$40,000.00		$40,000.00

If instead of $20,000.00 Brown had paid $30,000.00 for a half interest in the business, it would be assumed that the $5,000.00 premium which he paid was due to Goodwill, which was really one of Ames' assets, although not actually shown on his books.

BALANCE SHEET

Merchandise	$25,000.00	Ames—Capital Account	$30,000.00
Cash	30,000.00	Brown—Capital Account	30,000.00
Goodwill	5,000.00		
	$60,000.00		$60,000.00

As alternative to the foregoing arrangement the following would be proper:

BALANCE SHEET

Merchandise	$25,000.00	Ames—Capital Account	$27,500.00
Cash	30,000.00	Brown—Capital Account	27,500.00
	$55,000.00		$55,000.00

If a partnership is already established one partner may, with the consent of the other, dispose of part of his interest to an outsider without any new capital being brought into the business. Assume a partnership with the following balance sheet:

BALANCE SHEET

Assets	$60,000.00	Ames—Capital Account..	$30,000.00
		Brown—Capital Account.	30,000.00
	$60,000.00		$60,000.00

If Ames sold half of his interest to Clark, the balance sheet might reflect the fact as follows:

BALANCE SHEET

Assets	$60,000.00	Ames—Capital Account..	$15,000.00
		Brown—Capital Account..	30,000.00
		Clark—Capital Account...	15,000.00
	$60,000.00		$60,000.00

You should note that the deal between Ames and Clark is purely a private one, and from the books of the partnership it would be impossible to tell how much Clark had paid Ames for half of his interest. He might have paid him $20,000.00, or the purchase price might have been only $10,000.00.

The status of the assets is not altered in the least by such an arrangement, but if Clark had contributed $15,000.00 to the partnership for a *one-fifth interest in the business,* the assets would be increased $75,000.00, and an additional $15,000.00 of capital registered on the books, as seen in the following illustration:

BALANCE SHEET

Assets	$75,000.00	Ames—Capital Account...	$30,000.00
		Brown—Capital Account..	30,000.00
		Clark—Capital Account...	15,000.00
	$75,000.00		$75,000.00

The foregoing set of examples illustrates the fundamental importance of clearly determining whether an incoming partner purchases an interest in the profits or an interest in the business.

Interest on Capital

Very often the partnership agreement specifies that interest is to be paid to the partners according to an agreed percentage upon the capital invested. When one partner contributes more capital than another and the partnership agreement provides that profits are to be shared equally, it is clear that the partner with the least investment is obtaining larger returns on his capital than the other. Under such circumstances, therefore, it is often customary to provide that 6% interest be allowed on capital contributions before profits are divided. Such interest is not an expense to the business and should not be charged to the regular interest account. A special account for this purpose should be set up entitled "Interest on Capital Invested," and its debit balance should be deducted from the net profits for the period. When the interest is charged to this account, it should be credited to the individual partners' capital accounts.

In illustration of these points the following transactions may be noted:

Ames—Capital Account

	Invested $30,000.00

Brown—Capital Account

	Invested $30,000.00

CLARK—CAPITAL ACCOUNT

	Invested $15,000.00

At the end of the year, if interest at 6% is allowed on the capital invested, Ames and Brown will be credited with $1,800.00 each and Clark will be credited with $900.00, the total $4,500.00 being charged to Interest on Capital Invested. Since all profits and losses are to be divided equally among the partners, each partner would then be charged with one-third of this $4,500.00, thus balancing the interest account, and when the entries have been made, their capital accounts may appear as follows:

AMES—CAPITAL ACCOUNT

⅓ Interest...............$1,500.00	Investment $30,000.00
	Interest 1,800.00

BROWN—CAPITAL ACCOUNT

⅓ Interest...............$1,500.00	Investment $30,000.00
	Interest 1,800.00

CLARK—CAPITAL ACCOUNT

⅓ Interest...............$1,500.00	Investment $15,000.00
	Interest 900.00

The same result could have been obtained without the necessity of passing the items through a special Interest Account. Ames' and Brown's Capital Accounts could have been credited with $300.00 each, and Clark's Capital Account could have been charged with $600.00, thus obtaining exactly the same result.

Clark's Capital Account	$600.00	
Ames' Capital Account		$300.00
Brown's Capital Account		300.00

AMES—CAPITAL ACCOUNT

		Investment	$30,000.00
		Interest	300.00

BROWN—CAPITAL ACCOUNT

		Investment	$30,000.00
		Interest	300.00

CLARK—CAPITAL ACCOUNT

Interest	$600.00	Investment	$15,000.00

Where the partnership agreement specifies that interest is to be charged on *deficits* and credited for *excess* of required capital contributions, a somewhat different problem is presented. If a partner's nominal contribution is $10,000.00 and he has actually contributed only $8,000.00, his deficit is $2,000.00, and since the profit and loss sharing ratio is determined after taking the nominal capital contributions into consideration, it is only fair that the partner who has not actually contributed the full amount should pay interest on the deficit. Similarly, a partner who has actually contributed $12,000.00 when he is only required to contribute $10,000.00 is clearly entitled to interest on the excess investment. Such items of interest should be passed through the regular interest account, since such excesses and deficits are in the nature of loans to the partnership or loans by the partnership,

i. e., accounts payable or accounts receivable. Interest on such items should be treated the same way as interest on any loan.

Liquidation of Partnership

A great deal of misconception exists regarding the accounting features of partnership dissolutions. If the profit and loss sharing ratio is known, the problem is a simple one. Suppose that the firm of Ames and Brown, sharing profits and losses in the ratio of ⅔ and ⅓ respectively, find that their venture is unprofitable and their capital impaired. They decide to discontinue business and distribute the remaining assets.

Balance Sheet—Ames & Brown

Assets (cash value)	$37,000.00	Ames—Investment	$45,000.00
Deficit	33,000.00	Brown—Investment	25,000.00
	$70,000.00		$70,000.00

How should the $37,000.00 of cash assets be divided? Some might assume that 45/70 of the assets ($23,785.70) would go to Ames and 25/70 ($13,214.30) to Brown, but this would be absolutely wrong. The partnership agreement specifies that profits and losses are to be shared, ⅔ by Ames and ⅓ by Brown, and *this ratio is different from the capital ratio.* Since the loss of $33,000.00 must be charged to the partners in the ratio of ⅔ to ⅓, Ames will be charged with $22,000.00 and Brown with $11,000.00.

Journal Entry

Ames' Capital Account	$22,000.00	
Brown's Capital Account	11,000.00	
Deficit Account		$33,000.00

Ames—Capital Account

Loss (⅔ of $33,000)	$22,000.00	Investment	$45,000.00
Balance (in red)	23,000.00		
	$45,000.00		$45,000.00
		Balance	$23,000.00

Brown—Capital Account

Loss (⅓ of $33,000.00)	$11,000.00	Investment	$25,000.00
Balance (in red)	14,000.00		
	$25,000.00		$25,000.00
		Balance	$14,000.00

Balance Sheet—Ames & Brown

Assets (Cash Value)	$37,000.00	Ames—Capital Account	$23,000.00
		Brown—Capital Account	14,000.00
	$37,000.00		$37,000.00

The loss having been charged to the partners' capital accounts, the total assets equal the total proprietorship interest, and Ames will get $23,000.00 and Brown $14,000.00.

In some cases such a distribution of losses will more than extinguish one partner's capital account, leaving him in debt to the other partners. This amount will be set up on the partnership books as an asset. If collected, it will be divided among the remaining partners. If uncollectible it will be treated like any other bad debt—a loss to be borne by the remaining partners. For illustration we may consider the case of three partners who share profits and losses equally.

GIBBS, HALL & CO.—BALANCE SHEET

Assets (Cash Value)	$10,000.00	Gibbs—Capital Account	$10,000.00
Deficit	6,000.00	Hall—Capital Account	5,000.00
		Jones—Capital Account	1,000.00
	$16,000.00		$16,000.00

JOURNAL ENTRY

Gibbs—Capital Account	$2,000.00	
Hall—Capital Account	2,000.00	
Jones—Capital Account	2,000.00	
Deficit		$6,000.00

Distributing the loss equally among the partners in accordance with the partnership agreement:

GIBBS—CAPITAL ACCOUNT

Loss (⅓ of $6,000.00)	$ 2,000.00	Investment	$10,000.00
Balance (red)	8,000.00		
	$10,000.00		$10,000.00
		Balance	$ 8,000.00

HALL—CAPITAL ACCOUNT

Loss (⅓ of $6,000.00)	$2,000.00	Investment	$5,000.00
Balance (red)	3,000.00		
	$5,000.00		$5,000.00
		Balance	$3,000.00

JONES—CAPITAL ACCOUNT

Loss (⅓ of $6,000.00)	$2,000.00	Investment	$1,000.00
		Balance (red)	1,000.00
	$2,000.00		$2,000.00
Balance	$1,000.00		

GIBBS-HALL & CO.—BALANCE SHEET

Assets (cash value)	$10,000.00	Gibbs—Capital Account	$ 8,000.00
Jones—Deficit	1,000.00	Hall—Capital Account	3,000.00
	$11,000.00		$11,000.00

If Jones makes up this $1,000.00 deficiency, then the cash value of the assets will be $11,000.00, distributable $8,000.00 to Gibbs and $3,000.00 to Hall. If Jones is insolvent, then the $1,000.00 he owes must be considered a loss and divided among the remaining partners *equally* as specified by the partnership agreement. Each partner will be charged with $500.00, and the balance sheet will then appear as follows:

GIBBS, HALL & CO.—BALANCE SHEET

Assets (cash value)	$10,000.00	Gibbs—Capital Account	$ 7,500.00
		Hall—Capital Account	2,500.00
	$10,000.00		$10,000.00

The assets will then be distributed to the partners—$7,500.00 to Gibbs and $2,500.00 to Hall.

PROBLEM

(Adapted from the Illinois C. P. A. Examination, November, 1908)

A, B, and C were partners and contributed the following capital: A, $8,000.00; B, $6,000.00; and C, $4,000.00. Profits and losses were to be borne equally. At the end of the first year each partner had drawn $1,000.00. The assets were then disposed of for $3,000.00, the purchaser discharging all liabilities of the firm. How should this $3,000.00 be apportioned among the partners? In your solution assume that C was insolvent.

SOLUTION

After the assets were sold the firm's condition was as follows:

BALANCE SHEET

Cash	$ 3,000.00	A—Capital Account	$ 8,000.00
A's drawings	1,000.00	B—Capital Account	6,000.00
B's drawings	1,000.00	C—Capital Account	4,000.00
C's drawings	1,000.00		
Deficit	12,000.00		
	$18,000.00		$18,000.00

Since losses must be divided equally, each partner will be charged with ⅓ of $12,000.00, or $4,000.00, leaving A's capital $4,000; B's capital $2,000.00; and eliminating C altogether.

BALANCE SHEET

Cash	$3,000.00	A—Capital Account	$4,000.00
A's drawings	1,000.00	B—Capital Account	2,000.00
B's drawings	1,000.00		
C's drawings	1,000.00		
	$6,000.00		$6,000.00

By the terms of the problem, C is insolvent and cannot pay the $1,000.00 which he owes. This amount is, therefore, a further loss to A and B and must be divided equally between them.

BALANCE SHEET

Cash	$3,000.00	A—Capital Account	$3,500.00
A's drawings	1,000.00	B—Capital Account	1,500.00
B's drawings	1,000.00		
	$5,000.00		$5,000.00

or

Balance Sheet

Cash	$3,000.00	A—Capital Account	$2,500.00
		B—Capital Account	500.00
	$3,000.00		$3,000.00

The two drawing accounts were assets of the business, being accounts receivable against A and B as individuals. If A and B had paid in $1,000.00 a piece to settle these debts, the balance sheet would have appeared as follows:

Balance Sheet

Cash	$5,000.00	A—Capital Account	$3,500.00
		B—Capital Account	1,500.00
	$5,000.00		$5,000.00

Instead of paying the cash in and then taking it right out again, a short cut may be taken (as shown in this solution), transferring the debit balances of the drawing accounts to the Capital Account.

Where the ratio of invested capital is different from the profit and loss sharing ratio and it is desired to liquidate the business gradually by paying the partners off in installments, there is danger that unexpected losses during realization may cause one of the partners to be overpaid. Under such circumstances it is desirable to pay the first installment in such a way as to bring the capital ratio and the profit and loss sharing ratio to the same basis.

In illustration of this point, assume the case of a liquidating partnership with the following balance sheet:

BALANCE SHEET—A, B, & C Co.

Sundry Assets	$18,000.00	A—Capital Account	$10,000.00
		B—Capital Account	5,000.00
		C—Capital Account	3,000.00
	$18,000.00		$18,000.00

By the terms of the partnership agreement, all profits and losses are to be shared in the following ratio:

A	8/17
B	5/17
C	4/17

Rather than sacrifice values by a forced sale it is decided to liquidate assets gradually and to pay the partners in installments. The total of the first dividend to partners is $5,400.00, and the second dividend is the same amount. These amounts are distributed to the partners *on the basis of their respective capital accounts* —10/18 to A, 5/18 to B, and 3/18 to C. A loss of $5,185.00 is then suffered and must be divided among the partners according to the agreed profit and loss sharing basis, *which differs from the capital ratio,* the result being that C's Capital Account shows a debit balance.

A—CAPITAL ACCOUNT

First Installment, 10/18 of $5,400.00 (a)	$ 3,000.00	Capital	$10,000.00
Second Installment, 10/18 of $5,400.00 (b)	3,000.00		
Loss, 8/17 of $5,185.00 (c)	2,440.00		
Balance	1,560.00		
	$10,000.00		$10,000.00
		Balance	$ 1,560.00

B—CAPITAL ACCOUNT

First Installment, 5/18 of $5,400.00 ....(a)	$1,500.00	Capital	$5,000.00
Second Installment, 5/18 of $5,400.00...(b)	1,500.00		
Loss, 5/17 of $5,185.00 ....(c)	1,525.00		
Balance	475.00		
	$5,000.00		$5,000.00
		Balance	$ 475.00

C—CAPITAL ACCOUNT

First Installment, 3/18 of $5,400.00 ....(a)	$ 900.00	Capital	$3,000.00
Second Installment, 3/18 of $5,400.00...(b)	900.00	Balance	20.00
Loss, 4/17 of $5,185.00 (c)	1,220.00		
	$3,020.00		$3,020.00
Balance	$ 20.00		

BALANCE SHEET

Sundry Assets	$2,015.00	A—Capital Account	$1,560.00
C—Deficit	20.00	B—Capital Account	475.00
	$2,035.00		$2,035.00

In order to prevent such a situation it would be better so to divide the first $5,400.00 as to make the ratio of capitals equal to the profit and loss sharing ratio.

Total Capital	$18,000.00
First Dividend	5,400.00
Remaining Capital	$12,600.00

$$\frac{\$12{,}600.00}{17} \times 8 = \$5{,}929.41 = \text{A's new capital}$$

$$\frac{\$12{,}600.00}{17} \times 5 = \$3{,}705.88 = \text{B's new capital}$$

$$\frac{\$12{,}600.00}{17} \times 4 = \$2{,}964.71 = \text{C's new capital}$$

By so dividing the first dividend of $5,400.00 as to bring A's balance to $5,929.41, B's balance to $3,705.88, and C's balance to $2,964.71, the ratio of capitals *becomes equal* to the profit and loss sharing ratio.

In order to do this the first payment of $5,400.00 must be apportioned as follows:

A	$4,070.59
B	1,294.12
C	35.29
Total	$5,400.00

The three partners' capital accounts, after having been charged with the two installments and with the loss, will appear as follows:

A—Capital Account

First Installment ...(a)	$ 4,070.59	Capital	$10,000.00
Balance	5,929.41		
	$10,000.00		$10,000.00
Second Installment, 8/17 of $5,400.00..(b)	2,541.18	Balance	$ 5,929.41
Loss, 8/17 of $5,185.00 (c)	2,440.00		
Balance	948.23		
	$ 5,929.41		$ 5,929.41
		Balance	$ 948.23

B—CAPITAL ACCOUNT

First Installment.....(a)	$1,294.12	Capital	$5,000.00
Balance	3,705.88		
	$5,000.00		$5,000.00
Second Installment, 5/17 of $5,400.00...(b)	1,588.23	Balance	$3,705.88
Loss, 5/17 of $5,185.00 (c)	1,525.00		
Balance	592.65		
	$3,705.88		$3,705.88
		Balance	$ 592.65

C—CAPITAL ACCOUNT

First Installment.....(a)	$ 35.29	Capital	$3,000.00
Balance	2,964.71		
	$3,000.00		$3,000.00
Second Installment, 4/17 of $5,400.00...(b)	1,270.59	Balance	$2,964.71
Loss, 4/17 of $5,185.00 (c)	1,220.00		
Balance	474.12		
	$2,964.71		$2,964.71
		Balance	$ 474.12

BALANCE SHEET

Sundry Assets	$2,015.00	A—Capital Account.......	$ 948.23
		B—Capital Account.......	592.65
		C—Capital Account.......	474.12
	$2,015.00		$2,015.00

By paying the first installment in this manner the ratio of the capital accounts is made equal to the profit and loss sharing ratio. Subsequent installments are divided 8:5:4, and the loss is apportioned in the same way.

The subsequent distribution of assets is made according to the same ratio as profit and loss sharing, simply because *it is also the capital ratio.* No confusion regarding this point should be permitted. Assets are divided according to the capital ratio. Losses are divided according to the profit and loss sharing ratio, but in this case *the two have been made equal.*

TEST QUESTIONS

1. What are the principal sources of difficulty in partnership accounting?
2. What important clauses should be found in properly constructed articles of partnership?
3. What is the status of a junior partner?
4. Under what circumstances should partners receive interest on their investments?
5. In the absence of agreement how should profits and losses be shared by partners?
6. When the capital ratio differs from the profit and loss sharing ratio, what precaution should be observed if assets are liquidated and partners paid off in installments?

CHAPTER X

CORPORATIONS

Chief Justice Marshall's often-quoted definition of the corporation as "an artificial being, invisible, intangible, and existing only in contemplation of law" is easily the most satisfactory that has ever been offered. In the famous case of Dartmouth College v. Woodward, Chief Justice Marshall declared that "being the mere creature of law, it possesses only those properties which the charter of its creation confers upon it, either expressly or as incidental to its very existence. These are such as are best calculated to affect the object for which it was created. Among the most important are immortality, and, if the expression may be allowed, individuality; properties by which a perpetual succession of many persons are considered as the same, and may act as a single individual."

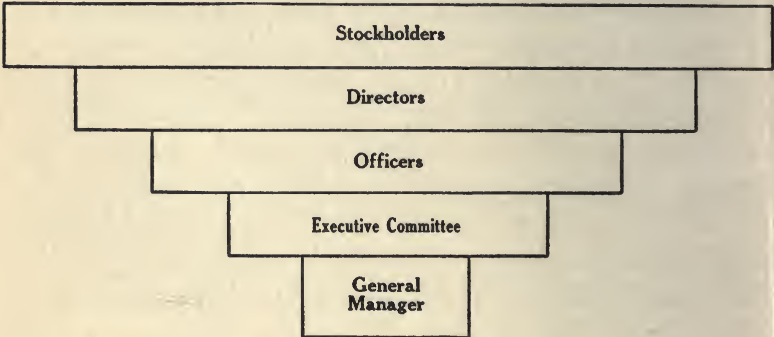
These various individuals who own an interest in the corporation are known as "stockholders," and their interest in the corporation is evidenced by shares of stock. A share of stock is usually for a round amount, i. e., $10.00, $50.00, $100.00, or $1,000.00. The stockholders control the corporation through a committee of their representatives, called the "board of directors." The internal government of the organization is dependent upon a set of rules known as "by-laws," which are prepared and approved by the stockholders. The relations of the corporation to the outside world are dependent upon the charter which has been granted it by the

state. The stockholders or their representatives, the board of directors, elect the officers of the corporation, and these officers appoint minor officials, engage clerks, and hire workmen. The officers of the corporation are usually:

1. President.
2. Vice-President.
3. Secretary and Treasurer.

And the general plan of organization may appear as follows:

CORPORATE ORGANIZATION



The interest which the stockholders have in the corporation is evidenced by stock certificates, which are signed by the officers. Each certifies that the person to whom it is issued is "the owner of —— shares of common (or preferred) stock of the ———— Company."

Capital Stock

A corporation may have more than one kind of capital stock. Its various classes of stock may differ one from the other in

1. Dividend rate.
2. Preference as to dividends or assets or both.
3. Voting power.

One class of stock may call for a certain definite dividend return, which must be paid before the holders of other kinds of stock receive any dividends. Such a stock is called "preferred stock." Ordinary stock is usually known as "common stock." A 6% preferred stock would be entitled to dividends of 6% before any dividends were declared on the common stock, and if the preferred stock is cumulative, the dividends are a charge against the profits of the company and accumulate until paid. If preferred dividends are not paid in any year, the unpaid amounts go over and must be satisfied before the common stockholders receive any dividends.

In case preferred stock is preferred as to assets, its holders, in case of dissolution, are entitled to receive face value for their stock, after the satisfaction of general liabilities, before the common stockholders receive anything.

On the corporation's own books capital stock is always shown [1] at its par value, although in the open market it may be quoted at either more or less than par. Stockholders are entitled to receive nothing in dividends until and unless dividends are declared. The declaration of dividends is controlled by the board of directors, who may declare dividends at such times and in such amounts as they see fit, subject always to the laws of the state. As soon as a dividend is declared, it becomes a liability of the corporation, but until that time it should never be shown as a liability, even in the case of past-due dividends on cumulative preferred stock.

Corporate Books

The corporate form of organization requires certain books of record, which are not necessary in the partner-

[1] See footnote on page 220.

ship or in sole proprietorship. The books usually used are:

1. Minute Book.
2. Subscription Ledger.
3. Certificate of Stock Book.
4. Stock Ledger.
5. Stock Journal.

In the case of large corporations there are other records of various kinds.

The Minute Book is a bound record of what happened during directors' and stockholders' meetings. This book is kept by the secretary of the corporation, who is responsible for its accuracy. The by-laws usually provide that the minutes must be read to, and approved by, the board of directors, after which they may not be changed.

The Stock Ledger is a book containing the details of shares of stock held by the stockholders. In this volume each stockholder has an account (Figure 70), and to his account is credited the number of shares of stock which he receives, and to it is debited the number of shares of stock with which he parts. The balance of his account at all times represents an official record of the number of shares of stock which he owns. Inasmuch as capital stock is ordinarily transferable without notification to the corporation, it may very often happen that details of the Stock Ledger do not accord with the truth; but, since dividends to stockholders are distributed in accordance with this official record, it is necessary for transfers of stock to be reported to the corporation if the real holder is to receive dividends to which he is entitled.

The Stock Ledger is controlled by the Capital Stock Account in the General Ledger. Transfers of shares

Name____________________

Address____________________

Cancelled						Issued					
Date	To Whom Transferred	Cert. Nos.	L. F.	Debit	Balance	Credit	L. F.	Cert. Nos.	How Paid	From Whom Transferred	Date

FIG. 70.—Stock Ledger Page Ruling

from one person to another will not affect the total shares outstanding; hence the general ledger controlling account will ordinarily record but few changes.

In a large corporation whose shares are traded in extensively, many transfers of stock will have to be made. In such cases a Stock Journal may be used. This is merely a posting medium.

When a corporation is organized, it is usual to solicit subscriptions to capital stock. All persons who subscribe for stock sign an agreement to accept when issued and to pay for it duly as called for by the directors as a statutory step in the organization. This is a binding contract and may be recorded on the books of the company. Where a large number of subscriptions are made, it is customary to keep a Subscription Ledger, which contains an account with each subscriber. These accounts are controlled by a general ledger account entitled "Subscriptions" (or "Subscribers").

The Stock Certificate Book contains blank stock certificates, which are filled in with the proper figures and torn out. Each stock certificate blank is attached to its stub, very much like the ordinary check book. The stub must be filled in with the same data that appears on the face of the stock certificate, and the stub remains as a permanent record of the issuance of the certificate.

Corporation Proprietorship Accounts

The principal proprietorship account is, of course, Capital Stock. The balance of this account represents at all times the total par value of all stock outstanding. It is a controlling account over the Stock Ledger, which shows details, the Capital Stock Account showing the total. There should be one Capital Stock Account for each class of stock outstanding. A corporation having

first preferred stock, second preferred stock, and common stock outstanding would have three capital stock accounts, one for each class.

When considering the copartnership we saw that the net profits for the year were transferred direct to the partners' capital accounts. This cannot be done in a corporation. The balance of Capital Stock is fixed, unless changes occur in the number of shares of stock outstanding. Net profits, therefore, must be transferred to some account other than the Capital Stock Account. Such an account may be designated "Surplus." If the operations for any year should show a net loss, it may be charged to the Surplus Account. If the amount of the loss were greater than the total balance to the credit of Surplus, the excess would be charged to an account called "Deficit." The capital stock outstanding plus the surplus, plus any credit balance allowed to remain in Undivided Profits will be equal to the net worth of the corporation. Or the Capital Stock Account less the deficit, if there be one, is also equal to the net worth of the business.

Another—an intermediate—proprietorship account is often used, i. e., Profit and Loss Allocation Account. To this account is credited the total net profits for the year, and to it is debited all withdrawals of profits in the shape of dividends. The balance of the account should be closed into Surplus or Undivided Profits.

Reserves

As will be discussed in a later chapter, dividends may only be declared out of the surplus profits of the business. Therefore, the balance of the Surplus Account may be said to represent the amount of profits which might have been, but were not, declared as dividends. A dividend

might be declared equal to the full amount of the Surplus balance, but conservative management looks unfavorably upon any attempt to withdraw *all* the profits from a business. The wise executive fully appreciates that many contingencies may arise, and he likes to build up a substantial margin of surplus with which to cushion the shock of unexpected disaster and loss. In some industrial concerns this conservative plan has been so consistently followed that the surplus is often several times larger than the total capital stock. Stockholders are usually hungry for dividends, and when they see a large surplus, they feel that the management has been niggardly in its dividend declarations. It, therefore, has become customary to reserve, appropriate, or "earmark" certain portions of the surplus as being unavailable for dividends.

This is usually accomplished by transferring a certain portion of the surplus to a reserve account. Such reserves are always *for contingencies.* Thus, a powder company may carry a large reserve to provide protection against the consequences of explosions. Big industrial companies frequently carry reserves to absorb the shock of unexpected losses by fire, flood, or war. If the unexpected should happen and a large loss be suffered, it would then be charged direct to the reserve account instead of to Surplus or Profit and Loss. The true reserve, therefore, is nothing more nor less than appropriated surplus, which has been especially set aside for a specific purpose.

Premium on Stock

The laws of many states forbid corporations to sell shares of stock for less than par, but there is no restriction against selling it for more than par. It sometimes

happens that a corporation wishes to begin its life with a surplus. This being the case, it will sell its capital stock for an amount over par. For example, one starting in business might have $100,000.00 worth of stock for sale. In order to create a surplus it might sell this stock for $125,000.00. Since the Capital Account must show *par value* of the stock outstanding, the $25,000.00 premium should be credited to some other account ultimately transferable to Capital Surplus. It would be considered bad practice to credit it direct to the Surplus Account, since it may not seem desirable to indicate this premium as being available for dividends. It should be noted in this connection that there seems to be no legal restriction against using such premiums for dividend purposes, but it would be poor business practice to do so.

Discount on Stock

The statutes of some states allow corporations to sell stock for less than par. When this is true, the difference between the price realized and the par value should be charged to Discount on Stock. Discount on Stock really is equivalent to Capital Deficit, and this title may be used where appropriate.

Unissued and Treasury Stock

Stock that has never been issued may not appear on the corporation's books, but if it has once been issued and has then come back to the corporation either by purchase or by gift, it must be treated as an asset under the caption of "Treasury Stock." Many people, who should know better, are accustomed to call unissued stock "treasury stock," but the best authorities are unanimous in condemning such practice. Treasury stock should represent only stock which has once been issued for value and has come back to the corporation.

If unissued stock is booked as a debit item, it will act as an offset to the credit balance of Authorized Capital Stock. It is not an asset and should not be shown as one on the balance sheet. Rather it should appear as a deduction from the amount of authorized stock, thus:

BALANCE SHEET

Assets	$100,000.00	Authorized Capital Stock $250,000.00	
		Less Unissued 150,000.00	
			$100,000.00
	$100,000.00		$100,000.00

Under such an arrangement there is no account for capital stock issued, the amount of outstanding shares being determined from the two accounts, Authorized Capital Stock and Unissued Stock.

A single corporation might have as many as eight or even more main proprietorship accounts:

1. Capital Stock Preferred
2. Capital Stock Common
3. Treasury Stock
4. Capital Surplus or Deficit
5. Reserves (appropriations of surplus)
6. Surplus or Deficit (from operation)
7. Undivided Profits
8. Profit and Loss Allocation

} Corporation Proprietary Accounts

The algebraic [2] sum of all these items would represent the *net worth* of the corporation.

In this section of accounting, as in nearly all others,

[2] The word "algebraic" is used here inasmuch as an arithmetical sum would be incorrect. Algebraic recognizes minus as well as plus quantity; as, in the expression $6x - 5y$, the *arithmetical* sum of the coefficients is 11; the *algebraic* sum of $+6$ and -5 is $+1$.

there is no standardized terminology for the practitioner or the student. The accounts as they are listed above represent the titles usually given to them.

Opening Entries

When a corporation is organized, it becomes necessary to open the books of account. It is not necessary to discuss the various entries in the subsidiary ledgers, since the use of controlling accounts has been thoroughly treated in Chapter II. From the general ledger viewpoint only, opening entries divide themselves naturally into four classes.

1. Stock paid for in cash and issued immediately.
2. Stock paid for in assets other than cash and issued immediately.
3. Stock subscribed for, but unpaid, which is issued immediately.
4. Stock subscribed for and unpaid to be issued when paid.

The opening entry in the first case may be a simple one.

Cash ....$.......
    Capital Stock ....$.......

The opening entry when property instead of cash is turned over may be equally simple.

Sundry Assets ....$.......
    Capital Stock ....$.......

Where stock may be issued as soon as it is subscribed for, the opening entry may be:

Subscribers (a controlling account)...................$.......
    Capital Stock ....$.......

In the above entry Subscribers is a general ledger controlling account over the Subscription Ledger, which contains the detail accounts with each subscriber. If the corporation is a small one and the number of subscribers few, their accounts may be carried in the General Ledger, in which case the entry might appear as follows:

Jones ....$.......
Smith ....
Brown ....
Carr ....
Johnson ....
Herman ....
    Capital Stock ....$.......

It will be noted that the subscribers' accounts represent an asset of the corporation, since subscriptions are legally binding when accepted and constitute an enforceable claim, which the corporation holds against its subscribers.

Often stock may not be issued until it is entirely paid for. In this case the opening entry may be:

Subscribers ....$.......
    Capital Stock Subscribed..$.......

The account entitled "Capital Stock Subscribed" registers the liability of the corporation to issue capital stock. When a subscription is paid up in full, Cash must be debited and Subscribers credited for the amount, and when the stock certificates are issued to the subscriber, Capital Stock Subscribed will be debited. As an illustration of this procedure, assume a corporation where the total subscriptions equal $10,000.00.

Subscribers $10,000.00
    Capital Stock Subscribed.............................$10,000.00

If one of the stockholders paid $800.00 in full for his

subscription of 8 shares at par of $100.00, the following two entries would be made:

Cash	$800.00	
Subscribers		$800.00
(Also credit the individual account in the Subscription Ledger)		

Capital Stock Subscribed	$800.00	
Capital Stock		$800.00
(Also credit individual stockholder's account in the Stock Ledger)		

If one of the other subscribers, John Jones by name, should pay his conditional subscription to 30 shares in the following assets:

Buildings	$1,000.00
Land	500.00
Merchandise	1,500.00

the following entries might be made:

Sundry Assets	$3,000.00	
John Jones—Vendor		$3,000.00

John Jones—Vendor	$3,000.00	
Subscribers		$3,000.00
(Also credit John Jones' account in the Subscription Ledger)		

Capital Stock Subscribed	$3,000.00	
Capital Stock		$3,000.00
(Also credit John Jones' account in the Stock Ledger)		

Buildings	$1,000.00	
Land	500.00	
Merchandise	1,500.00	
Sundry Assets		$3,000.00

The alternative entries for the above would be:

Buildings	$1,000.00	
Land	500.00	
Merchandise	1,500.00	
John Jones—Vendor		$3,000.00

John Jones—Vendor	$3,000.00	
Subscribers		$3,000.00
(Also credit John Jones' account in the Subscription Ledger)		

Capital Stock Subscribed	$3,000.00	
Capital Stock		$3,000.00
(Also credit John Jones' account in the Stock Ledger)		

The reason for making the entry, debiting Sundry Assets for the total of all assets turned over by John Jones, is one of convenience, since it may be necessary to appraise the exact value of certain of the assets before actually setting them up on the books. By making the total entry to the Sundry Assets Account an opportunity is given for making any needed adjustments in the values of the various items before finally booking them.

To carry the illustration still further, let us assume that a third subscriber, George Holmes, turned over the total assets of his small business in payment for his subscription to 50 shares of stock. The various items which he claims to be worth $5,000.00 are:

Merchandise	$2,500.00
Fixtures	500.00
Goodwill	2,000.00

The entries would be as follows:

Sundry Assets	$5,000.00	
George Holmes—Vendor		$5,000.00

George Holmes—Vendor	$5,000.00	
Subscribers		$5,000.00
(Also credit George Holmes' account in the Subscription Ledger)		

Capital Stock Subscribed	$5,000.00	
Capital Stock		$5,000.00
(Also credit George Holmes' account in the Stock Ledger)		

Merchandise	$2,500.00	
Fixtures	500.00	
Goodwill	2,000.00	
Sundry Assets		$5,000.00

The balance of the subscribers' accounts represents the total amount owing to the corporation by the subscribers for its capital stock and is, of course, an asset since it represents a claim which is legal and enforceable. If subscriptions are not paid when due, the subscriber may be sued for the amount. If he is unable to pay because of insolvency, the entries may be reversed by debiting Capital Stock Subscribed and crediting Subscribers for the amount involved.

Sometimes, depending upon statutory provisions, the contract of subscription contains a clause that any amounts paid on the subscription will be forfeited, under certain conditions, to the corporation if the subscriber fails to fulfill his contract. When the amount so realized is a clear gain, it may be credited to the Capital Surplus Account.

Sometimes it is specified that the subscriptions are to be paid in installments rather than by a single cash payment. In such a case the opening entry may indicate the various installments by means of separate subscribers' accounts, thus:

Subscribers, Installment No. 1	$.......	
" " No. 2	....	
" " No. 3	....	
" " No. 4	....	
Capital Stock Subscribed		$.......

In national banks the holders of stock are liable, not only for the amount they have invested, but for an equal amount over and above their investments, and it very frequently happens that a Capital Surplus is created upon organization. The difference between the par of the stock issued and the actual amount received for the stock is credited to the Capital Surplus Account. Illustrative entries are shown herewith:

Subscribers	$150,000.00	
Capital Stock Subscribed		$100,000.00
Capital Surplus Subscribed		50,000.00
Cash	150,000.00	
Subscribers		150,000.00
Capital Stock Subscribed	100,000.00	
Capital Surplus Subscribed	50,000.00	
Capital Stock Issued		100,000.00
Capital Surplus		50,000.00

When stock is issued at a discount, in those states where it is allowed, the difference between the par of the outstanding stock and the amount actually received must be debited to an account called "Discount on Stock."

Subscribers	$50,000.00	
Discount on Stock	25,000.00	
Capital Stock Subscribed		$75,000.00
Cash	50,000.00	
Subscribers		50,000.00
Capital Stock Subscribed	75,000.00	
Capital Stock Issued		75,000.00

Donated Stock

In those states where the laws prohibit the issuance of stock for less than par, a device is commonly employed which depends for its effectiveness upon the fact that treasury stock may be sold for any amount that it will bring, while the shares when first issued must be sold for par or above. The organizers of the corporation will take all the stock of the corporation in return for the assets which they turn over. Then the organizers will return to the corporation a certain proportion of their stock holdings as a gift. This returned stock should be booked as "treasury stock," and it is then available for sale for less than par.

There is an element of manipulation in this procedure,

and yet it is so commonly employed and so universally understood that very few *are* deceived. As a direct evasion of the law accountants must frown upon it, but under certain circumstances the employment of such a device is pardonable. Stock cannot always be marketed at par value, even though it may be worth it. The corporation must then make the best bargain that it can. The property which the organizers turned over to the corporation may be worth the entire par value of the stock which is given them for it, but, unless cash can be raised, the corporation will be crippled and the organizers suffer thereby. In order to insure the corporation's ultimate success, the organizers will cheerfully donate a percentage of their stock holdings, by the sale of which the corporation may raise working capital.

For example, assume a corporation which is capitalized at $100,000.00. The organizers of the corporation turn over their plants and other assets in exchange for the entire stock issued. The first entry, therefore, may appear as follows:

	Dr.	Cr.
Plant & Other Assets	$100,000.00	
Capital Stock		$100,000.00

The balance sheet of the corporation at this point will appear as follows:

BALANCE SHEET

Plant & Other Assets	$100,000.00	Capital Stock	$100,000.00

A corporation cannot operate without having working and trading assets. In order to raise working capital, the organizers turn over 25% of their holdings to the

corporation. The following journal entry shows the proper booking:

Treasury Stock	$25,000.00	
Donated Surplus		$25,000.00

The balance sheet at this point would appear as follows:

BALANCE SHEET

Plant & Other Assets	$100,000.00	Donated Surplus	$ 25,000.00
Treasury Stock	25,000.00	Capital Stock	100,000.00
	$125,000.00		$125,000.00

The corporation may now sell this treasury stock for 30 cents on the dollar.

Cash	$ 7,500.00	
Donated Surplus	17,500.00	
Treasury Stock		$25,000.00

At this time the balance sheet would appear as follows:

BALANCE SHEET

Cash	$ 7,500.00	Donated Surplus	$ 7,500.00
Plant & Other Assets	100,000.00	Capital Stock	100,000.00
	$107,500.00		$107,500.00

This balance of Donated Surplus may be left on the books indefinitely, or be transferred to Capital Surplus, or be used to offset the Plant and Sundry Assets Account, on the theory that the asset *must* have been overvalued if the organizers were willing to give up part of their stock. This is always open to question, and proper procedure would depend upon the individual circumstances. If the sundry assets which the organizers turned over to the corporation were clearly overvalued,

then the balance remaining to the credit of Donated Surplus should be transferred to the credit of the Plant and Sundry Assets Account, thus reducing its value to $92,500.00.

Corporation Problem

(Adapted from the Washington (State) C. P. A. Examination, September, 1907)

Ames is the owner of a business with property valued as follows:

Land & Building	$100,000.00
Machinery & Tools	79,000.00
Merchandise Inventory	93,500.00
Total	$272,500.00

Ames, Brown, Cass, Daniells, and Evers organized the Ames Company (a corporation) with an authorized capital of $350,000.00 divided into 3,500 shares of $100.00 each under the following conditions:

Ames receives 2,725 fully paid shares for his property as shown above.

Brown subscribes for 100 shares.
Cass subscribes for 100 shares.
Daniells subscribes for 100 shares.
Evers subscribes for 125 shares.

One hundred shares are placed in the treasury for future disposition, and 50 shares of fully paid stock are given to each incorporator for the cash payment of 10% of par value, in consideration of services in the organization of the company. Each incorporator then donates 30 shares to the company for sale to provide working capital. Draft the necessary opening entries for the

Ames Company, giving effect to the above transactions, and prepare a trial balance.

JOURNAL

	L. F.	Debit	Credit
Subscription	(a)	$340,000.00	
Capital Stock Subscribed	(a)		$340,000.00
For the following subscriptions:			
Ames 2,775 shares			
Brown 150 "			
Cass 150 "			
Daniells 150 "			
Evers 175 "			
Total 3,400			
Plant and Sundry Assets	(b)	272,500.00	
Ames—Vendor	(b)		272,500.00
Ames—Vendor	(c)	272,500.00	
Subscription	(c)		272,500.00
Capital Stock Subscribed	(d)	272,500.00	
Capital Stock Issued	(d)		272,500.00
Cash	(e)	2,500.00	
Organization Expense	(e)	22,500.00	
Subscription	(e)		25,000.00
Fifty shares given each incorporator for $500.00 in cash in consideration of services in organization			
Capital Stock Subscribed	(f)	25,000.00	
Capital Stock Issued	(f)		25,000.00
Treasury Stock Donated	(g)	15,000.00	
Donated Surplus	(g)		15,000.00
To record donation of 30 shares by each incorporator to be sold for working capital			
Land & Buildings	(h)	100,000.00	
Machinery & Tools	(h)	79,000.00	
Merchandise Inventory	(h)	93,500.00	
Plant & Sundry Assets	(h)		272,500.00
To distribute items included in lump sum total			

SUBSCRIPTION

Debit	Credit
(a) $340,000.00	$272,500.00 (c)
	25,000.00 (e)

Capital Stock Subscribed

Dr.	Cr.
(d) $272,500.00	$340,000.00 (a)
(f) 25,000.00	

Plant & Sundry Assets

Dr.	Cr.
(b) $272,500.00	$272,500.00 (h)

Ames—Vendor

Dr.	Cr.
(c) $272,500.00	$272,500.00 (b)

Capital Stock Issued

Dr.	Cr.
	$272,500.00 (d)
	25,000.00 (f)

Cash

Dr.	Cr.
(e) $2,500.00	

Organization Expenses

Dr.	Cr.
(e) $22,500.00	

Donated Stock

Dr.	Cr.
(g) $15,000.00	

Donated Surplus

Dr.	Cr.
	$15,000.00 (g)

LAND & BUILDINGS

(h) $100,000.00	

MACHINERY & TOOLS

(h) $79,000.00	

MERCHANDISE INVENTORY

(h) $93,500.00	

TRIAL BALANCE

Accounts	Totals		Balances	
	Dr.	Cr.	Dr.	Cr.
Subscription	$340,000.00	$297,500.00	$ 42,500.00	
Capital Stock Subscribed	297,500.00	340,000.00		$ 42,500.00
Capital Stock Issued...		297,500.00		297,500.00
Cash	2,500.00		2,500.00	
Organization Expenses..	22,500.00		22,500.00	
Donated Stock.........	15,000.00		15,000.00	
Donated Surplus		15,000.00		15,000.00
Land & Buildings......	100,000.00		100,000.00	
Machinery & Tools.....	79,000.00		79,000.00	
Merchandise Inventory..	93,500.00		93,500.00	
Totals	$950,000.00	$950,000.00	$355,000.00	$355,000.00

COMMENTS ON PROBLEM

The problem states that "100 shares are placed in the treasury for future disposition." Since unissued stock is not recognized on the books of the corporation, the phrase has no meaning so far as this solution is concerned. Since the total authorized stock is $350,000.00 and only $297,500.00 has been issued, the unissued stock

is $52,500.00. It is improper to say that it is "in the treasury," since it is non-existent until issued.

Although the problem states the amounts subscribed for, the solution increases these amounts by 50 shares per subscriber. This takes care of the provision that "50 shares of fully paid stock are given to each incorporator (presumably in *addition* to the amount they agreed to take) for the cash payment of 10% of par value in consideration of services in the organization of the company." Since stock should properly be shown as "subscribed" before being issued, this $25,000.00 worth of stock is handled in the solution as *additional subscriptions.*

Problem Illustrating Change from Partnership to Corporation

(Adapted from the Washington (State) C. P. A. Examination, August, 1908)

Arthur Adams and Benjamin Bassett were partners trading under the name of Adams, Bassett & Company, sharing all profits and losses equally. June 30, 1908, the following balances appear on their Ledger:

	Debit	Credit
Adams—Capital Account		$ 70,000.00
Bassett—Capital Account		50,000.00
Land	$ 22,000.00	
Buildings	20,000.00	
Machinery & Tools	44,000.00	
Furniture & Fixtures	2,000.00	
Accounts Receivable	50,000.00	
Cash	7,000.00	
Materials & Merchandise	53,000.00	
Accounts Payable		35,000.00
Notes Payable		48,000.00
Notes Receivable	5,000.00	
Totals	$203,000.00	$203,000.00

On June 30, 1908, the business is incorporated as the Adams-Bassett Corporation on the following plan:

1. Capital Stock, $150,000.00.
2. The Adams-Bassett Corporation takes over the entire assets and liabilities of Adams, Bassett & Company at the book figures as given above, except (a) land of the book value of $5,000.00, which is retained by the partnership; (b) the accounts receivable, which are taken over at $48,000.00, and (c) the capital accounts of the partners.
3. The corporation pays the partnership $30,000.00 for the goodwill of the business.
4. Payments to the partnership are made as follows, viz.: $50,000.00 in first-mortgage bonds, and the balance in capital stock of the corporation.
5. After paying off Adams, Bassett & Company the remainder of the capital stock is sold for cash to sundry persons.

The land which is retained by the partnership is sold to Adams for $7,000.00 and is charged to the Adams' Capital Account.

After the conclusion of the foregoing transaction, Adams and Bassett dissolve partnership.

You are required to prepare:

1. Closing entries for the partnership books.
2. A statement setting forth the partners' accounts down to the final closing, beginning with the balances shown by their books on June 30, 1908.
3. Opening entries for the corporation.

JOURNAL—ADAMS, BASSETT & COMPANY (partnership)

1908		L. F.	Debit	Credit
June 30	Adams—Capital Account	(a)	$ 1,000.00	
	Bassett—Capital Account	(a)	1,000.00	
	Reserve for Bad Debts	(a)		$ 2,000.00
	Distributing the loss on accounts receivable to the partners equally			
30	Goodwill	(b)	30,000.00	
	Adams—Capital Account	(b)		15,000.00
	Bassett—Capital Account	(b)		15,000.00
	To set up the goodwill account on the partnership books prior to sale			
30	Adams-Bassett Corporation	(c)	228,000.00	
	Goodwill	(c)		30,000.00
	Land	(c)		17,000.00
	Buildings	(c)		20,000.00
	Machinery & Tools	(c)		44,000.00
	Furniture & Fixtures	(c)		2,000.00
	Accounts Receivable	(c)		50,000.00
	Cash	(c)		7,000.00
	Materials & Merchandise	(c)		53,000.00
	Notes Receivable	(c)		5,000.00
	Transferring the sundry assets to the corporation			
30	Accounts Payable	(d)	35,000.00	
	Notes Payable	(d)	48,000.00	
	Reserve for Bad Debts	(d)	2,000.00	
	Adams-Bassett Corporation	(d)		85,000.00
	Transferring the sundry liabilities to the corporation			
30	First Mortgage Bonds—Adams-Bassett Corporation	(e)	50,000.00	
	Stock—Adams-Bassett Corporation	(e)	93,000.00	
	Adams-Bassett Corporation	(e)		143,000.00
30	Adams—Capital Account	(f)	7,000.00	
	Land	(f)		5,000.00
	Adams—Capital Account	(f)		1,000.00
	Bassett—Capital Account	(f)		1,000.00
	To record sale of land at a profit of $2,000.00 divisible equally between the partners			
30	Adams—Capital Account	(g)	78,000.00	
	Bassett—Capital Account	(g)	65,000.00	
	First Mortgage Bonds—Adams-Bassett Corporation	(g)		50,000.00
	Stock—Adams-Bassett Corporation	(g)		93,000.00
	Distributing the assets to the partners and closing the books			

ADAMS—CAPITAL ACCOUNT

1908			1908		
June 30	Loss on a/c Rec. ......(a)	$ 1,000.00	June 30	Capital ......√	$70,000.00
30	Land purchased ...(f)	7,000.00	30	Goodwill ...(b)	15,000.00
30	Distribution of Assets..(g)	78,000.00	30	Profit — Sale of Land...(f)	1,000.00
		$86,000.00			$86,000.00

BASSETT—CAPITAL ACCOUNT

1908			1908		
June 30	Loss on a/c Rec. .....(a)	$ 1,000.00	June 30	Capital .....√	$50,000.00
30	Distribution of Assets..(g)	65,000.00	30	Goodwill ...(b)	15,000.00
			30	Profit — Sale of Land ..(f)	1,000.00
		$66,000.00			$66,000.00

JOURNAL—ADAMS-BASSETT CORPORATION

		L. F.	Debit	Credit
	A corporation organized under the laws of the state of ———— with an authorized capital stock of one hundred and fifty thousand dollars ($150,000.00) divided into one thousand five hundred shares valued at one hundred dollars ($100.00) each			
June 30	Subscribers	(a)	$150,000.00	
	Capital Stock Subscribed..........	(a)		$150,000.00
30	Sundry Assets	(b)	228,000.00	
	Sundry Liabilities and Reserve	(b)		85,000.00
	Adams-Bassett & Co.—Vendors.....	(b)		143,000.00
30	Adams-Bassett & Co.—Vendors.........	(c)	143,000.00	
	Bonds—First Mortgage ..%.......	(c)		50,000.00
	Subscribers	(c)		93,000.00
30	Capital Stock Subscribed..............	(d)	93,000.00	
	Capital Stock Issued.............	(d)		93,000.00
30	Cash	(e)	57,000.00	
	Subscribers	(e)		57,000.00

		L. F.	Debit	Credit
30	Capital Stock Subscribed	(f)	57,000.00	
	Capital Stock Issued	(f)		57,000.00
30	Land	(g)	17,000.00	
	Buildings	(g)	20,000.00	
	Machinery & Tools	(g)	44,000.00	
	Furniture & Fixtures	(g)	2,000.00	
	Accounts Receivable	(g)	50,000.00	
	Cash	(g)	7,000.00	
	Materials & Merchandise	(g)	53,000.00	
	Notes Receivable	(g)	5,000.00	
	Goodwill	(g)	30,000.00	
	Sundry Assets	(g)		228,000.00
30	Sundry Liabilities & Reserve	(h)	85,000.00	
	Accounts Payable	(h)		35,000.00
	Notes Payable	(h)		48,000.00
	Reserve for Bad Debts	(h)		2,000.00

ADAMS-BASSETT CORPORATION

TRIAL BALANCE OF TOTALS AND BALANCES

Accounts	Totals		Balances	
	Dr.	Cr.	Dr.	Cr.
Cash $	64,000.00		$ 64,000.00	
Accounts Receivable	50,000.00		50,000.00	
Notes Receivable	5,000.00		5,000.00	
Materials & Merchandise	53,000.00		53,000.00	
Land	17,000.00		17,000.00	
Buildings	20,000.00		20,000.00	
Machinery & Tools	44,000.00		44,000.00	
Furniture & Fixtures	2,000.00		2,000.00	
Goodwill	30,000.00		30,000.00	
Accounts Payable		35,000.00		35,000.00
Notes Payable		48,000.00		48,000.00
Bonds		50,000.00		50,000.00
Reserve for Bad Debts		2,000.00		2,000.00
Capital Stock Issued		150,000.00		150,000.00
Subscribers	150,000.00	150,000.00		
Capital Stock Subscribed	150,000.00	150,000.00		
Sundry Assets	228,000.00	228,000.00		
Sundry Liabilities and Reserve	85,000.00	85,000.00		
Adams-Bassett & Co.—Vendors	143,000.00	143,000.00		
	$1,041,000.00	$1,041,000.00	$285,000.00	$285,000.00

CORPORATE PROFITS AND DIVIDENDS

The fact that the liability of corporate stockholders is generally limited to the amount they have invested

in corporate shares is responsible for the conflicting opinions submitted by learned jurists and accountants as to what constitutes a corporate profit usable for dividend purposes. One of the fundamental rules of corporation law states that profits must not be paid out of capital; i. e., the stockholder's investment must not be returned to him under the guise of profits. Were this allowed, both the stockholders and the creditors of the corporation would be defrauded. The general rule is that *dividends must be declared only out of the surplus profits of the business.* The rule is simple enough, but its interpretation is singularly difficult.

In previous chapters we have seen that all current changes in net wealth due to the regular conduct of the business must ultimately be reflected in the Profit and Loss Account. It has also been stated that certain losses and gains *not* resulting from the current normal business operations are not to be shown on the Profit and Loss Account but are to be debited or credited direct to one of the main proprietorship accounts, inasmuch as they represent the decreases and increases in capital asset values, not caused by the current business activities. The loss of a plant by fire, in the absence of insurance, would be chargeable direct to the Capital Account of a sole proprietorship or to the Surplus Account of a corporation. A profit realized from the sale of fixed assets should never be allowed to affect the net profit for the accounting period and should be carried direct to the Surplus Account. When we speak of net profits, therefore, we are not taking into consideration *all* changes in net wealth.

If we admit that such procedure is proper, we must also make a clear distinction between the items which belong to the Profit and Loss Account and those which

are purely capital losses and gains. At this point we find conflicting opinions, and from the maze of contradictory evidence it is practically impossible to draw any definite conclusion. Court decisions, both English and American, exhibit marked differences in opinion. That the question is a vital one cannot be denied, in view of the rule that dividends must not be paid out of capital. Suppose a corporation makes a net business profit of $10,000.00 and suffers a capital loss of $30,000.00 which entirely wipes out its surplus. May it declare a $10,000.00 dividend?

Probably such a dividend might be legally approved. From the strictest point of view any capital loss which creates a deficit could well be absorbed by a reduction of the capital stock, but regular statutory formalities must be complied with if capital stock is to be reduced. For this reason most corporations prefer to retain the item of deficit on the books for an indefinite period in the hope that future profits will be large enough to allow its extinguishment. Here again we must emphasize that from a purely legal point of view, there seems to be no necessity for extinguishing a deficit out of current business profits. Ordinary prudence, however, would indicate the wisdom of such a course.

Mining Companies

In the case of a mining enterprise where the value of the capital asset, i. e., the mine, is constantly being reduced through current operation, the accountant would feel that a sufficient portion of the profits should be applied against the book value of the wasting asset to extinguish it entirely at the end of its life. This is merely the familiar principle of depreciation in a somewhat different form. A mine costing $100,000.00 with

an estimated life of ten years should ordinarily be worth only $50,000.00 at the end of five years, $20,000.00 at the end of eight years, etc.

Where the number of tons in the ground can be determined with fair accuracy, it is possible to base the depreciation of the mine assets upon the number of tons mined. Frequently it is impossible even to guess at the tonnage of mineral, and this possibly accounts for the fact that mining companies are excused from the necessity of amortizing their wasting assets. It is assumed that the investor in a mining corporation and the creditor of that corporation are both fully aware of the precarious nature of the venture and, therefore, do not need the protection which must be given to the stockholders of industrial enterprises. The dividends of a mining corporation usually consist partly of profits and partly of a return of capital. As long as the stockholders are aware that their invested capital is being returned to them piecemeal, no harm is done; but if they labor under the delusion that their large dividends are pure profit, their capital remaining intact, a grave deception has been practiced upon them.

Realized Profits

It is uniformly agreed that additions to surplus brought about by "marking up" the value of fixed assets may not be used as a basis for dividend declarations. If a fixed asset is sold for an amount in excess of its book value, the profits made may be distributed to the stockholders, but until that profit is *actually realized,* it must not be distributed.

United States court decisions are somewhat hazy as to what constitutes net profit, and a literal reading of their decisions would indicate that profits must be realized *in*

cash before a dividend may be paid. Many of these decisions were written by jurists who were unfamiliar with accounting principles and practice. This would account for the confusing and misleading language which they employ. Surely it is not reasonable to believe that the courts would insist that all accounting should be on a cash rather than on an accrual basis! One of the fundamental concepts of accounting is that a profit is made at the time that the sale is made. It makes absolutely no difference whether the merchandise is exchanged for *cash* or for some other asset such as *other merchandise, notes,* or an *account receivable;* profit is realized at the instant the transaction is completed—when a cause of action has arisen which can be enforced against the debtor. The position of the legal profession in this matter of profits is clearly untenable, and with the gradual increase of accounting knowledge among our lawyers, we may look for a radical revision of their ideas.

Scrip and Stock Dividends

As long as surplus profits exist, a dividend may be declared even though there may not be sufficient *cash* to pay that dividend. It is perfectly proper to pay dividends in assets other than cash. Many corporations have declared scrip dividends, and cases have been known where corporations declared dividends in merchandise. If cash is not available in the treasury of the corporation, it may be borrowed for dividend purposes. The alternative is to declare a stock dividend.

Scrip represents nothing more than the corporation's promise to pay. The scrip which is issued is practically equivalent to cash and may be passed from holder to holder just as cash would be.

When a stock dividend is declared, the procedure may

be a simple one, consisting of nothing more than a debit to Surplus and a credit to Capital Stock Issued. A stock dividend must be issued in the manner prescribed by statute.

Dividends may be declared out of the Profit and Loss Allocation Account, or the Undivided Profits Account, or the Surplus Account. While the use of the Profit and Loss Allocation Account is recommended, it is also considered good practice to transfer the total net profits for the period to Surplus and then to declare all dividends from that account. As an illustration of this manner of booking a dividend declaration, the following transaction may be noted:

BALANCE SHEET

Cash	$20,000.00	Capital Stock Issued	$50,000.00
Other Assets	55,000.00	Surplus	25,000.00
Total	$75,000.00		$75,000.00

JOURNAL ENTRY

Surplus	$15,000.00	
Dividends Payable		$15,000.00
In accordance with resolution of the directors meeting of ——, 191—		

BALANCE SHEET

Cash	$20,000.00	Dividends Payable	$15,000.00
Other Assets	55,000.00	Capital Stock Issued	50,000.00
		Surplus	10,000.00
	$75,000.00		$75,000.00

JOURNAL ENTRY

Dividends Payable	$15,000.00	
Cash		$15,000.00
To pay dividends declared by Board of Directors ——, 19—		

BALANCE SHEET

Cash	$ 5,000.00	Capital Stock Issued	$50,000.00
Other Assets	55,000.00	Surplus	10,000.00
	$60,000.00		$60,000.00

As soon as a dividend is declared, it becomes a liability to the stockholders and must be so booked. It very often happens that stockholders cannot be located, and when this is the case, the dividends owing to them must remain on the books as a liability until they can be located. It is considered advisable to number each dividend declaration and to open a separate account for each number.

When stock dividends are declared, the following booking would be proper:

BALANCE SHEET

Cash	$ 2,000.00	Dividends Payable	$ 10,000.00
Other Assets	109,000.00	Capital Stock Issued	100,000.00
		Surplus	1,000.00
	$111,000.00		$111,000.00

JOURNAL ENTRY

Dividends Payable	$10,000.00	
Capital Stock Issued		$10,000.00
Dividends paid in stock of the corporation as authorized by resolution of the directors dated ———, 19—		

BALANCE SHEET

Cash	$ 2,000.00	Capital Stock Issued	$110,000.00
Other Assets	109,000.00	Surplus	1,000.00
	$111,000.00		$111,000.00

In case the dividend is payable in scrip instead of in cash, the booking is equally simple involving a debit to

Dividends Payable and a credit to Dividend Scrip Payable. When the scrip is redeemed, Cash is credited and Dividend Scrip Payable is debited.

TEST QUESTIONS

1. What is a corporation?
2. (a) Name two classes of capital stock.
   (b) Describe.
3. (a) What is the stock ledger?
   (b) What is its controlling account?
4. What are reserves?
5. (a) What is unissued stock?
   (b) What is treasury stock?
6. (a) What are the four classes of opening entries?
   (b) Outline sample entries for each class.
7. (a) What is donated surplus?
   (b) How is it created?
8. What is the rule regarding dividends?
9. (a) Give illustrative set of journal entries reflecting the declaration and payment of scrip dividends.
   (b) Of stock dividends.

CHAPTER XI

RESERVE AND RESERVE FUNDS

The word "reserve," as commonly employed, has no specific meaning. It may refer to a valuation account or to an appropriation of surplus. A valuation account in a properly organized scheme of accounts should never be labeled a "reserve." Since we find that it is so labeled by a majority of business men and accountants, it is essential that we carefully distinguish between reserve accounts which are appropriated surplus and those which are merely offsets to asset accounts.

VALUATION ACCOUNTS

One of the first rules of bookkeeping provides that subtraction is not an operation to be employed in ledger accounts. The effect of subtraction is obtained by insertion *on the opposite side.* If an asset account has a debit balance of $10,000.00, which should be reduced to $8,000.00, it would be improper to subtract $2,000.00. That amount should be added to the credit side of the account, thus bringing the balance of the account to the desired figure. Instead of crediting the asset account itself, it is preferable to create a valuation account to receive the credit. Such a valuation account can never be considered alone, but must always be considered in connection with the account which it offsets. The existence of a valuation account with a credit balance is nothing more than an indication that there exists an asset account, which is estimated to be overstated. If we have

a building worth $10,000.00, it may appear on the books as being worth $15,000.00 if it is offset by a valuation account for $5,000.00. To arrive at the estimated true value of such an asset, it is necessary to deduct therefrom the balance of the offsetting valuation account.

A valuation account is usually created as a result of calculations of depreciation. An asset when purchased may be worth $10,000.00. At the end of a year, however, it may be worth only $9,000.00. The $1,000.00 decrease may be charged to Profit and Loss and credited direct to the asset account, thus bringing its balance into accord with the fact. If it is desirable to carry on the record the original cost of the asset, the $1,000.00 credit will *not* be made to the asset account, but to the Allowance for Depreciation Account, in practice frequently designated incorrectly as "Reserve for Depreciation." The value of the asset is then ascertained as follows:

Book Statement of Asset Value	$10,000.00
Allowance for Depreciation	1,000.00
Actual Value of Asset	9,000.00

The loss in the value of the asset is, as we shall see later, an expense—a cost consequent, we will assume, upon operation. It takes place whether profits are made or not.

True Reserves

A true reserve is fundamentally different from a valuation account, since it represents amounts which have been set aside or "reserved" out of surplus for some special purpose. We have seen that surplus generally represents the capital which is obtained by reserving profits, i. e., withholding earnings from distribution to the stockholders. If a corporation makes a profit in any one year

of $10,000.00, and only declares dividends amounting to $5,000.00, the balance would ordinarily be transferred to, or permitted to remain in, the Surplus Account, where it would represent capital left in the business by the stockholders. Of course, a surplus need not necessarily be created in this way, since it may be brought into existence through the sales of capital stock at a premium or by the reduction in capital stock or by the purchase of shares in the open market at less than par value. But since these methods of creating a surplus are not the most frequently met, they may be ignored for the time being. A surplus account is, in itself, a reserve account, although it represents profits which have been reserved for *general* rather than for *specific* purposes. It may be desirable to segregate certain portions of this surplus under specific titles, but this does not change the essential character of the item.

A business which had a surplus of $50,000.00 might desire to provide against explosions in their factory. They might also foresee that the progress of invention and technical scientific improvements might render some of the machinery obsolete. Lastly, it might seem prudent to them to provide in some way against unusual losses due to insolvency of their customers. They, therefore, set aside or "reserve" certain portions of their surplus to care for these contingencies.

Journal Entry

Surplus Account	$35,000.00	
Reserve for Explosions		$10,000.00
Reserve for Obsolescence of Machinery		20,000.00
Reserve for Possible Losses on Accounts Receivable [1]		5,000.00

[1] Of course, the usual risk of bad debts is chargeable to Profit and Loss, the credit being made to the proper valuation account. Such a valuation account would be an offset to Accounts Receivable. When a reserve is created, it represents provision for *contingent* losses on accounts receivable.

These three reserves are still to be considered as bearing the general label of "Surplus." No particular merit exists in creating these accounts, except in so far as they indicate the plans, policies, and intentions of the management. A reserve may be transferred back into general surplus just as easily as it was taken away and this without scandal or serious criticism. The mere act of relabeling surplus something else cannot change its essential characteristics.

True reserves are generally created to provide against contingencies, although they may do no more than fulfill the normal functions of the Surplus Account itself, i. e., to provide a permanent increase in capital or to equalize dividends.

Effect on Balance Sheet Interpretation

In reading a balance sheet, it is clearly essential to distinguish between true reserves and those so-called reserves which are merely valuation accounts. Since many corporations do not make this fundamental and vital distinction, it is necessary to go behind the balance sheet figures in order to arrive at the actual facts. Since any reserve appearing on the credit side of the balance sheet may represent *either* surplus profits or an offset to assets, it is clear that the condition of the corporation cannot be definitely determined without investigation.

As an illustration of the difficulties which are brought about by the indiscriminate use of the word "reserve," let us consider the case of a corporation owning machinery valued at $50,000.00, the estimated depreciation on which is $5,000.00 per year. This depreciation is an expense—is absolutely independent of profits—and must

be taken into consideration before gross profits may be determined. The usual, but erroneous, entry would be

Depreciation of Machinery..........................$5,000.00
  Reserve for Depreciation of Machinery.....................$5,000.00
 (The correct method would be to credit "Allowance
 for Depreciation of Machinery" instead of "Reserve
 for Depreciation of Machinery")

At the end of the year it is found that the business has been profitable and that the profits will be larger than usual. The directors, therefore, decide that, in addition to the regular annual provision for depreciation, they will reserve a certain portion of the profits to take care of *possible* depreciation which may be suffered in the future or deterioration in the nature of depreciation of a contingent character. This is simply a precautionary measure, and, while it would seem rather unnecessary if a consistent depreciation program had been carefully planned and followed, it would ordinarily be regarded as conservative and desirable, in view of the fact that the estimated life of any asset is very little more than an expert guess. The creation of this contingent provision against *possible* excess depreciation will be booked as follows:

Surplus (or Profit and Loss Allocation)..............$3,000.00
  Reserve for Depreciation of Machinery.....................$3,000.00

On the balance sheet which will be prepared at the end of the period there will appear an item of "Reserve for Depreciation of Machinery...$8,000.00." Without interpretation this means little or nothing. On the face of the balance sheet the reader would have to assume that the machinery was worth either $50,000.00 or $42,000.00. There is no possible way of telling from the balance sheet itself that the machinery is actually worth $55,000.00,

although we know this to be the truth, since $5,000.00 out of the $8,000.00 reserve represents an offset to the book statement of the asset, and the remaining $3,000.00 is surplus appropriated for contingencies.

If the $5,000.00 depreciation had been credited to a valuation account, such as Allowance for Depreciation of Machinery, no question could exist as to the interpretation of the balance sheet. It would be seen that the $5,000.00 was a logical reduction in the book statement of the asset and that the $3,000.00 was a surplus item reserved, forming a portion of the net worth.

In constructing a balance sheet it is considered best to show the book statement of an asset in an inside column and to deduct therefrom the balance of the valuation account, extending the net amount into the asset column, as shown herewith:

BALANCE SHEET

Cash		$........	Accounts Payable		$.......
Accounts Receivable		....	Capital Stock		....
Merchandise		....	Appropriated Surplus:		
Real Estate		....	Reserve for Explosions..		....
Machinery ...	$50,000.00		Reserve for Depreciation		
Less — Allowance for Depreciation...	5,000.00	45,000.00	of Machinery		3,000.00
			Surplus		....
Other Assets		....			
		$........			$.......

True reserves should be shown as indicated in the above balance sheet and may be properly labeled as "Appropriated Surplus." The reader who is acquainted with current practice in balance sheet construction will appreciate that such an arrangement, while strictly

proper, is not ordinarily employed, and he should guard himself against being deceived by any other balance sheet arrangement.

Reserve Funds

Surplus is not represented by any specific assets on the opposite side. It is not possible generally to pick out any particular items of resources and to label them as being offsets to Surplus. Both capital stock and surplus are represented among the assets to be sure, but they are not specifically tied up to particular assets. Since reserves are only appropriated surplus, they are represented by assets in general rather than by particular assets. This does not mean that particular assets *may* not be set aside, but that they *need* not necessarily be. A good example of this is to be found in corporations engaged in hazardous occupations, such as powder mills. In anticipation of explosions, it is customary for them to create a fund consisting of liquid assets, such as cash or readily marketable securities. The creation of such a fund is a simple matter and requires nothing more than an entry as follows:

Contingent Fund (cash)	$.......	
Cash		$.......

Such a fund consists of assets which have been specifically "earmarked" or put away for a special purpose, and in the absence of restrictions, the funds may be used for purposes other than the one suggested at its creation.

Certain kinds of funds are generally put in the hands of trustees and, when this has been done according to a restrictive agreement, the fund cannot be expended for other than its original purpose.

There is no accounting connection between the creation of a money fund and the creation of a reserve, although it often happens that the two are born at the same time and as the result of the same policy. A fund may be created without a reserve, and a reserve may be created without a fund, or both may be created at the same time for the same purpose. Let us assume the case of a company with a Reserve for Contingencies amounting to $10,000.00. If an explosion takes place, entailing a loss of $5,000.00 in assets, the asset accounts will be credited and the Reserve Account debited. If the assets are replaced, the asset accounts will be debited and Cash will be credited.

If, in addition to the reserve account, the corporation had accumulated a money fund amounting to $10,000.00, the entries might be as follows:

	Dr.	Cr.
Reserve for Contingencies	$5,000.00	
Sundry Assets		$5,000.00
(Charging the loss by explosion of ——, 19—, to the contingent reserve created for that purpose)		
Sundry Assets	$5,000.00	
Contingent Fund (cash)		$5,000.00
(To set up as assets the new buildings created from the special cash contingent fund for explosions)		

The difference between the first and the second case is that no fund exists in the one and, therefore, general Cash was credited for the amount required to rebuild. In the second instance, a cash fund was available and the fund account was credited, leaving the balance of the general Cash Account untouched.

A fund may be created all at one time or be built up during a series of years. In either case the entry is a debit to the Fund Cash Account and a credit to general Cash. It may be deemed desirable to make a yearly payment to the fund equal to the amount credited to the cor-

responding reserve, but this does not alter the fact that the creation of a fund and the creation of a reserve are separate and distinct operations.

Sinking Funds

A great deal of confusion has been found to exist regarding sinking funds for the redemption of debt. When bonds are issued, it is often customary to provide in the trust deed that a sinking fund must be provided for the redemption of the bonds at their maturity. As a rough example, we may assume that bonds amounting to $50,000.00, payable in ten years, have been issued and that a sinking fund is to be formed to take care of this indebtedness at its maturity. This simply means that $5,000.00 must be set aside each year in a special fund, and the bookkeeping entry may be:

Sinking Fund (cash)	$5,000.00	
Cash		$5,000.00

This operation is repeated each year until the end of the ten years, when the amount in the sinking fund will be equal to the bonds outstanding. When the bonds are paid, the entry may be:

Bonds Payable	$50,000.00	
Sinking Fund		$50,000.00

If the deed of trust had specified that payments to the sinking fund should be made *out of profits* or earnings, it would have been necessary to create a sinking fund reserve in addition to creating the sinking fund itself. Each year the entries would be:

Sinking Fund (cash)	$5,000.00	
Cash		$5,000.00
Profit and Loss Allocation	5,000.00	
Reserve for Sinking Fund		5,000.00

At the end of the ten years the books would indicate that the sinking fund held $50,000.00 and the Reserve for Sinking Fund had been credited with $50,000.00. When the bonds are paid, the entry would be:

Bonds Payable $50,000.00
    Sinking Fund (cash)....................................$50,000.00

This would leave the Reserve for Sinking Fund still standing on the books. What entry must be made to dispose of it? The usual procedure is to transfer it to Surplus. The payment of a debt cannot, by the very nature of accounting science, affect Profit and Loss. When a debt is created, assets are received, and when a debt is paid, assets are parted with. Neither of these transactions serves to increase or decrease the profits. A man who borrows $50.00 today and repays it tomorrow has lost nothing. His entry when he borrowed the money was:

Cash $50.00
    Accounts Payable $50.00

When he repays the debt, he will reverse the entry:

Accounts Payable $50.00
    Cash $50.00

When a corporation borrows $50,000.00 for ten years the same principle is involved. It is, therefore, unnecessary and, in fact, improper from the accounting standpoint to create a sinking fund reserve, since it must eventually find its way into the Surplus Account, and it might just as well have been credited to that account in the first place. The reason that such a reserve is required by the bondholders is that it offers them additional security for their indebtedness. A reserve for sinking fund cannot be dissipated by dividend declarations, but must

be left untouched until the debt is paid. After that it may be transferred to Surplus and then used as a basis for dividend declarations. The creation of such a reserve is really a doubt cast upon the items which go to make up the surplus and acts to lessen the Surplus balance, which is tempting the stockholders and directors to declare dividends to the danger point.

It should be realized that the creation of a cash fund does not make a corresponding liability reserve any more secure, since a reserve may, it seems generally at any time, be thrown back into Surplus or utilized for purposes other than that for which it was created.

Sinking fund assets are, as stated, usually in the hands of sinking fund trustees. Trust companies or banks frequently act as such trustees, and it is their duty to safeguard the interests of the bondholders. The sinking fund installments are paid over to them on certain definite dates, and the corporation thereafter exercises no control over the fund, although it does carry the fund as an asset. It is customary for the trustees to invest sinking funds in particularly conservative securities, and the income from these securities belongs to the sinking fund and must be charged to the Sinking Fund (asset) Account. Those returns on sinking fund investments may be treated as "other income" or may be credited direct to the corresponding Sinking Fund Reserve, if there is one. The latter plan seems to be authorized by the best modern practice.

Sinking Fund Installments

The operation of compound interest serves to increase the fund more rapidly than the bare amount of the annual installments. These annual installments must, therefore, be figured so that at the maturity of the bonds the sum

of the installments, plus the interest on sinking fund investments, will be exactly equal to the required amount. The calculations in connection with sinking fund accounts are rather complex and ordinarily require the use of logarithmic tables. Tables have been prepared, however, which will do away with making these intricate calculations, and a section of such a table is shown herewith. It will be noted that if interest is disregarded, it will require an annual installment of $100.00 in order to redeem an indebtedness of $1,000.00 in ten years. When we take into consideration the fact of interest, it is found that an annual installment of $79.50, paid in at the end of each year, will be sufficient.

THE ANNUAL INSTALLMENT, PAYABLE AT THE END OF EACH YEAR, REQUIRED TO REDEEM $1,000.00 IN FROM 1 TO 20 YEARS AT A 5% RATE OF INTEREST

YEARS	INSTALLMENT	
	Without Interest	Compound 5% Interest
1	$1,000.00	$1,000.00
2	500.00	487.80
3	333.33	317.21
4	250.00	232.01
5	200.00	180.98
6	166.66	147.02
7	142.85	122.82
8	125.00	104.72
9	111.11	90.69
10	100.00	79.50
11	90.91	70.39
12	83.33	62.83
13	76.92	56.45
14	71.42	51.02
15	66.66	46.34
16	62.50	42.27
17	58.82	38.70
18	55.55	35.54
19	52.63	32.75
20	50.00	30.24

The formula by which these figures are reached is as follows:

$$\frac{i}{(1+i)^n-1}$$

This formula gives the annuity which would amount to $1.00 in "n" years. "i" represents the interest on $1.00 for one year. In order to solve this formula it is necessary to use logarithms, but we can illustrate it if we use a short period of time, such as four years, and multiply without the aid of the logarithmic tables. In this formula "i" equals .05 (the interest rate) and "n" equals 4 years. Therefore,

$$\frac{i}{(1+i)^n-1} \text{ equals } \frac{.05}{(1.05)^4-1}$$

The value of $(1.05)^4$ can be determined by simple multiplication as being 1.2155 +. By subtracting 1 from this we get the amount which must be divided into the numerator:

$$\frac{.05}{.2155}$$

When the required division is made, the arithmetical result is .23201. Since the calculation was made for $1.00, we must multiply by 1,000 in order to obtain the proper figure for $1,000.00. $.23201 \times 1{,}000 = \$232.01$, or the amount required to redeem $1,000.00 in four years at 5%. Where n (number of years) is a large figure, it will be necessary to use logarithmic tables in order to obtain the value of $(1+i)^n$.

Secret Reserves

Much has appeared in the popular press during recent years about secret reserves. Some of our largest corporations are accused of having created such reserves. A secret reserve, as the name implies, is a "non-ledger asset"; that is, it does not appear on the books and is, in fact, not a reserve at all in the sense in which we have been using the word. A secret reserve simply means that the company's net worth is understated, and this may be done in one or two ways.

1. Some of the assets may be understated or even entirely omitted.
2. The liabilities may be overstated.

Assets may be understated by charging capital expenditure to Revenue or by making excessive depreciation charges.

The advantage of a secret reserve is that the company is thereby enabled to absorb a large unexpected loss without anyone being the wiser so far as the book accounts are concerned. When the loss is suffered, enough of the secret assets are brought on to the books to offset entirely the assets which were lost. It is related that in a recent panic one of the large banks in Chicago was enabled to charge off more than $1,000,000.00 worth of doubtful accounts without any affect being noted on the net worth, as shown by the financial statements.

As to the legitimacy of the secret reserve there can be but little question. Accounts serve no purpose unless they tell the truth. An understatement of assets is *theoretically* just as wrong as an overstatement of assets.

Practically, many business men and accountants favor the creation of a secret reserve, and there may be some

justification for it in the case of a bank, whose very existence is dependent upon public confidence and which cannot afford to admit large losses, particularly during years of depression and panic. There is but little warrant for the creation of a secret reserve by the ordinary corporation. The fact that such secret reserves have been looked upon as evidencing conservatism has been responsible for some stock market manipulations, from which the public has suffered. Obviously, if a company's net worth is understated, the holders of its stock will part with it for less than if the accounts told the truth. There can be no question but that such understatement of assets or overstatement of liabilities has been sometimes made for the sole purpose of enabling the officers and directors to purchase stock of the corporation for less than its real value.

Many railroads of this country have been creating secret reserves for years through charging capital expenditures to Revenue. Railroad companies have constructed many miles of double track without setting up the increased value in the Property Account.

The tendency of modern accounting is distinctly against misstatements of fact, even where such statement is made following out a policy of "conservatism."

Summary

In closing this chapter it seems desirable to reiterate one or two of the principal points which have been brought out. There is considerable danger of confusion even among accountants as to funds and reserves. There is necessarily no connection between the creation of asset funds and the creation of reserves, and the fact that they are often created at the same time and in the same amounts is responsible for much of the misconception

which exists. Reserves may be created without corresponding funds, and when this is done, the reserve is represented by the assets in general and not by specific assets. Even after reserves are created and funds established, a fund may in some cases be used for other purposes, leaving the reserve standing on the books. Or the reserve may be eliminated without any change in the Fund (cash) Account. This absolute independence of the two is purely an accounting independence, and where a corporation pledges itself in a trust deed to certain fund and reserve procedure, it must abide by the terms of its agreement.

The distinction between valuation accounts and reserve accounts is of exceptional importance. A true reserve is nothing more than surplus which has been appropriated or "earmarked" for a specific purpose. A reserve need not necessarily be created from a surplus account, but may come from the same accounts that feed the surplus, i. e., from the Profit and Loss Account or from the Profit and Loss Allocation Account. It is essentially a portion of Surplus, even though it comes from Undivided Profits, since the balance of Undivided Profits, which is transferable to Surplus, is diminished by the amount of the credit to Reserve.

TEST QUESTIONS

1. (a) What is a reserve?
   (b) What is a valuation account?
   (c) What is the proper balance sheet treatment of each?
2. What are reserve funds?
3. What accounting relation exists between reserve funds and reserves?
4. (a) What is a sinking fund?

(b) What is meant by "creating a sinking fund out of profits"?

5. (a) How are sinking fund installments calculated?

(b) What entry should be made for interest received on a sinking fund? For interest accrued on a sinking fund at the end of an accounting period?

6. (a) How may secret reserves be created?

(b) Are secret reserves ever justifiable?

CHAPTER XII

DEPRECIATION

One of the unalterable laws of nature is that of the disintegration—generally the "wearing-out"—of all material things. It is universally observed that any kind of property loses its usefulness as time passes. This loss is principally caused by the wear due to its employment, although other factors may contribute to the same end.

When we speak of "depreciation," we are referring to this well-known phenomenon, but the word applies more particularly to the wearing-out of *perishable material property owned* by a business *other than that which is intended for resale.* Illustrations of such perishable material property are buildings, machinery, fixtures, rolling stock, and tools. While some merchandise unquestionably lessens in value, due to the passage of time, it will be understood that the term "depreciation" does not ordinarily refer to anything except assets of the above nature used by a business.

As Professor Hatfield has so well stated, "All machinery is on an irresistible march to the scrap heap and its progress, while it may be delayed, cannot be prevented by repairs." This gradual diminution in value and utility of fixed assets must be recognized in the books of account. Surely if a machine is worth less each year, the accounts representing that machine must reflect its diminishing value rather than its original purchase price.

Depreciation a Cost

This loss in value is a cost of doing business, just as much as labor, fuel, oil, or any other cost which is incurred in order that the business may operate. If a two years' supply of coal should be purchased, it is clear that the proper entry at the time of purchase would be a debit to Coal (an asset account) and a credit to Cash or Accounts Payable. At the end of the first year the Coal Account would be credited with the amount of coal *used* during that year, a corresponding debit going to the Coal Used Account (an expense account). Thus, the Coal Account would be reduced to the amount which represented the inventory value of the coal remaining on hand. If, during the second year, all the remaining coal were consumed, the Coal Account would, by similar entries, be entirely balanced.

This procedure, which is universally used in handling supplies, is exactly similar to the procedure employed in booking depreciation. Assume that instead of buying coal the company had bought a machine which was of such a nature that it would wear out in about two years. At the end of the first year the asset account representing that machine might be credited for one-half the cost and an offsetting expense account charged. At the end of the second year the same entry would be made, thus wiping the asset account off the books entirely. The point to be noted is that the machine is *used up* or *consumed* in exactly the same way, though not necessarily at the same speed, that the coal is consumed. The mere fact that the average life of a machine is considerably greater than that of the average purchase of supplies does not affect the method of treatment. If a machine could be bought which would last one hundred years, it would be

necessary to spread the cost of that machine over the years of its usefulness, i. e., perhaps charging one-hundredth of it each year to Expense.

Unless it is recognized that the value of a machine must be spread over the entire accounting periods which use it, it is clear that the total cost of the machine will appear as an expense of the last accounting period when it finally proves unserviceable, and this is contrary to one of the most fundamental principles of accounting. It would not be erroneous to conceive of all machinery and building accounts as representing deferred charges to Operation, differing in no way from the prepaid items which are ordinarily so classified. It will be easily recognized that the number of periods over which a deferred charge is to be distributed can be of no importance in determining the *character* of that deferred item. A deferred charge to Operation which will be wiped out in two years is not fundamentally different from one distributable over a fifty-year period.

Fluctuation and Depreciation

At this point it should be clearly noted that there is a fundamental difference between depreciation and fluctuation. A fixed asset may fluctuate in value, but such fluctuation would ordinarily not be recognized on the books. This is because fluctuation in the values of such assets may be attributed to *causes outside of the business* itself. Depreciation, on the other hand, is a lessening in the value of property, inevitably brought about by the wear and tear of constant use and the lapse of time. Depreciation is inevitable—fluctuation is not. Depreciation operates only to lessen values. Fluctuation may either lessen or increase them. Fluctuation in the value of fixed assets, either favorable or unfavorable, should

generally not be recognized on the books of account nor taken into consideration in arriving at yearly profits. Depreciation, on the other hand, must be booked before profits can be determined.

Appreciation

The argument is often heard that the depreciation of plant may be offset by the increase in the value of land. This might prove true if the land were to be sold, but since it is a fixed asset and essential to the conduct of the business, it will presumptively not be sold unless the business is sold with it. Any favorable fluctuation in the value of the land will, perhaps, never be realized, while depreciation is an actual loss, the consummation of which is certain. When machines wear out and *must* be replaced, it would usually prove impracticable to sell real estate in order to produce the necessary funds. This clearly indicates that the nature of fluctuation is entirely different from that of depreciation and that the one cannot be considered an offset to the other.

It is important that the reader should realize that depreciation is a *cost*. Many companies state their profits without taking depreciation into consideration, and many others book depreciation only during prosperous years, ignoring it entirely during less favorable periods. To state profits before depreciation has been taken account of is equivalent to stating profits before wages have been considered. No profit can possibly exist until current depreciation has been provided for out of gross revenue.

Causes of Depreciation

The depreciation of an asset may be due to one or more of the following causes:

1. Wear and tear consequent upon use.
2. Deterioration due to passage of time and exposure to the elements.
3. Obsolescence.
4. Inadequacy.
5. Accident.

The total depreciation of a given asset may be due to any one or all of these five items. Ten years ago a machine was bought for $800.00. Today it must be disposed of to the junk-dealer because it is no longer of any use. Nearly $800.00 worth of value has disappeared, and this *may* be due solely to the *wear and tear of constant use.* The machine may be absolutely worn out. On the other hand, it may be that it has seen only a moderate amount of active service and that its deterioration has been due to *exposure to the elements.*

The third possibility is that the machine has proved *inadequate* for the service demanded of it. It may be practically as efficient as the day when it was bought, but time and conditions have resulted in greater demands being made upon the machine which it cannot meet, and it therefore must be replaced by a newer and a more efficient type, in spite of the fact that its life may not be half spent.

Another cause which often induces manufacturers to eliminate a perfectly good machine is that of *obsolescence.* The progress of invention in this country is very rapid. Improvements in every art and science come about rapidly. In order to keep up with severe competition the management must continually replace good machines with better ones—with newer inventions.

The final subdivision for lessening value may be *acci-*

dent, but this can be dismissed since it should be, and usually is, covered by insurance.

In examining these several causes of decreasing value, it is clear they may be divided into two distinct groups—one consisting of those items which can be foreseen and planned for, the other comprising those which are uncontrollable and usually unforeseeable.

Class 1[1] (which can be foreseen and planned for).
- (a) Wear and tear consequent upon use.
- (b) Deterioration due to the passage of time and exposure to the elements.

Class 2[1] (cannot be foreseen or planned for).
- (a) Obsolescence.
- (b) Inadequacy.
- (c) Accident (usually covered by insurance).

Class 1 represents certainties, and Class 2 represents contingencies. The causes in Class 1 are inevitable and must be provided for out of gross revenue. It is an expense of the same nature as "labor" or "supplies used." The proper method of booking depreciation *of this kind* is to charge the amount to an expense account, either crediting the asset account with the same figure, or even better, crediting a "valuation account," for reasons heretofore given. Such an expense account may be called simply "Depreciation" or "Provision for Depreciation." The valuation account may be appropriately termed "Allowance for Depreciation."

When the rate of depreciation has been determined, a charge is made to the Depreciation (expense) Account and a credit to Allowance for Depreciation at the end of every accounting period. When the asset is finally dis-

[1] These two classes have been called "physical" and "functional," respectively by some accounting authorities.

posed of, the asset account is credited and the valuation account is debited. The amount received for the asset as "junk" is also credited to the asset account directly or indirectly through the valuation account, and any small balance which remains standing on the book as an asset should be disposed of by a charge to Depreciation for the current period.

It is clear that no one can ever forecast exactly how long an asset will remain useful or exactly how much it will bring when sold for junk. Hence, there may be a balance in the asset account, which has not been provided for by the depreciation plan. As an example of the proper method of treatment in such a case, let us assume that the books of a company show the Machinery Account with a debit balance of $800.00 and the Allowance for Depreciation Account with a credit balance of $700.00. The machine is disposed of for $50.00, and a new machine purchased for $1,000.00. The following entries will correctly book the transactions:

Allowance for Depreciation	$ 700.00	
Depreciation Account	50.00	
Cash	50.00	
Machinery Account		$ 800.00
Machinery Account	1,000.00	
Cash		1,000.00

Contingent Depreciation

The causes included in the second class should properly be provided for by a true reserve, i. e., surplus appropriated for contingencies. Ordinarily it cannot be considered as a cost of doing business, and since it cannot be foreseen or guarded against in any definite way, it should be classed with all other contingencies, such as explosions and extraordinary casualties, and provided for by a reservation of profits.

Many accountants and engineers do not take this view of depreciation, and it is obvious that in some cases it would be grossly improper. In certain lines of business the obsolescence of machinery may be anticipated almost as certainly as depreciation due to wear and tear. Examples of such industries are those connected with the use of electrical equipment. Improvements and inventions in electricity can be foretold with some degree of accuracy, and obsolescence can, therefore, be planned for in advance; but in the more established lines of manufacturing, revolutionary improvements cannot be foreseen, and if they are to be provided against at all, the provision should be in the nature of a reservation of profits.

When a clear distinction is made between these two classes of causes, the balance sheet may exhibit two distinct classes of provisions for the losses. The balance of the valuation account will appear on the left side of the balance sheet as a deduction from the cost of the asset, while the reserve account will be shown as an item of appropriated surplus on the right.

Replacements

When replacements of assets are made, the fixed asset account, representing the asset which has been eliminated, should be entirely closed out and a new asset account opened for the incoming asset. Some authorities justify an adjustment in the old asset account, which they feel accomplishes the same purpose, but frequently such an adjustment is not clear to anyone except the man who made it.

Plant Ledger

It is clear that the rates of depreciation for different assets will vary considerably, and yet it will be impossi-

ble for the ordinary business to carry an account on its General Ledger for *each individual asset.* The use of a subsidiary ledger and a general ledger controlling account will solve this difficulty. This subsidiary ledger, which may be entitled the "Plant Ledger," carries a *separate* account for each plant unit, whether it be a building or a machine. A controlling account in the General Ledger, which may be called "Machinery and Buildings," will represent the *total value* of the various plant units.

Each plant ledger account (Figure 71) may be ruled so as to show the depreciated value of the machine from year to year, while the general ledger controlling account will be offset by a valuation account. In this case the Plant Ledger is represented by *two* accounts in the General Ledger, and the total of the balances of the Plant Ledger will be equal to the total of the Machinery and Buildings Account *less* the balance of Allowance for Depreciation of Plant and Machinery. In this case neither the Machinery and Buildings Account nor its valuation account is a true controlling account, but *the two taken together* constitute a complete control over the Plant Ledger.

As a simple illustration of this kind of control let us assume that a Machine Ledger is controlled by the two general ledger accounts—Machinery and Allowance for Depreciation of Machinery. The machine ledger trial balance at a given date might appear as follows:

Machine Ledger Trial Balance

Machine "A"	$1,000.00
Machine "B"	1,000.00
Machine "C"	1,200.00
Machine "D"	1,800.00
Machine "E"	900.00
	$5,900.00

PLANT LEDGER

SHEET No. ______

UNIT NAME OR NUMBER Ties

YEAR OF INSTALLATION	ESTIMATED LIFE	FIRST COST	ANNUAL DEPRECIATION BURDEN 1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924
1912	10 years	$1000.00	$50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00		
Scrapped, 1922		Summary 1000.00 1000.00 0.00													
Balance brought forward—			$1000.00	950.00	850.00	750.00	650.00	550.00	450.00	350.00	250.00	150.00	50.00		
DEDUCT DEPRECIATION (A) PHYSICAL			50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00		
DEDUCT DEPRECIATION (B) FUNCTIONAL			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
TOTAL			$50.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	50.00		
DEPRECIATED BALANCE		$1,000.00	$950.00	850.00	750.00	650.00	550.00	450.00	350.00	250.00	150.00	50.00	0.00		
ADD COST OF INSTALLATION OF YEAR FOLLOWING			$0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
BALANCE FORWARDED			950.00	850.00	750.00	650.00	550.00	450.00	350.00	250.00	150.00	50.00	0.00		

FIG. 71.—Plant Ledger Page

(By courtesy of Earl A. Saliers, Ph. D., author of *Principles of Depreciation*)

The general ledger trial balance shows the Machinery Account with a debit balance of $7,500.00, and the Allowance for Depreciation of Machinery Account shows a credit balance of $1,600.00.

Machinery	$7,500.00
Less—Valuation Account	1,600.00
Balance (agreeing with Machine Ledger)	$5,900.00

Carrying this illustration still further, we depreciate Machine "A" $200.00. To do this we must charge Depreciation with $200.00 and credit Allowance for Depreciation of Machinery with $200.00 and *also* credit the Machine "A" Account in the Machine Ledger with $200.00. After this has been done the books will appear as follows:

MACHINE LEDGER TRIAL BALANCE

Machine "A"	$ 800.00
Machine "B"	1,000.00
Machine "C"	1,200.00
Machine "D"	1,800.00
Machine "E"	900.00
Total	$5,700.00

The general ledger trial balance figures exhibit the following, which clearly indicate the nature of the plant ledger control:

Machinery	$7,500.00
Less—Valuation Account	1,800.00
Balance (agreeing with Machinery Ledger)	$5,700.00

THE RATE OF DEPRECIATION

Now that the *method* of handling depreciation on the books is clearly in mind, it is necessary to consider

analytically those factors which determine the rate of depreciation. In other words, now that we have ascertained *how* to charge off depreciation, it is also necessary to consider *how much* should be charged off.

With the elimination of the causes in Class 2, the amount of depreciation to be charged off must depend upon:

1. The original value of the asset.
2. The residual or scrap value of the asset.
3. The ordinary life of the asset.

To illustrate this point assume that a machine is purchased for $10,000.00 and that similar machines under similar conditions have had an average life of nine years with an average residual value of $1,000.00. It is fair, therefore, to estimate that this particular machine will also remain in active service for nine years and that at the end of that time it may be sold for approximately $1,000.00. The amount to charge off is the original value less the residual value ($10,000.00—$1,000.00), or $9,000.00, and this amount must be spread over the life of the asset, i. e., nine years. Whether this amount should be charged off at the rate of $1,000.00 per year or on some other basis will be discussed a little later. At present the important point is the method of determining the total amount which must be charged off and the total number of accounting periods over which the charge is to be spread.

The factors which determine the rate are partially known and partially indeterminate. The original value or purchase cost of the asset is known. Its residual or scrap value may be foretold with a fair degree of accuracy. But the life of the asset is difficult to determine, inasmuch as it is dependent upon at least eight factors:

1. Character of the asset.
2. Use of the asset.
3. Surroundings of the asset.
4. Character of the plant management.
5. Climate.
6. Line of industry.
7. Carefulness of installation.
8. Skill of employees.

These matters are not for the accountant, but pertain peculiarly to the field of the engineer, whose estimate as to the life of an asset must be depended upon. Having been given this figure and knowing the original value and the probable residual value, the accountant's duty is to book the depreciation from year to year upon one of the several universally accepted depreciation methods.

Depreciation Methods

The best-known method of depreciation is that entitled the "straight line method." Its name arises from the fact that a graphical representation of the depreciated value of the asset from year to year forms a straight line. Under the straight line method the total amount to be charged off is distributed equally to each of the accounting periods. Thus, an asset costing $800.00 with a residual value of $200.00 and a life of six years would be charged off at the rate of $100.00 per year. (See Figure 72.) The objection to this method is that it does not do what it is designed for, i. e., spread the burden equitably over the accounting periods, because just after a machine is purchased, it requires little or no expenditure for repairs and maintenance, while in the latter years of its life it requires considerable in the way of upkeep. The figure which must be evenly spread over the machine's

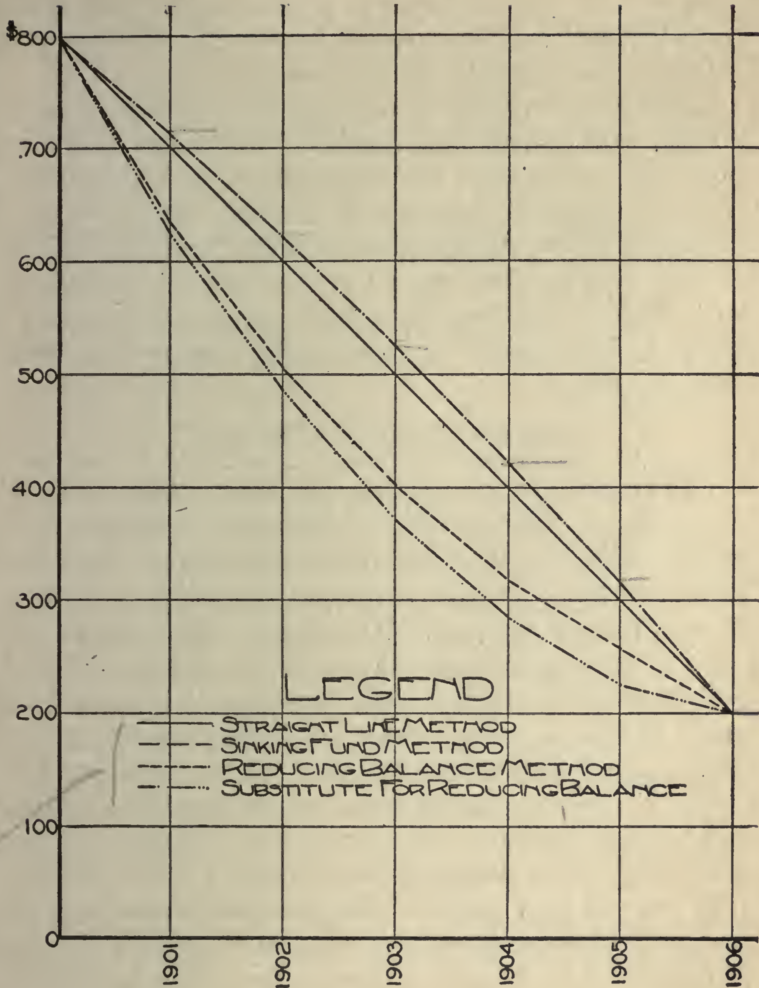


FIG. 72.—Chart Illustrating Depreciation Methods

life is clearly the *sum* of the depreciation charge *plus* the items of maintenance and upkeep, and in the latter years this sum is much greater than in the earlier years if the "straight line method" is used.

The *idea* underlying the straight line method is clearly correct, since the use of a machine benefits one period no more and no less than any other period and, if possible, each period should bear an equal part of the total expense of that machine. With the straight line method of depreciation, however, the burden on the last few periods of the machine's life is greater than on preceding periods, because of the heavy increase in the repairs and maintenance cost.

Reducing Balance Method

To eliminate the objections which have been made to the straight line method an alternative has been proposed, which is entitled "the reducing balance method." Instead of the depreciation rate being a given percentage of *cost,* the percentage is taken on the *diminishing balance.* Clearly the percentage must be greater under this system than when the straight line method is used if the same amount is to be written off in the same length of time. The formula for obtaining the percentage which must be used in the reducing balance method is somewhat complicated and involves the use of logarithms, but tables have been prepared which furnish these percentages. As an illustration of the reducing balance method, assume a machine costing $800.00 with a residual value of $200.00 and a life of six years. It may be determined either mathematically or by the use of a table that the proper per cent figure to use is 20.5%, which is to be taken on the *reducing balance* and not on the original cost.

REDUCING BALANCE METHOD

End of Year	Depreciation	Book Value of Asset
1901	$164.00	$636.00
1902	130.38	505.62
1903	103.65	401.97
1904	82.40	319.57
1905	65.51	254.06
1906	52.08	201.98

Note.—This percentage does not quite reduce the book value of the asset to $200.00, but the small discrepancy may be thrown into the depreciation of the last period.

With the reducing balance method the burden of depreciation is much heavier in the earlier years of the machine's life than in the later years, the expectation being that the increased burden in repairs and maintenance in the later few years will tend to make the total annual burdens substantially equal.

Since the formula which is used for determining the required percentage is somewhat difficult to apply, a substitute method which gives good results is sometimes employed. The method of applying this substitute plan will be apparent from the following example: Assume a machine costing $800.00 with a residual value of $200.00 and an estimated life of six years. A continual reducing fraction may be determined which has as its denominator the sum of the figures of the machine's life.

1 year
2 years
3 years
4 years
5 years
6 years

21 = denominator of the fraction

At the end of the first year 6/21 of $600.00 will be charged off. At the end of the second year 5/21 will be charged off and so on until the last year, when only 1/21 is to be charged off. The figures which are obtained by the use of this method are shown in the following table:

Substitute for Reducing Balance Method

Year Ending	Sum of the Years	Fraction Charged Off	Yearly Charge to Depreciation	Book Value of the Asset
1901.....	1	6/21	$171.43	$628.57
1902.....	2	5/21	142.86	485.71
1903.....	3	4/21	114.28	371.43
1904.....	4	3/21	85.72	285.71
1905.....	5	2/21	57.14	228.57
1906.....	6	1/21	28.57	200.00
	21	21/21	$600.00	

The percentage used is not that of cost, but a percentage of the amount which is to be charged off, i. e., in this case, $600.00. A glance at Figure 72 will show the difference between the Reducing Balance Method and this "substitute" method.

Revaluation

Another method of depreciation involves a revaluation or appraisal of the assets at the end of every accounting period. This plan of ascertaining depreciation is not recommended, not only because of its great expense, but because it does not result in spreading the depreciation scientifically over the various accounting periods

Working Hours

The fourth method bases depreciation upon the number of running hours. Instead of estimating the life of the asset in terms of years or months, it is estimated in terms

of total working hours. After a rate of depreciation per working hour has been obtained, it is multiplied by the total number of hours a machine has been running during any given accounting period, and the resulting figure equals the depreciation for that period. Assume an asset costing $800.00 with a residual value of $200.00 and an estimated life of 16,200 working hours. In order to obtain the rate of depreciation per working hour, the total amount to be charged off must be divided by the total number of working hours.

$$\frac{\$600.00}{16{,}200} = \$.037037 = \text{hourly depreciation rate.}$$

WORKING HOURS METHOD

End of Year	Hours Working	Deprecia-tion	Book Value of Asset
1901...............	2,400	$ 88.89	$711.11
1902...............	2,450	90.74	620.37
1903...............	2,700	100.00	520.37
1904...............	2,950	109.26	411.11
1905...............	3,010	111.48	299.63
1906...............	2,200	81.48	218.15
	15,710	$581.85	

The truly desirable feature of this method is that the depreciation charge coincides precisely with the use made of the machine, it being assumed that a machine depreciates in proportion to the amount it is used. As a general thing, this running hour method is highly recommended, but it is open to the same objection that was observed in the straight line method; viz., no provision is made for the heavy repair and maintenance charges which must surely be expected toward the end of the machine's life. If it were possible to forecast the cost of repairs and maintenance accurately, this figure could

be added to the amount to be written off and the sum of the two could be divided by the number of working hours, in order to arrive at an hourly rate. Unfortunately it is difficult, if not absolutely impossible, to make an accurate forecast as to the amount which will have to be spent for repairs and maintenance of a machine.

Another method which resembles the working hour method is that which bases depreciation upon the machine's output, i. e., pounds, yards, or gallons of product. This is the method which is employed in amortizing wasting assets, such as coal and ore mines, a definite charge being added to each ton mined and sold. In this connection it should be carefully noted that the charge is made at the time the mineral has been sold and not at the time when it is extracted from the mine. Whether the product is below ground or above makes no difference with regard to the total value of the assets. As soon as this product is disposed of, however, the total value of the assets diminishes by the value of one ton. The rate per unit output is determined by means of estimating the total number of pounds, yards, or gallons which the machine can produce before entirely wearing out and then dividing the amount to be written off by these total output figures, in order to arrive at the depreciation rate per unit of product.

Annuity Method

The *annuity method* of depreciation is based upon the theory that the cost of production should include, not only the repairs, maintenance, and depreciation, but also the interest on the capital invested in the asset. The annuity method is artificial and has the very grave fault of charging off a greater amount during the later years

of the asset's life than during the first few years, whereas we have seen that the reverse should be true. The formula for the annuity method is complex and somewhat difficult to solve. The method itself has not the approval of the best authorities. The assumption that interest on capital should be included in the cost of production is not universally accepted, and the method may be dismissed with the statement that the attractiveness of its application is mathematical rather than practical.

Sinking Fund Method

What has been said regarding the annuity method may also be applied to an extent to the *sinking fund method,* but since the latter is one which is in considerable use, it cannot be so easily dismissed. The sinking fund method of depreciation is so called because of its use in connection with a sinking fund. Every Allowance for Depreciation or Reserve for Depreciation is represented by assets in general, but it is often desirable to represent them by assets *in particular,* segregated in the form of a fund. When the depreciated asset is disposed of, the proceeds of the fund are used to defray the cost of replacement. In the discussion of sinking funds in Chapter XI it has been noted that the characteristic of a fund is that it grows in value, out of proportion to the annual installments, owing to the accrual of compound interest. Therefore, the annual installments to a sinking fund for depreciation need not be so large as the annual provision under the straight line method.

Consider the case of an asset costing $800.00 with a residual value of $200.00 and a life of six years. On the straight line method, depreciation of $100.00 would have to be charged off at the end of each fiscal period. If a sinking fund were to be created, it would not be necessary

to pay yearly installments of $100.00, since a less amount will suffice to create a sinking fund balance of $600.00 at the end of the sixth year. Assume that interest at the rate of 6% can be obtained on the sinking fund assets and that at the end of six years the sinking fund must be $600.00. It is required to ascertain the yearly installments which must be transferred from the general cash to the sinking fund.

$1.00 invested for 5 years at 6% =	$1.3382	
1.00 invested for 4 years at 6% =	1.2625	
1.00 invested for 3 years at 6% =	1.1910	
1.00 invested for 2 years at 6% =	1.1236	
1.00 invested for 1 year at 6% =	1.0600	
At the end of the sixth year	1.0000	goes to sinking fund, but earns no interest.
	$6.9753 =	Total accumulated value of $1.00 invested each year.

To determine the yearly installment to the sinking fund a simple proportion can be used.

$1.00 : $6.975 : : X : $600.00

X = $600.00 ÷ $6.975 = $86.02

SINKING FUND METHOD

End of Year	Cash Paid to Fund at End of Year	Interest	Credit to Asset	Balance of Asset
1901........	$ 86.02		$ 86.02	$713.98
1902........	86.02	$ 5.16	91.18	622.80
1903........	86.02	10.63	96.65	526.15
1904........	86.02	16.43	102.45	423.70
1905........	86.02	22.57	108.59	315.11
1906........	86.02	29.09	115.11	200.00
	$516.12	$83.88	$600.00	

Of course, it is understood that the interest on the sinking fund is debited to the fund and that the corre-

sponding credit may go either to one of the revenue accounts as a miscellaneous earning or to the Allowance for Depreciation Account. If the credit is treated as an additional earning, then the actual charge for depreciation must be increased by the amount of that earning, in order than the Allowance for Depreciation Account may be equal to the cash fund.

The most serious criticism of the sinking fund method is the one which has been previously made concerning the straight line method and the annuity method; i. e., the depreciation burden becomes heavier as the asset approaches the end of its useful life.

Comparison of Methods

For a comparison of the several standard methods which have been discussed, reference should be made to Figure 72, which shows the book value of the same asset from year to year, the only variation being in the depreciation method employed. The straight line method, it should be noted, results in a straight line on the graph. The reducing balance method and the "substitute" method each results in concave curves indicating heavy charges at the beginning of the period, which are lightened as the asset ages. The curve representing the sinking fund is convex, indicating that the charge becomes heavier as the time goes on. The curve for the annuity method would correspond with the sinking fund curve. The same figures are used in constructing these curves that have been used in the several tables.

"Dollar Years" Method

In public utility work especially, it is customary to determine the composite life of the plant as a whole and then to make the annual depreciation charge a figure

that will entirely write off "cost less scrap" value of the entire plant during that period. A method often used is the Humphrey's "dollar years" method. This plan first classifies the property as to cost value less scrap and also as to age. Then the class of property having the longest life is used as a base, and the number of renewals of other classes of property during that period is determined. The next computation figures the total cost of renewals in each class during the period. These costs multiplied by the years of life for each class result in the total "dollar years," which must be divided by the *total* cost of all renewals during the period to obtain the composite life. This method will be clear from study of the following table.

Life	Cost Value Less Scrap	Number of Renewals	Total Cost of Renewals	Dollar Years
50	$1,000.00	1	$ 1,000.00	50,000.00
25	6,000.00	2	12,000.00	300,000.00
10	3,000.00	5	15,000.00	150,000.00
5	5,000.00	10	50,000.00	250,000.00
15	7,000.00	3⅓	23,333.33	350,000.00
40	2,000.00	1¼	2,500.00	100,000.00
			$103,833.33	1,200,000.00

$$\text{Composite life} = \frac{1,200,000.00}{\$103,833.33} = 11.55 \text{ years}$$

Other Methods

Two other depreciation methods, if they can be so dignified, have often been used. They are mentioned here only for the sake of completeness and with the hope that their unscientific character may be evident. Depreciation charges are sometimes made equivalent to maintenance charges. At the end of a given fiscal period

maintenance charges are determined, and arbitrarily the same figures are also used for depreciation.

Another plan is to base depreciation upon the year's net profits. In periods of prosperity the depreciation charges will be high and in periods of adversity low or non-existent. Nothing need be said about this method, save that profits must necessarily be determined *after* depreciation; therefore the amount of depreciation cannot possibly be dependent upon the availability of profits.

An irregular depreciation program or plan may bring hardship to certain classes of stockholders, i. e., those holding non-cumulative preferred shares.

Repairs and Maintenance

Repairs and maintenance are clearly charges against current operations, entirely separate and distinct from the depreciation provisions. Repairs can never preserve a machine or a building in the condition it was at the time of purchase. It can only postpone the evil day of abandonment or renewal. It has sometimes been thought that repairs and maintenance should be charged to either Reserve for Depreciation or Allowance for Depreciation, but since the usual depreciation program does not contemplate such procedure, it is clear that it would be erroneous.

Renewals

Renewals, when they are more than a few dollars in amount, should be handled in the manner specified in a preceding section. (See page 352.) The asset account and the valuation account should be wiped out, and the renewal of the asset should be set up as a new asset account.

One exception must be noted to the rule that repairs

and maintenance must be charged to current operation in connection with the purchase of an old run-down, worn-out plant, which must be repaired before it is in condition for operation. The necessary repairs and maintenance in such cases obviously are in the nature of capital expenditures and should be charged to the asset account.

Conclusion

In all the foregoing discussion it has been assumed that an asset is allowed to run down until it is entirely depreciated, but as a matter of fact, no asset should ever be allowed to depreciate more than 30% or 35%. In other words, every asset should be at a 65% or 75% condition, and it is kept in this condition by means of repairs and renewals. The renewals need not consist of entire renewals of the unit, but in partial renewals of its various elements. No single element of a machine or building can ever be entirely worn out, since it must be replaced before it has reached the stage of dissolution. When the cost of repairs and renewals becomes too heavy, the machine should be discarded in favor of a newer and more efficient one.

In some lines of business it is not necessary to make provisions for depreciation, even though the various plant units are continually depreciating, inasmuch as the charge for replacement, where a large number of units are in use, tends to become fairly constant from year to year. In a railroad, for example, the number of locomotives which are scrapped and the number of new ones purchased is about the same from year to year. The same thing is true as to cars and other equipment. New equipment that is purchased is charged to operation, and the old equipment is allowed to stay on the books as an

asset, even though it has been destroyed. It is only in a business where the operations are enormous and where the depreciable units are fairly small in value compared with the total investment that this policy may be followed. For many years the railroads of this country had no consistent depreciation policies. Within the last few years, however, they have been forced by the Interstate Commerce Commission to provide for depreciation of their equipment.

Another type of property regarding which no account of depreciation charges is necessary is that mentioned by F. E. Webner, "Kilns, furnaces, etc., which are actually destroyed or consumed in whole or in part by their ordinary operations, may have to be rebuilt so often that this renewal or maintenance cost is probably absorbed into production costs and may thus obviate entirely the necessity for depreciation charges."

TEST QUESTIONS

1. (a) What is depreciation?
   (b) How should it be booked?
2. (a) What is appreciation?
   (b) When should it be booked?
3. (a) What is fluctuation?
   (b) Where and how should it be booked?
4. (a) What are the five causes of depreciation?
   (b) Are they alike in nature?
   (c) Into what two general classes may they be divided?
   (d) What does each class represent?
5. What is the proper accounting treatment of replacements?
6. Describe fully the relation between the Plant Ledger and the General Ledger.
7. Upon what does the life of an asset depend?
8. Name and describe four methods of depreciation.

CHAPTER XIII

SPECIAL FORMS OF STATEMENTS

When there is insufficient property at a fair valuation to pay debts, a person is said to be insolvent. This state of insolvency is interesting to the accountant because of several forms of statements or exhibits which are used in no other connection. These statements are known as

The Statement of Affairs.
The Deficiency of Account.
The Statement of Realization and Liquidation.

They are not a part of the regular accounting scheme, but, when appropriate, they are prepared by accountants and involve a thorough knowledge of accounting theory. The official who is placed in charge of an insolvent business is known as a "receiver" or a "trustee." His appointment comes from the court in a proper case upon the demand of creditors.

The Statement of Affairs

As soon as a receiver or trustee is appointed, he takes possession of the books of the insolvent and from them prepares a balance sheet. The figures used are the ones shown on the books, no attempt being made to arrive at the actual realizable values of the assets. This balance sheet which the receiver prepares has very little value except as a basis for a further statement, which is universally known as the "statement of affairs," and which has no legal standing, but which is prepared as

administration data for the use of a receiver or trustee or for a creditors' meeting. The creditors and the receiver are both interested in one significant figure, viz., the per cent of his claim that each unsecured creditor may reasonably expect to receive. The statement of affairs attempts to make such a forecast. No definite form of exhibit is required, but custom and usage have fairly well standardized the method of presentment.

The assets are usually shown on the left-hand side and the liabilities on the right-hand side. It is customary to list the assets in the order of their probable realization, while the liabilities are usually listed in the following order:

1. Entirely unsecured obligations.
2. Fully secured obligations.
3. Partly secured obligations.
4. Contingent obligations.
5. Preferred obligations.

In further explanation of the fifth item it should be noted that certain kinds of liabilities, such as rent and wages, are preferred by statute and must be paid before any other obligations.

An acceptable form of ruling for a statement of affairs is shown in Figure 73, although it cannot be claimed that this is rigidly standard. It is one which was suggested by Esquerre in his *Applied Theory of Accounts*.

In column 1 are listed the assets in the order of their probable realization, and in column 2 are shown the *book* values of those assets. In column 4 are shown the *real* (appraised) values of the assets except those which are pledged to creditors as securities for claims. In such cases, only the equity of the insolvent or the excess value

STATEMENT OF AFFAIRS							
Assets	Book Value	Expected to Realize		Liabilities	Book Value	Expected to Rank	
1	2	3	4	5	6	7	8

FIG. 73.—Suggested Form for Statement of Affairs

of the asset is shown (this figure being the appraised value of the asset minus the claim which it secures).

In column 5 the liabilities are listed, preferably in the order discussed above, but if not in that order, at least segregated into the same classes. The order of the liabilities is not of vital importance, but they should be classified under the several group headings suggested. In column 6 the *book* values of the liabilities are shown, and in column 8 appear the unsecured claims and, in the case of partly secured creditors, the excess of claims over their security. The total footing of this column represents the entire unsecured indebtedness.

From the total of column 4 is deducted the total of all preferred claims, the result being the total of assets, at estimated realizable value, which are free to meet the unsecured liabilities listed in column 8.

Columns 3 and 7 are used for convenience in making deductions and eliminations. The method of using these columns is shown in the following examples. Suppose that the value of a pledged asset is less than the liability it secures. How would eliminations be made on the statement of affairs?

1	2	3	4	5	6	7	8
Pledged Assets ...	$2,000.00	$2,000.00		Partly Secured Liability .	$5,000.00	$5,000.00	
Partly Secured Liability..		5,000.00		Less— Security (contra)..		2,000.00	
Excess Liability (contra)		$3,000.00		Balance (unsecured)			$3,000.00

If, on the other hand, the appraised value of the pledged asset is in excess of the liability it secures, the differences between the two will represent an amount available to apply on the unsecured indebtedness. Assume a current asset with a book value of $10,000.00, appraised value of $7,000.00, securing a liability of

$5,000.00, the statement for such a situation will be as follows:

1	2	3	4	5	6	7	8
Pledged Asset ...	$10,000.00	$7,000.00		Fully Secured	$5,000.00	$5,000.00	
Less—Secured Liability (contra)		5,000.00	$2,000.00	Pledged Asset (contra)...		7,000.00	
				Unpledged Balance (contra)...		$2,000.00	

After all the figures have been entered on the statement of affairs according to the form indicated, the fact will appear that the total of column 4, representing the free assets at appraised value, subtracted from the footing of column 8, representing the unsecured indebtedness, equals the total deficiency. This figure is then posted to column 4, thus bringing the statement to a balance. The percentage which the unsecured creditors should expect to receive on their claims is obtained by dividing the total of column 4 by the total of column 8. This percentage should always be computed with the expenses of the bankruptcy proceedings in mind.

It should be noted that there is nothing sacred about this arrangement. The liabilities may appear on the left-hand side and the assets on the right, or the "report" form may be used instead of the statement form. The liabilities may appear in the convenient order mentioned or in any other order, the same being true about the assets.

Proprietorship Items

It is not customary to show under liabilities any of those items which represent proprietorship. All items of investments and accrued profits are ordinarily omitted but, if desired, they may be shown, although they will appear only in column 6 and not in column 8.

Reserves

In drawing up a statement of affairs for a corporation the question immediately arises as to what disposition is to be made of reserves. This cannot be answered without an inquiry as to the meaning which attaches to "reserve" in the particular case. If a reserve is classified as Appropriated Surplus, it would be considered as a capital item and probably not shown on the statement of affairs. If the reserve is, in reality, a valuation account, it should be deducted from the book value of the asset to arrive at its depreciated book value.

As an illustration of some of the points discussed, the following illustrative problem is presented:

Problem Illustrating Use of the Statement of Affairs

(Adapted from the New York C. P. A.
Examination, Jan., 1907)

On June 30, 1914, Ward and Parker, merchants, announce their inability to meet their obligations and to make an assignment for the benefit of their creditors. From an examination of their books, supplemented by other information, their condition appears as follows:

Assets		Liabilities	
Cash on Hand	$ 6,875.00	Creditors Unsecured	$31,250.00
Notes Receivable	5,312.00	Creditors Partly Secured	29,875.00
Accounts Receivable	3,250.00	Creditors Fully Secured	21,250.00
Chattels	17,500.00	Taxes & Wages of Employees (preferred)	875.00
Warehouse Receipts and Other Securities	35,000.00		
Deficiency	15,313.00		
	$83,250.00		$83,250.00

We find upon examination that the Profit and Loss Account shows sundry losses of $16,875.00 and that the trade expenses for the current period equal $9,250.00. The amount to the credit of Ward's Capital Account is $12,500.00, but his drawing account shows a debit balance of $11,250.00. Parker's Capital Account shows a credit balance of $20,062.00, and his drawing account has a debit balance of $10,500.00.

Of the accounts receivable it is estimated that $1,250.00 of them are worthless and that $750.00 of them are doubtful, although they are expected to produce $250.00. Of the chattels, amounting to $17,500.00, it is noted that only $11,250.00 will be realized. The warehouse receipts and other securities are in the hands of creditors pledged to secure payment of their accounts, viz.:

In the hands of partly secured creditors......	$ 3,750.00
In the hands of fully secured creditors.......	31,250.00

COMMENTS ON THE PROBLEM

There is no point of particular difficulty involved in this problem. The method of treating fully secured and partly secured liabilities is illustrated by the solution.

The Deficiency Account

The deficiency account is an exhibit supplementing the statement of affairs. Its function is to disclose how the deficiency has been caused, and it may be looked upon to furnish a reason for the result which the statement of affairs shows. It is customary to prepare this statement in account form, but this is not necessary, since the report form is more easily prepared and is more intelligible to the lay reader.

STATEMENT OF AFFAIRS

Ward and Parker, June 30, 1914

Assets

	Book Value	Estimated to Realize	
Cash on Hand	$ 6,875.00		$ 6,875.00
Bills Receivable	5,312.00		5,312.00
Accounts Receivable—Good	1,250.00		1,250.00
" " Doubtful	750.00		250.00
" " Bad	1,250.00		
Chattels	17,500.00		11,250.00
Warehouse Receipts	31,250.00	$31,250.00	
Less—Fully Secured Creditors		21,250.00	10,000.00
Warehouse Receipts in Hands of Partly Secured Creditors—see contra	3,750.00		
Total	$67,937.00		$34,937.00
Deduct—Preferred Claims			875.00
Balance Available for Distribution to Unsecured Creditors, being 59.5% of their claims			$34,062.00
Deficiency			23,313.00
			$57,375.00

Liabilities

	Book Value	Estimated to Rank	
Creditors Unsecured	$31,250.00		$31,250.00
Creditors Partly Secured	29,875.00	$29,875.00	
Less—Security—see contra		3,750.00	26,125.00
Creditors—Fully Secured	21,250.00	21,250.00	
Security		31,250.00	
Free Assets—see contra		10,000.00	
Taxes and Wages—see contra	875.00		
Total Book Liabilities	$83,250.00		
Total Unsecured Claims			$57,375.00

The deficiency account is charged with various losses and expenses and withdrawals of capital and is credited with the invested capital and any appreciation in the value of assets, the balancing figure being equal to the deficiency as shown by the statement of affairs.

In order to collect the desired figures for the deficiency account easily, it is customary to add an extra column to the statement of affairs. The statement of affairs for Ward and Parker with the "deficiency" column added is shown below.

STATEMENT OF AFFAIRS

Ward and Parker, June 30, 1914

Assets

	Book Value	Estimated to Realize		Deficiency
Cash on hand	$ 6,875.00		$ 6,875.00	
Bills Receivable	5,312.00		5,312.00	
Accounts Receivable—Good	1,250.00		1,250.00	
Accounts Receivable—Doubtful	750.00		250.00	$ 500.00
Accounts Receivable—Bad	1,250.00			1,250.00
Chattels	17,500.00		11,250.00	6,250.00
Warehouse Receipts	31,250.00	$31,250.00		
Less—Fully Secured Creditors		21,250.00	10,000.00	
Warehouse Receipts in Hands of Partly Secured Creditors—see contra	3,750.00			
Total	$67,937.00		$34,937.00	$8,000.00
Deduct Preferred Claims			875.00	
Balance Available for Distribution to Unsecured Creditors, being 59.5% of their claims			$34,062.00	
Deficiency			23,313.00	
			$57,375.00	

Liabilities

	Book Value	Estimated to Rank	
Creditors Unsecured	$31,250.00		$31,250.00
Creditors Partly Secured	29,875.00	$29,875.00	
Less—Security—see contra		3,750.00	26,125.00
Creditors—Fully Secured	21,250.00	21,250.00	
Security		31,250.00	
Free Assets—see contra		10,000.00	
Taxes and Wages—see contra	875.00		
Total Book Liabilities	$83,250.00		
Total Unsecured Claims			$57,375.00

The deficiency account itself might appear as follows:

DEFICIENCY ACCOUNT

Ward and Parker, June 30, 1914

Sundry Losses and Expense			Capital		
Profit and Loss Account	$16,875.00		Ward's Capital	$12,500.00	
Trade Expenses	9,250.00	$26,125.00	Parker's Capital	20,062.00	$32,562.00
Loss on Realization of Assets			Deficiency as per Statement of Affairs		23,313.00
Accounts Receivable	$ 1,750.00				
Chattels	6,250.00	8,000.00			
By Partner's Drawings					
Ward's Drawings	$11,250.00				
Parker's Drawings	10,500.00	21,750.00			
		$55,875.00			$55,875.00

As an alternative arrangement the following would be acceptable:

Deficiency

(Report form)

Ward and Parker, June 30, 1914

Loss on Realization of Assets as Shown by Appraisal			
Accounts Receivable		$ 1,750.00	
Chattels		6,250.00	$ 8,000.00
Sundry Losses and Expense			
Profit and Loss Account		$16,875.00	
Trade Expenses		9,250.00	26,125.00
Total Losses			$34,125.00
Invested Capital			
Ward's Capital	$12,500.00		
Parker's Capital	20,062.00	$32,562.00	
Withdrawals			
Ward's Drawings	$11,250.00		
Parker's Drawings	10,500.00	21,750.00	
Net Capital			10,812.00
Deficiency as per Statement of Affairs			$23,313.00

The statement of affairs and the deficiency account are complements of each other. Both are required to make a complete showing. In C. P. A. examinations it is customary to call for both the statement of affairs and the deficiency account.

There has been no professional standardization of this statement, and no particularly good reason exists for *debiting* rather than crediting the account with losses. The accounting profession is about equally divided on the method of preparing this statement. The important thing to note is the relation which exists between it and the statement of affairs. They both end with the same

figure, although they arrive at it by different paths. The one acts as a check and a proof on the other.

Statement of Realization and Liquidation

The statement of realization and liquidation is a logical "follow-up" to the two statements described. The statement of affairs is in the nature of a prophecy—the receiver's estimate of what his administration may do. The test of the receiver's accuracy as a prophet is the record of his actual accomplishments, and this is furnished in summary form by the statement of realization and liquidation—a statement usually prepared in account form, furnishing a tabloid history of the receiver's accomplishments. This statement is often spoken of as the "Realization and Liquidation *Account*" and usually appears in "account" form, but it is not an account under a strict definition of the word. It seldom, if ever, appears as a general ledger account and, as a matter of fact, it may not be looked upon even as a *practical* statement, inasmuch as it consists of a mixture of unlike things, and results in a total which the ordinary reader finds difficult of analysis.

Various boards of C. P. A. examiners have found the preparation of this statement a splendid test of the student's analytical and synthetical powers. For that reason practically every C. P. A. examination paper contains at least one question bearing on the construction of this exhibit.

When the assets and liabilities of the business are turned over to the receiver or trustee, it is his duty—acting under court orders—to realize on the assets, i. e., turn them into cash and provide funds to liquidate the liabilities. It is almost inevitable that some loss will be suffered in a quick sale of assets, particularly those of a

fixed nature, and it is possible that some gain may be made either in the realization of assets or in the liquidation of the liabilities. The expenses of the receivership or trusteeship also form items that must be considered in determining the final net result of the receiver's activities.

Method of Construction

When the trustee's duties are merely those of realization and liquidation of a business, the preparation of this account is not a difficult matter. Under such circumstances the account is constructed as follows:

1. Debit the account with the *book* value of the assets to be realized.
2. Debit it with any *new* assets which may have been discovered after the preparation of the statement of affairs.
3. Credit the account with the liabilities to be liquidated.
4. Credit it with any *new* liabilities discovered after the presentation of the statement of affairs.
5. Debit the account with the amounts paid to liquidate liabilities.
6. Debit it with the book value of the liabilities not liquidated.
7. Credit the account with amounts actually realized on sales of assets.
8. Credit it with the book value of assets not realized.
9. Debit the account with all the expenses of realization and liquidation.
10. The balance of this account represents the profit or loss on realization and liquidation.

The difference between the book value of the assets which were sold and the actual realized price does not appear in this statement, except in the final figure of total profit or total loss, the details of which should be presented in a supplementary statement or exhibit.

An illustration of the manner in which this account is constructed is offered in the following skeleton form:

Skeleton of Realization and Liquidation Account

Assets to Be Realized			Liabilities to be Liquidated		
....	$.......		....	$.......	
....	....		....	....	
....	....	$.......	....	....	$.......
New Assets Discovered			New Liabilities Discovered		
....	$.......		....	$.......	
....	....		....	....	
....	....	$.......	....	....	$.......
Liabilities Liquidated			Assets Realized		
....	$.......		....	$.......	
....	....		....	....	
....	....	$.......	....	....	$.......
Liabilities not Liquidated			Assets not Realized		
....	$.......		....	$.......	
....	....		....	....	
....	....	$.......	....	....	$.......
Expenses of Realization and Liquidation			Loss on Realization and Liquidation		$.......
....	$.......				
....	....				
....	....	$.......			
		$.......			$.......

At least one excellent authority (Professor William Morse Cole) says that because of the diverse elements entering into the statement of realization and liquidation

a separate account should be opened for each of the three elements.

1. Realization.
2. Liquidation.
3. Expense of liquidation.

But when a Realization and Liquidation Account is called for in a C. P. A. examination, the *complete* statement is the one generally desired, and the examinee should not, unless so instructed, prepare it in the form of three separate accounts.

Receiver's Operations

This statement was probably never intended to do more than cover the various steps in realization and liquidation, but C. P. A. examiners have found it worth while to extend its scope to include those cases where the receiver or trustee continues to operate the business for the benefit of the creditors, making either a net profit or a loss and finally turning the business back to its original owners. This complexity makes it difficult and awkward to construct an illuminating realization and liquidation statement. Probably the best way to handle such a problem is to include, in the statement, a new section headed "Supplementary Charges" and "Supplementary Credits." All the items of expense and income are entered as supplementary items, and the net result of the trustee's realization, liquidation, and trading activities is shown in the one figure of net profit or net loss.

Such a figure, of course, means very little without a thorough analysis, and for this reason the statement is usually accompanied by a supplementary exhibit, showing in detail the items which contribute to the profit or loss.

Another way of insuring the production of an enlightening statement is to make separate schedules or exhibits for the various phases of the trustee's activities and to bring them all together in a summary statement.

Treatment of Cash

It will be noted that cash is usually not shown in the statement of realization and liquidation, since cash is an item which is already realized. Some accountants, however, include it on both sides of the account. On the debit side it is included under the heading of "Assets to be Realized" and on the credit side under the heading of "Assets Realized."

Problem on the Realization and Liquidation Account

(Adapted from the Michigan C. P. A. Examination, June, 1908)

The firm of Robinson and Hart became financially embarrassed, and a trustee was appointed January 1, 1914, to take charge of their affairs for the benefit of creditors.

On that date (January 1, 1914) the financial condition was shown by their balance sheet as follows:

Assets	
Cash on Hand and in Bank	$ 1,006.50
Notes Receivable	18,000.00
Accounts Receivable	5,000.00
Merchandise	4,220.18
Plant	16,000.00
Real Estate	10,000.00
	$54,226.68

Liabilities

Accounts Payable	$10,000.00
Notes Payable	6,000.00
Notes Receivable Discounted	10,000.00
Mortgage on Real Estate	8,000.00
Mortgage on Plant	13,000.00
Taxes	315.00
Robinson—Capital	3,455.84
Hart—Capital	3,455.84
	$54,226.68

In order to realize on all assets advantageously, the trustee purchased merchandise to the amount of $10,000.00, and during the year collected $21,350.00 cash on sales. The accounts receivable realized $3,950.00. Of the notes receivable entered in the balance sheet as $18,000.00 there was on hand only $8,000.00, the balance of $10,000.00 having been discounted with the bank and represented on the liability side by the item notes receivable discounted. The $8,000.00, notes on hand, realized the full sum, while of the $10,000.00 discounted with the bank only 70% could be realized, the balance being lost.

The notes payable, the taxes, and the interest on mortgages (5½%) were paid in the course of settlement, and one-half of the accounts payable were also paid.

Current expenses were as follows:

Salaries	$1,000.00
Office Expenses	800.00
Legal Fees	1,200.00
Trustee's Commission	2,000.00

During the year the withdrawals for private use by the owners amounted to $1,000.00 each. On January 1, 1915, the trustee surrendered charge of the estate and paid over the cash balance on hand. There remains on that date merchandise on hand, $5,600.00.

Prepare a realization and liquidation account, a trustee's cash account, and a balance sheet of the estate at termination of the trust.

SOLUTION

STATEMENT OF REALIZATION AND LIQUIDATION

BY

TRUSTEE FOR THE FIRM OF ROBINSON AND HART

January 1, 1915

Assets to be Realized		
Cash	$ 1,006.50	
Notes Receivable	8,000.00	
Accounts Receivable	5,000.00	
Merchandise	4,220.18	
Plant	16,000.00	
Real Estate	10,000.00	$ 44,226.68
Liabilities Liquidated		
Notes Payable	$ 6,000.00	
Accounts Payable	5,000.00	
Notes Receivable Discounted	3,000.00	
Taxes	315.00	14,315.00
Supplementary Charges		
Purchases of Merchandise	$10,000.00	
Salaries	1,000.00	
Interest on Mortgages	1,155.00	
Office Expense	800.00	
Legal Fees	1,200.00	
Trustee's Commission	2,000.00	16,155.00
Liabilities not Liquidated		
Accounts Payable	$ 5,000.00	
Mortgage on Real Estate	8,000.00	
Mortgage on Plant	13,000.00	26,000.00
		$100,696.68
Total Net Profit (see Exhibit C)		5,524.82
		$106,221.50

Liabilities to be Liquidated		
Notes Payable	$ 6,000.00	
Accounts Payable	10,000.00	
Mortgage on Real Estate	8,000.00	
Mortgage on Plant	13,000.00	
Taxes	315.00	$ 37,315.00
Liability Discovered (Notes Receivable Discounted)		3,000.00
		$ 40.315.00
Assets Realized		
Cash	$ 1,006.50	
Notes Receivable	8,000.00	
Accounts Receivable	3,950.00	12,956.50
Supplementary Credits		
Sales		21,350.00
Assets not Realized		
Merchandise	$ 5,600.00	
Plant	16,000.00	
Real Estate	10,000.00	31,600.00
		$106,221.50

EXHIBIT A

STATEMENT OF TRUSTEE'S TRADING

For the Period Ending December 31, 1914

Total Sales		$21,350.00
Merchandise Inventory, Jan. 1, 1914	$ 4,220.18	
Merchandise Purchases	10,000.00	
	$14,220.18	
Less—Merchandise Inventory, Jan. 1, 1915	5,600.00	8,620.18
Gross Profit		$12,729.82
Salaries	$ 1,000.00	
Interest on Mortgages (5½% on $21,000.00)	1,155.00	
Office Expenses	800.00	2,955.00
Net Profit		$ 9,774.82

EXHIBIT B

STATEMENT OF TRUSTEE'S CASH RECEIPTS AND DISBURSEMENTS

Presented January 1, 1915

Date	Item	Amount	Date	Item	Amount
1914			1914		
Jan. 1	On Hand	$ 1,006.50		Purchases	$10,000.00
	Sales	21,350.00		Payment to Bank	3,000.00
	Accounts Receivable	3,950.00		Notes Payable	6,000.00
	Notes Receivable	8,000.00		Accounts Payable	5,000.00
				Taxes	315.00
				Interest on Mortgages	1,155.00
				Salaries	1,000.00
				Office Expenses	800.00
				Legal Fees	1,200.00
				Trustee's Commissions	2,000.00
				Withdrawals	2,000.00
			Dec. 31	Balance	1,836.50
		$34,306.50			$34,306.50
1915					
Jan. 1	Balance	$1,836.50			

COMPARATIVE BALANCE SHEETS OF ROBINSON AND HART

Assets	Jan. 1, 1914	Jan. 1, 1915	Increases and *Decreases*
Cash	$ 1.006.50	$ 1,836.50	$ 830.00
Notes Receivable	8,000.00		*8,000.00*
Accounts Receivable	5,000.00		*5,000.00*
Merchandise	4,220.18	5,600.00	1,379.82
Plant	16,000.00	16,000.00	
Real Estate	10,000.00	10,000.00	
Total Assets	$44.226.68	$33,436.50	*10,790.18*
Liabilities			
Accounts Payable	$10,000.00	$ 5,000.00	*5,000.00*
Notes Payable	6.000.00		*6,000.00*
Mortgage on Real Estate	8,000.00	8,000.00	
Mortgage on Plant	13,000.00	13,000.00	
Taxes	315.00		*315.00*
	$37.315.00		
Additional Liability Discovered	3,000.00		*3,000.00*
Total Liabilities	$40.315.00	$26.000.00	*14,315.00*
Net Worth			
Robinson—Capital	$ 3,455.84		
Less—½ of Additional Liability Discovered	1,500.00		
Robinson—Capital, Jan. 1, 1914	$ 1,955.84	$ 1,955.84	
Add—½ of Profits (½ of $5,524.82)		2,762.41	
		$ 4,718.25	
Less—Withdrawal		1,000.00	
Robinson—Capital, Jan. 1, 1915		$ 3.718.25	
Hart—Capital	$ 3,455.84		
Less—½ of Additional Liability Discovered	1,500.00		
Hart—Capital, Jan. 1, 1914	$ 1,955.84	$ 1,955.84	
Add—½ of Profits (½ of $5,524.82)		2,762.41	
		$ 4,718.25	
Less—Withdrawal		1,000.00	
Hart—Capital, Jan. 1, 1915		$ 3.718.25	
Summary			
Total Assets	$44,226.68	$33,436.50	
Total Liabilities	40,315.00	26,000.00	
Net Worth	$ 3.911.68	$ 7.436.50	
Represented by			
Robinson—Capital	$ 1,955.84	$ 3,718.25	
Hart—Capital	1,955.84	3,718.25	
	$ 3,911.68	$ 7,436.50	

EXHIBIT C

Loss on Realization (Accts. Rec.)	$1,050.00	Profit on Trustee's Trading as per Exhibit A	$9,774.82
Expenses and Fees	3,200.00		
Net Profit (as per Realization and Liquidation Statement	5,524.82		
	$9,774.82		$9,774.82
		Net Profit as per Balance Sheet	$5,524.82

COMMENTS ON THE SOLUTION

This problem is a very fair illustration of the type of problems which are required by C. P. A. examiners. In the solution it will be noted that cash on hand was included on both sides of the account, although this was not necessary. The treatment of the notes receivable discounted is worthy of some comment. It is assumed in the solution that the $3,000.00 loss is discovered by the receiver. This loss forms a real liability, since it must be paid to the bank. The Notes Receivable Account might be swelled by the $3,000.00 worth of bad notes, which were returned by the bank, and then this $3,000.00 wiped off in realization. This method would be perfectly proper, although the solution, as given, seems a little clearer. The treatment of the supplementary charges and supplementary credits will be immediately understood upon examination of the statement.

Another solution of this problem in a somewhat different form is shown herewith, it being thought desirable to indicate at least two of the standard methods of preparing such exhibits.

EXHIBIT A

Statement of Realization and Liquidation by Trustee for the Firm of Robinson and Hart

January 1, 1915

Assets to be Realized				
Cash			$ 1,006.50	
Notes Receivable		$18,000,00		
Less—Notes Receivable Discounted		10,000.00	8,000.00	
Accounts Receivable			5,000.00	
Merchandise			4,220.18	
Plant			16,000.00	
Real Estate			10,000.00	$44,226.68
Assets Realized				
Cash		$ 1,006.50		
Notes Receivable		8,000.00		
Accounts Receivable		3,950.00	$12,956.50	
Assets not Realized				
Merchandise		$ 4,220.18		
Plant		16,000.00		
Real Estate		10,000.00	30,220.18	43,176.68
Loss on Realization of Assets				$ 1,050.00
Liabilities to be Liquidated				
Notes Payable		$ 6,000.00		
Accounts Payable		10,000.00		
Mortgages on Real Estate		8,000.00		
Mortgages on Plant		13,000.00		
Taxes		315.00		
		$37,315.00		
Liability Discovered (Notes Receivable Discounted)		3,000.00	$40,315.00	
Liabilities Liquidated				
Notes Payable	$ 6,000.00			
Accounts Payable	5,000.00			
Notes Receivable Discounted	3,000.00			
Taxes	315.00	$14,315.00		

Liabilities not Liquidated				
Accounts Payable......$ 5,000.00				
Mortgage on Real Estate 8,000.00				
Mortgage on Plant..... 13,000.00	26,000.00	40,315.00		
Gain on Liquidation..............................				None
				$ 1,050.00
Expenses and Fees of Trusteeship				
Legal Fees...............................			$ 1,200.00	
Trustee's Commission.......................			2,000.00	3,200.00
Total Loss on Realization and Liquidation...........				$ 4,250.00
(Transferred to Summary)				

EXHIBIT B

TRUSTEE'S TRADING AND PROFIT AND LOSS STATEMENT

For the Year Ending December 31, 1914

Total Sales (for cash)..		$21,350.00
Inventory of Merchandise, Jan. 1, 1914............	$ 4,220.18	
Add—Merchandise Purchases........................	10,000.00	
	$14,220.18	
Deduct—Inventory of Merchandise, Dec. 31, 1914..	5,600.00	
Cost of Goods Sold..		8,620.18
Gross Profit..		$12,729.82
Deduct—Expenses		
Salaries	$ 1,000.00	
Interest on Mortgages..........................	1,155.00	
Office Expense..................................	800.00	2,955.00
Net Profit (Transferred to Summary)..............		$ 9,774.82

EXHIBIT C

TRUSTEE'S SUMMARY STATEMENT

Net Profit (from Exhibit B)..................................	$9,774.82
Loss on Realization and Liquidation (from Exhibit A)..........	4,250.00
Amount Creditable to Partner's Capital Accounts............	$5,524.82

Whatever method of solving such problems is used, the exhibit is not complete without a statement of the trustee's cash receipts and disbursements and a statement of the resources and liabilities at the time of his discharge. The preparation of these is a simple matter, since all the data are contained in the problem itself and all that is needed is a careful picking-out of the items. It will be noted that all these statements "support" one another, so that an error may not be made in one schedule without being caught by some of the others.

It is always a good idea to present the final resources and liabilities in comparative form, although the ordinary account form would be proper. It is always of interest to compare the statements just before and just after the trusteeship, and the comparative form showing the increases and decreases of the various items would prove most illuminating.

TEST QUESTIONS

1. (a) What is a statement of affairs?
   (b) What is its purpose?
   (c) For whom and by whom is it prepared?
2. (a) What is a deficiency account?
   (b) What relation does it bear to the statement of affairs?
3. (a) What is a statement of realization and liquidation?
   (b) What relation does it bear to the statement of affairs and the deficiency account?
   (c) How is it constructed?
   (d) For whom is it constructed?

CHAPTER XIV

THE HOLDING COMPANY AND THE CONSOLIDATED BALANCE SHEET

During recent years a new form of organization has been developed, bringing with it accounting problems of importance. This organization is what is familiarly known as a "trust" or "holding company." Broadly speaking, there are two ways that a "trust" may be formed:

1. A new corporation may purchase all the assets of a number of other corporations engaged in the same general line of business.
2. A new corporation may exchange its stock for the stock of other corporations.

The first case presents no accounting difficulties. The second method of organization deserves the very closest attention, because of the fact that the various units, i. e., subsidiary companies, retain their legal individuality. Each subsidiary corporation is linked direct to the parent corporation through capital stock control, but ordinarily there is no such relation between the various subsidiary companies, although there may be.

Such combinations or holding companies are formed (1) for the purpose of acquiring control of the capital stock of operating companies and (2) for the purpose of receiving as their own income, incomes of the sub-

sidiary organizations, which can probably be considerably increased because of

1. Reduced cost of operation.
2. Elimination of competition.
3. Cheaper financing.

Holding corporations, strictly speaking, exercise no function except that of holding the stock of other corporations, but there is no reason why a holding company may not, in fact, they do frequently, engage in certain operating activities.

The Accounting Problems

In a discussion of the broad general accounting features of such holding companies and their subsidiaries, it must be borne in mind that there are two kinds of holdings:

1. A holding company may possess only a very small proportion of the total outstanding stock of the subsidiary.
2. It may own all or practically all the outstanding capital stock and thus exercise complete control.

In the first case the stock holdings are considered merely as investments or, possibly, as a lever for influence, and no special points of interest are involved; but in the second case where a sufficient amount of the stock is owned to carry control, some of the most difficult problems of accounting are to be noted.

In a discussion of holding companies and their subsidiaries, it is likewise well to get in mind the fact that from the operating standpoint (disregarding for a moment the legal point of view) the entire organization may be considered as nothing more than a series of

separate establishments or plants under the same management and ownership. When looked upon in this light, certain accounting principles, it can be clearly seen, will apply that would not be appropriate if each subsidiary were to be considered as a separate self-contained and independent unit.

If the various subsidiaries are considered merely as separate elements in the same organization, it is clear that any transactions between two such subsidiaries will have no effect upon the status of the organization considered as a whole. In illustration of this point we can do no better than quote the very apropos illustration which is to be found in Esquerre's *Applied Theory of Accounts.*

If a father had intrusted the management of $300,000.00 of personal property to three of his sons, in equal amount, they to enjoy the income of the trust estate, it might be that, at the end of a given period, the marshaling of the units of the principal of the trust fund might show that John had loaned $50,000.00 to James, who in turn had loaned $25,000.00 to Charles. But the balance sheets submitted by the three trustees would not in the aggregate reveal anything of great importance to the father, since the fund remains intact. If James repaid John the $50,000.00 which he owes him and, in turn, Charles repaid to James the $25,000.00 loaned by the latter, John's balance sheet would be richer in liquid assets, while that of James and Charles would be poorer in liquid assets and richer in reduction of liabilities; but the father would not have one cent more. If, then, the components of a holding company, as represented by the stock which the latter controls, have been financed one by the other, all the debts of an individual member (one such subsidiary), which are the assets of another must be omitted from a statement endeavoring to show the exact status of the assets controlled by the parent company.

True Balance Sheet

The true balance sheet of a holding company is ordinarily not very illuminating. On the asset side it contains practically nothing but securities owned, and on the liability side very little but its own capital stock outstanding. Nor are the balance sheets of the subsidiary companies as informative as they should be. From a study of them it is difficult, if not impossible, to get that adequate survey of the business as a whole which would be desired by the stockholder of the holding company. Such a stockholder feels that so far as true ownership is concerned all the phases of the business are simply phases of a *single* enterprise and that he is, therefore, entitled to obtain his information from that standpoint.

Consolidated Balance Sheet

It is clear that some special form of exhibit or statement must be prepared in order to satisfy the wishes of the holding company's own stockholders. Such a statement cannot be a balance sheet, in the strict sense of the word, but custom has sanctioned its use in this particular instance, since the term "consolidated balance sheet" has a distinct meaning peculiar to itself. It may be well to say at the outset of the discussion that the consolidated balance sheet probably has no legal standing at the present time, but it is almost universally employed by every large holding company. The consolidated balance sheet is made up by properly combining, according to the certain fundamental accounting principles, the several balance sheets of the various corporations making up the organization. The consolidated balance sheet shows the assets of the subsidiary companies as the assets of the holding company, thus for balance sheet purposes

eliminating and disregarding the legal distinct individuality of the subsidiary corporations.

Elimination of Interrelations

In order to form this consolidated showing, it is necessary to eliminate all the relations of constituent companies with each other. Assume that Company "A" is a holding corporation owning the entire capital stock of Corporation "B," Corporation "C," and Corporation "D." To get a consolidated balance sheet it would be necessary to merge the balance sheets of these four corporations, and if a true showing is to be desired, all intercompany relations must be eliminated. Company "B" may owe Company "C" $50,000.00, yet from the standpoint of the enterprise as a whole this fact is immaterial. From the standpoint of an individual, it does not make any difference which pocket his money is in, but if an account is to be kept with a certain pocket, the matter of transference of funds from one pocket to the other is of importance.

We may, therefore, lay down the rule that in the construction of a consolidated balance sheet the balance sheets of all the companies forming a complete whole are to be merged into one, but that all intercompany relations are to be eliminated in the process. In the formation of a consolidated balance sheet all the items of cash owned by each of the companies will be added together, their sum representing the total cash on hand. In a similar way all the items of merchandise on hand will be determined and the total used in the consolidated balance sheet.

The item of accounts receivable, however, would not necessarily be treated in this way. It would be necessary for the accountant to scrutinize these various items care-

fully to find out whether an account receivable of one company was not offset by an account payable of another. If this were found to be true, it would be necessary to eliminate them both, showing only as accounts receivable the total amount due all the companies from *outside* sources.

Working Form

As an aid to making up consolidated balance sheets, it is customary to use a working form as follows:

Accounts	Company "A"		Company "B"		Company "C"		Elimination of Inter-relations		Total	

The form is self-explanatory, simply providing a convenient means of making the required elimination.

The principal points to be noted in the preparation of consolidated balance sheets are in connection with goodwill, surplus, and the minority interests.

Goodwill

The goodwill item which appears on the consolidated balance sheet is the algebraic sum of the several items of goodwill purchased by the holding company from the several subsidiary companies. If the price, whether in cash or in capital stock, which is paid for the stock of another company should be greater than the sum of the par value of such stock and its proportion of surplus, the difference is the amount which is properly chargeable to the Goodwill Account on the consolidated balance sheet.

This principle has for its basis merely ordinary common sense. If the purchase price is greater than the total net worth, as exhibited in the balance sheet of the purchased company, it is assumed that the assets of that company have been stated at a figure which is really under their true value. It cannot be held that the purchasing company is guilty of the folly of knowingly paying more for the stock than it is worth. The excess price which is paid is, therefore, held to be for the purchase of goodwill.

If, on the other hand, the purchase price is less than the market value of the stock, as shown by the balance sheet, it may be assumed that the balance sheet figures are inflated, and such a discount would ordinarily be credited to the Goodwill Account on the consolidated balance sheet. It might happen that the total credits to Goodwill were in excess of its total charges, although this would be unusual. In such a case at least one authority recommends that the excess credit balance be credited to the Capital Surplus Account. It would be equally proper to credit it to a valuation account, since it merely serves as an offset to inflated asset values. Whatever title is used, it should clearly label the amount as being unavailable for dividends.

In addition to the various goodwill components obtained by charging the excess of purchase price over book value of capital stock of the purchased companies, there must also appear as additional charges to that account the various items of goodwill which appeared on the balance sheets of the underlying companies at the time they were taken over. Such previous goodwill items are frequently merged with other items under the head of property.

As an illustration of the goodwill treatment, we may

assume that Corporation "A" has purchased all the outstanding capital stock of Corporations "B," "C," and "D." Disregarding other elements appearing in their balance sheets, we find that Corporation "B" shows goodwill of $10,000.00, that its outstanding capital stock is $50,000.00, and that its total surplus, both appropriated and free, is $7,000.00. Corporation "C" has a capital stock of $25,000.00, and a surplus of $8,000.00, and Corporation "D" has goodwill of $5,000.00, capital stock of $15,000.00, and a surplus of $2,000.00. Corporation "A" paid $60,000.00 for the total stock of Company "B," $31,000.00 for Company "C," and $20,000.00 for Company "B."

Company	Goodwill	Capital Stock	Surplus	Price Paid by Company A	Excess or Deficit	
					Excess	Deficit
B	$10,000.00	$50,000.00	$7,000.00	$60,000.00	$3,000.00	
C	None	25,000.00	8,000.00	31,000.00		$2,000.00
D	5,000.00	15,000.00	2,000.00	20,000.00	3,000.00	

From the foregoing facts it is required to determine what the item of goodwill on the consolidated balance sheet would be.

Charges to Goodwill		Credits to Goodwill	
Co. B	$10,000.00	Co. C	$ 2,000.00
" B	3,000.00	Balance	19,000.00
" D	5,000.00		
" D	3,000.00		
	$21,000.00		$21,000.00
Balance	$19,000.00		

From the calculation as shown it is plain that the goodwill item appearing on the consolidated balance sheet will be $19,000.00. This item of goodwill, which has just been determined, would not actually appear anywhere

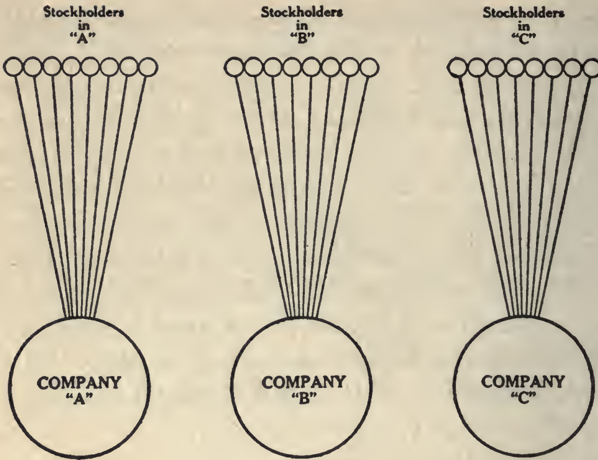


Chart illustrating condition before stock transfer

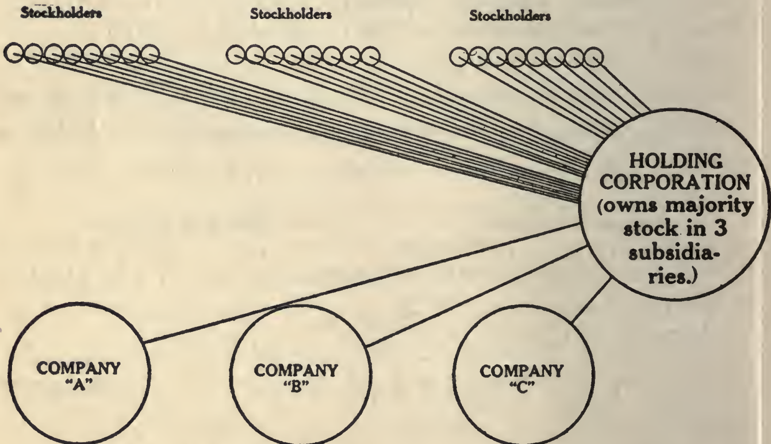


Chart illustrating condition after the stockholders in Company "A," Company "B," and Company "C" exchange their stock for stock of the new holding corporation.

FIG. 74.—Charts Illustrating Lines of Stock Control of a Holding Company

on the books of account either of the holding company or of any of these subsidiary companies. Ten thousand dollars of it would appear in the Ledger of Company B as an asset and $5,000.00 of it in the Ledger of Company D as an asset, but the remainder could nowhere be found as a book item. The reason is that the stock holdings of the parent company are shown at their *cost* price, while the general books of the subsidiary companies will

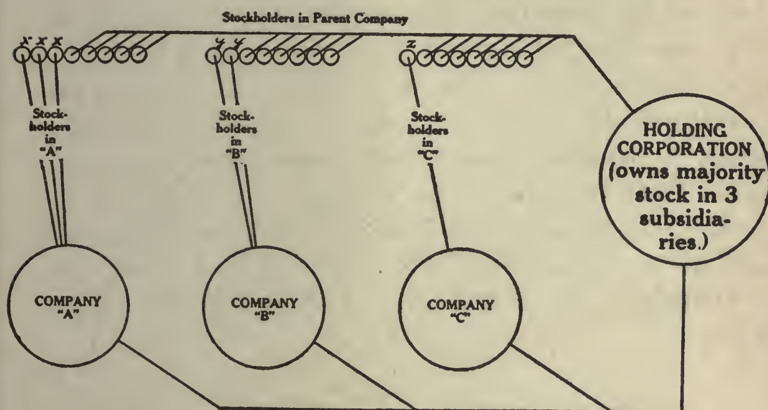


Chart illustrating condition if parent company is able to buy only controlling interest in Company "A," Company "B," and Company "C." A consolidated balance sheet must not overlook the legal rights of stockholders marked "x," "y," and "z"

Fig. 74.—Continued

show no changes. The only effect so far as their books are concerned is the change in stockholders, which will be registered in the stock ledger entry.

In the foregoing discussion it has been assumed that the holding company has purchased *all* the stock of its subsidiaries, but in practice this rarely, if ever, obtains.

Minority Interests

Usually the holding company is unable to purchase all outstanding shares, although it usually can obtain enough to exercise a controlling interest. (See charts in Figure 74.) The minority stockholders, i. e., those who have not exchanged their holdings for stock in the parent company, must not be ignored in the consolidated balance sheet. Not only must the stock belonging to outsiders be set up as a separate item on the consolidated balance sheet, but also the amount of surplus which belongs to those stockholders. This is a matter of simple arithmetical calculation. The amount of surplus to be apportioned to minority stockholders is the same percentage of the total surplus of the subsidiary company as the minority stockholders' interest is of the total outstanding stock of the subsidiary. There are at least three ways of exhibiting the facts on the Consolidated Balance Sheet.

First Method

Consolidated Balance Sheet

Assets		Liabilities		
Assets	$.......	Liabilities		$.......
		Capital Stock of holding company	$.......	
		Proportion of Surplus	....	....
		Minority Stockholders' Interest		
		Capital stock	....	
		Proportion of Surplus	....	....
	$.......			$.......

Second Method

CONSOLIDATED BALANCE SHEET

Assets	$.......	Liabilities		$.......
		Capital Stock		
		Capital Stock of holding company	$.......	
		Subsidiaries' Stock Outstanding	....	....
		Surplus		
		Majority Interest	....	
		Minority Interest	....	....
	$.......			$.......

Third Method

CONSOLIDATED BALANCE SHEET

Assets	$.......	Liabilities	$.......
		Capital Stock of holding company	....
		Subsidiaries' Stock Outstanding	....
		Surplus	....
	$.......		$.......

This latter arrangement does not apportion the surplus; hence one of the other two methods is to be preferred.

INTERCOMPANY SALES

Another interesting accounting feature occurs in connection with intercompany transactions where there is a minority stock interest. If we regard the holding company and all its subsidiaries as being one undertaking, then it is evident that the sales from one subsidiary to

another should contain no element of profit. If this principle is not closely observed, anticipation of profits would result and inventories would be inflated from the viewpoint of the enterprise as a whole. On the other hand, the minority stockholders may not be interested in the enterprise as a whole, if only stockholders in a particular subsidiary. So far as they are concerned sales must be made to other subsidiaries at a fair profit; otherwise they feel that they have been defrauded.

The system of handling intercompany sales, in order to meet both these points of view, must necessarily be very elaborate. It implies carrying all sales, both at the cost and at the selling price. This enables the construction of consolidated balance sheets, showing all inventories at actual cost of production, and it also permits the preparation of subsidiary companies' statements and balance sheets, showing intercompany transactions on the basis of profitable selling prices. Material may be passed from one subsidiary to another, and in a large organization there may be eight or ten transactions before the ultimate finished product is eventually sold to outsiders. Not until this has actually been done may the various intercompany profits be actually shown as "realized" from the holding company viewpoint.

Another point of interest in the same connection occurs when one subsidiary sells material to another for construction purposes. In previous chapters we have seen that from the standpoint of the undertaking as a whole, all charges for new construction should be strictly on a cost basis, including no element of profit. This same principle holds true in situations similar to the one now in discussion, and the price at which materials are charged to the construction account of Corporation B must be their actual cost of production, although Cor-

poration B paid for the materials on the basis of cost plus profit to another subsidiary.

The whole scheme of holding company accounting is so vast that we cannot do more than lay down a few general principles which apply. The very size of most of our modern trusts necessitates intricate and elaborate accounts. Complicated as these may appear, they have no terrors for the man who is thoroughly versed in accounting science, for they are based on the simple unchangeable accounting principles.

TEST QUESTIONS

1. (a) What is a "trust" in the popular sense?
   (b) In what two ways may a "trust" be formed?
2. What are the advantages of consolidation?
3. What is the difference between the accounting and the legal point of view as regards holding companies?
4. (a) What is a consolidated balance sheet?
   (b) What is its legal standing?
   (c) How does it differ from a true balance sheet?
5. What are the components of "goodwill" on a consolidated balance sheet?
6. Illustrate three ways of exhibiting proprietary interest on a consolidated balance sheet.
7. What is the accounting rule as to inter-company sales?

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