Accounting Students' Series

Accounting Principles

By

SAMUEL F. RACINE

Certified Public Accountant

1917

CONTENTS

CHART OF CONTENTS

CHAPTER I.

BOOKKEEPING

DEFINED.

"The art of keeping a systematic record of business transactions, so as to show their relation to each other and the state of the business in which they occur; art of keeping accounts." (Webster.)

"The art of recording business transactions, with the view of having a permanent record of them and of showing their effect upon wealth." (Lisle.)

METHODS.

As to the methods of keeping the records, bookkeeping many be divided into two classes: Single Entry and Double Entry.

SINGLE ENTRY.

Single Entry, or Simple Entry as it is sometimes called, is a name given to any of the various plans of recording transactions which show them only in the relation they bear to persons. Its form and completeness depend greatly on the knowledge and ingenuity of the person keeping the records. In many cases there is just an ordinary ledger, such as is used in double entry bookkeeping, with date, explanation and money columns aranged for both charges and credits, and with an account or page for each person. The party keeping the record, records the items or transactions in the order of their occurrence on either the debit or the credit side as the case may be. He usually outlines the transaction rather fully in the explanation columns and keeps a fairly complete record.

Another plan often met with is that of keeping a memorandum of transactions, in the order of their occurrence, in a blotter or day book, then transferring them to a ledger, classified according to persons. This memorandum may take any form whatsoever. It usually gives the name of the person with whom the firm has dealt and also outlines the transaction fully, giving a list of the articles dealt in, the amount of money paid or received, etc. It is intended to be a complete history of the transaction and has been known to go even so far as to mention the witnesses to the transaction and their views as to a purchaser's prospect of paying the account. In the majority of cases, some sort of an account is also kept to show the investment or the proprietary interest in the business.

Owing to the many imperfections of single entry, it is gradually going out of use, however, many people still use it and, as it offers a number of interesting points for consideration, it will be taken up again in another chapter.

Double Entry.

Double entry is that form of bookkeeping which records two effects of each transaction, one of which is a charge and the other a credit to the respective accounts affected.

This plan is impossible where only personal accounts are used, as in single entry, and, in order to complete the double entry and to show the effect of the transaction on the business or institution, accounts are required, in addition, to record the various units of operations—such things as earnings, expenses, property or rights acquired and liabilities incurred in their acquisition.

As to completeness, double entry bookkeeping may be divided into two classes, one of which contains accounts showing the receipts and disbursements, the income and expenditures and the resources and liabilities, and the other which only contains accounts showing the receipts and disbursements.

The former is known as the Capital and Revenue method and the latter as the Receipts and Disbursements method.

The capital and revenue method is used by all concerns conducted for profit, while the other method is used only by institutions which are not conducted for profit.

The object of every business is to increase the proprietary interest in the concern and as, from the standpoint of the proprietor, its most interesting feature is the effect on his investment—the profit or the loss—the most important object of bookkeeping, at least so far as he is concerned, is the record of the changes in his capital. Therefore, as double entry bookkeeping is the only method which records this particular information, it is used almost exclusively by commercial organizations.

With books kept entirely by single entry, the profit or loss of a given period is ascertained by a comparison of the net worth of the concern at one date and its net worth at some prior date. When comparing these items, the tendency is to assume that all changes occurring in the net worth are due to the operation of the business and profits arising from the sale of fixed assets or from outside investments, although really foreign to the operation of the business, are often erroneously included.

With complete double entry, the profit is not only ascertained, as in single entry, by a comparison of the net worths of different periods, but it is also ascertained by using accounts that record the progress of the business. These accounts contain a record of all transactions which have an effect on the income of the concern and reflect the various causes that have produced the profit or loss. In addition to this, owing to the careful classification of the items, profits or losses that have occurred from sources outside of the business are separated from the ordinary business profits or losses and the result of the operation of the business is not misrepresented.

Double entry possesses so many advantages over single entry that many exaggerated claims are made for it; for instance, it is often stated that the profit or loss of a business can be immediately ascertained from books kept by double entry, and that double entry books at all times accurately show the status of the business for which they are kept; whereas, the profit or loss can only be ascertained from the majority of double entry books after an inventory of the assets, and even then, owing to the many theories used as to the proper method of valuing the assets and also to the impossibility of determining, with any degree of accuracy, the true value of much of the property, the inventory value determined upon is only an approximation and therefore the profit or loss resulting is but an estimate of the correct result. It also is impossible to accurately determine the proper value of property consumed in conducting the business and this has a tendency to disturb the accuracy of the results as well. Furthermore, there are some items which, although of great value to the firm, cannot be placed on the books at all. The most important of these are the skill and experience of its proprietors or the right to exercise some monopoly. In addition to these, acts are often performed during one period of operation which do not become an active liability until some later date, and, if double entry bookkeeping did all that was claimed for it, the liabilities would appear in the books immediately after the completion of the act. They, however, are usually omitted until they actually demand attention. Liabilities of this sort are known as contingent liabilities and, in general, if given effect at all, are simply appended to the balance sheet as a footnote. The principal ones are bills receivable discounted and guaranteed goods.

Municipal.

Municipal accounting, although operated on the double entry principle of carrying accounts with inanimate things and having a debit and a credit for each transaction, differs in the nature of the information it is expected to impart. In the majority of cases, the intent is to display only the receipt and the disbursement of money —special stress being given to the collection of taxes, licenses, fines, etc., and to the disbursement of funds rather than to the asset value of the purchase or the effect of the transaction on the proprietorship. In fact, where accounts are kept in this way, they treat of the fiduciary capacity of the municipality only and the element of proprietorship is almost entirely eliminated.

The books of a municipality when operated in this manner, viz., under the receipt and disbursement method, are arranged so that reports prepared therefrom will disclose its ability to liquidate current liabilities and also the legal margin of its borrowing powers. This information being for use when estimating the value of its bonds or considering the propriety of undertaking public improvements.

Many municipalities are endeavoring to operate their accounts under the capital and revenue method mentioned under double entry and in many cases are having considerable success. It is contended, however, that as a municipality's principal asset—the right to collect taxes—is of such a nature that it cannot be placed on the books and that any statement of assets will fall far short of the actual condition of affairs, and also that, as the borrowing power of a city is not estimated according to the value of its ledger assets, it is unnecessary and incorrect to keep municipal books in this manner. Furthermore, as a municipality is not operated for profit, it is claimed that the keeping of revenue accounts, the purpose of which is to display the sources and the disposition of the profit of an undertaking, is useless except for such subsidiary undertakings as water works or electric light plants.

It seems that, so far as the expenses are concerned, there is no excuse for not giving effect to them as they occur, in order to properly place the responsibility, and also that there is no excuse for not keeping a complete record of the various properties and articles purchased. With this aim in view considerable money has been expended in endeavoring to perfect a system of accounts which will be adaptable to the purposes of a municipality.

New York State has prepared a uniform system of accounts for cities of the second class, which seems to be working admirably. They must have had a difficult task to arrange this system, however, for, in addition to the difficulty of making accounts which are fiduciary in principle display accounting matters from a proprietary standpoint, there is also the matter of appropriations and appropriation expenditures which had to be contended with.

To illustrate these difficulties, let us point out that in fiduciary accounting it is only necessary to record the position of the fiduciary officer with reference to his trust and, theoretically at least, all transactions are but changes in the form or nature of his responsibility. In commercial accounting there are two main elements that have to be considered, viz., Revenue and Capital, and every transaction will affect one or both of these divisions. In municipal accounting, under the proposed system, all of these elements exist and in addition another element is encountered, due to the necessity of keeping expenditures within limits arbitrarily set by appropriations in the budget or by subsequent authorization, so that, in addition to the record that would be required in a commercial organization, it is necessary to record the effect of each transaction upon the appropriation.

A careful analysis of these difficulties will disclose that in addition to the receipt and disbursement of funds collected, and the effect on revenue, the city must record the proprietary interest in property acquired, which it controls for the benefit of the public, and also must keep a careful account of all appropriations as well as the expenditure chargeable against each and, in addition to these, must still show its fiduciary relation to the public in its records.

QUESTIONS.

1. Outline concisely the principles of single and of double entry.

2. Define double entry bookkeeping and state wherein it differs from single entry bookkeeping.

3. How is the profit or loss ascertained by the different methods?

4. Wherein do municipal accounts differ from private accounts as to capitalization and revenue?

5. State what, in your judgment, are the principal defects of the original method of municipal accounting. What is your conception of the information that should be given in the periodic statements of a municipality?

6. a. Name some of the differences between municipal accounting, as it is generally conducted, and commercial accounting.

b. Is there, in your opinion, any reason why municipal accounting should not be placed on a commercial basis, and, if not, how can this be accomplished?

CHAPTER II.

Single Entry

It is often stated that one of the principal objections to single entry books is that it is impossible to prove the work. This is probably true, to the extent that it is impossible to prepare a trial balance as is possible in double entry bookkeeping, but there is nothing to prevent the proving of posting, which is virtually taking a trial balance, where a day book with debit and credit columns is used in connection with the ledger.

This is accomplished by totaling the debit and credit columns of the day book and also the debit and credit items, for the period under review, in the ledger. The total charges as shown by the day book should equal the total charges as shown by the ledger and the total credits of the one should likewise equal the total credits of the other; special care, however, should be taken to see that all accounts containing items referring to the particular period are included even though the accounts are ruled up.

Where a single column day book is used, it is usually thought preferable to prove the accuracy of the work by checking back the items in the ledger to the original entry in the day book.

The Audit Of.

The work of an auditor has been divided into three classes:

The Detection of Fraud.
The Detection of Errors of Principle.
The Detection of Errors of Omission.

In the case of single entry bookkeeping the audit is accomplished in much the same way as in double entry —by verifying each item that occurs in the books and by locating and giving effect to items that have been omitted.

Errors of principle would hardly occur while fraudulent errors could be most easily covered and would demand the utmost attention on the part of the auditors.

The report prepared by the auditor usually takes the form of a Statement of Assets and Liabilities with such explanatory schedules as are desirable to show the condition of the organization.

Statement of Affairs.
Statement of Assets and Liabilities.

A Statement of Affairs or a Statement of Assets and Liabilities is a statement showing the assets and liabilities of a concern which has not kept its books on the double entry principle. It is prepared, either wholly or in part, from outside sources, and displays the present worth of the concern as an amount representing the difference between the assets and the liabilities.

A balance sheet differs from a statement of assets and liabilities to the extent that it is always prepared from double entry books and does not contain, except probably as a footnote, any items that do not appear in the books.

The term Statement of Affairs is used also in reference to a statement prepared to show the probable value of the claims of the general creditors of an insolvent, and a careful distinction should be made between the two forms. It is preferable, therefore, to always classify the statement of the affairs of a solvent concern using single entry books as a statement of assets and liabilities thereby eliminating every possibility of confusion.

Ascertaining Profit,
Resource and Liability Method.

Where it is desired to ascertain the profits for a particular period, it is necessary to prepare a statement of assets and liabilities, and ascertain the net worth by deducting the liabilities from the assets. A comparison of this amount with the net worth as shown by the previous statement of assets and liabilities or the investment at the beginning of the period, after making due allowance for withdrawals and contributions, will show the profit or loss for the period.

A portion of the profit or loss resulting might have been produced from sources outside of the business, such as the profit resulting from the sale of fixed assets or from outside investments, and care should be taken to see that the business is not given credit for these extraordinary items and the profit or loss on the ordinary business thereby mis-stated.

It is also necessary to give consideration to withdrawals which are taken in lieu of compensation for operating the business.

A business should be charged with a reasonable amount to represent the value of the services of the owner, and withdrawals of cash or goods in lieu of such compensation are a direct charge against the business and should not be included with withdrawals for other purposes when ascertaining the profit or loss of a concern operating single entry books.

As an example, let us consider the following proposition:

"A" starts in business on January 1st with an investment of $5,000.00. He also has a piece of real estate estimated to be worth $5,000.00. At the end of the year his assets, including the real estate which is now valued at $7,000.00, total $15,000.00. What has the business produced during the year?

His net worth at the beginning of the year was $10,000.00; it is now $15,000.00, hence he has made a profit of $5,000.00. The real estate has increased in value by $2,000.00, hence the profit on the operation of the business is but $3,000.00.

Let us presume also that during the year he had received a legacy of $5,000.00 and that this amount had been absorbed by the business. It now appears that his investment in the business, exclusive of real estate, totals \$10,000.00; \$7,000.00 of the \$15,000.00 of his present worth represents real estate, hence \$8,000.00 represents the present worth of the business. This is \$2,000.00 less than he put in the business, therefore a loss of this amount has occurred during the period.

Let us consider his affairs from still another standpoint. Suppose he had withdrawn \$3,000.00 and had invested it in mining stock which is now worthless. His original investment in the business was \$5,000.00; he withdrew \$3,000.00 leaving but \$2,000.00 of his original capital in the business, therefore if the present worth of the business is \$8,000.00 as stated, his profit must have been \$6,000.00.

The above plan of ascertaining the profit or loss of a concern is known as the Resource and Liability method; while the plan of finding the profit or loss by aid of the revenue accounts used in double entry is designated as the Loss and Gain method.

Preparing a Profit and Loss Account.

Whenever it is desired to prepare a profit and loss account displaying the sources of profit of a concern whose books have been kept by single entry, it is necessary to tabulate the ledger. This is accomplished by analyzing each account in the ledger and tabulating the items under appropriate headings to correspond with the accounts of double entry.

To illustrate this method let us take the following ledger account:

John Doe

Jan. 1, Mdse.	\$ 40.00	\$ 45.00	Cash ....Jan. 3
Jan. 2, Cash	10.00	5.00	Overcharge ....Jan. 3
Jan. 3, Cartage	2.00	2.00	Balance
	\$ 52.00	\$ 52.00	

To tabulate the account, take two sheets of analysis paper containing a sufficient number of columns and head them to correspond with the accounts desired. One of the sheets will contain credit column headings and will receive the debit items found in the accounts; the other will contain debit columns to receive the credits found.

Having prepared the paper, take each item to be found on the debit side of the ledger and extend it to the proper column on the analysis sheet; then follow the same plan with the credit items.

In the particular account we have before us, the $40.00 item will be entered in a column headed Merchandise Sales, the $10.00 item, in a column headed Cash, and the $2.00 item in a column headed Cartage. On the other sheet of paper the $45.00 item will be placed under the heading Cash; the $5.00 item under Merchandise Returns, and the $2.00 item in a column headed Balances.

After completing the items in the ledger, it is necessary to bring into the tabulation all outstanding items covering earnings or expenditures incurred, whether or not received or paid. Care must be taken to explain each item as entered so that if necessary they may be checked back and proved.

The analysis of the ledger having been completed and the columns totaled, the auditor is provided with complete revenue or other accounts and may proceed with the preparation of reports, the same as would have been made from double entry books.

Changing to Double Entry.

It will be noticed that, in the above illustration, we have provided a credit for every debit to be found in the books, also a debit for every credit. If these new debits and credits were entered in the books, either individually or in totals, and if the outstanding items were also included in the books, the books would have equal debits and credits and would be in balance. If the double entry method of entering debits and credits of like amount were continued, the books will have been changed to the double entry system.

If it is desired to set up in the ledger the accounts created by tabulating the ledger, it is necessary to make a journal entry debiting or crediting all of the accounts, both old and new which are to appear in the ledger. The accounts which already appear in the ledger, however, need not be entered in the ledger again.

To illustrate, let us take a single entry ledger containing the following balances:

	Dr.	Cr.
J. Doe	$ 40.00	$
J. Smith		80.00
M. Jones	30.00	
Proprietor		4000.00

An analysis of the ledger, we will presume, gives us the following additional accounts:

Expense	$ 430.00	$
Real Estate	2000.00	
Purchases	4000.00	
Cash	1600.00	
Sales		4020.00

The journal entry to place these accounts in the ledger will be as follows:

John Doe	$ 40.00	
M. Jones	30.00	
Expense	430.00	
Real Estate	2000.00	
Purchases	4000.00	
Cash	1600.00	
J. Smith		$ 80.00
Proprietor		4000.00
Sales		4020.00

The debits and credits of the statement are now equal and if new accounts are opened in the ledger for all of those found in the statement which are not in the ledger, the ledger will be in balance also and will conform to the basic principle of double entry.

If it is desired to change a set of books from single to double entry without tabulating the ledger, it is only necessary to prepare a Statement of Assets and Liabilities, giving effect to all items, whether included in the books or not. The net worth or capital of the concern must also be included in the statement to bring it into double entry form by providing equal debits and credits. If all of the items are given effect in the ledger, the ledger will balance also and will be in double entry form. It is, then, only necessary to continue placing debits and credits of equal amount to keep the books in this form.

Another condition not often dealt with in the Certified Public Accountants' examinations in connection with single entry books, relates to insolvency. In this case the net worth will represent a deficit and will be included in the journal entry opening the new double entry books as a debit item.

Comparative Statements.

It is often desired to determine the disposition of profits earned by a concern during a particular period. This is true in cases where double entry books are kept as well as where the single entry method is used.

The principal reason why such a statement is desired is that although the reports state that a certain profit has been made, the proprietors cannot reconcile the statement with the condition of their cash account, which they look upon as the best criterion of their profits or losses.

Such a statement is prepared by comparing the amounts of each individual item appearing in the statements representing the condition of the concern at the beginning of the period with a similar statement prepared at the end of the period under review. The increase or decrease of each of the assets is extended into columns headed "Increases" or "Decreases" and then the difference in the amounts of the columns is extended as either net increase or net decrease of assets. The liabilities are then analyzed and their differences are extended in the same manner. The profit or loss will then be explained by the net change in the assets plus or minus the net change in the liabilities.

QUESTIONS.

1. You are asked to test the correctness of a set of books kept by single entry by applying the double entry system to the entries made. What would you do without writing a new set of books? Take as a basis the following ledger accounts:

Dr.		John Doe.	Cr.
1905		1905	
Jan. 2, Balance	$1000	Feb. 2, Cash	$ 600
Jan. 20, Mdse.	500	Feb. 2, Disc.	12
		Feb. 2, Returns	400

Dr.		Richard Doe	Cr.
1905		1905	
Jan. 25, Ft. Charges	$ 200	Jan. 20, Mdse.	$2000
Feb. 2, Acceptance	1500		
Feb. 2, Mdse. Ret'd	300		

2. How would you determine the profits for a given period from a set of books kept by single entry, the capital at the beginning of the period being known?

3. How would you audit a set of single entry books, and how would you prepare therefrom statements showing the results obtained by the business?

4. Define and differentiate the following kinds of statements:
   (a) Statement of Assets and Liabilities.
   (b) Statement of Affairs.

5. Set out below is a statement prepared by Mr. J. Brown, a cigarette manufacturer, claiming to show the result of his year's trading. Do you approve of the statement? Give brief reasons in support of your views.

Plant and machinery..	$ 5,059.00	Capital	$ 2,659.00
Furniture and fittings.	187.00	Sundry creditors	9,850.00
Goodwill	1,500.00	Loan	2,000.00
Inventory	6,451.00	Bank overdraft	2,000.00
Accounts receivable....	4,484.00	Balance, being profit for year............	1,591.00
Cash	19.00		
J. Brown, drawing acct.	400.00		
	$18,100.00		$18,100.00

6. Robinson & Co., wholesale dealers in notions, whose books have not been kept by double entry, wish to improve their system of bookkeeping. Write a brief report, advocating double entry, setting forth the superiority of that method generally, and showing by specific reference to the mode of bookkeeping employed by them, the advantages that will accrue from the change.

7. Your suggestion (see the previous question) as to a change of method having been approved by Robinson & Co., you have been instructed to make the change at the close of the fiscal year; state in detail how you would proceed from start to point of proof.

8. Reduce the single entry system to a few accounting equations that will embody all its basic principles.

9. Why is it often desirable to compare the amounts of the items appearing in the balance sheets of a concern representing its finances at the beginning and end of a fiscal period?

10. The balance sheet of The Alameda Supply Co., Jan. 1, 1907, shows the following state of affairs:

ASSETS		LIABILITIES	
Real Estate	$ 50,000.00	Capital Stock	$200,000.00
Plant and Machinery	85,000.00	Creditors, open account	16,000.00
Horses and Wagons	15,000.00	Bills Payable	30,000.00
Patents and Goodwill	20,500.00	Profit and Loss Account	30,500.00
Inventory	49,000.00		
Accounts Receivable	35,000.00		
Cash in Bank	22,000.00		
	$276,500.00		$276,500.00

A year later, Jan. 1, 1908, after an audit of the books and accounts, the balance sheet stands as follows:

ASSETS			LIABILITIES		
Real Estate		$ 52,000.00	Capital Stock		$200,000.00
Plant and Machinery:			Creditors, open account		17,000.00
Bal. 1/1/07	$85,000		Mortgage		25,000.00
Less dep	8,500		Profit and Loss Account:		
		76,500.00	Bal. last year	$30,500	
Horses and Wagons:			Profit this year	23,400	
Bal. 1/1/07	$15,000				53,900.00
Less dep	2,250				
		12,750.00			
Patents and Goodwill		20,500.00			
Inventory		65,000.00			
Accounts Receivable		33,000.00			
Agency Investment		15,000.00			
Cash in Bank		21,150.00			
		$295,900.00			$295,900.00

From the foregoing it will be seen that for the year a net profit of $23,400.00 has been earned, while the accounts receivable are smaller and the cash balance on hand is less than at the beginning of the year, though no dividend has, in the meantime, been paid.

Prepare an account showing what has become of the profit earned.

11. H. Johnson and J. Dinkle have been in partnership for a year, and the books have been kept by single entry.

An examination of their affairs discloses the following resources and liabilities: Goods, $800.00; Cash, $85.00; Real Estate, $1,000.00; and account due L. B. Ross, $900.00; a note in favor of the firm, signed E. J. Jones, $1,500.00. Their investment was: Johnson, $385.00; Dinkle, $400.00.

Prepare a statement showing the profit for the year and make the journal entries necessary to open new double entry books. Also prepare the capital accounts showing the disposition of the profit.

12. Statement of affairs of John Doe, Jan. 1, 1910.

Ledger Balances	Dr.	Cr.
M. C. Grace	$ 165.00	$
Jas. Hamilton		76.85
Harold Wayne		472.65
J. B. Grayson	26.25	
The Ivy Press		65.65
Fredonia Hotel	67.98	
Mrs. Chas. Johnston	176.25	
M. B. Johnson	65.65	
Harold Jackson	345.95	
Jas. S. Martin	75.75	
John Doe, Investment, 1/1/09		5,000.00
Resources		
Merchandise, Inventory	$ 354.50	
Fixtures	450.00	
Cash, per cash book	2,230.55	
Insurance, Unexpired	10.00	
Accounts Rec. as per ledger balances		
Liabilities		
Bills Payable		$ 90.00
Accounts Payable, as per ledger balances		

From the above information open double entry books and ascertain the profit or loss for the period under review.

13. John Smith's books show that he has accounts outstanding to the amount of $24,500.00. They also show that he owes $7,345.00; $2,500.00 of which is a note in favor of his brother Harry. He estimates that his investment was $5,500.00, nearly all of which was merchandise.

An appraiser estimates that, in addition to what the books show, he has real estate to the amount of $9,000.00; horses, $450.00; wagons, $150.00; merchandise, $25,000.00; and fixtures, $985.00. He owes the bank $15,000 on notes and also owes his brother $2,000.00 which items do not appear in the books.

The real estate was purchased just prior to the time he entered business, 5 years ago, and cost him but $4,500.00.

From the above information open double entry books and show the amount of profit he has derived from the business during the time he has been in operation; taking into consideration, if necessary, that his living expenses amounting to $75.00 per month have been taken from the business in lieu of salary.

14. You are asked to prepare an account showing the profit earned by a concern for a certain period. The books have been kept by single entry and you gather from them the following:

Capital, $19,360; Cash, $2,600; Accounts Receivable, $15,600; Merchandise, $10,400; Fixtures, $1,650; Accounts Payable, $3,850; Bills Payable, $5,000; Merchandise used by proprietor, $800.

The capital above set out is the balance of the account after $1,500 withdrawn during the period and $1,200 for salary have been charged up against it.

Set up a statement showing the profit and loss.

CHAPTER III.

Accounts and Accounting, Accounts—Character

Accounts Defined.

"An account is a registry of pecuniary transactions; a written or printed statement of business dealings, or debits and credits, or of a certain class of them, or of other things subject to a reckoning or review." (Webster.)

Accounting Defined.

The act of preparing a registry of pecuniary transactions or of stating an account.

Accountant Defined.

An accountant is one who is skilled in designing and preparing records of pecuniary transactions and in stating accounts.

The term accountant is often assumed by bookkeepers but this application of the term is erroneous, for accounting implies much more than mere bookkeeping. A reference to the chapter on bookkeeping will disclose that bookkeeping is the act of recording business transactions—the simple, mechanical process. The accountant, not only is able to keep books but also is able to devise methods and design the form that books should take, for the use of the bookkeeper. There is also a distinction between an auditor and an accountant, for auditing is inspecting and criticizing the work of others. We may therefore summarize as follows:

Bookkeeping is Mechanical.
Accounting is Constructive and Creative.
Auditing is Inspective and Critical.

Certified Public Accountant, Defined.

A Certified Public Accountant is one who, by virtue of his personality, knowledge and experience, has been able to satisfy a board of examiners, acting for the state, as to his honesty, integrity and efficiency in handling the affairs of commerce and finance. A person employing him is virtually assured by the state from which he received his certificate that he is competent to perform any work pertaining to the profession. His certificate carries weight in all financial institutions and, even though the Certified Public Accountant, himself, may be unknown to the institution, the fact that he has qualified and holds the proper certificate is sufficient to assure the accuracy and authenticity of his work.

Division of Accounts.

It is our desire to take up the study of the work of an accountant, viz., the devising of forms for stating accounts and the propriety of including certain items therein. We believe it will answer our purpose and will prove more advantageous to the student if we consider accounts in the sense of their being a simple narrative or statement of facts or occurrences, and we will not attempt to classify them, as usually is done, as simple debits or credits or as to the finalty of the record. We will attempt to show how, by using some form that is adapted to the particular narrative, it may be more readily interpreted, may insure greater accuracy in reading or transcribing, or may reduce the labor involved in classifying the events. We also will attempt to show the evil effect of careless classification, as well as the advantages to be derived by carefully grouping items of a class, and by sub-dividing certain of these groups, carrying the important items of the group in one account and the minor items in others. In addition to this we will show how certain of the transactions may be displayed not only individually but also collectively or in summarized form with advantage, as well as the object of and the advantages to be obtained by so grouping them. First, though, we wish to consider the persons or things affected by the transactions, and this requires a classification as to character.

Character.

As to character, accounts may be Personal or Impersonal.

Personal.

Personal accounts are accounts, with persons, which show the effect of the transaction on the various people with whom the institution or concern has done business. In its broadest sense, this would include accounts with the proprietors and we will include the consideration of proprietorship accounts under this heading.

Personal accounts with others are usually of such an extensive nature that it is desirable to keep them in a book or books separate from the other accounts. They are usually divided into two sections; those to whom we sell and those from whom we buy. Each of these sections or groups may be given a separate book or, as is often necessary, a number of books may be assigned to one of the groups; for instance, the sales of a large wholesale house may be divided as to salesmen's territories or states covered; each state or salesman's territory having a separate record or ledger.

The method of proving and of incorporating these ledgers into the general ledger offers many points of interest and will be considered under Controlling Accounts.

The accounts representing the proprietorship in a concern may be divided into three classes, representing either the interest of the individual operating alone, the respective interests of partners, or the interest of a collection of individuals operating as a corporation.

In the case of an account representing the proprietary interest of a sole trader, it is customary to credit him with his investment and with any increases resulting from his operations. Decreases and withdrawals in the nature of funds or goods are charged to him. The adjustments to his capital account, however, are made, usually, at the end of each fiscal period; the individual items being retained during the period in a subsidiary account under the heading, Drawings, or Current Account.

In the books of a partnership, accounts are operated for each of the partners, the same as in the case of a sole trader, with the exception that where partners have agreed to invest a specific sum, their capital account will always show this sum irrespective of an insufficient investment, accruals in the way of profits, or deficiencies representing losses sustained.

To illustrate: "A" and "B" have entered into a partnership, agreeing to invest $10,000.00 each and to share profits equally. "A" invests $8,000.00 while "B" brings in the amount agreed upon. There still remains a liability on the part of "A" for the $2,000.00 that he failed to bring into the firm. This should appear on the books as an account against "A."

At the end of a year, we will suppose a profit of $4,000.00 is ascertained. "A" and "B" should each receive credit for half of this sum. In "A's" case this could be used to write off his existing liability; while in the case of "B" the $2,000.00 would appear to his credit, subject to withdrawal.

Corporations, as a rule, do not carry accounts with their individual stockholders in their general books, although an exception might occur in the case of a close corporation where there are not enough members to warrant the use of subsidiary books. The customary plan is to carry an auxiliary record to show the shares held by the individual stockholders. Usually this auxiliary record is entirely separate from any of the financial books and is operated entirely independent of them. Even where stock is only partly paid for or where dividends have been declared and remain uncalled for, accounts are not opened for the individuals; instead, they are treated as a class and one account answers for them all; the details of the account being carried in some other convenient form.

IMPERSONAL.

Impersonal accounts are accounts carried in double entry books with inanimate things representing the various activities or divisions of the business. They may be either Real, as representing actual property or rights in possession, or they may be Nominal, representing the effect of each transaction or class of transactions on revenue, as sales, wages, etc.

QUESTIONS.

1. In contra-distinction to the duties of an auditor, what are, generally, those of an accountant?

2. Explain the following accounts:
   Personal.
   Real.
   Impersonal.
   Nominal.

3. What is the relation of nominal accounts to real accounts?

4. What advantage has a firm or corporation in employing a Certified Public Accountant to conduct an audit?

5. In the books of a corporation, how are the accounts of individual stockholders usually kept?

6. "A", "B" and "C" agree to start in business with a capital of $400,000.00, of which "A" is to furnish $200,000.00; "B," $100,000.00, and "C", $100,000.00. "A" is to have a ½ interest in the business and "B" and "C" each ¼ interest.
   "A" contributes $200,000.00; "B", $90,000.00, and "C", $80,000.00.
   How would the capital accounts appear on the books at the end of the year?

7. The capital account of "A" showed a credit of $2,000.00 on January 1st; during the year he withdrew $500.00 and made a profit of $1,200.00. How should these items appear in his books? Illustrate.

8. On Dec. 31, 1907, the balance sheet of James Smith & Co. showed liabilities $90,000.00 and assets $190,000.00. The books are kept by single entry and the Statement of Assets and Liabilities of Dec. 31, 1906, showed the capital to be $98,800.00, of which "A's" share was $40,000.00; "B's" share $33,800.00 and "C's" share $25,000.00. Profits are to be divided as follows: "A," ½; "B," ⅜; "C," ⅛. During the year "A" drew $5,000.00, "B" $4,000.00 and "C" $3,000.00. Make up profit and loss, and partners' accounts.

CHAPTER IV.

ACCOUNTS—FORM.

We believe, for the purpose of this book, it is unnecessary for us to explain the functions of the Date, Explanation, Folio and Amount columns used in separating and classifying the various elements of the usual business transaction and that we may start at the point where these columns are grouped into a form desirable for displaying a simple chronological record of transactions as a class.

SIMPLE CHRONOLOGICAL RECORD.

Such a record will contain the columns mentioned above, in the order they are given, and will be desirable for use in recording such items as cash receipts, etc.

If it were desired to include the cash payments in the same record, it would be necessary to deduct each individual credit from the debits to ascertain the amount of cash on hand from day to day.

This reminds us of the stubs of a check book, provided with but one amount column, on which a bookkeeper had endeavored to keep a record of his bank account. He started out satisfactorily and got the first page correct. On the second page, he made an error and immediately corrected it. On the third or fourth page, he made another error but did not discover it until the end of the month, while reconciling his cash account; then, in trying to correct, he changed every total or balance of the fifteen

---

The student or instructor will notice that no forms are included in this chapter.

This omission is intentional and was made after consultation with many experienced men. Their conclusion is that the ordinary students are unable to draw forms in a satisfactory manner and that any method which will require that they become more proficient in this respect, will be beneficial.

We believe that we have fully explained each form so that the student can easily draw it if he will but make the effort and, in exchange for the effort he makes, he will have a much better idea of the details of each form and will remember it much longer.

The student will find a number of the rulings identical but the column headings or the purpose of the form is different in each case.

In drawing these forms we suggest that the student adhere to the following width of columns:

Date, one-half inch; Explanation, one and one-half inches; Folio, one-fourth inch; Amounts, one inch.

pages that contained entries made during the period in which the error was undiscovered.

The plan of recording was very simple and, probably, owing to the necessity of carrying forward balances after every few items, was as good as any but, when it is not necessary to start a new page after every two or three entries, it is better to subdivide the debits and credits and provide a column for each.

This can be accomplished by simply adding another money column to the right of the one already used and by entering the debits in the first column and the credits in the second one.

JOURNAL FORM—DEBITS AND CREDITS WIDELY SEPARATED.

Or, if preferable in any particular case, instead of attaching another column on the right, the additional column may be placed on the left, in the portion usually allotted to the date, but the new column will now contain the debits and the other the credits, as usually it is desirable to keep the charges on the left side and the credits on the right. An additional folio column will be required now and will be placed to the right of the new money column, between it and the explanation column. The date will be inserted in the information column between each transaction, thus:

JOURNAL, JANUARY, 1911.

Dr.	Folio	Explanation	Folio	Amount
		1st		
245.00	3	Cash		
		H. Watson	27	135.00
		Bills Rec.	11	110.00
		Pd. his a/c and note in full		
		1st		

The principal value of this particular arrangement is that the debit and credit items are widely separated and the danger of posting debits as credits or *vice versa* is considerably reduced.

Ledger Form.
Standard.

The above forms are quite desirable where items occur in chronological order and where such chronological arrangement assists in referring to them but, where the chronological arrangement of the events of a class is of lesser importance than distinguishing between the debit and credit items, it is preferable to arrange the account with two separate and complete chronological records similar to those outlined at the beginning of this chapter.

Each of these records will include columns for Date, Information, Reference and Amount and they will be displayed side by side, the debit on the left and the credit on the right.

The order of the columns or the amount of space allotted to each is subject to considerable variation and this will require additional consideration on our part.

Ledger Form to Facilitate Reference Between Debits and Credits.

In the case of a journal, it is usually considered advisable to show the debit and credit money columns as widely separated as possible, or at least to take a considerable amount of precaution against posting one class of items as the other but, in the case of a ledger, the opposite rule seems to hold and, in general, it is thought desirable to arrange these columns to facilitate reference as much as possible.

One of the best plans of ledger rulings, used with this end in view, is that wherein the money columns are placed close together; the date columns in this case being placed at the edges of the page.

The order of the columns is Date, Explanation, Folio, Debit Amounts, Credit Amounts, Folio, Explanation and Date.

An objection to this form is found in the variation of the order in which the columns occur on the two sides of the account. When posting, it is customary to remember the items in the order: Date, folio, amount. This form requires that the credit items be posted in the reverse order or that the writing be made in the reverse order. Either method is confusing and must reduce the speed of the bookkeeper considerably.

Ledger Form—Showing Balances.

There is also a feature, used in connection with the form outlined above, that is rapidly coming into use. It consists of placing between the money columns, still another column into which the balances of the account are extended. There are a number of derogatory features, however, which we believe should be mentioned in connection with this form. The principal one is the tendency of the bookkeeper to use only a pencil when computing the balances and this, usually detracts greatly from the appearance of the books. It is also necessary, if full benefit is expected to be derived by the use of this form, to start the first entry for a new month, be it debit or credit or even though there are numerous vacant lines above, at a point at least one line below the balance, thereby grouping all items referring to a particular month between the balances as shown at the beginning and end of the period. Also, there is but one column to contain both the debit and the credit balances and, unless care is taken to use red ink or a draw a ring around credit balances, much confusion will result.

All confusion can be eliminated by using two balance columns, one for the debits and one for the credits in connection with the standard ledger form.

Additional Columns for Monthly Totals.

In the case of a firm whose books must show all transactions immediately after they occur, it is sometimes very difficult to prove the books owing to the necessity of continuing with the posting from day to day even though the books are out of balance. This difficulty can be eliminated by using the standard ledger form arranged with two amount columns on each side, an extra amount column being placed to the right of each of those already in use. The total of the debits and the credits, either for the current month or to date, in each of the original columns can be shown in the extra columns for use in connection with the trial balance; additional entries can then be made without disturbing the work of proving the previous month. The "Balance" forms mentioned in the preceding section are also of value in this respect, if properly operated.

DETAIL COLUMNS.

Often, in displaying an account, it is desirable to show in detail the items that comprise it.

This is accomplished by placing a column to the left of the one in which the item to be explained is shown and showing in this column all of the items comprising the total.

The most familiar example of detail columns is the invoice used by tradesmen to show the indebtedness for goods purchased. In this case, usually, but one detail column is necessary, although as many can be used as is required. The ruling of the account described in this section is identical with the one described on page 27.

COMBINED ACCOUNTS.

There are some accounts which are so closely allied that it is desirable to display two or more of them under the same heading.

Take, for examples, income producing property, stocks, bonds, etc. In each case it is desirable to distinguish between the income derived from the asset and any increment or decrement that it sustains during a particular period and also to retain all of the items in the same account. This result is obtained by carrying two money columns on each side of the account; the first on either side being used to record the items relating to income and the second to record all other items. It is then possible, at a glance, to ascertain the income which each investment has produced as well as the amount invested and the nature of the investment, and, if the asset has been disposed of, the profit or loss resulting from the transaction.

Probably the most common use of combined accounts is in connection with the accounting of estates where, often, a very careful apportionment between corpus and income is necessary and where the two classes of items are carried in separate columns throughout the books.

In the accounts pertaining to the issue and the payment of stock of a corporation, it is very desirable to show the number of shares held by a person as well as the amount he owes thereon in the same account; therefore, the two accounts are combined and shown under the same heading, similar to the illustration outlined above. The ruling of this form, is also identical with the one described on page 27.

Still another use of combined accounts is found in connection with the records of concerns which deal with people of a foreign country who use a different currency.

As an example, let us take the case of an American importer buying goods from Great Britain. The invoice he receives will always be extended in English money and for the purpose of reconciling his accounts with the English merchants' it is necessary that he keep a set of records in their currency. It is also necessary, in order to keep his own books in balance, to record the transactions in American money.

Each of these financial records will require the same details of explanation, therefore, in order to save time and space, it is customary to arrange the account in a manner which will allow the same explanation and information to apply to both financial records. This is accomplished by arranging a combined account with the following headings for each side, debit and credit: Date, Explanation, Folio, Foreign Currency, American Currency.

Wide Explanation Columns.

We believe we have fully covered the different forms of displaying the amounts and the dates and we will now take up a study of the explanation columns.

The most common variation of these is found in ledgers where considerably more information is required in explaining one side of the account than is necessary in explaining the other. For example, in the case of a branch office, all invoices to the home office should be most fully explained in the ledger to facilitate the preparation of a statement of the account to forward the home office and will require considerable room, while the credits to the home office account in the branch books will probably be shown in total and will require no explanation at all, except the reference to the page of the journal on which the distribution of the invoices is shown. A ledger with an exceptionally wide debit and a narrow credit explanation column is consequently preferable in this particular case.

Special Information.

There are also cases where the utmost detail is required in the explanation column, as in the case of a brewery. A brewery usually has from six to ten different sizes of containers and it is necessary to keep a record of those charged to each customer. This is accomplished by using an extra wide explanation column on the debit side. This column is subdivided into three-eighths inch columns, one for each size of containers. Each shipment of product is entered in detail in the ledger, the quantities being recorded in the proper column according to the size of container. In general, the charge for containers is kept separate from the other charges, necessitating two amount columns on the debit side.

The credit side may take a form identical with the debit side, or if preferred it may show only the date, information, folio, and the two amount columns. The first form mentioned is usually preferred as by its use it is always possible to determine just how many of each size of container is outstanding with a particular customer, although where the containers are called in promptly or where the brewery is intentionally lax in calling them in, the second form answers very nicely.

Leaders.

In a book as wide as would be required to contain the number of columns mentioned above, it is often hard to follow a line across the page.

Some of them may be ruled in red or heavy blue ink—usually every fifth one—thereby making it very easy to follow a particular line.

Proving Postings.

The use of additional columns may also serve another purpose, in addition to giving a more detailed record of the transaction, viz., they may be used to assist in proving the work, either by the aid of additional folio columns or by the aid of additional amount columns.

Folios Classified.

By arranging additional reference columns to allow one for each book of original entry, it is possible, although possibly impracticable, to sort out the amounts to which they refer and to classify them according to the sources of the entries; then, in proving the work, the total of the items posted to a ledger from any book of original entry may be ascertained by totaling the items which have an entry in the folio column which refers to that particular book. This total should agree with the total of the items as shown by the book of original entry and an error in posting can be localized to one particular book, by a comparison of the amounts.

AMOUNTS CLASSIFIED.

A similar plan may be followed, in connection with the amount columns, without having recourse to the reference columns. Of the two plans, the latter is used almost exclusively as it deals directly with the amounts in question and thereby reduces the possibility of errors in proving.

This special ruling may be used in connection with almost any of the forms heretofore mentioned. Its use is rather limited but it is almost invaluable where different departments bill separately and allow different rates of discount.

BOSTON BANK LEDGER.

The most important use to which this ruling has been put is in connection with the record of depositors' accounts in a bank. In this particular case it is essential that the books be balanced every day and that they show, at all times, the exact status of each account. In order to facilitate the work, columns are used for balances at the beginning of each day, checks cashed, deposits made during the day, and balances at the close of business. The balance at the beginning of the day was proved at the close of business on the preceding day. All checks are entered in the next column and all deposits in the third column. Each of these columns is proved individually by making the totals agree with the total of the checks or the deposit slips. After the entries for the day are known to be correct, it is a simple matter to ascertain the correct balance for each individual account and also the total balances.

In ascertaining the balance of each account, it is necessary to take the original balance, deduct the checks, and add the deposits for the day; therefore, the totals of the columns containing the original balance and the deposits should equal the columns containing the checks and the new balance.

If this is true in the case of one account, it is also true of any number of accounts; therefore, all of the accounts may be proved, *en bloc,* or any page or section may be proved individually and an error, if there is one, localized to a particular page or section and later to a particular account.

Still another reason for subdividing amounts is found in connection with books of original entry, used where there are a number of different ledgers and where, for the purpose of facilitating the proof of the entries to each ledger, it is desired to keep all of the entries affecting a particular ledger in a separate column.

In this case separate columns, to contain the entries affecting each ledger, are provided in each book of original entry except in cases where a particular book of original entry could not contain entries affecting a particular ledger as in the case of a bills receivable register which has no connection with an accounts payable ledger.

Cost Ledger.

Amounts may also be classified for a purpose other than facilitating proof. As an example, take the case of a cost ledger where the different classes of charges to an account receive different rates of oncost.

Each of the classes of items, such as material cost, labor cost, or direct expense is recorded in a separate amount column and the totals are brought down at the end of each period or at the completion of the work. The oncost is then computed, on each of the totals, at the rate that is considered proper.

Membership Ledger.

In the case of clubs, lodges, banks, and similar institutions, where there are usually but few entries to an account between each period of balancing, it is customary to include a considerable number of accounts to a page, allowing only a few lines to each one; each page or section is then considered as one account and treated accordingly.

It is also customary to dispense with the explanation columns entirely as, in general, the charges to all accounts are similar and a separate column is provided for each class of items, making it unnecessary to further explain the transaction. A special column, usually on the extreme left, must however, be provided for the names of the accounts.

As an example, take a club or a telephone company. In each case a charge is made to each account at a stated period to cover services for that period; therefore special columns are provided for the names and for each period's charges. Usually there is a fine or penalty for arrears and, in order to facilitate the work, the books are usually closed on the day the penalty accrues. The balances due on the accounts are extended into a specially designated column and, in still another column, an amount is entered after each balance found in the balance column to represent the penalty. These two items form the nucleus of the new month's accounts. If, as is usually the case, additional charges are made to represent special services in the nature of long distance calls, etc., they are kept in memorandum form until the end of the period, when they are entered, in totals, in a column specially provided for the purpose. Credits to accounts are also cared for by the aid of special columns.

In the case of a club, column headings would be as follows: Members, Balance, Fines, Dues, Charges, Total Debits, Date, Folio, Credit, Balance, etc. across the page —a like series of rulings to be provided for each month of the year.

A telephone ledger might take the following order of columns: Phone No., Balance, Service, Miscellaneous Charges, Total, Date, Folio, Credit, Discount, Balance, etc. again throughout the series—one set for each month.

Narrow or Short Pages.

In the case of banks in particular, where a Boston bank ledger is used, new pages are required at very short intervals and, in order to eliminate the necessity of rewriting the names for each new page, it is customary to perforate the sheets on the perpendicular line that separates the names from the amounts; then, instead of copying the names on each new page, it is only necessary to remove the end of the new sheet at the perforations and thereby allow the original set of names to be exposed so they can be used again in connection with the money columns on the succeeding page or series of pages.

In the case of clubs, telephone companies, and similar organizations which have constantly recurring charges, it is known just how much space will be required for an account and it is possible to have the ledger bound with the first leaf wide enough to contain the name of the account and a sufficient number of columns to record the transactions for two months. The second leaf will have the columns for two more months printed on each side but will be narrow and will not contain a space for the names, for the reason that the names which appear on the first sheet—the wide one—will extend beyond the second sheet and will be exposed for use with the columns which appear on each succeeding sheet. The third sheet will be the same as the second while the fourth sheet will be a wide one and will have columns for two more months to complete a year on the first page and will have sufficient room on the other side for a new set of names and two sets of columns for the next set of names.

Different length pages may be used wherever it is necessary to carry the totals forward from page to page at short intervals. In this case, the first page used at the beginning of a period will be considerably shorter than the rest and each succeeding page will be just one line longer than its predecessor, so that the total of the items at the bottom of any page will never be covered by the preceding page and so that the totals may in turn be totaled without turning the pages. Although this plan is desirable in many cases, its use is limited to cases where not exceeding ten or twelve pages are to be used, otherwise the short pages will be too short for any use.

The best example we can give of this form is a comparative report of business done. Each month, the details of the business are recorded; the totals for the month being placed at the bottom of the page at a point where the sheet containing the preceding months' business will allow it to be exposed. Each succeeding month is handled in the same manner. This allows the totals of the twelve months to be exposed at one time and also, after lifting up the pages covering succeeding periods, allows the details of a particular month to be ascertained very easily.

It is also possible to use sheets in a loose leaf binder in such a way that the totals of one page will not be obscured by the succeeding page and so the totals of the one may be included in the totals of the next without rewriting. This is accomplished by cutting one line off either the top or the bottom of every page except the first of any particular period and by using them alternately in such order that the totals of any page will always appear either above or below the next page.

When the first page is totaled at the bottom, as is usual, the succeeding page should be one of those with the lower line removed. After it is in place the totals from the first page will remain in view and may be included with the items of that page when ascertaining their total. In this case, however, the totals of these pages must be placed at the top of the new page so that when the third page of the series—one with the top portion removed—is in place it will still remain in view and may be added with the items on that page. The totals in this case being placed at the bottom of the sheet. It will be noticed that the totals will alternately appear at the bottom of one page and the top of the next.

Still another use of cut pages is found in connection with columnar journals where there are numerous columns—so many that it is impracticable to have them spread across one page of the book. In the case of a voucher register, the main subdivisions of the accounts such as Manufacturing, Trading, Administration, etc., only are allowed exposed columns. The details of each main subdivision are recorded in columns to be found on the same sheet as the exposed column but to its left and, just under the preceding sheet, when the book is closed.

In the particular voucher register we have in mind, the paper is used on but one side and all sheets are bound on the left side. When the book is opened, columns are exposed as follows: Date; Creditor; Folio; Accounts Payable; Vouchers Payable; Voucher Number; Date Paid; Manufacturing; Trading; Administration, and Miscellaneous Accounts Debit, subdivided into Date; Account; Folio and Amount. The columns Manufacturing, Trading, Administration and Miscellaneous Accounts are each on a separate sheet, arranged with a number of columns, to the left of the column mentioned, which contain the details. In the case of the Manufacturing Account sheet, the inner columns are headed, Pig Iron, Scrap Iron, etc.

Rules for Draughting.

The following list of rules covering the draughting of books will no doubt prove of value:

(a) Place folio columns as close as possible to the column containing the amounts to be posted.

(b) Place columns, that are to receive amounts which must be posted, as near to the explanation column as possible.

(c) Place columns which have no direct connection with other columns, and which are used for memoranda only, separate from the other columns. This relates to such columns as "Cash Discounts" used in a cash book where net amounts only are used in balancing the cash.

(d) Use leaders on all books of unusual width.

(e) Arrange a column for tabular proof wherever possible.

QUESTIONS.

1. What advantages are to be derived by widely separating the debit and credit amounts in a journal?

2. Distinguish between a journal and a ledger as to use.

3. What advantage is to be derived by placing both money columns together in a ledger?

4. Could the form referred to in question three be improved upon in any way?

5. Draft the form suggested where it is desirable to maintain the sequence of dates.

6. Outline three forms of ledger ruling, each differing from the standard form. Mention the points of superiority over the common form of each of the three special forms, for the purpose intended.

7. Rule a ledger for use under the following conditions:
Allowing an easy comparison of amounts,
An extra column for balances,
Considerable detail in explaining the debit entries.

8. Prepare a ledger ruled in such a way that the total of each column will represent the total of one of the books of original entry.

9. Prepare a ledger for the use of a business, having 1,000 accounts, in which it is necessary to know the total charges and credits to each ledger daily and in which it is also necessary to know the balance standing to the credit of each account daily.

It is also necessary that the balances be arranged in such a way that they can be easily totaled and their sum ascertained.

There are usualy but few entries to an account each day.

10. Prepare a ledger for a telephone company which makes monthly charges to accounts for service and also for long distance calls.

Where payment is made before the tenth of the succeeding month, a rebate is allowed.

For convenience, the books are balanced on the tenth of each month.

11. Prepare a ledger ruling for a brewery, arranged so that each account will show the number and kind of containers and the number of the delivery receipt which in turn contains the serial numbers of the containers. The account should also show the charges made for keg beer, bottled beer and containers, separately, as well as the total charges of each shipment.

The credits should be divided to show the credits on containers separate from the credits on beer.

The beer is bottled in two sizes; boxes are arranged to hold two dozen of each size and barrels are prepared for export trade, each containing 5 dozen quarts or 10 dozen pints; the kegs are of three sizes.

12. Prepare a ledger for a club which charges an admission fee of $50.00, monthly dues of $5.00 and also additional sums for special privileges. Fines are charged to the accounts where the members fail to keep up their dues.

13. What form of ledger would be appropriate for an enterprise in which the accounts bear interest at 5 per cent per annum on current transactions? Illustrate a ledger account in detail, showing the method of computing the interest and balancing it into principal semi-annually.

14. Illustrate the use of a series of cut pages in a comparative report; each page to contain one line more than the preceding one; the extra line to be placed so that anything written thereon will be exposed and may be read though the balance of the sheet is covered by a shorter sheet containing the comparative report of a preceding month. The bottom line of each sheet is to contain the totals of the month's business, and the sheets are to be arranged so that the totals of twelve months may be exposed at a time.

15. Illustrate the use of cut pages where the top of one and the bottom of the next is removed.

16. Prepare a copy of the form of voucher register described on page 37.

17. An American firm has an extensive trade with Spanish and English customers, to whom goods are invoiced in Spanish and English currency, and payments made by bills in those currencies are accepted. The firm's principal business is, however, in the United States. Explain in what manner you would arrange for keeping the ledgers and the titles of any special accounts that might be necessary.

CHAPTER V.

Classified Journals.

Under the old system of bookkeeping, it was considered necessary to make not only an immediate memorandum of the transaction but also, at a more opportune time, to re-write it showing the accounts and the effect thereon. Each entry was considered individually and it was believed necessary to show, in the ledger, a chronological record of all transactions affecting an account. In order to accomplish this result, it was necessary to make at least two postings for each transaction and, in a business of any size, the system was unwieldy and expensive. Under the stress of urgent necessity, various plans have been adopted to reduce the labor and expense involved.

The principal of these consists of classifying the items according to accounts affected and, instead of posting all of the items affecting an account to the ledger, keeping a detailed list of them in the book of original entry and posting only an amount, representing the total of the items, to the ledger. The items which make up the total, are, of course, posted individually to their respective accounts.

In many cases the items affecting an account are so numerous that a separate book should be used for recording them, as in the case of sales, purchases, etc., but in other cases the entries to an account might not exceed a dozen or so, in which case a page or two in the journal can be alloted to the entries affecting each important account and the plan of posting totals in lieu of many similar items given effect.

In general, there is but one posting made to represent the total of the items entered in the book or on the alloted pages of a journal for a particular month, but in some cases it is desirable to further subdivide the items, in which case, additional colmuns are used and the individual items are distributed into these columns according to sub-accounts affected.

Sales Book.

For example, take the case of a merchant selling some particular article; he would have numerous charges to customers but only one credit, viz., to sales account, and a chronological record of these would possibly answer his purpose. If he were to increase his line of goods and desire to analyze his sales, let us say into machines and supplies, it would be necessary to provide columns, under each of these headings, into which the items making up a sale could be distributed.

Tabular Proof.

If, as is usual, the original column representing the total of the sales was allowed to remain and all items making up a sale were also extended into the distribution columns, the items in the amount column on any page or series of pages should equal the total of the items which had been extended into the other columns.

This is, probably, one of the best examples of tabular proof and is mentioned as it is one of the principal advantages of columnar books. Columns should be arranged to facilitate proof in this manner whenever possible.

Invoice Book.

If the merchant's purchases were numerous, he could also provide a book for the purpose of recording them. In some cases this would take the form of a scrap book into which all incoming invoices would be pasted. The amount of the invoice would be extended into a column provided for the purpose, and would be posted to the credit of the personal account affected. The column would be totaled to ascertain the amount of purchases and this sum would be posted to the debit of the purchase account and would counterbalance the various credits to the personal accounts.

Purchase Journals.

If he preferred, he could use the Chronological Journal Form (see pp. 24) for recording these items, in which case he would require columns for the date of the invoice, the name of the creditor, the terms of the invoice, the day it becomes due and the amount.

If, as stated above, he should decide to analyze his sales, it would also be advisable for him to make a corresponding analysis of his purchases, in which case he would require similar distribution columns, into which the analysis could be made.

QUESTIONS.

1. Prepare a sales book for the use of a foundry and machine shop. The following information is required:

Date of sale, folio, name of purchaser, items sold, selling price of each item and amount of sale.

2. Prepare a sales book, similar to the above, but with additional columns to provide for the distribution of the sales into subdivisions as follows:

Foundry,
Boilers,
Engines and Machines.

3. Illustrate the tabular proof by the aid of figures and entries in the form you have prepared in answer to the preceding question.

4. Prepare a purchase journal for use under the following conditions:

It is required to show invoice number, date, name of creditor, terms, due date and amount of the credit to the personal account; charges will be distributed over merchandise purchases, freight, trade expenses and sundries; folio columns are to be properly placed for easy reference.

CHAPTER VI.

Cash Records.

In each of the cases mentioned in the previous chapter, some particular class of items has been removed from an account in the ledger and their total substituted; at most, only one side of the account has been removed and there still remains a number of entries to the account in addition to those represented by the totals. Other cases arise, however, where almost the entire account is taken from the ledger as in the case of the cash account, where, if any mention of the account is made at all, it is only to show the total charges and credits to the account for the period.

Two Column Cash Book.

In this case, as the entire account is to be removed and as it is now to appear in a separate book, and, furthermore, as the entries therein are to be both the original entry of the transaction and the final entry of the cash account, it becomes necessary to provide columns for both debit and credit entries, each of which will represent one side of the cash account.

When a two column cash book is used, it is necessary to post every item appearing on either side of the cash book to the opposite side of some other account in the ledger; then, in order to keep the ledger in balance, the total of each side of the cash book is posted to the corresponding side of the cash account in the ledger.

Tabular Cash Book.

The plan of classifying the items and extending all of those in certain predetermined classes into separate columns and posting the total of the class instead of the individual items, is applicable to cash books as well as to other books of original entry but, in the case of cash books, the original or first column is used to contain the amount of the miscellaneous entries which might arise for which no special column has been provided, instead of as a tabular proof column, although the plan of tabular proof is applicable if desired.

As an example, let us take the case of a sole trader whose cash receipts consist of payments on account, made by customers and also of cash received from the sale of merchandise. His payments are to people from whom he has made purchases on account, and also for expenses, freight, express, etc. If the two column cash book were used, each item would be posted in detail to its individual account but, let us presume that instead of this he had provided a special cash book with columns into which the expenses, freight, express and items of sundry other classes could be entered; it would then be necessary to post only one item, representing the total of each special column, at the end of the period, instead of the numerous items which would be included in that total.

The column headings in this case would be in the following order:

Debit Side: Date, Explanation, Folio, Accounts Receivable, Miscellaneous, Cash Sales;

Credit Side: Date, Explanation, Folio, Miscellaneous, Expense, Freight, Express.

Discounts in Cash Book.

Let us presume, also, that a number of his customers were in the habit of discounting their bills and that he discounted his bills. In this case the cash involved would be slightly less than the amount of the account which it was intended to pay and a credit or charge would be necessary, from some source, to make up this difference.

The entries, to adjust, could be made through the journal, individually, or, if the items were numerous and it was considered advisable to use the journal for this purpose, a page or so could be alloted to Discount Account and the plan of posting totals as outlined on page 40, could be used; in general, though, it is considered advisable to carry the discount columns in the cash book, either as memorandum columns or as regular cash columns.

If they were to be used as memorandum columns, they would appear on the same side of the cash book as the entry representing the amount of the actual cash involved, but the entry in the cash columns would be the net amount received or paid on an account. All of the items appearing in the discount columns would be posted individually to their respective accounts and the total would be posted to Discount on Sales or Discount on Purchases as the case might be. The discount items would not enter into consideration when balancing the cash and would have no connection with it; in fact, there would be virtually three separate and distinct accounts in the cash book, one representing Cash, debit and credit; another representing Discount on Sales and the other Discount on Purchases.

The column heading of this book would be as follows:

Debit side: Date, Explanation, Folio, Discount Allowed, Net Cash Received, Miscellaneous, Cash Sales;

Credit side: Date, Explanation, Folio, Discount Received; Net Cash to Accounts Payable, Miscellaneous, Expense, Freight, etc.

If it were desired to reduce the number of postings to each of the personal accounts, by making but one posting of the gross amount instead of two postings,—one for the cash item and one for the discount,—it would be advisable to transfer the discount columns to the opposite sides of the cash book and to embody them in the cash account. The entry covering a cash item and a discount, in this case, would be a charge or a credit to cash for the gross amount, with a contra-entry to the same account to adjust the difference between the amount entered and the actual amount of cash involved.

As an example, consider the following account headings:

Debit side: Date, Explanation, Folio, Accounts Receivable, Miscellaneous, Cash Sales, Discount Received;

Credit side: Date, Explanation, Folio, Miscellaneous, Expense, etc., Discounts Allowed.

The plan of providing memorandum columns, entering net amounts, and making two postings offers a number of advantages which more than repay for the extra work involved. From an auditor's standpoint, the entering of the net amounts is preferable as it facilitates tracing cash receipts into the bank and, also, as it allows each personal account in the ledger to accurately display the mode of settlement. From a statistical standpoint the other plan —the plan of recording gross items on one side and deductions on the other, to counterbalance,—is entirely incorrect, as neither side of the cash book will accurately display the receipts or the disbursements and an attempt to use the totals for this purpose would be inaccurate and misleading.

There is, however, a limit to the use of this form, as it cannot be used where the discounts do not all relate to the same group of accounts, and to the same columns in the cash book. As an example, let us presume that the accounts with customers are kept in three separate ledgers and that a column is provided in the cash book to receive the cash received on each of these groups of accounts. If the net cash is entered in the cash portion of the book and the discount is entered in memorandum only, it will be necessary to have three discount columns, otherwise, at the end of a month, it will be necessary to analyze the amounts in the discount column for the purpose of determining the amount that is to be posted to the general ledger accounts which control the customers' ledger. (See Controlling Accounts, pp. 261.) The preferable plan is to enter the gross amount in the column representing the particular customers' ledger affected and then adjust the difference between this amount and the amount of actual cash received by a contra entry in a discount column provided on the other side of the cash book. It will be noticed that the total amount affecting a particular customers' ledger is entered in the column provided for that ledger, hence no analysis of the discount is necessary and one discount column will suffice.

Column headings would be about as follows:

Debit side: Date, Explanation, Folio, City Ledger, Country Ledger, Foreign Ledger, Miscellaneous, Cash Sales, Discount Received, etc.;

Credit side: Date, Explanation, Folio, Accounts Payable Ledger, Miscellaneous, Expense, etc., Discount Allowed.

Bank Columns in Cash Book.

In the cash books just outlined, the bank was not considered and if funds were on deposit in a bank the amount thereof would, necessarily, be included with the cash in the drawer when balancing.

If it were desired to distinguish between the amount of cash avails which was with bankers and the amount in the drawer but still not carry a bank account, memorandum columns could be used on each side of the cash book into which the deposits and the withdrawals could be recorded, the deposits on the debit side and the withdrawals on the credit side. In this case, the cash receipts would be debited to cash; but as the cash drawer would not be considered separately from the bank, no credit to cash would be given for funds deposited in the bank; likewise withdrawals from the bank for the cash drawer would not be charged to cash.

This plan is most often used where all receipts are deposited in the bank and where all payments are made by check.

It works very satisfactorily where this is done for there is no cash on hand, except in a separate fund, to confuse the bookkeeper when balancing.

The following ruling is suggested:

Debit side: Date, Explanation, Folio, Discount Allowed, Credit to Customers, Miscellaneous Credits, Cash Sales Credit, Bank Deposits;

Credit Side: Date, Explanation, Folio, Discount Received; Accounts Payable Ledger: Miscellaneous, Expense, etc., Check Number, Withdrawals.

If it were considered preferable to distinguish between the cash and bank items and to carry separate accounts for them in the ledger, it would be necessary to credit cash with all deposits and, if the cash book were still to be used for recording payments made by check, to charge cash with all withdrawals from the bank. This would necessitate standard columns on each side of the cash book to care for the bank items.

The deposit column would appear on the credit side of the cash book, giving Cash credit for all amounts taken from the cash drawer and deposited in the bank. The withdrawal or check column would appear on the debit side, charging Cash just as if the money had been brought back to the cash drawer. To counterbalance the entry debiting Cash, an entry would be made on the credit side of the cash account, debiting the expense or other account affected.

The following column headings would answer:

Debit side: Date, Explanation, Folio, Credit "A" to "L" Ledger, Credit "M" to "Z" Ledger, Credit Miscellaneous, Credit Cash Sales, Credit Discount Received, Credit Bank.

Credit side: Date, Explanation, Folio, Debit Accounts Payable Ledger, Debit Miscellaneous, Debit Discount Allowed, Debit Bank Deposits, Debit Expense, etc.

Daily Balance Book.

In the case just outlined, the cash book balance represents the amount of cash in the drawer only and, in order to have a record of the total cash avails, it is necessary to provide some sort of an auxiliary record which will combine the cash and the bank items.

This record usually takes the form of a Daily Balance Book into which a complete record of both the cash and the bank items is made.

In form, the book would be ruled similar to the following and would, possibly, be printed with three forms on a page, allowing six forms to be displayed when the book is opened as this number answers for a week's balances.

DAILY CASH BALANCE BOOK, THURSDAY........................, 191......

Bank Balance, brought forward			$ 00.00
Cash Balance, brought forward			00.00
Cash Receipts:			
*..		$ 00.00	
....		00.00	
....		00.00	00.00
			$ 00.00
Less:			
Cash Payments:			
*..		$ 00.00	
....		00.00	
....		00.00	00.00
			$ 00.00
Cash Avails:			
Bank:			
Balance, as above	$ 00.00		
Deposits	00.00		
	00.00		
Withdrawals:	00.00	$ 00.00	
Cash:			
Checks	00.00		
Currency	00.00		
Specie	00.00	00.00	00.00
			$ 00.00

* One line to correspond with each column in cash book.

In Chapter IV we outlined the disadvantages resulting from the use of a chronological record of events which contained both additions and deductions and mentioned the necessity of correcting each succeeding total to work out an error occurring in any previous portion of the work. In accounting to prevent fraud, this feature becomes an advantage in connection with the daily cash balance book for, in correcting an error, made either intentionally or otherwise, it is necessary to correct not only the balances of the report which contained the error, but also the opening balances of the current report, as well as both the opening and closing balances of all intermediate reports, or else to make entries in the cash book to adjust the error. In either case, the necessity of making the adjustment has a tendency to reduce the number of such errors.

Separate Books for Cash and Bank.

In the majority of businesses the cash receipts are greatly in excess of the number of cash payments, with the result that, as, in the ordinary cash book, it is necessary to carry both the receipts and payments along together chronologically, the credit side of the book is seldom filled and the unused space is wasted. There are also very few cases where a like number of columns are required on each side of the book and additional waste results here as well. In order to overcome this and also to provide for an increased number of bookkeepers, it is often desirable to provide separate books for the cash and the bank.

In such a case all receipts would be deposited in the bank and all payments would be made by check; therefore, but one column would be required in the cash book to record the cash credits, as they would all be entered in a column headed "Deposits" and, in the case of the bank record, only one column would be necessary for the bank debits. This would eliminate the necessity of devoting an entire side of a page for these entries as the extra column could, usually, be easily included on the same side as the other items, or, if the book would thereby become cumbersome, it could be folioed instead of paged and thereby be reduced in size, as both sides of the opened pages could be used for the same class of entries, debits or credits as the case may be, allowing but a small margin on one side or the other into which the columns for the contra-entries could be placed.

Cash Received Book.

Column headings for a form of cash received books might be as follows:

Date, Explanation, Folio, Accounts Receivable, Miscellaneous Credits, Cash Sales Credit and Bank Deposits.

If it were necessary to provide for discounts as well, a column could be placed just to the left of the Bank Deposit column to contain these entries. The two debit columns should be placed together to facilitate proving the cash. This method offers a particular advantage where it is desired to restrict the payment of bills with cash. In a Cash Received book, there are usually no columns into which cash payments can be recorded. Payments must therefore be made by check, hence all receipts must be deposited in the bank.

Still another method of handling cash receipts, found only in very large institutions which receive checks almost exclusively, is known as the Slip System. It is designed to reduce the work of entering the cash receipts. Deposit slips are prepared in duplicate. One copy, which may contain considerably more information than the other, is retained in the office as a posting medium. In one concern a separate deposit slip is prepared daily for each customer's ledger. In addition to the usual information, it contains the name of the customer, the amount he intended to pay, and the discount he expected to receive. The total of this deposit slip is entered in the cash book as a credit to the account representing the particular customer's ledger affected and also as a debit to the bank and to discount. All postings are made direct from the deposit slips which are bound together from day to day as they accumulate. This plan is not practicable where very much specie is handled but it does work very satisfactorily where the entire business is done by check. It is most desirable in a concern operating like a lumber jobber, where most of the sales are made subject to a sight draft, with bills of lading attached. The bank usually mails to the jobber a duplicate deposit slip each day for the collections received and, if the slip system is used, it is only necessary to file the deposit slip in the binder and post directly therefrom to the ledger, making the cash book record either as outlined above, or, if considered preferable, once a month after making a recapitulation of the deposit slips on the binder.

Check and Deposit Register.

Wherever the plan of carrying two separate books is used, it is customary to designate the one containing the bank entries as a check register.

This book usually contains, in addition to the customary explanation columns, memorandum columns for deposits and balances and standard columns for withdrawals as well as all those accounts which would have been provided for in the cash book under similar conditions. An explanation column should also be provided for check numbers.

A good form of check register is ruled with column headings as follows:

> Deposits, Balance, Date, Explanation, Check Number, Bank Credit, Discount Credit, Folio, Account Payable Debit, Miscellaneous Debit, Vouchers Payable Debit, Voucher No., etc.

The slip system may also be used instead of a check register. A combination check and remittance letter similar to that described on page 305 is used—a carbon copy to be retained in the office as the original record of the transaction. All posting or distribution to expense accounts is made directly from the carbon copy and, at the end of each month, a recapitulation of the information contained thereon is prepared and entered in the books of original entry to represent the group of transactions.

Some concerns use the same plan but instead of a remittance letter, they just make a memorandum of the items the check is intended to cover, on the face of the check, as this allows them to use a much smaller form. This is done to enable them to have the checks printed in sheets, usually about five checks to the sheet. A carbon copy of each sheet is retained and is used as the record of cash payments and as the posting medium.

QUESTIONS.

1. Contrast the daybook, journal and ledger method of bookkeeping with some more modern method. Describe the limitations of the first mentioned method and show to what exent, in what manner, and for what reason it has been superseded or modified in modern accounting practice.

2. Draft a form of cash book to be used where all receipts are deposited in the bank and all payments are made by check. Illustrate the use of this book by three or more entries.

3. Describe several methods of recording discounts on accounts as paid, avoiding mis-statements of receipts and disbursements. State the advantages or disadvantages of the methods proposed.

4. Prepare forms of cash books illustrating the use of discount columns, under the following conditions:

(a) Where it is desired to post the amount of cash received and the amount of the discount separately to the credit of the customer's account;

(b) Where but one posting, of the gross amount, is all that is required.

Compare the advantages of the two methods.

Make pro forma entries in each of the forms you have prepared.

Prepare a statement, from the figures you have used, illustrating the method of balancing the cash.

5. Prepare forms of cash books for use under the following conditions:

(a) Where bank columns are carried in the cash books but where, in balancing the cash, the total cash on hand is the difference between the totals of the cash received and the cash disbursed columns and includes the amount in the bank as well as that in the drawer;

(b) Where the entries relative to the bank account are kept in the cash book but where separate ledger accounts are kept for cash and bank;

(c) Where the total receipts are deposited daily and where all disbursements are made by check, illustrating the use of a check register.

Make pro forma entries in each of the forms prepared and show, by the aid of a daily balance book, the method of proving the cash.

CHAPTER VII.

Accounts—Contents.

On looking at accounts from the viewpoint of the record which they are intended to contain, we find that they may be divided into four classes: Major, Subsidiary, Summary and Collective.

Major.

A major account is one of the more important accounts in a set of books—one which contains, in some form or other, a record of all of the events that go to make up the narrative covering the transactions of a particular class.

Subsidiary.

A subsidiary account is one which is auxiliary to, though not necessarily dependent upon, nor essential to, some other account.

Subsidiary accounts are used to contain certain items of a class, either for the purpose of clearing the major account of the details, or for the purpose of keeping certain items which affect the major account separate from it, so that the original information will not be lost.

A Construction account is a good example of the temporary subsidiary account. It is used to accumulate information relative to the cost of a certain piece of work and after the completion of the work, it is closed into some major account such as Plant or Buildings. This relieves the major account of all of the details and allows each item therein to represent some entire unit of construction.

A Reserve for Depreciation account is a good example of a permanent subsidiary account. The creation of such an account allows the separate accumulation of amouuts which, for the purpose of the balance sheet, are deductions from the major account but which should not be deducted therefrom in the books as, in many cases, it is quite desirable to know the original cost of the properties as recorded in the major account and, if the items representing the depreciation were recorded in the major account also, it would soon be impossible to determine the cost of the various items without a detailed analysis of that account.

The relationship that a subsidiary account might bear to its major account, also deserves mention.

Adjuncts.

If it is intended to contain some particular portion of the items which ordinarily would be included in the major account and is used for the purpose of relieving the major account of unnecessary detail, or if it is used as a rest account awaiting the culmination of some event, it will most likely appear on the same side of the ledger, debit or credit, as the account to which it relates and will be an adjunct to it.

Offset.

If, however, it represents items which, although properly belonging to the major account, have not been allowed to enter it for the reason that it would disturb the information that the major account is intended to display, it will appear on the opposite side of the ledger and will be designated as an offset to the major account. It would appear as a deduction from the major account at any time it was used in a balance sheet, or for other statistical purposes.

The line of demarcation between major and subsidiary accounts may not be very clear, for a number of accounts, although of major importance may, in a sense, be subsidiary to some other account.

An an example, take the accounts representing sales, purchases, etc.; these are properly classed as major accounts, still they are subsidiary to the trading account;

however, the trading account being of greater degree and importance than the sales or purchase accounts and being used for an entirely different purpose hardly comes under the heading "Major Account." It is more properly classed as a Summary Account.

Summary.

A summary account is one which contains in concrete form the substance of a number of other accounts; a concise statement of facts. It is a summary of the information contained in a number of other accounts, now combined to display some fact. If differs from the major account to the extent that, although a major account may likewise have accounts which are subsidiary to it, the items contained in the major account are of the same degree as the items contained in its subsidiary account while, in the case of the summary account, the items therein have been combined to produce an account of greater degree.

To exemplify this, we will take the profit and loss account. It contains only final information relating to each item that affects the profit or loss of a period. When it is complete it is of higher degree than any of the numerous accounts which it contains. Many of the major accounts which are closed into it may have subsidiary accounts but, in each case, the major accounts and the subsidiary accounts are of like degree of importance.

Collective.

Collective accounts are those which gather a number of accounts together into an aggregation. Their function is to enable the one account to answer the purpose of many.

The distinguishing feature between a summary and a collective account is that the former takes a number of accounts, each of a different class and by their aid displays some additional information; while the latter takes accounts which, for the purpose they are to be used, are of the same class and simply combines them.

CONTENTS OF ACCOUNTS.

There is also another manner of classifying accounts, viz., as to the correlation of the items—Mixed and Individual or Specific.

SPECIFIC.

A specific account is one which is precisely formulated and in which the items are of an exact, particular nature.

MIXED.

A mixed account is one in which the items therein are of a different or dissimilar nature. They are usually the result of a failure to carefully distinguish between the functions of two or more classes of items and of combining them, believing that they are similar. At best, mixed accounts are misleading and fallacious, and accountants should never allow them to exist. An accountant should work under the policy that if an account is worth keeping, it is worth keeping well, and in all cases should see that the account headings are specific and that separate accounts are provided for all dissimilar items.

An account may be mixed or impure when: (a) it contains items of two or more classes, as in the case of Merchandise, Interest and Discount, Freight and Express, etc.; (b) or items are contained therein which although of the same class are of different degree and would be used differently, should the account be applied to some particular purpose, or would perform different functions than other similar items contained in the same account, as in the case of the machinery account, which might represent different classes of machinery, the depreciation on each class being different; or, (c) the account is disturbed by giving effect to certain elements which could more properly be set aside in some other account until a more opportune time, as in the case of Machinery, Plant, Equipment, Land and Buildings—accounts which are sometimes reduced annually to give effect to depreciation when, in general, the asset should remain on the books at cost and the depreciation should be cared for by the aid of an offset account; or, (d) the heading of the account is a misnomer as applied to the items contained in the account, as is often the case with Goodwill, Treasury Stock, etc., or, (e) one account has been used to contain items of a class which would later have to be apportioned over several departments, as in the case of salaries which relate to two or three departments.

The rule that account headings should be specific; that every account should be arranged so that its functions can be ascertained without an analysis of its contents; and that every account should have a definite specific purpose in the books, should be consistently followed.

MERCHANDISE.

Reference to a standard business college text book discloses that the merchandise account is supposed to be debited with:

(a) Inventory of stock of goods on hand at beginning of business;
(b) Merchandise purchased;
(c) Goods returned after being sold and credited to merchandise;
(d) Shortage, damage or overcharge claims allowed on goods previously sold;
(e) Merchandise discount;
(f) Freight and drayage, storage, insurance or similar charges.

It is supposed to be credited with:

(a) Merchandise sales;
(b) Goods returned after having been charged to merchandise account;

(c) Merchandise taken from stock for private use, donations or shipment on commission;
(d) Shortage or damage claims on purchases;
(e) Merchandise discounts;
(f) Insurance received for goods damaged or destroyed;
(g) Inventory at time of closing.

An analysis of the items entering into this account discloses at least a half dozen classes, each of which could be placed more properly in some other account under a specific heading. As the account is given, it simply represents an aggregation of figures from which no accurate information of any sort can be secured without an analysis of its component parts. Even the profit, which it is supposed to display after the inventory has been included, is not the actual profit, either gross or net, on sales or on trading, therefore, the account can only result in a misconception of the outcome of the business and surely it never should be used by anyone who professes to be skilled in the art of accounting.

The component parts of trading are buying and selling, therefore we should have accounts to show purchases and sales and, as there usually is a stock on hand at the beginning of any fiscal year and, as this stock does not pertain to either purchases or sales, we should have still another account headed "Inventory, January 1, 19—" or some similar term, to care for this item.

These three accounts, after giving effect to current inventories, outstanding invoices, etc., represent the outcome of trading; therefore, in order to display the results of operations we should close these accounts at the end of each period into one account called Trading.

Interest and Discount.

The principal objection to the use of the account Interest and Discount lies in the lack of uniformity in accounting terminology.

Interest is a charge made for the use of money. It is usually computed at a rate per cent. and may be collected either in advance or during the period of the loan. If collected in advance it is usually termed discount.

As long as the use of the account is restricted to the above items and its use is understood to be so restricted, no harm can result, for they are each of the same nature and, in preparing a statement displaying the results of a business, would be used in the same manner and under the same headings or sub-headings; but, suppose that interest charged to equalize partners' investments or cash discount taken by customers for the prepayment of their bills, or trade discounts, in the nature of a reduction in the price of articles sold to certain classes of the trade, were included. All of these items are of a different nature than those outlined above and, as the heading Interest and Discount applies equally well to these as to the others, we should eliminate the term from our nomenclature and in its stead substitute headings of a more specific nature; furthermore, as the net result of the interest or discount received and given is of minor importance and also as the controlling factors that lead to the granting or the taking of discount are somewhat different, we should distinguish carefully between the charges and the credits and should open separate accounts for each whenever necessary.

The most commonly used headings are:

Interest and Bank Discount, Dr.
Interest on Loans, Cr.
Interest on Bonds and Mortgages, Dr.
Cash Discount on Purchases, Cr.
Cash Discount on Sales, Dr.
Interest on Investment of Partners, Dr.

The account Trade Discount very seldom is found in the books for the reason that, in general, it is but an adjustment of the list or catalogue price of goods and is deducted on the invoice to which it relates. Exceptions to the rule are found in certain lines where the quantities purchased during a particular period affect the discount for the entire period or where a special unusual discount is granted and it is desired to have the books show the results of this special discount.

As an example, we will take the case of certain cracker manufacturers. They grant an additional 5% trade discount if the purchases of a particular concern exceed \$15.00 during a particular month and 10% if they exceed \$50.00. This allowance is made after the sale is recorded, hence an account Trade Discount is required in their books. They also grant a special discount of 10% on purchases of 30 boxes of crackers. This with the other discounts allowed brings the sale price of crackers down to a very low figure and, in order to determine the advisability of granting the discount, a separate account is kept to show the allowance on these special orders.

Freight and Express.

The items usually found in a Freight and Express account represent charges for:

(a) Bringing stock to the establishment—an element of cost.

(b) Delivering goods to customers—an element of sales.

(c) Special expenditure made to procure certain goods in a short time; if they are in the nature of special goods —an element of sales; if they are regular stock that should have been on hand—an element of cost.

The use of such an account can only result in a misconception of the results obtained and, in its stead, such accounts as the following should be used:

Freight on Purchases—Infreight, Dr.;

Freight on Sales—Outfreight, Cr.

Express on Sales, debit or credit, and Express on Purchases, debit, could be used also, but, in general, there is no necessity of separating express items from freight items, and they are all found under the same headings.

Freight on purchases made F. O. B. destination should not be included in the freight accounts but instead should be charged to the shipper.

Infreight is an element of the cost of goods and is kept separate from purchases only for the purpose of assisting in the apportionment of the freight paid over the cost of goods sold and the cost of the goods on hand at inventory time so as to give a correct value to the stock on hand.

Machinery or Equipment.

The analysis of a Machinery Account might disclose items representing:

(a) Cost of machinery and equipment, including tools, boilers, engines, lathes, etc.;

(b) Repairs and replacements, which might or might not increase the value of the plant;

(c) Deductions for depreciation;

(d) Deductions for articles sold, either at selling price, cost or book value;

(e) Cost of removing and setting up a machine in some other location, and,

(f) Items of expense.

In general,, this account should contain a record of the items purchased, only, at cost price, including the expense of making ready for operations.

If the asset consists of items on which the rate of depreciation should vary, separate accounts should be carried for each class so that the depreciation could be computed without an analysis of the items or, if conditions were such that the additional accounts would be impracticable, an Equipment Ledger could be installed which would contain the history of every article of equipment, including the cost, date of purchase, repairs, depreciation, etc., and ultimately, the disposition of the asset, its selling price, and the difference between the selling value and the book value, which amount is entered to close the account.

The equipment ledger could be balanced by adjusting it to correspond with its representative accounts in the general ledger as explained in Chapter XX.

The machinery account should not be disturbed or reduced by the depreciation; instead an account headed Reserve for Depreciation on Machinery should be used to contain the allowances of this sort. (See Chapter XVII.)

PLANT.

That which has been said about the machinery account applies with equal force to the plant account.

This account is usually used to show collectively the value of machinery, tools, buildings, etc., in connection with the plant.

At times it is used also to cover up "Water" due to overcapitalization. Its use in this connection destroys the entire value of the account and, whenever possible, it should be avoided.

LAND AND BUILDINGS.

Land and buildings are also dissimilar in respect to the depreciation that occurs thereon and the remarks that were made about machinery or equipment apply here also.

GOODWILL.

Goodwill represents the value of the connection or reputation which a business has acquired during its existence. The account should never contain any items except those representing its actual purchase or sale price.

It, like the plant account, is sometimes erroneously or fraudulently used as a cloak for watered stock, but it is more proper to use the term "discount on stock" and to frankly state conditions as they are. Goodwill should never be increased on the books except upon the acquisition of additional property, and then, only when the actual value of the thing given exceeds the tangible value of the thing received. For example, if stock of the par value of $5,000,000.00, with an actual value of $1,000,000.00 were exchanged for the assets of a going concern which had a tangible value of $800,000.00, the goodwill would be $200,000.00, not $4,200,000.00 as is often stated. The additional $4,000,000.00 actually represents a discount on the stock and should be shown as such, if it can possibly be arranged to do so.

The legal decisions on the subject seem to uphold the validity of exchanges of property for stock even though the intrinsic value of the one is undoubtedly much less than the par value of the other, therefore the plan outlined above, although desirable, is often impossible, and the goodwill or plant accounts must be used to contain the "water."

Treasury Stock.

Treasury Stock, like goodwill, has been misused in many cases to cover up the instability of a corporation or to give an appearance of strength where but normal conditions prevail. It should represent only the par value of stock which, after having been disposed of by the company, is later returned to it, either as a donation or on account of a forfeiture.

In Washington, the laws relative to forfeited stock require that it be sold at public auction, away from the office of the company, to the bidder who will pay the amount of the assessment for the least amount of stock. The balance of the stock is then returned to the original holder. Correct accounting requires that forfeited stock be kept separate from treasury stock for the reason that the degree of ownership is different.

The term Treasury Stock could be used also in connection with stock actually purchased, but in general, it is illegal for a company to purchase its own stock, so it is seldom used in this manner. If stock were purchased it should be treated as an investment and would appear in a special account as Purchased Stock, at cost, with a memorandum as to its par value. The account Treasury Stock should never be used to represent Unsubscribed Stock or Unissued Stock which has been reserved for future sale.

Thompson's "Commentaries on the Laws of Corporations" 3276.

"Transfers of Shares to the Company Itself Void. The general rule is, that unless the governing statute or constitution of a company authorizes it in express terms to purchase its own shares, such a purchase is ultra vires. Where this rule prevails, the selling shareholder will remain liable to creditors, unless he sells his shares innocently to one capable in law of purchasing and holding them, not knowing that such purchaser is using the funds of the corporation; and not even in that case, according to the best theory. The reason is, that he gets—without rendering a lawful consideration—a part of those assets which are a trust fund for the creditors; and the fact that he gets them *innocently* furnishes no reason whatever why he should not restore them.

EXPENSES.

In a small business, it is often unnecessary to subdivide the expenses into groups, but in larger concerns, where the expenses are watched carefully, it is desirable that they be subdivided under appropriate headings to facilitate the preparation of financial statements and to assist in comparisons of the results of different periods.

Whenever it becomes necessary to subdivide the account, special care should be devoted to having the subheading analogous to the matter which the account is to contain. Such headings as the following are specific and proper:

Insurance, Material.
Insurance, Merchandise.
Insurance, Plant.
Rent, Store.
Rent, Office.

The Federal Income Tax law requires that certain classes of expenses be reported separately, hence it seems desirable to keep accounts with these particular items. They are interest, taxes, dividends, losses, and depreciation.

QUESTIONS.

1. Define:
   Cash Discount;
   Trade Discount.

2. A corporation, located in Chicago, that has been very lax in its accounting methods, carries a freight account into which it charges all payments, of whatever nature, made to railroad companies; even payments made on the delivery of goods purchased F. O. B. Chicago. If called upon to reorganize their method what suggestions and alterations would you make in respect to this subject? State your reasons.

3. What is the treasury stock of a corporation?

4. Define goodwill. On what basis should goodwill be valued? On what grounds, if any, can an increase in the book value of goodwill be justified?

5. Would an account Investments and Treasury Stock be proper? Why?

6. Is it proper to charge the difference in the value of a business, excluding goodwill, and the purchase price in stock, to goodwill account?

7. By analysis, the debit side of a merchandise account shows purchases, $60,000; returns to us, $4,000; entries offsetting errors in sale extensions, $2,000; trade discounts to customers, $13,500; balance profit, $27,000; the credit side shows sales, $90,000; returns by us, $5,000; allowances to us, $1,500; inventory at close of year, $10,000. Suggest such changes in the method of recording the items in the foregoing statement as would readily show; (a) the net amount of purchases, (b) the net amount of sales, (c) the percentage of profit.

8. A company has acquired at $90.00 per share, 100 shares of its own capital stock of the par value of $100 per share. Its balance sheet shows treasury stock $9,000. Is this correct? If so, why? If not, state how you would adjust the books.

9. (a) Explain the inaccuracies from an accounting standpoint of the ordinary interest and discount account.

   (b) Explain by entries, the proper accounting for each case in which interest and discount is involved in handling both bills receivable and bills payable.

CHAPTER VIII.

Individual or Specific Accounts.

The accountant should endeavor to use headings for accounts which can be construed in one manner only and which are so precisely formulated that only such entries as properly belong therein could possibly be included in the account, and he should endeavor to avoid ambiguity and the use of terms or names whose meanings have become distorted or perverted in the public mind. Cases do arise, however, where, owing to the inability to supply a better or more accurate term, it becomes necessary to use the one which has been generally accepted, even though that one may be interpreted in ways other than the items making up the account would warrant. In such cases, the general term should be modified or restricted in some way so that the proper value of the account will be apparent; or, if conditions are such that it is not practicable to restrict or modify the account in the books or in the balance sheet, special mention should be made of the account in the accountant's report setting forth the exact meaning of the term as used. Examples of such terms are Reserve Fund, and Treasury Stock.

The tendency of modern accountants is to create new and specific accounts to take the place of such accounts as we have classed as mixed accounts. The result is an account for each class of value or element of business effort which is a factor in recording the increase or decrease in the proprietorship of a concern.

The majority of these new accounts have been mentioned or discussed in the preceding chapter, so now it will be necessary to mention only those which possess special functions.

Purchases.

The purchase account should contain only those items which have been purchased for resale, with such credits as may be necessary through the return of goods purchased or on account of allowances in the nature of trade discounts, damages, overcharges, etc. The balance of this account should represent the net cost, exclusive of cash discount, of the goods purchased.

At balancing time, care should be taken to see that post dated invoices are given effect if the goods have been included in the inventory.

In-Freight, although often included in this account, should be shown separately; first, to keep the account pure; second, on account of the value of the In-Freight account, should it become necessary to apportion the amount of freight paid over the goods sold and the inventory.

The purchase account could be divided into several accounts, such as: Purchases, Raw Material; Purchases, Merchandise; Purchases, Grain; Purchases, Flour, etc., if it were desired to segregate and record the transactions of a manufacturing establishment that also deals in other goods, or of a trading concern operating various departments.

The inventory of special goods purchased in advance of actual use for the purpose of aging or seasoning or on account of the inability to purchase when required, may include all carrying charges such as interest, storage, taxes, etc., therefore the purchase account or some subdivision thereof may contain these expenditures.

Sales.

The sales account should include all sales of goods which were purchased for the purpose of resale, as well as such deductions as overcharges, returns, etc.

The balance of this account should represent the net sales of the concern for the period which the account covers.

Sales of fixtures or other similar property, which at the time of purchase were not intended to be disposed of at a profit and which were not charged to the purchase account, should not be included in this account; neither should consignments or ventures, or actual sales where the goods are in the process of manufacture but not yet delivered, even though, as was the case disclosed by a recent audit, they were actually paid for before the specifications of the order had been decided upon.

Wherever, owing to the small number of consignment sales that occur or for some other cause, it is considered desirable to include such transactions in the sales account instead of opening another account, adjustments should be made, at balancing time, to correct the account. It is believed better, however, to keep the account pure from the start so that there will be no possible chance of overlooking these items or of giving incorrect information.

Allowances for damaged goods due to contingencies and not in the ordinary run of business, should be shown separately, if they run into any considerable sum, on account of the tendency to disturb the percentage of profit on the goods sold,—the profit on turnover as it is called.

In certain classes of business, particularly those dealing with ice, milk, typewriter ribbons, carbon, and transportation, it is customary to sell coupons or tickets redeemable in goods or service at some later date. The sales or service account should not receive credit for such sales until the coupon or ticket has been redeemed, for the reason that no profit will have been earned until the transaction has been completed, and also that the purchase or cost accounts will not have been affected by the transaction. The proper method is to credit Coupons or Tickets Outstanding at the time the sale is made, then debit Coupons or Tickets Outstanding and credit Sales when they are redeemed. This method will allow the books to show at all times, the value of the unredeemed coupons or tickets.

Where a great number of tickets are outstanding or whenever a change in management or some similar condition arises and it is necessary to apportion the sales, profits, etc., it is desirable to issue the tickets serially and to keep each series separate in the accounts. This method also allows the amount of profit derived through the loss or nonuse of tickets on the part of the purchaser to be ascertained.

Still another problem presents itself in connection with the use of coupons. Many coupons are sold, for cash, at a discount from their face value, as in the case of ice coupons which are sold in books at a discount of about 10% from the regular retail price of the ice they represent. Special conditions surrounding each plan of issue govern the treatment of the discount but, in general, the sales account is allowed to receive credit for the regular retail price and the discount is recorded separately. At the end of a fiscal period the discount is apportioned on the ratio that the redeemed tickets bear to those sold, and the amount thereof which belongs to the current period is shown in the trading account as a deduction from sales.

Gross Profit.

In certain lines of business, such as real estate or jewelry, it is found advisable to separate the sales account into two sections; one representing the cost of the articles sold and the other the profit on the individual transactions. This gives rise to the account Gross Profit. In order to secure this separation of sales, each article or tract is designated by a number which relates to some record of the purchase of the property. By reference to the number and later to the record of cost, the cost is ascertained and the selling price can be apportioned over Cost and Gross Profit.

The apportionment necessitates that two columns be provided in each book of original entry which is to contain a record of such sales instead of one as is used where sales are not so treated.

INVENTORY.

The Inventory Account should be charged with the cost of all stock which was purchased with a view of re-selling and which is on hand at the date of the inventory.

Care should be taken to see that all goods, the purchase price of which is included in the purchase account, are included as well as all expenditures that have been made in holding or aging them. Goods in transit, if the invoice representing their cost has been entered, should be included. Goods purchased for future delivery may properly be included if the cost thereof has been charged to the purchase account. If the cost has not been charged to the purchase account, the goods need not be inventoried but if the goods were purchased on a falling market and if they cannot be sold for an amount in excess of cost, a reserve for possible loss on purchases should be created. Goods that have been hypothecated should be shown in a special account separate from the regular inventory.

The Inventory Account is placed on the books by a debit to Inventory and a credit to Trading Account. In order to distinguish between the various inventories it is necessary to show the date of the inventory in each account, as "Inventory of Raw Material, December 31, 1916."

OPERATION OF THE TRADING ACCOUNT.

The trading account is a collective account used for the purpose of showing the gross results of the operation of the business. These results are secured by assembling the accounts representing sales, purchases, and inventories under the heading Trading.

The inventory account representing the stock on hand at the beginning of the period is closed into the trading account first. This is followed by the purchase account and later, by a credit for the new inventory. If desired, the balance of the account could be brought down at this point to show the cost of goods sold, or the turnover.

The sales are next entered to the credit of this account and a balance is shown representing the gross profit.

If the concern is a highly departmentalized organization, the trading account will also receive debits for all expenses incurred which relate to sales and its balance will represent the profit on trading instead of gross profit.

It will be seen that, immediately after the inventory account representing the stock at the beginning of a period is closed into trading account, another inventory account representing the stock on hand at the end of the period and likewise the beginning of the next period will take its place so that at all times the books will contain an account or accounts to represent the stock at the beginning of the period of operation.

Valuing Stock.

As previously stated, the inventory account should be charged with the cost of the goods which were purchased for resale, but which are on hand at the end of the fiscal period. Special care should be taken to see that all goods represented by invoices charged to Purchase Account are inventoried, whether they are actually in stock, either at the principal office or in branches, or are in transit, and, also, that the cost of all goods sent out on consignment as well as an allowance for freight on the entire stock is considered.

Often the latter item is not considered, and the entire amount of transportation is charged to the current period but, where the item assumes very large proportions, as it does in the West, owing to the lack of transportation facilities and the distance from the base of supplies, it is undoubtedly better to consider it as an increase in the value of the stock although, in general, it is placed in a separate account. Care should be taken, however, to see that only such charges as actually enhance the value of the article are included, that is, the cost of removing stock from one store to another should not be considered, unless the delivery of like goods to the second store would actually cost more than if they were shipped direct from the base of supplies.

If, owing to a fluctuation in the value of stock, it could be purchased at a price lower than was actually paid for it or contracted to be paid for it, viz., if the market price is less than the cost price or the contract price where the goods have not been delivered, it is considered proper by some accountants to inventory the goods at the market price instead of the cost. Their rule is that an inventory should be taken at cost or market, whichever is lower. This is hardly proper, for the gross profit on a transaction is the difference between the actual cost and the selling price irrespective of market price, and any method of ascertaining the gross profit, except by considering actual cost and actual selling price, must be inaccurate. If, however, the market price is such that a loss will ultimately result, a portion of the profits of one year should be reserved to protect the next year against this anticipated loss.

In the event of the sale of an undertaking or upon the dissolution of a partnership, or in fact, any case where an inventory is taken for some purpose other than ascertaining profits, the cost price need not be used; but if the object of the inventory is to ascertain profits no other method of valuation can be considered proper.

Where an inventory is being taken to ascertain the asset value of the stock as well as the profit on an undertaking, it should be valued at both cost and market; the cost price to be used in the trading account and the market value in the balance sheet, the difference in the two values to be adjusted through the surplus account.

Where the stock on hand represents a number of purchases at different prices, and a considerable amount is involved, it is not proper to consider the last price paid as the proper price for inventory purposes, lest, owing to some small, probably intentional, purchase at a high figure, the actual inventory value and likewise the profits be greatly increased.

It is considered proper to base the inventory valuation on the cost of the last few purchases, viz., presuming that there are 1,000 articles on hand and that the last purchases were as follows:

Nov. 1st	400@$10.00
Dec. 1st	400@$ 9.00
Dec. 20th	400@$ 9.50

The stock would be presumed to contain two hundred articles from the purchase of November 1st and all of the articles purchased on December 1st and December 20th. The inventory would then contain two hundred articles at $10.00, four hundred at $9.00 and four hundred at $9.50.

This plan of inventorying can only be used where a perpetual or running inventory is kept by the aid of stock cards, and where each purchase at a separate price is recorded separately. It is not practicable where a great number of small articles are kept, or where in-freight is apportioned direct to the cost of each article and where the in-freight varies on account of different methods of shipping or packing. On the other hand, it is the correct method of inventorying for the purpose of determining profits and should be used wherever it is possible to do so.

Where the use of extra cards to record each price is objectionable, all of the purchases of a particular article can be recorded on the same card and the credits to the cards can be computed at the average cost of the articles on hand.

To illustrate, let us consider the following stock card:

	Received			Delivered		Average	Balance	
Date	Qu.	Cost	Amt.	Qu.	Amt.	Cost	Qu.	Amt.
1/2/17	15	$5.00	$75.00			$5.00	15	$75.00
1/4/17	5	4.50	22.50			4.87	20	97.50
1/5/17				5	$24.35	4.87	15	73.15
1/7/17	6	4.00	24.00			4.62	21	97.15
1/8/17				14	64.68	4.62	7	32.47

It will be noticed that the average cost is not accurate. It is, however, sufficiently accurate for ordinary purposes and as the true balances of stock and amounts is carried forward from day to day so that the record may be proved against the controlling accounts and so that the errors can be absorbed by later transactions, it is not considered necessary to carry the average cost figures beyond two places.

Goods such as wool, hides, skins, etc., which are purchased in bulk and sorted later, should be inventoried so that the entire cost of the lot will be apportioned over the various articles, proportionate to the ruling market price at the time of the purchase.

The above method of valuing goods also applies to products manufactured in bulk, like lumber, which after being cut, is sorted and graded according to quality; much of it being sold at less than the true cost if it were apportioned according to the quantity produced. Fish provide another case where true cost must give way to economic cost, on account of the varying results secured from the same trap during a period of operations. The true cost of catching a poor grade of fish is the same as that of catching one of better quality but, as much of the product will not carry its proportion of oncost, although it will absorb some of the oncost that would have to be apportioned to the better grades were the better grades packed exclusively, it is considered proper to allow the better grades to absorb a greater proportion of the oncost than is absorbed by the poorer grades. This is accomplished by allowing the economic value of the articles, as indicated by market conditions and prices, to rule when apportioning the total cost to the total output for the purpose of an inventory.

To illustrate, during a certain period a cannery packs: 15,000 cases, Reds; 18,000 cases, Medium Reds; 10,000 cases, Pinks, and 10,000 cases, Chums, at a total cost of $250,000.

An inventory taken at the end of the fiscal year shows: 5,000 cases, Reds; 4,000 cases, Medium Reds; 4,000 cases, Pinks, and 5,000 cases, Chums.

Required, the inventory value thereof, the market values being $7.20 per case for Reds; $6.00 per case for Medium Reds; $4.40 per case for Pinks and $4.00 per case for Chums.

The market value of the total product at the price ruling on the day of the inventory was:

15,000 cases Reds	@ $7.20	$ 108,000
18,000 cases Med. Reds	@ 6.00	108,000
10,000 cases Pinks	@ 4.40	44,000
10,000 cases Chums	@ 4.00	40,000
		$ 300,000

The ratio of total cost to total market value is 250,000 : 300,000 or 5 : 6; hence the economic cost of the different qualities of salmon is 5/6 of the market price. The inventory will be as follows:

5,000 cases, Reds	$6.00	$ 30,000.00
4,000 cases, Medium Reds	5.00	20,000.00
4,000 cases, Pinks	3.66 2/3	13,333.33
5,000 cases, Chums	3.33 1/3	16,666.66
		$ 80,000.00

Often, owing to a fire, or for some other reason, it is either impossible or impracticable to inventory the stock but, if for financial reasons, an estimate of its value is desired, it can be secured where the inventory of some prior date is at hand and where the purchases, sales and percentage of gross profit on turnover is known. The sales account contains the cost of the goods, as well as the gross profit, hence by dividing the amount of the sales by the percentage of gross profit, plus 100% to represent the cost of the goods sold, one per cent of the cost of the goods sold will be secured. This amount multiplied by 100 will equal the cost of the goods sold. The original inventory, plus the purchases, less the cost of goods sold will be the value of the stock on hand.

In the ordinary trading concern, one inventory includes the entire stock, but in the case of a manufacturing concern or a trading concern handling various classes of goods, there are usually a number of departments and a separate inventory is taken for each. In the case of a manufactory, the inventories would probably be of raw material, partly finished goods, finished goods and, in some cases, merchandise purchased. Inventory accounts should be operated for each of these divisions.

Raw Material.

The inventory of raw material should include everything which, during manufacture, enters into the finished product but which has not been changed in form or value by the manufacturer. It should not include engine room supplies, tools or repair parts, etc., neither should it include articles which enter into the finished product without additional manufacture, such as completed parts, etc. These should be inventoried separately as Partly Manufactured Goods.

The inventory value of raw material should include, in addition to original cost, duty and in-freight, although separate accounts could be used to contain the freight or duty pertaining to the goods on hand.

Partly Manufactured Goods.

The inventory of partly manufactured goods should include all articles in the process of manufacture. The value should be the actual cost of raw material or parts, including duty and in-freight, plus labor and a portion of the overhead expense or oncost.

If the inventory is prepared for a concern operated by a holding company, and if a portion of the goods inventoried were received from other subsidiary companies, it is considered proper to inventory the goods at the price paid by the purchasing company, but the holding company should set aside a portion of its profits to cover the nominal increase in value caused by the transfer from one company to the other. The first company would, undoubtedly, be entitled to its profit on the sale to the second company; also, the purchasing company should pay the market value for the articles transferred, but the holding company cannot properly assume a profit on the simple transfer of goods from one department of its organization to another.

Where goods are in the process of manufacture and are to be sold at a price which will result in a loss, the loss should be anticipated and given effect during the year in which the contract was made.

On exceptionally large contracts where, should the entire profits be given to the year in which delivery is to be made, the result would be an excessive dividend in that year, as against a very small dividend in the preceding year, and where the contract is sufficiently well along that the outside limit of cost to complete may be ascertained with a considerable degree of accuracy, and where the contract will undoubtedly result in a profit, it is considered proper to apportion the estimated profit over the two periods, on the basis of the amount expended to date and the estimated cost to complete, to completed cost.

In the case of buildings or similar construction work it is becoming common practice for the contractor to guarantee a certain limit of cost, he to become responsible for one-half of the cost in excess of this specified amount and to share in all amounts he may save by keeping the cost to an amount below the specified cost. In determining the valuation of this class of contracts, great care should be taken to see just what items are to be taken as representing cost, and also to see that no profit is assumed for the contractor unless the nature of the work and the nearness of completion warrants it.

Another class of contracts provides for the compensation of the contractor on a percentage basis; the percentage to be based on the cost. The possibility of loss for the contractor is eliminated here so that he can assume, as profit, the entire amount due him at the end of his fiscal year without setting any portion aside in reserve to cover possible losses on uncompleted work.

FINISHED GOODS.

Inventories for finished goods should be along the same lines as outlined for partly finished goods, viz., cost should control. No estimated profit should be considered, and all losses, due to unfavorable contracts or conditions, should be anticipated and cared for.

The cost should represent the cost of raw material including in-freight and duty, labor, royalties on patents, depreciation, and rental of plant, and all expenses, such as heat, light and water, which are incidental to the operation of the plant, but should not include an estimated amount to represent interest on capital invested in the plant or the property. A deduction might also be made from the cost of an individual article or from the total cost of the product, as a credit to the manufacturing account, for the value of scrap saved from the job or the various jobs. In many lines of business this amounts to a large sum and reduces the factory cost considerably. In a manufacturing jewelry business, the value of the sweepings is surprising. In the fishing business, a considerable amount is secured by the sale of bones, etc., and in most machine shops, the brass and copper filings are saved and sold. All of these items are a reduction of factory cost and are not, as is sometimes shown in the profit and loss account, a credit to sales.

If the concern uses a portion of its scrap and manufactures a by-product, the cost of the principal product should be reduced by the market value of the scrap, and the cost of the by-product should be increased by the same amount. This method will place the by-product entirely separate in the accounts of the company. The Interstate Commerce Commission in their uniform system of accounts for gas companies operating in the District of Columbia makes no distinction between residuals and by-products, and treats the sales of both as operating revenues, but, as stated above, it seems more proper to deduct the value of the residuals from the cost of the original articles unless (a) additional expenditures are made to bring the residuals into salable condition so that a by-product is thereby produced, or (b) it is considered advisable to combine all expenditures relating to the cost of both the main product and the by-product in the same accounts, instead of separating the accounts relating to the by-product from the other accounts. The Interstate Commerce Commission, however, does not combine the expenses incidental to preparing the by-product for market with the other expenses incidental to operation, but instead they show the account, Residual Expense, as a general expense item in the same subdivision of their accounts as office expenses are shown.

In the case of partnership settlements, as upon the withdrawal of a partner where there are contracts uncompleted, it is, at times, considered proper to assume a profit on manufactured goods, but this should be accomplished without disturbing the inventory valuation at cost. This can be done by keeping the portion of the profit settled for in a separate account until the close of the fiscal period, at which time it should be closed into the profit and loss account, appropriation section.

Royalties on patents, capitalized on the theory that the cost of the goods would be increased if the patent were not the property of the concern and it were necessary to pay the royalty to others, would hardly be included in the cost of the goods; in fact, it seems improper to make such an allowance although the only result of making such a charge to cost would be that the true profit of the concern would appear in the profit and loss account in two parts; one, a credit in the net profit section, representing the profit derived by the ownership of the property, which otherwise would have been paid out as royalty, and another representing the profit of the concern which would have resulted had the concern been compelled to pay a royalty. Other than that the profits are shown subdivided, no very great misstatement would result by keeping an account to show the royalties that may have been paid under other conditions, except that the inventory of goods on hand would contain an amount representing the loading to cover the royalties, and to this extent would be overvalued. A reserve should be set up to correct the inventory where the amount involved is sufficient to warrant it. The only object that can be accomplished by dealing with royalties in this manner is that conditions of different periods may be made uniform for the purpose of comparison.

In general, the cost of a patent is spread over the period of its anticipated active life by making a like charge against each year; if desired, however, and if the approximate quantity of product that it will affect can be ascertained, it may be spread over the product per unit of production. In any case the total amount charged to the product should not exceed the actual cost of the patent.

Obsolete, uncatalogued or deteriorated goods should be inventoried at cost price the same as the other goods, but a sum representing the probable loss on this class of stock should be reserved or deducted from the inventory to protect the succeeding year against the loss should it occur. In making the estimate of the proper amount to be set aside or deducted to cover the loss, care should be taken to see that the amount is based on an actual appraisal of the goods and not on an arbitrary percentage which may or may not be approximately correct.

Goods at Branches.

Although goods at branch offices may be billed at either cost or selling price, they are often charged to the branch at (a) an arbitrary amount sufficient to keep the branch from making a profit; (b) cost plus a certain predetermined percentage, or (c) selling price less some fixed percentage.

Plan "a" is used where for some reason, often fraudulent, the branch is not allowed to make a profit. The prices at which the goods are billed to the branch are often adjusted from month to month according to the amount of loss the branch office shows.

Plan "b" is used where it is desired that the executive office will absorb a portion of the profit that would otherwise fall to the branch. This plan is preferable, in general, for the reason that the loading can be easily removed and the actual cost for inventory purposes be determined.

Plan "c" is the most popular for the reason that it is easily computed on the invoices to the branch and as contracts with managers, where their compensation is based on profits, often provide that the profit shall be determined on a cost equal to a certain percentage of the selling price. It, however, is very unsatisfactory at inventory time as each individual article must be revalued at the executive office to adjust it to the true cost.

Whichever method is used the branch office inventory must be adjusted to actual cost at the time it is placed on the executive office books. Cost in this case includes freight to the branch.

The customary manner of accomplishing this is to remove the branch office accounts entirely from the books of the executive office by an entry similar to the following:

Branch office sales	$10,000	
Tacoma branch office		$10,000

and to place the inventory on the books at cost by the entry

Inventory, Tacoma branch	$8,000	
Trading		$8,000

At the beginning of the next period the first entry must be reversed to put the Branch Office Sales and Tacoma Branch Office accounts on the books again.

FOREIGN BRANCHES.

Inventories from foreign branches will ordinarily be in the foreign currency. In order that the profits will not be unduly affected by fluctuations in exchange, the average rate of exchange as determined by taking an average of the quotations of January 1st and the last day of each quarter thereafter is used. The goods may be presumed to have been acquired throughout the year and hence the average will be approximately correct.

The general rule for converting the trial balance of a foreign branch to the currency of the executive office is: "Fixed assets at the same rate as used at the last balancing period; current assets at the current rate; revenue items at the average rate; remittances at the actual rates"; the difference caused by the fluctuation being thrown into a Fluctuating Currency Adjustment Account.

An inventory is both a revenue item and a current asset. If both rates are used another adjustment account will be necessary to absorb this difference. The principal purpose of closing the books is to determine profits, and as profits can be determined only by using the average rate it is believed preferable to use that rate, under ordinary conditions, in preference to the current rate, which would be used only where the stating of the asset values was paramount.

QUESTIONS.

1. Define turnover.

2. In the course of trading, you make and receive certain charges or allowances for purchased or sold returned goods. How would you deal with these?

3. Purchases, sales, returns, and allowances are frequently posted to one account called merchandise. Describe the limitations of an account so kept, and suggest, with your reasons therefor, an improved method of recording these transactions.

4. How should inventories be treated in closing the ledger at the end of a fiscal period? Is the common practice of adding the inventory of goods on hand to the credit side of the merchandise account technically correct? Explain.

5. Acting as auditor of a manufacturing company, state briefly the essential points to be considered in ascertaining the correct profits, so far as inventories are concerned.

6. A manufacturing concern finds that in the past fiscal year the prime or manufacturing cost was thirty-three and one-third per cent of the profit on sales. On June 30 of the current period the directors want an approximate inventory without count or schedule and call upon you to prepare it. Illustrate your plan of procedure—(150-200 words).

7. Admitting that, in making up an inventory, the most approved method is to value the goods at cost price, can you state any instance where it would be permissible to extend the values at the market price?

8. Describe three methods of ascertaining and recording the profit or loss on sales.

9. A firm having several branches maintains an account with each branch in the ledger and charges to such account all goods sent to the agents for stock. When stock is taken, the balance of each branch is treated as ordinary accounts receivable and is included in the general debts owing the firm. If you see any objections to this method, state them, and say how you would deal with the accounts.

10. The East and West Railroad Company hauled many tons of coal during the year to the various distributing points along its line for the use of the locomotives, and upon this company coal $70,000 freight was charged, such charge being made against the cost of fuel for locomotives and credited to freight earnings. Was the above method of handling this freight item correct? In answering state your reasons fully.

11. A trading and mining company maintains five general stores at five separate stations, and concentrates its supplies each year at Station "A," which is the only one accessible by railway; distribution is made from thence by means of wagon and pack

trains. The cost of goods laid down at Station "A" is 10% above invoice prices at the company's general office in Montana; and the agent at Station "A" is instructed to re-bill all shipments to Station "B" at 20% above original invoice cost; to Station "C" at 35%; to Station "D" at 40%, and Station "E" at 50%, the experience of several years bearing out the general manager's statement that such additions are approximately correct and cover actual cost of transportation.

In auditing the accounts for the purpose of certifying the annual balance sheet, you ascertain that certain goods at Station "D" amounting to $10,000, are inventoried by the agent at that point at 70% above the original invoices which you have examined at the home office. He states that Station "E," being overstocked, shipped him several lots of merchandise at price billed out to "E" by Station "A," plus 10% for estimated cost of handling and repacking at "E"; and to this "D" legitimately added 10% for cost of transportation from "E" back to "D."

In your visit to other stations you find many similar instances where goods have been moved back and forth and each time the shipping station has added 10% for handling and repacking.

Out of a total inventory, at all stations, of goods originally costing $200,000, the summary shows final extensions of values aggregating $325,000, of which not more than $75,000 is covered by cost of transportation, leaving $50,000 represented by internal charges added between the different stations.

Review the foregoing statement and give your method of handling such accounts.

12. In making an audit you find that a large quantity of goods were purchased prior to the last statement and hence included in the last inventory at cost price. A change in the tariff has increased their value. The portion which has been sold since the change was sold at prices which represented an increase of $10,000.00. In the inventory just taken the goods still on hand are inventoried at present cost value which is $10,000.00 more than the original amount. What would you do about it, if anything?

13. A manufacturing concern is required to carry a six months' supply of a certain kind of raw material and, as the material is not of the kind that can be purchased every day, they must purchase it at any time it is offered to them. For this reason the prices sometimes fluctuate considerably. When they purchase this material, they pay cash for it and have the material shipped as wanted. What method would you use in arriving at the cost of the portion of this raw material which was used during any one month in manufacturing?

14. You find that a concern whose books you are auditing has capitalized the amount of royalties that it would have had to pay on the sales of a three years' period if it had not owned the patents. On the increase of surplus thus obtained the directors have declared a stock dividend. Would you consider it necessary to

criticize the action of the directors? If so, what would be the character of your criticism?

15. A construction company contracts to erect buildings or works, charging in some instances a fixed price, and in other instances the actual cost plus a fixed percentage thereon. In what manner should the unfinished contracts be valued at the close of each fiscal year?

16. What should be the procedure in ascertaining the value of stock on hand at the time of a fire; the financial books being intact and showing an inventory taken four months before the fire? It is also possible to ascertain the sales and the usual gross profit. Without using figures, draft a statement in the form you would consider most suitable for setting forth your findings.

17. The following is a copy of certain accounts of the Rushtown Manufacturing Co. for the year ending December 31, 1915.

MANUFACTURING ACCOUNT

Cost of Raw Material Used:			Cost of goods manufactured, carried forward	$ 210,000
Inventory Jan. 1, 1915		$ 45,000		
Purchases		80,000		
		$ 125,000		
Inventory Dec. 31, 1915		35,000		
		$ 90,000		
Wages paid	$ 82,000			
Wages accrued	3,000	85,000		
Prime cost		$ 175,000		
Indirect expenses		35,000		
		$ 210,000		$ 210,000

TRADING ACCOUNT

Cost of Goods Sold:		Sales	$ 350,000
Inventory, Finished Goods, Jan. 1, 1915	$ 26,000		
Goods manufactured, brought down	210,000		
	$ 236,000		
Inventory, Finished Goods, Dec. 31, 1915	36,000		
	$ 200,000		
Selling Expenses	42,000		
Profit on Trading	108,000		
	$ 350,000		$ 350,000

On April 1st, 1916, a fire destroyed the entire property. What amount of raw material and finished goods were destroyed, presuming that the purchases of raw material amount to $25,000, wages paid, $25,000, sales, $90,000, and indirect expense, $9,000?

18. A milk company sells to its customers strips of tickets which are good in payment of the milk delivered to them. These tickets are paid for in advance by the customers. What accounts would you expect to find on the books and how should the entries be handled to show the transactions of the sales of tickets and the deliveries of milk?

19. A corporation leases certain premises for a period of ten years for a total rental of $450,000.00, to be paid in monthly installments of $3,750.00 each. It is, however, later arranged that they shall pay $25,000.00 six months prior to actual commencement of the lease, for which advance they will receive a credit applying on the total of $450,000.00, amounting to $30,000.00; the difference between the $30,000.00 and the amount actually paid of $25,000.00 representing compound interest on the advance. Under this plan they are to make 120 monthly payments of $3,500.00 each. Describe briefly how you would handle this transaction on the books of the corporation.

20. A lumber company manufactured ten million feet of lumber at a cost equal to four-fifths of the current market price on the entire product manufactured. At the end of the year, there remains one hundred thousand feet with a current market price of $24.00 per M., two hundred fifty thousand feet @ $22.00 and one hundred fifty thousand feet at $21.50. What is the inventory value of this lumber?

CHAPTER IX.

Cash.

The cash account should contain a record of all cash entering or leaving a business. The balance of this account should represent current funds in the hands of financial officers and financial agents, cash in transit for which agents or branches receive current credit, and deposits in banks or with trust companies available for use on demand. Such items as certificates of deposit, I. O. U.'s, dishonored checks, or any other items that are not actual cash or immediately convertible into cash should not be included in the balance; neither should it contain special deposits created for the purpose of paying declared dividends or bond interest coupons.

Statement of Receipts and Disbursements.

A Statement of Receipts and Payments or Disbursements differs from a cash account, only to the extent that the beginning and ending balances are omitted.

Statement of Revenue and Expenses.
Statement of Income and Expenditures.

A Statement of Income and Expenditures should contain all items of income or expense, earned or incurred, whether or not they have resulted in an actual increase or decrease of cash. In general, the term is used by societies, municipalities or similar institutions, which were not organized for profit, and is intended to take the place of the profit and loss account of a business organization.

The principal difference between a Statement of Receipts and Disbursements and a Statement of Income and Expenditures is that the former may contain capital items, or income items which refer to some period not covered by the latter and that the later may include items which have not been realized or paid. The only condition under which receipts and revenues, and payments and expenditures would be the same is where there are no capital items included in the cash account and where all items of income have been actually paid or realized in cash.

Certificates of Deposit.

A certificate of deposit represents actual cash deposited with a bank or bankers, either on account of the income it produces or for safety where a checking account is not desired. In either case it should not be included in the cash balance. It should be placed in an account headed "Certificate of Deposit, maturing.........................., 19........" The income it produces should not be confused with the income derived from operations and, therefore, should be shown separately, or with other like items, in the accounts.

Trust Funds.

The legal liability of a trustee is greatly increased where the trust fund is not kept separate from the trustee's own funds for, no matter how careful he might be or how profitable an investment might become, he could not profit in any way; but, should a loss result under these conditions, even though he were not responsible for it and had acted in the best of faith, he would have to reimburse the estate the amount of the loss.

If trust funds are specifically invested or are deposited separately from those of the trustee, the trustee is only responsible for *mala fides* acts, and, for that reason, trust funds should always be separated from the personal cash of the trustee. If possible, they should be deposited to a separate account in a bank of good repute, and should be designated "Estate of Jane Doe, Peter Smith, Trustee," or some similar term, specifying that the account is that of the trust estate to distinguish it from the personal account of the trustee.

I. O. U.'s.

I. O. U.'s and tickets of managers and other employees offer one of the hardest problems of the bookkeeper's work. The managers usually feel that they are privileged to help themselves to the cash, often without making a memorandum of the amount taken, and other employees easily acquire the habit of overdrawing between pay days if the opportunity is offered. Everything possible should be done to discourage the practice. In the case of minor employees, one of the best plans is to demand that they interview the manager and have him vise the ticket before making the advance. In the case of the manager, it is probably better to open an account to which all I. O. U.'s are charged and then credit it with his salary when it becomes due, making a check to cover the difference in his favor, if there is any, at that time. The tickets should be retained until the end of the period and then be given him with the check to balance his salary account.

A further objection to the use of I. O. U.'s. is found in connection with some classes of embezzlement. In a recent case a young man was found short in his cash. Evidence was brought to show that the officers and other employees of the company had been in the habit of cashing I. O. U.'s. It was held that where it was the custom of the concern to allow the cashing of I. O. U.'s. and where the cashier had left I. O. U.'s. to represent the amount he had abstracted from the cash drawer, there was no embezzlement.

Operation of the Cash Account.

In all well regulated concerns, it is customary to deposit the total cash receipts of each day separately in the bank and to make all payments by check. This necessitates that a small amount of cash be kept separate for use in paying minor items which require immediate attention and enables the accountant to use separate books for receipts and disbursements.

The working fund which has been set aside is usually designated as petty cash although the terms revolving fund and imprest cash are common. The operation of accounts representing imprest or petty cash is described in Chapter XIX.

QUESTIONS.

1. Distinguish between a Revenue and Expenditure Account and a Receipts and Disbursements Account. State fully the difference.

2. State fully, reasons for or against the use of cash receipts and payments on account of trading, as a basis for the imposition of a tax on corporate incomes.

3. Why are the books of most municipalities based upon receipts and disbursements instead of revenue and expenses?

4. Under what conditions would the receipts and revenues, and the disbursements and expenses be alike?

CHAPTER X.

Capital and Revenue.

It is believed advisable, before taking up the study of the various property accounts, to discuss the underlying principles involved in distinguishing between capital and revenue income and expenditures.

Capital Receipts—Preferably Capital Income.

Capital income is the amount contributed to or guaranteed for the permanent use of an organization to enable it to carry on its business. It may represent, not only the amount actually invested in the concern in cash, but also amounts which the stockholders have agreed to contribute in the future, and also amounts secured by the issuance of long time obligations.

Capital Expenditures.

Capital expenditures are expenditures which have been made in acquiring or improving the equipment or other property of an organization.

Working Capital.

The working or circulating capital of an organization is the amount of the capital income which remains for use in operating the business after the capital expenditures have been cared for.

It is sometimes defined as the excess of current assets over current liabilities. Under either definition the amount indicated would be the same. If there were a fund of $10,000 remaining from the capital invested after the fixed assets had been acquired, this amount would be represented in the balance sheet as the excess of current assets over current liabilities.

Fixed or Capital Assets.

Fixed assets are the assets of a concern which have been acquired for its permanent use. An easy method of determining whether an asset is fixed or current, is to ascertain the purpose of its purchase. If it was acquired for the purpose of resale, it is a current asset. All other assets except cash are fixed.

CURRENT ASSETS.
FLOATING ASSETS.

Current or floating assets are those which are not a portion of the permanent investment of the undertaking. They are the assets which the firm deals in or consumes for the purpose of making a profit, or which represent cash, or are in a form readily convertible into cash. They are sometimes subdivided into quick and working assets. Cash, readily realizable investments, accounts or notes receivable and similar items are treated as quick assets, while inventories of raw material, finished goods and other items which are to be sold or consumed are considered as working assets.

FIXED LIABILITIES.

Fixed liabilities represent that portion of the capital income of an organization which is a liability of the concern, as distinguished from the investment in the organization.

CURRENT LIABILITIES.
FLOATING LIABILITIES.

Current or floating liabilities are those which require attention within a short time, viz., liabilities which are not of a permanent character.

REVENUE RECEIPTS—PREFERABLY REVENUE INCOME.

Revenue income is the income which properly arises from the operation of an undertaking.

REVENUE EXPENDITURES.

Revenue expenditures are those incurred in the operation or maintenance of an undertaking.

CAPITAL AND REVENUE.

In determining what properly constitutes an increase in the capital assets of an organization, it is necessary to ascertain the purpose and effect of the expenditure.

An expenditure made by an undertaking with a view to increasing or extending its operations, or in preparing it for operation, is a charge to Capital; all others are a charge to Revenue, and reduce the profit of the organization.

In preparing a concern for operation, it is presumed that all expenses incidental to its organization, the sale of its stock or bonds, and in fact expenditures of every nature which relate to the period prior to the time the property is ready to operate, are proper charges to capital accounts, and that miscellaneous income, such as interest on excess capital and discount on purchases, are credits thereto.

Charges for increasing or extending the operations of a concern may properly include any charge made for new equipment which is to be used in addition to all other equipment; or new equipment which is to be used in place of some old equipment, in which case the book value of the old equipment is eliminated from the capital assets and the cost price of the new is substituted; or for the residual value of old equipment which has been again converted into use.

The point of distinction between capital assets and revenue items is due to active life or existence, rather than value. An asset consumed in a day or in connection with a particular job is a revenue item, while the same asset, if its use extended over a number of years, would be a capital asset.

To illustrate this, let us take the case of a trench digger which was used by a contractor to construct an irrigation ditch. Its use continued for but six months, after which, for the reason that there was no more work to be done, it was cast aside. Its entire cost was charged as a revenue item against the ditch constructed, and its use proved very profitable but, had there been an opportunity to use it in other localities, it would have been carried on the books as a capital asset, and its value distributed over a number of years.

A slight exception to this rule exists in the case of items of very small value. They are usually charged to revenue even though their active life extends over a number of years; for example, fountain pens. The Interstate Commerce Commission places $200 as the dividing line. Under their ruling all revenue items, and capital items having a value of less than $200 are charged to revenue.

Capital assets should be reduced on the books of a concern at any time that a portion of the assets are disposed of, and also from year to year to provide for depreciation. The amount written off at the time of sale should represent the book value of the asset, viz., the purchase price, less deductions already made or allowed for depreciation. The difference between the book value and the selling price should be adjusted through the undivided profits or surplus account, as an amount affecting prior years. The amount allowed for depreciation from year to year should represent the decrease in value of the asset due to wear, obsolescence and effluxion of time. It is in the nature of a rental charge, paid by the business for the use of the fixed assets, and is properly a charge against revenue.

As an example of the manner in which accounts should be adjusted to care for the replacement, let us take the following case: An asset which cost $1,000.00 has been in use for ten years and a reserve amounting to $750.00 has been provided for its replacement. It is sold for $100.00 and a new asset costing $1500.00 is installed to take its place.

The entries required to show this replacement on the books are as follows:

Dr.		
Reserve for Depreciation	$ 750.00	
Profit and Loss Adjustment	150.00	
Cash	100.00	
Cr. Property		$1,000.00
(Asset is sold at less than book value. Balance is thrown into an account to adjust the errors in depreciation rates of prior years.)		
Dr. Property	1,500.00	
Cr. Cash		1,500.00
(New Property is acquired.)		

A fluctuation in the value of the fixed asset does not increase the rental value of the asset; therefore, as the concern does not intend to dispose of the fixed asset and as the asset is only intended for the use of the business, no attention need be paid to the fluctuation.

A fluctuation in the value of a current or circulating asset which has, manifestly, been acquired for the purpose of realization, has a direct bearing on the profit to result from its sale and, where a loss is probable, it should be taken into consideration and the anticipated loss given effect within the period in which the loss occurred; but, where the fluctuation is favorable, it is usually considered advisable to wait until the asset is sold before taking credit for the profit.

Increases or decreases of capital may also occur in the case of reversions, viz., where property or a particular sum of money is to fall to its owners at the expiration of a particular time and where the income derived is a sum different from the true income of the property. This principle applies in the case of leaseholds which have a rental value different from the amount actually received, but which will, at the expiration of the lease, revert to the owner, who will then secure the greater or lesser sum, as the case may be, with the consequent change in value.

The revenue account is properly charged with every expenditure incurred in the operation of the business. It should also be charged for the use of the fixed assets necessary to the operation of the business, for all stores consumed and with all repairs. In general, every item representing an expenditure which does not actually enlarge the field of operations or improve the fixed assets of the concern, should be charged to revenue.

Although, prior to the beginning of operations, it is considered proper to include legal expenses, rent, interest, etc., in the capital accounts, it is, in no case, proper to handle these items in this manner after operations have started, unless the expense is incurred in connection with the acquisition of some additional capital assets.

It is not to be presumed that revenue expenditures include only those which do not represent assets, but rather that, although it includes all expense items, it also includes the expenditures made for assets which are to be immediately consumed in the business, and which are of such a nature that it is not considered advisable to record the amount consumed from day to day.

MINES, QUARRIES, ETC.

The principles outlined above do not apply, in practice, to mines, quarries, and similar undertakings which are intended to operate only during the life of the asset. Such organizations do not provide for the reducing value of the asset from year to year for, in general, it is not intended to replace it, neither is it possible to accurately ascertain the residual value and, furthermore, it is not considered desirable to retain in the business large sums of money which are not to be reinvested.

In such organizations, the investment and all additional expenditures made in developing, promoting or financing the concern are considered as capital and all receipts of whatever nature are considered as revenue. On the other hand, companies operating this class of property, which intend to purchase other properties and to continue operations indefinitely, should provide for the depreciation and exhaustion of their properties the same as any other concern, otherwise they will have no capital available with which to purchase future workings.

QUESTIONS.

1. What constitutes capital expenditures?

2. State the general principles covering the discrimination between what constitutes proper charges against capital and what constitutes proper charges against revenue.

3. Name and define two classes of income and two classes of expenditures.

4. Under what conditions would amounts be charged to betterments at one time, and charged to operating expenses at a later date in railroad, electric and gas companies' accounts?

5. Point out carefully and illustrate with examples, the distinction that is drawn between circulating and fixed capital. How far is this distinction of importance?

6. What effect, if any, has the depreciation of fixed assets on the loss and gain account? Explain fully.

7. Should an electric railway company whose line is under construction, no part of it having been completed and no cars having been run, open any accounts for operating expenses, or should it charge all expenditures to construction?

8. Distinguish between depreciation and the fluctuation of assets.

9. Do revenue expenditures create assets?

10. A traction company engaged in construction was sued by a gas company for damages to the latter's pipe line along and across the former's right of way. Is this a revenue or capital charge?

11. Where and in what manner of entry should record be made of sales of plant and items of machinery disposed of because worn out or otherwise useless?

12. Give four examples of assets that are fixed assets in connection with some particular line of business, but are generally current assets.

13. Give four examples of assets that are current assets in connection with some particular line of business, but are generally fixed assets.

14. In your examination of the Automobile Delivery Truck account of a company, you find the following entries:

Debits.

Jan. 1, 1914, Trucks 1, 2, 3, 4, @ $1,200	$ 4,800.00
July 1, 1914, Truck 5	1,500.00
Aug. 1, 1914, Truck 6	1,500.00

Credits.

Aug. 1, 1914, Truck 2		$ 900.00
Sept. 1, 1914, Truck 4		750.00
Balance, Sept. 1, 1914	$ 6,150.00	

The Reserve for Depreciation for Automobile Delivery Truck account stood credited on Jan. 1, 1914, with $1,800.

Upon analyzing the transactions represented by these items, you find the following facts:

(a) Truck 5, purchased July 1, replaced Truck 1. The portion of the reserve for depreciation accumulated on January 1 for Truck 1 amounted to $900. Truck 5 was purchased on open account.

(b) Truck 2 was traded in for $850 on the purchase of Truck 6 costing $1,500. The difference was paid in cash. The reserve which had been accumulated for depreciation on Truck 2 on January 1, amounted to $300.

(c) Truck 4 was totally destroyed in an accident September 1. The reserve for depreciation on this truck amounted on January 1 to $300 and it was insured for $750.

Assume the rate of depreciation to be 25 per cent per year.

Give journal entries which would properly record the above facts and show the balances of all accounts affected, as of September 1, 1914.

CHAPTER XI.

Investments.

A separate account should be opened for each investment made. If it is an investment of funds which have been reserved for some specific purpose, as in the case of a Sinking Fund Investment or Reserve Fund Investment to provide for contingencies, special mention should be made of the fact. In the case of bonds or other interest bearing securities, it is desirable to mention the dates of their maturities as well as the rates of interest they bear and the dates of payment and, in the case of stock, to show the dividend dates.

Accounts should be maintained to care for the income of the investments either entirely separate from the investment account or by preparing an extra set of columns, debit and credit, under the same heading, forming a combined account as outlined in Chapter IV.

Investments in Life Insurance.

The majority of life insurance policies provide for a cash surrender value. This cash surrender value increases from year to year with the life of the policy and represents the amount which the company is willing to return to the insured upon the cancellation of the policy. The increase from year to year represents the amount paid by the insured in excess of the present worth of the amount of the policy, based on the expectancy of life as ascertained from the mortality table used by the company, hence a portion of each year's premium should be debited to the account representing the cash surrender value of the policy so that, after each premium payment, the amount of the account will correspond with the value of the policy as determined by reference to the policy itself. The balance of the premium is a charge to revenue.

The ordinary policy does not provide for a cash surrender value during the first three years, but the value shown at the end of the third year is usually considerably in excess of the premium for that year, hence although the policy does not provide for a cash surrender value, it is considered proper to carry an asset account for it during the first three years. The amount shown in the asset account at the end of the first and second year respectively is usually one-third and two-thirds of the cash surrender value at the end of the third year. These amounts are not accurate but are usually considered near enough for ordinary purposes.

Investments in Real Estate.

The treatment of an account representing real estate held as an investment differs considerably from that of an account representing the acquisition of property for the permanent use of the concern. In the latter case, no fluctuation in the value of the property need be considered as long as the property answers the purpose of the business, but, in the case of a temporary investment, an unfavorable fluctuation due to a change in transportation facilities, market conditions, or any similar cause, should be given effect in the year in which it occurs, if there is a possibility of it ultimately resulting in a loss. The treatment of real estate held as an investment is much the same as that of stock or other similar assets. No profit should be taken until the property has actually been disposed of, and all losses should be anticipated and given effect to protect the year in which the ultimate sale occurs against the year in which the loss arises.

The differentiation of capital and revenue expenditures also requires consideration in connection with the real estate held as an investment. Assessments for improvements, or improvements made directly by the owner, undoubtedly increase the value of the property and may correctly be added to the investment account, but taxes do not increase the value of the property and, in the case of producing property, should be paid out of the revenue they produce, the balance of the revenue, if the asset is held as an investment, being a credit to the operating accounts in the case of a real estate concern, or net profits in the case of any other class of organization. If, however, the asset may be classed as non-producing, for the reason that it produces no revenue or not sufficient to pay the taxes and necessary expenses incidental to its upkeep, it is proper to increase the amount of the investment by the amount which the expenses exceed the income. This assertion is based on the theory that any expense properly chargeable to the period of construction or during the time an asset is being brought up to a producing stage is properly chargeable to capital. The theory is applied to mines in distinguishing between development work and operation; to railroads when differentiating between construction and operation charges, and to non-producing real estate as stated above.

Property completed and ready to operate but lying idle, as in the case of a hotel which was completed but not occupied for two years thereafter, should be depreciated, and the depreciation, with all expenditures incurred in holding the property, should be written off to profit and loss, thereby creating a deficit. These expenditures do not relate to the period of construction and hence cannot be capitalized.

Land reclaimed by dyking or by fills should be carried on the books at its cost; the cost to include the original cost of the property, dykes, sluicing, filling, interest on borrowed money, office salaries and rent, and all other expenses of every kind relating to the period during which the property is being reclaimed. Miscellaneous earnings such as interest on excess capital and discount on purchases are proper credits to this account.

INVESTMENTS IN STOCKS.

An investment in the stock of another company may be made either to secure the control of the other organization or on account of the revenue it produces. If the investment is to secure the control of a company which it is intended to operate, the purchased stock should be entered on the books of the holding company at its book value, not its par value, and any difference between the purchase price and its book value should be set aside in a subsidiary account until such time as the stock is disposed of.

The book value of the stock purchased is secured by ascertaining the entire proprietary interest of all of the stock of the subsidiary company and then taking a proportionate amount thereof, depending upon the ratio that the stock acquired bears to the entire stock of the company. The proprietorship should include not only the capital, surplus and undivided profits, but also all reserve of surplus as well.

The object of placing the acquired stock on the books at the book value is to facilitate the consolidation of the balance sheets of the respective companies, and the separation of the earned surplus from the purchased surplus. This is accomplished by combining the figures of all the balance sheets, after eliminating or adjusting inter-company transactions. If the acquired stock in the holding company's balance sheet appears at the same value as it does in the books of the subsidiary company, it is only necessary to offset the one against the other. Profits or losses on operations of subsidiary companies are usually adjusted on the holding company's books before any attempt is made to consolidate the statements.

Where a holding company purchases the stock between the dividend dates of the subsidiary, the book value as at the date of purchase should be ascertained by actually closing the books of the subsidiary company. If, however, this is impracticable, it is considered proper to ascertain the approximate value as at that date by apportioning the earnings of the entire fiscal period over the periods before and after the date of purchase according to the number of days in each, or to make the apportionment according to some similar method which may be considered as being more equitable.

A holding company does not purchase the stock of a subsidiary company with a view of re-selling it. The stock acquired is a fixed asset, therefore no effect need be given unfavorable fluctuations in the market value, neither should a profit be assumed on account of a favorable fluctuation.

To illustrate the manner of handling investments in subsidiary companies, let us presume that Company "A" acquires 90% of the stock of a subsidiary company which has a capital of $100,000 and a surplus of $50,000, and that during the first year it earned $50,000. The holding company owns 90% of the capital and surplus and should have accounts on its books to represent its equity in the subsidiary company.

If, as in this case, the value of the equity is increased by earnings, the account representing the equity on the books of the holding company must be increased correspondingly. In this particular case, the equity possessed by the holding company is 90% of $150,000 or $135,000. At the end of the year this must be increased by 90% of the earnings, $45,000, to give effect to the new book value. The subsidiary stock account will then show $180,000.00. The amount earned by the subsidiary company has not been distributed as dividends and therefore is not available for dividends on the part of the holding company. The entry to place the earnings on the books of the holding company is as follows:

Subsidiary Stock at Book Value	$ 45,000.00	
Undeclared Earnings of Subsidiary Company		$ 45,000.00

After a dividend is received by the holding company, the undeclared earnings of the subsidiary company become available for dividends and may be transferred to surplus by the following entry:

Undeclared Earnings of Subsidiary Company	$ 45,000.00	
Surplus		$ 45,000.00

The declaration of a dividend reduces the proprietory interest of the holding company in the stock of the subsidiary company, hence the book value of the stock as shown by the holding company's accounts must be reduced accordingly. In our example we will presume a dividend of 100% is received. The holding company holds $90,000 par value of stock of the subsidiary company, hence its share of the dividend is $90,000. This will reduce the book value of the subsidiary stock to par value. The entry to accomplish this is:

Cash	$ 90,000.00	
Subsidiary Stock at Book Value		$ 90,000.00

Although a dividend of $90,000 is received and although no doubt the courts will rule that all dividends are properly treated as income, it is not considered advisable from an accounting standpoint, to treat the entire dividend as income. A portion of the dividend is no doubt returned capital—in our illustration, $45,000. We can therefore consider only the remaining $45,000—the amount of the undeclared earnings—as income.

In the majority of cases where subsidiary stock is purchased, an amount is paid for it which is different than the book value on the books of the subsidiary company. This difference is recorded in the books of the holding company as Premium or Discount on Subsidiary Company Stock. The account remains on the books during the entire time the stock is held by the holding company, but, as it no doubt represents the goodwill or, may we say, illwill of the purchased organization, it is combined with or deducted from the goodwill account of the consolidated balance sheet.

Another problem that requires consideration in the accounts of a holding company is the proper treatment of profits derived by one company of an organization, in dealing with another company of the organization.

If Company "A" sells goods to Company "B" and earns thereon $10,000, it is no doubt an earning available for dividends on the part of Company "A," but so far as Company "C," the holding company, is concerned, certain goods have only been transferred from one department of its organization to another and it is not proper for it to consider that an earning has been made. A number of years ago the common practice was to allow the surplus as shown by the consolidated balance sheet to contain this inter-company profit, but to show the amount thereof separately. It is now shown in the consolidated balance sheet as a deduction from the inventories.

If corporation stock is acquired solely for the revenue it produces, it should be valued the same as other current assets, as outlined in Chapter VIII.

In the case of an investment in the stock of a mining company or some similar organization which does not maintain its property with reserves, etc., and is therefore operating a wasting asset, the dividends received will not represent the true earnings of the company. They will comprise not only the earnings but a portion of the capital as well, and the amount received should be apportioned so that the decrease in the capital value of the investment will be recorded. It is impossible to determine accurately the amount of each, but it is certain that the dividends will not be received perpetually, therefore some provision must be made which will reduce the asset value of the investment on the books almost to extinction before the mine or other property is exhausted. The plan of reducing the book value to the market value, whenever the market value becomes the lower, would hardly provide sufficiently or properly for the wasting of the asset, as, so long as the property operated and produced, the amount of the dividend would be the criterion of value rather than the possibility of exhaustion, therefore, some other plan must be used to care for the reducing value of the investment. Whatever plan is used, it should be one which will not actually extinguish the asset from the books, lest it entirely disappear and its earnings be misappropriated. The plan of writing off an amount each year equal to the net receipts, after allowing a fair rate of interest as revenue, is to be commended. Of course, after the asset is reduced to a nominal sum, no further provision need be made for exhaustion, and the entire dividend may be treated as revenue.

Investments in Bonds.

An investment in bonds differs from an investment in stock to the extent that, with the former, it, generally, is possible to ascertain the date on which they will mature, the actual amount to be received as interest, the amount the investment will yield as income, and the rate of the yield. This is not true of stocks, therefore our remarks relative to investments in stocks will not apply to investments in bonds.

In the case of bonds, the purchase price is rarely par, although, in general, they are payable at par, therefore the purchase price must be increased or decreased on the books from period to period so that its resultant balance will equal the face of the bond at the date of its maturity.

If a bond were purchased at a sum above par and the account remained on the books without change during the entire life of the bond, when the bond was paid it would produce a sum considerably smaller than the book value, and a loss would result which would have to be adjusted in that particular year; conversely, if it had been purchased considerably below par, a considerable profit would have resulted. It is, therefore, self evident that any income produced by a bond which was purchased above par, should be applied first to the amortization of the premium paid, then the balance of the income may be considered as revenue. If the bond had been purchased below par, its approaching maturity and the possibility of collecting par increases the value of the bond and the account should, in the absence of statutory regulations, be increased by the amount of the accumulation.

To illustrate let us consider the following Certified Public Accountants' examination problem and solution:

PROBLEM

There were purchased December 31, 1910, $100,000 of Brownsville 4½'s for $103,394.43, ex interest.

On June 30, 1912, half of the bonds were sold for $52,418.55, ex interest.

Given that the bonds are semi-annual and that the price paid is such as to net the investor the nominal rate of 4% per annum —that is, 2% semi-annually—determine the profit made from the sale and the interest revenue for the two years ended Dec. 31, 1912. Give an analysis of the bond ledger account as it would appear at the close of business Dec. 31, 1912.

SOLUTION

Bond Ledger

Brownsville 4½s, to net 2 per cent semi-annually

	Principal	Premium		Principal	Premium
1910			1911		
Dec. 31. 100 bonds Nos.:	$100,000.00	$ 3,394.43	June 30. Cash	$	$ 182.11
			Dec. 31. Cash		185.76
			1912		
			June 30. Cash		189.47
			June 30. 50 sold, cash......	50,000.00	1,418.55
			Dec. 31. Cash		96.63
			Dec. 31. Balance ..	50,000.00	1,321.91
	$100,000.00	$ 3,394.43		$100,000.00	$ 3,394.43
1913					
Jan. 1. Balance ..	$ 50,000.00	$ 1,321.91			

Income

1912		1911	
Dec. 31. Balance to P.&L.......	$ 7,221.03	June 30. Cash, 2% of $103,394.43	$2,067.89
		Dec. 31. Cash, 2% of $103,212.32	$2,064.24
		1912	
		June 30. Cash, 2% of $103,026.56	2,060.53
		Dec. 31. Cash, 2% of $ 51,418.55	1,028.37
	$ 7,221.03		$7,221.03

Profit on Bond Sales

1912		1912	
Dec. 31. Balance to P.&L.......	$ 1,000.00	June 30. On Brownsville 4½'s	$ 1,000.00

Cash

1911				1910		
June 30.	Income	$ 2,067.89		Dec. 31.	Brownsville 4½'s	$ 103,394.43
	Premium	182.11	$ 2,250.00			
Dec. 31.	Income	$ 2,064.24				
	Premium	185.76	2,250.00			
1912						
June 30.	Income	$ 2,060.53				
	Premium	189.47	2,250.00			
June 30.	Principal	$50,000.00				
	Profit	1,000.00				
	Premium	1,418.55	52,418.55			
Dec. 31.	Income	$ 1,028.37				
	Premium	96.65	1,125.00			

In ascertaining the amount by which a bond account should be increased or decreased on the books each year, reference should be had to some bond table, copies of which may be secured at any bookstore. The use of a bond table will insure the accuracy of the charge or credit to revenue at the effective rate of the bond interest, but if a bond table is not available, and absolute accuracy is unnecessary, or, if the rules of the Interstate Commerce Commission are being followed, it is considered advisable to apportion the premium or discount on the bond equally in amount, to each year, until maturity.

In many cases, the bond accounts are adjusted each year by using the market quotation as the basis of valuation. For ordinary purposes this plan is incorrect, for the reason that, at the time a bond is purchased, the purchase price is based on some pre-determined ratio of yield, and any basis of valuation which does not give effect to this ratio of yield, subject to contingencies, must improperly state the income on the investment unless, of course, the bond does not represent a permanent investment. The exception to this rule is found in connection with the accounts of certain insurance companies which are compelled by law to value their securities at market. The reason for this ruling seems to be because the majority of insurance companies are mutual organizations and that they provide for paying off their policies from time to time as they mature. The paying of a matured policy with its profit accumulations is in the nature of a withdrawal of capital or the paying off of a copartner, hence the rule governing the valuation of assets at market as for the purpose of sale or liquidation of a business as described in Chapter VIII, under the heading "Valuing Stock," is considered preferable. This plan of valuing the assets is highly desirable where a portion of the capital is to be distributed, for the reason that it offers the only method whereby it is possible to accurately determine the true current value of the amount withdrawn, but it is entirely wrong where the amount of earnings is to be ascertained.

Bonds purchased for immediate resale could properly be valued at cost less an allowance for an unfavorable fluctuation, the same as other items dealt in.

Many classes of bonds are issued with the intention of refunding them if it is impossible to care for them at maturity. In any case, it very seldom happens that the higher grade of bonds are foreclosed, therefore it seems unnecessary to provide for loss through their non-payment, particularly if the bonds have a long time to run; but bonds of the speculative class are of uncertain value and the investor should not be too hasty in accepting his interest or his stock bonus as profit. The possibility of a loss resulting through an unsatisfactory refunding agreement or through foreclosure may be provided for by reserves if desired.

Investments in Securities, In General.

Where investments are made in securities from profits which have been reserved for some specific purpose, it seems unnecessary to provide for a minor loss that might occur at the time of their sale for, in no case, would the loss affect the operation of the business and it would simply mean that, instead of having a particular sum in reserve, the amount might be slightly reduced at the time of realization. Of course if the loss were so great that the balance sheet would result in mis-statement, or that the result to be obtained by the reserve would be defeated, it should be given effect by reducing to a more proper amount both the reserve fund, credit, and the investment account.

Investments made in securities on a margin should be entered at their full purchase price with the existing liability for the balance of their purchase price shown as a liability, for it is only by this manner of entry that a person studying the accounts can determine the true worth of the particular investments, or the possibility that the margins may be entirely wiped out by unfavorable fluctuations.

Where a considerable number of securities are held by a concern dealing in them, it is possible that certain securities have decreased in value while others have increased, in which case, instead of entirely ignoring any increase due to a fluctuation in the market value, it is considered proper to allow the increases to offset the decreases; but, where a loss will undoubtedly occur, an amount is credited to an Investment Fluctuation Account and charged against the income of the current year to provide for the loss when it is ascertained.

Consideration should be given the possibility of securing a favorable market quotation by the aid of "Accommodation Transactions" between members of a group of investors and of using this favorable quotation as a basis of an overvaluation of some particular investment and a consequent covering of losses.

In the case of a concern holding securities other than as a dealer in them, no charge could be made against income from operations to provide for losses thereon, for the income from operations relates to the investor's business as a trader or manufacturer and not to his investments. Any adjustments necessary would have to be made from the net profits account direct.

QUESTIONS.

1. You find in your annual audit of an investment company that bonds of another company are included among the assets at their face value, though purchased at a discount; that such discount has been considered as commission earned and so credited to profit and loss account and later carried to a reserve fund. What is you opinion of the transaction? If it does not meet with your approval, how would you have recorded the transaction?

2. Describe the various methods with which you have met for writing off the premium on bonds purchased, pointing out their weaknesses or advantages. What is the most scientific method of dealing with premiums paid, and upon what principle is it based?

3. A corporation owns three parcels of real estate, one unimproved which produces no income; one partly improved which produces just sufficient to provide for the taxes; and the third fully improved which produces a considerable sum in addition to the taxes and other expenses. How should the accounts appear on the books?

4. A corporation formed to invest in certain classes of securities has made a serious loss on paper by the fall in the price of some of its purchases, while it has earned enough on income to pay the usual dividend. How should this be dealt with in the annual accounts?

5. Finance corporations holding a large number of shares in other corporations are in the habit of valuing their securities for balance sheet purposes at either (a) cost price, or (b) market price at the date of the balance sheet.

Discuss the respective merits of the two methods and say which you consider the most desirable, from an accountant's point of view.

6. An insurance company buys $50,000 7% 10 year bonds at 116 for investment. The bonds will mature at the expiration of 5 years. What should be done with the premium?

7. "A" Company invests $135,000 in stock of "B" Company, receiving 1,000 shares. The books of the "B" Company at that time disclosed the following: Capital Stock, $110,000; Surplus, $38,500. During the year immediately succeeding the purchase, the "B" Company earned $19,250, and at the end of the year declared a dividend of $57,750. What sum may "A" Company assume as profit.

8. A policy of life insurance provides for an annual premium of $28.05. The cash surrender values at the end of the third, fourth and fifth years are $45.00, $65.00 and $88.00 respectively. How should the policy and the premium thereon be treated in the books?

CHAPTER XII.

Capital Assets.

Capital Assets represent the acquisitions of a concern which are intended to be of a permanent nature, and which are presumably purchased from the Capital Income or from profit accumulations which have been set aside as additional permanent capital.

Their permanence in the business requires that they receive a treatment different than that given the assets which are to be immediately disposed of or which are held ready for immediate disposal. The principal differences are, that due allowance must be made for the decrease in the value of the properties from day to day, owing to the approach of a time after which it will be impracticable or impossible to use them, and, that to a certain extent, the result of the use of the assets must be counteracted.

The fact that capital assets are often purchased with the capital stock of the concern, which, in general, is of an indeterminable value and which it is usually desired to have appear as having been exchanged for articles possessing at least its face value, gives rise to the inflation of the value of the assets which are acquired with it.

As an example, take the case of a concern incorporated to acquire the assets of some particular plant. At the time of incorporating, it is usually desired to give stability to the concern by having a considerable amount of capital stock and by having it appear as fully paid. In order to accomplish this without investing additional funds in the corporation, it is customary to accept the assets at the par value of the stock which is given in exchange, even though the assets do not possess a value equal to the predetermined amount of the stock, then, in order to make the value of the assets acquired indeterminable, it is considered necessary to place them on the books in an indefinite manner, say as Plant or Equipment, without an appraisal or inventory.

This mode of procedure should be discouraged whenever possible for it not only misrepresents the actual worth of the concern and is contrary to the intent of the law as will be seen by a study of recent supreme court decisions, but it also causes the earnings of the concern to appear considerably less than they actually are; for, no matter at what value the asset may have been entered upon the books, during its life, this amount must be cared for by charging it, in installments, against the earnings of the business, and, if the amount at which it is placed on the books is excessive, the annual installments under the inflated value will be proportionately larger than they should be, and the earnings will appear smaller than they actually are. It is undoubtedly more desirable to show the capital assets at their appraised value and to have the books display the difference between this value and the par value of the stock, which was given in exchange for the asset, as a discount on the stock or, if conditions warrant, as goodwill. In either case, if desired, the excess could be written off in future years out of surplus without disturbing the actual earnings as displayed by the books but it seems unnecessary to write off the account for the reason that, ultimately, the stock will be called in and the discount will then automatically adjust itself against its book value, so that the stock holder will receive an amount proportionate to his investment in any case. In order to insure the proper adjustment of the accounts it is only necessary to keep the discount or premium on each class of stock separate.

The Interstate Commerce Commission provides that where the consideration given for the purchase or the improvement of property is other than money, the money value of the consideration at the time of the transaction shall be charged to the property accounts and the difference between this amount and the nominal value of the stock issued shall be charged to Discount on Capital Stock. The discount account being reduced (1) by premiums realized on subsequent sales of the same sub class of stock, (2) by assessments levied on the stockholders, (3) by appropriations of income or surplus for the purpose, (4) by charges to profit and loss upon the reacquirement of the stock.

Conditions also arise where a concern may purchase certain articles which will require rebuilding or reconstructing before being available for service. The rule that the asset must be in actual working order and ready to operate before capital charges cease holds true in this case, as in others, and all expenditures made in preparing the asset for such service are properly chargeable to the account representing the asset, and therefore represent a Capital Expenditure.

It is also possible that, in order to secure a certain business, a considerable number of assets might be purchased with the business which, although a portion of the capital assets of the vendors, may not be desirable for the purposes of the vendees and which would necessarily be discarded shortly after their acquisition to make room for more modern equipment. In this case, at the time of purchase, the undesirable machinery should have been placed on the books at its scrap value but, if it were not, the book value should be adjusted at the time of its sale and any difference closed into goodwill.

Goods might also be acquired on the installment plan, the purchase price of which would, no doubt, be considerably in excess of the cash price that would have been paid had the money been available. Such purchases, if they amount to a considerable sum, should be apportioned over "Cost" and "Interest on Installment Purchases." The interest account should be reduced from period to period proportionate to the totals of the amounts which will be outstanding from term to term.

To illustrate this principle of amortization let us presume that the list price of an article is $1820 cash, or $2000, payable $500 in cash and the balance in three annual payments of $500 each. The interest charge here is $180, the amounts which will be outstanding during each period are $1500 the first year, $1000 the second year, and $500 the third, a total of $3000. The interest is apportioned to each year as follows: 1500/3000 or ½ to the first year, 1000/3000 or 1-3 to the second, and 500/3000 or 1-6 to the third year. This method, although it does not apportion the interest according to the effective rate is quite equitable, much more so than the equal annual charge method.

Organization Expenses.

The organization expenses of a corporation may properly include all legal expense incidental to its organization, the incorporation fee, seal, stationery, prospectus, commissions or other expense incidental to the sale of stock, rent, salaries and, in fact, every expense of every kind which may properly be incurred in organizing the concern. This amount is placed on the books as a capital asset and need not be written off but, in general, it is written off during the first few years of the life of the organization.

A discount on the sale of stock should not be included in the organization expense account under any condition.

The actual amount of an expenditure incurred during the period of incipiency for interest on a bond issue may possibly be included as an organization expense, but it is believed more practicable to include such a charge in the construction account.

Earnings during construction, such as interest on excess capital which has been loaned, is a proper deduction from construction or some similar account. The rule is that all earnings or expenses relating to the period of construction may properly be thrown into capital asset accounts, so that when the concern is ready to operate it starts with a clean slate, viz., without either profits or losses.

The Interstate Commerce Commission treats expenses incidental to the sale of bonds, or other evidence of indebtedness, the same as discount on bonds. This method is not theoretically correct in all cases. A bonus paid for securing a loan is, no doubt, in many cases but an adjustment of the interest rate and should be included with the discount on the issue, but expenses for engraving and printing, fees for drafting mortgages and trust deeds, recording fees, and legal expense have no bearing whatsoever on the interest rate and should not be thrown into the discount account, which exists solely for the purpose of adjusting the nominal interest to the effective interest each year.

Bonds Issued for Construction Purposes.

The fact that bonds are issued for construction purposes in no way affects the final disposition of any discount or premium that may enter into consideration at the time of their disposal. As explained in a previous chapter, any difference that may exist between the par value of a bond and its market value may be traced to a difference between the interest the bond bears and the value of money at the time of its disposal. This, of course, has no bearing whatsoever on the cost, in dollars, of the property constructed from the funds secured by the sale of bonds.

The effective rate of interest paid on the bond is a charge for the use of the money and, if it accrues during the time a concern is in operation, it is properly a charge against Net Profits; but that portion of the interest, that actually accrues during the time a concern is being prepared for operations, is a charge to some capital asset account.

The effective interest is the amount of the interest charged after caring for the periodical apportionment of the discount on bonds or the premium on bonds accounts; these accounts having been placed on the books, at the time the bonds were disposed of, to contain the difference between the sale price and the par value of the bonds, their purpose being to adjust the periodical interest payment so that the charges to each period will be at a uniform rate of interest throughout the life of the issue.

Double Account System.

The method of operating the accounts of an undertaking materially affects the manner of handling future expenditures. Certain corporations are organized under a provision that a considerable portion of the money invested must be expended toward the acquisition of certain predetermined fixed assets and that these assets must be maintained from year to year during the life of the organization. Under this plan of operation no charges are made for depreciation, neither are additional expenditures capitalized even though they are a betterment to the concern, except, of course, that they actually enlarge the scope of the organization or complete some step contemplated in the original plan of organization.

This plan of operating the accounts is usually designated as the Double Account System, principally on account of the form given the balance sheet owing to the desire to distinguish between the expenditure for capital assets and the remaining working capital. In the balance sheet, the capital assets are shown in comparison with the capital liabilities; the balance, representing the excess of the capital liabilities over the capital assets, being carried forward into a second section as working capital.

There are many objections to this system and as it is but little used we are devoting as little space to it as possible. For further information see Dicksee's Advanced Accounting.

SINGLE ACCOUNT SYSTEM.

The Single Account System—that in general use—properly distinguishes between Capital and Revenue expenditures and takes into consideration the value of the use of the property.

Under this system, and as outlined in the chapter on Capital and Revenue, all expenditures which actually increase or extend operations or make operation more permanent should be charged to the capital assets under some appropriate heading; all others should be charged to revenue. As simple as this rule may seem, there are many puzzling circumstances which cause trouble in determining just what is and what is not a proper charge to either of these classes of accounts.

ARTICLES PREPARED FOR USE OF FIRM.

In general, we believe that a firm is not justified in carrying any fixed asset on its books in excess of its actual cost—surely no firm would be justified in accepting as profits and declaring as a dividend any profit presumed to have been earned by making a portion of its plant or equipment in its own shop. This rule also holds true in the case of articles manufactured by a subsidiary company for its holding company, or other subsidiary companies under the same control, in so far as the consolidated statements of the group of companies is concerned. There are, however, no objections to the manufacturing company selling the article at a profit, or to the purchasing company putting it on its books at the amount paid for it, but so far as the group of companies is concerned no profit has resulted and hence the assets must be reduced to cost if the true earnings of the consolidated companies are to be shown in the consolidated statements.

When ascertaining the cost of the article manufactured it is proper to include all items of direct cost and the regular oncost or overhead charges, including management or superintendence. It is not considered advisable, although from a strictly technical viewpoint, it is no doubt permissable, to include any charge for management or superintendence or any other indirect expense as an element of cost in the case of construction or any large or unusual work outside of the ordinary scope of the business, where no extra expense has been incurred. The reason for this is that under normal conditions the entire charge for management, superintendence and other indirect expense is spread over the cost of the regular product of the concern, and, if any portion of it should be apportioned to a special building or some similar piece of work, the cost of the ordinary product of that particular period would receive a reduced amount of oncost and the cost records would be misleading for use during periods wherein no special work is undertaken.

To summarize, in the case of small items, manufactured for the use of the concern, which will have no material effect on the oncost charges, it is considered proper to include the regular oncost charges, but where the article constructed or manufactured is large and expensive and the apportionment of oncost will disturb the cost records prepared for future use, no charge for oncost should be made.

Where goods have been manufactured and the cost thereof is found to be in excess of the price at which similar articles could be purchased from outsiders, it is often considered necessary to reduce the book value to the market price. This is improper for the reason that the books are designed to show cost and not values—in fact all accountants maintain that they are not appraisers. If it were proper to adjust the cost of a manufactured article to give effect to some quotation, it would also be proper to reduce the cost of any purchased article to the amount of a lower quotation secured after its purchase and this of course is considered absolutely unnecessary. If an individual were to buy an office desk at $80.00 and while returning to his own office were to see a similar desk on sale at $50.00, he would not enter the price of the desk on his books at $50.00. It cost $80.00 and this amount is the price at which it would be carried on his books.

Moving and Altering.

Moving or altering a plant, in general, does not materially increase the capital value or the stability of the organization and, unless there is a distinct betterment, it is believed desirable to charge the entire amount to revenue during the period in which it occurs; of course, if the charges for alteration or moving amount to a considerable sum and if such action will reduce the operation expenses to any great degree in future years, it would not be proper to allow the current year to suffer the entire amount to the benefit of future years; therefore, the expense incidental to moving or altering may be properly spread over a number of years if such a course is desired.

Replacements.

We believe that the accepted definition of the term replacement, in accounting, restricts its use to indicate the removal of one article and the substitution of another of the same or greater value, in distinction from a renewal which simply makes good some existing article by a process of re-manufacture.

A replacement, therefore, should result in a credit to Plant or Machinery for the value of the article displaced and a charge for the article substituted. If this plan is followed closely and care is taken to ascertain the actual book value of the article replaced, very little difficulty should occur in handling such items.

In ascertaining the value of the article displaced, the process is simplified considerably if it is possible to refer to a Plant or Equipment Ledger to find the cost of the article and also the present book value; but, if such a ledger is not maintained, the book value of the individual article can be easily determined if the date of purchase, its cost and the rate allowed for depreciation is known.

Occasionally extensive replacements become necessary where proper provision has not been made for the obsolescence of the article displaced, in which case a considerable loss will result, owing to the failure to realize the book value of the article scrapped. This loss should have been provided for during previous years, but as it was not, it now becomes a charge against surplus as an adjustment of prior years' profits. If there is not a sufficient amount of Surplus, after crediting the current year's profits, to cover the loss and also a dividend, no dividend can be legally declared. In general, however, if a concern is in a healthy state, it is customary to spread the loss over a considerable number of years and to declare a small dividend from year to year even though the loss has not been entirely cared for. (*)

In case an organization entirely replaces some of its fixed assets at a considerable expense, the expenditure may or may not result in a direct increase of its earnings, as in the case of a steamship company replacing a dock with a larger, more modern and much improved structure, and considerable doubt exists as to whether the expenditure could properly be capitalized. In general, where an expenditure of this kind is made it is done with the intention of improving the service to the public, maintaining their goodwill and securing a continuation of their business, therefore, as the stability of the organization is increased and as there is undoubtedly a betterment of fixed assets, the expenditure should be capitalized.

---

* *Distribution of Charges for Property Retired and Replaced*: In case the amount chargeable as operating expenses for property retired and replaced, provided for in section "7" of the general instructions for the classification of investment in road and equipment, is relatively large and its inclusion would seriously distort the expense accounts for a single year, the carrier, if so authorized by the commission, may charge the amount thereof to balance sheet account No. 726, "Property abandoned chargeable to operating expenses" and distribute it thereafter, in accordance with the provisions of that account to the operating expenses of succeeding years. (I. C. C. Ruling.)

Conversions.

In the operation of many classes of undertakings, certain portions of the equipment become unsuited for the purpose for which they are being used and it becomes necessary to replace them by larger, more modern or better articles, although, owing to the scope of the undertaking, the displaced articles may be converted into use in some other place. This brings up the question of the value at which the part converted into use in the new location should be placed on the books, i. e. should the book value remain on the books, or should the asset be considered at its market value and the new department or district as the purchaser at that price.

The market value is often used by accountants but it seems rather hard to determine this with any degree of accuracy, for the reason that the market value of used material is generally a question of barter rather than of a quotation and, as no attempt is to be made to dispose of the article, the opportunity of barter is lost and the estimate of value must be simply an assumption; therefore, so long as the book value is not exorbitant and the value of the asset has been depreciated from year to year during its life, it is believed proper to allow the book value to remain on the books irrespective of the location of the asset, provided it still remains in use.

In either of the cases mentioned above, all cost of removing the old asset should be charged to revenue. In case the book value remains on the books, the cost of installing should also be charged to revenue; but, if the market value rules, the cost of installing may properly be capitalized.

Appreciation from Outside Sources.

The effect of outside conditions on the capital assets should be ignored, viz., even though the property of an organization may have greatly increased in value, no effect should be given this increase until the property is actually disposed of, for, no matter how much greater the value may be, no profit could be accepted as available for dividends until it had actually been realized. In cases where it is particularly desired that the asset value be increased to the estimated value, and this is done, care should be taken to credit the amount representing the increase to some special reserve account, properly headed, so that under no condition could it possibly be considered as an addition to surplus and an amount available for dividends.

QUESTIONS.

1. If a company, duly organized, acquires several plants that are found to be in a run down condition and to require extensive outlay for repairs and renewals to bring them up to the required state of efficiency, should such outlay be charged against capital or against revenue? Give reasons.

2. What is the proper manner of placing assets on the books where payment has been made in stock, the face value of which is greatly in excess of the actual value of the asset?

3. A corporation, having acquired a manufacturing plant, discards shortly after its acquisition a large portion of the machinery and replaces it by machinery of a more modern type. (a) What do you consider is the correct method of dealing on the books with the book value of the discarded machinery? (b) Do you consider that it would be proper for the corporation to pay dividends until the value of the discarded machinery has been written off out of profits? Give full reasons for your answer.

4. A corporation issues bonds, proceeds to be used for construction purposes. If bonds are sold at a discount, to what account should the discount be charged? If sold at a premium, to what account should the premium be credited?

5. In the construction of a large building the proprietors issue $800,000.00 20-year 6% bonds which are disposed of to the contractors at 85% of their face value. You find, upon examination, that the discount of 15% has been charged to Construction Account in the first place, and then to Building Account.
State whether you consider the final entry legitimate or not, and give reasons.

6. After the organization of a corporation, it proceeds to construct a manufacturing plant, paying for the same in cash realized from the sale of capital stock at eighty cents on the dollar. When ready for operation, what items would be included in the cost of such a plant?

7. Do you consider that interest paid on capital during the construction of a dock should be charged to a capital asset?

8. What is usually included in the account Organization Expenses in the books of a company? How should this account be treated? Give reasons.

9. Can or cannot, a going concern, employing a salaried manager and superintendent, charge any part of their salaries to cost of improvements or extensions that may be added to the plant at intervals? In either view, why?

10. A concern engaged in building locomotives wishes to equip their machine shop with some new machinery of standard

types, and determines to have it made in their own plant by their own workmen from material which they have in stock. By this means it will cost much less than if they bought it from outsiders. They desire consequently to charge their Machinery and Large Tools account with the current market price of the machinery so produced, on the ground that their workmen, while making it, have been detached from other profitable employment.

Discuss this question pro and con, and say what you would advise to be done, giving reasons.

11. The North & South R. R. Co. has demolished its old wooden station at a certain city on its line and has erected in its place a larger and more ornate structure of brick and stone, at a cost of $100,000.00 in excess of the book value of the old building after deducting the salvage. Bearing in mind that this expenditure of $100,000.00 does not materially increase the earning capacity nor decrease the operation expenses of the company, what disposition should be made of this item in the accounts?

State the general principles that should govern an accountant in dealing with this class of expenditure, whether occurring in a railroad or any other property.

12. A manufacturing concern, having increased its capital and invested considerable money in new machinery and in the reconstruction of old machinery, removes to a new location and charges the cost of moving and reconstructing to one account termed installation. Explain fully how this account should be treated in closing the books of the company and give reasons.

13. A factory makes large outlay during a year for alteration to plant, how would you treat such expenditures?

14. The real estate holdings of a manufacturing corporation, of which you are auditor, have substantially increased in value since their purchase. The directors have caused the real estate account on the books to be debited and profit and loss account credited with the amount of the increased value.

Do you consider this procedure justified? State reasons for your answer.

15. Expenditures are made by a corporation for items of each of the following classes: (a) taking down a machine in one part of the factory, moving it and putting it up in another part, (b) expenses of incorporating the company, including state charges and lawyer's services, (c) brokerage on the purchase of a piece of property, (d) commission on an issue of debenture bonds, (e) cost attending a mortgage, (f) furniture and fittings of a city office and salesroom, (g) costs of patents, including solicitor's charges and government fees. Which items should be charged to capital and which to revenue? State reasons for your answer in each case.

16. After appraisement, a manufacturing corporation increased the book value of its real estate to the appraised figure, carrying

the amount of the appreciation to undivided profits account. Shortly afterwards, the corporation declares a dividend to pay which, a part of the real estate appreciation account is required. Do you consider that the corporation is justified in treating appreciation of real estate as an earned profit (assuming the real estate to be used for the purpose of the business) and in paying that appreciation out as dividends. State fully reasons for your answer.

17. A suburban traction company after equipping its lines at a very considerable expense for overhead trolley and operating same for several years decides to adopt the third rail system. Extensive changes are necessary in changing power houses, rearranging tracks, and altering cars, involving an expenditure of $25,000. In addition considerable machinery and rolling stock, the original value of which had been treated as a capital outlay and was carried on the books at a valuation of $25,000 is rendered obsolete and is disposed of for $3,500, showing a loss of $21,500. The profits from operation for the year are $18,000.

State how you would recommend that the matter be dealt with in the company's accounts and whether the company can pay a dividend?

18. A company adds to its plant by purchasing second-hand machinery to the extent of $2,500, and expends a further $1,000 in placing it in efficient working order. Had new machinery been purchased, it would have cost $4,000, and have been capable of producing 15 per cent additional output at the same cost. Do you consider that the $1,000 should be charged as a capital or as a revenue expenditure? Give reasons for your answer.

19. The plant of a manufacturing corporation is situated on land which was purchased several years ago at $50.00 per acre. Recently, property adjacent thereto, and throughout the neighboring district has been changing ownership at prices averaging $550.00 per acre. The corporation desires to show on its books an increased valuation of its own site at the last named figure. As only 50% of the subscribed capital has been called, and there is no immediate reason for calling more, it proposes to issue to its stockholders, in proportion to their respective holdings, certificates of stock for the amount of the appreciation, which will equal the balance of the subscription.

Have you any comment to make, or advice to offer, regarding this proceeding and what entries would you make if the proposed transaction were carried into effect?

20. You are asked to make the regular annual audit of a street car company, which has started to make important extensions and improvements within the year. The company desires to use your report for the stockholders and for the information of the trustee under the mortgage securing the bonds. The company will ask the trustee to certify additional bonds and the request will be based on the expenditure for the improvements.

The old tracks, power house, equipment, etc., are being largely rehabilitated and a new extension to the line is being built.

The company has capitalized the following items:

(a) Legal service in connection with the franchise covering the extension of the line.

(b) Legal service in connection with filing the supplementary trust deed necessary to have the new line become part of the security for the bonds.

(c) The full cost of dynamos of greater efficiency and larger capacity. The old dynamos are not sufficient to carry all of the increased load, but for the present are retained as reserve units.

(d) The cost of a new switchboard in the power house. The old switchboard was sold and the amount realized was credited to the property accounts.

(e) The cost of taking out the old and installing the new switchboard.

(f) The cost of tearing out one end of the boiler house and enlarging it to provide space for additional boilers.

Are the above proper charges to capital? Give reasons.

CHAPTER XIII.

DEPRECIATION.

Depreciation in its broadest sense is an impairment of value. As applied to accounting, it represents the impairment due to wear, obsolescence or effluxion of time.

DEPRECIATION CHARGE.

Any allowance that may be made for depreciation should give consideration to these items and should be made with a view of caring for the entire impairment during the period of active life of the asset.

The easiest mode of application seems to be to make a rental charge against operations to cover the use of the asset.

One portion of the business, taken as a unit, should not profit at the expense of some other portion, therefore, this rental charge should be made as near actual cost as possible; or, looking at it from another standpoint, a sufficient rental should be charged against operation during the life of the asset to cover the cost of replacing it at the time it becomes necessary to do so.

The plant, etc., is consumed in the production of the article manufactured, therefore, any charges that are found necessary to maintain or renew it should be considered as an element of the cost of the article manufactured. The fact that depreciation continues irrespective of the continuation of operations is not of itself a sufficient argument to warrant its elimination from the accounts representing the cost of the articles produced; although, if, during any particular period, there is a term of idleness, the depreciation that occurred or that is estimated to have occurred may be separated from the portion directly traceable to operation and treated as a charge against net profit. During periods of slightly decreased output we believe the regular depreciation charges should be made.

Buildings may or may not be used exclusively in manufacturing, and in cases where the depreciation of the building represents charges to other departments as well, it is considered proper to apportion the depreciation of the building over all of the departments benefited by its use. The building operation account is credited with the amounts distributed to the various departments and is charged with taxes and similar items which relate to the building.

Necessity of Providing for Depreciation.

It has often been asserted that, if the profits of any particular year are not sufficient, no provision for depreciation can be made. This theory is surely a fallacy for depreciation cares for that portion of a plant which has been consumed during the period in the production of the articles manufactured. Providing for depreciation is but charging the product with the value of the use of the machines or other property which made its production possible. The charge is intended to be the true cost of the services received and should be borne by the article produced, irrespective of whether a profit is derived by their sale or not.

Depreciation is in no sense like a dividend, which can be increased or decreased in proportion to the profits available. One is an element of cost and the other simply a distribution of the profits and, although the provision for depreciation directly affects dividends, ~~the declaration of a dividend in no~~ way affects depreciation.

Every purchase of material or plant is made with the intention of consuming it in the process of manufacture. In the case of the material, except possibly in the case of mines or quarries, the amount of the residue is apparent and the value of the amount used may be easily ascertained, but in the case of the plant, it is almost impossible to properly determine the amount consumed. At some future date the plant will be discarded probably because it is worn out or more likely to allow the installation of some more improved article; in any case, the day ? of desuetude is approaching and provision must be made from period to period for the impairment of the asset.

To illustrate this principle, let us take a nugget or other piece of gold which is being used in gold plating and presume that it represents a machine which produces any manufactured article. Its use in a potassium cyanide solution will gradually cause it to diminish in weight until ultimately another nugget will have to take its place. It is impossible to see the movement of the gold from the nugget to the article which is being plated but the nugget certainly decreases in weight and value and the other article assuredly increases, correspondingly, so that when the plating is finished the value of the article plated has absorbed the value of the gold removed from the nugget. So it is with a machine. In the beginning there was a machine. At a later date there will be no machine, but, instead, there will be a number of manufactured articles which resulted from its use. The cost of the machine is as much an element of the cost of the goods manufactured as the cost of the gold is an element of the cost of the plated article. The only difference is that the gold changes with such rapidity that its value simply must be considered while the machine in many cases runs along year after year with no apparent diminution in value.

In the case of very large undertakings, it has been contended that there is practically no depreciation for, owing to the scope and the intended continuity of the organization and the necessity of thorough and continuous overhauling to keep the asset in the high state of efficiency for continuous operation, the expenditure for repairs and renewals must be sufficient to maintain the asset and, at the end of any period, the asset will be worth, so far as the operation of the business is concerned, an amount equal to its purchase price and book value. This argument may be theoretically correct but in actual practice, owing to the inconsistency of human nature, it does not work out satisfactorily. Where depreciation is not accounted for and where the repairs and renewals are supposed to maintain the asset, the tendency of managers is to gauge the expenditure for such work according to the profits of the period. During unprofitable years repairs and renewals are dispensed with, with the result that, not only are future years compelled to stand the expense that should have been borne by the prior years but, as the failure to make repairs usually results in greatly increased depreciation, they must stand this additional expense also so that profits are invariably incorrectly stated from year to year.

There is also a tendency among new managers, particularly where they have taken over the management of a plant which is in a run down condition, to increase the capital assets by the amount expended on renewals. They do this for, as they claim, these renewals should have been made during the previous regime and are not properly a charge against the current year's operations. This also results in an improper statement of profits and should not occur in any well regulated organization.

Many cases arise where profits are purposely inflated by persistently giving revenue the benefit of all doubtful expenditures and by increasing some capital asset by the amount thereof. This results in a corresponding increase in the profits for the period and such an inflation of profits invariably results in a fictitious dividend and consequently an impairment of capital, therefore, if the practice of capitalizing items which are properly a charge to revenue were to continue for any considerable period, the organization necessarily would become seriously handicapped, owing to a lack of capital, and would ultimately have to cease doing business.

The argument that the appreciation of the fixed assets more than covers the depreciation of the plant and therefore makes it unnecessary to provide for the depreciation thereon, is often heard, but this also is not based upon sound logic. The fact that a portion of the property is worth more, is not sufficient excuse for assuming that a profit has been made thereon. In fact no profit can be assumed until the sale actually occurs and the profit is realized, therefore this increase in value should not be allowed to offset a proper charge to revenue, the elimination of which would result in an increased profit. Furthermore, ordinarily, the increase may, we believe, be presumed to affect land only, which if used for ordinary commercial purposes, is not supposed to depreciate and for which no depreciation charge is made. Its increase on the books would not, in any case, affect the earnings of a business, and, if given effect at all, it would appear as a credit to an account headed "Appreciation of Real Estate —Not available for dividends" and not to the credit of revenue, therefore, its appreciation should not be used as an offset to the depreciation on some other asset which the business is consuming and is supposed to maintain out of revenue. If the plant or equipment could, under any possible condition, be presumed to have increased in value and, provided also that it was considered proper to give this increase effect, would not the annual charge for depreciation, which is nominally a charge for the use of the asset, be properly increased rather than diminished?

One writer states that depreciation should not be considered as a charge against operation for the reason that it goes on irrespective of operation. The latter statement is undoubtedly true, in fact it is possible that an article may suffer more during enforced idleness than it would if properly cared for during a much longer period of operation, but, even so, the asset was purchased with a view of consuming it in the production of the articles to be manufactured in the course of its operation and its cost should be included in the cost of articles produced during the period of use. If, however, during any particular period, no articles are produced for the reason that the asset is not operated, the depreciation must be taken from previously earned profits or, if no surplus or undivided profit is available an impairment account should be created and the loss shown as such on the books of the undertaking.

From a legal standpoint there is a growing demand that depreciation be cared for in the accounts of all undertakings. The Interstate Commerce Commission requires it of transportation companies; the majority of state laws affecting the operation and accounting of public service corporations provide for it; the Internal Revenue Departmant allows it as a deduction from gross income, and the directors of all corporations are invariably held responsible for fictitious dividends, therefore, although there are a number of Supreme Court decisions to the contrary, we believe that we are justified in stating that an allowance for depreciation is not only necessary from an accounting standpoint but is necessary from a legal standpoint as well.

Methods of Computing.

The annual charges to revenue may comprise:

(a) The straight line method: The amount expended for repairs and renewals and also an equal portion of the decrease in the value of the asset during its active life, giving consideration to its residual value, if any.

(b) The diminishing charge method: The amount expended for repairs and renewals and also a certain per cent. of the book value of the asset. The book value is reduced each year by the charge for depreciation and therefore causes a corresponding reduction in the charge to revenue each year.

(c) The equal annual charge method: The amount expended for repairs and a proportionate amount of the estimated expenditure on the asset during its life, including its cost and the renewals.

(d) The appraisal method: The difference between the appraised value of the asset at the beginning and the end of each period and also, if they were not charged to the asset direct, the expenditures for repairs and renewals.

INTEREST.

Either of these methods may be varied slightly by increasing the asset which is being depreciated by an amount representing interest thereon and arranging the depreciation charge so that it will absorb the interest on the value of the asset as well as its cost. We believe, however, that this method if applied to machinery or similar assets is quite undesirable for the reason that interest allowed on capital in this manner, is but a portion of the profit or return on the investment. The rate used is but an assumption, and the true profit is the net profit, shown under this manner of handling the items, plus the interest that has been included in the cost of the goods. The result is that it is not only impossible to ascertain the true cost but the ordinary business profit of the concern is considerably understated.

The net profit section of the profit and loss account will receive as credits the amount brought down as ordinary business profit from the preceding section and will also receive the amount that has been distributed to the other sections as interest on capital so that, although the source of actual net profit will be somewhat obscured, its true amount will be shown in this section the same as if no interest on capital had been considered.

Much has been written in favor of including a charge for interest in the cost of goods and no doubt the advocates of this method are equally positive that their plan is correct. We maintain, however, that cost should represent expenditures only and that the return for the use of the capital has nothing whatever to do with the cost of the goods manufactured.

A certain concern of our acquaintance charged interest on material in stock, interest on the value of land used while a ship was on the ways, interest on the value of the ways, interest on the value of the office building, interest on the amount deposited as a bond for the completion of a government job, interest on the value of the machinery used on the job and finally interest on the capital which was in reserve to care for unusually large jobs. When they had prepared their cost summaries they added an additional charge for profit. It was absolutely impossible for them to determine the true cost of a single job. All of their charges for works based on the cost records of previous jobs, were altogether too high and as a natural result they could not secure work and ultimately they were compelled to discontinue operations.

Annuity System.

The exception to the rule discussed under the preceding heading is found in the case of leasehold. A leasehold differs from almost every other asset to the extent that it may be purchased in portions. The purchase price represents, not a single unit, but rather the present worth of a number of individual units. A quotation on a leasehold usually grants the option of making a series of annual payments or, if preferred, of making a lump sum payment to cover the entire leasehold.

The lump sum payment represents the present worth of amounts which have been prepaid. The reduction in the amount of annual rental is purely a capital earning and has no bearing on operations whatsoever, therefore the charge against operations should be the amount that would have been paid had no prepayment been made. This amount should be credited to the leasehold account each year to represent its depreciation and another amount, representing the interest on the balance of the leasehold account at the beginning of the period, should be debited the leasehold and credited to net profits. If the interest rate used is accurate, the leasehold account will have been entirely absorbed by the time the lease expires.

REPLACEMENT FUND.

A fund might also be provided by investing an amount, equal to the charge for depreciation, in securities or by depositing it in some depository from which replacements might be made without interfering with or crippling the business. The plan, however, is very seldom adopted as it results in removing much needed capital from the business and placing it, usually in some quickly realizable form, where it can earn but a very small return in comparison with its value to the business, and also as in but very few cases can a property be supposed to require replacement all at once or with such rapidity that, in the ordinary course of business, its replacement could not be accomplished without serious difficulty. Where the plant is very expensive and short lived, the plan may prove satisfactory.

EFFECT OF EACH.

Each of the methods outlined possesses advantages under particular conditions; for instance, the plan "A", of spreading the cost of the asset in equal portions over its life, is desirable where the active life of the asset is known and where its residual value can be determined with a degree of accuracy and where it is desired that each year stand an equal portion of the cost of the asset.

This method is applicable to copyrights, patent rights, and similar assets that are not affected by wear, the charge for the renewal of which is supposed to constantly increase from year to year and which is usually counterbalanced by a charge for depreciation which decreases from year to year in approximately the same ratio.

The plan "B", of making a charge of a certain per cent. of the reducing balance of the book value of the asset results in decreasing the charge to revenue for depreciation during the later years of the life of the asset when the renewals may be supposed to increase, and also in retaining some sum to represent the residual value no matter how long the asset may remain in use.

It is quite desirable that some amount should always remain on the books to represent each asset and this plan is usually preferred on that account. It also has the advantage of providing a constantly diminishing charge for depreciation which allows for the constantly increasing charges for renewals and, if the charge for depreciation diminishes rapidly enough, it also makes an allowance for the decreasing efficiency of the asset, as well, so that the total of the charge to revenue will decrease from year to year proportionate to the decrease in the output of, or satisfaction derived from, the asset.

The objection to this plan is that it provides for the reduction of the annual charges for depreciation by geometrical progression and the laws of geometrical progression bear absolutely no relation or similarity to laws covering the depreciation of an asset.

This great defect in the popular method of providing for depreciation has been overcome to a certain extent by a method known as the Sum of Digits or Progressive method which provides for depreciation according to the rules of arithmetical progression. Under this method, the depreciation that is to be provided for is spread over the life of the assets, in amounts varying with the number of years the asset may be expected to be used, in such a manner that each succeeding year bears a smaller charge than the preceding year, corresponding to the decrease in the terms of the progression.

As an example of the progressive method of depreciation, let us take a machine costing $1500 with an estimated life of ten years and a residual value at that time of $400.00, and ascertain the depreciation charge for each year.

The depreciation to be provided for is $1100.00; the time over which it is to be spread is ten years. The sum of the numbers representing the years is 55 (10 plus 9 plus 8 plus 7 plus 6 plus 5 plus 4 plus 3 plus 2 plus 1 equals 55). The first year, according to this method, should bear 10/55 of the entire depreciation ($200.00); the second 9/55 ($180.00), and so on until the last year which will bear 1/55 ($20.00). This method provides for the reduction in the depreciation charge in a uniformly constant, decreasing manner. The renewals may be presumed to increase with the expiration of the life of the asset in a uniformly constant increasing order so that the decrease in the depreciation charge is to a certain extent offset by the increase in the charge for renewals.

The only objection to this method is that in the case of long lived assets, the charge for the first year will be too large while the charge for the last year will be too small. To illustrate take an asset with a life of fifty years. The charge against the first year will be fifty times that to be charged against the last year.

An alternative method which is proving quite satisfactory and which seems to delight everyone to whom it has been explained is designated as "Controlled" depreciation. It, also, is based on the rules of arithmetical progression but the extremes of the progression are chosen so that they will bear a relation to each other corresponding to the amounts of depreciation that should be charged to the first and last years of the life of the asset.

To illustrate the operation of the Controlled depreciation let us presume that in our preceding example we had determined that the depreciation chargeable to the first and last years of the life of the asset should be in the ratio 5:3, or to save bothering with fractions (multiplying by the number of years, 10, less 1) the ratio of 45:27. The *common* difference of our arithmetical progression will be found to be 2 and the total of the terms 360. (45 plus 43 plus 41 plus 39 plus 37 plus 35 plus 33 plus 31 plus 29 plus 27.)

The first year, according to this method, would be charged with 45/360 of 1100; the second year 43/360; and so until the last year which would be charged with 27/360.

This method of depreciation seems to have no undesirable features. It charges each year with the amount that should be charged against that year. The annual charge decreases at just the exact rate that the accountant wishes it to and, as it is absolutely under his control, he can make allowances for decreasing efficiency or increasing renewals, according to his own wishes, without being held down to the laws of geometrical progression or some other equally unsatisfactory rule which bears no relation to the decrease in the value of the asset to be depreciated.

In the case of machinery, in particular, it may safely be assumed that the annual charge for renewals and depreciation will vary from year to year and, in theory, plan "C" possesses a distinct advantage for the reason that the annual charge to revenue always remains the same. This plan, however, is based more on estimates than the others and loses much of its merit on that score but, provided that all repairs due to accident are charged to expense and ultimately to revenue, it may still be equally as accurate as the others. It possesses an advantage to the extent that all charges, in the way of renewals, increase the book values of the asset and allow, as they undoubtedly should, for an increased life of the asset.

Plan "C" also offers a decided advantage where foremen or others are inclined to object to charging any portion of the renewals to revenue. It enables the bookkeeper to charge the asset account direct with the renewals. They are then depreciated with the asset according to the plan adopted in the beginning.

This plan like "A" has the disadvantage of allowing the asset account to be entirely written off and must be carefully watched wherever the asset has a residual value.

In theory, plan "D" is the best, but in actual practice it is found to be the most inaccurate of all for the reason that its use results in a great variation in the annual charges to revenue. As a proof of either of the other methods, an appraisal is desirable, but no effect should be given it on the books unless there is a considerable discrepancy between the appraised value and the book value, and unless the difference arises through errors in the depreciation allowances rather than through changes in the market value of the article appraised or the parts thereof.

If it is considered necessary to give effect to the appraised value, the book value should first be reduced by the regular charge for depreciation for the period under review, then the asset account should be adjusted through the surplus or undivided profits accounts and the rate or method of depreciation should be changed to a more accurate one for future use. Often, simply correcting the rate for use in future years is all that is considered necessary and, taking into consideration the possibility of an inaccurate appraisal, it is better to do this than to adjust the account except in case where past estimates of depreciation have proven wholly inaccurate.

Repairs and Renewals.

Repairs represent the charge made for replacing parts broken accidentally. They are always a charge to revenue and, owing to the fact that they relate to the instant in which the accident occurred and do not accumulate by wear or depreciation, they cannot be spread over a number of years.

Renewals represent the replacement of a worn part with a new one. The part starts to wear the first day it is used so that some charge against that day, or more properly, fiscal period, should be made even though the part is not renewed for many months. Accumulating renewals therefore may properly be spread over a number of years.

Renewals are, as stated, a charge to revenue, either directly during the year in which they occur, or by a charge of an equal portion of the estimated amount to be expended during the life of an asset, as outlined under plan "C"; or, in cases where use greatly depreciates the asset, by a certain amount per unit of production. (Also see page 215.)

Although the rule seems very simple, it is often hard to apply. This is particularly true in the case of extensive renewals which greatly increase the value of the article, not only from an operating standpoint but as an asset as well, and the tendency is to capitalize the expenditure. It is believed better, however, where plans "A" or "B" are used, to charge the entire expenditure to revenue, unless the renewals involved amount to practically redesigning or rebuilding, in which case it might be well to have the entire asset or if preferred the renewals appraised. The book value could then be increased by the proper amount and the balance of the expenditure charged to revenue.

The value of the asset is not only increased by an extensive overhauling but the life no doubt is increased as well so that a new basis of depreciation must be used in the future to care for it.

Of course, if plan "C" were being used, the additional expenditure would have no effect on the annual charge to revenue except, possibly, to increase it if the renewals were out of proportion with the estimate. If, in this case, the expenditure entirely wiped out the amount that had been allowed for renewing the worn parts of the asset and resulted in an increase in its book value which was not warranted by the actual conditions, the amount of the expenditure, which was in excess of the amount originally contemplated should be closed into revenue and the annual charge to revenue should be adjusted if necessary so that in the future a sufficient amount would always be available to cover any renewals that might be necessary.

Consideration should also be given the effect of not making renewals promptly. This undoubtedly results in a greatly increased charge to revenue but it is a matter of scientific management rather than of accounting and all the accountant can hope to do is to see that the renewals, no matter how great, are properly charged to revenue during the year they occur, as outlined above. Of course, if the current year would improperly suffer by this method and if the renewals were traceable to prior years when sufficient provision had not been made for them, a portion of the expenditure should be closed into surplus as an adjustment of the profits of those particular years.

Obsolescence.

Undoubtedly one of the most uncertain factors in determining the proper charge for depreciation is that of obsolescence. It is almost impossible to ascertain, with any degree of accuracy, the advance that may be made in the construction of any particular class of machine. It is also almost impossible to decide, even approximately, how long any particular mechanical device will provide the required output to keep up with the demands or whims of the trade. Take the case of an electrical machine, it might answer the requirements for many years but the advent of a new or improved machine or an unusual increase of business might make it imperative that it be discarded; or take the case of a typewriter, there are already a number of devices patented and in operation which are intended to supersede it. No one can tell just when they will be able to satisfy the public but sooner or later the manufacture of typewriters will cease and provision should be made so that when that day arrives nothing will remain on the books of the manufacturer to represent the unused value of his machinery unless, by chance, he can hope to be able to turn it to good use in manufacturing the new article.

A consideration of the rapid advance of this particular article leads us to believe that much of the profit that has been made in their manufacture and sale has been eaten up by the purchase of new machinery, especially adapted to making new and improved machines, to replace other models, long before the manufacturing machinery was worn out, and by the decrease in the value of the stock owing to the improvements on these later models. Provision should have been made for this in the early years of the industry and, if it was not, little can be hoped for in current years in the way of a satisfactory profit. The rapid strides made in the construction of typewriting machines signal the early appearance of a perfect article which, if history repeats itself, will almost immediately give way to some other article, built on different lines which will do the work in half the time or without the effort. In the meantime provision should be made to care for this contingency.

The above paragraph was written a number of years ago and the intervening years have apparently proven that our idea is right as at least two of the leading companies have been practically discontinued.

An article might also become obsolete in a certain sense, so far as the business is concerned, long before it becomes useless for the purpose for which it was made. This occurs in the case of fixtures which are attached to leased property and cannot be removed by the tenant at the termination of the lease. So far as the tenant is concerned their life expires with the lease and provision must be made to cover their value before that time.

Property may become obsolete also on account of the exhaustion of material upon which to work. As an example, take a small stamp mill which is useless after the ore is exhausted unless it can be profitably removed to some other location. Its cost must be spread over the period of its operations.

An analysis of the different elements that cause obsolescence will disclose that they may be divided into two classes:

(a) Those that are a certainty;

(b) Those that are but a hazard of the business.

Obsolescence which is certain, as in the case of electrical machinery used in a rapidly growing city where it will soon be too small to operate successfuly, is a proper charge against operations, but obsolescence which is purely a contingency, as in the case of the discontinuance of the manufacture of typewriting machines, is not a proper charge against operations. It can only be provided for out of surplus or undivided profits.

Abandonment of Property.

In general, where property is abandoned, the asset account is reduced to the scrap value of the property and, if provision has not been made during the life of the asset to cover its entire obsolescence and depreciation, the difference is closed into undivided profits or surplus as an adjustment of the profits of prior years.

Sale of Property.

At the time of sale of a portion of the property, an element of doubt exists as to the proper entries to make to adjust the accounts representing the assets. Usually the property account represents the purchase price of the asset and some subsidiary account represents the allowances that have been provided for. In general, the provision for depreciation, etc., has been in accordance with some well defined rule during the life of the assets, therefore, in ascertaining the book value of the particular asset sold, it is only necessary to ascertain its cost price and apply the rule or method that has been used to ascertain its reduced value. Any difference that exists between the book value and the sale price should be closed into surplus or undivided profits on the theory that either too much or too little has been allowed for depreciation and obsolescence in past years.

If the property of a concern consists of many articles and if, owning to their great number and variety, the above outline becomes impracticable, it is suggested that a record be kept of each article in a Plant Ledger and that the record cover the purchase price, renewals and depreciation and, after its sale, the sale price and adjustments necessary to close the account. Such a book is almost invaluable in determining the proper rates of depreciation, the relative values of different brands of articles, etc., and is explained more fully in Chapters VII and XX.

Wasting Assets.

Although, undoubtedly, every visible asset is subject to depreciation, certain undertakings, except under certain conditions, do not consider it necessary to allow for this depreciation in their accounts. This particularly refers to the accounts of non-permanent undertakings such as those operating a single ship, a mine, a quarry or a patent covering a novelty which may or may not please the public.

In each of these cases the undertaking exists only during the life of the asset and may end at any time owing to a fad of the public, an accident, or the exhaustion of the material which is being worked. As no provision could be made with any great degree of accuracy to cover the portion of the value that should be charged against each period and, as the undertaking is to cease with the life of the asset, it is contended that no good can be accomplished by withholding any portion of the income to provide for replacement, although, usually, it is considered proper to provide for renewals and the depreciation of machinery which may require replacing during the life of the undertaking.

The principal objection to the plan of ignoring the decrease in value is that stockholders receive as dividends not only the profits of the undertaking but a portion of the capital as well and, as they are unable to determine the amount of each, their tendency is to consider the entire dividend as profit and to treat it accordingly with a consequent impairment of their capital.

The usual objection, raised in connection with providing for depreciation or exhaustion in connection with such undertakings, is that if provision is made, it results in the accumulation of a considerable sum of money in the company which is not required by the undertaking and which could be more profitably used by the stockholders.

In connection with such undertakings, we believe, special mention should be made of the necessity of providing for depreciation or exhaustion, even in the case of mines, single ships, etc., where the undertaking is to be of a permanent character. That is if, after the one mine is exhausted or during its life, other mines are to be purchased or if the organization expects to continue to operate and to acquire more property and cannot be said to be organized for the single purpose of working the one asset, provision should be made for the depreciation or exhaustion of the assets comprising its property the same as is the case of other lines of business.

We also wish to state that, in our opinion, the term depreciation hardly applies to the decreases in the value of mines, quarries or timber caused by the removal of material. In these cases, it seems to be a question of determining the proportionate cost of the material removed rather than depreciation. To be sure, depreciation in its broadest sense means any decrease in value but, as applied to accounting, its use is restricted to decreases due to wear, obsolescence or effluxion of time, and none of these applies in the cases mentioned above. If they do depreciate, it is in the same sense that a cargo of wheat depreciates when a portion is sold rather than as a machine would depreciate through use, or a copyright through the expiring of time; hence, it seems impracticable to try to apply the rules of depreciation to these articles.

In estate accounting, the practice is to make no provision for the exhaustion of mines, quarries or timber in the apportionment between the life tenants and the remaindermen if the property had been worked during the life of the testator or if the life tenants are removing only such portion of the property as they actually require for their own use.

RATES ON DIFFERENT OBJECTS.
LAND AND APPURTENANCES.

Land used for manufacturing purposes may, in general, be presumed to maintain its value and cannot be the subject of depreciation.

In the case of farm lands consideration should be given the cost of recuperating the land from the income derived through the crop. Except, in rare cases, this is considered as a direct charge against the current year's operations. Orchards require replacing from time to time either on account of the age of the trees or on account of the demand for new or improved varieties but, as the new trees may usually be brought to bearing before the older ones are removed, the expense is not considered sufficiently large to make an allowance for, except, possibly, to spread it over a few years' earnings. Expenses incurred in bringing the original trees into bearing may properly be capitalized.

Fences, sidewalks, etc., depreciate and, if they amount to a very great sum, should not be included with the cost of the land. Their life varies from five to twenty-five years, according to the ability of the material of which they are constructed to withstand the weather, and they should be depreciated accordingly.

Buildings require a separate account because of the different rate of depreciation and, like the other articles mentioned, vary greatly in their length of life, depending on the material used, the workmanship, the modernness of their equipment and the permanence of the town in which they are located. Under normal conditions the minimum life may be estimated as approximately 25 years for frame buildings and 50 years for the more substantial structures. The maximum life may exceed 100 years but it is doubtful if a term much greater than 50 years should be allowed on account of obsolescence, and contingencies which cannot be foreseen.

Fixtures attached to the land during a tenancy should be written off during the life of the lease if they are to become the property of the landlord at the expiration of that time or if they are of such a nature that it would be impracticable to remove them.

The depreciation of wood foundations is often greater than the rest of the building. In the case of cement foundations, however, it is often less, so that conditions might arise wherein it would be desirable to separate the cost of the foundation from the rest of the building. The one example we have of the life of a foundation exceeding the life of the building is that of a large office building where the cement foundation is the full size of the lot and extends into the earth a great distance. It is so strongly constructed that it is estimated it will be available for use for whatever purpose the land is to be used after the present building is removed. Another reason why the foundation should be kept separate is that in the case of some buildings the foundation carries a different rate of insurance.

Appreciation of land is not an offset to the depreciation of buildings. The buildings must be depreciated even though the value of the land has increased. The increase in the value of the land is but a capital increase and should not be given effect.

Leaseholds.

The initial cost of a lease and all expenditures made for property that will revert to the landlord, as well as the interest on the lease for the entire period should be spread in equal portions over the life of the lease. If there is a possibility of a claim arising, at the expiration of the lease, for damages or for replacing the premises in their original condition, a portion of the earnings should be set aside from year to year to provide for it.

In many cases, it is considered proper to invest an amount each year, equal to that portion of the total cost of the lease which is charged to that year so that, at the expiration of the lease, a fund will be available with which to acquire another lease if desired. A fund, so provided, is usually placed at interest and it is not unusual to find that this interest is allowed to affect the annual charge to revenue. The cost and expenses incidental to the lease are not changed by the investment of a fund to provide additional finances to purchase another lease, therefore, no change should be made in the charges to revenue, during the period, on that account.

Another factor which requires consideration in connection with the depreciation of leaseholds is the renewal of the lease. Many leases provide for an extension or renewal for an additional period or a change of rates after the first portion of the lease has expired. In general, the consideration for the new term or the new rate is to be based on an appraisal and, during the first part of the lease, it is impossible to determine the amount of the charge for the next period. These charges alone cause no difficulty but, if an amount has been paid for the leasehold in addition to the annual rental, the question of the depreciation of the cost of the leasehold becomes important. Ordinarily, the tendency is to spread the cost of the leasehold over as great a period as possible but this is incorrect in most cases. The uncertainty of the future makes it imperative that the cost of the leasehold be spread over the first portion of the lease, unless there is a certainty that the initial cost will affect the future period as well.

Additions to property, made by the lessee, which revert to the lessor at the termination of the lease may be taken onto the books of the lessor under either of two methods. The increased value of the expectancy may be recorded from year to year, resulting in an increase of the rental income, or if preferred the entire value of the property may be taken onto the books, crediting Rent Received in Advance of Accrual. In this case depreciation must be written off the property account to offset the rental income from year to year. The latter method is usually preferred for statistical, insurance and credit purposes.

MACHINERY.

The active life of machinery varies from five to forty years. Electrical machinery usually is possessed of a very short life, owing to rapidly changing conditions, while such articles as lathes, under certain conditions, seem to be practically indestructible and are not affected very greatly by obsolescence. Boilers last from 8 to 15 years, depending on the pressure under which they operate and the water used. Engines have a greater life, except those of the gasoline or naphtha type which depreciate very rapidly. Shafting, etc., is rapidly being replaced by motors and meters to allow the cost of operation to be more accurately recorded and to eliminate the upkeep of belting and boxes and also the loss of power incident to keeping the shaft in operation and in readiness even though a number of the machines may not be in operation. It therefore requires a considerable allowance for depreciation.

EQUIPMENT.

On both office and factory equipment the allowance for depreciation is usually from 10% to 12½% on decreasing balances, but it is doubtful if this is sufficient.

The possibility of loss resulting through the expiration of a lease should be given consideration, and any articles that it would not be practicable or possible to move should be stated in a separate account.

HORSES.

The care and attention that an animal receives and the conditions under which it labors are such prominent factors in the depreciation of horses that it is generally considered advisable to have them re-valued from period to period.

The cost of feed and attention an animal receives during its early life are capital charges. At some later date, when the animal becomes revenue producing the capital charges diminish and ultimately all expenditures are charged to revenue but, as the animal constantly increases in value until about middle age, it is impossible to determine just when the capital charges should cease without an appraisal.

TOOLS.

The loss on loose tools through breakage and theft is so great that it is usually considered proper to re-value them from time to time. The decrease in value should be charged against the current year's operations, in lieu of an annual charge for depreciation.

PATTERNS, PHOTOGRAPHIC PLATES, DRAWINGS, ETC.

Patterns and similar articles, if made for a particular job, should become a portion of the cost of that job. Stock patterns should be inventoried at cost but great care should be given to sorting and setting aside those which are worn out or obsolete. The most popular plan seems to be to keep a record of each pattern and the date on which it was used. Those which are not in use or have not been used for a reasonable time should be inventoried as of no value, others should be appraised. The reduction made in the account at the time of the inventory represents the depreciation for the period under review.

A certain manager of our acquaintance has adopted a very satisfactory method of inventorying his patterns.

He keeps a record of the cost of every pattern and the dates on which it was used. At inventory time a record of all of those used within the year is prepared, showing each pattern at cost price. He reduces their total by fifty per cent to arrive at their inventory value. He does this on the theory that, taken as a unit, his patterns are half worn out, viz., he allows each new pattern to offset the value of some other pattern that is practically worn out, and the patterns that have depreciated twenty-five per cent of their value to offset other patterns that have depreciated seventy-five per cent, and so on, constantly using the mean percentage—fifty—as the basis of valuation. Patterns not used within the year are inventoried as of no value.

The tendency of most managers seems to be to over value patterns and similar articles and great care must be taken to see that they have not over stated their inventories. The writer has in mind a commercial photographer who uses in the neighborhood of 5000 plates during a year. Most of these are on special orders; very few are used a second time, still he persists in valuing all plates at fifty cents each at the end of the year. His balance sheet shows a surplus of about $2500 each year and although he never gets his debts paid near enough to allow the declaration of a dividend, he actually believes he is making a profit and, not only this, but he seems to be able to convince his bankers also that he is making a profit, for they continue to increase their loan to him at regular intervals.

Patents.

Patents should be entirely written off during their life. If the patent covers some article the sale of which is dependent upon the whims of the public, it should be closed out against the income of the first sales.

The possibility of being compelled to protect the patent in the courts always exists and it is advisable to provide for this contingency by writing off considerably more than a proportionate part of the cost each period. Expenditures made in quieting the title or protecting the monopoly relate back to the date of the grant and, we believe, may properly be capitalized, after charging Surplus with that portion of the expediture which relates to prior years.

Where the patent is being operated as a Wasting Asset, it is not considered necessary to write off any portion of the cost from year to year.

Goodwill.

Goodwill differs from patents and copyrights for the reason that it is not terminable. It does not depreciate and no deduction need be made.

Depreciation and Foreign Branches.

Considerable confusion exists in large concerns operating foreign branches as to the proper manner of handling depreciation on the capital or fixed assets of the branch.

The most satisfactory method of handling these assets is to keep them entirely on the executive office books. The branch office only has the use of the assets and need only be charged with the depreciation thereon. This method makes certain that the fluctuation in exchange will affect only the revenue accounts of the branch, and eliminates the necessity of converting the amount of the assets, as ordinarily shown by the branch books, to the currency of the executive office. If however, they are recorded on the books of the branch, they should be converted at the original rate of exchange that was in effect the day of their purchase, and should appear on each successive executive office or combined balance sheet at the same amount, after giving effect to necessary adjustments caused by the sale or purchase of additional assets and to the usual rate of depreciation. The amount of the depreciation of each period should be computed by the executive office and charged to the branch office at the end of each period or, if the branch office determines the amount of the depreciation, it must be converted into the currency of the executive office at the same rate of conversion that is applied to the asset account.

Current Additions to Assets.

Students are invariably at a loss to determine the proper method of dealing with the depreciation of assets acquired during the current operating period.

There are four methods in general use, as follows:

(a) Depreciate the balance as shown by the books at the beginning of the period only;

(b) Depreciate the balance as shown by the books at the end of the period;

(c) Depreciate the balance as shown by the books at the beginning of the period at the regular rate, and the current purchases at one-half that rate, on the theory that purchases during the first half of the period will offset purchases of the last half, and that the mean date of all purchases is July 1st;

(d) Depreciate the beginning balances at the regular rate, and compute the depreciation on the current purchases at the same rate for the number of months and days the assets have been in use.

Plan "a" results in a charge which is too small, while the charge under "b" is excessive. Plan "c" is preferable for ordinary use where purchases are uniformly spread over the entire period, but where the amount of the purchases is large and where accuracy is desired, plan "d" is the only one that is acceptable.

Residual Values.

Residual Value of an Article Costing $100.00, Reduced at Various Rates Annually

Rate, %	50.00	40.00	33.33	30.00	25.00	20.00	15.00	12.50	10.00	7.50	5.00	3.00
Time												
1 year	50.00	60.00	66.67	70.00	75.00	80.00	85.00	87.50	90.00	92.50	95.00	97.00
2 years	25.00	36.00	44.44	49.00	56.25	64.00	72.25	76.56	81.00	85.56	90.25	94.09
3 "	12.50	21.60	29.62	34.30	42.20	51.20	61.42	66.99	72.90	79.15	85.74	91.27
4 "	6.25	12.96	19.75	24.01	31.65	40.96	52.21	58.61	65.61	73.21	81.45	88.53
5 "	3.12	7.77	13.20	16.81	23.57	32.76	44.38	51.29	59.05	67.72	77.38	85.87
6 "	1.56	4.66	8.80	11.77	17.82	26.20	37.72	44.88	53.14	62.64	73.51	83.30
7 "	.78	2.80	5.87	8.23	13.37	20.96	32.06	39.26	47.83	57.94	69.83	80.80
8 "		1.68	3.91	5.77	10.02	16.76	27.25	34.35	43.05	53.60	66.34	78.37
9 "		1.00	2.61	4.03	7.52	13.40	23.17	30.06	38.74	49.58	63.02	76.02
10 "			1.74	2.83	5.65	10.72	19.69	26.30	34.87	45.86	59.87	73.74
20 "					.31	1.15	3.88	6.94	12.16	20.93	35.85	54.37
30 "							.76	1.84	4.24	9.60	21.46	40.09
40 "									1.48	4.39	12.85	29.56
50 "										2.00	7.69	21.80
60 "											4.60	16.08
70 "											2.75	11.86
80 "												8.74
90 "												6.45
100 "												4.76

QUESTIONS.

1. It has been stated that, in a given year, the plant of a business cannot be depreciated because a sufficient profit has not been made. Is this correct?

2. Distinguish between depreciation and the fluctuation of assets.

3. Define obsolescence.

4. One author claims that depreciation is not a charge to manufacturing as it goes on independent of operation. Discuss the assertion.

5. May depreciation be waived on the theory that it is fully covered by the appreciation of fixed assets? Is there any sound argument in favor of this?

6. How are the depreciation charges often verified?

7. A few years ago a great many concerns greatly reduced their output owing to financial difficulties. Should they still charge the full rate of depreciation?

8. Is depreciation in the nature of an expense item or is it a disposition of part of the profits, like a dividend?

9. What conditions would influence you in fixing the rate of depreciation on buildings, machinery and tools, fixtures and patterns?

10. Should depreciation be written off the accounts of a corporation whose properties are of a wasting nature, such as a quarry or a mine? Give reasons.

11. Given a machine costing $2000.00 with a life of ten years and a residual value of $350.00. Renewals are estimated to amount to $5.00 the second year and increase thereafter at the rate of $5.00 per year.

Required a table showing, for each year, the depreciation, renewal charge, and total charge to revenue, under each of the following methods:

(1) Straight line method ("A");
(2) Diminishing charge method ("B");
(3) Equal annual charge method ("C");
(4) Progressive method;
(5) Controlled method, presuming that the total charges, including renewals, against the last year will be three-fifths of the charge for the first year.

12. From the figures prepared for question "11," prepare a graphic chart illustrating the various methods. Allow one-half inch on the perpendicular lines to represent $20.00, and one-half inch on the horizontal lines to represent one year.

Draw dotted lines "S" to "SD" to represent the depreciation under the straight line method; "D" to "DD" to represent the diminishing charge method; "E" to "ED" to represent the equal annual charge method; "P" to "PD", the progressive method; and "C" to "CD" the controlled method.

Draw solid lines "S" to "SR" to represent the total charge to revenue, comprising depreciation and renewals under the straight line method; "D" to "DR", under the diminishing charge method; "E" to "ER", under the equal annual charge; "P" to "PR" under the progressive method; and "C" to "CR" under the controlled method.

Colored inks should be used when possible to designate each of the methods.

13. Describe at least two methods of estimating depreciation for a manufacturing firm; state the advantages or disadvantages of each and show how the entries should be made in the books.

14. In determining the result of the operations of a company whose business requires the use of a large number of tools and implements, what general rule would you consider? (Ill.)

15. Is depreciation the same as ordinary wear and tear?

16. An electric lamp manufacturing company has charged to cost of lamps, as depreciation, one-fourth of the value of the filament-filtering machinery acquired a little more than one year ago. The life of the machinery is estimated to be ten years but, owing to discovery by a competitor of a new process of metal pulling which, while still imperfect, promises to revolutionize the lamp industry, the machinery in question will probably be obsolete within a period of three years. State at length what you would say concerning the propriety of making such a charge to cost.

17. (a) What is the meaning of depreciation and how does it affect the net results of a business?

(b) Where a plant is purchased as a whole, without a valuation of its different parts, how would you provide for depreciation?

18. An examination of the minutes and other records of the books of a corporation, preceding an audit, discloses that a revaluation of its buildings, plant and machinery had been made by expert appraisers called in for the purpose. The report of these appraisers states that the values as determined by them were greater than those disclosed by the books. Should such increased value be entered on the books of the corporation?

19. What kind of expenditures of a manufacturing business would you classify as being in the nature of maintenance and repairs of equipment, machinery and plant, and what would constitute actual betterments? How should such expenditures be dealt with on the books?

20. Explain fully and accurately the consequences of omitting to provide for depreciation.

21. It is contended that it is unnecessary to write off depreciation on:

(a) Freehold premises;

(b) Plant and machinery;

provided that they are maintained in a full state of efficiency out of revenue. Give briefly your own views on this subject.

22. During the past fiscal year a concern under audit has not shown a profit sufficient to justify paying a dividend. The manager, in order to avoid showing a loss, disregards the usual de-

preciation reserve charges for structures, plant, machinery, tools and implements.

What would be your view as auditor under the circumstances? Give your reasons.

23. Name some reason why it is important to keep separate the various items of cost in the construction of a building containing boilers, engines, shafting, and heating plant. In the erection of the building itself, why should the cost of the foundations be kept separate from that of the balance of the building?

24. What would be a fair allowance for depreciation per annum on the following plant assets:

Real estate, including fences, sidewalks, tracks, etc.;
Buildings and building fixtures—fireproof construction;
Factory equipment, including benches, cupboards, etc.;
Machinery, both iron and wood working;
Fixed tools, both iron and wood working;
Loose tools, both iron and wood working;
Power plant;
Electric wiring and apparatus, including dynamos, motors, etc.;
Sprinkler system and fire equipment;
Blower system;
Office furniture and fixtures, including typewriters, adding machines, graphophones, multigraphs, etc.;
Horses and mules;
Wagons, harness and trappings;
Patterns—iron and wood—and drawings?

State your opinion, for or against, the necessity of providing for depreciation in a manufacturing business.

25. Note different methods by which depreciation on patents, buildings and machinery may be provided for, and outline briefly your opinion as to the most desirable course to be adopted.

26. A railway company leases the property of another railway company for a period of 50 years and, as part of the consideration for the lease, agrees to expend immediately $250,000 on the leased property in order that it shall have a greater operation efficiency. At the termination of the lease, the property is to be returned to the lessor in the same condition as at the time of making the lease, subject to ordinary wear and tear. What entries, if any, would you make on the books of the lessor in respect to the expenditure of the $250,000, and why? Explain fully.

27. A company is about to reduce its capital stock so as to wipe off past losses. It is suggested that a further sum be written off its plant and machinery to anticipate and provide for ordinary depreciation and thus save this charge against profit and loss for some years. What objections, if any, are there to this procedure?

28. A manufacturing corporation had an appraisal made of its building and machinery with the result that the appraised values were below the book values. The difference was largely accounted for by the fact that the prices of building material, labor, and some classes of machinery, at the date of the appraisal, were lower than they were when certain portions of the plant were erected. On the other hand, the value of the real estate occupied by the plant had, since its purchase, increased to an extent far greater than the net difference between the book value and the appraised value of the buildings and machinery.

On the company's books, depreciation on buildings and machinery had been regularly written off on the basis of what was considered to be a fair percentage of the original cost.

You are asked to give your opinion as to whether the book value of the building and machinery should be reduced to the appraised value, and if so, whether the company would be justified in appreciating the book value of the real estate either to its actual value at the date of the appraisal above referred to, or by an amount sufficient to cover the difference between the book value and the appraised value of the buildings and machinery.

Prepare a brief report to the company embodying your suggestions.

29. Discuss the different methods of dealing with, first, repairs, and, second, replacements in connection with (a) a concern that writes off, annually, sufficient depreciation to cover the life of the machinery, and (b) a concern where no depreciation is written off and where it is claimed the machinery is kept as good as new.

Can you name some other reason why depreciation should be considered in respect to machinery other than that of wear and tear?

30. In the machinery accounts of a firm whose books you are auditing appear charges for:

(a) New parts to replace old ones worn out;
(b) Engineer's salary;
(c) Labor setting up new machinery;
(d) Moving old machinery from one part of the factory and setting it up in another.

Do you see any, and if so what, objection to these charges being so treated?

31. A company is established for working a patent of which ten years are unexpired and for which a sum of money has been paid. How should the company deal with this asset?

32. You are asked to advise whether a company working a wasting property (*e. g.*, a mine) should, before the annual closing of its books, make any provision for the estimated depreciation of such property, or whether it should be allowed to stand on the books at its original figure without such provision being made. State your opinion, giving reasons.

33. Is depreciation of plant a legitimate element of the cost of

goods produced? Explain the method employed to keep a plant in efficient condition out of earnings.

34. What would be the effect on a statement of assets and liabilities of the failure to charge depreciation against the following assets: (a) leasehold buildings, (b) fixed machinery, (c) loose machinery, (d) horses and trucks, (e) patterns and molds? Give reasons in each case.

35. The secretary of a manufacturing corporation has undertaken to close its books. The balance to the credit of the profit and loss account is just sufficient to enable the directors to declare a small dividend, which they propose doing. At this juncture the services of an accountant are engaged. He finds that no provision for depreciation has been made and that all expenditures for repairs and renewals, amounting to more than the proposed dividend, have been charged direct to plant account. Show the nature of any corrective entries that should be made. What would be the effect of such entries, there being no surplus?

36. A company leases for a term of 50 years certain unimproved property for factory purposes, paying a ground rent therefor of $1,000 a year. The company erects certain buildings at a cost of $40,000 which are to pass to the owner of the fee at the termination of the lease. Without going into mathematics in the matter, state how you would treat the proposition in the books of account.

37. A salt company has completed a manufacturing plant, the machinery and equipment cost being $250,000. It is assumed that because of the nature of the business, the entire machinery and equipment will have to be replaced every several years. In such a case how would you recommend that current repair and maintenance charges should be handled.

38. A manufacturer obtains two patents at the same time as follows:

(a) He purchases outright a patent which has only ten years more to run for the sum of $5,000, which he terms his patent No. 1;

(b) He invents a contrivance and obtains a patent on the same, the cost of which he estimates at $12,000 and which he styles as his patent No. 2.

At the end of three years he expends the sum of $5,000 in defending his patent No. 2, the decision being given in his favor. One year later he spend $2,000 in a suit he brings against a competitor for infringement of his patent No. 1, which suit he also wins.

Without giving the actual figures, state how you would treat all the above transactions and arrive at a valuation of the two patents six years after he obtained them, giving reasons therefor.

39. How should an incorporated coal company estimate the value of its colliery in its balance sheet from time to time, first, as a freehold, second, as a leasehold?

40. Machinery is purchased for a sum of $3000. Additions are made in June of the second year to the amount of $250.00 and in

March of the third year to the extent of $320.00. Show by means of ledger accounts the various methods of dealing with these additions when writing off the annual depreciation at the rate of ten per cent on diminishing balances.

41. Machinery is purchased for a sum of $3000. Its life is estimated to be six years, and its break-up value at the end of this period is $534. Show the machinery account for the six years, writing off depreciation at a fixed rate per cent on the diminishing or reducing value of the asset.

42. Machinery is purchased for a sum of $3000. Additions are made in June of the second year to the amount of $250, and in March of the third year to the extent of $320. Show by means of ledger accounts the various methods of dealing with these additions when writing off the annual depreciation, the rate of which is 10% of the plant and machinery account.

43. A lease is purchased for a term of seven years by payment of $2000. It is proposed to depreciate the lease by the annuity method charging 5% interest. Show the ledger account of the asset during this period.

44. Two thousand dollars is paid for a lease for a term of seven years. It is desired to write this amount off by means of the depreciation fund method, it being necessary to raise a similar amount, at 5% compound interest, in order to replace the lease at the end of the period. Show the ledger accounts dealing with this matter.

45. The Directors of the Old Time Spinning Company decide to entirely replace their plant which is now out of date. Having advertised for tenders for the new machinery required, they accept that sent in by Messrs. "A" "B" & Co., amounting to $8850. The old machinery and plant account stood in the books of the company at $5400. There was also a reserve for depreciation account in the books, the accumulated credit balance of which amounted to $1050. Some of the materials composing the old machinery were found to be in good condition, and Messrs. "A" "B" & Co. agreed to take over shafting, etc., valued at $550, for use again; while the remainder was put up at auction and realized $1200 net.

Make the entries necessary to record these transactions in the books of the Old Time Spinning Company and state how you would deal with the balance of the old machinery and plant account.

46. On January 1st, 1910, a manufacturer buys a plant, expending $1000; on July 1st, 1911, he buys new machinery to the amount of $200, and on December 31st he sells a machine, costing $150 on January 1st, 1910, for $80.00. On April 1st, 1912, he buys new machinery for $140 and on October 1st, 1913, sells a machine, costing $60.00 on July 1st, 1911, for $35.00. His plant is depreciated in the books annually at December 31st, at the rate of 5% per annum on the whole original cost. On December 31st, 1914, he wishes to alter this method for the whole period to 7½% per annum on the diminishing value. Prepare accounts showing the result of both methods.

CHAPTER XIV.

GOODWILL.

Goodwill is the value of the influence that reputation, location, or monopoly has on the future profits of a concern. The purchase of goodwill represents the purchase of future profits, and the purchase price is, in general, the value of the excess of these profits over the amount that the same capital could produce if invested in other lines; hence, goodwill represents the present worth of an annuity which will produce an amount equal to the excess of profits that can be earned on account of an established reputation, location or monopoly.

COMPUTING VALUE.

In estimating its value, the life of the annuity purchased should be carefully considered. In the case of trading concerns, it is presumed that it will last from one to six years after a sale of the property has been consummated; in manufacturing concerns, from one to four years, and in professional firms, one to two years, subject, however, to the effect of special conditions in either case, such as the expiration of a desirable lease or of patents which have provided the monopoly; the degree of restriction placed on the vendor's future actions in the same line of business; the degree of transferability that is possible; the fact that the vendor is a corporation and that there is no assurance that its active members will not enter competitive organizations; or the degree of control that the vendor might be able to exercise over the market where a merger is contemplated with a view of affecting a monopoly.

In determining the amount of excessive profits that may safely be anticipated, it is necessary to review the history of the concern to be transferred and to use the past profits as a basis of computations. It is very seldom that the profits for any period are accepted as the amount which may be expected to accrue during another like period, but, rather, some normal period, of greater or less degree, is used as a standard and the average profit of that particular period, per unit of time, is presumed to be the profit which may safely be anticipated during such succeeding like periods as may be determined upon as the life of the annuity, viz., at the time of the sale of an undertaking, it may be decided that the goodwill transferred is equal to a three years purchase of the average profits for the past five years or, if conditons are such that a shorter period would be the better criterion of future profits, the goodwill might be based on, say, a three years' purchase of the average profits of the past eleven months, as was reported recently in a large merger; or, under another method of computation, the goodwill may be considered as the present worth of a terminable annuity equal to the excess of the average profits over the current value of money subjected to like risks, the annuity to run for the period that the influence of the old owners or organization may be expected to affect the new organization; or under still another method of computation, the one most popular where corporations are consolidated, the annuity may be considered as interminable, on the theory that the old company will become a part of the new company and the goodwill of the old company will affect the profits of the new company perpetually.

Still another condition requiring consideration, is the nature of the consideration that is to be given in payment of the goodwill. If the goodwill is to be paid for in cash, the actual present worth of the purchased profits must be ascertained but, if the payment is to be made in new stock of the consolidated companies which, like the goodwill, is interminable, the amount of stock given is not of material consideration; all that is necessary is that the return on the stock be equal in amount to the excess profits that have been purchased. At the time a corporation, which had acquired goodwill in exchange for stock, discontinues business, the goodwill account will be closed against the capital stock account so that no matter what the amount may be, the stockholders holding the particular class of stock which was issued for goodwill will receive nothing. The only object of the issue of the stock is the paying of dividends to the stockholders of an amount equal to the excessive earnings that they parted with when they transferred their original stock to the new organization.

To illustrate, let us take the case of stockholders who have been earning $12,000 per year on $100,000 capital. If $100,000 worth of ten per cent preferred stock is given them they will receive $10,000 per year as dividends and in case of dissolution their $100,000. They have been earning $12,000, however, instead of $10,000 and should receive additional stock which will produce the $2,000 for them. They are not entitled to additional stock which has preference as to assets for the reason that they have already received protection for the investment by the terms of the preferred stock already issued $50,000 of four per cent stock, or $25,000 of eight per cent stock, will produce the $2,000 earnings for them. It is not material therefore, provided the stock has no preference as to assets, whether the first amount or the second is issued for the purpose.

After deciding the basis of computations and the manner of payment, it becomes necessary to determine just what constitutes the profits of the period under review.

It is clear that all earnings that accrue in the ordinary course of business should be considered, and that all legitimate expenses should be placed on the books and deducted from the earnings to determine the actual results. It is also clear that any profits or losses which have occurred that are not in the ordinary course of business, such as losses through fire or theft, or profit due to the sale of some portion of the undertaking, a patent, an investment, or some fixed asset, should be eliminated, but there are a considerable number of items which are of a doubtful nature or which are subject to manipulation, which must be considered. The most important of these are items which are a direct result of a lack of, or an excess of capital. They are Interest on Borrowed Money, Cash Discounts on Purchases and Earnings on Outside Investments.

Interest on borrowed money appears only where there is a lack of capital, hence, when determining the profit of any particular period, based on normal conditions, this item should be eliminated.

Cash discount on purchases is possible only when the money with which to make prompt payment is available, either as capital or as borrowed money. If it is made possible by borrowing money, the discount is correctly an offset to the interest paid. If in a particular case it is not an element of trading, it should be eliminated when determining the future profits.

Outside investments which were made to obtain revenue are invariably made from surplus capital, therefore their earnings should not be confused with those of operation.

Income derived from the investments made to provide for the redemption of bonds is an offset to the expense of the bond issue and should not be included as profit on ordinary business.

Profit derived through particularly favorable conditions, as by a street railway company during a World's fair, should be eliminated also.

Fire losses or defalcations are ordinarily the subject of insurance, and the only item that can properly be deducted, to show the profit on ordinary business, is the amount that the insurance would cost.

The expenses which accumulate during the period of idleness after a fire must be handled so that the true period of operations is the basis of the time used in computing the goodwill and so that the unusual expenses are not allowed to affect the profit on ordinary business.

Care should be taken to see that a proper allowance has been made for the expense of management, for, as is often the case where a person has been managing his own business, there may have been no allowance for this and profits are incorrectly stated to that extent.

The proper amount of depreciation is probably the hardest of all to determine for, possibly, the initial value of the property, as stated by the books, is entirely wrong and the final book value may be entirely different from the value at which the property is to be taken over, or at which it has been appraised. It is therefore a question of exercising good judgment in determining just what constitutes a proper charge for depreciation during the period under review.

We suggest that, where the charges for depreciation which have been made in the past are not a reasonable charge for the use of the property and where the amounts at which the property has been carried on the books are incorrect, an appraisal of the property be made and the amount thereof be used as the basis of computation for the charges of the prior years. This will necessitate that the appraised value be treated as the residual value, and the computations be made in the reverse of the usual order, to secure the proper cost and the proper charges for depreciation.

Existing liabilities on contracts, if they affect the revenue of the concern, should be considered also. This refers particularly to such items as the liability existing on guaranteed goods or containers returnable, which have been sold at a profit but which are redeemable at a sum in excess of actual cost.

In guarding against the manipulation of the accounts, it becomes necessary to carefully watch all items which affect the earnings of the business, consideration being given to the effect of any possible manipulation on each of the persons connected with the business. In the case of a manager selling his own business, if he were inclined to misrepresent the status of affairs, he would do so by attempting to increase the apparent profit, either by suppressing proper charges or increasing the credits. If, however, it was his desire to purchase the business of his employers, his tendency would be to make it appear as poor as possible and he would accomplish this by inflating the purchases and decreasing inventories and sales.

In the case of bad debts, a person selling a business could easily see that they were paid out of his own pocket at an opportune time so that the losses would not appear so great.

Sales are often padded by including sales on approval or consignment sales and taking full credit for the anticipated profit before the actual sale is consummated.

Expenses may be allowed to accumulate for a considerable period without giving them effect on the books. This will result in an inflation of the profits of the period during which they were suppressed.

Goods purchased may be included in inventories and the invoices held up or paid from sources other than the cash of the concern, or the stock may be improperly valued so that an apparent profit would be derived from that source.

It is also possible that a portion of the undertaking is to be retained by the vendors and that this portion has produced a portion of the profit. This profit will not accrue to the vendees and an allowance should be made therefor.

In most of the cases mentioned, the apparent profits being greater than the actual profit, the purchase price of goodwill will be correspondingly increased to the detriment of the purchasers.

In all cases special attention should be given the articles of agreement to see whether the goodwill is based on the actual profits or the excessive profits of a particular period. The latter method is undoubtedly the most equitable and preference should be given it whenever possible, but a much longer period should be used than where the entire profits, before deducting interest on capital, is to form the basis of computations.

After having found the amount of profits which can safely be anticipated in the future, we must deduct an amount to represent the normal earning capacity of the money invested, if we are to use the amount of the excessive profits. Any sum which the business produces in excess of the effective value of the money invested may be considered as the amount of the annuity which is being transferred as goodwill. After having determined the life of the annuity and the amount thereof, it becomes an easy matter to ascertain its present worth, which is the goodwill value of the business transferred.

Goodwill, under this method, is intended to represent the purchase price of the excessive profits that will accrue on account of being established and of possessing those qualities which have a tendency to attract business and to develop large profits. As stated under Capital and Revenue, any expenditures incurred in starting a business or bringing it up to a profit producing stage may be capitalized. Goodwill, then, if a portion of the purchase price of a business or if it is the result of expenditures made in bringing it up to the profit bearing point, may properly be placed on the books as a capital asset. If, however, goodwill is not purchased but is just estimated to have accrued on account of a long period of prosperity or on account of extensive advertising after the business has been running, it can not, properly, be placed on the books as a capital asset; but, in the case of the advertising, there would be no harm in spreading the expenditure of any one period over a number of periods, provided that the entire amount is charged to revenue during the time that the business may expect to profit by the expenditure.

An apparent exception to this rule might occur in the case of a new organization which, as a part of its preliminary expense, conducts a large advertising campaign in an effort to become established. Preliminary expenses, including all expenses incidental to getting the concern under way, may properly be capitalized, hence this treatment of the advertising expenditure is, in many cases, correct.

Nothing can possibly be gained by increasing the amount of a goodwill account during a period of operations, for, surely, no business can be made more valuable by simply increasing this account in the books, and the addition to the account would not make the books more correct, in fact, they would be incorrect to the extent that, in the generally accepted use of the term, the goodwill account is presumed to represent the purchase price of goodwill only, whereas in this case it represents an arbitrary value that has been placed upon it. Furthermore, no profit can properly be taken on any article until a sale results. The writing up of goodwill gives effect to an anticipated profit which may be mistaken for a legitimate profit and result in a fictitious dividend, to the detriment of the concern.

In the case of the withdrawal of a partner, there is often a payment made to him to represent his share of the goodwill of the firm. The goodwill account may, under this condition, be increased by the amount his share represents. No attempt should be made to place an amount on the books to represent the total value of all of the individual partners' interests in the goodwill for only the one portion has been purchased by the members of the new firm. To illustrate, "A," "B" and "C" have been conducting a business, profit divided equally. "C" decides to retire and it is concluded to allow him $10,000.00 as his share of the goodwill. The goodwill account should be written up to $10,000.00 and a like amount credited to "C's" Capital account, in preference to placing the goodwill at $30,000.00 and crediting each partner with his portion.

In the case of holding companies, the purchase of subsidiary company stock is in fact the purchase of a going concern and any amount paid therefor in excess of the book value of the stock, as shown by the books of the subsidiary company, is in fact the purchase price of the goodwill of that concern and, although it is usually kept separate in the books of the holding company as Premium on Subsidiary Company Stock, it is in fact goodwill and is combined with the goodwill account when preparing a consolidated balance sheet.

To summarize, goodwill may be increased on the books: (a) at the time of the acquisition of some going concern that is to become a portion of the business; (b) during a period of incipiency to represent expenditures incurred in building up the business; or (c) to give effect to the proportionate goodwill value of a partner's interest which is purchased by other partners.

Consolidations of Corporations.

Where a number of concerns have merged their interests and are consolidated into one corporation, there is usually considerable doubt as to the amount at which goodwill should be placed on the books. The proper plan, if this element of doubt exists, is to appraise the assets and to set up the balance of the purchase price as goodwill, provided that the purchase price as stated, represents cash or like value. If the purchase price is paid in stock of an indefinite value, an attempt should be made to ascertain the actual value and to adjust the property and goodwill accounts accordingly, throwing the balance into discount on stock. This is the ruling of the Interstate Commerce Commission. The majority of the stockholders, however, object to this mode of procedure and prefer that the entire stock be placed on the books as fully paid. Stock cannot be made fully paid by simple bookkeeping entries and if the stock is to appear as fully paid in the books, care should be taken to have the minutes cover the transfer fully, including the valuation at which each article is transferred, so that the accountants will have no difficulty in entering the assets and the stock at the proper values on the books.

Another problem which confronts the accountants at the time of a consolidation of a number of corporations is the adjustment of values, earnings, and voting rights to the satisfaction of the various groups of stockholders.

The most desirable method is to issue fully paid cumulative preferred stock in exchange for the tangible assets taken over; ordinary preferred stock for the intangible assets; and common stock, which is entitled to no preference whatsoever, to equalize voting rights.

Cumulative preferred stock entitled to first payment in case of dissolution will make certain that the stockholders will receive an amount equal to the value of the property contributed, should it ever be necessary to discontinue the operation of the new concern.

Ordinary preferred stock will make certain the payment of dividends equal to those earned in the past as it will be issued in amounts, to each group of stockholders, which will represent the capitalized value of the excess earnings of their old company before consolidation.

Common stock has no preferences and may be entitled to dividends only under certain conditions which may appear to be equitable at the time of its issue but, in general, it is entitled to vote. Its issue can be arranged so that voting rights of the different companies consolidated will be equitably distributed.

As an illustration: "A," "B" and "C" Corporations are to consolidate. Their capitals are $60,000, $80,000 and $100,000, and their average net earnings $10,000, $8,000 and $6,000, respectively. Provide stock and arrange an equitable apportionment thereof.

To care for the tangible assets turned over, we will provide \$240,000 (dollar for dollar, stock for property) 6% Cumulative Preferred Stock. To care for the goodwill we will ascertain the amount of Ordinary Preferred Stock the companies are entitled to as the capitalized value of their excess earnings, and distribute it accordingly. The minimum desired rate of earnings we may take as 6%, as in company "C," hence any amount earned by either company in excess of 6% may be capitalized as goodwill. We find "A" has earned \$6,400 and "B" \$3,200 per year in excess of the 6% on the value of their tangible assets. These amounts we will capitalize at 5%. Any other rate will answer equally well but in general the rate should not be too small, otherwise the amount of stock to be issued will be excessive. At 5% the capitalized values of the returns of \$6,400 and \$3,200 per year are \$128,000 and \$64,000 respectively.

We will issue Ordinary Preferred 5% Stock to cover these amounts. Five per cent is chosen for the reason that it was the rate used in capitalizing the excess earnings. This stock should be secondary to the cumulative preferred stock in case of the distribution of assets for the reason that it represents the intangible assets only, which ordinarily, in the case of a dissolution, may be presumed to be of no value.

The stockholders of Company "A" have received \$60,000 of 6% cumulative preferred stock and \$128,000 of 5% ordinary preferred stock; a total of \$188,000. The stockholders of Company "B" have received \$80,000 of 6% cumulative preferred stock and \$64,000 of 5% ordinary preferred stock; a total of \$144,000. The stockholders of Company "C" have received only \$100,000 of 6% cumulative preferred stock. Let us presume that it is considered equitable that each group of stockholders should have an equal vote in the management of the company. We can accomplish this by issuing Company "B" \$44,000 and Company "C" \$88,000 of the common stock. This will give the stockholders of each of the old companies $188,000 of stock, all of which will have a voting right.

Presuming that our earnings in the new company are just equal to the combined earnings of the old companies we will have a distribution thereof as follows:

	Co. "A"		Co. "B"		Co. "C"	
	Stock	Dividends	Stock	Dividends	Stock	Dividends
6% Cumulative Preferred	$ 60,000	$ 3,600	$ 80,000	$ 4,800	$100,000	$ 6,000
5% Ordinary	128,000	6,400	64,000	3,200		
Total Dividends		$10,000		$ 8,000		$ 6,000
Common Stock			44,000		88,000	
Total Voting Rights	$188,000		$188,000		$188,000	

Notice (a) the dividends are just the same as were earned by each company prior to the consolidation: (b) the number of shares and hence the voting rights are equal.

If a condition arose where the voting rights were not to be equal, the common stock could be issued and apportioned so that the wishes of the stockholders could be carried out.

If the new consolidated company does not earn as much as the total of the old companies, it would no doubt be due to an over-valuation of the goodwill and would fall to the holders of the stock which represents the goodwill, viz., the ordinary preferred stock.

Consideration must be given the equitable distribution of the additional earnings which are expected to result from the consolidation. Ordinarily all of the companies may be presumed to have contributed equally to the success of the new company, hence an equitable distribution of the additional earnings would be to pro rate them over all issues of stock. The stockholders of each of the old companies under our proposed plan of consolidation have a like number of shares of stock, hence a distribution in this manner would be equal to each group of stockholders.

WRITING OFF GOODWILL.

Goodwill, if placed on the books at a proper valuation and in a proper manner, is a capital asset. As outlined in the previous chapters, a mere fluctuation in the value of a capital asset may be ignored, hence, as goodwill cannot be consumed in the business and is not subject to depreciation like the more tangible assets, it is unnecessary to amortize or otherwise reduce its book value.

The writing off of goodwill creates a secret reserve, to the extent that a capital asset will be decreased at the expense of either surplus, undivided profits, or revenue, and profits will be held in reserve without their existence being disclosed by the current financial reports.

BADWILL.

In the case of the purchase of a concern or, more particularly, where a number of firms have consolidated, and where certain of those taken over have not made a sufficient profit to pay for the use of the capital involved in conducting the business, an equivalent reduction must be made in the purchase price. This, then, in contra-distinction to goodwill might be designated badwill and should offset the goodwill value taken over with the other concerns. Instead of giving effect to such an account, however, it is usual to accept the minimum rate earned by either of the companies as the basis of computations and to distribute common stock to the other companies of an amount equal to the capitalized value of their earnings which are in excess of the minimum earnings determined upon.

To illustrate: Let us presume that the basis of the issue of the cumulative preferred stock in the preceding illustration had been 7% instead of 6%. Company "C" earned but 6% and, if the consolidation was to be equitable, would have been compelled to contribute something to make up for the lack of earnings. In our solution we evaded this possibility by taking a rate so low that no company was called upon to make a contribution.

QUESTIONS.

1. (a) Define goodwill. (b) On what basis should goodwill be valued?

2. A company whose capital stock is $250,000.00, divided into $100,000.00 6% non-cumulative preferred shares and $150,000.00 common shares, begins its life with an excess of liabilities (including capital) over real assets to the extent of $10,500.00, which sum is debited to suspense account. During the first few years small losses are made and carried forward to the profit and loss account, but finally sufficient profits are earned to wipe out the losses of previous years and leave a balance of $16,500.00.

The holders of the preferred stock claim that any surplus profit, after payment of the preference dividend should be used to extinguish the suspense account.

The holders of the common stock claim that all such surplus is properly available for their dividend on the ground that the original deficiency carried to the suspense account was in effect a charge to goodwill.

Give briefly your understanding of goodwill. State how you would deal with it in this case, and whether the directors may pay any dividend on the common stock.

3. When a corporation acquires a number of plants, paying a lump sum for each, is it necessary to show on the books the proportion of the purchase price paid for goodwill, and if so, what would be the proper method of ascertaining and expressing such proportion in the accounts?

4. Under what circumstances, if any, is it permissible in your judgment to increase or decrease the book value of goodwill?

5. In the case of a consolidation of three manufacturing concerns, how would you determine the goodwill of the consolidated company?

6. Under what circumstances is it necessary to open a goodwill account? What advantages are there in allowing it to remain open indefinitely on the books?

7. A merchant, who has been in business for twenty years, decides to put a valuation on the goodwill of his business and carry it as an asset on his ledger, the entry being to charge goodwill and credit surplus. Another merchant five years later buys the entire business, including the goodwill, and after making a careful inventory finds that the actual net resources exclusive of goodwill, amount to $5,000.00 less than the sum he paid for it. Discuss the subject of goodwill in respect to the above case, and state the correct manner of dealing with it.

8. In auditing the books of a corporation capitalized at $250,000 you find that three years previously they acquired the business of a co-partnership included in which was an asset called goodwill, valued at that time at $25,000, since then the account has not

been written down. The average profits of the corporation for the three years have been nine per cent on the capitalization. How would you treat the item goodwill? Give reasons.

9. In making an audit of a firm's books for the purpose of certifying its annual profits for a period of years and with a view to its conversion into a corporation, what items of earnings and expenses should be omitted which ordinarily would be properly included in its regular annual profit and loss account?

10. Is goodwill a fixed or floating asset? Why?

11. A firm resolves itself into a corporation in which new capital is interested. How would the auditor ascertain the value of goodwill?

12. The books of the Mapes & Manning Company, manufacturers of and dealers in farm implements, show for the past five years net profits as follows: 1906, $177,000; 1907, $143,000; 1908, $206,000; 1909, $16,000; 1910, $98,000.

You are instructed by a banking syndicate to examine the accounts of the company and report upon the profits during the above period. In the course of your examination you ascertain the following facts: Current liabilities were not taken into the accounts as follows: January 1, 1906, for new buildings, $42,000; accrued wages, $5,300; December 31, 1906, repair charges, $2,600; accrued wages, $2,900; December 31, 1908, merchandise invoices, $6,800; current expenses, $5,400; December 31, 1910, accrued wages, $3,200; materials and supplies, $4,600; shop equipment, $8,400.

On December 31, 1910, the company engaged two real estate experts to appraise the land and buildings. The lower of the two showed a present value of $587,000, and this valuation was adopted by the board of directors, who instructed the bookkeeper to charge real estate account and credit profit and loss at the above date with the difference between the foregoing amount and the book figures of $560,000.

A mortgage of $200,000, bearing 5% remained upon the property during the whole of the period under review, and interest on this mortgage was charged before arriving at the book profits.

Satisfactory provision was made in each year for depreciation of buildings, machinery, etc.

Revise the profits for each year in accordance with the above fact.

13. Goodwill for a large amount appears among the assets of the Barchester Brewery Company, Ltd., a company formed during the brewery boom. The profits of the company have gradually decreased during the past few years, and, in the years ending June 30th, 1908, and 1909, while the dividend was paid on the preference shares, no profits were available for dividends on the ordinary shares. The balance at the credit of the profit and loss account for the year ended June 30, 1910, was sufficient, after satisfying the preference shareholders, to pay a dividend of 2½%

on the ordinary shares. The directors were divided in opinion as to whether a dividend should be declared or the amount taken to the credit of the goodwill account. As auditor to the company you were called in to advise the directors. State briefly the views you would have submitted to the board.

14. A new corporation, "D," is formed to purchase and amalgamate the business of three corporations, "A," "B" and "C" carrying on the same class of business, at December 31, 1908.

There are considerable differences between the capitals, the gross sales, the expenses and the net profits of the three corporations. The amounts to be allotted to each in shares of the new company for its capital and goodwill is agreed to be referred to you.

Prepare a statement setting forth what you consider to be an equitable apportionment of the stock of the new concern.

For the purpose of class uniformity, use the following figures:

	"A"	"B"	"C"
Capital	$ 60,000.00	$120,000.00	$180,000.00
Surplus	30,000.00	40,000.00	45,000.00
Average Annual Net Earnings	15,000.00	9,600.00	10,800.00

CHAPTER XV.

Liabilities.

The accounts representing the liabilities of a concern, if they are entered in the books at all, are usually properly stated. Many cases exist, however, where they are not entered. The principal of these are, (a) where a like amount of assets are omitted also, as in the case of the purchase of property under a purchase money mortgage, where, erroneously of course, the only account that is carried in the books is one to receive the amount of the payments actually made on the property; and (b) where the liability is but a contingency.

Purchase Money Obligations.

It is not unusual to find accountants who recommend that the equity in property is all that need appear in the books of the purchaser. Under this method, if a person were to buy a piece of property for $5,000, paying $1,000 cash and the balance in $500 quarterly payments, his books would show Equity in Real Estate, $1500, at the end of the first quarter, no mention being made of the existing liability of $3500. Assets are subject to great fluctuation in values, while liabilities remain unchanged and for this, if for no other reason, the books should show the entire cost of the asset and the liability that exists thereon. This method of handling the accounts will give the reader of the financial reports of the company an opportunity to determine the true equity of the purchaser in the property.

Contingent Liabilities.

There are a considerable number of transactions that occur in the regular order of business, the effect of which is not fully realized at the time the transaction occurs and, as a result, no attempt is made to record them in the books. This refers particularly to liabilities which are incurred but which may or may not become a claim, contingent upon the happening of some event. As an example, take the case of a note that has been charged to the bills receivable account. If it is discounted, the usual entry is to debit Cash and Bank Discount and credit Bills Receivable. This entry immediately removes the note from the account and no effect is given the possibility of the note being ultimately dishonored and becoming a claim against the business. The proper entry is to debit Cash and Bank Discount and credit Bills Receivable Discounted, then when the note matures and the liability is found non-existent, the bills receivable and the bills receivable discounted accounts can be adjusted.

Where a great number of notes are discounted and where they extend over a considerable period, it is at times advisable that they be separated in the accounts according to their maturity dates, as "Bills Receivable Discounted, May Maturities."

Notes are often given, guaranteed, or endorsed for the accommodation of other persons, in which case, the persons accommodated should be charged with the amount and Bills Payable credited, or, if notes were exchanged the entry would be Bills Receivable Dr. to Bills Payable.

Cumulative preferred dividends in arrears are another form of contingent liability, differing from bills receivable discounted to the extent that, as between the company and the preferred stockholder, no liability exists until such time as a sufficient profit has been earned to warrant the declaration of the dividend and the dividend has been declared but, from the standpoint of the holders of inferior stocks, a liability does exist for the reason that the cumulative preferred dividends which are in arrears must be paid before any dividends can be paid on their stock. This item should not be included in the books of the company as it is not a liability of the company, but it should appear appended to the balance sheet as a footnote for the information of stockholders.

The liability on guaranteed goods or similar existing contracts, if there is any possibility of it becoming a claim, should be given effect. This is accomplished by charging some revenue account with the amount of the anticipated liability and crediting a reserve account therefor so that the balance sheet will disclose the true state of affairs. The entry would be similar to the following:

Estimated loss on existing contracts	$ 1,000.00	
Reserve for possible loss on existing contracts		$ 1,000.00

Suits pending in the courts also require consideration but, as often the entering of the liability in the books of the company may be accepted as evidence to prove an acknowledgement thereof by the company, it is not considered advisable to make an entry in the books until the case is decided. An auditor should, however, see that mention is made of the pending action in his report.

Capital Liabilities—Bonds Payable.

Considerable doubt exists in the minds of students, as to the advisability of placing bonds on the books that have been authorized but not yet issued. Much of the confusion arises, no doubt, on account of the divergent views published by the various accountants who have expressed themselves on the subject. Certain accountants have advised that the entire amount of the authorized issue should be shown on the books and that the unissued portion should be carried in an offsetting account. This method is the same as is used in recording capital stock. Other accountants state that the bonds should be placed on the books only as they are sold. They rely upon some auxiliary record such as a bond register for the details of the issue. Still another group of accountants notably those of the Interstate Commerce Commission, advise that bonds be placed on the books as soon as they are certified to by the trustee and that those unsold should be carried in an offset account. Under either of these methods, where the account does not contain the actual amount authorized, it is considered advisable to show this information in the heading of the account as "First Mortgage Bonds, 1950, J. & J. (January 1st and June 1st), Authorized $100,000.

The method advised by the Interstate Commerce Commission is believed by the author to be preferable.

Refering to the first method given, the difference in the principles involved between the entries covering the stock and the bonds is very slight, possibly not enough to warrant a different treatment of the items, but, as from an accounting standpoint, the trouble seems to lie entirely in the accepted manner of caring for stock, there seems to be no valid reason for treating bonds in the same manner.

In connection with examination problems, it is sometimes required that certain bonds be set aside as treasury bonds for future disposition; such a requirement we believe infers that, from the examiners' viewpoint, it is preferable to treat the bonds the same as stock and, in solving the problem, it is desirable to give effect to an unissued bonds account.

Bonds usually are issued as of a particular date, and in general, interest is computed as from that date. If a particular bond happens to be sold on some date between the interest dates, the purchaser is compelled to pay to the issuing company the amount of the interest that has accrued from the last interest date. This amount will be returned to him at the next interest date. As an example, the purchaser of a bond on February 1st will be compelled to pay interest from January 1st, if January 1st was the last interest date. On say July 1st, he will receive interest for the entire six months from January 1st including the amount of his payment which is then returned to him. Care should be taken, therefore, to see that the purchased interest is separated from the purchased principal so that at a later date the true return on the bond can be ascertained.

Premium or discount on the issue should be set aside in a subsidiary account to adjust future interest payments.

The rate that should be used when amortizing the premium or the discount can usually be ascertained by reference to a bond table. In practice the bond tables are used almost exclusively in determining this rate, and also when it is desired to ascertain the amount that should be quoted to net the investor a certain return. In the certified public accountants' examinations, however, it is often necessary to solve problems of this nature without the aid of a bond table.

The majority of these questions require the present worth of a bond; the par value, the time, the normal rate and the effective rate being given. The following solution illustrates a method which students have found very easy to remember.

A \$1,000, 5% bond, maturing in three years, was sold to net the investor 4%. What was the sale price?

1st. Ascertain the value of \$1.00 at the end of the given number of interest periods at the effective rate. ($1.04^3 = 1.124864$.)

2nd. Find the difference between the effective and the nominal rate. ($5 - 4 = 1$.)

3rd. Divide this difference by the effective rate. ($1 \div 4 = .25$.)

4th. Divide this quotient by the value of \$1.00 at the end of the given number of interest periods at the effective rate. (See 1.) ($25 \div 1.124864 = .222249$.)

5th. Subtract this quotient from the dividend. ($25 - .222249 = .027751$.)

6th. Multiply by the par value of the bond. ($.027751 \times 1000 = 27.751$, the premium or the discount on the bond. In this case premium.)

7th. Add the premium or deduct the discount from the par value of the bond and the result will be the present worth. (In this case $\$1000 + \$27.75 = \$1027.75$.)

When bonds, which were actually issued to bona fide holders for value, are reacquired, that portion of the balance, remaining in the accounts containing discount, expense and premium on bonds for the sub-class of the security reacquired, applicable to the portion reacquired should be credited or charged thereto, as may be appropriate, and concurrently charged or credited to profit and loss. Such proportion should be upon the ratio of the par value of the security reacquired to the par value of all of the securities of the subclass actually outstanding immediately before such reacquirement. In case, however, the premium realized or the discount suffered at the prior sale of the securities reacquired has been included in an asset account other than the premiums or discounts account, such asset account should be concurrently adjusted through profit and loss to the extent of such excess of the premium or discount previously included therein with respect to the securities reacquired. If after making the adjustments referred to above, the company has profited or lost by the acquisition of the bonds before their maturity, the profit or loss should be recorded in a separate account which will indicate the exact nature of the item. This profit or loss will constitute an item apart from the profits or losses on ordinary business and at balancing time should be closed into the net profit section of the profit and loss account.

Capital Liabilities—Proprietorship.

The principal features of the accounts representing proprietorship have already been dealt with in Chapter IV; we wish to add, however, a few words relative to corporation accounts.

The authorized amount of capital stock of a concern is, in general, placed on the books and the amount unissued is entered as an offset as Unissued Stock. The latter account is reduced from time to time as the stock is issued.

If the stock is divided into shares possessing different privileges, separate accounts should be opened for each portion designating them as "Common Stock," "Preferred Stock," "Cumulative Preferred Stock," etc.

Common Stock.

Common stock is the ordinary stock of a corporation. Unless its rights have been diminished in some way, by the charter, each share is entitled to equal rights in the management, profits and, at dissolution, in the assets of the company.

Preferred Stock.

Shares conferring on their holders preferential or additional rights not enjoyed by the holders of other shares are called preferred shares. They can only be created when the authority to create them is given by statute or charter, or by agreement between all parties interested.

The principal preferences are (a) as to dividends; (b) priority in case of distribution of assets; (c) exclusive voting rights; (d) the appointment of its holders to office. As an example, the holders of preferred stock may be the only parties entitled to act on the board of directors or the preferred stockholders may be entitled to have three directors on a board of five.

In Washington there is no provision in the statutes covering the issuance of preferred stock and preferences can only be given by the unanimous consent of the stockholders.

Cumulative Preferred Stock.

Cumulative preferred stock is stock which according to the term of its issue is entitled to dividends at a certain rate. If the profits are not sufficient during a particular year to warrant the payment of the dividend, the amount thereof is payable out of the profits of some succeeding period. Often the period of accumulation is limited to three or five years.

INTEREST BEARING STOCK.

The rule is that a corporation cannot contract to pay interest or dividends on the shares of its capital stock in excess of its earnings, unless expressly authorized to do so by statute. The reason is that a corporation cannot, in the absence of legislative sanction, divide its capital stock among its shareholders. A railroad company cannot, therefore, without special legislation, contract to pay interest on stock before the road is completed or any income received, and a contract to do so cannot be enforced against the capital of the company.

A railroad corporation has authority however to stipulate that each stockholder shall be entitled to interest on sums paid on stock subscriptions while its road is in process of construction, till it is completed and goes into operation, payable whenever the surplus earnings shall enable it to properly do so. Such a guaranty has been held to be nothing more than a pledge of the funds of the corporation which may be legally applicable to the payment of the dividends,—that is a pledge of its profits and it merely creates a preference in the distribution of its profits among its shareholders. Hence, if it appear in any case that no profits have been earned, the holders of the preferred stock cannot maintain actions against the company to enforce payment of the guaranteed dividends. (Thompson's Commentaries on the Law of Corporations.)

GUARANTEED STOCK.

"For stronger reasons, a corporation cannot, in the absence of express legislative authorization, guarantee dividends on the capital stock of another corporation at a certain rate per cent per annum, without reference to the question whether it should have any profits out of which to pay them, for such a guaranteed annual dividend is merely another form of a contract to pay interest on shares of another company. Such a guaranty, it has been held, cannot be enforced, although made to induce subscriptions to the capital stock of the company, and although made partly in consideration of necessary services tendered by the subscriber to the corporation." (Memphis Grain Co. vs. Memphis Ry. Co., 85 Tenn. 703; s. c. 4 Am. St. Rep. 798; 5 S. W. 52.) (Thompson's Commentaries on the Law of Corporations.)

In another case, "two corporations agreed with one another for a lease of property of the one to the other, the lessor guaranteeing a certain dividend, and agreeing to make certain quarterly payments. It was held that a stockholder of the lessee corporation could not, on behalf of himself and other stockholders, maintain an action against the lessor corporation to enforce the agreement and to compel the payment of his dividend. The reason was that the promise was made to the lessee corporation, and not to its stockholders." (Thompson's Commentaries on the Law of Corporations.)

Non Voting, Profit Sharing Stock.

Non voting, profit sharing stock may be issued where it is desired to allow employees or others the right to share in the profits of the organization without granting them the right to vote. The laws of Washington, however, provide that each stockholder, either in person or by proxy, shall be entitled to as many votes as he may own, or represent by proxy, shares of stock; provided however that nothing shall prevent any corporation by their bylaws, limiting such bona fide share holder to a single vote or one vote for every full share of paid up stock or its equivalent in assessable stock, disregarding the number of shares he may own.

Non Assenting Stock.

In the reorganization of corporations it often happens that certain of the shares of the original issue refuse or fail to accept the offer of the reorganization committee in reference to the exchange of the old shares and, although the reorganization plan is adopted and the property taken over by the new organization, there still remains a liability to the non-assenting stockholders. In general, their stock has no voice in the management of the company and it is proper to show it on the books as a liability as "Non Assenting Stock."

As an offset to this liability it is considered proper to set aside, as Reserved Stock, the amount of the new stock that the non-assenting stockholders would have received had they accepted the plan of reorganization. If the corporation should be compelled to pay the value of the stock held by the stockholders in cash, the reserved stock could be sold to produce at least a portion of the amount due them. If the stockholders are awarded more than the reserved stock will produce, the excess over the amount of the reserved stock is a proper charge to some capital asset account, usually goodwill.

Stock Without Par Value.

Under the laws of certain of the states, corporations may be organized with a capital stock which has no par value. Certificates are issued which represent a certain portion of the entire capital. In this case the regular capital stock accounts cannot be used. Instead an account "Capital, Represented by .... Certificates" will be opened. Its credit balance will represent the investment of the proprietors.

Earnings are transferred to the credit of Undivided Profits or Surplus account whether or not the stock has a par value and later, upon the declaration of a dividend, to dividends payable account, or, if the profits are to be used for some other purpose, to an account indicating the use to which they are to be put, for example: "Reserved Surplus for Contingencies" or "Reserved Surplus for Extensions." If profits are to be retained in the business instead of being distributed and if the respective rights of different classes of stockholders are thereby disturbed, the amounts reserved should be specifically marked so that when it is distributed it will go to the stock which was entitled to it in the first place.

The surplus account is often used to include undivided profits but, as it is also used to include contributions made by stockholders in addition to the par value of their stock, as in the case of the organization of a bank where a premium is paid on the subscription; or to include the excess of assets remaining after the capital stock has been reduced without a return of such excess to the stockholders, it is considered preferable by many accountants to use the term undivided profits to the exclusion of the other term where earnings are concerned.

During nearly every period of operations a considerable number of items arise which have no bearing whatsoever on the earnings of that period. A large error may be discovered in an inventory or insufficient depreciation may have been charged against prior years. In such cases some accountants recommend that no adjustments should be made to correct the earnings of the prior years. One author states as his reason that if this were done the loss never would appear in the published reports of the concern. The same author, however, is very emphatic in his statement that all accrued liabilities and deferred charges to operations should be brought into the books at the closing date so that the profits of the current year will not be improperly stated. It appears to us that the principal desire of the accountants should be that the current profits appear correctly stated irrespective of what adjustments may be necessary to produce the results or whether the adjustments affect future periods or past periods.

The writer suggests that, where the earnings of prior years have been improperly stated, an account, Profit and Loss Adjustment of 191........, should be opened. This account should be closed into surplus or undivided profits at the end of the period. If at any future date the profit and loss account of that period is being used it can be corrected by including the amount of the adjustment.

QUESTIONS.

1. What is a contingent liability?

2. In a case where the preferred shares of a company are issued under a provision that the annual dividends to which they shall be entitled shall be "cumulative," would you consider it necessary to show any arrears of dividend as a liability upon the balance sheet, or how would you deal with it?

3. Give at least two examples of contingent liabilities and state how they should be treated in the books.

4. A corporation authorizes an issue of $1,000,000.00 of bonds. The trust company issues and certifies $500,000.00 of these bonds to December 31, 1907. On this date the company sells $200,000.00 of bonds, pledges $200,000.00 as collateral security for the payment of its notes and has $100,000.00 in the treasury. How should this issue of bonds appear on the balance sheet of the corporation on December 31, 1907?

5. Do unsold bonds of a railroad company constitute a liability? If they do, under what accounts would they appear in a ledger? Does unsubscribed stock in a corporation constitute a liability? If it does, under what accounts would it appear in the ledger?

6. (a) The Bristol Manufacturing Company issued and sold on the 1st of January, 1911, to "A" and "B" 100 (50 to each at the same price) First Mortgage Bonds of $500.00 each, bearing interest at 4% per annum, and received $48,000.00 in cash.
What record of the transaction should be made?
(b) Suppose that certain of the bonds had not been sold until March 1st. What difference would it have made in the entries covering their issue?

7. A company takes a large number of notes from its customers and when in need of funds, discounts or sells them. What accounts, if any, should appear to care for the contingent liability thus created?

8. Distinguish between the accounts usually designated Surplus and Undivided Profits as to (a) definition, (b) treatment.
State circumstances under which it is proper to debit or credit surplus account.

9. Goods were returned by a customer on December 30th, 1916. They had been billed to him during November at $856.00. They were included in the inventory on December 31st at $750.00 although the entry to credit the customer was not made until January 5th, 1917. What entries are necessary to correct the records?

10. "A" is a superintendent in the employ of "X" & "Y", a firm of manufacturers, and has an interest in the profits. On September 8, 1914, "X" & "Y" indorse A's $3,500 note, due in

six months with interest at 6%. "X" and "Y" charge the fee of 1% ($36.05) to "A's" account on the firm's books. "A" sells this note to a private note broker. On March 10, 1915, "X" and "Y" pay $3607.50, inclusive of protest fees, to the holder of the note which "A" had permitted to be dishonored. What entries are necessary on the books of "X" & "Y" to record the transaction?

11. Three 6%, $1000 bonds with four years to run are sold to net the investor 5%, interest payable semi-annually. What premium did he pay?

12. Two 5% $1000 bonds with two years to run, are sold to net the investor 6%, interest payable semi-annually. What discount did he receive?

CHAPTER XVI.

Subsidiary Accounts.

The principal use of subsidiary accounts is to record items which either have been paid during one period of a company's operation and have not been consumed—as an example; "Insurance, paid in advance"—or have accrued, but have not been paid, as in the case of "Bond interest accrued but not due." In either case, at the time of closing the books, the amount transferred from the major account (Insurance or Bond Interest) to the summary account (Profit and Loss or Trading) must represent the actual effect of the year's transactions that are properly chargeable to that year. If the major account does not display the accurate result, it must be adjusted by the aid of a subsidiary account which, under certain conditions, may be a portion of the major account and may appear on the same page in the ledger, For the purpose of closing the books, however, it is subsidiary to the other account.

Methods of Entry.

To illustrate: The insurance account of a certain firm shows a debit balance of $126.00. Upon checking the account, it is ascertained that the amount which properly applies to the current year's operations amounts to but $106.00, leaving a balance of $20.00 which applies against the expenses of the succeeding year. In adjusting the account, $20.00 is carried forward as Unexpired Insurance and the $106.00 is carried to the profit and loss account, net profit section. Upon opening the books for the new year the $20.00 becomes the opening balance of the major account but, while the books are being closed, it is a subsidiary account.

There are two methods of treating subsidiary accounts.

The majority of accountants would, in recording the adjustment of the major account make an entry debiting Unexpired Insurance and crediting Insurance with $20.00; they would then close the insurance account by debiting Profit and Loss and crediting Insurance with $106.00. At the beginning of the new period the first entry would be reversed. In many cases this method is quite desirable, as the entry can be placed on the books before the final trial balance is taken, but it will be noticed that three entries are necessary.

The alternative method is to debit Profit and Loss and credit Insurance with the proper amount chargeable to the current year's operations. The amount that relates to the succeeding period simply remains in the account as an asset and no entries are necessary to take it out of the account or to replace it.

Insurance Paid in Advance.

In particular reference to insurance paid in advance, we have to determine the proper amount to be carried over as an asset. Some accountants claim that the cancellation value of the policy is all that may be properly carried over while others believe that the amount of the insurance premiums should be spread over the periods it affects before and after the closing date according to the number of days in each. The first method is desirable where the concern is liquidating and actually expects to cancel the policy but where the concern is to continue and the policy may reasonably be expected to be entirely used the second method is preferable.

Advertising Appropriations.

Occasionally an organization will spend a great amount of money in one year for advertising purposes. The amount may be so large that its effect will extend over a considerable number of years. In this case it is considered proper to carry into the next period, as a deferred charge to operations, the portion of the expenditures which may equitably be considered as applicable to that year.

In the case of a very extensive campaign covering a number of years, it is customary to appropriate, for the purpose, a certain sum, possibly varying with each year, which is charged, as expended, to Special Advertising. The amount of the average expenditure of each year, during the life of the campaign, or possibly including a few additional years where the effect would be felt that long, is transferred from the special advertising account to the current advertising account to represent the proper portion of the expenditure chargeable against the current year's operations. The balance of the special advertising account remains as a subsidiary account representing deferred charges against future years.

Any expenditure in excess of or not included in the appropriation should be charged to the regular advertising account directly.

Expenses Incurred in Advance of Sales.

Firms which supply Christmas goods, fireworks, clothing, and similar articles, the demand for which is periodical, often incur a considerable amount of expense during one fiscal year which properly belongs to the next period for the reason that it is directly applicable to the succeeding period's sales. There is, of course, an argument that the expenditures of the various periods will equalize themselves, but this hardly seems sound for heavy expenditures may be incurred during one period to produce business for the succeeding period and, if the large expenditures are charged against the profits of the period in which they are made rather than to the period for which they are expended, the true result of the expenditures may never be known. It seems more desirable, therefore, that all expenses, incurred after the periodical business has ceased, be carried forward as a charge against the next period's business or, if it is possible to do so, it is preferable to change the dates of the fiscal periods so that they will expire with each selling period.

Discount on Bonds.

Discount on bonds sold is a prepaid expense, apportionable over the life of the bonds like the interest, and should be treated accordingly, by retaining on the books from year to year the portion of the original discount that properly applies to future years.

In practice, it is frequently considered inadvisable to spread this item over a great number of years, as would be necessary where the life of the bonds is very great, and the account is closed on the books immediately by charging it against the profit and loss account, net profit section.

No doubt this method is satisfactory where the amount involved is not very great but under ordinary conditions we believe the bond discount should be spread over the life of the issue in such a manner that the amount charged to each year will adjust the amount of interest paid at the nominal rate so that it will represent the effective interest properly chargeable to each period.

Expense incurred in negotiating an issue of bonds is usually capitalized for the reason that the proceeds of the bonds are usually used for acquiring capital assets; if, however, the proceeds are to be used for working capital and a considerable sum is involved, the expenses incurred in financing the issue should be spread over the life of the issue the same as the discount.

The reason for this is that in the case of the purchase of the capital assets the amount chargeable to each year will be apportioned to that year as a part of the depreciation charge while, in case the money is retained for working capital, if each year is to be charged, the amount must be spread over each period by amortizing the amount of the expenditure.

The Interstate Commerce Commission treats all expenses incidental to bond issues in the same manner no matter what the purpose of the issue may be. They include them in the account with the bond discount and charge to the income account of each period, a portion, based upon the ratio that such fiscal period bears to the remaining life of the security. It will be noticed that they charge a uniform amount to each period and that they make no effort to use the effective rate of the interest on the issue when writing off the discount and expenses.

COMMISSION ON LOANS.

The amount of commission paid on a loan is usually but an adjustment of the interest rate, viz., a quotation of 7% annual interest and 3% commission is approximately the same as a quotation of 8% interest on a three-year loan. For this reason we believe that commission on loans should be amortized, to produce the effective rate of interest, the same as discount on bonds.

SUSPENSE ACCOUNTS.

During the course of adjusting or closing the books or even during a period of operations, items arise which for some reason or other, cannot be analyzed sufficiently to properly place them on the books. It then becomes necessary to make such entry as is possible, placing the unapportionable balance into a suspense account, properly headed, for future attention.

The following were used recently, when adjusting the books of a branch office, and are good examples of this style of an account:

"Spokane Bills Receivable Suspense Account"

Used where a reconcilation of the account was impossible and where records were not available to check out the entire account, but where it was necessary to give effect to the account on the books.

"Executive Office Collection Suspense Account"

Opened for a similar purpose, covering collections made by the branch for the home office and erroneously reported to them.

Such accounts should be closed at the earliest possible moment and not allowed to stand in anticipation that they will automatically adjust themselves.

Accrued Expenses.

There are a considerable number of items, such as taxes, rent, interest, wages, etc., which accrue with the passing of time, viz., each moment of time causes an increase in the amount properly chargeable to these accounts, but, owing to the fact that the increase is continuous, it is impossible to record it as it accrues. The usual procedure is to pay the accounts as they become due, charging the amount paid to the respective accounts and then, whenever the books are closed and the profits for a period or the status of a concern as at the end of a period is determined, the amount that is properly chargeable to the current year is transferred to revenue, irrespective of what the account balance shows. The amount remaining forms a subsidiary account for balance sheet purposes and will appear therein under an appropriate heading, such as Taxes Accrued and Unpaid, etc.

The subsidiary account may form the nucleus of the major account upon opening the books for the new period as outlined in the first part of this chapter.

Premium on Bonds.

The premium on an issue of bonds sold, like the discount, should be set aside to adjust future interest payments.

In connection with the issue of bonds, attention is directed to the manner of paying interest on each bond.

In general, interest is payable semi-annually and if a bond is disposed of at any time between the interest dates, it carries with it, the interest that has accrued since the last interest date; therefore, if a bond were sold at a premium or a discount at any time between the two interest dates and if no provision were made at the time of sale for the interest that had accrued, consideration would have to be given the accrued interest in determining the actual premium or discount. The amount of interest that was sold with the bond should be credited to the bond interest account to offset a portion of the amount that would be paid on the next interest date.

Premium on Stock.

In the organization of double liability corporations such as banks, etc., and also in the case of industrial concerns where the stock has been increased, it is not unusual to have the stock issued at a premium.

In either case, there is no legal objection to crediting the premium to the undivided profits account and repaying it to the stockholders as a dividend, except in cases where a certain surplus is required by law in addition to the capital stock. In general, however, the premium is credited to a premium on capital stock account and is allowed to remain on the books as surplus not available for dividends.

In the case of the new organization, the reasons for issuing the stock at a premium are usually to provide the surplus required or to secure desired working capital with a minimum amount of capital stock. The object of doing this is to limit as much as possible the liability existing under the double liability clause of the various special incorporation laws.

To illustrate let us take the case of a double liability company requiring $200,000 capital. If they organize with a capital stock of this amount the stockholders will be liable for another like amount. They can accomplish the same purpose and avoid one-half of the liability by organizing with a capital stock of but $100,000 and a surplus of $100,000.

Where a concern has increased its capital stock and has issued the new stock at a premium, the company does not profit directly by the transaction, for the reason that the premium received is still the property of the stockholders; the company simply has the use of it during the period it remains in its hands. The objects to be secured by the issue of stock in this manner are to equalize the value of the old stock and the selling price of the new, and to provide the desired working capital with as small an increase of the dividend bearing stock as possible, thereby enabling the company to pay a satisfactory rate of dividend on the stock outstanding with a smaller amount than would be required were a greater amount of stock distributed.

If the new stock were issued as outlined above, the new stockholders would receive, at some date, more or less removed, pro rata with the old, a portion of the premium that they had paid into the company and, to avoid this, it is customary to grant the old stockholders, proportionate to their holdings, the right to subscribe for the new stock at par. This right is transferable and, if a stockholder does not care to use it himself, he may sell it to some other party who pays him the value of the premium and the company the par value of the stock.

An interesting problem is involved where it is desired to ascertain the value of the right to subscribe for stock. We will use the following example to illustrate:

A company with a capital stock of $100,000 and a surplus of $50,000 decides to increase its capital stock to $200,000 by issuing "rights" to its stockholders. A certain stockholder wishes to transfer his right to the subscription of ten shares of the new stock. What amount should he receive therefor?

The new capital is to be $200,000 and the surplus, $50,000. The book value of each new share will be $125.

The purchaser will have to pay $100 per share to the company and therefore should pay $25 per share to the original holder of the right.

In general, the holders of an original issue of stock, have a prior right to subscribe for any new stock, provided the new stock is not to be exchanged for property, and they cannot be called upon to pay more than par for it.

Premium on the sale of treasury stock may be handled in a number of ways. If the stock was purchased, the premium on its sale is usually a credit to surplus. If it is donated stock, the premium should be closed into Donations for Working Capital so that the actual value of the donation may be determined. If the stock was acquired through a forfeiture, the credit for the premium should be closed into Forfeitures.

Discounts on the stock would be closed into the same accounts as the premiums, in each case.

The Donations for Working Capital account is closed into Special Surplus, not Available for Dividends, as soon as the value of the donation is ascertained.

Forfeitures are usually considered as profits available for dividends, therefore the account is closed into profit and loss, net profit section.

Premium or discount on subsidiary company stock over or under its book value should be retained in a separate account for the purpose of facilitating the preparation of consolidated balance sheets, and also for the purpose of adjusting the account representing the book value when the stock is ultimately disposed of. In the preparation of a consolidated balance sheet, the account representing the premium or the discount is combined with the goodwill account. If the stock it relates to is sold by the holding company, the premium or discount is closed into the account which contains the book value of the stock, before determining the profit or loss on the sale.

Undeclared Earnings of Subsidiaries.

Where a subsidiary company has made a profit during a fiscal period but has not declared a dividend, it is doubtful whether its holding company can consider the earning as an amount available for dividends on its stock for the reason that in law, dividends are not supposed to accrue, viz., they fall entirely to capital or to income as of the day of declaration. For the purpose of showing the financial condition of the combined companies, however, it is quite desirable to place the earnings of the subsidiary company on the books of the holding company. If this is not done it is difficult to adjust the accounts, representing the book value of the subsidiary company's stock on the books of the holding company, so that they can be cancelled against the capital and surplus that they represent on the books of the subsidiary company.

The entry to accomplish this is:

Dr. Book Value of Subsidiary Co. Stock	$1,000	
Cr. Undeclared Earnings of Subsidiary Company		$1,000
(To record earnings of subsidiary company)		

When the subsidiary company declares and pays a dividend the entry is:

Dr. Cash	$2,000	
Cr. Book Value of Subsidiary Co.		$2,000
(Book value of subsidiary company stock reduced by a dividend)		

The earnings covered by the dividends to the holding company are now available for dividends on the part of the holding company so the amount that is contained in the undeclared earnings account may now be transferred to surplus by the entry:

Dr. Undeclared Earnings of Subsidiary Co.	$1,000	
Cr. Surplus		$1,000
($1,000 of the dividends received from the subsidiary company represent earnings which are now available for distribution as dividends, the balance representing a return of the original surplus which was purchased with the stock.)		

There seems to be no doubt in the law as to the availability of the entire dividends of a subsidiary company, as dividends for the holding company, but if the dividends of the subsidiary company are treated in this manner it usually causes so much confusion that it is considered preferable to handle the accounts as outlined above. We believe also that accountants should endeavor to influence the law along correct accounting lines instead of accepting the law just as it is.

TAXES.

Taxes are, in general, provided for in advance of the date of their payment by the aid of reserves, viz., each month or year an amount is charged to revenue and credited to a reserve for taxes account. This places the burden of the tax on the period in which it is assessed even though no benefits are received therefrom during that period. In the majority of cases the benefits derived from the payment of taxes are secured after the taxes are paid. The funds collected by the county or the city are disbursed, after they are received, in payment of the cost of conducting the government. It therefore seems that taxes should be written off after they are paid instead of provided for in advance of their payment. This means that instead of showing a liability on the books of say \$2,500 for accrued taxes there will be an asset of possibly \$2,000 representing taxes paid in advance of benefits received. In this case the difference in the method of treating the item will cause an addition to surplus of \$4,500, an amount well worthy of consideration.

QUESTIONS.

1. Would you consider it proper to include as an asset the following items: Insurance premium unearned, taxes paid in advance, advertising expense? Explain briefly and give reasons.

2. A firm expends considerable sums upon advertisements in order to form a business. Assuming that the expenditure thereon decreases annually until, in the seventh year, it reaches a point representing a normal annual cost under this head, how would you expect the amounts to be treated in the books? In your reply let $14,000.00 be the expenditure of the first year and the decrease $2,000.00 annually.

3. A railway company sells on October 1, 1900, an issue of 5% 20 year bonds dated September 1, 1900, at 110 flat. What is the amount of the premium and how should it be treated on the books of the company?

4. Explain what is meant by suspense, prepaid and accrued accounts, and give examples of each, showing proper classification as to debits and credits.

5. From the standpoint of a corporation which requires additional capital, would it be preferable to issue the new stock at par pro rata to the old stockholders or should it be sold in the open market at the highest price obtainable.

6. What portion of $15,000—commission paid for negotiating a sale of bonds to run 10 years—should be treated as an asset at the end of the first year? Give reasons.

7. A company receives a premium on its own capital stock. What account should receive credit for the premium? Is this premium available for the payment of dividends? Give reasons to sustain your answer.

8. How should the discount and premium arising from the sale of a company's own securities held in its treasury be treated on the books? Give examples.

9. Outline an entry recording bond interest due but not paid at the time of making the entry. What are the advantages of such an entry?

10. Mention other items which could be treated in a similar way to that suggested for interest in the previous question and state the advantages of such treatment.

11. Illustrate in the form of journal entries the accrual of discount and the amortization of the premium on bond investments. Explain or illustrate the relation of each to the interest receipts and to the income returns.

12. "M" Company's Balance Sheets are as follows on the dates mentioned:

ASSETS

	Dec. 31, 1914	Dec. 31, 1915
"X" Company stock (90 shares)	$ 22,500.00	$ 22,500.00
Cash	10,000.00	12,000.00
Inventory	5,000.00	6,000.00
Accounts receivable	5,000.00	5,000.00
Plant machinery	10,000.00	9,000.00
	$ 52,500.00	$ 54,500.00

LIABILITIES

Bonds payable	$ 5,000.00	$ 4,000.00
Accounts payable	3,000.00	2,000.00
Capital stock	30,000.00	30,000.00
Surplus	14,500.00	18,500.00
	$ 52,500.00	$ 54,500.00

"X" Company's Balance Sheets are as follows on the dates mentioned:

ASSETS

	Dec. 31, 1914	Dec. 31, 1915
Cash	$ 8,000.00	$ 7,000.00
Inventory	3,000.00	4,000.00
Accounts receivable	4,000.00	4,500.00
Plant machinery	15,000.00	13,500.00
	$ 30,000.00	$ 29,000.00

LIABILITIES

Bonds payable	$ 5,000.00	$ 4,000.00
Accounts payable	2,000.00	1,000.00
Capital stock	10,000.00	10,000.00
Surplus	13,000.00	14,000.00
	$ 30,000.00	$ 29,000.00

Required:

A—Entries to adjust "X" Company stock account on the holding company's books as at January 1, 1915.

B—Entry to place earnings of "X" Company for 1915 on the books of "M" Company as at December 31, 1915.

C—Entries to place dividends of 30% declared by each company on the books of each, respectively.

D—Entry to place the dividend of "X" Company on the books of "M" Company.

E—Prepare a corrected balance sheet of each company.

F—Eliminate $200.00 intercompany profit on merchandise which appears on the books of "M" Company from the balance sheet of the "M" Company.

G—Eliminate the book value of "X" Company stock which appears on "M" Company's books at the end of the year.

H—Prepare a consolidated balance sheet.

CHAPTER XVII.

Reserves.

In taking up the discussion of Reserves, we must admit that, considering the object of this work in connection with outlining the principles of accounting with a view to assisting the student in satisfying the various examining boards, we are entering it with some hesitancy due to the great divergence of opinion that exists not only among the examiners but the other authorities as well.

The principal trouble seems to lie in the failure of accountants to distinguish between the source of the various items which make up the reserves. Some of them represent credits which are offsets to charges to the revenue account while others are created by charging undivided profits or surplus.

Those that originate in the revenue account invariably represent the estimate of loss or expense that has occurred, as distinguished from the actual payments that have been made to replace that loss, or loss that has required attention during the year. To illustrate: In a given year, the manager of a concern estimates that the amount of loss through bad debts which is properly chargeable to that year, is $500.00. Possibly an analysis of the ledger will not disclose bad or doubtful accounts representing anywhere near that sum, but experience has taught him that, in conducting his business, losses through undesirable credit will surely result, and, in order to correctly state the accounts for the period, it is necessary to charge an amount to that year which will provide for the loss on sales to undesirable customers. The offset to this charge is a credit to Reserve for Bad Debts. The reserve provided is supposed to cover all losses that occur, even though at the time the reserve was made some accounts were thought to be good which later proved to be bad. As losses occur, they are charged against the reserve instead of against revenue, as would have been done had no provision been made to care for them.

Those charges that originate in the surplus account represent profits that have been set aside for some purpose; possibly to retain in the business an amount with which to make extensions which, without the reserve, would require a new issue of stock or an issue of bonds. The fact that these profits have been ear-marked and separated from the others does not affect their availability for any other purpose which may appear to be more important than the one for which the account was originally opened; provided, of course, that there is no existing obligation covering the operation of the account.

The accounts that were created by charging operations to give effect to the amount of the losses that have occurred but which cannot be ascertained accurately are reserve accounts; those that are profits, set aside for some purpose, other than to provide for losses that have already occurred, are reserve funds.

The first represents a provision for estimated losses that have occurred through operation and is intended to be closed as soon as the actual amount of the expenditure is ascertained. The other represents profits, changed in purpose but not in form.

To summarize: A Reserve Account represents the provision made for a loss that is known to have occurred and that should be provided for by charges to revenue awaiting the final ascertainment of the loss. A Reserve Fund represents profits that have been set aside to provide for some expenditure of the future. It is not a provision for losses of the past.

Excessive losses, greater than the amount of undivided profits and surplus are a reduction of the reserve funds but they have no effect on reserve accounts for reserve accounts already represent similar losses, the effect of which has been provided for.

In the preparation of balance sheets or other reports covering the status of the accounts, a reserve account becomes an offset to its major account, if the major account appears in the books, and is shown in the report as a deduction from it. Reserve funds are invariably an adjunct of surplus account and should appear as such.

As examples; a reserve for bad debts gives effect to a reduction in the value of bills and accounts receivable. In a balance sheet the reserve should be deducted from the total of the bills and accounts receivable. A reserve fund for extensions represents profits retained in the business for a certain purpose. It represents additional proprietorship and in a balance sheet the account should appear classified with the other items of proprietorship.

Reserve Accounts.

Reserve accounts may be provided for almost any purpose. The principal purposes are in connection with the loss through bad debts, depreciation and deterioration of stock.

The advantages derived by providing reserve accounts are that anticipated losses may be provided for, on a number of articles as a group without affecting the individual items of the group or the total thereof, and that the cost of articles may remain on the books until required for use in the adjustment of fire losses or at the time the property is sold.

Before going further in this discussion, we wish to make clear the manner of placing reserves on the books.

As an example, let us refer to the illustration just used relative to the loss incurred by a certain firm through bad debts. From past experience the manager concludes that the probable loss for a particular year will be approximately $500.00. In order to give this effect, the following entry is necessary:

Profit and Loss..	$ 500.00	
Reserve for Bad Debts....................		$ 500.00
To provide for possible loss through bad debts.		

In a short time it is decided that a certain account is worthless and should be eliminated from the ledger; the entry

Reserve for Bad Debts..............................	$ 100.00	
John Doe		$ 100.00
To close the latter account.		

is then made, closing the John Doe account and reducing the reserve by a corresponding amount. Should the reserve account become exhausted through losses which were not anticipated and provided for, the excess of losses should be closed into profit and loss, and not charged to the reserve account.

RESERVE FOR BAD DEBTS.

In estimating the amount that should be provided to cover losses through bad debts, it is customary to build up the reserve so that it is equal to approximately 2% of the accounts outstanding, as displayed by the books. This plan is undesirable for, if a considerable number of accounts are closed during any one year, it may exhaust the reserve account, with the result that that year will have to provide for its entire rebuilding; whereas, if but few accounts are closed during the period, only a small additional amount will be required to bring the reserve account back to its required amount. In practice, it virtually amounts to charging the losses as they are determined directly to profit and loss and then adjusting the reserve account, at the end of each period, proportionate to the amount of accounts outstanding at that time. Where this plan is used, often a loss is not anticipated on the bills receivable account. Losses undoubtedly result through the non-payment of notes and such losses should be provided for.

Frequently the accounts are not analyzed to determine the sufficiency of the reserve. It should provide, not only for those debts that are known to be bad, but also for possible losses on those supposed to be good.

A more desirable plan seems to be to set aside at desirable intervals an amount equal to, say, one-half of one per cent, or less, of the sales that have occurred during the period just completed. This plan has the decided advantage of placing the loss where it belongs—as a charge against the sales—and of spreading the loss proportionately over each period and upon every article sold. The loss actually occurs at the time of the sale and should be entered against that period. Under this method, this is done and, also, if a note should ultimately be taken on an account its probable loss would already have been cared for and would require no additional attention.

If at some future date, it is found that the rate used is incorrect the reserve account can be adjusted through undivided profits or surplus and the rate corrected for future use.

Where losses are written off during a particular period, which is already charged with a reasonable amount as a reserve for bad debts, and where the losses relate to past periods in which a sufficient reserve was not provided, the amount of the loss which relates to past periods should be closed into surplus as an adjustment of the profit and loss account of the periods in which the losses occurred.

Reserve for Cash Discount.

Cash discounts we believe, relate to the period in which they are granted or taken, hence no provision need be made in one year to protect it against the succeeding year.

If a discount is allowed at any time, the period following has the use of the money and should stand the discount.

An exception to this rule is found in some lines of business, notably flour, where the cash discount allowed is but the cancellation of an overcharge in the sale price, or perhaps a trade discount. In certain lines it is customary to add a sufficient amount to the reasonable value of the goods for sale purposes to represent the discount that is going to be allowed for prompt payment. The amount is usually large enough to be attractive to the purchaser of the goods so that he will pay promptly if it is possible to do so or, if his financial condition is such that he cannot take the discount, so that the company will know the state of his affairs. There is no question of interest on capital involved here on the part of the seller of the goods. His desire is to cut down the loss on bad debts and the collection expense. He loses nothing by the plan for the reason that the party who expects to pay cash considers only the net cash price. The other fellow, whose capital is so limited that he cannot take a large discount, buys elsewhere and some other firm carries all of the risks so that it cannot meet the first dealer's net cash price.

Reserve for Depreciation.

In connection with either the plan of writing off a portion of the original purchase price of an article or that of writing off a certain percentage of its book value, it is desirable to set aside, in a reserve account, the amount that has been determined upon as the proper depreciation, so that the property account will continue to show the actual cost of the articles represented therein. In the former case, it is particularly desirable that the original purchase price should remain on the books for use when computing the reserve, although in the latter case, the book value can be ascertained easily by deducting the amount of the reserve account from that of the property account.

The reserve account should be charged with all amounts expended for the purpose for which it was created. It should not be charged with any items which were not anticipated and provided for therein. Repairs caused by accident, assuredly should not be included in the account. They should be charged direct to an expense account. Replacements, also, are not proper charges to the account for the reason that they represent entirely new articles which should be charged to the property account. The cost of articles which they replace should be removed from the property account, and the reserve account should be reduced by the amount of depreciation which it contains, that relates to the particular asset removed. Should the amount in the reserve be insufficient to cover the depreciation that has now been ascertained, the balance should be written off against undivided profits or surplus.

It will be noticed that, as we have outlined a reserve for depreciation, it is intended to cover a certain particular class of anticipated losses. Undoubtedly it would be easier to consider the reserve as a provision for whatever may occur, irrespective of the amount that has been provided for certain contingencies, but, so long as the reserve is but an estimate and also as it includes various estimates on particular objects and covering particular losses, it is better, if possible to do so, to adjust each loss when ascertained against the provision that has been made for it. As an example, let us take the case of a machine costing $1,000.00 which is being depreciated at the rate of 10 per cent per year on reducing balances. In five years, the book value of this particular machine will be $590.50. Let us presume that it becomes necessary to dispose of it and to replace it with a new and better article and that the amount obtained for it is but $300.00. To adjust the accounts, we should reduce the property account by the amount of the purchase price, $1,000.00. We would then, under one plan—the incorrect one—charge the reserve account with the loss of $700.00 or, under the other plan, with the amount it contains that represents the anticipated depreciation on that particular machine, viz., $409.50. The balance of $290.50 undoubtedly represents a loss that has not been provided for and this loss, now that it has been ascertained, should be charged to undivided profits or surplus as an amount affecting prior years. Under the incorrect method, the reserve account would be charged with a loss which it was not intended to cover and, owing to the unanticipated reduction of the reserve account, there would not be sufficient provision for the anticipated loss on other articles in the property account. The loss that has been provided for, in connection with any particular article, can be easily determined, its cost and the rate of depreciation being known, so there is no excuse for not correctly stating the loss in the books after it has been ascertained.

During the first few years of an article's use, the amount expended to renew worn parts will be comparatively small but the wear that has occurred during this period is proportionately liable for the ultimate expenditure and each year should be charged with its portion. An estimate of the probable wear should be made and should be charged against each year's operations and credited either to the reserve for depreciation account or, if desired, to an account headed Reserve for Renewals. If the latter account is used, expenditures for renewals should be charged to it as they are made.

The advantage of separating the items under the headings reserve for renewals and reserve for depreciation is that the different elements of depreciation are separated and neither of the reserves can become exhausted at the expense of the other without the fact being known.

Losses on small tools, as ascertained, are usually charged direct against operations, during the period in which the loss occurs, therefore, no reserve need be provided to cover this class of loss.

Reserve for Deterioration of Stock.

The plan of inventorying old or unsalable stock at some arbitrary figure is very unsatisfactory, for, no matter how conservative the appraiser may be, the amount of the appraisal from year to year will assuredly vary and will affect the amount of profit from year to year correspondingly. Possibly in one year, the goods may be considered worthless and be omitted from the inventory and in the next year, due possibly to a lack of knowledge on the part of the party making the inventory, they may appear at full value or nearly so, with the result that the ratio of profit to turnover will be disturbed, proportionate to the amount involved. The better plan seems to be, as outlined in Chapter VIII, to inventory the goods at cost as long as they are included in the regular stock and to set up a reserve to cover their decrease in value by charging profit and loss and crediting Reserve for Deterioration of Stock. The reserve account must be adjusted from year to year to correspond with the changes in the amount of the possible loss anticipated. Should any of the goods be sold at a reduced price, the inventory account or some special account, other than the sales account should receive credit for the cost price and the difference between that and the realized price should be charged to the reserve.

Reserve for Damages to Leased Property.

In leases, there is often a provision requiring that the property be replaced in its original condition and some provision must be made during the life of the lease to provide for this expense.

An amount should be set aside as a charge against operation during each year of the life of the lease if the damages may be presumed to accrue during the entire period, or during the last few years of the lease if the nature of the damage is such that this procedure appears proper. If the accounts are to be adjusted after a portion of the lease has expired, and if no provision was made during the early years of the lease and the damage relates to that period, surplus should be charged with the amount apportionable to the past periods, as an adjustment of prior years' profits.

RESERVE FUNDS.

In connection with reserves, the use of the word Fund is often criticised on the assumption that a fund must be cash and an asset, whereas its use as a credit represents an assumed liability. The same argument might equally well be applied to the word Reserves for a reserve must be something substantial and in possession, in which case it must be an asset, but we doubt if this objection has ever been raised. It could also be used in connection with the word Capital for capital is the net amount of assets invested in a business. The distinction that is drawn between the use of these words is not sufficient to warrant that the entire discussion should revolve around the one word to the exclusion of the others.

Immediately that it is desired to establish a trust in connection with some particular undertaking, as for the purpose of extensions, and that trust is established, it becomes necessary to give effect thereto. This can be accomplished only by giving the trust credit for an amount such as is believed proper and, provided that the amount of the trust is to be held in reserve, we must call it a Reserve, or Reserved Profits if we prefer. We may call it a Reserve Fund.

The fact that the amount designated is a credit balance is no objection to the use of the word Fund, neither does the use of the word Fund in connection with a credit account restrict its use to that side only; it applies equally well to things in possession and may appear as an asset.

A reserve fund may be created for almost any purpose for which profits that would have been distributed as dividends could be used. Its principal use is to reserve profits in the business with which to build up and strengthen it, or to pay off existing obligations or equalize dividends. If the reserve is to be of a permanent nature—say to provide permanent working capital—it should be specifically designated so that it will not be looked upon as available for dividends.

The term reserve is used also in connection with profits arising from unusual sources as from the sale of stock at a premium or the sale of real estate. In general, such profits are set aside as reserves for exceptional losses. There is, of course, no objection to using such a reserve, or for that matter, any reserve fund that is not affected by existing obligations, for any other purpose that may appear desirable.

The entry required to place a reserve fund on the books consists of a charge to Undivided Profits or Surplus and a credit to some account designating the purpose of the fund. Examples are, Reserve Fund for Extensions, or Reserve Fund for Contingencies.

The use of the word Fund is often omitted, even in connection with items which undoubtedly arise from profits. But where the importance of discriminating between the two classes of items is so great, it appears that considerable stress should be placed upon the character of each reserve and this can be accomplished best by specifically indicating their nature in each case either by the inclusion of the word Fund or by stating that the account represents profits. Examples: Profits Reserved for Extensions.

Reserve for Fire or Similar Losses.

A great number of firms, owing to the scope of their business and the fact that their property is widely scattered, are able to assume the risk of loss through fire, except, possibly in the case of their factory or some of their most important branches and, instead of paying out considerable sums annually for insurance, they insure the property themselves by charging profit and loss, possibly through the accounts of each branch, with a sum such as would have been paid out in premiums had the property been insured by outsiders, and by crediting this amount to an account headed Reserve Fund for Fire Losses. As losses occur they are written off against the reserve. Should the reserve prove insufficient the additional losses must be cared for out of profits. Under no condition should they be allowed to remain on the books in the hope that future reserves will be sufficient to wipe out the old loss and also provide for additional losses as they occur.

If the condition of the business is such that it could possibly be crippled by a loss, it is undoubtedly better to place the insurance outside of the business; if, however, it is decided to carry the insurance in the business, a sum should be invested outside of the business, in some form that will allow the immediate realization of cash equal to the amount of the reserve. If a loss occurs, the securities can be converted into cash, thereby allowing the immediate replacement of the property. Any loss that occurs, after the amount thereof has been ascertained, should be charged against the reserve.

If, after operating a considerable number of years, it is found that the reserve is out of proportion with the amount of loss that reasonably could be expected, the reserve may be written down slightly and a profit taken on account of the operation of the account. This profit, however, would be a credit direct to undivided profits or surplus and should not be allowed to disturb the statements showing the current operation of the business; neither should the annual charge for insurance be interfered with so long as it represents, approximately, the amount that would have to be paid out as insurance premiums.

We will illustrate this account by giving entries covering its operation. We will presume that a concern is carrying its own insurance on three ships and that the reserve fund for fire losses amounts to $100,000 and that the annual charge is $5,000 per vessel.

To enter the current year's expense we will make the entry:

Expense, Gleaner	$ 5,000	
Expense, Harvester	5,000	
Expense, Reaper	5,000	
Insurance Reserve Fund		$ 15,000
To provide an insurance reserve.		

If the Gleaner, which cost $100,000, is lost during the year its cost will be charged against the reserve by the entry:

Insurance Reserve Fund	$ 100,000	
Gleaner		$ 100,000
Insurance reserve covers loss of Gleaner.		

Had the Gleaner cost $125,000, the reserve fund being but $115,000, the entry would have been:

Insurance Reserve Fund	$ 115,000	
Profit and Loss	10,000	
Gleaner		$ 125,000
To record loss of Gleaner.		

If, as should have been done, the insurance reserve was invested outside of the business, the entry would be:

Insurance Reserve Fund Investment	$ 15,000	
Cash		$ 15,000

If the entire reserve fund had been invested and the investment was called in to buy a new vessel the entry would be:

Cash	$ 115,000	
Insurance Reserve Fund Investment		$ 115,000

A reserve for fire or similar losses is not a provision for known losses; it is a provision for possible contingencies of the future and therefore is a reserve fund and not a reserve account.

Secret Reserves.

A Secret or Hidden Reserve represents an accumulation of profits which is not given effect on the books.

The excess of actual profits over those given effect constitutes the amount of the secret reserve.

The method we have outlined in connection with the valuation of inventories, particularly those relating to investments that have a readily determinable realization value, creates to a certain extent a secret reserve. This, however, is but a conservative estimate of profit, whereas in general, a secret reserve may be presumed to be an arbitrary reduction of actually realized profits.

The purpose of a secret reserve usually is to retain in the business amounts, which, if they appeared on the books, would be demanded as dividends or, in the case of public service corporations, to suppress the profits so that they will appear but normal in proportion to the capital invested and the public will not feel that the charges for services are in excess of what they should be or that the profits are the result of a monopoly rather than of service. In the case of many corporations they are created also to prevent taxation.

The usual mode of procedure in building up a secret reserve is to make exceptionally large charges against revenue to cover anticipated losses, such as depreciation, bad debts, etc.; to charge it with expenses, as they occur, which have already been provided for in the reserve accounts, or with purchases which should be capitalized; to write off goodwill or organization expenses, or to undervalue inventories. It might be accomplished also by giving effect to liabilities that do not exist but we believe this practice is very unusual. The only example of this procedure we have been able to find is the case of a prominent holding company which took dividends of subsidary companies onto its books as loans from the subsidiary companies.

The advantages of a secret reserve are that, in the case of a business where profits are fluctuating, a normal rate of increase may be shown; exceptional losses may be endured without an apparent effect on the stability of the concern; the business may be strengthened and, where additional capital is required, but where the tendency of the stockholders is to demand all surplus earnings as dividends, it may be secured.

Its disadvantages are that the accounts and reports do not show the proper status of the business; an estimate of valuation based on reports must be inaccurate and may be used fraudulently by those in possession of a knowledge of the true state of affairs; losses due to speculation or mismanagement may be concealed and assets that have been fraudulently disposed of may be entirely erased from the books; when the amount of the reserve is given effect for any purpose by placing it on the books, it may be exaggerated with a consequent inflation of proprietorship and of profits or, where it is created or adjusted by tampering with inventories, the true proportion of profits cannot be ascertained.

The propriety of creating a secret reserve seems to us to be well answered in the preceding paragraphs for, surely, no practice which has so few good points should be looked upon with favor where there are so many questionable features. Still, in justice to the practice, we must admit that the policy of the largest and most conservative institutions in the country favors it and, so long as the object of the reserve is good, and the good intentions are conscientiously followed, and it appears to be in the interest of the business, there is a possibility that the end justifies the means.

QUESTIONS

1. Do you consider there is any distinction between Reserve Funds and Reserve Accounts? What are your reasons?

2. What is your understanding of the term Reserve for Doubtful Debts, and how would you establish it upon the ledger?

3. If accounts which were placed on the books during the past year are discovered to be bad and it is desired to write them off, to what account should they be charged presuming that there is no reserve for bad debts?

4. A concern owning a fleet of twenty vessels decides to carry its own insurance. How will this be dealt with on its books and at the close of each fiscal year?

5. An old established and highly prosperous business is transferred in 1900 to a company which pays the proprietors $300,000 for all fixed assets and $50,000 for goodwill. In 1909 the company has accumulated $125,000 of undivided profits and the directors decide to charge off the entire item of goodwill. What effect will this have upon the accounts?

6. Corporation "X" makes a practice of charging to expense and carrying to depreciation reserve account every half year a certain percentage of the book value of its plant and machinery. What, in your opinion, is the correct method of dealing in this case with repairs and renewals; i. e., should they be charged to Profit and Loss, or can they properly be charged to Depreciation Reserve Account? Give reasons for your answer.

7. What do you consider the best way of entering on the books of a manufacturing company the amount written off to profit and loss for depreciation of (a) buildings, (b) large or fixed tools, (c) small or expense tools?

8. Name the advantages or disadvantages of the following two methods of bringing on to the books of a company the depreciation of its machinery:

(a) Crediting machinery account with ten per cent of the balance of the account each year and charging profit and loss.

(b) Crediting a reserve for machinery depreciation with ten per cent of the balance of the machinery account each year and charging profit and loss.

9. In reviewing the schedules of open customers' accounts receivable for the purpose of setting up a reserve against irrecoverable amounts, how would you proceed?

10. A firm of brickmakers, under the terms of their 20 years lease, agree that at the close of the term they will level the ground, cover it with soil and generally restore it to previous conditions for agricultural purposes.

(a) How would you deal with this liability in the accounts of the firm?

(b) Assume 5 years of the term have expired and none of the work has been done and no provision made. How would you adjust matters at this date?

11. Give your views as to the better way of carrying property accounts in a manufacturing business, whether at cost or value. Give also the manner of treating depreciation under each method.

12. You are employed to audit the accounts of the Utility Mills and find that the machinery after having been regularly depreciated for a number of years has been valued by an independent appraiser at a sum considerably in excess of the book value, and the company has appreciated the machinery item in the balance sheet by such increased value. How would you suggest that the corresponding credit should be dealt with? Would such appreciation be available for distribution in the shape of a dividend?

13. On an independent appraisal being made of the machinery and tools of an engineering business, of which you are auditor, it is found that the appraised valuation is in excess of the book valuation. It is desired to set up the appraised valuation on the books. How should this be done?

NOTE.—In this question the term "book valuation" is to be understood as meaning the balance of the Machinery and Tools Account, less the balance to the credit of Depreciation Reserve Account—a provision for depreciation having been made annually and credited to the latter.

14. In three successive fiscal years a manufacturing corporation values its supplies, etc., on hand at cost, with deduction for deterioration as follows: At end of first year 5 per cent; at end of second year 10 per cent; at end of third year 15 per cent. With the inventory taken on this basis the profit for the second year did not equal the dividends declared and surplus was intrenched upon; in the third year the dividend paid was so much in excess of profits that the surplus was entirely exhausted and a debit balance created in the profit and loss account.

In auditing the books, how would you treat the above condition in your report?

15. What do you understand by the term "secret" or "hidden" reserves? Mention four bona fide uses of a secret reserve and state your opinion as to the propriety or otherwise of the creation of such reserves, giving reasons.

16. Is there any reason why the goodwill carried as an asset on the books of a growing and prosperous manufacturing concern should be depreciated, amortized or otherwise written off, and if so what would be the effect of such depreciation, amortization or writing off?

17. Name two ways in which a secret reserve may be created and suggest a purpose for such creation.

18. Express your opinion as to the soundness or otherwise of secret reserves from the viewpoint of a shareholder, a director, and the auditor of a company respectively?

19. A corporation invests its capital in a number of subsidiary companies, each subsidiary company having a distinct organization, but its dividends being payable to the parent company. The parent company decides to carry insurance for all of the subsidiary companies and each pays in to the parent company monthly a specific sum. Fire losses as incurred are payable by the parent company. How are such entries treated and what should the books show, also what entries are necessary at the close of fiscal years?

20. On an independent appraisal being made of the physical assets of a manufacturing corporation, the appraisal shows appreciations and depreciations, as compared with book values, as follows:

Real estate, appreciation	$20,000.00
Buildings, depreciation	3,000.00
Machinery, depreciation	2,500.00
Tools, depreciation	3,000.00

The directors desire to bring the book values into agreement with the appraisal. Draft entries to show how, in your opinion, this should be done.

21. What, in your opinion, would be the proper record for a business corporation to make of an appropriation from its surplus profits for the amount of a permanent investment in property?

22. It is agreed by the directors of a manufacturing company that certain depreciation should be allowed, but that it is desirable to let the plant account stand on the books at cost value. How would you as auditor manage to meet the situation?

23. By what accounting method may regular provision be made for the cost of replacements or renewals from time to time that are not in the nature of ordinary repairs and that tend to maintain or to restore the value and efficiency of the plant?

24. A public service corporation that regularly sets aside from its profits a sufficient amount to provide for depreciation, removes part of its old plant and replaces it with a larger and more costly one. The old plant is sold for scrap. How should the cost of the new plant and the proceeds from the sale of the old plant be treated in the accounts of the company? Give reasons.

25. Should provision be made out of revenue to provide for discount on accounts receivable outstanding after the date of closing? Give reasons for your answer.

26. A manufacturing company ships its products in packages costing 7½ cents each. They are charged to customer at 10 cents each but subject to credit when returned in good order at the same price as charged. At the close of the year, the package account shows an apparent gain representing the difference between the cost of packages and the amount of contingent sales. What disposition should be made of the ledger gain at the close of year?

CHAPTER XVIII.

Reserve Investments.

In connection with a great many lines of business, it is desirable that quickly convertible assets will be available for some particular purpose at some future date. This might be in connection with the payment of a debt through which considerable loss might result if cash were not available at the time it matures; to provide against a fire loss; to complete existing contracts; to extend operations; or, as is sometimes the case, to provide for the redemption of an issue of preferred stock which is, possibly, to be redeemed at a sum in excess of par and which, from the standpoint of the common stockholders, it is very desirable to liquidate; or, as in the case of permanent undertakings, to pay a portion of a debt that is not to be refunded at maturity.

The only way that a firm can make certain that funds will be available at the time they wish them, is to set them aside from time to time as they can be spared and invest them in securities that are safe and readily convertable into cash, or to deposit them in some reliable bank.

Where such an accumulation is made by setting aside certain amounts at regular intervals, it is usually considered as a Sinking Fund Investment, while, if the accumulation is made at irregular intervals and is of varying amounts it is usually designated as a Reserve Fund Investment. The use of the terms has not, as yet, been sufficiently restricted in accounting terminology to warrant the assumption that the above assertion will accurately apply in all cases where they are used, but we believe it properly restricts their use.

The investment can be operated entirely separate from any reserves of surplus if conditions are such that there is no necessity of creating a reserve of this sort to replenish the working capital, although, in general, the reserve fund is considered quite necessary. The investment may be operated also in connection with a reserve account to provide for the purchase of assets to replace those that have been discarded by the business, but this use seems almost unwarranted, except in rare cases, for it very seldom happens that the assets require replacing with such rapidity that they cannot be cared for without drawing upon an investment outside of the business.

The most important use of reserve investments is to set aside funds which have been provided out of undivided profits or surplus and which already appear on the books to the credit of some reserve fund so that they will be available for some particular use when they are required.

The reserve fund is usually created out of surplus for some specific purpose. A sort of trust obligation is created whereby the business has obligated itself to retain certain profits for some particular use. These profits, although they are represented on the books by a credit account are in fact assets, which have accumulated through the operation of the business. They may not be specific assets, in fact, until a specific investment is made, they are in general but an undivided portion of the assets. After an investment is made the assets invested become identified with the trust.

The investment of the fund in no way affects the liability of the business to the trust, hence, the books will continue to show the credit item but, after an investment is made, they will show in addition that, instead of having the reserve fund absorbed in the business, it has been specifically provided for and removed from the business. This, then, gives us two accounts, each relating to the same trust, one showing the existing liability or assumed obligation and the other, the provision that has been made for it. Each of these accounts is operated entirely separate from the other and any fluctuation or loss that may affect one, will not necessarily affect the other, viz., excessive losses may reduce or entirely absorb either of the accounts but the other may still remain intact and may ultimately accomplish the purpose of the trust.

The reason for creating a reserve fund is to accumulate the assets that represent the profits of various periods so that they will be available to care for something that the business has pledged itself to do in the future. If the assets are removed from the business and are placed so that they will not be subject to the risks of the business the ultimate accomplishment of the act that the concern has pledged itself to perform is made much more certain.

If the purpose of the reserve fund is of very great importance we might go a step further, as is often done in connection with the redemption of bonds, and place the investment entirely out of the control of the organization and in the hands of a trustee, with instructions to use the funds that accrue in following the terms of the trust. This is the most certain method of accomplishing something in the future where the availability of quick assets at the time they are required is of great importance.

In connection with the investment of reserve funds, it appears that, as the majority of industrial concerns are compelled to borrow money at high rates of interest with which to conduct operations, it is inadvisable to create investments, which must necessarily bear a very low rate of interest and which absorb the working capital, just to make certain the availability of current assets should they ultimately be required, while the funds invested can be used to such a good advantage in the operation of the business, unless, of course, the certainty of availability of such funds is very essential to the welfare of the business. Such a case arises in connection with an insurance fund which would be absolutely useless if it were invested in the business and liable to destruction with the rest of the assets. Investments of reserves are provided for, under contract, in connection with various bond issues but where the trustees are authorized to purchase the bonds of the company with its trust funds, thereby securing the same rate of interest, its ill effects are greatly reduced.

In the C. P. A. examinations, it often is required to determine which of certain accounts pertaining to reserves and investments, represent assets and which represent liabilities. Such questions should be answered very fully, outlining the possibility, whenever it exists, of the account being either debit or credit. As an example, take the term "Investment Fund." It might represent either certain profits which have been retained for investment or, possibly, certain quick assets held in the form of investments. In the former case it would appear as a credit item and in the latter as a debit item. As an additional example, let us take the term "Sinking Fund." Usually the term represents a sinking fund investment, but it is often used to represent the sinking fund reserve. It is very seldom, if ever, used as a credit item without having a correlative debit. Other terms that occur are "Contingent Fund," which represents a provision for contingencies, and "Redemption Fund," which provides for the redemption of some debt. Either of these may be debits or credits or both, depending on whether they represent assets or profits.

To determine, arithmetically, the amount of the installments required to accumulate a particular sum during a given time, ascertain the compound interest on $1.00 for the period the first installment will run, then from the figures you have used, ascertain the accumulation of a like sum deposited or invested at the end of each succeeding period. The total of these will represent the value of an annuity of $1.00 for the period of the sinking fund. Dividing this result into the amount which it is desired to accumulate will give the amount of the required installments.

To illustrate, the value of $1.00 at 4 per cent compound interest, has been ascertained as follows:

0 years	$1.00	
1 year	1.04	
2 years	1.0816	
3 years	1.124864	
4 years	1.16985856	$5.41632256

hence, $1.00 deposited at the end of each year for five years at 4 per cent interest, compounded annually, will be the total of these or $5.41632256. This sum divided into any amount it is desired to accumulate under these conditions will give the amount of the annual contribution.

At the time the contribution is made, cash is removed from the usual depository and invested or placed in the hands of a trustee for investment. The entry on the books of the company will be:

Sinking Fund Investment or Trustee	X	
Cash		X
Cash placed in the hands of Trustee for investment to provide for...........		

Then to replenish the working capital out of current earnings, if it is desired to do so, will require the entry:

Undivided Profits	X	
Reserve Fund for...........		X
The above amount is set aside as a reserve to replenish Working Capital		

We now have a Sinking Fund Investment and a Reserve Fund both relating to the same obligation, but each created in a different way and each operated independently of the other.

Let us presume that at the end of the first fiscal year the trustee receives the earnings on the investment. The entry is:

Sinking Fund Investment or Trustee	X	
Sinking Fund Income		X
Earnings as above reported this day.		

or, if the investment were not in the hands of the trustee the entry would be

Cash	X	
Sinking Fund Income		X
Cash received this day as income on Sinking Fund		

and when the income is invested:

Sinking Fund Investment	X	
Cash		X
The income received is re-invested.		

We now have an account representing the income derived from the investment and must determine what is to be done with it. It undoubtedly represents a profit on an investment and therefore is a credit to surplus or some account that is subsidiary to it. It is proper therefore to close it into the reserve fund for this account is subsidiary to the surplus account; in fact the reserve fund seems to be the place for it as the sinking fund investment not only requires the annual installment but also the accretions if it is to amount to the proper sum when required and, if the reserve fund is to be the complement of the sinking fund investment, it should likewise receive the accretions. It is desirable, however, that the transfer from one account to the other be made through the Profit and Loss Account, Net Profit Section, so that the latter account will show the actual income from all sources for the period. After this has been done and the net profit section has been closed into the surplus account, the amount of the income on the sinking fund investment can be carried to the reserve fund. Unanticipated profits arising through the manipulation of investments may be retained in a separate account to offset any unanticipated losses that might occur.

It should be thoroughly understood that there is no absolute necessity that the Sinking Fund Reserve and the

Sinking Fund Investment agree. They are independent of each other and, although it is desirable that they should agree, it is not essential.

Let us presume that, instead of a Reserve Fund, we had a Reserve Account representing a Reserve for Depreciation and that this amount was to be invested outside the business to provide for the purchase of new machinery. Our entries would follow those of the preceding example very closely as will be noticed by the following:

Profit and Loss (Manufacturing)	X	
Reserve for Depreciation		X
The annual reserve for depreciation is set aside		
Replacement Fund Investment	X	
Cash		X
The annual reserve for depreciation is invested to make certain the availability of Cash when required		

and later:

Cash	X	
Replacement Fund Income		X
Income received this day		

but now we have an account representing income from an investment which is an element of surplus—a capital earning, while the reserve account represents a charge against Profit and Loss—a provision for a loss which is not in any sense a subdivision of surplus; therefore, assuredly the Replacement Fund Income cannot be combined with the Reserve for Depreciation. One is a portion of earnings and the other is an anticipated loss or expense, and furthermore, the annual charge to profit and loss represents the value consumed during the year in the way of depreciation and it should not be reduced in any way by the simple investment of certain funds which represent a capital investment and which are, in fact, not connected with depreciation or operations at all. Therefore, in this case, we will be unable to close the Replacement Fund Income into the Reserve for Depreciation. It should be closed into the Profit and Loss Account, Net Profit Section, the same as any other capital earning.

From the above, it appears that a sinking fund, in the usual sense of the term, can not be operated properly in connection with a reserve account, for a sinking fund infers the use of not only the installments, but also the accretions in the accomplishment of its purpose, whereas the reserve account can not and should not be affected by the accretions. Of course, if it were desired to build up a certain sum, say to replace certain machinery, this could be accomplished under the sinking fund method, but the amount of the sinking fund installments would not affect the amount of the depreciation. The latter would be slightly greater, as it would have to provide for the same amount during the same time without the benefit of the earnings on the investment.

It should be remembered, in connection with the above, that the Reserve for Depreciation should be charged only with the decrease in the value of the article displaced after the amount thereof has been ascertained. The amount in the replacement fund investment, however, can be used for the purchase of new assets at any time, as no necessity exists whereby the investment must be expended in a particular manner or for particular assets.

Let us take up the subject of reserve funds again and presume that the bank in which we had deposited a portion of the investment fails. We should reduce the investment by the amount of the loss and charge it to undivided profits or surplus. The reserve fund could remain as it was but, instead of being specifically invested, a portion of it would now be represented by assets in the business or, if preferred, the two accounts could be adjusted to correspond by throwing the loss into the reserve fund; or, let us presume on the other hand that, during a number of years, business losses have resulted which not only require all of the undivided profits and surplus to cover them but now require a portion of the reserve fund. We must reduce the reserve fund to cover the deficit for, surely, it would be incorrect to show on one side of our balance sheet an account headed impairment, while, on the other side appears an account representing undivided, though specially allocated, profits. Our reduction of the reserve fund in this case has not affected the investment and conditions might be such that it would be unnecessary to draw upon the investment at all. Dividends would, of course, cease during the period of the impairment.

Let us presume, further, that the investment includes certain bonds which have been purchased either above or below par. It is self evident that the premium or discount would have to be adjusted by a process of amortization each year until the bonds matured and that this adjustment would have a direct effect on the income derived from the investment. It, however, is not necessary to give effect to a mere fluctuation in market quotations covering bonds held for permanent investment.

To illustrate still further, we will presume that we have the following accounts on our books:

BALANCE SHEET OF THE "X" CORPORATION

Assets		Liabilities	
Cash	X	Sundry Liabilities	X
Sundry Assets	X	Dividends Payable	X
Sinking Fund		Bonds Payable	X
Investment	X	Capital	X
		Reserve Fund	X
		Undivided Profit	X
	XXX		XXX

We will presume also that we have accumulated a sufficient amount to pay off the existing obligation. We now convert the Sinking Fund Investment into Cash and with the cash pay off the bonds. The entries are:

Cash	$ 000.00	
Sinking Fund Investment		$ 000.00
The sinking fund investment is converted into cash.		
Bonds Payable	$ 000.00	
Cash		$ 000.00
The bonds are paid.		

or possibly a portion of the investment includes our own bonds which have been purchased by the trustee, in which case we would deduct their value from both the Investment and the Bonds Payable Account by the entry:

Bonds Payable	$000.00	
Sinking Fund Investment or Trustee		$000.00
Bonds cancelled this day		

After closing the account representing the fund and the investment, we have the following:

BALANCE SHEET OF THE "X" CORPORATION

Assets		Liabilities	
Cash	X	Sundry Liabilities	X
Sundry Assets	X	Dividends Payable	X
		Capital	X
		Reserve Fund	X
		Undivided Profit	X
	XXX		XXX

The necessity for the trust no longer exists, hence the Reserve Fund may be dispensed with and if desired closed into its major account, Undivided Profit; but, as undoubtedly the necessity of having additional funds has not decreased since the original bond issue was sold, such a procedure would be imprudent as it might result in the distribution as dividends of funds which are required in the business.

Another plan is to set off the amount of the Reserve Fund against intangible assets such as patents, mines, or in some cases goodwill, as where it represents an arbitrary loading incidental to a purchase of property with stocks of an uncertain value.

The preferable plan seems to be to distribute the amount in the reserve fund as a stock dividend. This method not only increases the capital stock and retains the working capital, but satisfies the stockholders as well. It virtually amounts to capitalizing the earnings and gives us the following balance sheet:

BALANCE SHEET OF THE "X" CORPORATION

Assets		Liabilities	
Cash	X	Sundry Liabilities	X
Sundry Assets	X	Dividends Payable	X
		Capital (including Reserve Fund)	X
		Undivided Profit	X
	XXX		XXX

Let us presume that, in the case mentioned above, the bonds held by the trustee had been purchased before maturity at an amount either above or below the book value as determined by the books of the issuing company and that they were to be cancelled. The trustee is entitled to credit for the bonds turned over to the issuing company at the cost to him or, if he has been holding them and has been amortizing the premium or the discount that was in effect at the time he purchased them, he is entitled to credit for their book value as determined by his books at the time of the transfer. If the book value as determined by his books is different from the book value as determined by the books of the issuing company, the amount of the difference must be adjusted on the books of the issuing company as a profit or loss on the redemption of bonds before maturity.

As an example let us presume that bonds were issued at 95 and that the discount had been amortized until the accounts in the books of the issuing company appeared as follows:

Dr.	Discount on Bonds Issued	$ 3,000
Cr.	Bonds Payable	100,000

and that half of them had been purchased by a trustee at 96, but that the discount on his books had been amortized until his accounts showed,

Dr.	Bonds Receivable	$ 50,000
Cr.	Discount on Bonds Purchased	$ 1,750

He is entitled to a credit of $48,250 when he delivers the bonds to his principal, the issuing company. The company must adjust the difference between this amount and their book value by the entry:

Bonds Payable	$ 50,000	
Discount on Bonds		$ 1,500
Sinking Fund Trustee		48,250
Profit on the Redemption of Bonds before Maturity		250

Reserve Funds for Exhaustion.

Another problem that presents itself in connection with reserves and reserve investments is in connection with the sinking fund provision of certain bond issues which are secured by wasting assets.

This problem differs from the others to the extent that although the reserve fund represents profits set aside as in the other cases, the provisions of the contract covering the bond issue, instead of providing for a specific amount of accumulation, usually provide that the amount of the reserve fund is to be based on the amount of the assets removed from the property. In the case of a mining property, it is usually a stated amount per ton of ore removed. In the case of timber lands the amount is usually based on the number of thousand feet of logs removed. The object of this provision is to retain in the business an amount either of property or of investments to provide a reasonable security for the bond issue.

The fact that the amount of the reserve fund is based on tonnage or stumpage is not a sufficient excuse for treating the charge as a debit to operations. In the case of a wasting asset, it is unnecessary to charge operations with any amount to represent the exhaustion of the property, therefore the reserve should be created out of undivided profits or surplus unless the contract covering the bond issue specifically provides otherwise.

Many concerns are operating on mining properties or timber lands which are not operating wasting assets. The purpose of the organization must be considered when deciding whether it is operating a wasting asset or not. If its articles of incorporation provide that it is to operate other properties, it is not operating a wasting asset, but if the articles provide for the operation of but one property it is operating a wasting asset and need make no provision for exhaustion or depletion.

Where a concern is operating on mining properties, timber or similar assets but is not operating the property as a wasting asset, provision must be made for exhaustion. The conditions here, however, are different than they are in the case of a manufacturing organization.

In a manufacturing organization, a lack of working capital is liable to be permanent unless provision can be made for its upbuilding by setting aside profits for that purpose, as in the case of the examples illustrated by the balance sheets shown on pages 235 and 236 but, in the case of the concern operating properties like a mine, the lack of working capital is usually of but short duration. In the case of the manufacturing concern, as rapidly as cash comes in, it must be reinvested, while in the case of the mining company it will probably remain idle until some other large investment is made. In the case of the manufacturing concern, if the capital is to be increased permanently by the retention of profits, an amount must be set aside from profits to build up the working capital. An amount also must be set aside from operations or revenue to provide for the maintenance of the assets, but, in the case of the mining company, it usually is not desired to increase the capital of the company, therefore but one amount under ordinary conditions need be set aside and this amount is usually a reserve account, viz., an amount set aside out of operations to provide for a known loss.

Under many of the trust deeds covering a bond issue the amount required to be set aside is greatly in excess of the proper charge against operations for the exhaustion of the property. The effect of such a provision is that a portion of it must be created by charges to operations while the balance will be created by charging undivided profits or surplus. The first portion will be a reserve account and the other a reserve fund. The reserve account results in no increase in the proprietorship of the concern—it simply preserves it—while the reserve fund actually does increase the proprietorship. Ultimately, after the payment of the bond issue, the reserve fund may be transferred to surplus and distributed as dividends but the amount of the reserve account must remain in the business.

QUESTIONS

1. Under what circumstances, if any, would it be desirable to specifically invest a reserve fund? What class of securities should it be invested in?

2. Define briefly, the following terms: Sinking Fund, Contingent Fund, Reserve Fund, Redemption Fund, Depreciation Fund, Investment Fund. Which of these represent assets and which liabilities?

3. The balance sheet of "A" Company as at December 31st, 1915, is as follows:

Assets		Liabilities	
Cash	$ 10,000	Accounts Payable	$ 3,000
Accounts Receivable	25,000	Notes Payable	7,000
Plant	50,000	Capital Stock	75,000
	$ 85,000		$ 85,000

A year thereafter, December 31, 1916, after declaring dividends, the balance sheet is:

Assets		Liabilities	
Cash	$ 25,000	Accounts Payable	$ 3,000
Accounts Receivable	20,000	Notes Payable	2,000
Plant	45,000	Reserve for Extensions	10,000
		Capital Stock	75,000
	$ 90,000		$ 90,000

(a) In just what manner has the reserve for extensions been absorbed by the business?

(b) If the amount of the reserve for extensions is invested outside of the business, how will the balance sheet appear?

(c) If the investment is then converted into cash and the cash is used to purchase additions to the plant, how will the balance sheet appear?

4. At the beginning of a certain year a company has a reserve fund amounting to $5,000 invested in bonds, and a balance to the credit of surplus account amounting to $7,500. At the close of the year, it is ascertained that the company's operations have resulted in a loss of $10,000. You are requested to show the effect of this result upon the accounts named.

5. What is a reserve account? How may it be established, and for what purpose? What, if any, contra account should be maintained? Under what circumstances should these accounts be maintained? Why?

6. Under the condition that a general mortgage, or trust indenture, makes provision for regular payments to the trustee of a sinking fund which, with accretions from the investment thereof, is to provide for the redemption of bonds at their maturity, state what accounting should be made in respect to the payments

into such fund of its interest or profit accretions. Indicate what, if any, distinction should be made between the interest and the profits. Give reasons.

7. Distinguish between a sinking fund and a depreciation fund. Show the reason for the creation of each fund, and state how each is placed on the books of a company.

8. How may a reserve and a sinking fund, both relating to the payment of the same debt be simultaneously operated? What purpose is accomplished thereby and how do said accounts respectively appear on the balance sheet?

9. On the first of July, 1905, a company borrowed $100,000.00 at 4 per cent per annum, payable half yearly, payment of loan to be made at the end of ten years, at 105 per cent. It was decided to set aside out of profits such a sum as would, with interest, at 4 per cent per annum, provide for the payment of the premium on the loan at end of the period.

It has been ascertained that the proper semi-annual charge to Undivided Profits is $195.74.

From the information given, write up the books in detail for the first two years and also show the journal entries that would have to be made at the end of the ten years to close out the various accounts.

10. The firm of "A" "B" "C" Co. owns a plant worth $10,000.00 and has been writing off a sum averaging $1,000.00 per year for depreciation. They have decided that it will be to their advantage to take this money and invest it in profit bearing securities as a reserve with which to buy new machinery whenever it becomes necessary.

On January 1st of each year they invest this amount in stocks and bonds. Presuming that the interest and dividends amount to 6 per cent per annum and also that it is payable December 31st, what entry would you make in the books at the end of the first, second and third years?

At the end of the third year, machinery is purchased to the amount of $2,500.00, to replace other machinery costing $2,000, which has a residual value of $1,400.00, and a book value of $1,500 and which is to be paid for from the sale of a portion of the stocks and bonds that comprise the fund. What entries?

What is the status of the Replacement Fund Investment, Replacement Fund Income and Reserve for Depreciation Accounts?

11. Explain the nature and operations of an insurance fund. Is such a fund applicable to all lines of business, and, if not, why?

12. What is a sinking fund? How should the account be treated on the books of a corporation?

13. Define: Reserve Account, Reserve Fund.

14. The American Manufacturing Company on January 1, 1909, placed in service a piece of machinery which would depreciate, according to its chief engineer, at the rate of 15 per cent

per annum. The original cost of this machinery was $84,000.00 and the board of directors agree to set aside annually a sinking fund which, together with the interest thereon, will amount to the original cost at the end of the prospective life of the machinery. This sinking fund is to be deposited with a trust company on December 31st of each year and a proportionate amount at the end of the last partial year of the life of the machinery; interest is to be credited by the trust company at each of these dates at the rate of 4 per cent per annum. Show how the amount of the annual sinking fund payment may be arrived at and prepare a detailed statement for the board of directors, proving that the amount so obtained is correct.

15. A mortgage provides for a sinking fund to be accumulated in the hands of a trustee from profits prior to dividend payments. Prepare skeleton balance sheet to disclose the state of the fund, dividends declared and payable, appropriations of profits for the purpose of the fund and an unappropriated surplus. What effect would losses in excess of such unappropriated surplus have on the sinking fund?

16. An industrial corporation has an issue of bonds falling due in fifteen years, and has accumulated a fund annually from profits with which to pay off the bonds at maturity. The fund is invested in interest-bearing securities. How will the payment of the bonds affect the figures and items in the balance sheet?

17. Describe briefly how you would bring upon the books of a company a sinking fund created for the purpose of finally redeeming its bonded indebtedness. How would you treat the assets of this fund and the investment of same? Finally, how would you show the condition of this fund in the balance sheet of the company?

18. What meaning does the appearance of a sinking fund account in a balance sheet convey to you? Should a sinking fund represent specific investments, or may it be offset by equivalent ledger entries?

19. A few years ago the Ford Motor Co. agreed to make a refund to each purchaser during the succeeding year if a stated number of machines was sold during that year. If you had been asked to determine a method by which the necessary records should be kept in order that the least inconvenience would be experienced at the close of the year when this refund was to be made, it being apparent that the requirement would be met, what orders would you have given? Write a report embodying the same.

20. State three purposes for which a sinking fund may exist and give examples of each.

21. What entries appear where bonds have been redeemed with the cash turned over to the trustees, and where the bonds are cancelled?

22. What are the advantages or disadvantages of retiring a debt by the sinking fund method?

23. To what account should the interest received on sinking fund investments be credited?

24. After the bonds payable and the sinking fund investment accounts have been closed and there remains only the sinking fund reserve (credit), what should be done with the sinking fund reserve?

25. In the case of a perpetual undertaking, is it necessary that the sinking fund be arranged to retire the entire bond issue?

26. An individual buys a fleet of ships. He then forms a corporation to take them over at double the amount paid by him, payable one-half in debenture bonds of the company, and one-half in its capital stock. A sinking fund is to be provided, for the gradual retirement of the debenture bonds. A public accountant is called in at the end of five years to make up the accounts. He insists on creating a reserve for depreciation based on the full consideration paid by the corporation. The directors argue that the reserve for depreciation should be based on the amount of debenture bonds issued, on the theory that the capital stock issued to the vendor was in the nature of a bonus and did not represent any real value. State your views regarding the two propositions.

27. A reserve fund of $250,000 has been set aside out of the profits of a company and invested in government securities at par. How should the fund and investment appear on the balance sheet of the company, (a) if the value has increased, (b) if the value has decreased? Give reasons for your answer.

28. An interurban railway company, wishing to provide against possible accidents, adopted the plan of depositing 2 per cent of their gross receipts each month in a local savings bank as a reserve for that purpose, charging the funds so set aside to an account which they designated "Reserve for Accidents." The total fund for the year amounted to $4,869.26, out of which they paid $950 for accidents occurring and settled during the twelve months, debiting such payment to the Accident Account, and leaving a cash balance in the bank on December 31, of $3,919.26.

The bookkeeper endeavored to close the books by showing the $4,869.26 as a charge against operations for the year arising out of accident liability, carrying over the balance in bank, $3,919.26, to provide for future accidents, and making a corresponding credit to the Reserve for Accidents account. This left the company with cash assets of $3,919.26 not represented on the books.

Wherein did the bookkeeper err and what entries should have been made to show the transaction correctly?

29. A company issued $1,000,000 bonds (denomination $1,000 each), dated January 1, 1910, bearing interest at 5 per cent and

maturing January 1, 1920. These bonds were sold at 80 per cent of their par value.

The mortgage provides for a sinking fund to be created by annual payments of $50,000, and at December 31, 1911, the balance sheet of the company, among other items, shows the following which relate to these transactions:

Discount on bonds	debit,	$ 160,000.00
Trustee of sinking fund	debit,	102,000.00
First mortgage bonds	credit,	1,000,000.00

On January 1, 1912, the trustee purchased 113 bonds out of the funds in his possession at $900 each, which were cancelled.

State what entries should be made in respect to these transactions; also give your views as to the proper treatment of discount on bonds, both as to when they are purchased and cancelled, as in the foregoing, and when they are not redeemed until maturity.

30. The Smith and Jones Manufacturing Company issued $200,000 of first mortgage, 50 year, 5 per cent sinking fund bonds, which were marketed at 98½ and 1 per cent commission, and expended the entire proceeds in the erection of their plant. The discount and commission were charged to Unamortized Debt, Discount and Expense Account, and subsequently charged to profit and loss, proportionately, during the life of the bonds. Five years later, the company was enabled, owing to a disturbance in the financial market, to purchase $50,000 of these bonds for the sinking fund account at 95. Prepare the necessary journal entries to correctly record the above transactions on the books of the company.

31. The Black Diamond Coal Company issued bonds to the extent of $1,000,000 several years ago. The indenture provided for a sinking fund to be created by setting aside five cents per gross ton on all coal mined, from the proceeds of which the directors were from time to time instructed to purchase or redeem at par any or all of the bonds issued. Instead of following the provision outlined, a reserve for bond redemption was created out of profits which, at the date of the audit, amounted to $218,000. In the meantime the company purchased in open market bonds worth at par $139,100 for which it paid in cash $88,052.50. The bonds were carried on the books of the company as an investment at their par value, with an offset of $51,047.50 credited to "discount on bonds purchased." The remaining money that would ordinarily have been used to create the sinking fund was advanced as a loan to a subsidiary company, the parent company taking notes for the amount from the subsidiary company. It is now the intention to refund the bond redemption reserve by using, as a part of the fund, the bonds mentioned above which were purchased from the general funds of the company and, in addition, as many of the notes of the underlying company as are necessary to bring the amount of the sinking fund up to the bond

redemption reserve. How would you treat this matter in the accounts of the company and in the balance sheet? Give reasons.

32. On January 1st, of a certain year the "A" company acquired a fifty years' lease of its business premises, paying therefor $10,000. It was decided to provide for depreciation by setting aside $90 per annum as a sinking fund, and on December 31st, twenty years later, the amount so set aside had (with interest) accumulated to $2400. At this time the directors obtained from an insurance company a policy assuring them the payment of $10,000 at the end of thirty years, in consideration of an annual premium of $220, the first premium being paid upon that date; and having thus provided for the redemption of capital, they gave instructions that the $2400 accumulated during the past twenty years should be stated in the balance sheet dated as a Reserve Fund. Do you consider this treatment correct?

33. The X. Co., by its Articles of Association, was required to set aside and invest the sum of $1,000 per annum before declaring any dividends, in order to provide for the redemption of $40,000 of debentures redeemable in twenty-five years. At the end of that time the instalments so set aside have accumulated at compound interest to $41,645. The investments have been sold, and the debentures paid out of the proceeds of such sale. State how you would deal, in the company's books, with the credit balance of $41,645 representing the accumulation of the annual instalments.

34. As secretary of the National Securities Co., you receive from Mr. T. Head, a stockholder in the company, the following letter: "I have received from the National Securities Co., a copy of its balance sheet of December 31st. There is one point on which I am not quite clear, and that is the meaning of 'Reserve Fund, $50,000' on the liabilities side of the balance sheet. It seems to me to be on the wrong side, for I cannot see how a fund can be a liability. I shall be much obliged if you will explain the matter and tell me where the 'Fund' is, and why it is not invested in outside securities."

Write an answer to this letter. The reserve fund in question has been accumulated out of profits. What would you substitute for the words "Reserve Fund" so as to avoid the above misunderstanding?

CHAPTER XIX.

Miscellaneous Subsidiary Accounts

Other uses of subsidiary accounts are found in connection with the cash, sales and purchase accounts. In the majority of cases great benefits may be secured by subdividing these accounts into groups to represent the different classes of the items that they contain. The cash may be subdivided into separate deposits in various banks or with various employees; the sales or purchases may be subdivided according to the manner of payment, or each of these amounts may be subdivided according to the district or territory affected.

Divisions of Cash Account.

In the case of the cash account, it often is desirable that a small amount be set aside in the office to care for small items of expenditures that require payment during each day but which are so small and unimportant that it is undesirable to handle them through the regular cash account. It also is desirable, in the majority of cases, that funds be taken from the regular cash drawer and deposited with a banker, or in some cases, with a number of different bankers located in the same or in different cities.

The advantages of dividing the funds among a number of bankers are that the deposits of different offices can be kept separate, as when the offices are in different cities, and that expenditures of different kinds can be handled separately, as in the case of a Western concern which buys extensively in the East or a foreign country and which wishes a bank account in the vicinity of its creditors to facilitate the payment of bills or, as in the case of a concern which pays its purchase accounts, expense accounts and payrolls through different departments.

Each of these depositories or funds requires a separate account which should show the amount that may be withdrawn by the concern. In practice it very seldom happens, however, that the amount shown by the bankers books agrees with the balance shown by the books of the depositor. This is accounted for by errors, or the omission of checks, deposits or similar items from either of the sets of books. The banker may have entered a collection to the credit of the depositor which has not been entered on the depositor's books or, on the other hand, checks may have been drawn by the depositor which the bank has no record of.

RECONCILIATION OF BANK PASS BOOK AND BANK ACCOUNT.

In order that these differences may be ascertained and cared for, it is desirable that the accounts be reconciled at regular intervals. This is accomplished by checking the various items in one set of books against the corresponding items in the other set of books. The items that do not appear in both sets of books should be separated into four groups under the headings:

(a) We debit they do not credit;
(b) We credit they do not debit;
(c) They debit we do not credit;
(d) They credit we do not debit.

The totals of each of these groups, when properly combined with the balance shown by one of the sets of books will produce the balance shown by the other set of books and a detailed statement containing these items will show the cause which produced the difference. The rule covering the combining of the figures is as follows: To the other party's balance, debit or credit, add the excess items of both sets of books on the opposite side and deduct the excess items of both sets of books on the same side, debit or credit.

To illustrate, we will presume that we are attempting to reconcile the books of a merchant with those of his banker. The balance shown by the statement of the account from the banker is $2000.00. We find, (a) that the merchant has entered a deposit of $165.00 as $185.00; (b) checks outstanding total $400.00; (c) a note of $50.00 has been paid by the banker but has not been recorded on the books of the merchant and; (d) a collection of $200.00 has been made by the bank which is not on the books of the merchant.

To verify the correctness of the work performed we will prepare a summary as follows:

Balance credit, per banker's statement			$ 2000.00
We debit, they do not credit	(a)	$ 20.00	
They debit, we do not credit	(c)	50.00	
Total debits			70.00
			$ 2070.00
We credit, they do not debit	(b)	$ 400.00	
They credit, we do not debit	(d)	200.00	
Total credits			$ 600.00
Balance for merchant's book			$ 1470.00

If $1470 is the amount shown by the merchant's books, the work has been performed correctly. The only error that has been found is the one of $20.00 in "a," and in general, it is the only one that will need particular attention. The other items will, in the ordinary course of business, care for themselves.

After the differences in the two accounts have been ascertained, it is usually necessary to rearrange the figures in the form of a report. The following form starts with the balance shown by the banker's books and adds or deducts the various amounts to produce the amount shown by the depositor's books. Whenever the reconciliation of the bank account is to be an exhibit in an auditor's report, it is very desirable that its closing balance agree with the amount shown by the balance sheet, therefore this form is used almost to the exclusion of those which close with the banker's balance.

Reconciliation of the Cash Account with the First National Bank of.................. as at July 1st, 191.......................		
Balance per bank statement		X
Less outstanding checks as listed below		X
Balance per Cash Account (Ex. A.)		XXX
Outstanding Checks:		
#............	X	
#............	X	
#............	X	
#............	X	
Total as above	XXX	

INTERNAL CHECK.

LAPPING SYSTEM.

In handling cash in connection with a system of internal check, it is desirable that all payments be made by check and that all receipts of whatever nature be deposited daily in the bank.

The advantage of depositing the total receipts is that items may be traced directly into the bank. If the total receipts represent any particular sum, the total deposits must equal a like sum and must contain the same items. A comparison of the receipts and the deposits automatically verifies them both and practically eliminates every opportunity of the cashier to convert funds to his own use. His only opportunity for fraud is to suppress charges or to withhold certain cash items entirely and credit the party who made the payment by a journal or some similar entry. The possibility of detection where either of these plans is worked is so great that their practice is not very common.

The most common method of converting funds, and the one that the system of depositing all receipts daily is intended to prevent, is the method of withholding a portion of the cash receipts of one day and giving the parties, whose payments were withheld, credits on a succeeding day out of the receipts of that day and, in turn, giving the last payors credit out of the recepits of still another day and so on, *ad libitum.*

This system is known as the lapping system. In order to detect its use it only is necessary to procure copies of the deposit slips from the bank and, as mentioned above, compare the individual items thereon with the entries in the cash book. It is impossible for the operator to do any more than keep the totals of the deposits and the receipts alike for the reason that the items comprising the two lists are entirely different. One list contains the cash or check receipts of the day, while the other contains the amounts to be credited to persons who paid on some preceding day which, in general, would be quite different.

The advantage of making all payments by check is that more than one person can be made responsible for the payment and, if the check is substantiated by a properly prepared voucher, the entire history of the transaction can be traced easily.

Petty Cash.

Wherever the entire cash receipts are deposited in the bank and all payments are made by check, it becomes necessary to arrange some plan for paying the petty bills, such as car fare, express, etc., which come in from time to time and which are immediately payable or which do not warrant the use of a check. They may be cared for by appointing some one as petty cashier and by providing that person with a fund from which the payments may be made. As soon as the fund is exhausted, or at any other time, the petty cashier is credited with the amount of the payments and a new check is issued to reimburse the fund.

Imprest Cash.
Revolving Fund.

Often the petty cash is represented by an account in the general books, operated as stated above, which is charged with the amount of the checks issued in favor of the petty cashier and credited with the amount disbursed. In this case the balance of the fund will vary from time to time. It is preferable, however, to have a predetermined amount as the basis of the fund and to keep that one item on the books as a charge to the fund, only increasing or decreasing it when it is necessary to do so to care for changing conditions. The amount of the fund should be based on the maximum amount of possible expenditures for a particular period, say a week or a month, and at the end of each of these periods the petty cashier should prepare an itemized list of the expenditures and should secure a check for the exact amount, thereby bringing the fund back to its original amount. The cashier, when entering the check in the general cash book, should debit the expense or other accounts for which the petty cash was expended by a direct entry without making any entry in the petty cash account in the general books. At all times the petty cashier should have on hand money or vouchers for disbursements sufficient to equal the amount of the fund.

This manner of caring for small payments is known either as the Imprest System or the Revolving Fund System.

As an assistant to the proper vouching of the petty cash, we recommend the use of a bound book, with alternate leaves perforated, printed with columns for the following information: Date, Total Disbursements, Expense, Express Out, Postage, etc., Received by. The above information should be filled in for each payment and should be recorded in duplicate by the aid of carbon. The original copy on the perforated sheet may be removed from the book at the end of the period and will serve as a voucher for the check, while the carbon copy will serve as a bound record for the benefit of the petty cashier. The original sheet should be of the same size as the regular voucher jacket used by the firm, to facilitate filing.

As a preventive of fraud, the petty cashier should not be allowed to receive any money from cash sales, etc., and should be compelled to produce a receipt for every disbursement, no matter how trivial.

Branches.

Where branches are operated, the only difference in the handling of the cash is that the cashier will usually have control of the cash receipts of the branch as well as the revolving fund and that the revolving fund will necessarily have to contain a larger amount than would be desirable were it possible to reimburse it on a few moments' notice.

The cashier should not be allowed to confuse the cash receipts from sales with the revolving fund and should be compelled to deposit all receipts from sales, in the bank, to the credit of the executive office and in turn the executive office should replenish the revolving fund of the branch upon the receipt of proper vouchers for expenditures.

Sales.

The sales account is intended to contain a complete record of the sales of the articles acquired or manufactured for that purpose and, in the majority of concerns, no subsidiary accounts are required. A few concerns, however, where a variety of products is handled, divide their sales into various sub-accounts, each representing the class of article disposed of but, except in rare cases, this seems a considerable waste of time. The principal cases where this method is desirable arise in connection with concerns handling, in addition to their own product, some article on which they pay a royalty or which is handled on a commission basis; or where, as in the case of a branch office handling a number of products the percentage of profit on which varies, it is desirable to keep a check on stock by applying the actual profit on turnover in comparison with the estimated profit that each class of goods should bring.

In order to accomplish this distribution of the sales, extra columns must be provided in the books of original entry for each class of product or each subdivision determined upon, in addition to the column containing the original entry, then, as each sale is recorded, it is analyzed and the proper amounts are extended into each of the distribution columns to the credit of the proper subsidiary account.

Cash Sales.

Wherever sales of the various articles handled are recorded separately, some provision must be made for caring for the cash sales. This is usually done by providing separate columns in the cash book for each subdivision of the sales account, but, if the cash book is thereby made unduly cumbersome, only one column need be provided and all cash sales can be entered therein without attempting to segregate them. Where this plan is used, the total of the column in the cash book is to be posted to the credit of a cash sales account in the ledger. The sales, after entry in the cash book, should be analyzed and distributed in the sales book, to the regular distribution columns, but their total should be retained in a special column headed Cash Sales. The total of this column should be posted to the debit of the cash sales account in the ledger and should equal the credit, posted from the cash book, covering the same period.

Purchases.

Wherever sales are subdivided as outlined in the preceding paragraphs, it becomes necessary to provide like accounts for the purchases and like columns in the proper books of original entry so that the purchases of each class of product may be ascertained. Cash Purchases may be treated similar to Cash Sales, if desired.

INVENTORIES.

Inventories would, likewise, have to be divided to correspond with the division of the sales, and should be arranged in accordance with the outline given in Chapter VIII.

The principal other accounts that are subsidiary to the inventory account are those representing goods that have been transferred to some other person, either for that person to sell or as a sale subject to approval. In neither case should the transaction be looked upon as a sale. No valid contract of sale exists and there is a possibility that the goods will be returned, hence they should be included in the inventory the same as other goods in possession. Often such sales are billed out at a sum in excess of the actual inventory value, in which case a profit, apparently, will have been made. This is improper and the accounts should be adjusted at inventory time to their true value. This is accomplished by reversing the entry that was used to place the transaction on the books at the time it occurred, and by inventorying the goods the same as other like goods in stock plus the transportation charges to their present location and similar items.

Goods with branches are usually treated the same as goods on consignment and likewise should be reduced to inventory value at the end of each period. At the opening of the new period, the entry that was made to adjust the account may be reversed and the original record of the transaction given effect again for use during the new fiscal year.

The entry made at the time the goods were shipped to a branch we will presume was

Branch Office Stock	$ 800.00	
Branch Office (or Consignment Sales)		$ 800.00
40 cases of commodity "A" @ $20.00		

If the goods are actually worth but $15.00 per case, when inventorying, the goods should be included in the inventory as "Goods at Branch Offices, itemized, $600.00" and the first entry should be cancelled by the entry,

Branch Office (or Consignment Sales)	$ 800.00	
Branch Office Stock		$ 800.00

After the books are closed, the first entry should be replaced on the books to keep a record of the stock at the branch. Similar entries would be made for goods on consignment.

Where stock accounts are operated as outlined above, it often happens that credits are made to the account for goods sold, at an amount different than they were originally charged thereto. This confuses the values remaining in the account and makes it impossible to use the account as a check on stock. If half of the goods mentioned in the preceding example had been sold for $22.50 and the stock account had been credited with $450.00, the balance of the goods would have been represented by an account balance of but $350.00, whereas the account balance should have been $400.00. The proper method of handling such sales is as follows:

(a) Branch sales	$ 400.00	
Branch Office Stock		$ 400.00
(To credit branch office stock with 20 cases commodity "A" at branch office net price $20.00)		
(b) Customer	$ 450.00	
Sales		$ 450.00
(Customer buys 20 cases commodity "A" of branch office at $22.50)		

In the foregoing entries, it will be noticed that the regular sales account is not credited at the time goods are sent to a branch on consignment. In the case of goods on sale or return, however, it is customary to credit the regular sales account. This method results in a profit during one year which may become a loss in the next year and, if in a particular case the amount involved is very great, the second year should be protected by providing a reserve for possible loss on goods sold subject to approval. The entry to do this is:

Profit or Loss (Trading)	$ 000.00	
Reserve for Possible Loss on Returned Goods		$ 000.00
(To protect 1917 against possible loss on goods sent out on approval in 1916)		

QUESTIONS

1. What do you consider the proper way to handle cash in accounts? What advantages are there, if any, in banking each day the exact receipts of the previous day?

2. Describe a desirable system of keeping a petty cash book and petty cash vouchers?

3. Explain the uses and relations of the petty cash book to the principal cash book.

4. You have in hand the examination of the cash and bank account of a mercantile firm that uses checks very freely. Draft a reconcilement account, bringing the cash book and bank pass book into agreement at the close of the period under review.

5. In closing the books, how would you value goods owned by your client and consigned at selling price to customers of your client, under an agreement by which the customers pay for the goods as used? Give reasons.

6. An auditor for a manufacturing company is confronted with three conditions, viz.: (a) goods shipped on consignment and remaining unsold; (b) goods shipped to customers on sale or return, and remaining unsold; (c) goods on hand at agencies. How should these accounts be valued and placed in the balance sheet?

7. Rule and title five columns of a petty cash book in addition to the description columns and make an illustrative entry for and in each distribution column.

8. A house sends out many goods on approval and treats the transactions as sales. How should such items be treated by the auditor when setting up statements for a period?

9. Company "A" ships the following paint to its Seattle branch at the prices given:

100 cases No. 1	@ $ 20.00	$ 2000.00
75 cases No. 2	@ 30.00	2250.00
150 cases No. 3	@ 40.00	6000.00
		$10250.00

The Seattle branch ships to the Tacoma branch, 50 cases of No. 1 and 25 cases of No. 2. It also sells the following at the prices given:

25 cases No. 1	@ $ 24.00	$ 600.00
30 cases No. 2	@ 33.00	990.00
100 cases No. 3	@ 38.00	3800.00
		$5390.00

It remits to the executive office the $5390 less $350.00 freight and $150.00 expenses and less $800.00 uncollected. Required, (a), the stock accounts in detail as they should appear on the books of the executive office; (b) entries necessary to record all transactions on the books of the executive office.

CHAPTER XX.

Miscellaneous Collective Accounts.

A collective account differs from other accounts to the extent that each item contained therein retains its individual identity throughout its life, whereas other classes of accounts absorb the items that enter into them.

The object of collective accounts is to consolidate a number of accounts of a class for statistical purposes or to condense information without affecting the individuality of the accounts proper.

The records of the various transactions affecting collective accounts must be such that they will display the effect of the transaction, not only on the individual accounts, but on the collective account as well.

Bills Receivable.

Their most simple form is that of the bills receivable account which contains an itemized record of all of the notes received. Each note, although included in the account with the others, must be treated individually and when it is paid must be removed from the account.

Bills Receivable Ledger.

If there are such a great number of notes that it would be impracticable or confusing to attempt to keep an individual record of each note in the usual manner, an auxiliary record should be kept. This would allow greater latitude in arranging the accounts and would assist in retaining their individual identity. Should such a record be maintained, it would not be necessary for the bills receivable account in the ledger to contain such a complete record as is customary and, instead of the individual record of each note, it would contain only the totals of the items which make up the subsidiary record.

In order to secure these totals and to eliminate the mass of detail in the original account, all books of original entry that are to contain items affecting this account should be provided with a separate column for this class of items and the total of the class should be posted to the original account while the individual items, which make up this total, should be posted to the subsidiary record; or, if desired, the original record of the notes received may also become their final record. This can be accomplished by recording the notes in detail, in the order of their occurrence, in a bills receivable ledger and by posting their total to the debit of the bills receivable account in the general ledger and the amount of each note to the credit of each personal account affected thereby. This record will then represent the debit side of the bills receivable account, but the bills receivable account in the general books, instead of showing the individual items, will show only the totals, while the subsidiary record will contain the details. As the notes are paid, individual items will receive credit in the subsidiary record and the total of the credits as determined from the book of original entry will be posted to the credit of the bills receivable account in the general ledger. The total of the unpaid notes in the bills receivable ledger should equal the balance of the bills receivable account in the general ledger.

SUNDRY DEBTORS.

Similar treatment may be accorded the accounts of persons whose business with the firm is so limited that an entire page is not required to contain the record of their transactions. In connection with loose leaf ledgers, the major portion of the accounts are usually alloted an entire page, and these are filed in the binder in alphabetical order, but certain of them do not require such a great amount of space and, in order to accommodate these, a separate sheet, intended to contain a number of accounts, is often inserted after each index sheet.

Sundry Debtors Ledger.

A similar record, but in book form, is used at times where there are numerous small accounts with customers who purchase only once or twice a year.

It usually contains debit columns the same as the debit side of a ledger but, as payments may extend over a number of months and as the amount of the credits to the book each month might be required in balancing, a number of credit columns are usually provided—one for each month in which credits might be applied. The last column on the credit side should be reserved for extending all items that are not paid in the time provided for by the other credit columns. This allows each page to be balanced separately. After balancing, the unpaid items can be carried forward to a new page. There is no necessity of providing for the segregation of the charges according to months as they would be entered in the order of their occurrence and a new account could be provided for the new customers of each succeeding month.

The plan outlined above automatically forms itself into a series of accounts each one representing the balances carried forward at the beginning of a month and also the charges for that month. The life of an account is governed by the number of credit columns provided and, as a new account is opened each month, there are as many live accounts as there are months alloted to each, but each account is just one month older than the preceding one.

There is always a possibility that a customer may make more purchases than were anticipated and wherever such a ledger is used it becomes necessary to provide some plan by which the various purchases may be readily connected. Usually it is not desirable to attempt to insert additional purchases in the lines originally allotted to the purchaser, as this has a tendency to disturb the totals of the pages, but there is no objection to including, at the end of each monthly account, the purchases that have been made by the persons whose accounts are represented therein; then, in order to call attention to the existence of an additional purchase, the accounts should be cross indexed. The best plan of cross indexing seems to be to use a combination of the last figures appearing in the folio numbers of each of the pages on which items affecting a customer appear and to place these just before each purchase shown. Should greater individuality in cross indexing be desired, letters may be used arbitrarily in connection with the figures to designate certain accounts.

As an example, John Jones' purchases appear on page 660. On the tenth of the succeeding month he makes another purchase which is recorded, on page 664, at the end of the account containing his original purchase. It is desired to cross index his transactions and, presuming there are already transactions with some other party indexed "04," his transactions will be indexed "A04," arbitrarily using the letter "A" and the figures "0" and "4" which are the last ones appearing in the folio numbers of the pages on which his items appear.

The plan of using the ledger as a book of original entry, as outlined under Bills Receivable, is used to a good advantage in connection with sundry debtors by telephone and similar companies, which have a regular recurring charge against each account each month. The number of postings is greatly reduced if the one record can be used both as the original and the final book entry. In fact, however, in the majority of cases, some record on charge slips, meter reading reports, etc., is the actual original and the books invariably refer to them.

Another form of sundry debtors ledger that is very popular consists of a numerical list of charges, with details as to date, name and address of customer, number of the charge, and amounts. Credit columns provide for the date and amount of payments as well as the folio of the original entry.

Under this system all invoices to irregular customers are prepared in duplicate and numbered consecutively. The original is forwarded to the customer and the duplicate is registered under a corresponding number in the sundry debtors ledger. After registration it is filed alphabetically under the customer's name. As rapidly as payments are made, the duplicate charge slips are removed from the file and the amount of the credit is posted to the sundry debtors ledger, opposite the charge bearing the corresponding number. The unpaid items of the sundry debtors ledger must agree with the charge slips remaining on the file and the totals of each must agree with the sundry debtors ledger controlling account in the general ledger. Where there are credits for returned goods or items other than cash, additional credit columns are usually provided so that the various classes of credits to the sundry debtors ledger can be properly separated.

This method is particularly desirable for handling C. O. D's.

Controlling Account.

Wherever a subsidiary ledger is kept there should be some account in the general ledger to contain a synopsis of the items in the subsidiary ledger. Such an account is considered as controlling the subsidiary record and is known as the Controlling Account.

Adjustment Account.

If the condition of affairs is such that the persons keeping the subsidiary record do not have access to the controlling account, either because the records are kept in different offices or cities or because it is not desired that the various bookkeepers refer to the general ledger, they can make the subsidiary record self balancing by setting up an adjustment account in their ledger to contain the complement of all items that enter therein. This adjustment account will contain the same items that are in the controlling account in the general books but will show them on opposite sides.

The advantages of adjustment accounts are that the work may be apportioned over a considerable number of bookkeepers, each of whom will be able to prove his own work without disturbing the other and without referring to the controlling records, and that the general books will contain all of the required information about the accounts contained in a subsidiary record without the mass of detail.

Too much stress should not be placed upon the accuracy of the controlling account for, if the records making up the totals are incorrectly added, both the controlling account and the account that received the other portion of the entry will have received the incorrect amount without throwing the general ledger out of balance.

Subscription Account.

The subscription account is another form of collective account.

Usually it is undesirable to fill up the general books with accounts with persons who have subscribed for the stock of the corporation and, in lieu of so doing, an auxiliary record of these accounts may be kept. The total only appears in the general books, under the heading Subscription Account.

Capital Stock Account.—Stock Ledger.

The capital stock account is also a collective account and may be cared for in the same subsidiary ledger with the subscriptions, by the use of combined accounts as outlined in Chapter IV, but in this case the quantity of shares, instead of their par value, will control, hence plain ruled columns should be substituted for those used when money is to be recorded.

At the time stock is subscribed, an entry is made in the general books debiting Subscriptions and crediting Capital Stock, therefore, in the subsidiary books we must debit each subscriber with the amount of his subscription and credit him with the quantity of stock that represents his interest.

In order to keep this ledger in balance, adjustment accounts should be opened with Capital Stock (shares) and Subscriptions (dollars) and should be arranged so they will be the complement of their controlling accounts in the general ledger.

Such a ledger would be provided with columns to contain the following information:

Debit: Date; Information; Certificates Cancelled; Shares (quantity); Subscription Debit;
Credit: Date; Information; Certificate Number; Shares Issued (quantity); Subscription Credit; Balance, Shares.

The above ruling for a combined stock and subscription ledger, subject to special conditions, is without doubt the most satisfactory ledger that can be used where stock is sold on installments, for the reason that it allows the record of payments and the record of stock issued to be kept on the same sheet in the ledger.

To illustrate its use let us presume that "A" purchases 100 shares of stock, payment to be made at the rate of $1,000 per month; the stock to be delivered as paid. In the stock ledger the following amounts would be posted:

"A" Subscription Account	$ 10,000.00	
Subscription Adjustment Account		$ 10,000.00
(A buys 100 shares.)		

If "A" pays $1000, the entry to be posted will be:

Subscription Adjustment Account	$ 1,000.00	
"A" Subscription Account		$ 1,000.00

If he receives a certificate for 55 shares to apply on this payment the entry to be posted will be:

Capital Stock Adjustment Account...............	5 shares	
"A" Stock Account..		5 shares
(Certificate No. 1 issued to "A")		

His account will then show that he contracted for $10,000 worth of stock; that he has paid $1,000 thereon and that he has received a certificate for but 5 shares.

The amounts entered in the adjustment accounts should be entered in columns corresponding with the entries in the personal accounts and should allow the balancing of each set of columns separately, i. e., the items entered in the shares column, debit, should equal those entered in the shares column, credit, and the amounts entered in the subscription column, debit, should equal the amounts in the subscription column, credit. One set of columns represents shares while the other represents dollars.

DIVIDENDS PAYABLE ACCOUNT.

It is unnecessary to include, in the general books, accounts with each of the stockholders at the time dividends are declared. Instead, the amount of the dividend is credited to Dividends Payable Account and, as the dividends are paid, this account is charged. A subsidiary record is kept to contain the detailed information and the accounts with the stockholders.

EXPENSE ACCOUNT.—EXPENSE LEDGER.

The tendency of modern accounting is to apportion carefully all items of expense. This usually requires a considerable number of distribution columns in the books of original entry and often makes them very cumbersome; if desired, relief can be obtained by extending all items of expense into one column, and by analyzing and distributing the items in a separate book which is provided with columns for each sub-division desired.

The total of the entries in the various columns of the subsidiary record must agree with the total of the entries in the expense column which the subsidiary record represents.

This record is designated a Supplementary Distribution Journal or an Expense Ledger, depending on whether the totals of the columns are posted to the general ledger, or the book is treated as a subsidiary ledger controlled by the expense account in the general ledger.

Salary Account.—Salaries Ledger.

In many concerns, it is undesirable that the office employees know the amount of salary each is getting. Also, it is desirable at times to distribute the salaries over a number of departments. In either case a Salaries Ledger, operated on the principle of the Expense Ledger, can be used to contain this information and, if it is important that this information should not be disclosed, a lock ledger can be used, in which case only those possessing a key can inspect it.

Materials Account.—Stores Ledger.

In connection with cost accounts, it is important that a careful record be kept of all stores on hand. This is accomplished by keeping a complete record of each article in stock. The materials account in the general ledger acts as a controlling account. Every item that is purchased must be charged to the materials account in the general books and likewise to the account representing that article in the stores ledger.

As articles are used, this account and likewise the material account in the general ledger is credited. The credits to the general ledger account are usually in totals only. At the end of any period the value of the stock on hand may be ascertained by referring to the materials account in the general ledger while the quantity of each article in stock is always disclosed by the stores record.

Accounts Receivable.—Sales Ledger.

The principal use of controlling and adjusting accounts is in connection with recording the accounts representing the sales to customers, for the reason that these accounts are usually recorded in a separate ledger and, if the business is exceptionally large, a number of ledgers are used, each containing certain subdivisions of the accounts. Each ledger should contain an adjustment account to make it self-balancing and the general ledger should have a separate controlling account for each subsidiary ledger. Such a plan necessitates that all books of original entry be provided with distribution columns into which the accounts affecting each ledger may be segregated. The following are good examples of sub-divisions of the ledgers:

Alphabetical: "A to E," "F to I," etc.,
Districts: City, Country, or
City, Wash.; Ore.; Ida.; B. C.
Salesmen's territories: Brown's Ledger,
Hill's Ledger, etc.
Numerical or decimal: (Usually used with cards, giving each account a number, the individual figures of which might represent territories, salesmen, etc., in addition to the actual account number).

The accounts in a district or salesman's ledger may be divided alphabetically according to towns and then the customers of each town may be subdivided alphabetically; or the accounts of customers living in a city may be subdivided according to street and then according to street number. Either of these methods facilitates entering the charges as, in general, a salesman will send in a great number of charges to the same district at a time, or a delivery wagon will turn in its charge slips according to its route which will, in the majority of cases, correspond with the order of the accounts in the ledger.

In many concerns the sales ledgers do not contain detailed postings of debit items but, in their place, a single debit item is entered. This is accomplished by posting all invoices to a statement ledger, which consists of monthly statement blanks interleaved with blank sheets. A carbon is used, when posting, so that a copy is retained on the blank sheet. Debit items are posted directly to the statement ledger. Credits for returned goods often are treated likewise but credits for cash payments usually are posted directly to the sales ledger. At the end of each month, the total of the statement is posted to the debit side of the sales ledger and the entries in the sales ledger, which affect the statement, are transcribed to the statement ledger, so that any particular account in the sales ledger will agree with the corresponding statement in the statement ledger, with the exception that debit items, and possibly credit items covering returned goods, appear in totals only in the sales ledger while they appear in detail in the statement ledger.

After both records of each account correspond, the statement is detached by the aid of perforations and is mailed to the customer. The carbon copy is retained for reference. In some cases it is considered advisable to use only the statement ledger but, in general, both ledgers are preferred.

Accounts that have been assigned offer another problem to the bookkeeper for the reason that payments made on the assigned accounts are usually forwarded to the assignee and are debited to him in the general books or, perhaps, are paid to the assignee direct while the customer continues to buy goods and perhaps makes payments thereon which are not to be credited to the assignee. The most desirable method of handling these accounts is to transfer the amount of each account, that is assigned, to a ledger sheet of a different color, which is filed adjacent to the original ledger sheet. As payments are made on the assigned accounts, they are credited on the colored sheet and debited to cash and later debited to the assignee and credited to cash. Payments made on accounts not assigned are treated in the regular manner.

In some cases special columns are arranged in the cash book to record all transactions affecting the assignee. All credits to assigned accounts are entered in a column separate from other cash receipts, and payments to the assignee are entered in a special column on the credit side. In general, all cash receipts on assigned accounts must be remitted to the assignee daily, therefore the totals of the two special columns should agree from day to day.

COMBINED NOTES AND ACCOUNTS RECEIVABLE LEDGER.

Where a great many notes are accepted on accounts it is very beneficial to have the record of the notes and the record of the accounts combined. This may be accomplished by arranging two money columns on each side of the ledger, debit and credit. The first column will contain all transactions which affect the bills receivable account and the second column will contain the transactions which affect the accounts receivable. This is another example of a ledger being controlled by more than one controlling account.

ACCOUNTS PAYABLE.—PURCHASE LEDGER.

Purchase ledgers may be operated the same as the sales ledgers but they will contain the accounts with creditors. It is usually unnecessary to keep a great number of purchase ledgers but such a plan could be arranged if necessary. The most common subdivisions are City Purchases and Out of Town or Country Purchases.

Where a considerable number of invoices is received from foreign countries it is desirable to operate a purchase ledger for each country. Each entry therein is recorded in both the foreign and the national currency and the adjustment accounts are kept in both currencies. The combined account form, described in Chapter IV, is used. The profit or loss on exchange is usually absorbed in the cash book at the time the invoices are paid.

PLANT ACCOUNT.—PLANT LEDGER.

A Plant or equipment ledger is often operated as an auxiliary to the machinery or plant account, and, in general, also the reserve for depreciation and reserve for renewal accounts. Such a ledger is controlled by all of the above mentioned accounts and contains the history of every article included therein, with the provision that has been made for depreciation and renewals. It serves as a basis for determining the advisability of purchasing certain similar articles in the future, and also of adjusting the controlling accounts or the rate of depreciation at the time an article is sold or appraised.

One of its principal advantages is that the depreciation and the repairs or renewals on each article may be treated independently without affecting the other articles included in the plant account.

A plant ledger usually contains a complete history of each individual article, with its size, capacity, expected life, etc. Columns may be provided as follows:

Debit Side: Date, Information, Plant Dr., Renewals, Depreciation.

Credit Side: Date, Information, Plant Cr., Reserve for Renewals, Reserve for Depreciation.

Investment Account.—Investment Ledger.

Wherever a concern makes extensive investments in bonds, etc., it becomes desirable to isolate such accounts from the general books. A separate ledger can be adapted to this purpose easily and can contain accounts with each security purchased and its accretions without unduly affecting the general books. If desired, a separate journal could be used to record the results, in which case it only would be necessary to reconcile the adjustment account and the controlling account at the end of each fiscal period. The combined account form described in Chapter IV is most desirable for use in this connection as it allows the income and the principal to be kept in separate columns.

Suspense Account.—Suspense Ledger.

It is very undesirable to cancel a customer's indebtedness from the ledger for, possibly, at some future date the customer may become able to pay, in which case, even though the account is outlawed, it often is possible to have him do so; neither is it desirable to load up the active ledgers with dead accounts. The better plan is to transfer the account, bodily if loose leaf ledgers are used, to a suspense ledger, where it can receive such attention as is possible. The controlling and adjustment accounts of both ledgers should be adjusted to give effect to the transfer.

Accounts representing notes, overdue and uncollectible, may be treated in the same manner, but as a precaution against the loss of the notes they should be affixed to the account leaf in the suspense ledger.

Private Ledger.

In connection with the general books of many concerns there is much information which it is desirable to keep private. This is particularly true of that contained in accounts referring to the capitalization, inventories, fixed indebtedness, investments, etc. The number of entries affecting such accounts necessarily is very small and if the accounts were removed to some other ledger they could easily be kept by the firm's consulting accountant, while their isolation from the more active accounts would effectually debar any of the employees from learning the condition of the firm.

In order to accomplish such a result the accounts should be divided so that the general ledger will contain only such accounts as are built up from day to day in the regular course of business and also an adjustment account with the private ledger, to keep the general ledger in balance. The general ledger will have, as before, numerous subsidiary ledgers but it, in turn, will be subsidiary to the private ledger.

The private ledger will contain in detail all of the accounts that are not in the general ledger and also a controlling account to represent the accounts which remain in the general ledger.

In closing the books at the end of each period, it is necessary, in effect, to close all of the accounts of the general ledger into the private ledger, but, as in fact, many of the accounts are immediately returned to the general ledger, it is actually necessary to transfer only the totals of certain of the revenue accounts to the private ledger.

The adjusting and closing entries are made in the private books to adjust and close the accounts and to open them again.

A private cash journal can be used in connection with the private ledger, or if it is of sufficient detail so that all accounts are represented, it might entirely supplant the private ledger.

QUESTIONS

1. Show the manner in which controlling accounts are employed in commercial and municipal bookkeeping.

2. Does any advantage attach to the employment of more than one volume for the ledger of a business requiring one bookkeeper? Give reasons.

3. Suggest a plan whereby a department store might adequately control its C. O. D. business. If convenient for purposes of illustration, submit a form.

4. Draft a form of customers' ledger for the use of a concern which sells a mechanical device on time payments; the deferred payments being covered by notes. Repair parts are sold from time to time so that it is quite necessary that the note and the other accounts be combined.

5. What do you consider the best subdivision of ledgers, when sales amount to $6,000,000 or $10,000,000 per annum in a manufacturing business, say steel? Describe, fully, your plan or method of connecting up the ledgers employed, also the method of treating purchases and sales.

6. What do you understand by a self balancing purchase ledger? Describe fully the method of keeping it.

7. Describe a way of keeping a bills receivable book as a book of original entry from which the credits to personal accounts are posted in detail while only the total of monthly charges and liquidation of notes are posted to the bills receivable account.

8. In auditing the accounts of a firm, you find a number of dishonored and overdue notes which form part of the balance of bills receivable account. State fully what you would do with these.

9. A manufacturer makes extensive investments in stocks and bonds, buying and selling from time to time as the market conditions warrant and clearing all such transactions through his regular books of account. How could such transactions be isolated from his manufacturing operations and what books and accounts should he employ to record the details of the principal and income from such investments?

10. Explain the purpose and manner of keeping a private ledger as part of the financial books of a firm or corporation.

11. On January 1, 1912, a firm possessed the following assets:

Buildings	$ 3,000.00
Plant and Machinery	2,000.00
Inventory Merchandse	2,000.00

Accounts Receivable:		
Smith	$ 400.00	
Jones	500.00	
Brown	200.00	
White	400.00	
Stone	100.00	
Roberts	600.00	
Allen	200.00	
Dick	600.00	
Currie	200.00	
Johnston	200.00	
		3,400.00
Cash		600.00
		$11,000.00

The creditors were made up as follows:

Long	$ 550.00
Thin	550.00
Black	600.00
Kay	300.00
Low	900.00
Robb	1,100.00
	$4,000.00

The capital of the firm belonged in equal shares to Peat and Smart.

During the month of January the following transactions occurred:

Sales

Smith	$ 100.00
Jones	150.00
Brown	200.00
White	50.00
Stone	200.00
Roberts	300.00
Allen	150.00
Dick	200.00
	$1,350.00

Cash Received

Smith	$ 500.00
Jones	500.00
Brown	300.00
White	300.00
Stone	150.00
Allen	300.00
Dick	750.00
	$2,800.00

Purchases

Long	$ 500.00
Thin	300.00
Black	500.00
Kay	400.00
Low	200.00
Robb	200.00
	$2,100.00

Cash Payments

General Expense		$ 500.00
Peat		200.00
Smart		200.00
Long	$ 550.00	
Thin	550.00	
Black	200.00	
Kay	300.00	
Low	500.00	
Robb	400.00	
		2,500.00
		$3,400.00

Record these transactions in a Sales Ledger, Purchase Ledger and General Ledger, making each self balancing. Take off a trial balance from each ledger and close the books as on January 31, 1912. Inventory at that date was $3,000.00. Reserve, $200.00 for outstanding expense, and $100.00 for possible loss from bad debts before closing.

12. Explain how you would install for a large concern, a system of bookkeeping arranged so that only the proprietor or officers of the company, together with their auditor, a Certified Public Accountant, shall be cognizant of its financial condition and annual profits or losses.

13. In closing the books of a firm, it is found that the accounts receivable include $5,000.00 of worthless accounts and $10,000.00 of doubtful accounts. The firm decides to deduct from the gross profits $15,000.00 for these items. What would you consider the best method of carrying these items on the general ledger?

14. Describe fully the operation of the controlling account expedient as used in connection with a private ledger.

15. State fully how the disbursements entered in a petty cash book should be carried to the controlling account of expenses in the general ledger and to the detail accounts in the expense ledger.

16. What books of a mercantile firm should be treated as books of original entry and be posted directly to the ledger?

17. What accounts should be embodied in the private ledger to make it a complete synopsis of the business? How would you prove the correctness of the accounts?

18. Describe several economies in accounting made possible by the introduction of special columns in books of original entry.

19. Prepare a form of purchase ledger for a large firm of importers illustrating the use of adjustment accounts as well as showing the operation of the individual ledger accounts. Invoices from creditors are all in English currency.

20. In designing a set of accounts for a business, how might provision be made for a constant showing of the aggregate sum owing by customers and the aggregate sum owing to creditors, without the necessity of preparing a schedule of the accounts of such customers and creditors?

21. Give several methods of keeping the records of petty accounts with infrequent customers.

22. "A. B." has on December 31st, 1914, at "C. D.'s" credit in his accounts payable ledger $1,800.00, and at his debit in the Sales Ledger $4,000.00, both due for payment in January, less 2½ per cent. On January 25th, "A. B." draws on "C. D." at

three months' date, for the balance due to him, plus interest at 5 per cent per annum. On January 28th, "A. B." discounts the note with his bankers, paying $25.00 for discount.

Make entries in journal form in "A. B.'s" books, recording these transactions, keeping in view that there are accounts in the general ledger controlling the accounts payable and the sales ledgers.

CHAPTER XXI.

Trial Balance.

A trial balance is another form of collective account. It consists of a record of the status of each account, prepared for the purpose of determining the correctness of the amounts posted to a ledger.

Its use is based on the fact, that, in double entry books there must be a like amount of debits and credits. It is used only to test the accuracy of the postings and is not even presumed to be conclusive proof that they are correct. It is the absolute certainty that there is an error somewhere when its debits and credits do not agree that makes a trial balance valuable. It is sometimes looked upon as very valuable by office managers, etc., in determining the status of the business but, as it shows only the balances of the accounts, without special reference to their value or relation to each other and usually without giving effect to the various accrued or deferred items, the information they derive is necessarily very slight.

The principal errors that are not located, through the agency of a trial balance, are errors of posting to the wrong account, or incorrect postings that are counterbalanced by other inaccuracies. These are of such rare occurrence that the usual bookkeeper usually is satisfied that his work is accurate when he is able to secure a balance.

The method of balancing is to prepare a synopsis of the accounts in a ledger and then to locate errors until the totals of the debits and credits agree.

The synopsis may be a list of the footings of each side of every account, a record of the balances remaining, or a summary of the debit and credit postings to each account each month.

PROOF BY FOOTINGS.

The most popular method of taking a trial balance is by the aid of footings. It has an advantage over the other methods as it is the simplest to draw off and also as the possibility of making an error when determining the balance of an account is eliminated.

By this method it is possible to determine the side upon which the error lies and the amount thereof. To accomplish this result a record is retained of the totals of the accounts outstanding at the first of each month; to their sum is added the totals of all books of original entry. This amount, provided no accounts have been ruled up during the month, will equal the total of the footings of the accounts in the ledger. Where this plan of proving is used, it is advisable not to rule up any accounts except just after balancing the ledger. The total of those ruled may be deducted then from the original total to secure the beginning total for the succeeding month.

PROOF BY BALANCES.

Another popular method of taking a trial balance is to make a record of the balance of all accounts in a ledger. If the work is correct the debit balances will equal the credit balances.

Proof by balances offers a slight advantage over the preceding method for as soon as the trial balance is completed it contains proper footings for use when preparing financial statements, whereas the other form of trial balance will require reducing to balances before the figures can be used.

PROOF BY CHARGES AND CREDITS.

Another method of determining the accuracy of a set of books consists of proving the entries to the accounts each month instead of the footings or balances of the accounts. This is the most direct method of proving the accuracy of the books as it deals specifically with the items that have been entered since the last balance and its use is to be recommended wherever the bookkeepers lack experience or accuracy in their work.

Other advantages are that the additions, balances, etc., automatically prove themselves on each page but, in order to make each page self-balancing, the trial balance should contain not only the charges and the credits for the month, but also the balances at both the beginning and end of the period as well. The following illustrates its form:

Page 1:

Folio	Name	Beginning		Current entries		Ending		Proof
		Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	
40	Purchases..........	500		200	10	690		
50	Sales...............		800	40	740		1500	
60	Plant...............	800		100		900		
61	Expense............	300		47		347		
64	Cash...............	400		550	247	703		
66	Proprietorship......		2400				2400	
		2000		937			3900	6837
			3200		997	2640		6837
Pages 2-12:								
	Sundry Accounts....	1200		740	680	1260		
		3200		1677			3900	8777
			3200		1677	3900		8777

As a proof that the additions have been made correctly on each page, columns one, three and six must equal columns two, four and five. If an incorrect balance has been entered; if it has been placed on the wrong side; or, if an error has been made in addition, the above proof will disclose it.

If, after the above proof has been found satisfactory, the different pairs of columns are not in balance, it is undoubtedly due to errors in the figures used and not to errors of addition, and it is necessary to take the columns separately to localize the error.

Columns one and two are easily verified by reference to the preceding trial balance. Column three must equal the total debits as disclosed by adding the various books of original entry; the difference existing, if any, represents the amount of the error on the debit side and, this being known, it is usually an easy matter to pick it out. The same rule applies to the proof of the fourth column. After columns one, two, three and four have been proved, columns five and six are an easy matter as the errors therein can be only those that are the result of a failure to properly adjust the items therein to correspond with the corrections made in proving the others. Such errors are disclosed by re-adding each page of the trial balance and by testing the items relating to each individual account on each page that is found to be out of balance.

Besides being exceptionally easy to prove, a considerable advantage accrues to this form of trial balance in connection with systems of internal check, particularly in connection with branch offices, as the entries affecting each account or each class of accounts each month are given in the trial balance and the bookkeeper at the branch usually can be called upon to prepare a report covering the source of the items affecting the principal general ledger accounts; this report to be used by the auditor at the home office in analyzing the various transactions and verifying the entries to each of the accounts.

QUESTIONS

1. Does a trial balance in which the aggregate of debits and credits correspond, prove the books to be correct? If not, explain why it does not.

2. Explain how one should proceed to detect an error in a trial balance.

3. Trial Balance:
   (a) Describe it and its uses.
   (b) Do you consider its use necessary?

4. Outline the different plans of preparing a trial balance and give the relative advantages.

5. The totals of a trial balance taken April 30th, under the proof of totals method are $162,462.15. The cash receipts were $24,000; cash payments, $27,000; journal entries $18,000; sales $28,000, and purchases, $19,000. The May 31st trial balance totals: Debit, $287,642.51; credit, $278,262.15. (a) What amounts or items would you look for to detect the error? (b) If the proof by charges and credits method were used and if the total of the charges was $115,981.00, what amount would you look for?

CHAPTER XXII.

Profit and Loss Account.

In closing the books at the end of a period, it will be found that, provided the accounts have been adjusted to show their true position, every account therein indicates either a feature of the progress of the undertaking up to the date of closing or the condition of some element of value as at that particular moment.

Those relating to the condition of affairs are allowed to remain on the books, while those indicating progress, or which are required in determining progress, are transferred to an account or accounts, which summarize the results obtained.

There are a number of methods of summarizing the accounts indicating progress—the revenue accounts as they are usually called—so that the results for the fiscal period may be determined properly.

Profit and Loss Account.

The most simple method is to close all of the revenue accounts into one account—Profit and Loss—without making any attempt to group items of a class. A profit and loss account prepared under this method summarizes the revenue accounts to show the net profit or loss only. It does not show gross profit, profit on trading, or profit on ordinary business.

The next method in order, corresponding to the details shown, subdivides the accounts into two groups, Trading, and Profit and Loss. The trading account under this method shows cost and gross profit, on the debit side, and net sales, on the credit side. All other items are shown in the profit and loss account. The balance of a trading account, operated in this manner, indicates the gross profit of the concern. Selling expenses are not shown in the trading account when it is operated under this method. The profit and loss account may also be subdivided to show the profit on ordinary business, separate from the net profit if desired and, in general, where profits or losses result which are not properly traceable to the ordinary business operation, this method is advantageous.

A third method of subdividing the revenue accounts, applicable only where the accounts are departmentalized, classifies them according to departments, often, Manufacturing, Trading, and Profit and Loss. Under this method, all items pertaining to the manufacturing department are shown in the manufacturing account. Items which relate to the trading department are shown in the trading account but the balance of this account, under this method, represents the profit on trading instead of the gross profit as in the preceding case, although the account may be subdivided to show both gross profit and profit on trading if desired. The profit and loss account under this method is practically the same as described under the preceding method with the exception that certain items relating to manufacturing or trading are now shown in the preceding sections. The remaining accounts will represent either administrative items, or items of an extraordinary nature which must be shown below a point which indicates the profit on ordinary business. The administrative items are usually shown in a subdivision designated Administration Section and the extraordinary items are shown in a subdivision designated Net Profit Section.

If the profit and loss statement is intended to show the disposition of the profits, it is customary to attach still another section designated Appropriation which contains that information, and which in fact is but a copy of the surplus account.

Other methods of dividing the revenue accounts are also found, each one of them being used by some particular line of business, as examples, railroads usually divide their revenue accounts into maintenance, transportation and miscellaneous operations; electric companies, into generation, transmission to transforming station, and distribution; gas companies, into production and distribution. A peculiarity often found in gas company accounts is in connection with the charge to distribution, covering the cost of gas lost in distribution. The production section gets credit for all gas produced but the portion lost in distribution is treated as a separate item of expense in the distribution section.

There is a considerable lack of precision in accounting terminology in connection with the use of the term profit and loss as applied to a statement displaying profits or losses. Often it is intended to signify an account containing subdivisions for: manufacturing, trading, administration, net profits, and profit and loss appropriation items, while, in other cases, the manufacturing and trading sections are presumed to be separate accounts and the remaining three sections are considered as the profit and loss account. This difference in the application of the term does not cause confusion as it merely indicates the manner of showing the division in the ledger or in the reports. The classification of the items is the same in each case. Where there are three accounts each division becomes a separate entity and is usually shown on a separate page in the ledger or reports. When there is but one account, the manfacturing and trading items are merged in the profit and loss account and become separate sections thereof.

The profit and loss account is also designated income account, revenue account, loss and gain account, or operating account, although each of these terms has certain uses to which it seems best adapted. As examples, income account may be applied specifically to an account showing the income of eleemosynary organizations while revenue account may be used to specifically indicate the revenue of a municipal organization although the terms are used interchangeably in connection with the earnings of a railroad. The term operating account is used to show the profit or loss of mines, transportation companies or manufactories but it does not apply to trading concerns.

MANUFACTURING.

The manufacturing section or account is intended to disclose the results of manufacturing during the period under review.

The principal items which relate to this section are:

The cost of material consumed;
The cost of direct labor; and
The indirect expense of the factory.

The account, therefore, should be divided to show, first, the prime cost, then the completed cost of the goods manufactured. It would appear similar to the following:

MANUFACTURING

To Cost of Material Used:			By Prime Cost, Carried forward	X
Inventory, raw material beginning of period	X			
Purchases	X			
	X			
Less Inv. end of period	X	X		
To Labor		X		
		XXX		XXX
To Prime Cost, bro't down		X	By Inventory partly m'f'd goods, last of period	X
Inventory, partly m'f'd goods, beginning of period		X	By Cost of goods m'f'd carried for'd	X
Power, Reserve for Dep. on machinery, etc.		X		
		XXX		XXX

The inventory of partly manufactured goods at the end of the period should not be deducted from the inventory at the beginning of the period for it contains portions of the items consumed during the period as well as of the original inventory and is in fact an offset to the total of the charges to this section.

Prime cost is usually defined as the cost of raw material consumed plus the amount expended for labor. Prime cost is in fact direct cost; it is the item which serves as the basis for the apportionment of the indirect cost items. If in a particular business, all labor were apportioned to cost, proportionate to material consumed, labor would not be an element of prime cost.

The manufacturing account should be prepared so that it will divide the items to correspond with the application of the various items to the cost of goods manufactured, as shown by the cost books. If certain items are supposed to be covered by a particular oncost charge, they should be shown separately from other items which are distributed to the cost of the goods in some other manner. As an example, if rent, light, and heat are to be distributed to cost, proportionate to labor hours, the manufacturing account in the general books should show these items separately so that their total can be compared with the amount of oncost distributed in the cost books.

Trading.

This section or account covers the sale of the goods and the profit thereon. In a purely trading concern such items as infreight, duty, etc., would have to be included in this section, but in a manufacturing concern they would relate to raw material and would be a portion of the cost of manufacture and therefore would appear in the manufacturing section.

The Trading Section should be arranged to disclose:

The cost of the goods sold (the turnover),
The net sales,
The gross profit,

The expense of selling, and
The profit on trading.

In form, it would be as follows:

TRADING

To Cost of Goods sold:			By Sales:	X	
Inventory, Finished Goods, beginning of period	X		Less Returns, Allowances or Trade Discounts	X	X
Cost of Goods m'f'd brought down	X				
	XX				
Less Inventory, end of period	X	X			
To Gross Profit, carried for'd		X			
		XXX			XXX
To Selling Expense:			By Gross Profit: bro't down		X
Salesmen's Salaries	X				
Commission	X				
Traveling Expense	X				
Rent of Salesroom	X				
Cartage or Freight outwards	X	X			
Reserve for Bad Debts (based on Sales)		X			
To Profit on Trading, carried for'd		X			
		XXX			XXX

This account should not be confused with the trading account of a strictly selling organization as described in the first part of this chapter. When a trading account is prepared for a highly departmentalized concern, all expenses of the selling department are included therein but where, as in the first case, the sole purpose of the organization is selling and the business is not departmentalized, all of the expenses are shown in a succeeding section or account.

Reserves for bad debts usually are shown in the trading section on the theory that the loss occurred at the time the sale was made, although in some cases, it is shown in the administration section on the theory that the loss is due to improper management. Bad debts, charged off in a particular year, which relate to a preceding period should be shown in the appropriation section as "Profit and Loss Adjustment of Prior Years," provided there is no reserve account to care for them.

Where a concern has a number of selling departments, as in a case where two products are handled, the trading account may be subdivided to show the gross profit on each product or department. The expense applicable to both departments should be shown in a general trading account corresponding with the second section of the account displayed above.

ADMINISTRATION SECTION.

The administration section is intended to contain all items which relate to the expense of conducting the business.

The information usually desired is:

The expense of conducting the business, and
The ordinary business profit.

In form, it might be as follows:

ADMINISTRATION.

To Management or Office Salaries	X	By Trading Profit, bro't down	X
General Expense	X		
Office Supplies	X		
Rent	X		
To Ordinary Business Profit, carried for'd	X		
	XXX		XXX

In many cases, the compensation of managers is based on the net profit. As an example, the manager of a grocery may receive 2 per cent of the net profit. The compensation of the manager should be shown in this section, even though it is necessary to use the figures in the net profit section to determine the amount due him. If, as in the above example, the compensation is a percentage of net profit, the amount shown as net profit before ascertaining the amount of compensation, contains the compensation, hence it is necessary to divide the amount which represents the total of the actual net profit and the compensation by 100 per cent plus the per cent of the compensation to get 1 per cent of the actual net profit. To illustrate further, let us presume that in our example the total of the net profit and the compensation were $20,400; dividing by 100 plus 2 or 102 gives $200 which is 1 per cent of the actual net profit; multiplying by 2 gives $400, the compensation of the manager. In many C. P. A. problems it is quite difficult to determine whether the payment to the manager is a gratuity or is a portion of his salary. If it is a gratuity, it should appear in the appropriation section and the above method of computation is unnecessary.

Net Profit Section.

This portion of the statement receives all of those items which are a direct result of the excess of, or deficiency of capital or which are not in the ordinary course of business. As credits, such items as income from outside investments or cash discount, secured owing to the ability of the firm to make prompt payment, are shown; while such items as interest paid on loans or bonds, etc., or unusual losses represent the charges thereto.

The Ordinary Business Profit or earning capacity of the concern is the basis on which goodwill is valued, therefore, any income, expenses or losses that occur which are not in the ordinary course of business or which may be traced to capital that is not required in the business or which the business requires but which must be received from outside sources, should be included below the dividing line which indicates the profit on ordinary business.

The Net Profit section should contain the following items:

NET PROFIT

To Expenses, incidental to securing capital:		By Ordinary Business Profit, bro't down	X
Interest on Loans, etc.	X	Income from Investments	X
Cash Discount on Sales	X	Cash Discount on Purchases	X
To Unusual Losses:			
Defalcations, Fire, etc.	X		
	XXX		XXX

Considerable difference of opinion exists in connection with the treatment of cash discounts, and the items often are found in other sections of the profit and loss account. We have placed them in the net profit section, as we believe they represent the result of either a lack or an excess of capital. Cash Discount on Purchases is not an element of cost for, if a profit is made during any one period of a company's existence, owing to cash discounts on purchases, it surely must be due to finances rather than to the ability to purchase cheaper. When selling the concern, consideration would not be given earnings of this sort when estimating the goodwill, although possibly the fact that the firm has always discounted its bills may be of some value. The ordinary business profit of the concern as displayed by the profit and loss account, for this reason, should not be disturbed by the inclusion of discount on purchases in the manufacturing or trading accounts. The discount should appear in the net profit section below the item ordinary business profit.

The same argument holds true of cash discount on sales. It has been asserted that such a discount is purely a reduction of the selling price of goods. Possibly it is in some cases but, in general, it is an after consideration and is in the nature of an offer made by the seller in an effort to secure the payment of accounts in advance of their due date; the acceptance thereof, depending entirely upon the finances of the purchaser.

Cash Discounts on Purchases are undoubtedly a question of finances rather than of cost and as Cash Discount on Sales is the effect of the same transaction, in the other person's books, it also must be a question of finances. It, therefore, should appear in the net profit section of the profit and loss account.

The above theory in favor of showing all cash discounts in the net profit section is only applicable to true cash discounts. In many cases, an allowance is made for the prompt payment of bills, which is an adjustment of the invoice price and is not in reality a cash discount. In such cases, the allowance should be deducted from purchases or sales as the case may be. As an example, let us consider the case of telephone or gas companies, rubber manufacturers, and flour millers. They usually allow a discount of from 5 to 20 per cent for prompt payment. In general they do this, not because their finances are in poor shape, but rather to keep their ledgers free from bad accounts. Their procedure is to ascertain, first, the nominal selling price of the article or service. To this is added the amount which is to be deducted later as a discount. This gives the quoted selling price. Purchasers, who are in good financial condition, figure the net amount as the price of the goods, for they intend to pay promptly, so that no good business is lost through excessive quotations. On the other hand, organizations of poor financial standing which are unable to discount their bills buy from concerns which do not increase their quotations to cover anticipated discounts or, if they are unable to buy elsewhere, pay the invoice price. Cash discounts, taken or granted under this condition, are but an adjustment of the quoted price of goods, to the true market value. The failure to take the discount results in a penalty against the purchaser so that in order to avoid the penalty, he always favors the concern granting the discount if it is possible to do so.

Another argument in favor of showing cash discounts in the net profit section is found in the method of handling purchases when inventorying. The invariable rule is to inventory at the list price but to deduct all trade discounts or similar discounts which are made to adjust list prices. True cash discounts are not deducted from the inventory, therefore care should be taken to see that the charges to the purchase account are not affected by the cash discounts, otherwise the results will be misleading.

Profit and Loss Appropriation Section.

This section is virtually a transcript of the surplus account. It is intended to show the profits available for distribution and their disposition. It might contain the following items:

P. & L. Appropriation.

(Partnership)				
To Interest on Capital	X		By Balance from Previous Year	X
To Apportionment among Partners	X	XXX	By Net Profit, Current Year	X
(Corporation)			By Profit from Sale of Fixed Assets (If apportionable over prior years)	X
To Special Reserves	X			
To Profit and Loss Adjustments relating to prior years	X			
To Dividends	X			
To Balance (Undivided Profits)	X	XXX		XXX

In order to facilitate the preparation of profit and loss accounts and balance sheets, the following method of procedure is suggested.

First. Index the items of the trial balance using the following letters to represent the section listed therewith:

A Manufacturing
B Trading.
C Administration.
D Net Profit.
E Appropriation.
F Current Assets.
G Fixed Assets.
H Current Liabilities.
I Fixed Liabilities.
J Proprietorship.

If special subdivisions are required as in the case of a concern operating two or three selling departments, additional subdivisions may be used as follows:

B-1 Trading, Own Product.
B-2 Trading, Purchased Goods.
B-3 General Trading.

Or, when a special section is required, "X" may be used to indicate it, as in a case where plant buildings are treated separately and where rent is charged against each department, to offset the maintenance of the buildings.

Second. Prepare skeleton profit and loss account and balance sheet forms and transcribe each item of the trial balance to its proper place on the skeleton forms. A little practice will enable the student to properly place the items without difficulty.

Third. Prove the equality of the two sides of the statements before balancing each section.

Fourth. Insert the balances of each section and carry them to a succeeding section. As an example, insert the cost of manufacturing, to balance the manufacturing section, and carry it to the trading section.

QUESTIONS

1. Describe the process of closing the books of a corporation at the end of a fiscal year, showing a trading and a profit and loss account and explaining the treatment of reserves for depreciation and for bad debts, as well as for the surplus or deficiency resulting from the operations of prior years.

2. Explain the difference between a trading account and a profit and loss account.

3. (a) What constitutes manufacturing cost?
   (b) What constitutes selling cost?

4. When preparing trading and profit and loss accounts at the end of a fiscal year, in what manner would you treat the following subjects:
   (1) Surplus or deficit brought forward from prior year;
   (2) Reserves for depreciation;
   (3) Reserves for bad debts;
   (4) Interest received on bonds;
   (5) Dividends received on stock;
   (6) Surplus or deficit carried forward to succeeding year?

5. State your understanding of the difference between gross profit and net profit.

6. In preparing a statement of the earnings of a business, covering a period of five years, in order to determine what the average earning capacity of said business had been, how should the expenditures for interest paid on bills payable, loans, and accounts payable be considered?

7. After auditing the books of a manufacturing company for a period of ten years, you are asked to give a certificate as to the net earnings of the business for those ten years for the purpose of a sale based on the earning capacity of the property. What items of expense, heretofore charged annually through the profit and loss account, may be properly eliminated in the preparation of your certificate, and why?

8. Without using figures, draft a profit and loss account in which gross profits are distinguished from net profits.

9. In a manufacturing concern, where more than one method of oncost apportionment is used, how should the items in the manufacturing account be subdivided?

10. In making up a statement of profit and loss, where would you show: (a), cash discount allowed customers for prompt payment of bills; (b), cash discount deducted in payment of invoices of your clients? Explain briefly and give reasons.

11. Give proper disposition of any balance appearing in a profit and loss account at the end of a fiscal year.

12. In summarizing the nominal accounts of a manufacturing concern to determine the result of operations for a period:

(a), What would be the order and character of the three closing accounts;

(b), What nature of accounts form the elements of each?

13. What is the purpose of a trading account, and what general result should it show? In closing the ledger what disposition would be made of the balance of the trading account?

14. State the different steps in the process of closing the ledger at the end of a fiscal period and give the reason for each step.

15. Explain the difference between a trading account and a profit and loss account and state in which account you would place the following items, giving your reasons:

Purchases.	Advertising.
Cartage and Freight	Sales.
Debenture Interest.	Stock on Hand.
Depreciation.	Returns.
Allowances.	Discounts.
Bad Debts.	Fuel.
Wages.	Packages.
Commission.	Directors' Fees.

16. In taking up the audit of the accounts of a company for the year December 31, 1912, you find that the adjustments made by the auditor for the year 1911 have not been taken on the books and therefore the books are not in agreement with the audited accounts as of that date. Assuming the following were the adjustments referred to, what disposition, if any, would you make of the items at this audit? Illustrate your answer with draft journal entries.

(1)	Invoices for merchandise in transit at December 31, 1911, not on books	$ 5,000.00
(2)	Invoices for merchandise received but not entered	10,000.00
(3)	Reserve for bad debts (said debts were written off in 1912)	2,000.00
(4)	Factory expense, bills of 1911 not entered until January, 1912	750.00
(5)	Pay roll accrued at December 31, 1911	6,000.00
(6)	Insurance premiums paid in advance at December 31, 1911	500.00
(7)	Taxes for the year ending December 31, 1911, not entered until May, 1912	1,000.00
(8)	Reserve against excessive valuation of inventory, December 31, 1911	10,000.00
(9)	Depreciation not taken up on books prior to January, 1911, $5,000.00, year ending December 31, 1911, $1,000.00	6,000.00
(10)	To write off an unlocated difference in the accounts receivable controlling account at December, 1911, which, however, was located and cancelled in 1912	1,500.00

CHAPTER XXIII.

Balance Sheet.

A Balance Sheet is an account prepared from double entry books to display the status of a business as at a particular moment. It is similar to a trial balance taken immediately after closing the books, but differs to the extent that the items therein are grouped or summarized to display some particular information, while the trial balance is merely a list of debits and credits.

The object of a balance sheet is to display a true statement of the financial condition of a concern. It is well, however, to bear in mind that such a statement, taken as a whole, is not to be considered as a statement of facts but rather as a statement of opinion, the value of which varies greatly with the knowledge and experience of the persons making it. True, all of the items therein are facts if the statement is prepared by a person versed in the work, but, owing to the numerous methods of valuing the different classes of assets and the various degrees of responsibility existing in regard to the liabilities, it cannot be accepted as anything more than a synopsis of ledger balances which have been adjusted to show the condition of each element of value according to the prevailing rule of its valuation. To the extent that these balances have been adjusted by the auditor to display the proper value of the accounts for balance sheet purposes, the balance sheet may be accepted as his opinion of the condition of the concern.

In the preparation of balance sheets, much depends upon the knowledge and ability of the auditor to display the facts in a manner that they may be easily and properly interpreted. Items, such as reserve accounts, which are offsets to other accounts should be deducted from their major account, while items of a class like Surplus and Reserve Funds should be grouped or, possibly, if their individuality is not important, be shown as one item. Care should be taken, however, that the items grouped are analogous to each other, otherwise the term applied to the group may be misleading. It is also advisable to display like groups adjacent to each other so that they, in turn, may be taken individually, collectively or comparatively with each other as desired.

One of the principal uses to which a balance sheet is put is in displaying the ability of a concern to liquidate its current liabilities readily, in connection with loans from bankers, etc. Such a balance sheet should display prominently those items which the banker considers most important. His loans are usually for but a short period and for this reason he is not concerned to any great extent with the fixed assets, therefore, we should display the current items first, placing on one side the current assets and on the other the current liabilities. By having them in juxtaposition with each other the banker may easily compare the one with the other and determine the excess of the one over the other, and the possibility of meeting the various claims from the assets available.

Certain of the assets, undoubtedly, are not as readily realizable as others, while some of the claims, although current, may not require attention as soon as others, therefore, we should endeavor to show the assets in the order of their availability and the liabilities in the order of their claims upon the assets.

Fixed assets are all supposed to be equally unavailable, therefore they are usually listed in the order of their prominence or magnitude.

Expenses paid during one period that properly belong to another, although, possibly, not current assets, reduce the accumulation of current liabilities; hence, they may be included among the current assets to facilitate the determining of the net current avails.

Fixed liabilities are usually secured by the fixed assets and it is well to place these items opposite each other to facilitate comparison.

In creating the capital, there may have been certain elements included which are of uncertain value, and which, at best, would exist only in an intangible form. These items are offsets, to a certain extent, to the proprietorship and should appear just opposite it so that, if desired, they may be deducted therefrom mentally to determine the total tangible assets in the business.

The general order of the groups of items, as we have outlined them, is not intended to apply in all cases, for the relationship of the party for whom the balance sheet is to be prepared must be considered when determining the proper form. A bond holder, whose claim does not mature for ten or twenty years, would not be interested particularly in the current items and, for him, we might display the fixed liabilities in comparison with the fixed assets and give these items first position.

The stockholders would be most interested in the disposition of the capital invested and would wish to learn the amount permanently invested and the proportion retained for working capital. In order that they may secure this information readily, the proprietorship and fixed liabilities should be shown first, in comparison with the capital assets, followed by the current items.

The following illustrates a common and very desirable form of balance sheet:

BALANCE SHEET OF THE "X" CO., AS AT....................................191....

Current Assets				Current Liabilities			
Cash		X		Bills Payable		X	
Investments, Bonds, etc.		X		Accounts Payable		X	
Bills Receivable	X			Sundry Charges Accrued:			
Accounts Receivable	X			Int. on Bills Payable	X		
	—			Int. on Bonds	X	X	
	X				—		
Less Reserve for Bad Debts	X	X					
	—						
Inventories:							
M'f'd Goods	X						
Goods in Process of Manufacture	X						
Raw Material	X	X					
	—						
Investments, Real Estate, etc.		X					
Deferred Charges:							
Unexpired Insurance	X						
Rent paid in advance	X	X		Total Current Liabilities		—	XX
Total Current Assets	—	—	XX				

Fixed Assets				**Fixed Liabilities**		
Real Estate		X		First Mortgage Bonds	X	
Buildings	X					
Machinery	X					
Furniture and Fixtures	X					
	X				—	XX
Less Res. for Dep.	X	X	XX			
		—		**Proprietorship**		
Goodwill		X		Capital	X	
			XX	Undivided Profits	X	XX
		—	XXXX		—	XXXX
Contingent Liabilities						

Treasury stock, donated to the company, is usually shown among the current assets just before the deferred items.

Unsubscribed or unissued stock should appear as a deduction from the capital stock.

Organization expenses, if they are being written off in installments, are a deferred charge and should be shown as such but if they are not to be written off, they should be shown in the same total with goodwill.

Sinking fund reserves are analogous to surplus and should be shown in the same section while sinking fund investments are current assets.

Additions to fixed properties, acquired during the fiscal period are usually shown separately from the amount on hand at the beginning of the period, but the total of both is usually extended. Depreciation on the additions is usually computed at half of the usual rate, on the theory that the average date of purchase is June 30th.

Investments in subsidiary companies are shown as fixed assets in the balance sheet of the holding company.

There are a number of other forms of balance sheets but as there does not seem to be any logic in the arrangement of items and as they seem to be but an arbitrary arrangement of accounts adopted long before accounting became a science, we are not attempting to discuss them.

QUESTIONS

1. What is:
   (a) A balance sheet;
   (b) A trial balance?

2. Why must the revenue account be completed before a balance sheet can be prepared?

3. What are the principal differences between a trial balance taken before the books are closed and one taken directly after they are closed?

4. In presenting a balance sheet, what items are matters of fact and what items are opinions, and, taken as a whole, are you, as auditor, establishing a fact or an opinion?

5. In drawing up a balance sheet, is it desirable to show the assets and liabilities by groups, and if so, into what groups would you classify? Give reasons for your classification.

6. In the preparation of a balance sheet for a manufacturing company, what general plan would you follow in determining the order of sequence in which the assets and liabilities should be stated?

7. Without using figures, outline a balance sheet for a manufacturing corporation and state how you would treat each of the following items:
   (a) Depreciation on plant;
   (b) Interest payable accrued;
   (c) Unexpired insurance;
   (d) Provision for bad and doubtful accounts receivable.

8. On January 1, 1908, the condition of a small trading company as determined by an examination at that date was as follows:

ASSETS		
Furniture and fixtures	$2,000	
Cash	500	
Notes Receivable	3,000	
Accounts Receivable	5,000	
Merchandise on hand	4,000	$14,500
CAPITAL STOCK AND LIABILITIES		
Capital Stock	$5,000	
Notes Payable	3,000	
Accounts Payable	6,000	
Surplus	500	$14,500

During the month of January the bookkeeper made all entries in the cash book and in the sales book, but made no journal entries and did not post his ledger. In addition to the entries appearing in the cash book and on the sales book the following transactions took place during January: merchandise purchased on credit amounting to $6,000, notes payable amounting to $6,000 renewed, special allowance of $500 made to customers.

The credit sales journal had two columns, one for the billed amounts and the other for the cost of the goods sold. The billed amount was $8,000 and the cost was $5,000.

The following statement gives a summary of the cash receipts and disbursements for January:

Cash Received:		
Collected from customers	$4,000	
Collected on note receivable	2,000	
Collected on merchandise sold and not entered on sales book (cost price $500)	600	$6,600
Cash Payments:		
Interest on notes payable	$ 45	
Salaries	500	
Rent	200	
Sundry expenses	300	
Accounts payable	5,000	$6,045

Prepare a balance sheet as of January 31, 1908, and a statement of profit and loss based on the book value of the merchandise.

9. You are the auditor of a manufacturing corporation which has been operating five years and which has, among other accounts, the following: Plant Account, $700,000; Reserve for Depreciation, $200,000; Surplus, $100,000. The officers ask you to certify to a statement embracing the above items in the following form, viz.: Plant, $700,000; Surplus and Reserve Accounts, $300,000. State: (a), whether you approve same; and (b), the reasons supporting your answer.

10. A corporation has an issue of preferred stock entitled to cumulative dividends of 7 per cent a year. The company has paid, on this stock, dividends at the rate of 5 per cent a year for ten years. Should the arrears of dividends appear on the balance sheet, and if so, how?

11. In closing a set of books state how you would treat the following on the ledger and on financial statements:

Depreciation of machinery	$1,500
Expenses prepaid	500
Discount on customers' accounts 3%	1,080
Salaries and wages accrued	675

CHAPTER XXIV.

Classified Journals—Continued.

Now that we have covered controlling accounts and the division of ledgers, we may proceed with the explanation of the more complex columnar books.

The principal advantages to be derived by using columnar books are that additions may be proved from page to page; numerous postings of a class may be treated as one item and posted as a total, and similar items may be posted in detail to certain records, and in totals, only, to other records, as in the case of a sales book, the individual items of which are posted to the debit of the customers' accounts in the customers ledger, and the total posted to the credit of the sales account and to the debit of the controlling account for that ledger in the general ledger.

Cash Journals.

A cash journal differs from an ordinary classified journal only to the extent that the one contains columns for the cash account and the other does not. The fact that the cash book usually requires about the same distribution columns as the journal facilitates the combining of the two books. This reduces the number of books and, to the inexperienced, greatly simplifies the work of keeping a record.

In general, a cash journal is prepared with debit and credit columns for each important account found in the general ledger, including cash and the accounts representing the subsidiary ledgers. Its operation is so very simple and so easily explained that it is installed, invariably, where an inexperienced person is to keep the books and where the accountant is to verify the work.

Some accountants prefer to use a book with explanation columns in the center and with all of the debit accounts on one side and all of the credit accounts on the other as this greatly facilitates the proof of the work—the total of the columns on one side equaling the total of the columns on the other. Others prefer that the debit and credit columns for each account appear together. The latter seems to be the easier to operate in connection with the majority of accounts but, as a considerable number of accounts only receive entries on one side, except at rare intervals, as in the case of expense accounts, the majority of entries in which are debits, it causes a considerable waste of space. This, however, can be overcome by eliminating the columns that are not required.

Wherever both sides of all accounts are represented it is easy to prove the entries on a page, for the debits and credits alternate across the page; but where some of the columns are omitted, confusion results in extending the amounts into the respective columns as well as in balancing and it is often quite difficult to prove a page.

When preparing a cash journal, debit and credit columns should be provided for each of the following accounts: discount, cash, bank, and for each subsidiary ledger; debit columns should be provided for purchases, expenses, and similar items; credit columns should be provided for sales. Debit and credit columns headed "Miscellaneous" should be provided, also, to receive the items which are not provided for in the other columns. Wherever "Miscellaneous" columns have been provided, it is not necessary to have a set of columns headed "General Ledger," for the one would contain items of the same class that would appear in the other.

Often entries occur in adjusting accounts which are unusual and for which columns have not been provided, as in connection with credits to expense accounts or debits to sales, and instead of making an entry in the Miscellaneous column, a red ink entry is made in the regular column. This makes the proving of the book still more complex, unless the deductions are actually made, and, if they are made, it becomes rather hard to prove the ledgers or localize errors by the method of verifying the charges and credits to the accounts for the period under review. For these reasons the red ink deductions should be avoided. As an alternative the item could be placed in the miscellaneous column and posted separately.

In closing the cash journal or any classified journal at the end of each month, it is customary to total each column on a different line and extend the amount into the column representing the general ledger. The total of the general ledger, or miscellaneous column, will then represent the total charges and credits to the general ledger from the journal for that period.

LEDGER JOURNAL.

Some concerns, even very large ones, are able to summarize their transactions so that no ledger is necessary for recording their business. They usually operate a Private Cash Journal with columns provided for nearly all of the accounts and with Miscellaneous columns, debit and credit, for the unusual entries. They also have, usually at the top or the side of each page, distribution accounts into which the balances brought forward from previous pages may be carried, as well as the items appearing on that page in the Miscellaneous column.

To illustrate: A cash journal has been provided as above, with columns for Cash, Bank, Expense, Sales, Purchases, Customers, Discounts, etc., and also Miscellaneous items. Adjacent to the Miscellaneous columns is a narrow portion provided with columns similar to a ledger and in this section are found accounts with Sundries, including Capital, Surplus, Plant, Inventories, etc., which possibly would not receive many additional entries and which might be explained fully in some other portion of the book, Bills Receivable, Bills Payable, Miscellaneous Income, Expense, etc. Into these accounts, all items appearing in the Miscellaneous columns are carried so that at all times the adjacent ledger accounts will balance the Miscellaneous columns. Whenever it becomes necessary to carry the footings forward to another page, the balances of the ledger accounts must be carried, also, unless short leaves have been provided for the various journal columns and the ledger portion of the book is allowed to extend beyond them.

Voucher Register.

The tendency of modern times is to eliminate as much of the detail work as is possible in connection with accounts. Much was accomplished upon the advent of controlling accounts, which allow the books of large concerns to be divided among a number of operators or placed in the cities of easiest access to the various fields of operation, and upon the adoption of columnar books, which reduce the volume of posting and improve the accuracy of the work, but undoubtedly the greatest advance of all is the voucher system of keeping accounts with creditors.

The great advantages of the voucher system are that practically no posting is required; all details relative to incurring a claim, receiving and apportioning the benefits, and its ultimate payment, with the acknowledgment of the payee and the authority and verification of each act in connection with the claim, are recorded and retained upon a few slips of paper; no unauthorized claim can be paid; the effectiveness of an audit is greatly increased, and the expense thereof greatly reduced.

Its disadvantages are that a considerable expense is entailed on account of filing and recording the vouchers and in the labor involved in having them vised by the various officials, and, also, that no ledger accounts are available for reference in future years.

In operation, the system consists of preparing a voucher for each claim the moment it is received and of having every step in the progress of the claim and the articles it represents recorded and vised by the persons responsible. Each claim is considered as a separate account and is treated much the same as "Sundry Debtors" in the books of account.

The forms used to properly record the transactions vary with every business. They usually consist of a check and a voucher or possibly a combination of the two. The check might be the standard form with the addition of a voucher number for cross reference, or it might contain a summary of the transaction, either on its face or on its back. It often includes a form of receipt for the signature of the payee, but as this does not serve to bind the payee, except in the case of disputed claims, the plan is gradually going out of use.

The combined check and voucher is likewise disappearing, principally on account of the objections advanced by bankers owing to the labor involved in handling it and the tendency of the makers to increase their responsibility by demanding that they see that it is properly receipted, etc., before paying, and also because the record of the transaction, discounts, etc., becomes, to a certain extent, public property.

The most satisfactory form of combined voucher and check is the one that leaves with the payee a record of the account or items that the check is intended to pay and which does not encumber the bank with any paper other than the standard check and which also retains with the original voucher an exact copy of the check.

This is accomplished by combining the check form with a form of remittance letter, in duplicate. The check and remittance letter and the carbon copy are all prepared at the same time. The check and remittance letter are forwarded to the payee who deposits the check and retains the remittance letter for reference. The duplicate becomes the voucher jacket for the invoices paid. The voucher jacket contains a copy of the check and the remittance letter, on one side, but, on the other side, lines and account names are printed so that the transaction can be journalized therefrom. Usually there are spaces for credit items at the top of the voucher jacket to provide for credits to creditors accounts, discounts, or similar accounts and, below these, spaces are provided for all of the departmental purchase or expense accounts. The spaces must be arranged to correspond with the columns provided in the voucher record for their registration.

The voucher record, in turn, should be arranged to provide for the easy distribution of the items and their proof and should be of the columnar type. Columns must be provided for all controlling accounts and accounts which will receive a great number of entries and, in addition, columns debit and credit, under the heading "Miscellaneous" into which items, for which special columns have not been provided, may be entered. Many of the debit columns will be closely related, therefore the columns which will contain items of a class should be grouped under the main heading. As an example, Salesmen's Salaries and Salesmen's Traveling Expense should be grouped under Selling Expense.

A voucher record provided as outlined above may have columns for:

Issue:
- Date
- Voucher No.
- Miscellaneous Creditors or General Ledger Accounts, Cr.
- Vouchers Payable, Cr.

Payment:
- Date, Check No. or Folio

Distribution:
- Purchases
  - Raw Material
  - In Freight
  - Duty

Selling Expense
  Advertising
  Salaries
  Traveling
  Commission
  Out Freight
  Rent
General Expense
  Salaries
  Rent
  Postage
  Stationery
Miscellaneous
  Account
  Folio
  Amount

It will be noticed that we have provided for posting credits to miscellaneous creditors in the same column with the miscellaneous general ledger accounts. This is done to provide for credits to creditors whose accounts are not to be paid promptly or who have a running account in the ledger.

Some concerns use a voucher register but do not use the regular voucher system of paying accounts. They post all credits to creditors accounts in the ledger and then pay the account instead of the voucher. This method is rapidly superseding the regular voucher system as it combines the advantages of a ledger account with the advantages of the numerical recording and the viseing system of the voucher. Where this method is adopted a vouchers payable column is not required unless it is desired for use in connection with a very few accounts which are so unimportant that a ledger account is not desired.

VOUCHER DISTRIBUTION LEDGER OR JOURNAL.

The greatest objections to the voucher system are, that usually an enormous book is used to record and distribute the amounts of the vouchers; that such a book must be specially made at considerable expense; that it is unwieldy and cumbersome to handle; and that the greater portion of each page is not written upon.

These objections may be eliminated by the adoption of a Voucher Distribution Ledger or Journal. Such a book contains a sheet for each of the principal classifications of charges and each sheet is provided with columns for each subdivision of the principal account that is desired. The voucher record then requires but one column for each group of accounts instead of one for each subdivision; the distribution book containing an analysis of the individual items in detail.

To illustrate: In a General Expense column in the voucher record we may include all items relating to general expense, irrespective of department or kind.

In the distribution ledger or journal the same items will appear again, but carefully classified, possibly under headings:

(a) Office Salaries
(b) Rent
(c) Charity
(d) Telephone and Telegrams
(e) Stationery
(f) Postage
(g) Light and Heat
(h) Janitor and Supplies
(j) Miscellaneous

The total of the items on the distribution sheet must equal the total of the column containing the same items in the voucher record and, instead of posting the total of the items as they appear in the voucher record to the general ledger, the total of the respective columns are posted from the distribution sheet.

In order to reduce the expense of preparing the sheets for the voucher distribution book, a plan of lettering the columns may be used to represent the various subdivisions of each account, then the same form of sheet will apply for each classification; the various letters designating the exact subdivision of the account to be charged as determined by reference to the distribution analysis of the voucher, on the back of the voucher.

To illustrate: If the distribution sheet is to be used to record general expense items, column "a" will contain office salaries, but, if the sheet is to be used to contain selling expense items, column "a" will answer for advertising.

An alternative method is to provide a separate sheet in the distribution book for each sub-account, as office salaries, rent, etc., and to have columns ruled to contain the entries for each month separately. At the end of each month, the totals of the entries made on each sheet during the month are carried forward to a special Summary Sheet which contains a recapitulation of all items of a class, classified according to months. When totaled, the monthly column of the Summary Sheet should equal the amount of the controlling column in the voucher record. The advantage of this method is that the results of each month may be compared easily with other similar periods and, if summary sheets of different lengths are used, the results of several years may be displayed at once without rewriting.

It, no doubt, has been noticed that we have designated the distribution book as either a journal or a ledger. When used as in the first example given, it is a journal, for the items contained therein are posted to the general ledger, but when used as in the second example it is a ledger, for the amounts therein are not posted to any other book but are allowed to accumulate in the distribution book until the end of the year. In this case the expense account in the general ledger is the controlling account of the distributing book or as it is sometimes called, the expense ledger.

QUESTIONS

1. What are the advantages of a columnar cash book?

2. Give heading for a combined cash book and journal, and state what you consider to be the advantages and disadvantages, if any, of such a book.

3. Rule a cash book to provide for controlling accounts of debtors and creditors, also for discounts in settlement of both receivable and payable accounts.

4. What method would you recommend for recording the cash receipts on the general cash book of a company operating ten branch houses, each of which deposits its daily receipts in a separate bank? Describe fully.

5. Describe the system of running a discount column in the cash book and show how the entries are made both in the general ledger and in the subsidiary ledger.

6. What are the functions of the cash book? Describe the peculiarities of one or more cash books with which you are familiar.

7. What is the advantage of having a cash account in the ledger?

8. What should a cash account in the ledger show?

9. Draw a form of cash book for a corporation where a complete voucher system is in operation and where the following conditions exist: Two country and two city ledgers are kept, also an operating ledger and a private ledger. It is the practice of a majority of the customers to take advantage of the discounts given for cash in thirty days. It is also the custom of the corporation to deduct the discount they intend to take advantage of on goods purchased by them, by means of a column in their voucher journal. Their business is such that 20 per cent of their sales are made for cash and 10 per cent on C. O. D's. The chief expenditures of the corporation are for woolen fabrics, notions, fuel, light and labor.

10. A company, engaged in the manufacture and sale of products, desires a separation of their expenses under proper divisional or department heads. Illustrate, make your own selection of some manufacturing business, and prepare a classification of accounts. What ledger headings would you use?

11. Submit rulings for correlated cash book, purchase book and sales book, to classify purchases and sales in three divisions and to provide for miscellaneous purchases. Provision must be made to record cash sales in the sales book and in the cash book and for customers' and creditors' controlling accounts. Submit *pro forma* monthly summary entries for the foregoing books.

12. A retailer, who employs four salesmen behind the counter,

sells for cash mostly, but a limited amount for credit. He rents the store room. His knowledge of accounts is limited but he can make a plain debit and credit entry. He knows which side of the cash book is debit and which is credit. He knows how to post to tne ledger, but understands nothing about opening and closing the books. Formulate and describe the simplest method on which to conduct his books, he to keep them during the year, you to audit and balance them once a year, and take off a general statement and trading account.

13. Describe the various uses of the journal.

14. Prepare a form of book for a small business combining general ledger, general journal and cash book in one binding, to show transactions involving all three on each double page.

15. Give a short statement covering the advantages or disadvantages of a voucher system and of tabular books.

16. Prepare a ruling for an invoice book to provide for total monthly charges to three material accounts and two expense accounts, and also detail postings to sundry accounts of capital and revenue outlay.

17. Prepare a ruling for a salesbook to provide: (1), total monthly postings to three goods accounts; (2), the separation of cash sales from charge sales; (3), supplementary distribution of sales among four salesmen's columns.

18. Prepare a form of monthly summary journal entries for the two foregoing books of original entry.

19. Draw a form of check register to be used in conjunction with a complete voucher system, it being intended that the check register shall take the place of the disbursement side of the cash book and shall also record the deposits and withdrawals in three different bank accounts. Discounts on goods purchased to be handled through the voucher journal.

20. Give headings for a Voucher Record Book suitable to any business with which you are acquainted. State briefly some advantages and disadvantages, if any, of the voucher system.

21. A wholesale house has on its books 200 individual accounts with creditors, 500 with city customers, and 1,500 with county customers, besides about 75 impersonal or representative accounts. Owing to the method of bookkeeping in force, it is necessary, in order to ascertain the amount of accounts receivable or payable, to take off a complete list of the accounts in question. You are called upon to advise how this difficulty can be overcome, and also as to whether the bookkeeping work on the accounts payable cannot be reduced, having regard to the fact that the firm discounts all its bills. Embody your suggestions in a brief report.

22. Describe what is known as the voucher system. Can a voucher system be used to advantage in every business? If not, state certain conditions which would militate against it.

23. A criticism often heard in respect to the voucher system is that it entails too much red tape. Is this a just criticism, and if so, under what circumstances?

24. State the advantages of using columns in an invoice or voucher register for distributing the expenditures. When would it be advisable to use a distribution ledger?

25. Rule, in proper form, a double page of a voucher record or register inserting at least three items as they should appear in the record, showing payment of those items. Show the title of each of the columns.

26. What is meant by the voucher system of accounts? Why is it particularly adapted to large corporations or manufacturing concerns?

Illustrate the system by making one voucher, that of Peters & Boynton, and by entering in the necessary books of the Anderson Foundry Co., the following items:

6/2 Received from Peters & Boynton, Pittsburg, Pa., 12 tons pig iron, $15.00; Term 2/5, n/30.
6/3 Bought of Holman & Co., 500 tons coal @ $6.00, for smelting furnace.
6/4 Paid workmen, as per pay roll, $898.50.
6/5 Rec'd bill from United Hdw. Co. for putting new roof on foundry, $250.00.
6/7 Paid Peters & Boynton for invoice of June 2nd.

27. Draw a form for the record of household accounts, or of a small trading business, that may be used as a combined cash book, journal and general ledger. Give the headings and provide five distribution columns for expenditures and also columns for controlling accounts for both accounts payable and accounts receivable.

28. Compare a simple arrangement of accounts, as for example, capital, cash, merchandise, personal, expense, profit and loss, with some other scheme of accounts expanded to meet the demands of present day requirements. Describe the possibilities and advantages of the more modern scheme.

29. Compare the advantages and disadvantages of a voucher record system as opposed to an accounts payable or creditors' ledger system with purchase journal, and state which you would recommend.

INDEX