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W. D. Hamman

THE JOURNAL OF ACCOUNTANCY

VOLUME 17

JANUARY, 1914

NUMBER 1

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June, 1912	4	7	7	4†	—	—
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The Journal of Accountancy

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Association of Public Accountants

Vol. 17

JANUARY, 1914

No. 1

The Interrelation of Financial and Operating Data

By WALTER A. STAUB, C.P.A.

Not more than a generation ago, an "audit" frequently, if not usually, consisted of a comparison of vouchers, *i. e.*, receipts for moneys paid, with the record of payments as set forth on the credit side of a cash book and the verification of the cash balance at the end of the period under review. The correctness of the record of receipts as set forth on the debit side of the cash book was more often than not simply taken for granted. The report consisted either of a notation on the cash book at the closing date of the audit period reading, say, "Audited and found correct" and signed by the auditor, or it consisted of a very brief letter or certificate stating, for example, "I have audited the accounts of Blank for the year ended 31st December 18— and found them to be correct."

A survival of this form of audit is still to be found in the "audits" conducted by auditors appointed by the courts in estate cases—the audit in such cases consisting largely of an inquiry as to the items for which the executor, trustee or other fiduciary agent should account and the integrity of the account as regards the expenses claimed to have been paid or other disposition made of the funds of the estate. In such audits comparatively little consideration—in fact, it may be said ordinarily no consideration—is given to the degree of efficiency with which the trust has been administered.

Great advances have been made in the field of public accountancy in the past generation—yes, even in the last five years—and the professional accountant of today must have a broader

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vision than his forerunner, and must be prepared to assume responsibilities which would make the practitioner of earlier days shudder. Business methods are different today from what they were before the telephone and typewriter had come into use, and so the public accountant of today can no longer be a mere checker of vouchers as in the early days. He must be able to visualize the operations of a business; that is, he must be able to see them in such a way that he may point out unfavorable tendencies, inefficient or improper management, and in general render constructive service.

To be sure, the accountant's responsibility, or what is expected of him, is not yet alike in all cases. Some business men who avail themselves of the accountant's services do not yet realize their scope or possibilities or are not prepared to accept services other than auditing in the narrower sense of the word. Even though this be true in some cases, however, every progressive accountant feels an ever increasing responsibility and realizes that the demand of the times is for greater efficiency and usefulness of service.

All that has so far been written will be generally admitted, and the question is: How can the accountant increase the value of his services and best measure up to what is already expected of him in many quarters and fit himself to meet the ever expanding requirements?

One way to do so is to take advantage of every opportunity to relate or connect the data appertaining to the physical side of his client's operations with the statements reflecting the financial aspect of the operations. This is by no means a new or novel plan, but it is not used by all accountants as fully as it might be and the value and importance of it are, perhaps, not realized by all accountants as much as they should be.

NEED FOR RELATING FINANCIAL AND OPERATING DATA

A well arranged statement of earnings and expenses serves a useful purpose and conveys more or less valuable information. It is difficult, however, for an interested party to determine from a study of a statement showing merely the amount of money earned, the amount of expenses incurred and the resulting profit or loss, how efficiently the operations of an enterprise have been

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conducted. Furthermore, it is extremely difficult, and in many cases impossible, to compare the relative efficiency of two concerns in the same line of business when only their financial statements are available for comparison. When we leave the realm of strictly business undertakings and consider municipalities and institutions, the comparison merely of their financial statements is usually of little significance.

Now in many industries and in many governmental and institutional functions, a unit of production or service can be found for expressing the volume of production or service, which can be used to show the realization and cost per unit of production or service. In many factories the variety of product is such that it is not possible to fix on any one unit of production which can be made the basis for stating the volume of production or sales of even one department, not to mention the entire factory.

For instance, a machine shop doing a jobbing business or manufacturing only on orders according to the purchasers' designs, could not express its production or work done in terms of any one unit which would indicate the volume of production and consequently permit of ascertaining the cost per unit of output or of sale. The same thing is true of printing shops, furniture factories and many other manufacturing establishments which will readily come to the reader's mind. For such concerns, more or less detailed cost accounts are necessary in order to permit of the management's critically studying the operations. It is surprising, however, how many industries do lend themselves to the treatment indicated, *i. e.*, that the operations can be stated not only as to their financial results but also in a broad way as to the volume of either production or sales in terms of a given unit, from which data the realization and cost per unit can then be determined.

INDUSTRIAL UNITS OF PRODUCTION

Among the industries whose operations are susceptible of such treatment, may be mentioned the following:

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<i>Industries</i>	<i>Units of Production</i>
Mining:	
Coal	Ton coal
Iron	" iron
Precious metals	Pound metal
Quarries	Ton stone
Lumber camps or saw mills	Thousand feet logs or lumber
Coke ovens	Ton coke
Cement mills	Barrel cement
Foundries	Pound iron, brass or other castings; or ton of cast iron pipe
Rolling mills	Ton or pound of bar iron, shapes or rails
Blast furnaces	Ton pig iron
Flour mills	Barrel flour
Linseed plants	Gallon oil
Tanneries	Dozen skins (kid) or square foot hide (calf or kid)
Automobile factories	Machine (where only one type is made)
Spinning mills	Pound yarn
Knitting mills	Dozen garments
Textile mills	Yard cloth, ribbon, etc.
Creameries	Pound butter

In some businesses there is but one final unit, as in coke manufacturing, where the unit is the ton of coke produced. In others, for instance knitting, there may be a general unit, such as dozen of stockings or underwear, but different sizes thereof. Consequently care must be exercised, when dealing with a concern of the latter class, in using the total quantity of production, as unit costs are in such cases really averages of a number of varying units and the proportion of large and small sizes in the total output may vary from one fiscal period to another.

Even in such cases, however, it is often found that there is considerable uniformity from one period to another. For instance, underwear is usually sold with a given assortment of small, medium and large sizes in a given quantity. The accountant's experience and judgment must indicate to him just how far it is safe to make use of a general or average unit of production in a business where one absolutely uniform unit does not obtain.

The fact that in some factories which have a standard unit of production, such as yard of cloth or dozen of underwear, there are many different grades or qualities of articles produced

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must also not be overlooked. This may be the case to such an extent that it would not be safe to base any conclusions on totals of units which are uniform as to quantity but not as to quality. On the other hand the volume of production and sales is valuable information, even though the averages which would be obtained by dividing such quantities into the corresponding money amounts might be of little value or even misleading. This is another case for the accountant to bring his good judgment and past experience to bear in deciding how far to go in making use of such data.

The unit of production may vary with the successive processes in a manufacturing operation for which there is one final unit. As an example may be cited the manufacture of cement. Here the final unit is the barrel of cement made and the figures showing the total number of barrels produced and sold respectively, the cost per barrel made and the realization per barrel sold during a given period are in themselves sufficient to give quite an insight into the operations of a cement company, especially if they are considered by one having some familiarity with the market conditions which obtained during the period under review.

Much valuable information is obtained, however, if the volume of each of the operations preceding the ultimate production of cement is ascertained and correlated with the cost chargeable to each operation. This would involve ascertaining the following data:

<i>Operations</i>	<i>Production Units</i>	<i>Operation Costs</i>
Quarrying	Tons cement rock and limestone*	Total quarrying cost
Grinding	Tons ground rock	Total rock grinding cost
Clinkering	Barrels clinker	Total clinkering cost
Grinding clinker	" cement	Total clinker grinding cost

The quantities of rock (ground and unground) and clinker on hand at beginning and end of the period must be dealt with in carrying forward from each operation in the manufacturing process to the succeeding operation the quantity of rock or clinker used and the cost thereof. This offers no particular difficulty.

* If the company does not have its own limestone quarries, the quantity and cost of purchased limestone is best dealt with separate from the quarrying of cement rock.

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With this data, the cost per unit in each of the several distinct operations can be easily calculated. The costs in each operation can be analyzed still further, but the data already indicated would of itself be sufficient to permit of valuable comparisons of the operations of one period with those of another, or with the operations of other plants in the same industry.

In making such comparisons, however, it is necessary to compare both volume of operations and unit costs. The volume has a large bearing on the unit cost and an increase in unit cost may be entirely due to a falling off in volume of operations. On the other hand, a unit cost which is about the same or falls slightly from one period to another should perhaps show much greater decreases because of greatly increased volume of operations with correspondingly increased opportunity for utilizing the possibilities of effective organization and system and thinner spreading of the "overhead."

One very helpful feature of a statement which combines financial and operating data and unit realizations and costs is that it makes it possible to determine how far an increase or decrease in profits is due to a rise or fall in prices of goods sold and how far to a decreased or increased manufacturing cost. This a purely financial statement cannot show. The sales of product may show a decrease in a given period as compared with the preceding period, yet there may have been an increase in the quantity of sales but a big drop in the prices realized. With both the quantity of sales and the average unit realization ascertained, the bearing of each of the several factors is plainly seen.

In addition to giving a better picture, as it were, of the operations than a financial statement alone can do, a combination of operating and financial data, wherever it is feasible to effect it, also has considerable value from an auditing standpoint.

In this connection it is interesting to consider for a moment the famous Kingston Cotton Mill case* which has so often been mentioned in discussions on inventories and the auditor's responsibility regarding them. In this case the padding of the inventories was continued over a period of years to bolster up decreasing profits. During the entire period in which the falsifi-

*The essential facts in this case will be found in the court's opinion in *MONTGOMERY'S Auditing, Theory and Practice*, pp. 577-579.

The Interrelation of Financial and Operating Data

cation was practised, the company's accounts were being regularly audited.

An old saying has it that "hindsight is easier than foresight" and it is not wise to criticise too harshly the practitioners of twenty years ago who had not the light which we enjoy today. Yet it may safely be said that had the auditor in this case not rested content with accepting the manager's certificate to the correctness of the inventory and preparing a profit and loss account on a currency basis only, but had carefully considered the available operating data, or—as it might also be put—had constructed a profit and loss account dealing with the *quantities* of yarn and cotton on hand at beginning and end of each period, and of cotton purchased and yarn sold during the period, and making allowance for the usual loss of weight in manufacturing, the fraud would surely have been discovered. The quantity of cotton and yarn in the inventory would so far have exceeded the quantity called for by the foregoing calculation, that the discrepancy would have invited searching investigation.

Another use of operating data by the auditor, somewhat analogous to that just described, is the use of it as a basis for determining approximately the profits which should have been realized from a given volume of operations. For instance, in the linseed business, there is a more or less definite relation between the market price of flaxseed and the market price of linseed oil which is extracted from flaxseed. If a linseed manufacturer eliminates the speculative element from his business by "covering" sales of oil with purchases of flaxseed options, the profit to be realized may be figured by multiplying the number of bushels of seed which were put through the process by the expected rate of profit per bushel of seed. Of course, it will not work out exactly, and disturbing factors other than fluctuations in the price of seed (the raw material) and of oil and linseed cake (the products) at times may be encountered, but the very fact of reckoning with these factors and determining their effect will be a satisfaction in stating the operations and may result in placing valuable information before the client.

PUBLIC UTILITY UNITS OF SERVICE

The operations of most public service corporations lend them-

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selves very readily to the correlating of their physical and financial aspects in a combined statement. It is in this field, too, that probably the widest use has been made of this method. The most generally used service units, as they may in the case of such operations be called, are as follows:

<i>Utilities</i>	<i>Units of Service</i>
Railroads	Ton mile (freight); passenger mile
Electric railways	Car mile; car hour; passenger
Electric light and power	K. W. hour
Gas companies	1,000 cubic feet gas
Water companies	1,000 gallons water

The telephone companies form about the only class for which it is difficult to find a satisfactory service unit. If only the city exchange business had to be considered, the problem would be easily solved, as the number of calls made would be a natural and satisfactory basis for stating the volume of operations and for determining the revenue and operating cost per unit of service (the individual call). The long distance service, however, introduces a complicating factor, as the total number of calls in one period, resulting from the combining of local and long distance calls indiscriminately, is very likely to be noncomparable with a like total for another period and particularly for another district. When the revenue and the operating expenses of strictly local business can be completely segregated from those appertaining to long distance business, the calls made can be very satisfactorily used as a basis for stating volume of operations and unit cost of operation and unit revenue.

In the case of some utilities, the operations must be divided into two or more sections and a distinct service unit used for each. In the case of railroads, for instance, the revenue and operating cost of freight and passenger service must be segregated if the units of ton mile and passenger mile are to be employed. As to the revenue this is readily done, but as to the operating expenses this is not so simple, as many of the expenditures are for the common benefit of both classes of service. The maintenance of way and general expenses are pertinent illustrations.

When it is borne in mind, however, that in determining manufacturing costs, a very considerable portion of the factory expenses must be apportioned among the various articles manufactured on a more or less arbitrary basis, there is really no

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reason why in the case of railroads and similar utilities expenses which apply alike to several different classes of service should not be apportioned among the several services in a way that careful observation and study indicate to be as fair as possible. Unless such a separation or apportionment is at least attempted, the cost of performing each different class of service is not even approximately known, and with the ever increasing regulation of rates charged by public utilities this is surely most important.

Of course, the units shown are by no means all that can be employed. Different units may be applied to various groups of operating expenses, as, for instance, the cost of maintenance per mile of track and in turn the number and cost of ties per mile of track and so on.

GOVERNMENTAL AND INSTITUTIONAL UNITS OF SERVICE

It might at first glance be thought that expenditures for various kinds of governmental service or functions would hardly yield themselves to the kind of treatment which has been advocated for the stating of industrial and public service operations. It is true that for some kinds of services it is most difficult to find a satisfactory unit of service; on the other hand it is also true that careful study and analysis show that such units can be found for expressing the quantity of various kinds of service and for stating the cost per unit of service more often than might be thought.

In the case of water works, gas plants and similar utilities, the same service units would naturally be used as by public service corporations. In the case of garbage disposal, for instance, the tons removed would express the amount of service; of street cleaning and street maintenance, the square yards of street area cared for; of police and fire service, the population served or square miles covered, or both; of inspections of various kinds, the number of inspections of each kind made.

For schools the cost per pupil and for hospitals and asylums the cost per patient are good units. Effective use of such unit costs can be made by comparing the cost not only in one city with that in another, but also by comparing say, the cost per pupil at one school in a city with the cost at other schools of the same grade in the same city.

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Some years ago the writer's firm, in reporting on the accounting methods of one of the large cities of the country, recommended that the classification of the city's expenditures by activities, functions or operations

be developed into a complete cost system by extending it to provide also for the complementary records or statistics of the quantity of work performed or service rendered. Thus sufficient data would be available for determining not only the total cost of a certain kind of service such as street cleaning, but also the length and area of streets cleaned and the cost per square yard. * * * The importance of developing the city's accounting system along the lines indicated is especially emphasized when it is remembered that the ultimate test which may be applied to determine whether or not a business enterprise is successful cannot be used to determine the efficiency of the conduct of a municipality's financial affairs. Business administration in the ultimate analysis has in view the earning of profits, and the accounts, if intelligently stated, will show how far this end has been achieved. On the other hand governmental administration is not concerned, directly at least, with earning profits but with rendering services to the community which presumably are to be paid for at cost by the community by means of taxes or special assessments. Hence it is that comparatively slight changes for the better or worse in the results of the administration of *business* enterprises are automatically brought to the attention of an ordinarily observant management by the fluctuation in net profits for succeeding periods of operation, while the cost of exercising governmental functions or performing public services may gradually increase in greater proportion than the growth of population or other causes warrant without the fact being noticeable excepting to the unusually vigilant. Even if expenditures do not increase, the service rendered may not represent full value for the expenditure made and yet the fact not be so obtrusive as to attract the attention of the average taxpayer.

Actual or potential competition tends to compel the manufacturer or merchant to give adequate value for the money received from his customers. This spur to efficient service is almost entirely wanting in governmental administration. There is no competitor offering to furnish a better article or more efficient service for the same expenditure. It is only in the case of municipalities operating such enterprises as lighting or water supply plants that a private corporation sometimes assumes the role of the competitor by offering to operate the plant more efficiently, and to the greater financial benefit of the city or the consumers or both, than the city appears to be able to do.

There is another very important distinction between business enterprises and municipalities which has a decided bearing on the expenditures of moneys in connection with their administration. In the case of business undertakings their revenue is limited to the return from their expenditures, and extravagant or unnecessary expenditures are not offset by a corresponding return of income. There is thus an inherent necessity for keeping expenditures within the bounds of the income which they may reasonably be expected to produce. On the other hand, municipal expenditures are not, in the main, expected to produce direct revenue and the rate of taxation may be indefinitely increased to provide the funds for making extravagant or unwise expenditures.

It is obvious that detailed information, not only as to the cost but the quantity of service rendered, must be had before the taxpayer, or those representing him, are in a position to commend or criticise intelligently the administration of the city's activities.

Soon after the report, from which the foregoing extract is

The Interrelation of Financial and Operating Data

quoted, was made public by the commission for which it was prepared, DR. WILLIAM F. WILLOUGHBY, assistant director of the census, read a paper on *The Correlation of Financial and Physical Statistics of Cities* before an annual meeting of the National Municipal League. The bureau of the census in its published statistics of cities has for some years been comparing the unit cost for certain kinds of municipal service in various cities.

In the city before referred to, a complete cost system has since been installed for the board of education. The expenses, classified as to tuition, supplies, building maintenance, etc., are kept separate for each of the schools in the city, there being considerably over a hundred schools in all, and costs per pupil are worked out for the various classes of expenses. The comparison of the costs at the various schools and of the expenses for maintenance of buildings and of equipment at the different schools yields information of great administrative value.

In conclusion, it may not be amiss to quote from another public report on unit costs as related to municipal service which also applies to some extent to the consideration and comparison of unit costs shown for the operations of industries and public utilities.

Unit costs are of great value for administrative and other purposes, but they are only one of several factors which have to be taken into consideration in determining whether or not a city's activities are being efficiently conducted. A low unit cost is not in itself conclusive evidence that real economy is being exercised in conducting the affairs of a city or institution. For instance, the cost per capita of operating the city homes and hospitals might be very low as compared with similar institutions elsewhere and at first glance it would seem that they were being operated on a remarkably economical and efficient basis. As a matter of fact, however, the low cost might be secured by supplying insufficient food—or of an inferior quality—to the inmates, or by having too small a staff of doctors and attendants, or again perhaps by “skinning” the maintenance of the buildings and other equipment, *i. e.*, by failing to spend the amount required to maintain the equipment in the best of condition and in keeping with the most modern standards. This being so, it is desirable that unit costs shall be obtained not only for the operation as a whole, but for the component parts thereof. *E. g.*, the cost of conducting homes and hospitals should be shown not only in total per capita, but also the per capita for such leading items as salaries of attendants, subsistence, clothing, house furnishings, repairs, etc.

Furthermore, in conjunction with the ascertaining of unit costs as a basis for intelligent criticism of the conduct of the city's affairs, it will always be necessary to make observations at close range of the manner in which work such as that at the city institutions is being carried on, whether it is in accordance with the best practice or whether methods are antiquated and behind the times. Methods of caring for the unfortunate,

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particularly the insane, have undergone radical changes in recent years, and the design of the buildings and the auxiliary equipment required for the housing and treatment of the patients have likewise been vastly improved.

We would not have it inferred from the foregoing paragraphs that unit costs and comparisons between different localities have little or no practical value. Of necessity the conditions obtaining in each case must be learned, but the conduct of municipal activities tends toward an average percentage of efficiency the country over, and a notable divergence from the average cost indicates a necessity for ascertaining whether a high cost is due to a high standard of service performed or whether it is due simply to extravagant or inefficient management; and, on the other hand, whether an unusually low cost be due to higher efficiency than the average or to a lower standard, *i. e.*, poorer quality of service. As a general rule, it may be said that the comparison of the cost of conducting the activities of one city with costs of like activities elsewhere will indicate to a very considerable extent, even if not conclusively, the degree of efficiency of management in the city under consideration. Certainly if it costs less to perform the same service elsewhere it behooves a city to ascertain whether the quality of the service being performed elsewhere is equal to its own, and, if so, whether it is not feasible to reduce the cost of its own service. On the other hand an abnormally low cost compared with that in other localities may well raise the question whether the community is performing the full measure of its obligations to its own citizens.

Cost Accounting Practice with Special Reference to Machine Hour Rate*

BY CLINTON H. SCOVELL, A. M., C. P. A.

There is more reason now than at any other time for many years why American manufacturers should consider most carefully the problems of finance and management of their business undertakings. Facing the prospect of increased foreign competition in some lines, and the tendency towards higher wages which inevitably follows the increased cost of living, and especially the increased cost of food, which makes up such an important part of working men's expenses, manufacturers are necessarily interested in any ways or means to make their industrial operations more efficient.

Many things contribute to the efficiency of shop management. When a business is small, its success usually depends on the ability, foresight and good judgment of one or two energetic men. As the business grows, methods and system must more and more take the place of the manager's personal oversight, and the need increases for accounting sound in principle and simple in operation.

Under the influence of the new science of management, there has been a constant study in the last few years of manufacturing methods, operating standards, cutting speeds, etc., resulting many times in such marked increases of production that the management may be sure that an improvement has been made, even if it does not know exactly *how much* saving has been effected.

It has been clearly established, however, that the cheapening of manufacturing operations which is brought about by a better operating practice is frequently secured at a considerably increased cost for office force, planning departments, helpers, supervision and other indirect labor, sometimes wrongly called non-productive. As a result the practical problem for the manufacturer is to compare the lessened direct cost for labor and equipment with the increased cost for the other factors. This

* An address delivered before the annual convention of the National Association of Machine Tool Builders, Hotel Astor, New York, October 22, 1913.

he can do only when he has an adequate cost accounting practice.

It is my purpose to point out the essentials of a cost system for a machine shop, or a manufacturing plant where the operating conditions are similar, with especial reference to the theory and practice of a machine-hour rate. I expect to show you that this is an intensely practical matter, and that it has an important bearing on the sales policy and the general management of your business.

Classify Expense Properly—Distribute it Correctly

Good cost accounting depends on the correct application of a few well understood principles. The first is to have the direct charges from the original sources, that is, pay-roll and material distributions, correctly classified between direct and indirect costs, and then to determine how the indirect, or so-called non-productive charges, may be identified with the product.

Any cost accounting practice worthy of the name should record accurately the direct labor costs. In a machine shop, or under similar conditions, this direct labor cost should be applied with precision to each job going through the shop. *Very little cost accounting practice, however, has attained any similar precision for distributing the indirect charges for equipment, referred to hereafter in this article as burden.*

What is Burden?

As the difficult and important part of cost accounting is to determine how a correct distribution of burden may be accomplished, it is clearly worth while to consider briefly the elements of burden.

It is a tedious and expensive undertaking to build and equip a new plant, and to complete the cycle of manufacture from design to finished product; and there is much to gain in the way of a clear understanding of costs, if we trace out this development step by step, taking careful note of the elements of the problems as we proceed.

When a new industry is to be established, the directors first buy a parcel of land suitable for the location of the proposed shop. If the purchase price is \$40,000 the new enterprise has at once absorbed capital that should earn about \$2,000 to the

Cost Accounting Practice and Machine Hour Rate

ordinary, prudent investor, who takes no manufacturing or trading risks. A site as costly as this is probably situated in or near a city, so that it will be subject to taxes of \$500 or \$600.

Shop buildings are next erected at a cost, let us say of \$200,000 more. This outlay of capital, like the investment in land, involves an annual interest charge (of some \$10,000), and under present laws, an annual penalty of some thousands of dollars more for taxes. But, unlike land, the buildings will require constant repairs. Even then they are subject to a slow but certain deterioration and obsolescence that must be met by a charge for depreciation. To protect the investment, the owners must pay insurance and provide watchmen. To make the buildings usable, they must be heated and lighted, supplied with water and fresh air, and regularly cleaned. The striking thing about these charges is that they all go on without any abatement, unless the shop is shut down, dark and cold, and even then the principal charges—interest, taxes, insurance, repairs and depreciation—abate scarcely at all.

All this expense has been incurred by the management to provide suitable areas for the intended manufacturing process. If there are five or six subdivisions, each one may occupy an entire small building, or all or part of a floor in a larger building. Whatever the details, each department (if we may use that overworked word) uses so many hundred square feet of floor space and must carry its proportionate share of the land and building charges already described.

Within a department there may be one or more different operations, such as, milling, grinding, boring, turning, planing, fitting and assembling. The equipment in each case represents an investment of capital; it requires the payment of taxes and insurance; it suffers depreciation (even more rapid than the building), and it incurs charges for power, repairs, and such indirect items as superintendence, inspection, and helpers' services. If the shop shuts down, the power may be shut off and the foreman dismissed; but so long as it runs, however short handed, or however inefficient, these charges do not change materially; and the fundamentals of interest, taxes, insurance, etc., (with the possible exception of repairs) are not one whit less.

All that has been described so far is overhead expense, more properly termed *burden*, and does not include any labor applied directly to the product (like the operative who is working at a lathe or boring mill).

This great accumulation of burden *represents manufacturing capacity*. Each department, and each separate machine-tool has a known annual burden. Its cost per hour is determined by dividing the total burden by the hours in the working schedule, and the shorter the schedule, the greater the hourly cost.

Having completed the buildings and installed the equipment, the management is ready to begin manufacturing operations. As the several parts of the machine progress from rough castings or forgings to finished pieces ready for the assembling floor, their value has increased as they have absorbed the successive increments of direct or productive labor and of the burden appertaining to the production centres through which they have passed.

Cost Accounting and Production Control

Before illustrating the practical application of this theory, I want to point out that good cost accounting is a help to efficient management, not only as it traces and records values but also as it may be made a powerful agent for production control. From my experience in professional service for industrial plants, I emphasize more and more the practical value of this second aspect of the work.

It follows therefore, that the first step in planning a cost accounting practice for a machine shop is to consider by whom and how authority to manufacture shall be made. It is simple enough to order ten castings from a given pattern which has already been made, but as you all know, the production of a machine tool involves orders for castings of many different patterns and sizes, bar stock for forgings, etc., and these material orders are all very simple in comparison with the complex schedule of machine operations which are required to produce the finished parts. You all recognize how important it is that parts should be made in quantities that are economical and that the different pieces required should all be ready together on the assembly floor. It is, therefore, of the utmost importance to make effective plans to initiate and control the production so

Cost Accounting Practice and Machine Hour Rate

that these results may be accomplished. The management will then have a definite schedule of manufacturing operation on which costs may be determined by orders, by lots, by individual parts—with as much or as little detail as may be necessary.

What Constitutes an Adequate Cost Practice

Returning now to the subject of specific costs, the first step is to provide such labor records, preferably with good automatic time stamps, as will make possible the necessary distinction between direct and indirect operations, and the exact time devoted to each lot of material or each expense order.

The next step is to compute the burden correctly for each department, including interest, taxes, insurance and depreciation on the buildings and equipment, and the additional charges for power, supervision and repairs. In many industrial plants "manufacturing expense" includes only part of these charges. The first cost of manufacturing is plant investment—land and buildings. No management using a rented plant would think of omitting rent from overhead charges. When the manufacturer becomes also a landlord, as when the plant is owned by the manufacturing company, what sound reason can possibly be given for omitting from burden the charges which the management incurs in lieu of rent?

The equipment presents a slightly different problem. Very few manufacturers operate with rented equipment; if they do, there is rent to pay, as an unavoidable burden on the manufacturing operations. When the equipment is owned, the maintenance charges are equally unavoidable. The manufacturer must get interest on his investment before he has in any sense a profit, and he must bear the expense of taxes, insurance, depreciation and repairs. Although these elements of cost may be neglected or not stated, they are, nevertheless, taking their proper share, or more, of what is figured without them as gross profits.

The weakness of many cost systems is that important elements of indirect cost are thrown together in a "general expense" account, concealing the leaks and wastes that reduce efficiency and curtail profits. Many manufacturers have no doubt been satisfied to handle burden in vague and general terms because they did not know any better way to dispose of it.

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It may be stated confidently that under ordinary machine shop conditions, no accurate distribution of burden can be accomplished, and therefore no accurate costs determined, by spreading burden over all the work done in the shop as a percentage of the cost of direct labor. In the shop proper, with its widely varying equipment of machine tools, distribution on the basis of a man-hour rate is not very much better, although, as I shall point out later, that plan works very well for fitters and assembly men.

To secure a correct burden distribution it is only necessary to prove, by analysis, the elements of which it is composed and then to consider how all this overhead is actually applied to the product.

Attention Should be Fixed on the Production Center

At this point we encounter another mistaken tradition of "departmentalized costs." To define burden correctly in each department is good as far as it goes, but it does not go very far, especially in a machine shop. *The attention of the manager and the cost accountant ought to be fixed on the individual production centre*, usually a power machine. Recent developments under actual shop conditions show that *the correct burden for a machine tool may vary from less than ten per cent to over three hundred per cent of a machinist's wages*. The widely accepted method of charging burden to costs on the value of productive labor makes no distinction between the mechanic at the bench, whose work has practically no burden except supervision, and the operator using a costly machine, which involves heavy charges for maintenance, power and repairs.

Fallacy of Average Rates

Face this situation squarely and the fallacy of an average rate is exploded forever. Instead we recognize as many elements of burden as possible, and while it is not necessary or desirable to apply these elements separately to the cost of each job, it is from every point of view desirable to identify the burden with the production centers through which it is charged to the jobs. For machine tools, under this plan, there is a charge to each job for the use of a tool as specific and as definite as the charge for the wages of the mechanic who operates the tool.

Cost Accounting Practice and Machine Hour Rate

Bench Hands and Assembling Crews

The work of bench hands and mechanics on the erecting floor must be accompanied by a burden charge which obviously is not literally a machine-hour rate. The burden rate for bench equipment differs not at all in principle from the rates for the machine tools. If, as is usually the case, the mechanics at the bench work under substantially uniform conditions, a uniform rate may be made at so much per hour for the use of the accommodations which they require for their work. In a large shop the bench rate might be different in different departments. Since it is uniform for all mechanics who work at the bench, it is practically a man-hour rate. It must be borne in mind, however, *that it is a rate for the use of equipment only*, unless indeed the circumstances make it convenient to merge the cost of supervision with the cost of equipment.

The erecting hands in a shop present a problem of a different kind. Their work usually requires a considerable area, and important charges for crane service and supervision. To speak of this work in terms which have long been familiar in cost accounting practice, the erecting floor may be considered as a department whose burden is to be distributed with reference to the work performed by the mechanics employed in the department. Probably the best way to distribute this burden is on a man-hour rate derived by dividing the total annual burden by the number of man-hours for the department.

General Burden

There are other charges connected with the management of a machine shop or manufacturing plant which are not necessarily well expressed through an hourly equipment rate. Such are charges for the drafting room, the bookkeeping, cost accounting, supervision, liability insurance, and general charges of management not specifically and directly connected with the maintenance and operation of machinery. These are charges which in a small shop should be applied in a fairly uniform way over all the employees in the establishment, preferably on a man-hour basis. This charge would be known as general burden, and since it would be uniform, it may be applied to the cost of each job, against which hours of mechanics' time have already been recorded, with very little additional work.

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Why Scientific Machine Rates are Important

The successful operation of a scientific machine rate is the most important development that has occurred in cost accounting practice in a generation. As these rates may be applied to the cost of jobs, the charge for burden which hitherto has been the difficult and uncertain part of cost accounting will be as accurate as the charge for direct labor. Furthermore, the use of equipment rates, in effect a *precision method* for the important part of overhead expense or burden, requires no more work in a cost office than the application of a rate which contains only part of these charges.

There are two good reasons for saying that a scientific machine rate is a development of tremendous importance in cost accounting practice. The first is that referred to in the opening paragraph of this article, namely that it is essential when scientific management is introduced that there should be an *exact* measure of the saving which is effected by it. The literature on this subject has not thus far made a sufficient recognition of the very important fact that if an operative reduces the time on a given job from ten to seven hours, for example, he has not only saved three hours at his wage rate, but also three hours of the rate for the machine tool which he has used, and three hours of general burden. As will appear from the table annexed to this article, these overhead costs are frequently more important than the direct wage which has already received so much attention.

Cost accounting practice, moreover, which analyzes burden charges as described in the foregoing paragraphs would naturally make a very precise account of the increases in overhead expense of any kind. In some cases in connection with the introduction of scientific management, these increases would be in a particular department, and would operate to increase the burden which would be disposed of as a machine-hour rate for the tools in that department. Usually, however, the additional charges would operate to increase the general burden, which is one of the most important and at the same time, one of the most elusive elements of manufacturing cost.

Cost Accounting Practice and Machine Hour Rate

A Measure of Loss Due to Slack Production and Inefficient Operation

The second reason for attaching so much importance to a *scientific machine rate* is that it *makes possible an accurate measure of the loss due to slack production or interrupted operation*. This is perhaps more important than the improved accuracy of cost records referred to above. When the board of directors is gathered at the end of the year, or once in six months, to learn about the results of the period under review, they do not often consider such detailed matters as the cost of individual orders. On the other hand, they are always interested in any explanation which the manager has to make about losses that are due to curtailment of manufacturing operations.

The directors at such times would value more than anything else a clear statement showing *how much* their company had lost on this account, especially if the details of the statement could be readily understood and readily proved by an analysis of the operating conditions. The big problems (in regard to manufacturing) which the directors have to settle are to make an efficient use of plant and equipment, especially if they are asked to decide on new additions to meet a probable volume of business. The new plant means an added investment, and it is of the utmost importance that the accounts should subsequently show to what extent this investment was utilized.

It is essential to distinguish clearly between losses or gains on machines actually made and sold, and losses due to slack production or inefficient use of equipment.

It must be borne in mind that the finished product has *absorbed only the burden of the equipment actually used in its manufacture*. It has not absorbed the burden of unused equipment or idle machinery. If the plant includes a foundry and the management decides to purchase castings, the idle foundry has contributed nothing to the product. It is obviously unfair to charge into the cost of goods the burden charges on the automatic machinery that may be idle because the management is buying and not making machine screws. If only three-quarters of the lathes run, the idle remainder have not helped machine parts actually manufactured, and although the plant may go into bankruptcy if it cannot utilize its equipment, *the cost of the work actually done is not greater on that account*.

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The burden on idle machinery is no more a part of the cost of manufacture (unless due to enforced seasonal variations) than the burden on a shop owned by another corporation. When there is a proper distribution and application of expense burden, only the burden is charged to cost which represents the equipment utilized in manufacture, and burden not applied remains as a balance to be charged direct to the loss and gain account at the end of a month, six months or a year. (See diagram page 11.)

This is readily accomplished through the means of burden accounts which collect by a very simple bookkeeping practice all of the charges in a given class, and receive credits as burden rates of the same kind as charged to the cost of product going through the works. The unearned burden in some cases may indicate an error which is to be corrected by using a more accurate rate in a subsequent period, but when proper records have been established, *the unearned burden is a clear loss*, and the balances of the burden accounts should be transferred directly to the profit and loss account.

Effect on Sales Policy

If the distinction is maintained between losses or gains on goods made and sold, and losses due to restricted output, the management will consider sales policies in a much more certain way than is possible when the facts are obscured in the haze of average costs, calculated on varying volumes of product. In respect to burden it is frequently true that costs figured as averages vary beyond all hope of comparison as the volume of output goes up or down.

When a cost accounting practice is maintained that distinguishes carefully between prime costs for material and labor, (which vary almost directly with the volume) and overhead charges or burden, the managers can see exactly in times of slack production at what price they can take any work that is offered and get something to carry the burden of the shop, in addition to the direct cost of labor and material. This, it must be admitted, is to some extent a matter of policy, for it may be better to hold a price and restrict output, rather than break the market by quoting prices that will give temporarily a little additional profit.

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A Measure of Manufacturing Efficiency

Whatever the effect on sales policy, good cost accounting, including correct burden distribution, is a matter of enduring importance from the point of view of manufacturing. Changes in volume may completely obscure gains or losses in efficiency, and render comparative costs of similar jobs impossible from season to season, solely because of the variations in the amount of business done. Exact costs, comparable under all conditions, are not to be secured unless the burden charged to production is only that appertaining to the equipment that is actually at work.

From the manager's point of view, the significant fact is that the burden, which it is proposed to apply through a series of equipment rates, is not appreciably less when the operating schedule of the plant is reduced. It is true that power charges may be slightly less, but the fixed charges for building space, interest, insurance, taxes, depreciation, and in some circumstances for repairs also, are no less when the machines are idle. *The manager of a machine shop cannot make a greater mistake in figuring costs than to charge a higher burden in any form whatsoever for the operation of part of his equipment, because the rest of it is temporarily idle, or a higher rate for a smaller labor force because the plant is working on part time. These differences which have always attracted the attention of observing managers are almost entirely clear loss or waste, and should be recognized as such and charged directly to the profit and loss account.*

A Practical Example

The practical manager who regards these ideas as too theoretical will do well to inspect the following list which shows the results of working out a machine-hour rate for direct operating burden in a plant operating about one hundred and fifty machines.

<i>Number of Machines</i>		<i>Rates in Cents</i>	<i>Number of Machines</i>		<i>Rates in Cents</i>
6	@	1.5	12	@	7.0
4	"	2.0	12	"	8.0
9	"	2.5	7	"	8.7
4	"	3.0	4	"	9.0
6	"	4.0	3	"	9.5
2	"	5.0	10	"	10.0
4	"	6.0	3	"	11.0
10	"	6.6	13	"	12.0

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2	@	13.0	3	@	24
2	"	14	2	"	25
11	"	15	1	"	26
1	"	17	1	"	29
3	"	18	2	"	30
1	"	19	1	"	47
1	"	20	1	"	52
1	"	22	1	"	76
4	"	23			

If one is disposed to criticise the minute division that has been made, such as having rates at 8c, 8.7c, 9c, 9.5c, and 10c, it should be borne in mind that there is practically no more work in the cost accounting department in using five rates instead of two. Moreover, if an effort is made to combine some of these rates, it is exceedingly hard to say which rates should be raised and which should be lowered. If five rates like those mentioned above should be brought together, some of the rates would be at least 15% out of the way. Such an error is altogether too large to be tolerated unnecessarily, when one is seeking for really accurate costs.

At the plant where these rates are in force the burden for erecting hands, including the charges for floor space, crane service and supervision, was *five times the rate for bench hands*. In addition to these rates every employee participates in a general burden which includes superintendence, managers, drafting, cost accounting, and all general charges, except those connected with selling expenses.

Inaccuracy of the Old Methods

The results which have been secured in working out these machine rates need only be stated to a practical man to show the violent inaccuracy which there must have been in cost accounting when overhead charges were applied as a percentage of productive labor, or even on a uniform man-hour basis. The following figures will supply a vivid illustration of the inaccuracy of the old method:

	<i>Job No. 1</i>		<i>Job No. 2</i>		
5 hours labor @ 28c	=	\$1.40	5 hours labor @ 28c	=	\$1.40
5 hours burden on the average plan @ 30c	=	1.50	5 hours burden on the average plan @ 30c	=	1.50
		= \$2.90			= \$2.90
Total cost			Total cost		

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At the same wage rate the two jobs show the same cost because they took the same time, although job No. 1 may have used a machine worth 3c per hour and job No. 2 a machine worth 24c per hour, or even one worth 50c per hour or more. Under these conditions, and assuming a general burden rate of 10c per hour, the true cost of these two jobs was as follows:

<i>Job No. 1</i>		<i>Job No. 2</i>	
5 hours labor @ 28c	= \$1.40	5 hours labor @ 28c	= \$1.40
5 hours machine rate @ 3c	= .15	5 hours machine rate @ 24c	= 1.20
5 hours general burden @ 10c	= .50	5 hours general burden @ 10c	= .50
Total cost	\$2.05	Total cost	\$3.10

This is a very conservative comparison. If job No. 2 required a machine worth 60c per hour, the cost would have been \$1.40 + \$3.00 + \$.50 = \$4.90. The percentage on labor method, or a straight man-hour rate in the shop, would show that these three jobs had the same cost, although as a matter of fact in the second case the cost was 151% and in the third case 239% greater than the first.

Perhaps the best thing that can be said about cost accounting practice by machine-hour methods is that it does not require any more work than any of the older methods that have been well developed as a means for taking out costs. At the plant from which the above illustration is drawn, it is not expected that there will be any increase in the cost accounting force for the operation of the plan as outlined. Of course, if a plant with an under-developed cost practice, or none at all, starts to make improvements in a wholesale way, it must expect to increase the overhead charges. If this increase is wisely planned, it is sure to be a money making expenditure.

Mass Production and Automatic Machines

As noted earlier in this article, there are some conditions, of course, under which a machine rate cannot be used to distribute burden, *but the underlying principle of collecting all burden charges for each production center is sound, whatever method may be used for distribution.* Some operations can best use a process rate, which includes labor and accessory supplies as well as burden. This method is particularly applicable to mass

production, or any work that is not made on successive and clearly distinguished manufacturing orders. The application of overhead charges, however, can be made through a process rate strictly in accordance with approved principles of burden distribution.

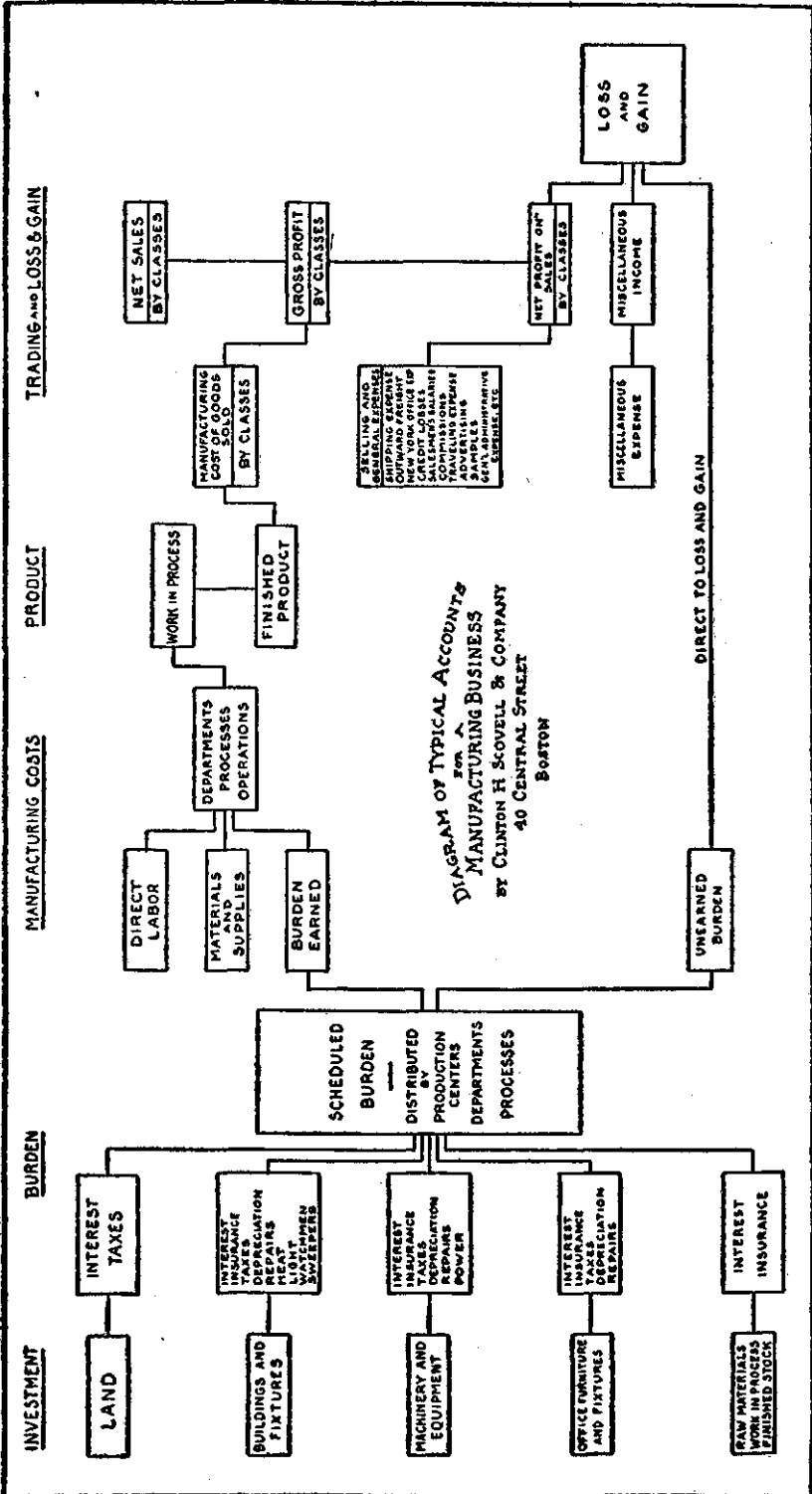
Automatic or semi-automatic machines present a troublesome problem of burden distribution, especially as the burden is usually far more important than the labor as an element of manufacturing cost. This problem has been handled at a plant operating several hundred automatic machines by a plan of efficiency charts, which provide for charging to the job the cost of the effective operation of the machine. Cost accounts under this plan measure with great precision the loss due to slack production, or careless attention from the operator.

Conclusion

There are still some managers who do not realize the importance of a good cost and accounting practice, but the knowledge it supplies is undoubtedly a valuable business asset, as well as a powerful aid to efficient management. The best possible evidence for this statement is that progressive and successful manufacturing enterprises are making liberal expenditures for work of this character.

The present day trend of business is undoubtedly in the direction of a more exact and scientific knowledge of every important detail. Success by rule of thumb, or from energy and enthusiasm alone, is becoming more and more impossible. "The man who knows and knows he knows" is the man who wins.

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Efficiency in Municipal Accounting and Reporting*

BY W. D. HAMMAN

Deputy City Auditor of Los Angeles

Accounting in some form is as old as civilization. Commercial accounting has reached a stage entitling it to be classed as a science; municipal accounting, however, is still in the elementary stage and much of it is far removed from the realm of guesswork, while efficient municipal accounting is as yet in its swaddling clothes.

The financial affairs of a municipality concern every citizen, but "what is everybody's business is usually nobody's business—but the politician's." The modern efficiency idea is that the function of a municipality is one of business, not politics; that a city government is analagous to a big commercial corporation, each citizen and taxpayer having the status of a stockholder. As a shareholder in a private corporation insists on an up-to-date accounting system, so the citizen-stockholder should demand a full statement of all the facts. An efficient system of accounting and reporting will show what results are accomplished and what value in property or service the taxpayer's dollar buys.

Assuming that we are all in the elementary class, let us consider a few fundamental principles in municipal accounting.

Accounting in its higher aspects is a comprehensive term and includes organization, administration, and operation. An account, as defined by SPRAGUE in his *Philosophy of Accounts*, is a "systematic statement of financial facts of the same or opposing tendency, leading to a conclusion." There are few municipal accounts, so called, that measure up to this standard; lacking system and proper classification of items, the "conclusion" formed may be erroneous and tend to conceal rather than reveal facts.

An accountant, as viewed by the man in the street, is a "bookkeeper out of a job." Bookkeeping in ordinary practice is largely mechanical. A mechanical bookkeeper learns to stick certain pegs in certain holes, as has been done by those before him, but an accountant analyzes the facts, determines *why*, and follows a system of reason and logic, rather than one of pegs and holes.

* A paper read before the California League of Municipalities.

Efficiency in Municipal Accounting and Reporting

"A public accountant" says DR. WM. ALLEN in *Efficient Democracy*, in a critical vein, "is an itinerant bookkeeper who sells his time to tell whether a stationary bookkeeper's addition and classification are correct or incorrect." Continuing in the same humorous vein, DR. ALLEN says: "An itinerant bookkeeper who demonstrated at a state examination that he was able to post books and add columns correctly was permitted to call himself a certified public accountant."

Seriously, the C. P. A. degree is one of honor and commands the highest regard, but certified accountancy has heretofore given scant attention to municipal accounting. There being no operative results capable of being assembled and analyzed in a profit and loss account, the certified public accountant frequently fails to show tangible results in his analysis of municipal accounts.

This logically leads to a consideration of the differences between private and public accounting. "The differences between public and private accounting," says LEONHAUSER in his *Handbook of Municipal Accounting*, "are not differences in method; they are rather differences in the subjects concerning which information is needed." The private corporation engages in business for profit; it is not a "welfare agency" except for its own stockholders; they ask and have a right to expect results, profits and dividends. The profit and loss account as perfected by modern accountancy tells a complete history of corporation activity, its losses or gains. However, in the municipal corporation, which rarely engages in business for profit, the chief concern is, or should be, the economic benefits to the public in general and the welfare of the individual citizen. This being the case the city's profit and loss account is non-existent; the city may indeed make gains or suffer losses, but these appertain rather to the good or evil economic results to its citizens, which are difficult to measure in dollars and cents. However, it must not be inferred that there is no way of measuring governmental business.

Public accountants frequently refer to municipal bookkeeping as "cash book accounting," and the criticism with a few exceptions is just. Ordinarily a record of the flow of cash into and out of the treasury is the only thing revealed, and the municipal account when kept on the cash book system does not tell what the interested citizen and taxpayer should know of extravagance

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and waste on the one hand or of economy and efficiency on the other.

A record of receipts and disbursements, even when kept in more or less detail, tells a rambling and disconnected story, from which the public can extract little of interest or real value.

In justification of this method it is frequently said that the city business is like that of a bank, which reduces its transactions to a cash basis. There is a similarity, but it is more apparent than real; the bank, while recording its various forms of credits as cash receipts and disbursements, nevertheless depends upon its profit and loss account for a knowledge of results. Imagine a cashier reporting to stockholders or directors the deposits received and cheques paid to convey an idea of success or failure of the banking business.

There are other serious objections to "cash book accounting." It takes no account of revenues accrued or expenses incurred until they reach the cash stage. Work done is misrepresented, because it fails to include goods used or services rendered last year, but paid for this year, or payments last year for services or goods used this year. It does not afford a continuous and intelligible record of property acquired, payment for which extends over a period of years. An appropriation for the fiscal year is made, and against that the payment is entered; this eliminates the fund account; and the same method is repeated in a subsequent year.

The cash book system is in almost universal use, but in some progressive cities, notwithstanding its imperfections it has been made to serve a valuable purpose, with a proper classification of receipts and expenditures into functional groups and by objects of expenditure, which enables a comparison with a corresponding monthly or yearly period, making it of high administrative value. Such comparisons when arranged in parallel columns, with increase or decrease in dollars or per cent, achieve the maximum of good in such an imperfect system. A comparison with like activities in other cities of similar rank affords a fair idea of the relative economy and efficiency.

Although single entry bookkeeping has been discarded by the commercial world, except in small shops and stores, yet cities, the volume of whose business runs into millions, are in the majority of cases content to follow the primitive method of

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simple record keeping. A chart recently published shows less than twenty American cities that submit a trial balance. A simple control account with cash or with treasurer will suffice to bring all ledger accounts into equilibrium for double entry purposes. Entries not involving cash nor affecting "fund accounts," if journalized and posted into same ledger, will not interfere with a perfect balance of the whole, provided the "city corporation" is debited or credited with the opposing asset and liability journal entries.

The defects of cash book accounting have been known for half a century. Until within the past score of years English cities have led in progressive municipal accounting. The so-called "expense and revenue system" of the British contained the nucleus of the new system; but our most modern American cities, actuated by the spirit of economy and efficiency, have so perfected it as to justify its classification as a science.

Briefly stated the new expense and revenue system embodies the principles of the commercial profit and loss account. The expenses of the city as a whole are assembled on the debit side and the revenues on the credit side; the excess of expenses over revenues is shown as a deficit, while the excess of revenues over expenses is shown as a surplus. In connection with this, but really forming a part of it, is what is called the accrual system, which takes into account all amounts due the city, as well as all amounts owing by the city. This is also sometimes called the asset and liability system.

There are four well recognized ways in which the property and liabilities of a municipality can be affected, *viz.*:

- (1) They may be increased or decreased by cash transactions.
- (2) They may be increased or decreased by credit transactions.
- (3) Assets may be decreased by depreciation and liabilities increased by reserves set up to cover depreciation.
- (4) Assets may be decreased by loss of property or defalcation, or by setting up the necessary reserves to cover such losses.

The cash book system recognizes only the first way, while the asset and liability system comprehends them all. All anticipated revenues such as taxes, licences, franchise income, etc., which are estimated on the basis of previous years' experience,

for budgetary purposes are set up in accounts indicating what ought to be received. The amounts when collected are credited so that the excess or deficit may be shown. This enables the collection of much revenue that might otherwise be overlooked. Accounts of delinquent taxes, sinking funds, etc., together with contingent liabilities such as outstanding orders and contracts, are not ignored. The general appropriation account will show unappropriated or over appropriated funds. Without this full record of financial facts, administrative officers cannot have an intelligent basis for action, nor can they know how the prescribed financial programme is working.

Of course cash transactions must be recorded as in the old system, but the classified receipts and payments are summarized, journalized and posted into the general ledger. The cash or treasurer account in the general ledger operates as a control over the fund ledger. The general ledger may be divided into any required number of individual ledgers such as contract ledger, property ledger, etc., each self balancing and controlled by an account in the general ledger.

What has been said applies to the general accounting system in the office of the auditor or controller. The departmental accounting should be in perfect harmony with the central system.

Efficiency in municipal affairs is a vital issue today, but many have only a vague idea as to what it is or how it is to be secured. As an object, efficiency is simply getting the most value for the least money. The matter of determining the degree of efficiency or inefficiency is almost wholly an accountancy proposition. The asset and liability system embodies all the elements of efficiency accounting, but to be of greatest value expenditures must be subjected to further analysis to derive more specific details, making it clearly analogous to what is known as "cost accounting" in the commercial world. The fundamental principle underlying this system is cost analysis and the separation of its primary elements into a number of logical groups, and determining the unit cost of each.

All administrative officers must act. Specific knowledge is necessary for intelligent action. They should know the cost by organization units; cost by activity; cost by character of expenditure; cost by objects purchased.

The determination of unit costs is the highest achievement in

Efficiency in Municipal Accounting and Reporting

accounting science, and clearly deserves the name "efficiency accounting." A unit is defined as "any given quantity with which others of the same kind can be compared or measured." "There can be no unit for the man who has no desire to know." The common units are per capita and per cent, but perhaps the most serviceable is the *per dollar* unit. Efficiency accounting will determine such questions as unit cost of collecting a dollar in revenue; unit cost of making an arrest; unit cost of a square yard of surfaced street; unit cost of delivery to consumer per 1,000 gallons water, etc. In personal service on measurable work, it will determine what per cent of value an employee renders for each dollar paid out of the municipal cash box.

Efficiency in municipal affairs is not possible unless there be an adequate accounting system. While accountancy cannot furnish energy and intelligence, it can and does expose inefficiency, dishonesty and extravagance and renders possible economy, efficiency, and resultant good government.

A municipal audit is defined to be, "an official examination of accounts to determine their accuracy and validity as a charge against specific appropriated funds." Checking is a necessary part of an audit, but if this is confined simply to determining if the recorded entries agree with the vouchers, as in most public auditing done under the direction of the grand jury, it usually fails to serve any substantial purpose.

A simple definition of an auditor is "one who audits." From this it must necessarily follow that one who does not audit is not an auditor, even though he may have the title and draw pay as auditor. There are two kinds of audits—a pre-audit and a post-audit. HERBERT SANDS calls the latter "post mortem audit," which is a very appropriate name, as it usually involves only the viewing and passing on the "remains"—finding out how, when, and where goods or money has been taken, and possibly prescribing a remedy. The post-audit is inefficient, as the crook can easily conceal his dishonesty by omitting or destroying incriminating evidence. A pre-audit is the efficient method and typifies "prevention" as compared with "cure" in the post-audit.

The pre-audit as applied to expenditures is now in quite general use in many large cities, but comparatively few have so far attempted to pre-audit receipts, although the latter is simpler and more easily effected. A pre-audit of expenditures is as-

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sured by requiring every expenditure for goods or personal service to be preceded by an authorization from the proper board, commission or legislative body. If this is done the duty of an auditor, aside from verifying computations and extensions, is to determine whether the expenditure conforms to the authorization. The pre-audit of receipts is accomplished by the auditor or controller issuing the financial stationery to the revenue collecting officer and holding him responsible for the proper use of the official receipts. This plan definitely fixes responsibility and while it is not absolutely "knave-proof," it serves as an effective check on dishonesty.

Perhaps ten dollars is lost in property where one dollar is lost in money to every municipality. The concealment or removal of personal property of a municipality is so easy that it is not astonishing that losses are frequent. In a large eastern city a steam yacht worth \$10,000 was stolen and never recovered; in another city two houses belonging to the municipality mysteriously disappeared; in another city an automobile vanished from sight. If such things are possible with houses and steam yachts we may only conjecture what can happen to more portable property.

A property audit consists of a charge to the officer given its custody and an annual inventory-audit thereafter, holding the custodian responsible for any shortage. Property worn out or valuable only as junk should be "surveyed" and condemned, so that proper credit may be given to the custodian. Simple and businesslike as this appears, few cities thus audit their property.

Such negligence as many municipalities display in these matters would bankrupt any corporation that did not have behind it unlimited resources.

Most large cities publish a report annually, some publish one quarterly, while several do so monthly. It goes without saying that a municipality's report should be a good witness and "tell the truth, the whole truth and nothing but the truth." Few published reports measure up to this standard. Some cities with faulty accounting methods try to classify and arrange their reports on modern lines, trusting to conceal the shortcomings of their accountancy methods. Such tactics may mislead the confiding taxpayer, or even the novice in fiscal matters, but the financier and the bond expert can usually see through the thin veneer.

Efficiency in Municipal Accounting and Reporting

The prime requisites of a good report are promptness, accuracy and completeness. The National Municipal League suggests that detailed accounts be divided into two classes, *viz.*: (1) Operative accounts showing costs of municipal administration and municipal revenues available to meet expenses, (2) Proprietary accounts, showing assets and liabilities.

Classification of all accounts into functional groups—such as general government; protection to life and property; health and sanitation; highways, charities and corrections; education; recreation; municipal industries—has been adopted by the federal and state government in the interest of a uniform system of accounting and reporting, and is now generally followed by larger cities still on the cash book system. This plan, however, is not altogether suitable to the expense and revenue system and hence reports of cities on the new system do not adhere to the National Municipal League's plan.

A plain distinction should always be made between expenditures on capital account, usually called "outlays," and expenditures involving maintenance, operations, etc., usually termed "expenses." A municipality's expenditures for outlays will vary from year to year owing to differing needs; but the expenses of a city should not vary much from year to year except to increase with population; and then the percentage should differ only slightly.

I know that there are those amongst the older writers on accounting who maintain that a municipality's chief asset is its power of confiscating property within its limits through taxation, and that such an asset cannot be valued. While it is true that the bond purchaser does not regard the city's tangible property as a realizable asset for bond payments, yet the more property a city owns the less it will have to buy, and this indirectly bears on a municipality's borrowing capacity. Those who hold this view do not contend, however, that what the city owns and what it owes should not be assembled in some way to show the excess of assets over liabilities. The municipal balance sheet only can provide this necessary statement of financial facts.

Every municipality as a part of its annual report should exhibit a balance sheet, showing classified summaries of all the city owns as assets and everything the city owes as liabilities. This should be in at least two sections—capital, balance sheet, and

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general or fund balance sheet. The capital assets are fixed properties such as real estate, machinery and equipment, sinking fund investments, and cash balances in bond funds. As opposed to these would be bonded and other outstanding debts appertaining to these fixed properties. Excess of assets over liabilities may be properly shown as "city corporation" or simply as capital surplus.

In the general account section should appear as assets the cash in fund accounts, delinquent taxes or other accounts receivable due the city. As opposed to these would be advance payment of taxes, outstanding demands, or other debts and encumbrances against fund cash. The excess of assets over liabilities may be shown as revenue surplus or simply as surplus. Of course if there are trust funds another division must be made which will show the cash on hand as an asset and the trust fund account as a liability.

The municipal balance sheet is a modern innovation, and some accountants err in the making of it; this is due to confusing the cash book fund entries appearing as debits with the ledger accounts appearing as credits; the error consists in showing the fund accounts as assets. The balance sheet represents the ledger accounts, where all balances appear on the side opposite to those in cash book. The difficulty grows out of the inability to distinguish between a fund which is an asset, and a fund account which is a liability. The municipal balance sheet should not be one of memoranda, but should be a true summarized abstract of the general ledger trial balance, and hence must be in perfect equilibrium.

In conclusion it may be appropriate to say that the awakened public interest in municipal activities, due to the work of efficiency commissions and bureaus of municipal research, is a hopeful sign of the new era in municipal administration, which will throw the old inefficient order into the discard.

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EDITORIAL

Integrity of Investment

The members of the New York stock exchange recently adopted a resolution calling for the appointment of a special committee to assist in measures which will "tend to increase the safety and integrity of American investments and at the same time afford every encouragement to legitimate enterprise."

The action of the exchange is undoubtedly wise and timely. Such a body should have a fuller appreciation of the difficulties combining the two objects sought than some of the legislative bodies which have attempted to afford protection to investors without adequate consideration of the effect on legitimate enterprise; and as the exchange possesses considerable powers in such matters it has the means of testing the efficiency of measures which the committee may recommend. Moreover, quite apart from its powers the exchange can exercise an important moral influence and can establish standards which will in a large measure be accepted by corporations and promoters even without legislative authority. Indeed, we believe that the healthiest development in such matters can be obtained by the creation of a strong public sentiment in favor of such methods as

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will best protect investors before they are crystallized into law and made legally binding by statutes.

The subject with which the committee is called on to deal is divisible into two parts: First, the safeguarding of the issue of securities; and, second, the protection of the holders of securities after they have been issued.

As regards the issuance of new securities, the present English company law is, we believe, generally accepted by students of the subject as embodying a fairly satisfactory provision for the protection of investors. The main features of this law are the requirements for a full disclosure of all important contracts affecting the company, of the interests of the promoters and directors in the business to be acquired or in the promotion or underwriting of the issue, and the explicit rules as to the responsibility for representations made in the prospectus whether on the faith of reports of others or not, different rules of course applying in the two cases. In view of the general interest in this question we are printing a copy of a typical English prospectus (see page 40) which illustrates the working of the act and which will repay careful study.

The exchange has power to make similar requirements as to disclosure in connection with any securities which it may be asked to list, and whilst it cannot make the promoters legally liable for failure to make full disclosure its influence should be sufficient to insure that its rules shall be generally observed.

The responsibility for statements in a prospectus would seem to be a question which can only be dealt with by legislative enactment, but the exchange should be able to render valuable service in securing legislation which will be practicable and not so drastic as to hamper new and legitimate enterprise.

Turning to the protection of holders of securities after they have been issued, the exchange should be able to deal with this question perhaps even more effectively than could be done by legislation. It is in this feature that the existing English law is the least satisfactory and the reports of the best English companies are meagre in comparison with those of the best American companies. A statute cannot prescribe more than a standard which all companies would be fairly required to adopt, and where a statute exists there is a natural disposition not to go beyond statutory requirements. In the resolution now under con-

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sideration reference is made to the desirability of greater publicity and fuller and more frequent reports of operations than has been customary with many companies in the past. Undoubtedly much can and should be done to bring the general practice of corporations closer to the standard set by the best companies in regard to publicity. At the same time it must be remembered that all companies cannot safely adopt the same standard. Companies engaged in competitive business cannot afford to disclose details of their business too explicitly, and information so disclosed may be more valuable to competitors or customers than to stockholders. This consideration has greater weight where a company is engaged in only one or two lines of activity than where its interests are more diversified. Again, while more frequent reports of operations are in many cases desirable it should be realized that, particularly in businesses of a fluctuating character, too frequent reports may easily be misleading, though quite truthful, and more harmful than beneficial to the average stockholder.

* * * * *

We have dealt thus far with the general aspects of the subject, but in both branches it has a special interest for accountants.

If those concerned in the issuance of securities are held to a strict responsibility for the representations made in connection therewith provision must be made for limiting that responsibility as to matters not within their personal knowledge. The natural limitation is exemption where representations are based and are stated to be based on reports of disinterested experts and the most important of such representations are often, if not usually, those as to past profits and present financial position, the natural basis for which is an accountant's report. Again, in the matter of subsequent reports, there is a steadily growing realization of the necessity for independent verification of published statements, and particularly annual statements, such as has been made compulsory in England and in many British colonies. It is to be hoped that the committee will lend its support to this movement and especially to modifications in the present practice calculated to strengthen the hands of auditors. The practice of having annual audits having been somewhat reluctantly adopted there is a disposition now to expect too much from them, a disposition for which the extravagant claims of some

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accountants seeking business are doubtless in a large measure responsible. There will always be limitations upon the protection which an audit can afford, but these limitations would be greatly reduced if auditors were made more independent of the officers and directors of a company by provisions for their election by stockholders and for opportunity for them to be heard by the stockholders before they could be supplanted, such as are contained in the existing English law. It is sometimes argued that such provisions would be ineffective because of the perfunctory character of stockholders' meetings, but if an important issue should arise between auditors and directors of a public company the press would be interested even if the stockholders should not be; and moreover, there has been a decided tendency towards more real and effective stockholders' meetings in the last few years. Directors might still be able to control the election of auditors, but if they realized that should a serious difference arise between them and the auditors the auditors could place it before the stockholders they would refrain from forcing an issue unless reasonably sure of being able to sustain their position at the bar of public opinion.

The committee is called on to deal with a subject of wide importance and the results of its investigations will be awaited with sympathetic interest by the whole accountancy profession.

The prospectus referred to is as follows:

A Copy of this Prospectus has been filed with the Registrar of Joint Stock Companies in Scotland

The Subscription List will open on Monday, the First day of July, 1912, and will close on or before Wednesday, the Third day of July, 1912

THE SCOTTISH IRON AND STEEL COMPANY
LIMITED

[Incorporated under the Companies (Consolidated) Act, 1908]

SHARE CAPITAL - - £750,000

DIVIDED INTO

300,000 Six per cent Cumulative and Participating Preference Shares
of £1 each

(Ranking also as regards Capital in priority to the Ordinary Shares), and
450,000 Ordinary Shares of £1 each

Editorial

£300,000 Five per cent Redeemable First Mortgage Debenture Stock

DEBENTURE STOCK

The mortgage debenture stock will be secured by conveyances of the company's heritable property to the trustees for the debenture stock holders and by a deed of trust relative thereto. It will be repaid at 100 per cent not later than 31st December, 1934 by a cumulative sinking fund of 2½ per cent, to be applied annually to the redemption of the stock by purchases when obtainable under 100 or by drawings at that price. The amount payable to meet interest and sinking fund in respect of the year 1912 will be £15,000 (representing one-half year's interest and a whole year's sinking fund) and in each subsequent year £22,500. In addition to this, the trust deed provides that after paying the 6 per cent cumulative dividend on the preference shares and before paying any dividend on the ordinary shares, the sinking fund will be increased by a further 1¼ per cent per annum (£3,750) of the amount of the debenture stock (£300,000), out of the surplus profits of the company. The company further reserves the right to increase the payments to the sinking fund in any year. In the event of a voluntary winding-up for the amalgamation or reconstruction of the company, the stock will be repaid at par.

PREFERENCE SHARES

The preference shares will carry a fixed cumulative preferential dividend of 6 per cent per annum, with the right to one-fourth of the profits in every year remaining after provision of a non-cumulative dividend at the rate of 6 per cent on the ordinary share capital.

The preference shares will also rank as to capital in priority to the ordinary shares, and in the event of liquidation, after the ordinary shareholders have been paid the par value of their shares, the two classes of shares shall rank equally until the holders of the preference shares have received an additional 5 per cent on the par value of their shares. Thereafter all remaining assets shall belong to the ordinary shareholders.

ORDINARY SHARES

The whole of the present issue of ordinary shares will be taken by the vendors in part payment of the purchase price of their businesses.

The dividend on the ordinary shares is, by the articles of association, restricted to 10 per cent per annum, payable out of the profits of any one year, until a special reserve fund amounting to £50,000 shall have been accumulated to secure the dividend on the preference shares, which, as provided by the articles, must be invested outside the business of the company.

Subscriptions will be received by the company's bankers:

THE LONDON CITY AND MIDLAND BANK LIMITED, Threadneedle Street, London, and Branches;

THE BRITISH LINEN BANK, Glasgow, Edinburgh, and Branches;

THE CLYDESDALE BANK, LIMITED, Glasgow, Edinburgh, and Branches;

For the Issue of £300,000 Five per cent Redeemable First Mortgage Debenture Stock at 95 per cent, and

150,000 Six per cent Cumulative Participating Preference Shares of £1 each at par

Payable as follows:	Debenture Stock	Preference Shares
On application	£5 0 0	£0 1 0
On allotment	45 0 0	0 9 0
On 12th September, 1912	45 0 0	0 10 0
Total	£95 0 0	£1 0 0

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The whole of the instalments may be paid on allotment only, and interest at four per cent per annum will be paid on such prepayments.

Bearer scrip will be issued after allotment, to be exchanged for registered debenture stock certificates after 1st October, 1912, the stock being transferable in amounts not involving a fraction of £1. Certificates for the preference shares will be issued in due course in exchange for bankers' receipts and fully-paid allotment letters.

The interest on the debenture stock will be payable half-yearly on 30th June and 31st December in each year, the first payment being on 31st December, 1912, calculated on the instalments from the respective dates of payment.

It is proposed to make the dividends on the preference shares payable in April and October in respect of the periods ending 31st December and 30th June in each year. The first payment will be calculated on the instalments from the respective dates of payment.

The preference and ordinary shareholders shall be entitled to one vote for every share held.

TRUSTEES FOR THE DEBENTURE STOCK HOLDERS

ARCHIBALD COLVILLE, Chairman of David Colville and Sons, Limited,
Dalzell Steel and Iron Works, Motherwell.

JOHN HENDERSON, General Manager, Clydesdale Bank, Limited, Glasgow.

SOLICITORS TO THE TRUSTEES

MACKENZIE ROBERTON & Co., 176 St. Vincent Street, Glasgow.

DIRECTORS

C. F. MACLAREN, Stenton Iron Works, Wishaw
(Chairman),

WM. DOWNS, Coats Iron Works, Coatbridge
(Vice-Chairman),

DAVID JOHN GARRETT, Waverley Iron Works
Coatbridge,

GEORGE B. BENNETT, Woodside Iron Works
Coatbridge,

ROBERT CRICHTON, Victoria Iron Works Coat-
bridge

THOMAS R. MILLER, Globe Iron Works,
Motherwell,

J. W. ARTHUR SPENCER, Phoenix Iron Works,
Coatbridge,

ROBERT WATERSTON, North British Iron Works,
Coatbridge,

WM. WYLLIE, Clifton Iron Works, Coatbridge,

} Iron Manufacturers.

BROKERS

BUCHANAN, GAIRDNER, and TENNANT, 19 St. Vincent Place, Glasgow.

EGERTON JONES and SIMPSON, 2 Copthall Buildings, London, E. C.

SOLICITORS

MOTHERWELL, M'MURDO, and MITCHELL, 10 Bank Street, Airdrie.

Editorial

AUDITORS

MOORES, CARSON, and WATSON, 209 West George Street, Glasgow, Chartered Accountants.

GRAHAMS and Co., 212 West George Street, Glasgow, Chartered Accountants.

SECRETARY—JAMES HAMILTON.

REGISTERED OFFICES (pro tem)—209 WEST GEORGE STREET, GLASGOW.

PROSPECTUS

The company has been formed for the purpose of acquiring, amalgamating and working as one concern the following businesses of malleable iron and steel manufacturers in Scotland with a view to securing economy of manufacture and administration:

Name of Company or Firm	Name and Place of Works
ARCHIBALD BAIRD & SON, Ltd.,	Cairnhill Iron Works, Coatbridge.
DOWNES & JARDINE,	Coats Iron Works, Coatbridge.
THOMAS ELLIS, Ltd.,	North British Iron Works, Coatbridge.
GLENCAIRN IRON AND STEEL COMPANY, Ltd.,	Glencairn Iron Works, Motherwell.
C. F. MACLAREN & COMPANY,	Stenton Iron Works, Wishaw.
HUGH MARTIN & SONS,	Coatbridge Iron Works, Coatbridge.
A. & T. MILLER,	Globe Iron Works, Motherwell.
JOHN SPENCER (Coatbridge), Ltd.,	Phoenix Iron Works and Drumpellier Iron Works, Coatbridge.
WILLIAM TUDHOPE & SON, Ltd.,	Crown Iron Works, Coatbridge.
THE VICTORIA IRON AND STEEL COMPANY, Ltd.,	Victoria Iron Works, Coatbridge.
WAVERLEY IRON AND STEEL COMPANY, Ltd.,	Waverley Iron Works and Rochsolloch Iron Works, Coatbridge.
WYLIE & COMPANY,	Clifton Iron Works, Coatbridge.
THE WOODSIDE STEEL AND IRON COMPANY, Ltd.,	Woodside Iron Works, Coatbridge.

DESCRIPTION OF BUSINESS—These firms and companies last year produced in malleable iron and steel about 225,000 tons.

Capital has been freely expended recently in the erection of the latest type of furnaces and machinery and in consequence the company will have a reserve capacity sufficient to meet the probable requirements of many years to come.

With two exceptions all the firms in Scotland which are strictly malleable iron manufacturers are included in this company, and with these two firms and a few others which make a small quantity of malleable iron as an adjunct of their larger business, arrangements are being made for a working agreement.

Malleable iron manufacture is one of the oldest metal industries in Scotland. Scotch iron has a first-class reputation both at home and abroad and the output is probably now equal to that of any district in the Kingdom.

The works proposed to be taken over have an excellent trade with the makers of boiler, gas, water, and steam tubes, rivets, bolts and nuts, the fencing and constructional trades, the Clyde and Belfast shipbuilders and engineers, locomotive builders, railway companies, and wagon builders.

EXPORT TRADE—The companies and firms have a considerable business with London, the various districts of England, Ireland, and the Continent

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of Europe. In the export trade the various brands and trade-marks are well-known in Canada, Australia, New Zealand, South Africa, Straits Settlements, India, and the East generally.

In regard to specialties of the malleable iron trade, such as for government work at home and abroad, this locality has come into prominence during the last few years. Many of the firms about to be amalgamated by this company are on the British admiralty, war office, India office, and other official lists.

In consequence of the situation of these works in the heart of the coal and pig-iron district of the West of Scotland, with abundant supplies of fuel and raw materials, the company will be in a specially favourable position to compete on the best terms in home and foreign markets. The works being conveniently situated for the ports of Glasgow, Greenock, Adrossan, Leith, Grangemouth, and Bo'ness, enjoy exceptional shipping facilities to all parts of the world.

The present managers of the various companies and firms are being retained by the new company, so that continuity in business and efficiency in manufacture are assured.

VALUATION OF PROPERTIES ACQUIRED BY THE COMPANY—The works, including ground, buildings, and fixed machinery and plant of the various firms and companies, have been valued by Messrs. Fuller, Horsey, Sons, and Cassell, Valuers, London, who have had a long and intimate connection with works of this description, and have practical knowledge of the trade, at the sum of £518,962.

The loose plant and tools have also been valued by the same valuers at £57,314.

The following is a copy of their certificate:

FULLER, HORSEY, SONS, and CASSELL. II, Billiter-square
CERTIFICATE London, E. C., 21st June, 1912
To the Directors of The Scottish Iron and Steel Company, Limited:

GENTLEMEN—In accordance with your instructions, we have attended at the undermentioned iron and steel works, rolling mills, and other properties, and have made a survey and valuation of same, together with the fixed and movable plant and machinery therein:

(1) Waverley Iron and Steel Works at Coatbridge, and a neighboring disused quarry used as a tip; (2) The Rochsolloch Iron and Steel Works; (3) The North British Iron Works at Coatbridge, together with an adjoining block of dwelling houses and tenements; (4) The Phoenix and Drumpellier Iron Works at Coatbridge, and a block of tenements in Phoenix Square, Coatbank Street; (5) The Globe Iron and Steel Works at Motherwell, together with certain tenements, a shop, and a fully licensed store; (6) The Coats Iron and Steel Works, situate in Coatbank Street, Coatbridge; (7) The Woodside Steel and Iron Works, situate at Langloan, near Coatbridge; (8) The Stenton Iron and Steel Works, situate at Wishaw, together with a row of 28 cottages in Alexander Street; (9) The Victoria Iron and Steel Works at Coatbridge; (10) The Clifton Iron and Steel Works at Coatbridge; (11) The Crown Iron Works, situate in Main Street, Coatbridge; (12) The Cairnhill Iron and Steel Works, situate at Calder, near Coatbridge; (13) The Glencairn Iron and Steel Works, situate at Flemington, near Motherwell; (14) The Coatbridge Iron Works at Coatbridge.

Each of the foregoing properties is held in perpetual feu, and is subject to a feu duty or duties amounting in the aggregate to £1, 621 8s 3½d per annum, in some cases with duplications and nominal casualties.

We are of opinion that the fair value as a going concern, as on 1st January, 1912, of the above-mentioned iron and steel works, rolling Mills, and other properties, together with the whole of the fixed plant, machinery, and fixtures, loose plant, tools, utensils, patterns, and other

Editorial

movables, is the sum of Five Hundred and Seventy-six Thousand Two Hundred and Seventy-six Pounds (£576,276), divided as under:

Land, buildings, and fixed plant and machinery ...	£518,962
Loose plant, furniture, patterns, and other movables	57,314
	£576,276

These figures are exclusive of any value for stock, stores, material, work-in-progress, registered brands, trade-marks, or good will.

We are, Gentlemen, yours faithfully,

(Signed) FULLER, HORSEY, SONS, and CASSELL.

The stock-in-trade of each firm at 31st December, 1911, has been carefully taken and verified both as to quantity and quality by a representative from another firm. The pricing of the stock has been carefully supervised by a committee of the vendors. This stock will be taken over by the company.

WORKING CAPITAL—It is calculated that the sum of at least £180,000 will be available as working capital out of the present issue after payment of the preliminary expenses. This sum the directors consider sufficient for the purpose of the business.

PAST PROFITS—The books of the firms and companies now proposed to be acquired have been examined by Messrs. Moores, Carson and Watson, Chartered Accountants, Glasgow, and Messrs. Grahams and Company, Chartered Accountants, Glasgow, and the following is a copy of their certificate thereon:

To the Directors of The Scottish Iron and Steel Company, Limited:

GENTLEMEN—We have examined the books of the following companies and firms: (1) Downs and Jardine, Coatbridge; (2) Thos. Ellis, Ltd., Coatbridge; (3) C. F. MacLaren and Co., of Wishaw; (4) Hugh Martin and Sons, Coatbridge; (5) A. and T. Miller, of Motherwell; (6) John Spencer (Coatbridge), Ltd., Coatbridge; (7) William Tudhope and Son, Ltd., Coatbridge; (8) Victoria Iron and Steel Company, Ltd., Coatbridge; (9) Waverley Iron and Steel Company, Ltd., Coatbridge; (10) Wylie and Co., Coatbridge; (11) The Woodside Steel and Iron Company, Ltd., Coatbridge, for the eleven years ending December 31st, 1911; and of Messrs. Archibald Baird and Son, Ltd., in so far as these relate to their business at Cairnhill, Coatbridge, for the four years ending December 31st, 1911.

The aggregate profits calculated to December 31st in each case, before providing for interest, depreciation, management salaries, and income tax were as follows:

1901, eleven businesses	£80,308 10 3	1907, eleven businesses	£87,031 13 0
1902, " " ..	64,623 18 9	1908, twelve " ..	53,402 19 10
1903, " " ..	72,891 15 7	1909, " " ..	36,652 18 0
1904, " " ..	80,439 12 1	1910, " " ..	32,279 11 7
1905, " " ..	84,631 7 7	1911, " " ..	75,412 17 2
1906, " " ..	106,387 13 10		

The annual average of the profits of the vendor firms on the basis of eleven years' working of eleven businesses, four years' working of one business, and apart from the results of the Glencairn Iron and Steel Company, Ltd., a company which has only been working for one year, and whose books have not been examined by us, has been £72,-181 12s 9d.

The amount charged for maintenance and renewals before arriving at the above profits is equal to an average of not less than £28,000 per annum. In addition to this, the wages expended on maintenance

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and renewals have been charged to revenue, but it has not been possible to ascertain the amount thereof.

We are, yours faithfully,

GLASGOW, June 21st, 1912.

(Signed) MOORES, CARSON and WATSON, C.A.
(") GRAHAMS and Co., C.A.

During the years 1909 and 1910 exceptionally keen competition prevailed amongst local makers, and prices were for a time reduced to an unremunerative level. In addition to this, several of the works were for varying periods closed for alterations and reconstruction. The profits for 1911 have shown a satisfactory recovery, and it is anticipated that irrespective of any benefits from amalgamation, 1912 will show much better results.

The amount required to pay the interest on debenture stock and the fixed dividend on the preference shares is:

£300,000 first mortgage debenture stock at 5 per cent	£15,000
2½ per cent for redemption of debentures	7,500
£300,000 in preference shares at 6 per cent	18,000
	<hr/>
	£40,500

By reason of the economies hereafter referred to, coupled with the general improvement in the trade, it is considered that increased profits can be earned, which would mean additional dividends on the preference shares.

The works proposed to be taken over are at present fully employed, and the contracts already booked will keep them so for many months.

ECONOMIES TO BE DERIVED BY AMALGAMATION—The economies which can be effected by the consolidation of this trade are very marked. The profits obtainable can be largely augmented owing to the fact that the malleable iron industry is peculiarly fitted to benefit from improvements in methods of working, which are only rendered possible by amalgamation. The rolling of the many and varied sections and the range and dimensions in these sections involves frequent roll-changing in the mills, but under amalgamation this will be reduced to an absolute minimum, giving thereby:

- (1) Greatly increased output from present plant in a given time, and consequent reduction in overhead charges.
- (2) Saving in consumption of fuel.
- (3) Less waste of metal due to much greater uniformity and regularity of work at furnaces and mills.
- (4) The utilization of plant on lines to give outputs greater than are possible when working as individual firms.

The economies in expenditure on rolls and other plant will also be considerable.

The advantages of buying in larger quantities and the lessened competition in selling should tend to increase the margin of profit obtainable.

The businesses will be taken over as from the 1st January, 1912, the debts and liabilities to that date being discharged by the respective vendors, the benefit of the trading after that date accruing to the company, which will therefore benefit by the large rise which has taken place in the selling prices of its products since that date. The profits to the date at which the company is entitled to commence business will afford a fund available towards the payment of the preliminary expenses.

SECURITY FOR DEBENTURE STOCK AND PREFERENCE SHARES—As will be seen from the valuers' certificate.

Editorial

Lands, buildings, fixed plant and machinery represent a value of £518,962
Loose plant represents a value of 57,314

To which has to be added the value of 576,276
Goodwill, including value of brands and trade-marks 249,384
Working capital, including stocks, provided by the present issue 180,000

Making a total of£1,005,660

or, excluding goodwill, etc., of £756,276. On the latter reduced figure it will be seen that the debenture stock is covered over two-and-a-half times, and the preference shares one-and-a-half times as to capital.

The following particulars are furnished in accordance with the requirements of the companies (consolidation) act, 1908:

A copy of the memorandum of association of the company, with the names, descriptions, and addresses of the signatories thereto, and the number of shares subscribed for by them respectively, is annexed to this prospectus, and forms part thereof.

The articles of association provide that the qualification of a director shall be the holding of shares of the company, whether preference or ordinary, of the aggregate nominal value of £1,000.

The provisions of the articles of association as to the remuneration of directors are:

ARTICLE 96. The remuneration of the directors, and their remuneration for services performed previous to the first general meeting, shall be determined by the company in general meeting.

ARTICLE 97. If any director shall be called upon to perform extra services and to make any special exertions for any of the purposes of the company or the business thereof, the company may remunerate the director or directors so doing, either by a fixed sum or otherwise as may be determined, and such remuneration may be either in addition to or in substitution of his or their remuneration as provided for above.

ARTICLE 117. The board may appoint any one or more of their number to be managing director, or general manager, or manager, or managing directors, or general managers, or managers, of the company, and may allow to him or them such remuneration in respect thereof, in addition to his or their remuneration as director or directors fixed in accordance with the preceding clause, as they think fit.

ARTICLE 118. The board may delegate to such managing director, or general manager, or manager, or managing directors, or general managers, or managers (provided that, in the case of a general manager, or manager, or general managers, or managers, he, or they, be a director or directors), all or any of the powers hereby made exercisable by the board except those relating to shares and borrowing, and any others as to which special provisions inconsistent with such delegation are herein contained.

The price payable by the company to the vendors, including price of stocks, is £956,508 9s 3d, of which £249,384 represents goodwill, payable to the respective vendors, as to £150,000 in fully-paid preference shares, as to £450,000 in fully-paid ordinary shares, and as to £356,508 9s 3d in cash out of the proceeds of the present issue. The purchase price payable to the vendors in preference and ordinary shares and in cash will be divided among them as follows, *viz.*:

Archibald Baird & Son, Limited, 8,435 preference shares, 26,513 ordinary shares, and £13,095 18s 6d in cash; Downs & Jardine 14,155 preference shares, 44,489 ordinary shares, and £21,319 17s 5d in cash; Thomas Ellis, Limited, 13,761 preference shares, 43,253 ordinary shares and £15,433 12s 6d in cash; Glencairn Iron and Steel company, Limited, 7,050 preference shares, 22,396 ordinary shares, and £11,378 1s 1d in cash; C. F. McLaren & Company, 13,081

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preference shares, 41,115 ordinary shares, and £21,134 1s 6d in cash; Hugh Martin & Sons 6,289 preference shares, 19,768 ordinary shares, £8,646 14s 7d in cash; A. & T. Miller 13, 758 preference shares, 43,243 ordinary shares, and £19,331 7s 1d in cash; ohn Spencer (Coatbridge), Limited, 15,499 preference shares, 48,714 ordinary shares, and £25,769 19s 10d in cash; William Tudhope & Son, Limited, 6,843 preference shares, 21,508 ordinary shares, and £11,325 4s 4d in cash; The Victoria Iron and Steel Company, Limited, 11,182 preference shares, 35,147 ordinary shares, and £15,849 18s 6d in cash; Waverley Iron and Steel Company, Limited, 30,071 preference shares, 34,698 ordinary shares, and £144,000 14s 8d in cash; Wylie & Company, 9,876 preference shares, 31,042 ordinary shares, and £12,999 16s 2d in cash; The Woodside Steel and Iron Company, Limited, 38,114 ordinary shares, and £36,223 3s 1d in cash.

Such fully-paid preference and ordinary shares are the whole of the shares issued or agreed to be issued as fully or partly paid up otherwise than in cash.

The minimum subscription upon which the directors may proceed to allotment is 150,000 preference shares.

The whole of the present issue has been guaranteed for a commission (which includes underwriting and over-riding commissions) payable by the company at the rate of 4 per cent in the case of the mortgage debenture stock, and of 6½ per cent in the case of the preference shares.

The preliminary expenses other than the above, including the expenses and stamp duties of the conveyances to the company, are estimated to amount to £25,000. These are payable by the company.

The following contracts have been entered into:

Here follow details of twenty-six contracts.

The following directors are respectively interested in the promotion of the company, and in the business and others to be acquired by the company, as follows, *viz.*: Colin Faulds MacLaren, as a partner of C. F. MacLaren and Company; William Downs, as a partner of Downs and Jardine; David John Garrett, as a shareholder of Waverley Iron and Steel Company, Limited; George Bowen Bennett, as a shareholder of the Woodside Steel and Iron Company, Limited; Robert Crichton, as a shareholder of the Victoria Iron and Steel Company, Limited; Thomas Ronald Miller as one of the trustees of the late Alexander Ronald Miller, iron manufacturer, Motherwell, who carry on business under the name of A. and P. Miller; John William Arthur Spencer, as a shareholder of John Spencer (Coatbridge), Limited; Robert Waterson, as a shareholder of Thomas Ellis, Limited; and William Wylie, as a partner of Wylie and Company.

The following directors are interested in the underwriting, having subunderwritten (at a commission at the rate of 2½ per cent in the case of the debenture stock and at a commission at the rate of 4 per cent in the case of the preference shares), debenture stock to the amount and preference shares to the number following their respective names, *vide licet*: C. F. MacLaren, 4,000 preference shares; William Downs, £1,300 debenture stock and 5,120 preference shares; David John Garrett, 2,500 preference shares; Thomas R. Miller, £4,700 debenture stock and 6,000 preference shares; J. W. Arthur Spencer, £3,000 debenture stock and 4,200 preference shares; Robert Waterson, 3,000 preference shares; and William Wylie, £600 debenture stock and 1,400 preference shares.

By the contracts above mentioned it is also provided that several of the directors should, along with other officials of the vendor companies and firms, receive engagements with the company on the terms therein specified.

Application will be made for a settlement and quotation for the de-

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debenture stock and the preference and ordinary shares of the company on the London, Glasgow, and Edinburgh Stock Exchanges.

Applications for debenture stock and preference shares must be made on one of the accompanying forms, and must be sent to the bankers of the company with a remittance for the amount payable on application.

If the amount of debenture stock or number of preference shares allotted to any applicant is less than the amount or number applied for by such applicant, the surplus will be credited in reduction of the amount payable on allotment, and the balance (if any) will be returned.

Failure to pay any instalment when due will render the allotment liable to cancellation and previous payments to forfeiture.

A brokerage of one-half per cent will be paid by the company to brokers and other approved agents upon all debenture stock and preference shares allotted on forms of application, other than underwriting applications, bearing their stamps.

Prospectuses and application forms may be obtained at the offices of the company, and from the British, Foreign, and Colonial Corporation, Limited, 57 Bishopsgate, London, E. C., and from the bankers, the brokers, and solicitors. Dated the 27th day of June, 1912.

THIS FORM MAY BE USED

This form should be sent with a deposit of 5 per cent to The London City and Midland Bank, Limited, Threadneedle Street, London, E. C., or branches; or to The British Linen Bank, Glasgow, Edinburgh, or branches; or to The Clydesdale Bank, Limited, Glasgow, Edinburgh, or branches.

No. A

FORM OF APPLICATION FOR DEBENTURE STOCK

THE SCOTTISH IRON & STEEL COMPANY, LIMITED

[Incorporated under the Companies (Consolidation) Act, 1908]

Issue of £300,000 Five Per Cent Redeemable First Mortgage
Debenture Stock at 95 Per Cent

To the Directors of The Scottish Iron and Steel Company, Limited:

Gentlemen—Having paid to the company's bankers the sum of £..... being a deposit of 5 per cent on application for £..... of the above mentioned five per cent redeemable first mortgage debenture stock, I (we) hereby request you to allot to me (us) that amount of debenture stock, and I (we) agree to accept the same or any less amount that may be allotted to me (us) upon the terms of the prospectus, dated the 27th day of June, 1912, and to pay the balance due as provided by the said prospectus.

Ordinary Signature

Name (in full)

Address

* Occupation or Description

Date, 1912

* If a lady, state whether "Mrs." or "Miss."

Please write distinctly

Cheques should be made payable to The London City and Midland Bank, Limited, The British Linen Bank, or The Clydesdale Bank, Limited.

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THIS FORM MAY BE USED

This form is to be filled up and forwarded with a deposit of 1s per share to the London City and Midland Bank (Limited), Threadneedle Street, London, E. C.; or branches; or to the British Linen Bank, Glasgow, Edinburgh, or any of its branches; or to the Clydesdale Bank (Limited), Glasgow, Edinburgh, or any of its branches.

No. A

FORM OF APPLICATION FOR PREFERENCE SHARES

THE SCOTTISH IRON & STEEL COMPANY, LIMITED

[Incorporated under the Companies (Consolidation) Act, 1908]

Issue of 150,000 Six Per Cent £1 Cumulative Participating Preference Shares at Par

To the Directors of *The Scottish Iron and Steel Company, Limited*:

GENTLEMEN:

Having paid to your bankers the sum of £....., being a deposit of 1s per share on..... six per cent £1 cumulative participating preference shares of the Scottish Iron and Steel Company (Limited), I request that these shares may be allotted to me upon the terms of the prospectus, dated the 27th June, 1912, and memorandum and articles of association, and I agree to accept the same, or any less number that may be allotted me, and to pay the further instalments as provided in the said prospectus.

Ordinary Signature

Name (in full)

Address

Occupation

Date, 1912

If a lady, state whether "Mrs. or "Miss."

A Slander Refuted

It has been brought to the notice of the American Association of Public Accountants that representatives of one of the surety companies operating in the middle west have made the assertion that losses have been incurred by bonding companies through errors intentional or otherwise made by accountants. The statement did not aver that these were errors by public accountants but the obvious purport of the assertion was to that effect.

This is an exceedingly serious matter and if the statement is without foundation it should be most emphatically denied. No doubt surety companies have suffered many losses through the inefficiency or worse of accountants employed by corporations

Editorial

or firms and entrusted with handling of funds; but these things have no possible bearing upon public accountancy and it is to be hoped that the statements which have been mentioned will be traced to their source and vigorously challenged.

It is particularly important that this should be done because the profession of public accountancy prides itself with great justification upon its immunity from such delinquencies as losses of the kind described would indicate.

In order to make certain that there was no foundation for the allegations in question the American Association has consulted with all its constituent state societies. Replies have been received from officers of most of the societies and so far there has not been a single report of any such loss in any part of the country.

We deeply deplore the statements which have been made to the detriment of public accountants but it is eminently gratifying to find so unanimous a report from the various parts of the country repudiating the slander. On the principle that out of evil cometh good it may be that the utterance of a false accusation has been beneficial. We doubt if many other professions or vocations could present so clean a slate.

A Students' Department

Beginning with this number of *THE JOURNAL OF ACCOUNTANCY* we present to our readers a new department which we believe will be of value and interest to a large number of accountants. For some time *THE JOURNAL* has been hoping to secure the services of MR. SEYMOUR WALTON, of Chicago, as editor of this proposed department and it is with a considerable amount of satisfaction that we are able to make a definite announcement of his acceptance of this post and that under his direction *THE JOURNAL* will institute a new department for students at the beginning of the new year.

The interest which is now taken in the education of accountants is far greater than at any prior time and it is indubitable that as accountancy progresses the importance of the training of students in accountancy will increase even more rapidly.

THE JOURNAL OF ACCOUNTANCY has always been a leader

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of professional thought, and it is our desire that it shall contain not only matter of value to the more advanced practitioner but that it shall also provide something for those who are not yet in active service. Accountants as a rule are not given to excess of self-confidence because they realize that the work and scope of the profession is advancing so quickly that it is almost impossible to keep pace with it. Therefore, we believe that even the practising accountant will find much of interest and something of value in this new department under the charge of so well-known an authority as MR. WALTON.

In the opening article of the series the editor of the students' department explains clearly the idea which he wishes to pursue and we desire to direct special attention to the foreword which appears on another page of this magazine.

Government Ownership

The postal service constitutes the only large business operation in which the government is engaged. It is a cash business, involving an expenditure of over \$210,000,000 during the current year, and this stupendous expenditure is destined to grow with the growth of the country.

* * * * *

It appears too obvious to require argument that the most efficient service can never be expected as long as the direction of the business is, as at present intrusted to a postmaster-general and certain assistants selected without reference to experience and qualifications and subject to frequent change. Before the postmaster-general and his assistants can become reasonably familiar with the operations of the service they are replaced by others, who, in turn, are called upon to resign before they can, in the nature of things, become qualified by knowledge and experience to perform their allotted tasks. Under such a system a large railroad, commercial, or industrial business would inevitably go into bankruptcy, and the Post-Office Department has averted that fate only because the United States Treasury has been available to meet deficiencies.

The foregoing is not the irresponsible statement of a demagogue or a yellow journal but is taken from the *Preliminary Report of Joint Commission on Business Method of Post-Office Department and Postal Service* submitted to congress on February 10, 1908, by a commission composed of Senators Boies Penrose and Thomas H. Carter and Representatives A. S. Clay, Jesse Overstreet, J. J. Gardner and John A. Moon. This commission was appointed under an act of congress approved March 2, 1907, and spent several months, aided by two firms

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of accountants, in making a careful study of the business methods of the post-office department and the postal service of the United States.

The statement quoted above is at this time charged with special significance in view of the recommendations of the present postmaster-general relative to government ownership of telegraph and telephone properties. A study of the report above referred to is calculated to suggest to any intelligent man the futility of expecting governmental operation of business to attain a high order of efficiency and as this subject is not one of party politics so much as of common-sense and business judgment, *THE JOURNAL OF ACCOUNTANCY* may have occasion in future to refer to other parts of the report.

It is a mere truism, admitted by any one who has had an opportunity to observe, that the business of the government is often done either badly or very expensively and frequently both badly and expensively. Is it not, then, befitting for our government officials in Washington to think about putting their house in order so that the duties with which they are now charged may be performed in a reasonably satisfactory manner and to think rather less about extending their authority into fields where their failures might be even more pronounced than they are now?

We commend the report of the joint commission referred to above to the consideration of the postmaster-general and to the business men of the country who, after all, must in a large measure pay the piper.

Income Tax Department

EDITED BY JOHN B. NIVEN, C.P.A.

There are published this month further rulings which have been issued by the Treasury department. Stated briefly the tenor of these rulings is as follows:

Ruling No. 1910, December 4, 1913, is the first decision on an actual case laid before the Treasury department arising out of the income tax law. It is in the form of a letter addressed to the collector, sixth division, Los Angeles, and relates to the irrigation and reclamation districts of California. The department holds that these districts are not political subdivisions of the state nor public utilities exercising any essential governmental functions accruing to any state or territory within the meaning of the income tax law, and that therefore the interest or income from bonds or other obligations of such districts is not exempt from the tax.

Ruling No. 1911, December 8, 1913, prescribes a form of certificate which may be used by fiduciaries who do not wish to exercise the privilege of exemption from having the normal tax deducted at the source granted to them in a previous ruling.

Ruling No. 1912, December 8, 1913, extends the time in which forms Nos. 1000, 1001, 1003 and 1004 may be used to January 15, 1914.

Ruling No. 1914, December 9, 1913, gives forms for itemized monthly list returns and summarized annual list returns to be made by withholding agents of all coupon and registered interest payments on which the normal tax was withheld. No special form of return has yet been prescribed for certificates of ownership which accompany coupon or registered interest orders when the owners of the bonds are not subject to having tax withheld at the source, but under this ruling, all such certificates are to be forwarded monthly to the collector. The monthly list returns above provided for have to be made to the collector for the district on the twentieth day of each month for the preceding month and, it is stated, withholding agents may, if they so desire, pay at the same time the amount of tax withheld. It is presumed if the tax so withheld is not paid monthly, assessment will be made on the withholding agent for the amounts collected in the previous calendar year and payment will be required on June 30th. The summarized annual list returns have to be made to the collector on or before March 1st.

Ruling No. 1915, December 5th, 1913, is an extension of and supplementary to T. D. ruling No. 1903. It prescribes the forms to be used by collecting agents when they substitute their certificates in place of owners certificates Nos. 1001, 1003, 1004, 1011, 1014, 1015, 1016 and 1018.

Ruling No. 1916, December 5, 1913, states that foreign organizations engaged in business in the United States are exempt from having any part of their income withheld by a debtor or withholding agent and it

Income Tax Department

prescribes the certificate to be furnished by foreign organizations to debtors and withholding agents.

Ruling 1917, December 16, 1913, extends the time for filing the itemized monthly list returns prescribed in ruling No. 1914 so far as they relate to the month of November, 1913, to January 5th, 1914.

In addition to the rulings before mentioned, which are printed in full in this month's issue of *THE JOURNAL OF ACCOUNTANCY* the Treasury department publishes, under ruling No. 1913, December 11, 1913, a decision of the United States supreme court in the case of *Stratton's Independence (Ltd.) v. F. W. Howbert, Collector of Internal Revenue in and for the district of Colorado*. The text of this ruling is not given as the action deals wholly with the provisions of the corporation tax act of 1909, but in effect the court holds that the corporation tax act, imposing a special excise tax on corporations, applies to mining companies; that the tax is not an income tax but imposes an excise tax upon the conduct of business in a corporate capacity, measuring the amount of tax by the income of the corporation; that the proceeds of ore mined by mining companies from their properties is income within the meaning of the corporation tax act; and that mining companies, in making returns of net income, are not allowed to deduct from gross income, on account of depreciation, the difference between the value of the product and the cost of production.

TREASURY RULINGS

(T. D. 1910 December 4, 1913)

Letter to Collector, Sixth District, Los Angeles, California

Irrigation and reclamation assessment districts are not political subdivisions of the State nor are they public utilities exercising any essential governmental functions accruing to any State or Territory, within the meaning of the Federal income-tax law. Interest or income from bonds or other obligations of such districts is not exempt from the income tax.

SIR: In reply to your letter dated November 14, 1913, with which was forwarded copies of the California State laws with respect to the irrigation and reclamation districts of California, and in which you set forth at length the status of such irrigation and reclamation districts, and in which the question is raised as to whether the interest derived from bonds issued under authority of this state to finance such irrigation and reclamation projects is subject to the income tax, you are informed as follows:

It appears that these irrigation and reclamation districts are created by special or general state laws which provide that their organization be

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perfected upon petitions signed by the required number of holders of title, or evidence of title, to lands within such proposed districts, and when such districts are thus created, bonds to secure funds for the necessary improvements are issued and the interest charges thereon are met by taxes specifically levied upon the lands benefited by the improvements.

The vote necessary to secure the issue of bonds is confined to the owners of real property, and neither the franchises, benefits, nor burdens are extended to or imposed for the general welfare of all the people inhabiting such districts.

It would appear, therefore, that such districts are not created for the general welfare or as public utilities in the administration of government for the benefit of all the people.

The income-tax law provides "that in computing net income under this section, there shall be excluded the interest upon the obligations of a state or any political subdivision thereof." The law further provides:

There shall not be taxed under this section any income derived from any public utility or from the exercising of any essential governmental function accruing to any state, territory, or the district of Columbia, or any political subdivision of a state, territory, or the district of Columbia.

The law also provides that in computing the net income of a person, no deduction shall be allowed for taxes assessed against local benefits, nor for any amount paid out for betterments made to increase the value of any property or estate.

The question at issue, therefore, would appear to depend entirely upon whether the irrigation and reclamation districts under consideration are political subdivisions of a state or whether they are simply assessment districts in which the assessment is made against local benefits, and whether, in the case of the districts under consideration, such districts are not created solely for the purpose of local benefits and for the purpose of confining the expense of such benefits to the particular persons who are benefited thereby.

In the case of *Smith v. Howell*, (60 N. J. L., 384), it is held that—

A political division to whose boundaries a general tax may be confined is a division of the state with its inhabitants organized for the public advantage and not in the interest of particular individuals or classes, the chief design of which is the exercise of governmental functions, and to the electors residing within which is, to some extent, committed the power of local government.

In *State v. Englewood Drainage, etc., Commissioners*, (41 N. J. L., 154), it is held that such political subdivision—

Does not include a sewerage, drainage, and water district under a board to be elected every five years by male and female resident landowners in fee, such board being invested with some control over a defined territory, but having no concern with the inhabitants, such district being formed, not for public advantage, but in the interest of a particular class—the landowners—and the chief end of which is not the government of the persons and things within its territory, but mere land improvement at the

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expense of the land either by general tax or special assessment, and the electors of which district have no voice whatever in its corporate affairs.

It would appear, therefore, that state laws providing for the taxation of certain districts created for a special purpose and for the special benefit of persons residing within, and owning real property within, certain prescribed limits does not create a subdivision of the state, nor are such laws intended to create a subdivision of the state, as that term is used in the income-tax law, but such districts are created under authority of the state simply to enable certain groups of citizens of the state to do that which they otherwise could not do without such legal sanction.

State agencies not existing for purely governmental purposes do not fall within any rule exempting the sovereign power of the state or any political subdivision thereof from Federal taxation.

It is, therefore, held that such irrigation and reclamation assessment districts are not political subdivisions of the state within the meaning of the income-tax law, nor are they public utilities exercising any essential governmental functions accruing to any state or territory, and that the interest or income from the bonds or other obligations of such districts is not exempt from the income tax.

(T. D. 1911 December 8, 1913)

Supplemental regulations prescribing form of certificate which may be used by fiduciaries, when said fiduciaries do not desire to claim any exemption from having the normal tax of 1 per cent withheld by the debtor organization at the source.

Fiduciary agents may, if they so desire, use instead of Form 1015 prescribed in supplemental regulations (T. D. 1906) of November 28, 1913, a certificate in substantially the following form:

(FORM 1019)

Form of certificate to be filed with debtor or withholding agents by fiduciaries when not claiming any exemption, as an alternative to the filing of Form No. 1015 in which exemption is claimed.

The following form of certificate may be filed with the debtor, or its paying agents, at the time of the payment to the fiduciary, or his representative, of all coupons, interest orders, rents, and all other kinds of income whatsoever upon which the tax on income is required to be withheld at the source, as an alternative to the filing of Form No. 1015:

I (we) do solemnly declare that I (we).....(Name fiduciary) am (are) the duly authorized.....(Indicate in what capacity acting) for the beneficiaries of the estate or trust of....., which estate or trust is entitled to the income from \$...... bonds of the denominations of \$...... each, Nos. of the

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.....(Give name of debtor) known as.....(Describe the particular issue of bonds) bonds, from which were detached the accompanying coupons, due....., 191...., amounting to \$....., or upon which there has matured....., 191...., \$..... of registered interest, or which estate or trust is entitled to other income from property or investments upon which there accrued....., 191...., \$..... of income.

Acting for and in the capacity herein stated, I hereby declare that I (we) do not now claim any exemption from having the normal tax of 1 per cent withheld from said income by the debtor at the source.

.....
(Name) (Capacity in which acting)
Date:, 191.... (Address)

When the fiduciary uses the above form of certificate the debtor organization shall be the *source* for the deduction and withholding of the normal tax of 1 per cent, as required by regulations, and fiduciaries receiving the income described in the said certificate from which the 1 per cent normal tax has thus been withheld, shall not be required to again deduct and withhold the normal tax of 1 per cent upon the said income.

(T. D. 1912 December 8, 1913)

Extension of time to January 15, 1914, for use of Forms 1000 (original and amended), 1001, 1003, and 1004, as provided in T. D. 1907 of November 26, 1913.

The time in which Forms 1000 (original and amended), 1001, 1003, and 1004, as provided in T. D. 1907, issued November 26, 1913, may be used shall be extended to January 15, 1914.

(T. D. 1914 December 9, 1913)

Supplemental regulations prescribing how itemized monthly list returns and annual list returns of all coupon and registered interest payments on which the normal tax of 1 per cent was withheld shall be made, pursuant to regulations for the administration of section 2 of the act of October 3, 1913.

Debtors or withholding agents are required by regulations made in pursuance to section 2, act of October 3, 1913, to make both a monthly and an annual list return.

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The required monthly list return shall give a list of all coupon or interest payments made, on which the normal tax of 1 per cent was deducted and withheld and shall show the name and address in full of the owners of the bonds, amount of the income, amount of exemption claimed, amount of income on which withholding agent is liable for tax, and the amount of tax withheld, and shall be made in substantially the following form:

(FORM 1012)

Monthly list return of amount of income tax withheld at the source

Filed by.....(Name of debtor organization)

To be made in duplicate to the collector of internal revenue for the district in which the withholding agent is located on or before the 20th day of each month, showing the names and addresses of persons who have received payments of interest upon bonds and mortgages or deeds of trust, or other similar obligations of corporations, joint-stock companies, or associations, and insurance companies, on which the normal tax of 1 per cent has been deducted and withheld during the preceding month.

I (we).....(Name) of.....(State address in full), the duly authorized withholding agent of.....(State name of debtor organization) located at.....(Address in full), do solemnly swear (or affirm) that the following is a true and complete return of all coupon and interest payments as above described, made by said organization and from which the normal tax of 1 per cent was deducted and withheld, at the time of payment or for which it is liable as withholding agent, during the month of....., 191..., on the.....(Describe the particular issue of bonds) bonds (or other obligations) of the.....(Name of debtor organization), and there are herewith inclosed all certificates of ownership which were presented with said coupons or orders for registered interest covering the interest maturing on \$..... of the bonds described.

Name.	Address in full.	Amount of income	Amount of exemption claimed.	Amount of income on which withholding agent is liable for tax.	Amount of tax withheld.
.....	\$.....	\$.....	\$.....	\$.....
.....
.....
.....
Total for months.....	
Amount of tax remitted herewith (if any) to collector.....				

To....., Sworn to and subscribed Signed:
 Collector. before me this
District of..... day of.....191....

 (Address) (Capacity in which acting)

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NOTE A—Withholding agents may if they so desire, pay at the time this list is filed, to the collector of internal revenue with whom the list is filed, the amount of tax withheld during the month for which the list is made.

NOTE B—All substitute certificates of collecting agents, authorized by regulations, that are received by debtors or withholding agents will be considered the same as certificates of owners, and in entering same in making monthly list returns, debtors or withholding agents will enter the name, address, and the number of the substitute certificates of the collecting agent in lieu of the name and address of the owner of the bonds.

Form 1012A. Includes all heading Form 1012, but omits bottom.

Form 1012B. With box heading Form 1012, omits head and tail.

Form 1012C. Omits heading Form 1012, includes tail.

Form 1012D, when necessary to be used, shall be a summary of the monthly list return, Form 1012, as made in detail by the withholding agent and the said summary and lists thereto attached when properly filled in and the summary signed and sworn to shall constitute the complete monthly list return of the withholding agent making same, as fully as if each list attached to the summary was signed and sworn to separately.

The said Form 1012D shall be in substantially the following form:

(FORM 1012)

Summary of monthly list return of amount of normal income tax withheld at the source

Filed by(Name of debtor organization)

To be made in duplicate to the Collector of Internal Revenue for the district in which the withholding agent is located, on or before the 20th day of each month, showing the names and addresses of persons who have received payments of interest upon bonds and mortgages, or deeds of trust, or other similar obligations of corporations, joint stock companies, or associations, and insurance companies, on which the normal tax of 1 per cent has been deducted and withheld during the preceding month

I (we).....(Name) of.....(State address in full), the duly authorized withholding agent of.....(State name of debtor organization), located at.....(Address in full), do solemnly swear (or affirm) that the following is a true and complete return of all coupon and interest payments as above described made by said organization and from which the normal tax of 1 per cent was deducted and withheld, at the time of payment, or for which it is liable as withholding agent, during the month of.....(date), 191...., on bonds (or other similar obligations) of the.....(Name of debtor organization), as fully set forth in detail, on lists attached hereto, said lists, Form 1012, and this summary, constituting the *Monthly List Return of Normal Income Tax Withheld at the Source* as required by the regulations; and that there are herewith inclosed all certificates of ownership which were presented with said coupons or orders for registered interest covering the interest maturing on \$..... of the bonds described, and that said withholding agent has paid no coupons or orders for registered interest not accompanied by the certificates of ownership as required by Treasury regulations.

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Description of obligation.	Amount of income.	Amount of exemption claimed.	Amount of income on which withholding agent is liable for tax.	Amount of tax withheld.
	\$	\$	\$	\$
.....				
.....				
.....				
.....				
.....				
Totals for month.....				
Amount of tax remitted herewith (if any) to collector.....				

To....., Sworn to and subscribed Signed:
 Collector. before me this
District of..... day of.....191....
 (Address) (Capacity in which acting)

NOTE A—Withholding agents may, if they so desire, pay at the time this list is filed, to the Collector of Internal Revenue with whom the list is filed, the amount of tax withheld during the month for which the list is made.
NOTE B—All substitute certificates of collecting agents, authorized by regulations, that are received by debtors or withholding agents will be considered the same as certificates of owners, and in entering same in making Monthly List Returns, debtors or withholding agents will enter the name, address, and the number of the substitute certificate of the collecting agent in lieu of the name and address of the owner of the bonds.

The annual list return to be made by debtors or withholding agents of the normal tax of 1 per cent withheld from interest payments made upon bonds or other similar obligations shall be made on or before March 1 of each calendar year and in substantially the following form:

(FORM 1013)

Annual list return of amount of normal income tax withheld at the source from interest upon bonds and mortgages or deeds of trust or other similar obligations of corporations, joint-stock companies or associations, and insurance companies.

Filed by(Name of debtor organization)

To be made in duplicate to the collector of internal revenue for the district in which the withholding agent is located on or before March 1, showing the totals of each monthly return on Form 1012, and their aggregate totals for the preceding calendar year.

I (we).....(Name) of.....(State address in full), the duly authorized withholding agent of.....(State name of debtor organization), located at.....(State address in full), do solemnly swear (or affirm) that the following is a true and complete return of the monthly totals of all coupon and interest payments made and normal taxes withheld therefrom by said organization or for which it is liable as withholding agent as reported on Form 1012, and their aggregate totals for the year ended December 31, 191....

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Month.	Amount of income.	Amount of exemption claimed.	Amount of income on which withhold- ing agent is liable for tax.	Amount of tax with- held.	Amount of tax remit- ted to collector.	Balance of tax due.
January	\$	\$	\$	\$	\$	\$
February						
March						
April						
May						
June						
July						
August						
September						
October						
November						
December						
Aggregate Totals for year						

To..... Sworn to and subscribed Signed:
 Collector. before me this
District of..... day of..... 191.....
 (Address) (Capacity in which acting)

The monthly list return in the form as required herein shall constitute a part of the annual list return to be made by debtors or withholding agents, and the debtor or withholding agent will not be required in making an annual list return of the tax withheld from income derived from interest upon bonds and mortgages or deeds of trust, or other similar obligations of corporations, joint stock companies, or associations and insurance companies, to again make an itemized list of the amount of tax withheld from each person, but will give in the annual list return the totals of the monthly list return for each month of the year for which annual list return is made.

All substitute certificates of collecting agents authorized by regulations that are received by debtors or withholding agents will be considered the same as certificates of owners, and in entering same in making monthly list returns, debtors or withholding agents will enter the name and address of the collecting agent and the number of the substitute certificate issued in lieu of the original certificate containing the name and address of the owner of the bonds.

Until the further ruling on this subject by this department no list return is required to be made of certificates of ownership accompanying the coupons or registered interest orders filed with a debtor or withholding agent, *when the owners of the bonds are not subject to having the normal tax withheld at the source*, but all such certificates of ownership shall be forwarded by the debtor or withholding agent to the collector of internal revenue for his or its district, on or before the 20th day of the month succeeding that in which said certificates of ownership were received by him or it.

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All forms of monthly and annual list returns herein provided for shall be 10½ inches wide and 16 inches from top to bottom.

(T. D. 1915 December 5, 1913)

Supplemental regulations prescribing forms of certificates to be attached to interest coupons in cases where the collecting agent's certificate is substituted for the certificate of the owners.

Subject to the provisions of the regulations in T. D. 1903, dated November 28, 1913, collecting agents may substitute Form 1000a, properly filled in and numbered, for the certificate of the owner on Form 1000.

When collecting agents substitute their own certificate in lieu of owner's certificate on Form 1001, said substitute certificate shall be in substantially the following form:

(FORM 1001a)

Form of certificate to be attached to interest coupons in cases where the collecting agent's certificate is substituted for the certificate of the owners.

(When owner is a domestic organization not subject to taxes on income at source)

(The owner's certificate, of which the following certificate is the counterpart, and bears the same number as this certificate, will be sent by the collecting agent direct to the Commissioner of Internal Revenue, at Washington, as prescribed by regulations.)

No.....

I (we).....(Name of collecting agent) do solemnly declare that the owner of \$...... bonds of the.....(Name of debtor organization), from which were detached the accompanying interest coupons due(Maturity), 191..., amounting to \$......, has filed with me (us) a duly executed certificate filled up in accordance with Treasury Regulations of October 25, 1913, Form No. 1001, which certificate has been indorsed by me (us) as follows: "Owner's certificate No..... (Name of collecting agency), , 191...", and that under the provisions of the income-tax law of October 3, 1913, said interest is exempt from the payment of taxes collectible at the source, which exemption is hereby claimed, and I (we) do hereby promise and pledge { myself } to forward the above-described certificate executed by the owners as stated and dated....., 191..., to the Commissioner of Internal Revenue, at Washington, D. C., not later than the 20th day of next month, in accordance with Treasury Regulations.

Signature of collecting agent,.....

Address,.....

Date,, 191....

When collecting agents substitute their own certificate in lieu of owner's certificate on Form 1003, said substitute certificate shall be in substantially the following form:

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(FORM 1003a)

Form of certificate to be attached to interest coupons in cases where the collecting agent's certificate is substituted for the certificate of the owners.

(When said owners are firms or copartnerships in the United States)

(The owner's certificate, of which the following certificate is the counterpart, and bears the same number as this certificate, will be sent by the collecting agent direct to the Commissioner of Internal Revenue, at Washington, as prescribed by regulations.)

No.

I (we).....(Name of collecting agent) do solemnly declare that the owner of \$......, bonds of the.....(Name of debtor organization), from which were detached the accompanying interest coupons due(Maturity), 191..., amounting to \$....., has filed with me (us) a duly executed certificate filled up in accordance with Treasury Regulations of October 25, 1913, Form No. 1003, which certificate has been indorsed by me (us) as follows: "Owner's certificate No.....,(Name of collecting agency),(Date), 191...", and that the name and address of the firm or partnership, and the names of the individual members thereof, and their places of residence were recorded on said original certificate, and I (we) do hereby promise and pledge { myself } { ourselves } to forward the above-described certificate executed by the owners as stated and dated....., 191..., to the Commissioner of Internal Revenue, at Washington, D. C., not later than the 20th day of next month, in accordance with Treasury Regulations.

Signature of collecting agent,.....

Address,.....

Date,, 191....

When collecting agents substitute their own certificates in lieu of owner's certificate on Form 1004, said substitute certificate shall be in substantially the following form:

(FORM 1004a)

Form of certificate to be attached to interest coupons in cases where the collecting agent's certificate is substituted for the certificate of the owners.

(When owners are both citizens or subjects and residents of foreign countries)

(The owner's certificate, of which the following certificate is the counterpart, and bears the same number as this certificate, will be sent by the collecting agent direct to the Commissioner of Internal Revenue, at Washington, as prescribed by regulations.)

No.....

I (we).....(Name of collecting agent) do solemnly declare that the owner of \$...... bonds of the.....(Name of debtor organization), from which were detached the accompanying interest coupons due(Maturity), 191..., amounting to \$....., has filed with me (us) a duly executed certificate filled up in accordance with Treasury Regulations of October 25, 1913, Form No. 1004, which certificate has been indorsed by me (us) as follows: "Owner's certificate No.....,(Name of collecting agency),(Date), 191," and that the owner in said certificate declares that, being nonresident foreigner,

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said interest is exempt from the income tax imposed on such interest by the United States Government under the law enacted October 3, 1913, and that no citizen of the United States, wherever residing, or foreigner residing in the United States, or any of its possessions, has any interest in said bonds, coupons, or interest; and I (we) do hereby promise and pledge { myself / ourselves } to forward the above-described certificate executed by the owners as stated and dated....., 191...., to the Commissioner of Internal Revenue, at Washington, D. C., not later than the 20th day of next month, in accordance with Treasury Regulations.

Signature of collecting agent,.....
Address,.....

Date,, 191....

When collecting agents substitute their own certificate in lieu of owner's certificate on Form 1011, said substitute certificate shall be in substantially the following form:

(FORM 1011a)

Form of certificate to be attached to interest coupons in cases where the collecting agent's certificate is substituted for the certificate of the owners.

(When owner's are firms or copartnerships in the United States claiming deduction for tax on account of operating expenses incurred)

(The owner's certificate, of which the following certificate is the counterpart, and bears the same number as this certificate, will be sent by the collecting agent direct to the Commissioner of Internal Revenue, at Washington, as prescribed by regulations.)

No.
I (we).....(Name of collecting agent) do solemnly declare that the owner of \$..... bonds of the.....(Name of debtor organization) from which were detached the accompanying interest coupons due(Maturity), 191..., amounting to \$....., has filed with me (us) a duly executed certificate filled up in accordance with Treasury Regulations of November 28, 1913, Form No. 1011, which certificate has been indorsed by me (us) as follows: "Owner's certificate No..... (Name of collecting agency),(Date), 191....," and the partnership in said certificate did claim a deduction of \$..... allowed on account of the actual expenses incurred in conducting said business, under regulations made in pursuance of section 2, act of October 3, 1913, and did solemnly declare that neither the partnership nor its individual members has claimed deductions in excess of its total actual legitimate annual expenses of conducting the business of said partnership, and that no portion of the living or personal expenses of the partners is included in the deductions claimed, and I (we) do hereby promise and pledge { myself / ourselves } to forward the above-described certificate executed by the owners as stated and dated....., 191...., to the Commissioner of Internal Revenue, at Washington, D. C., not later than the 20th day of next month, in accordance with Treasury Regulations.

Signature of collecting agent,.....
Address,.....

Date,, 191....

When collecting agents substitute their own certificate in lieu of

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owner's certificate on Form 1014, said substitute certificate shall be in substantially the following form:

(FORM 1014a)

Form of certificate to be attached to interest coupons in cases where the collecting agent's certificate is substituted for the certificate of the owners.

(When owners are firms or copartnerships of foreign countries and claim immunity from income tax)

(The owner's certificate, of which the following certificate is the counterpart, and bears the same number as this certificate, will be sent by the collecting agent direct to the Commissioner of Internal Revenue, at Washington, as prescribed by regulations.)

No.....

I (we).....(Name of collecting agent), do solemnly declare that the owner of \$..... bonds of the.....(Name of debtor organization), from which were detached the accompanying interest coupons due(Maturity), 191..., amounting to \$....., has filed with me (us) a duly executed certificate filled up in accordance with Treasury Regulations of November 28, 1913, Form No. 1014, which certificate has been indorsed by me (us) as follows: "Owner's certificate No.....,(Name of collecting agency),(Date), 191....," and that said certificates declare that said owners are a copartnership and that all the members of the firm or partnership, except partners whose names are recorded thereon, are nonresident foreigners and as such are exempt from the income tax imposed on such income by the United States Government under the law enacted October 3, 1913, and that no citizen of the United States, wherever residing, or foreigner residing in the United States or any of its possessions, except those named above, has any interest in said bonds, coupons, or interest; and I (we) do hereby promise and pledge { myself } to forward the above-described certificate executed by the owners as stated and dated....., 191..., to the Commissioner of Internal Revenue, at Washington, D. C., not later than the 20th day of next month, in accordance with Treasury Regulations.

Signature of collecting agent,.....

Address,.....

Date,, 191....

When collecting agents substitute their own certificate in lieu of owner's certificate on Form 1015, said substitute certificate shall be in substantially the following form:

(FORM 1015a)

Form of certificate to be attached to interest coupons in cases where the collecting agent's certificate is substituted for the certificate of the owners.

(When owners are fiduciaries)

(The owner's certificate, of which the following certificate is the counterpart, and bears the same number as this certificate, will be sent by the collecting agent direct to the Commissioner of Internal Revenue, at Washington, as prescribed by regulations.)

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No.....

I (we).....(Name of collecting agent), do solemnly declare that the owner of \$..... bonds of the.....(Name of debtor organization), from which were detached the accompanying interest coupons due(Maturity), 191...., amounting to \$....., has filed with me (us) a duly executed certificate filled up in accordance with Treasury Regulations of November 28, 1913, Form No. 1015, which certificate has been indorsed by me (us) as follows: "Owner's certificate No.....,(Name of collecting agency),(Date), 191....," that said certificate is executed by a fiduciary, and that the fiduciary, acting for and in the capacity as stated therein, has assumed the duty and responsibility imposed upon withholding agents under the law, of withholding and paying the income tax due, for which he (it) may be liable, and that, acting in said fiduciary capacity as stated therein, he (it) did claim exemption from having the normal tax withheld from said income; and I (we) do hereby promise and pledge myself (ourselves) to forward the above-described certificate executed by the owners as stated and dated....., 191...., to the Commissioner of Internal Revenue, at Washington, D. C., not later than the 20th day of next month, in accordance with Treasury Regulations.

Signature of collecting agent,.....

Address,.....

Date,, 191....

When collecting agents substitute their own certificate in lieu of owner's certificate on Form 1016, said substitute certificate shall be in substantially the following form:

(FORM 1016a)

Form of certificate to be attached to interest coupons in cases where the collecting agent's certificate is substituted for the certificate of the owners.

(Owners being foreign organization, not subject to the income tax at the source)

(The owner's certificate, of which the following certificate is the counterpart, and bears the same number as this certificate, will be sent by the collecting agent direct to the Commissioner of Internal Revenue, at Washington, as prescribed by regulations.)

No.....

I (we).....(Name of collecting agent) do solemnly declare that the owner of \$..... bonds of the.....(Name of debtor organization), from which were detached the accompanying interest coupons due(Maturity), 191...., amounting to \$....., has filed with me (us) a duly executed certificate filled up in accordance with Treasury Regulations of November 28, 1913, Form No. 1016, which certificate has been indorsed by me (us) as follows: "Owner's certificate No.....,(Name of collecting agency),(Date), 191....," and that under the provisions of the income-tax law of October 3, 1913, the said organization in said certificate declares that it is a foreign organization, and that the said interest or income is exempt from the payment of taxes collectible at the source, which exemption it claims, and I (we) do hereby promise and pledge { myself } to forward the above-described certificate executed by the owners as stated and dated....., 191...., to the Commissioner of Internal Revenue, at Washington, D. C., not

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later than the 20th day of next month, in accordance with Treasury Regulations.

Signature of collecting agent,.....
Address,.....

Date,, 191....

When collecting agents substitute their own certificate in lieu of owner's certificate on Form 1018, said substitute certificate shall be in substantially the following form:

(FORM 1018a)

Form of certificate to be attached to interest coupons in cases where the collecting agent's certificate is substituted for the certificate of the owners.

(Owners being foreign organizations engaged in business in the United States and subject to tax)

(The owner's certificate, of which the following certificate is the counterpart, and bears the same number as this certificate, will be sent by the collecting agent direct to the Commissioner of Internal Revenue, at Washington, as prescribed by regulations.)

No.....

I (we).....(Name of collecting agent) do solemnly declare that the owner of \$..... bonds of the.....(Name of debtor organization), from which were detached the accompanying interest coupons due(Maturity), 191..., amounting to \$....., has filed with me (us) a duly executed certificate filled up in accordance with Treasury Regulations of December 5, 1913, Form No. 1018, which certificate has been indorsed by me (us) as follows: "Owner's certificate No.....,(Name of collecting agency),(Date), 191...", and that under the regulations made in pursuance of section 2, act of October 3, 1913, said organization is subject to the normal tax of 1 per centum per annum upon the amount of net income accruing from business transacted and capital invested with the United States and did therein claim exemption from having the said tax withheld at the source from said income, and I (we) do hereby promise and pledge myself (ourselves) to forward the above-described certificate executed by the owners as stated and dated....., 191..., to the Commissioner of Internal Revenue at Washington, D. C., not later than the 20th day of next month, in accordance with Treasury Regulations.

Signature of collecting agent,.....
Address,.....

Date,, 191....

All of the forms prescribed herein to be used by collecting agents for substitution in lieu of the owner's certificate, accompanying coupons to be presented for collection, shall be subject to all of the provisions of the regulations as published in T. D. 1903 of November 28, 1913, the same as the said regulations are made to apply to Form 1000a, as given therein.

(T. D. 1916 December 5, 1913)

Regulations prescribing form of certificate to be furnished by foreign organizations engaged in business in the United States and subject to the income tax on interest or other income collectible at the source.

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Foreign organizations engaged in business within the United States are subject to the normal tax of 1 per cent per annum upon the amount of net income accruing from business transacted and capital invested within the United States; but said organizations shall be exempt from having any part of their income withheld by a debtor or withholding agent.

The certificate to be furnished by foreign organizations engaged in business in the United States shall be in substantially the following form:

(FORM 1018)

*Certificate to be furnished by foreign organizations engaged in business
in the United States*

I, (Give name), the (Give official position) (Name of organizations), a (Character of organization), of (County), located at (Post-Office address), do solemnly declare that said (Give name of organization) is a foreign organization engaged in business in the United States, and is the owner of \$ bonds, of the denomination of \$ each, Nos. of the (Give name of debtor), known as (Describe particular issue of bands) bonds, from which were detached the accompanying coupons, due 191..., amounting to \$; or upon which there matured 191..., \$ of registered interest, or is the owner of (Property or investments), upon which there was accrued 191..., \$ of income.

Under the provisions of the income-tax law of October 3, 1913, the said organization is subject to the normal tax of 1 per cent per annum upon the amount of net income accruing from business transacted and capital invested within the United States, for which tax it will make its return in due course, but it hereby claims exemption from having the said normal tax of 1 per cent on said income withheld at the source.

Name
.....
(Official position)

Date 191... Of
Address (Name of organization)
(Post office)

(T. D. 1917 December 16, 1913)

Extension of time for filing monthly list returns of all coupons and registered interest payments on which the normal tax of 1 per cent was withheld at the source in accordance with the requirements of section 2, act of October 3, 1913.

The time for filing itemized monthly list returns of coupon and registered interest payments for the month of November, 1913, which are required by regulations to be filed on or before December 20, 1913, is extended to January 5, 1914.

Students' Department

EDITED BY SEYMOUR WALTON, C.P.A.

FOREWORD

A few words of explanation are in order in regard to the objects to be aimed at in the studies which are to be pursued in this department. The consideration of these objects will include necessarily the discussion of what constitutes true education and what are the best means of obtaining it; what mental faculties it is necessary to cultivate, and how this can best be done; and to what extent mental training is valuable, whether that training is directly in the line of any person's daily work, or is only general in its character, conducing to habits of thought which will be valuable to any one who is ever confronted with problems of any kind, whose correct solution requires close and accurate reasoning.

It is not intended to lay out a connected course of business instruction such as is already given by many excellent schools of commerce and accounting in our larger cities. The intention is rather to supplement the work of these institutions by the discussion of subjects and the exposition of principles, as brought out in the solution of problems given in C. P. A. examinations. It may well be that the views expressed may not meet the approval of instructors in the established institutions, or of individual accountants throughout the country. If so, the columns of this department will always be open to the objectors, and their criticisms will be more than welcome. If the department does nothing more than to arouse among the accountants a discussion of mooted questions, it will have rendered a worthy service, since the great difficulty that has always handicapped *THE JOURNAL OF ACCOUNTANCY* has been that of inducing practical accountants to express themselves in print with regard to the many important subjects with which they are constantly required to deal.

The members of the various C. P. A. examining boards throughout this country and the Dominion of Canada can render an important service to the profession and to those who are working hard to enter it, if they will freely criticize the manner in which solutions to problems are given, whether in regard to the "general intelligence with which the questions are answered" or the technical way in which statements are set up. If there is too much of a tendency to "cut corners" so as to save time, let them so state, or if in their opinion there is not sufficient explanation of the principles involved to indicate the "general intelligence" asked for in the instructions on the examination papers, let them speak their minds, and criticize the inadequacy of the answers. A great point will be gained if the applicants for the degree can get a clear idea of what is required of them.

As the freest and fullest criticism is invited from the examiners, we trust that they will not take it amiss if we, in our turn, take occasion to

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offer them an occasional suggestion as to the wording of their problems and questions. Considerable time is often wasted by the candidates in trying to find out just what the examiners mean by some expression that a little change in the wording would have made perfectly plain. It is a little difficult for instance, to see why partners should take the trouble to make an agreement *inter se*, when they could just as well have made the agreement "among themselves," and not have left the applicant in doubt as to what important principle was indicated by the unfamiliar Latin words.

There is an old English engraving depicting a dying wife making a last request of her husband, who does not seem to be giving a very ready response, for she is represented as saying:

"Thou wilt, I know thou wilt. Sad silence gives consent,
And in this pleasing hope thy Emma dies content."

We trust that the examiners and other accountants will not force us to infer from their silence, sad or otherwise, that our ideas meet with their approval. Active criticism is better than that kind of negative endorsement. "In a multitude of counsellors there is wisdom," and it is only by the clash of minds that valuable truths can be brought out and firmly established.

TRUE EDUCATION

In order to fit oneself to become a practical accountant, either as a public practitioner or as the head of the accounting department of any large corporation, it is necessary to obtain a training which must consist of an extremely varied experience in accounting work or of an academic course of a high order, or better still, of both combined. Academic education alone will not make a finished accountant, and the wrong kind of education will do little towards accomplishing it, that is, the education that does no more than teach rules and facts without reaching any of the underlying principles. The only education that is of any real value is that which teaches the student to think clearly and to grasp the reason for any line of action, to know the "why" and not be satisfied simply with the "how." It will be found that the knowledge of the scientific why will greatly facilitate the carrying out of the more mechanical how.

DR. HENRY VAN DYKE clearly expressed this idea when he said: "The chief benefit that a good student may get in a good college is not a definite amount of Greek and Latin, mathematics and chemistry, botany and zoology, history and logic, though this in itself is good. But far better is the power to apprehend and distinguish, to weigh evidence and interpret facts, to think clearly, to infer carefully and to imagine vividly."

In these papers the constant endeavor will be to lead the student to carry out DR. VAN DYKE'S ideas, by an exposition of principles, rather than a dogmatic statement of rules and of accounting methods, without the attempt to explain the reasons for their adoption.

It is true that the intelligent man, be he office man or mechanic, can

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pick up these principles from his own experience, and it is equally true that very large numbers do so, but it is necessarily at the expense of a large number of mistakes and even of positive failures. Experience is a good school, but unguided it is a dear one. Experience that is enlightened by a through knowledge of principles is the best school of all, and is in fact the only one that will produce any really practical results.

The man without theoretical knowledge is like a man in a strange country without a map or a compass. He knows where he wishes to go, but he has no idea in which direction to travel, nor which road to take. If he is given time enough to try one road after another, he will eventually hit upon the right one and reach his destination. Another man, with a good road map, made by those who have traversed the same ground before, will go straight to his desired haven, and lose no time in futile exploration. So a practical business man, guided by a good working theory, made by those who have previously investigated the subject, can go directly to the heart of any new situation, without wasting time in vain experiments. However, it must be remembered that, as the mere possession of the map will not carry the traveler to his destination, without intelligent action on his part, so the mere learning of a theory will not solve the business man's problems. He must know how to give it practical application, and this knowledge can come only through practical experience.

ADVANTAGES OF AN ACCOUNTING EDUCATION

One of the mistaken ideas in regard to an education in accountancy is that it is of value only to those who wish to become certified public accountants. While such persons must of necessity obtain this education in order to enable them to pass the very severe examinations which are to test their fitness to enter the profession, it does not follow that no others should endeavor to gain the knowledge that a proper study of accounting principles will give them.

The demand made by the business world today is for efficient men. The large corporations are constantly seeking for men who will be able to give them correct information in regard to all the intricacies of their business, information that will enable them to stop leaks and to institute economies in production and in selling, and that will show them exactly what are the results of each department, not merely what the final round-up of the whole business for a year may demonstrate. They cannot afford to have mistakes made in the methods by which the results are obtained, in the taking of inventories, in the calculation of averages of different years as to cost of production or of selling, and in many other things which it is vital to them to know. These mistakes can be avoided or if made, can be pointed out, only by one who has a thorough knowledge of accounting principles, whether he be a certified public accountant or not.

The difference between a certified public accountant and the equally competent man who has not obtained his certificate is very similar to the

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difference between solid silver ware made before it was customary to mark solid silver as "sterling" and that made since the hall-mark was used. The old ware is just as solid as the new, but there is nothing to show it. To prove that it is solid it must be tested, while a glance at the new will show whether it is or not. The certified public accountant possesses the hall-mark, which carries with it at least the presumption of ability. The other man must be tried. The burden of proof is on him, but it is not on the certified public accountant. For that reason the larger business concerns of the country are constantly offering inducements in the shape of very large salaries to certified public accountants, with whom they have become acquainted during the progress of an audit.

The possession of a certificate authorizing a person to write C. P. A. after his name is not an absolute proof of supreme excellence, but the ability to pass the rigid examination presupposes such a knowledge of accounting principles as to place the person in the enviable position of having good positions seek him, instead of being forced himself to seek the positions. He is, at least, given abundant opportunities to demonstrate whatever ability he may possess.

Therefore, while it is not necessary for a person who has taken the trouble to acquire an accounting education to pass the examination, it would be much better for him to do so. The education itself will be just as valuable an investment in either case.

ACCOUNTING PROBLEMS

It is not unusual for a student in an accounting class to neglect the task of solving the problems, giving one excuse or another, sometimes valid, but more often an evidence of mere lack of energy. Such a person will say that he is content with listening to the discussions in class, or with reading the text. This arises largely from the impression that the problems are merely exercises in mental gymnastics, or that they describe conditions that are not likely to be met with in ordinary experience. Even if this were true, the ability to grasp the fundamental principles involved in these problems, and to apply the proper methods in treating them will be invaluable when similar conditions are encountered in actual business life. The actual problems may not be the same as the theoretical ones, but the habits of thought developed in the study of the theoretical will be of enormous value in solving the business problems that are likely to arise in actual practice. There will be acquired an insight into conditions that will enable one to distinguish between superficial resemblances and real relations, which is one of the principal foundations of the scientific study of any subject.

A very important thing to be learned from the solving of accounting problems is the ability to read the problem correctly. Very frequently what looks like a purely perfunctory remark may involve an important point, if its true bearing on the conditions is properly appreciated. On the other hand an apparently important point may prove to have little

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or no influence in the final results. The ability really to grasp what is read may be cultivated, just as well as can the ability to observe what one sees. The difficulty that many people experience in remembering what cards have been played in a game of whist does not arise so much from a faulty memory as from lack of observation of the cards as they fell. The same woman who cannot remember the cards at all, will be able to describe minutely the costume of another woman of whom she had but a glimpse as she passed her in the hall. In one case she has a trained habit of observation; in the other she has not. In a treatise on memory it was recommended that a person should train himself to remember the articles seen in a shop window, when passing it at an ordinary walk. It was said that the power to remember would be wonderfully increased by such a practice. The truth is that it would be rather the power really to see the articles that would be cultivated.

ANALYSIS AND IMAGINATION

In order to arrive at the underlying principles in any problem, whether one asked in a C. P. A. examination or one encountered in actual practice, the possession of two mental faculties is essential—the analytical faculty and the imagination.

The analytical faculty enables one to grasp all the elements of a problem and to make an analysis of their real nature in their relations to each other, distinguishing between a superficial resemblance and an essential interdependence.

The right use of the imagination enables one to keep in mind an image or picture of the whole field to be covered, so that no one part will be overlooked while the attention is concentrated on some other part. This is especially important to the person who is devising a complete system of office or of factory cost accounts so that each point will be covered with due reference to every other point and that all of the several units will so dovetail into each other that the result will constitute a consistent and harmonious whole.

Both the faculties of analysis and imagination come into play in the study of the questions asked in C. P. A. examinations. Before an attempt is made to answer them, they should be thoroughly scrutinized, so that every element may be understood and completely covered in the answer, each element being duly considered in its relation to all the others.

The necessity for going clear to the bottom of a subject, so that it is certain that everything has been taken into full consideration, and that all the information that can be obtained from the problem has been given its due weight, is illustrated by the following problem. In an answer that was published in a magazine that has a department of C. P. A. problems, a solution was given in which it was stated that the problem contained no information as to whether or not the preferred stock was preferred as to assets as well as to dividends. A correct analysis of the conditions called for will determine this question without a shadow of a

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doubt. The reader will do well to study the problem, to see whether he can discover from the problem itself what is the status of the preferred stock, before he looks at the solution. In the published answer referred to the wrong view of the question was taken.

PROBLEM

The Chimera Chemical Company, a corporation engaged in the manufacture of patent medicines and toilet preparations, being unable to pay or renew its maturing obligations, Mr. Willoughby West, president of the company and owner of eighty per cent of its common stock, approaches the managers of the Opulent Oxygen Company with a proposition to sell out or consolidate. Mr. West submits a balance sheet, which purports to show his company's condition, as follows:

ASSETS

Cash	\$ 1,007.21
Accounts receivable	269,197.08
Bills receivable	36,603.35
Merchandise inventory	52,402.91
Land and buildings	40,000.00
Machinery and equipment	16,460.57
Furniture and fixtures	4,466.33
Prepaid advertising	26,455.19
Prepaid taxes and insurance	1,413.24
Total	<u>\$448,005.88</u>

LIABILITIES

Accounts payable	\$ 66,568.63
Bills payable	152,468.53
Capital stock, preferred (par \$100)	50,000.00
Capital stock, common (par \$100)	100,000.00
Surplus	78,968.72
Total	<u>\$448,005.88</u>

An agreement is finally reached, whereby West agrees to sell to the Opulent Company all of the Chimera Company's common stock at its actual book value (as determined by an audit of its books and an appraisal of its assets) in payment for which he is to receive stock of the Opulent Company (at par) to an equal amount. West delivers his own 800 shares of Chimera common and instructs the Opulent Company to purchase, for his account, the remaining 200 shares at the most favorable figure for which it can be bought. It is finally secured at \$75.00 per share. Appraisers and arbitrators are named and you are called in to audit the Chimera Company's books and prepare the statement for final settlement.

You will find that cash, prepaid taxes and insurance, bills payable,

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preferred stock and common stock are correctly stated, as above. Accounts receivable aggregating \$23,641.38 and bills receivable aggregating \$14,342.98 prove to be worthless. The actual value of prepaid advertising amounts to only \$3,197.35. There are unrecorded accounts payable amounting to \$43,237.89. The appraisers decide upon the following valuations:

Merchandise	\$36,341.18
Land and buildings	40,000.00
Machinery and equipment	10,000.00
Furniture and fixtures	2,500.00

Prepare the following and embody them in a report to your clients:

1. Corrected balance sheet of the Chimera Chemical Company.
2. Deficiency account of the Chimera Chemical Company.
3. Statement of Willoughby West's account with the Opulent Oxygen Co.

It is then decided that the Opulent Company shall pay into the treasury of the Chimera Company sufficient cash to wipe out the impairment of its capital.

Draft the entries in the journals and cash books of both companies necessary to record all of the foregoing transactions. Also show the accounts of Willoughby West and the Chimera Company as they will appear in the Opulent Company's ledger.

SOLUTION

Journal entries adjusting accounts of Chimera Chemical Co., as appraised, and recording newly discovered liabilities.

Deficiency	\$128,968.72	
To Accounts receivable		23,641.38
Bills receivable		14,342.98
Prepaid advertising		23,257.84
Accounts payable		43,237.89
Merchandise inventory		16,061.73
Machinery and equipment		6,460.57
Furniture and fixtures		1,966.33
Surplus	78,968.72	
To Deficiency		78,968.72

BALANCE SHEET, CHIMERA CHEMICAL CO. AS AMENDED

ASSETS	LIABILITIES
Cash	Accounts payable
\$ 1,007.21	\$109,806.52
Accounts receivable	Bills payable
245,555.70	152,468.53
Bills receivable	Capital stock:
22,260.37	Preferred
Merchandise inventory	50,000.00
36,341.18	Capital stock:
Land and buildings ...	Common
40,000.00	100,000.00
Machinery and equip-	
ment	
10,000.00	
Furniture and fixtures ..	
2,500.00	
Prepaid advertising	
3,197.35	
Prepaid taxes and in-	
surance	
1,413.24	
Deficiency	
50,000.00	
\$412,275.05	\$412,275.05

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DEFICIENCY ACCOUNT

Accounts receivable	\$ 23,641.38	Surplus	\$ 78,968.72
Bills receivable	14,342.98	Opulent Oxygen Co. ...	50,000.00
Prepaid advertising	23,257.84		
Accounts payable	43,237.89		
Merchandise inventory .	16,061.73		
Machinery and equip- ment	6,460.57		
Furniture and fixtures ..	1,966.33		
	<u>\$128,968.72</u>		<u>\$128,968.72</u>

The amended balance sheet shows a deficit of \$50,000.00 against a total capitalization of \$150,000.00 of which \$50,000.00 is preferred. The treatment of the deficit depends on the status of the preferred stock. If it is preferred as to assets, the whole loss will fall on the common stock. If not, the loss will be divided pro rata between the two classes, reducing each of them to two-thirds of their original value. In the absence of specific information, it would seem that the latter assumption should be taken, if it were not for the fact that the Opulent Company proposes to pay in cash enough to cover the impairment of the capital. Assuming that the preferred stock is impaired one-third, or \$16,666.67, would necessarily imply that the Opulent Company would pay in that amount for the sake of making good the impairment of preferred stock, in which it had absolutely no interest. It must not be forgotten that the Opulent Company is buying only the common stock of the Chimera Company, and it is inconceivable that it would make a free gift to the preferred stockholders of \$16,666.67. We must therefore conclude that the common stock is impaired \$50,000.00, and is worth only 50% on the books. On this basis, West's account would be as follows, after he had paid the balance due:

W. West

200 sh. Chimera common	\$15,000.00	800 sh. Chimera common	\$40,000.00
500 sh. Opulent	50,000.00	200 sh. " "	10,000.00
		Cash	15,000.00
	<u>\$65,000.00</u>		<u>\$65,000.00</u>

The journal entries on the books of the Opulent Company would be,

Chimera Chemical common	\$40,000.00	
To W. West		40,000.00
for 800 shares Chimera common at 50% book value.		
W. West	15,000.00	
To cash		15,000.00
for 200 shares Chimera common, bought for his account.		
Chimera Chemical common	10,000.00	
To W. West		10,000.00
purchasing from him 200 sh. at 50%.		

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W. West	50,000.00	
To capital stock, or treasury stock		50,000.00
transferring to him 500 shares Opulent Co. stock (from original capital or treasury, as may be) in exchange for 1,000 shares Chimera common at 50.		
Cash	15,000.00	
To W. West		15,000.00
repayment by him of advance.		
Chimera Chemical common	50,000.00	
To cash		50,000.00
payment of deficit to bring the stock back to par. The only other account asked for would be on books of Opulent Co.		

CHIMERA CHEMICAL CO. COMMON STOCK

W. West, 800 shares at 50	\$40,000.00
W. West, 200 shares at 50	10,000.00
Cash	50,000.00

On the Chimera Chemical Co. books there would be an entry

Cash	\$50,000.00	
To deficiency		50,000.00
received from Opulent Co.		

The client to whom the report is to be made would naturally be the Opulent Oxygen Co. The following would be the condensed report:

Mr. John Doe, president,
Opulent Oxygen Co.

Dear Sir:

As instructed by you, I have made an examination of the accounts of the Chimera Chemical Co. and have prepared the following statement of its condition, as shown by its books and as it appears after the adjusting entries have been made in accordance with the report of the appraisers:

<i>ASSETS</i>	<i>Per Books</i>	<i>As Appraised</i>	<i>Deficiency</i>
Cash	\$ 1,007.21	\$ 1,007.21	
Accounts receivable	269,197.08	245,555.70	\$ 23,641.38
Bills receivable	36,603.35	22,260.37	14,342.98
Mdse. inventory	52,402.91	36,341.18	16,061.73
Land and buildings	40,000.00	40,000.00	
Machinery and equipment	16,460.57	10,000.00	6,460.57
Furniture and fixtures	1,466.33	2,500.00	1,033.67
Prepaid advertising	26,455.19	3,197.35	23,257.84
Prepaid taxes and insurance	1,413.24	1,413.24	
	\$448,005.88	\$362,275.05	
	\$448,005.88	\$362,275.05	
 <i>LIABILITIES</i>			
Accounts payable	\$ 66,568.63	\$109,806.52	43,237.89
Bills payable	152,468.53	152,468.53	Dr. 128,968.72
			Dr. 128,968.72
Capital stock:			
Preferred	50,000.00	50,000.00	

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Capital stock:			
Common	100,000.00	50,000.00	50,000.00
Surplus	78,968.72		78,968.72
	<u>\$448,005.88</u>	<u>\$362,275.05</u>	<u>Cr. \$128,968.72</u>

This shows that the common stock is impaired \$50,000.00. The whole loss must fall on the common stock, since the preferred stock is preferred as to assets, and does not lose any of its value until the common stock is exhausted.

This exhibit fixes the price to be paid to Mr. Willoughby West for the stock bought from him and for his account as fifty cents on the dollar. His account will therefore be as follows:

Willoughby West

200 sh. Chimera common \$15,000.00	800 sh. Chimera common \$40,000.00
500 sh. Opulent Oxygen 50,000.00	200 sh. Chimera common 10,000.00
	Balance 15,000.00
	<u>\$65,000.00</u>
Balance	<u>\$15,000.00</u>

The figures shown in the statement of assets are those submitted by the appraisers and arbitrators. The increase in the accounts payable was discovered from statements sent in by creditors and from an analysis of the inventory, disclosing goods that had been received for which no credits had been made to accounts payable.

Yours very truly,
_____, C.P.A.

NOTE—The importance of determining the status of the preferred stock arises from the fact that if it shared in the impairment the common stock would be impaired only \$33,333.33. This would give the common stock a book value of 66-2/3% and Mr. West would have been entitled to \$66,666.67 of the Opulent Oxygen stock, instead of \$50,000.00.

Book Department

CLUB ACCOUNTS AND THEIR CONTROL, By HAROLD TANSLEY
WIRT, F.C.A., *Gee & Co.*, London, 1913. \$1.50.

This publication is intended to prove of value to secretaries and committees of English clubs, and also to explode the theory that any one can manage a club. Incidentally, the author modestly submits the book to members of the accounting profession as a guide when they are called upon to install club accounts, as its theories are in every day use by the best English clubs. The books of account from which the revenue account and balance sheet are prepared, as prescribed by the author, are: cash book; tabular expenditure journal; impersonal ledger (partly ruled in tabular form; tradesmen's ledger; small journal (for impersonal entries, and adjustments); and debenture ledger (if the club has a debenture debt).

The author urges the importance of keeping, wherever possible, a record of the profits made in each department of the club, so as to produce a comparable ratio of percentage of profit to the takings.

A careful reading of this book fails to dispel the thought that our English cousins have made little progress in demonstrating the stewardship of club departmental service coincidentally with the stewardship of employees handling money and property. The accounting processes suggested by the author are practically obsolete in American clubs and have given place to clean-cut and concise methods that are promptly responsive to any desired demonstration of stewardship. American club management is generally vested in standing committees, composed of men or women active in business affairs, who demand the same graphic and comprehensive records for their club that they require in their own business affairs. This has resulted in giving to American clubs the very best accounting thought in the development of routine, accounting methods, and comprehensive statements of results.

HERBERT M. TEMPLE

THE THEORY OF DEBIT AND CREDIT IN ACCOUNTING, by
ROBERT GARDNER McCLUNG. *Morgan, Mills and Company*, Boston,
1913. 16 pages. \$1.00.

Length of title, magnitude of price and abundance of index are the most noteworthy features of a little pamphlet of fourteen pages devoted to a discussion of the theory of debit and credit in accounting by MR. ROBERT GARDNER McCLUNG. The absolute necessity for a publication of a work of this kind does not appear to the casual reviewer. To him it reads more like the introductory chapter of an ordinary text book on accounting. Every worthy contribution to the literature of accountancy should be welcome, but it is much to be doubted if the reception accorded the booklet in question will be as hearty as it might be were the contents greater and the price less.

A. P. R.

Book Department

INCOME TAX GUIDE, BY WALTER A. STAUB, C.P.A., *Lybrand, Ross Bros. & Montgomery*, New York, 1913. Fifty cents.

Following enactment of the Underwood tariff bill with its provision for the incidence of a tax upon individual as well as corporate income a mass of literature has been published dealing with the income tax and attempting more or less satisfactorily to explain the meaning of an act which certainly did not err on the side of too great clarity. Many of the banks have issued booklets containing advice to bondholders, and various other institutions have voluntarily come to the assistance of a rather bewildered public, but it must be confessed that the great majority of this expository pamphleteering has served chiefly to make confusion worse confounded. The primary reason for this failure to explain is the evident desire of the authors to display their ability as destructive critics. The act has been roundly belabored; its provisions have been ridiculed; and its inapplicability to the conditions of business has been demonstrated to the complete and serene comfort of complacent writers.

Constructive criticism, however, has not been wholly lacking and in MR. STAUB'S little book we have as lucid and able a discussion of the act as has appeared. He starts with the bold assumption that the act can be applied and proceeds to show how. Naturally he deals only with the act and those regulations under it issued prior to the publication of his book, but he displays a grasp of the law and a confidence in the administration of it which is valuable and encouraging. The set of forms for recording income which is embodied in the book is of great use. The exposition of the law is most sound. There is a modicum of criticism but as a rule the author takes the subject as he finds it and has no violent quarrel with facts. The book is excellent and should be an aid to every payer of income tax.

A. P. R.

A FIRST YEAR IN BOOKKEEPING AND ACCOUNTING BY G. A. MACFARLAND AND I. D. ROSSHEIM, pp. 224. *D. Appleton & Co.*, 1913.

As stated in the foreword the endeavors of the authors "have been to lay particular emphasis on the methods of exposition; appeal being made to the understanding rather than to the memory of the student." This is exactly what is needed in the university courses in commerce, and the purpose is laudable. It is my opinion that the method of illustrating principles by specific problems will soon supplant the routine sets so largely in use at present, and it is a pleasure to see a text with such a basis. Too frequently it is assumed that the student knows bookkeeping because he has waded through a mass of tiresome entries. Such routine work drives all ambition and initiative from many a man who begins the work. The authors state "but a small number of students having reference to this volume will eventually reach the summits of accounting, having no desire to follow it as a profession." This is unquestionably true, but the writer is also convinced that one of the great faults with instruction in bookkeeping is that teachers do not

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inspire the student with vision; the student sees only the things at hand and becomes mechanical in his action—he is learning the trade of being a bookkeeper. Certainly no university course in commerce has such an aim in view. The course in bookkeeping is used as a stepping stone in approaching the larger subject of accountancy. Merchandise or trade discount is defined on page 54 as “a consideration given or received for the payment of bills before they are due.” This is a confusion of the terms, trade and cash discount, and it is the latter which the authors have defined. An examination of the text failed to reveal the correct use of the term, “trade discount.” The fact that the old time mixed account with merchandise is used in this book is to be regretted. If universities are to prepare men for entering the profession the accounting work from beginning to end must be properly correlated, so that time need not be wasted in accounting classes in explaining and correcting the methods followed in bookkeeping texts.

In the opinion of the writer, too much attention (three chapters, 24 pages) is given over to single entry bookkeeping and the change from single entry to double entry. Particular attention should be called to the fact that no mention is made in the text of corporation bookkeeping or general corporation subjects, with which the bookkeeper should be familiar. The authors state in the foreword that the text “is designed to provide a full first year’s work in bookkeeping and accounting, for use in higher institutions of commercial training. Certainly not a great deal of time could be given the subject each week if the contents of the book were to suffice for a year’s work, and it is hoped that the number of universities devoting so little attention to training for accountancy is exceedingly small.

F. H. ELWELL.

Correspondence

Accounting Terminology

Editor, The Journal of Accountancy:

Sir: It is an ungrateful task to criticise the work of a committee which has freely given its services to the American Association of Public Accountants, but where severe criticism is bound to arise, it seems desirable that members of the association should be the first to realize the need therefor.

Few who have read the report of the committee on accounting terminology will dissent from the conclusion that it is not worthy of its members or of the accounting profession. It is unnecessary to discuss the report in detail and all that can now be done is to take steps to insure, so far as possible, that the report shall not be regarded by the public

Correspondence

as representative of either the accounting, literary or other qualifications of the general body of accountants in this country. It is solely with this object in mind and with a feeling of deep regret that this letter is written.

Yours very truly,

C. CULLEN ROBERTS.

New York, December 31, 1913.

[We are glad to publish Mr. ROBERTS' letter because we believe that the committee on accounting terminology will welcome any reasonable criticism; but it is necessary to point out that the American Association of Public Accountants does not signify its approval of committee reports simply because of their publication in the year book. The reports of committees are generally ordered printed, and it remains for the members of the association to express their views on such reports. The report in question is probably not intended to be the final word of the committee, but is simply a collection of definitions which the committee presents to the association as the result of its efforts during the year. This view of the case is clearly set forth in the introductory portion of the committee's report. *Editor, THE JOURNAL OF ACCOUNTANCY.*]

New York C. P. A. Examinations

Editor, The Journal of Accountancy:

Sir: A solution to question 5, part 2, practical accounting, 35th New York C. P. A. examination having been submitted in the November issue of *THE JOURNAL*, the writer begs to offer his solution of the same problem.

The question at issue, while it speaks of the value of the two stores, at Paterson and Newark respectively, in the writer's estimation could not mean to aim at the net worth of the firm at the dates mentioned in the problem. This viewpoint seems to have been taken by your correspondent from Dallas to judge from the wording of his solution.

By assuming this to be so, he concluded to divide the amount of \$1,500 due to creditors into two even parts in spite of the problem stating: "Purchases, Paterson store, January to July \$3,325."

This in the writer's opinion seems to imply that all other purchases, whether paid or unpaid, should be charged to the Newark store.

Very truly yours,

PAUL L. LOEWENWARTER.

Announcements

Frank L. Norris and David E. Boyce announce the opening of offices at 30 Church Street, New York, where they will practise under the firm name of Norris and Boyce.

Andrew Hunter, Jr., & Co., certified public accountants, announce the removal of their offices from the American Building to Suite 1022-1023 and 1024 Munsey Building, Baltimore, Md.

Raban & Finlay, certified public accountants, announce the formation of a partnership for the practice of accountancy, with offices at 5 Second Street North, Great Falls, Montana.

J. Porter Joplin, chairman of the committee on professional ethics of the American Association of Public Accountants, was the guest of the Institute of Chartered Accountants of Manitoba at a dinner given in the St. Regis Hotel, Winnipeg, on December 9th. After dinner Mr. Joplin addressed the members of the Institute on the subject of ethics, and a general discussion followed.

The first examination under the C. P. A. law of North Dakota will be held at the state university in Grand Forks, N. D., on January 29th. Applications for this examination should be addressed to the state board of accountancy, (president, Frank L. McVey, president of the university of North Dakota) thirty days before the date of examination.

Arthur E. Andersen and Clarence M. DeLany announce that they will engage in the general practice of public accounting under the firm name of Andersen, DeLany & Co., certified public accountants, with office in Harris Trust Building, III West Monroe Street, Chicago, Ill.

Mr. Anderson retains his connection with Northwestern University.

Elmer L. Hatter, certified public accountant, announces that he has opened offices at 625 Munsey Building, Baltimore, Md., for the general practice of accountancy.

W. F. Weiss and Company, certified public accountants, 170 Broadway, New York, announce that they succeed to, and continue at the same address, the accounting practice of the firm of W. F. Weiss and of Macpherson, Weiss and Company (of New York) the latter firm having been dissolved.

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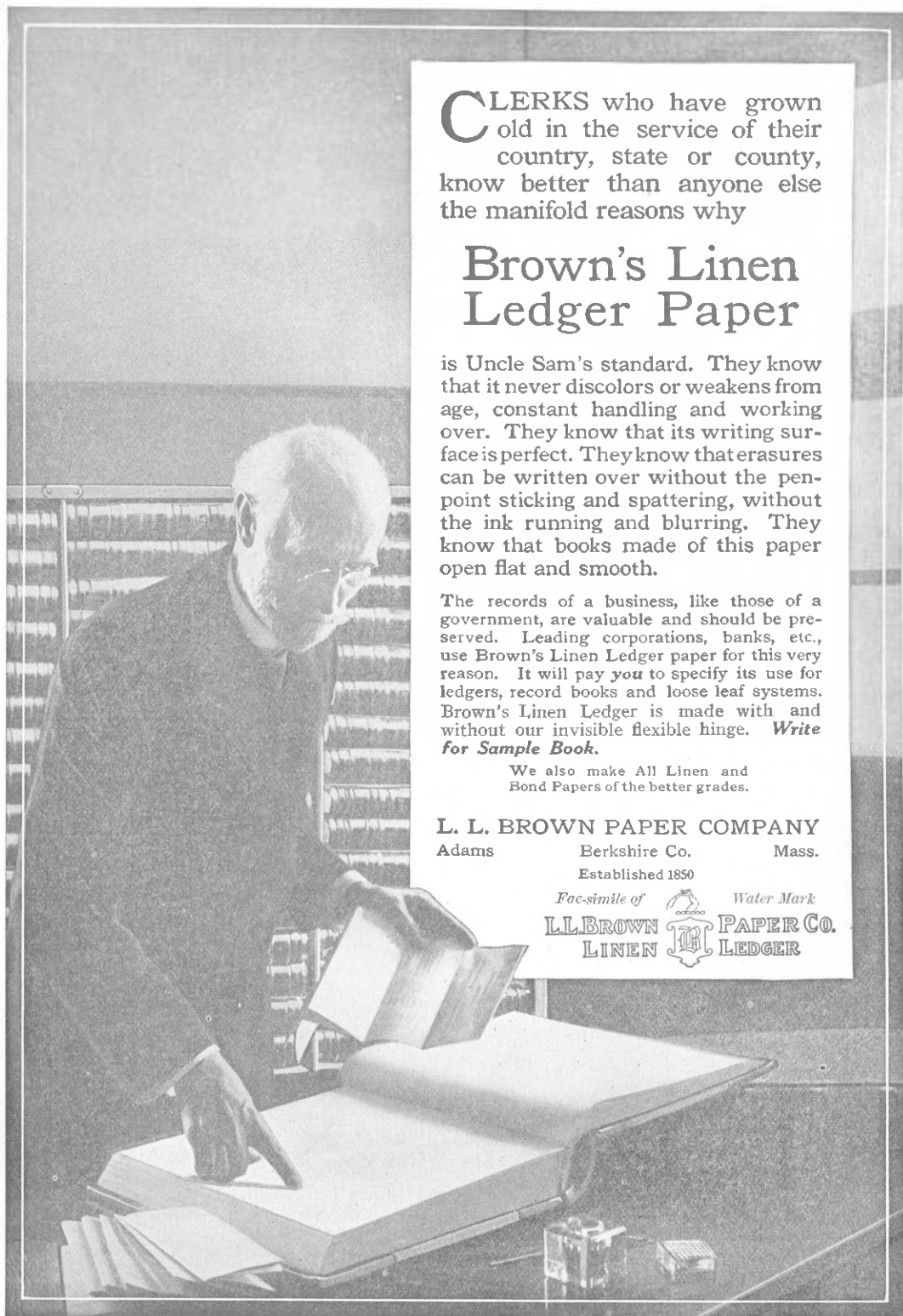
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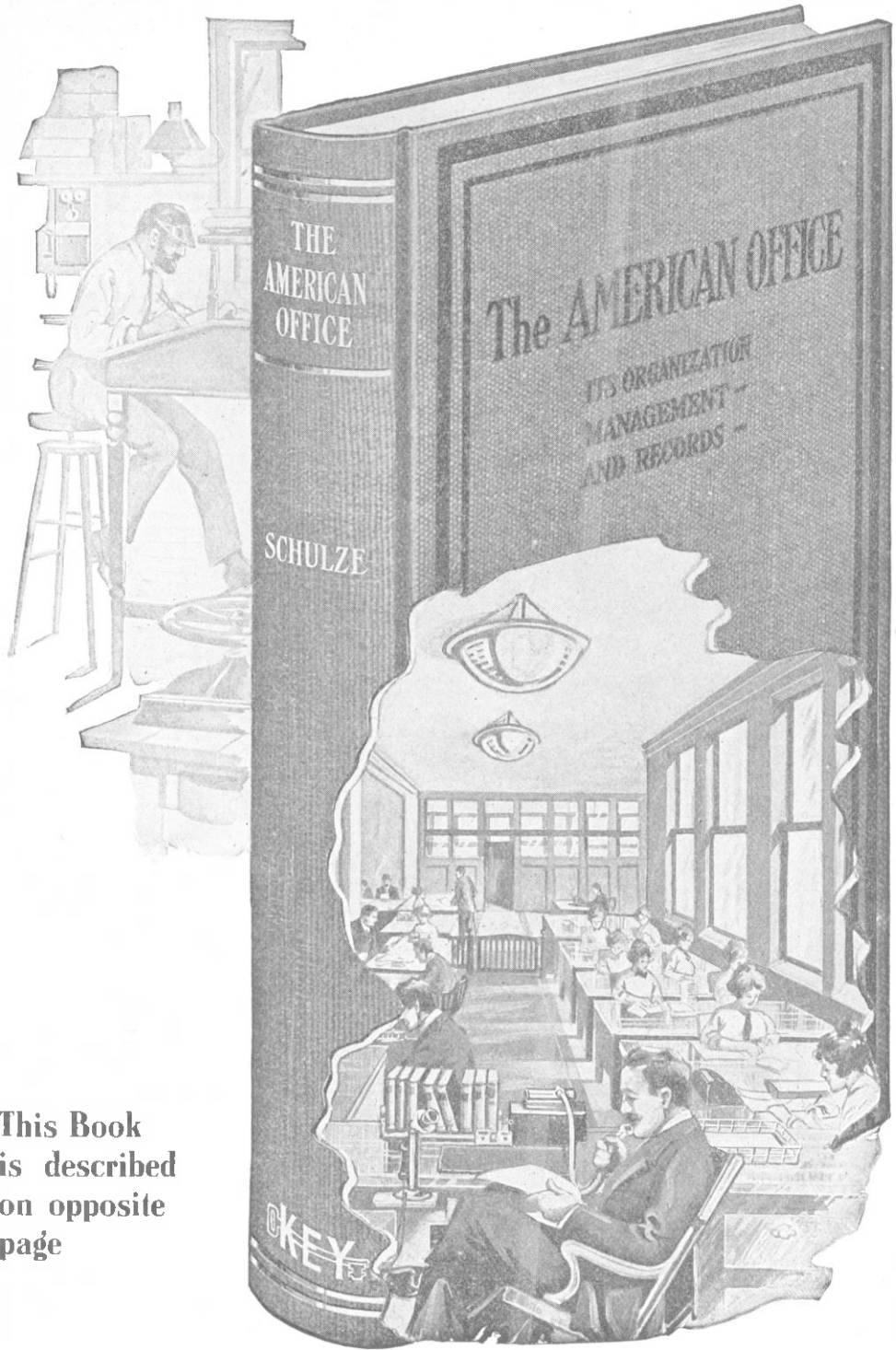
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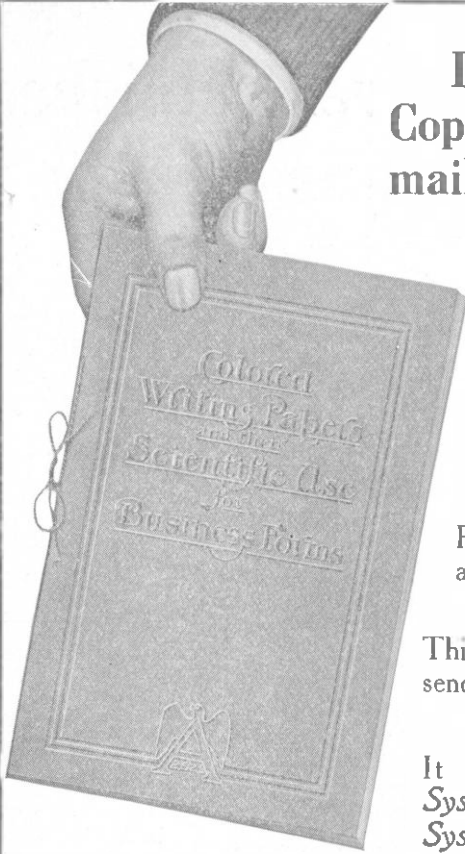
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