1919

Solutions to problems

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largest measure of success ultimately is he who by the quiet, refined, and thorough fulfilment of each task which he undertakes silently invites those who may have need for his services to seek them with the confidence that they will be unsurpassed.

Solutions to Problems

PROBLEM NO. 1

THE solution to this problem requires only a small amount of thought, but it must be intensive thought. It must be noted first that the errors apply to 1916 and 1917 respectively. Those which relate to the inventory of December 31, 1916, affect the surplus. The adjustments of the inventory of December 31, 1917, affect the profit and loss account of the year ended on such date. The corrections of the errors increase or decrease the surplus or the profit and loss account respectively as the case may be. One of the main points in the problem is to test the candidate's knowledge as to whether or not the errors relating to the inventory of December 31, 1916, affect the profits for 1917.

A further very troublesome point is the item of $4,000 for material received and included in the accounts payable but not included in the inventory. The suggestion is that the accounts were not in balance. No doubt many a candidate took that position and made a single entry, thereby offsetting the good results of his work up to that point. It is probable that when accounts payable were credited some account like purchases or merchandise was debited. When the books were closed there was made presumably the traditional entry, "Inventory new to Inventory old," or "Inventory to Merchandise or Purchases.' The entry was quite proper but the amount was $4,000 less than it should have been.

The correcting entry would charge "Inventory" and credit "Profit & Loss". The reason for this is that the previous credit to merchandise on account of goods unsold was too small, resulting in a figure for cost of goods sold which was too large, and consequently a profit which was too small in the amount of $4,000.

The entries in their entirety, but with explanations omitted for the sake of brevity, appear below:

DECEMBER 31, 1916.

Inventory	$ 500	
Surplus		$ 500
Surplus	1,000	
Inventory		1,000

DECEMBER 31, 1917.

Profit & Loss	$ 2,000	
Inventory		$ 2,000
Inventory..........	10,000	
Profit & Loss		10,000
Inventory	4,000	
Profit & Loss		4,000

The net effect of the errors on the profits of each of the two years is shown by the following ledger accounts:

Surplus 12/31/16		Profit & Loss 12/31/17	
$ 1,000	$20,000	$ 2,000	$30,000
	500		10,000
19,500		42,000	4,000
$20,500	$20,500	$44,000	$44,000
	$19,500		$42,000

It is possible that the correct solution to the problem contemplates a closing out of the profit and loss account to the surplus account. If so, such step is not clearly indicated by the text of the problem.

PROBLEM NO. 2

A lawyer would probably say that the essence of this problem is combination. The problem seeks to test the candidate's knowledge of how to combine the accounts of two related companies, and so leave them that they may be further combined with the accounts of a parent company. The problem in this respect is not difficult. The person who designed the problem evidently realized this and injected a number of thought-provoking provisions bearing on reserves and discounts and allowances.

The text of the problem read carefully discloses the following sentences which need second consideration:

"When the assets and liabilities of both companies at Oshkosh were taken over on December 31, 1916, no reserves in respect of discounts and freight allowances to trade were on record.

"Your analysis of the accounts showed that the Michigan Rubber Company had accounts receivable at the close of 1916 in the amount of $560,000, the discount to the trade averaging 4.6 per cent., which was also the prevailing rate at the close of 1917.

"There was included in the freight allowances of 1917 an amount of $8,400 on sales effected in 1916, and the probable credits to present outstandings in this respect were estimated at $11,500.

"You are advised by officials that this should not disturb the profits of the Michigan Rubber Company ($3,750.00), although the reserves created are to be on the balance sheet of that company."

The fact that no reserves for discounts and freight allowances existed at December 31, 1916, when the Oshkosh companies were acquired, puts one on notice to think carefully what effect such failure to provide would have. There are two theories regarding cash discount. The first, and incidentally the one which enjoys the confidence of many of the best accountants, regards cash discount as a spontaneous affair. It arises when some customer decides to settle an account before it is due. It does not accrue and consequently needs no advance provision. The second theory regards and treats cash discount like an accrual. It is argued that a percentage of customers are sure to take advantage of the opportunity and that a part of the asset in the form of accounts receivable is sure to fail of realization. Where companies having accounts receivable are taken over it must be admitted that the purchaser is wise if he insists on a provision for such loss.

Assuming that in the present problem the second theory regarding cash discount were intended by the author of the problem, the discount and freight allowances would be in the same class. We should therefore expect to find some further mention or evidence of these charges appearing in the accounts of 1917. The third paragraph above quoted gives the information which one expects to find bearing on trade allowances. There is nothing, the third paragraph notwithstanding, which clears up the situation with regard to cash discount and suggests guidance as to the proper procedure. It seems inconsistent that if the Michigan Rubber Company had accounts receivable at the close of 1916 in the amount of $560,000, the discount (cash) to the trade averaged 4.6%, and the discount was taken by any of the customers, no account for cash discount appears in the trial balance. The person who attempts to solve the problem is scarcely justified in working up discount entries and adjusting the cash account on the strength of the facts presented in the problem. Failure to make provision for probable discounts at December 31, 1917, may be justified by adherence to the instantaneous theory of cash discount.

The entries affecting the trade discount are fairly simple. If the Michigan Rubber Company had a surplus account it would be proper to charge the freight allowance adjustment in the amount of $8,400 to the surplus account when crediting the freight allowance account. The Michigan Rubber Company has no surplus account and its profits for the year 1917 are strangely protected, it appears, by "instructions from Chicago" and "advice of officials." There appears to be nothing to do since "Chicago" is so careful to preserve inviolate the profits of the Michigan Rubber Company, but to charge the amount against the National Rubber Company (Oshkosh).

The entry in the accounts of the Michigan Rubber Company for this and the adjustment for the year 1917 follow:

National Rubber Company (Oshkosh), ...	$8,400	
Freight allowances		$8,400
Adjustment for freight allowances on sales effected in 1916 charged in the accounts during 1917.		
Freight allowances	$11,500	
Reserve for freight allowances		$11,500
Provision for freight allowances on accounts receivable at December 31,1917.		

In view of the fact that there are but two adjustments they have been applied to the accounts of the Michigan Rubber Company in the trial balance of December 31, 1917, without being made to stand out. In other words, the figures which appear in the working sheet for combining the accounts of the two companies have been changed so as to give effect to these adjustments.

The oft repeated statement regarding the integrity of the net profit of the Michigan Rubber Company seems to be a ridiculous fancy of some one, either company official or the maker of the problem. If any of the stock of the Michigan Rubber Company were owned by some one other than the National Rubber Company there might be some logical reason for the provision. As it is, all the stock is owned by the aforesaid company. When the accounts are combined these stock accounts wash, and the excess of assets over liabilities of the combined companies becomes the equity of the parent company. The expression of the man who said, "You can't make money doing business with yourself," applies with full force to this case. In order, however, to comply with the strict instructions of the problem care must be had, in making the combined profit and loss statement, to restore the profit of the Michigan Rubber Company by charging the combined profits (which amounts to charging the Chicago office) with the difference between the two freight allowance adjustments, namely, $3,100. This brings to mind the fact that the National Rubber Company (Oshkosh) must pass on to the National Rubber Company (Chicago) the charge for freight allowances applicable to 1916. This adjustment has, in the working sheet, been made in the trial balance of the National Rubber Company (Oshkosh) by charging (Chicago) and crediting (Oshkosh) in the amount of $8,400.

The working sheet follows:

NATIONAL RUBBER COMPANY

Combined Working Sheet, December 31, 1917.

Debits	National Rubber Company Oshkosh	Michigan Rubber Company Oshkosh	Total	Eliminations	Net Figures
Advances on Construction	$ 50,000		50,000		$ 50,000
Buildings	600,000		600,000		600,000
Capital Stock—Michigan Rubber Co.	5,000		5,000	$ 5,000	
Cash	55,000	$ 4,550	59,550		59,550
Land	35,000		35,000		35,000
Liberty Loan Bonds	50,000		50,000		50,000
Interest Prepaid	12,000		12,000		12,000
Insurance Prepaid	17,500		17,500		17,500
Machinery and Equipment	350,000		350,000		350,000
Michigan Rubber Company	1,051,600		1,051,600	1,051,600	
Raw Material	1,000,000		1,000,000		1,000,000
Work in Progress	198,000		198,000		198,000
Finished Goods	1,232,000		1,232,000		1,232,000
Accounts Receivable		775,000	775,000		775,000
Advances to Employes		1,000	1,000		1,000
Notes Receivable		290,000	290,000		290,000
Travel	2,500		2,500		2,500
Salaries	6,000		6,000		6,000
Clerical	8,000		8,000		8,000
Miscellaneous	7,000		7,000		7,000
Interest	31,000		31,000		31,000
Manufacturing Cost Goods Sold	5,466,500		5,466,500		5,466,500
State Income Tax	40,000		40,000		40,000
Sales Salaries		40,000	40,000		40,000
Advertising		40,000	40,000		40,000
Trade Discount		380,000	380,000		380,000
Freight Allowances		115,600	115,600		115,600
Purchases		6,750,000	6,750,000	6,750,000	
Credits for Defective Tires		510,000	510,000		510,000
Clerical		22,800	22,800		22,800
Telephone and Telegraph		950	950		950
	$10,217,100	$8,929,900	$19,147,000	$7,806,600	$11,340,400
Credits					
Accrued Taxes	45,000		45,000		45,000
Accounts Payable	750,000	1,800	751,800		751,800
Depreciation Reserve	190,000		190,000		190,000
Notes Payable	200,000		200,000		200,000
National Rubber Co., (Chicago)	2,223,100		2,223,100		2,223,100
National Rubber Co., (Oshkosh)		1,051,600	1,051,600	1,051,600	
Capital Stock		5,000	5,000	5,000	
Sales	6,750,000		6,750,000	6,750,000	
Purchase Discount	59,000		59,000		59,000
Sales Invoiced		7,500,000	7,500,000		7,500,000
Charges for Mileage Used on Defective Tires		300,000	300,000		300,000
Recovered from Factory on Guarantee		60,000	60,000		60,000
Reserve for Freight Allowances		11,500	11,500		11,500
	$10,217,100	$8,929,900	$19,147,000	$7,806,600	$11,340,400

Working from the last column of the combined working sheet the balande sheet and profit and loss statement are evolved as below. While the problem calls for a profit and loss account it is not believed that the examiners would object to the statement in report form as presented herewith since, as suggested previously, it is ability to combine properly which the problem particularly seeks to test.

NATIONAL RUBBER COMPANY

Combined Balance Sheet—National Rubber Company (Oshkosh Plant) and Michigan Rubber Company—December 31, 1917.

Assets	
Land and buildings	$ 635,000
Machinery and equipment	350,000
Advances on construction	50,000
Liberty Loan Bonds	50,000
Raw material	1,000,000
Work in progress	198,000
Finished goods	1,232,000
Cash	59,550
Accounts receivable	775,000
Advances to employes	1,000
Notes receivable	290,000
Interest prepaid	12,000
Insurance prepaid	17,500
Total	$4,670,050

Liabilities and Capital		
Accrued taxes		$ 45,000
Accounts payable		751,800
National Rubber Company (Chicago)		2,223,100
Notes payable		200,000
Reserve for freight allowances		11,500
Reserve for depreciation		190,000
Excess of assets over liabilities:		
Michigan Rubber Co.	$ - 3,750	
Balance	1,244,900	1,248,650
Total		$4,670,050

NATIONAL RUBBER COMPANY

(National Rubber Company—Oshkosh Plant—and Michigan Rubber Company Combined)

Statement of Income and Profit and Loss for the Year Ended December 31, 1917.

Gross sales		$7,500,000
Less: Trade discount		380,000
Net sales		$7,120,000
Deduct:		
Freight allowances	$115,600	
Allowances for defective tires—net	150,000	265,600
Income from sales		$6,854,400
Cost of goods sold		5,407,500
Gross profit on sales		$1,446,900
Selling expense:		
Sales salaries	$ 40,000	
Traveling	2,500	
Advertising	40,000	82,500
Selling profit		$1,364,400
Administrative expense:		
Salaries	$ 6,000	
Clerical	30,800	
Telephone and telegraph	950	
Miscellaneous	7,000	44,750
Net profit on sales—income from operation		$1,319,650
Deductions from income:		
Interest	$ 31,000	
State income tax	40,000	71,000
Net income—excess of assets over liabilities December 31, 1917		$1,248,650

There are only two figures or sets of figures in the trial balance which require explanation as to their whereabouts in the statements. The first is the "purchase discount" of $59,000 which has been applied against the cost of goods sold in the amount of $5,466,500, making the net amount appearing in the income statement $5,407,500. The second net figure appearing in the statement of income is that of $150,000 shown as "allowances for defective tires." This is the net result of applying the charges for mileage used on defective tires ($300,000) and the recoveries from the factory on guarantee ($60,000) or a total of $360,000, against the allowances for defective tires of $510,000.

About Selling Things

IN the March number of "The Sabean" appears an article by A. Manville Waples entitled "About Selling Things." This paper reflects so fine a philosophy of service that the accountant, in applying its principles to the practice of public accountancy, will find in it a wealth of suggestion. By the courtesy of "The Sabean" we are permitted to reproduce the article in full:

The subject of Salesmanship has been taken apart, analyzed, microscoped and presented in so many lights that seemingly