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INDIAN RAILWAY CONFERENCE ASSOCIATION IN 1942.

Established in the late nineties of the last century, the Indian Railway Conference Association held its forty-second Annual Conference in October, 1940. The Association consists of such railway administrations working a railway open for passenger traffic in India as desire to join it.

Its functions include *inter alia* :—

(1) Framing of rules for the management of traffic interchanged between railways, including rules for the determination, by arbitration, of inter-railway claims on account of interchanged traffic and rolling stock ;

(2) Acting as a Board of Conciliation ;

(3) The conduct of the broad gauge wagon pool ; and

(4) Rendering of advice on other subjects relating to railways which may be referred to it.

Questions referred to the Association for opinion may be dealt with by the Association when in session or by a Standing Committee otherwise. One of the rules of the Association lays down that in order that a resolution shall be carried or a decision promulgated, not less than three-fourths of the total number of votes of the railways voting must be cast in its favour. The voting power of each railway is based on the freight ton-mileage of coaching and goods traffic and the mileage open and under construction. The scale of votes is a sliding one in both cases, so that the number of votes is not proportional to the ton-mileage or mileage and is subject to a maximum of nine votes in respect of ton-mileage and twelve votes in respect of mileage. At the time when the Association was constituted, there were only three railway administrations under state-management, *viz.*, E. B. Railway, O. & R. Railway and N. W. Railway and the rest were all company-managed. Thus even if all the three state-managed railways were single-minded on any question and opposed to it, it was possible to arrive at a decision and to promulgate it. The position as on the 1st April, 1941, is that of the total of 150 votes, the four state-managed railways can muster 39 votes, *i.e.*, 26 per cent. only. On this same basis after the A. B. and B. B. & C. I. Railways are taken the six state-managed railways will have 55 votes or 37 per cent. On any important question wherein state-managed railways are especially interested or receive instructions from the Railway Board it is now open to them to vote solidly against a resolution and prevent its being carried into effect and the position will be worse from next year.

Apart from their voting strength, the interest of the railways state-managed vis-a-vis the rest (including several railways managed by Indian States) may be grouped in other ways. In regard to mileage, state-managed railways will have 21,978 miles or 53 per cent. of the total mileage ; in regard to ton-miles they will have 16,723 millions or nearly 68 per cent., so that if the calculation of votes were proportional to ton-mileage and mileage they would be having $\left(\frac{53+68}{2}\right)$ or 61 per cent. of the total voting strength.

Looked at from a third point of view, *viz.*, gross-earnings and calculated on the figures of 1939-40, state-managed railways would have total gross-earnings of Rs. 74,05 lakhs as against Rs. 33,08 lakhs pertaining to the other railway administrations or over 69 per cent. of the total earnings. So far, no decision appears to have been arrived at in regard to B. & N. W. Railway. If it is decided that this railway and, therefore, R. & K. Railway also should be taken over for management by Government, the position of the state-managed railways will be much stronger and their stake in the matter much greater.

With the situation thus developing it is open to question whether the Indian Railway Conference Association requires to be retained much longer. It has been already shown that without the concurrence of the state-managed railways, the Association will be unable to put any resolution into operation and the position will get worse as time passes.

Great as has been the good work done by the Association, it appears that it will shortly have out-lived its usefulness. From

its abolition, there will be some saving of expenditure. Its entire work can be taken over by the Railway Board and this arrangement will not adversely affect the interests of the B. N., M. S. M. and S. I. Railways as they are all state-owned. There remain the interests of the H. E. H. Nizam's State Railway, Mysore State Railway and Jodhpur State Railway all of them worked by the respective States and certain smaller railways worked by Indian States or companies. To safeguard their interests, provision may be made for an appeal to a tribunal, the scope of the Railway Rates Tribunal being enlarged and modified for the purpose.

K. V. IYER.

In the comparison of the ton-mile revenue, the length of the average haul must not be overlooked as an important factor in judging the railway earnings per unit of freight traffic service since an increase or decrease in the length of the average haul produces a reverse change in the terminal expenses per unit of traffic. Dr. Henry C. Adams, a former statistician to the Interstate Commerce Commission, stated ". . . . it is universally recognised that terminal or dispatch expenses constitute a considerable portion of the aggregate or operating expenses, and that as the length of haul increases, the ratio of this class of expenditures decreases."

Others have frequently called attention to the shortcomings of the average revenue per ton-mile as a statistical measure of rate levels.

But in spite of all these disadvantages, Dr. Henry C. Adams stated that it seems wise in the absence of a better unit of comparison to retain the ton-mile average and to undertake its development so as to obviate the criticisms that may justly be made upon it. Dr. Adams had recommended the separation of railway traffic and earnings on the basis of the kinds of freight carried.

Professor William Z. Ripley also remarked that the revenue per ton-mile (for a particular road) will in many cases be found highly serviceable in the examination of particular rates. He said: "It may properly be used to determine whether a given commodity is contributing its due proportion to the general budget of the carrier. Revenue per ton-mile can, of course, be computed for each particular service; inasmuch as both the income and the volume of that service are matters of independent record."

The ton-mile revenue unit had received the approval of the *Institut International de Statistique* and by the end of the last century it was adopted in the reports of all important countries with the exception of England.

The preceding comment relates chiefly to comparisons of ton-mile revenues over a period of years for a single railway or for all railways in one country. The average is less useful in comparing within the same country the level of charge of one

railway with another, one of which may carry chiefly coal and another chiefly manufactured products. This limitation also applies to regional comparisons in the same country. It applies with greater force to international comparisons because, in addition to variations in traffic, there are variations in the nature and extent of the accessorial services customarily included in the rate. Even if all such differences are taken into account, the international comparison of ton-mile earnings would also raise the question of the significance of the showing in view of different policies of taxation, regarding import and export rates, and as to social policies which call for low rates for special purposes.

At an early date students of railway economics became aware of the fact that international comparisons of ton-mile revenue in tabular form were misleading unless accompanied by considerable qualification. In 1886, Mr. J. Grierson, General Manager of the Great Western Railway, England, pointed out that ". . . as a rule, no fair, or even useful, comparison can be made between rates per ton per mile on railways in England, and those charged on railways in continental countries. A multitude of circumstances—original cost of construction, difference in gradients, nature of services performed, speed in transit, limited liability of foreign companies, opportunities for getting full loads, immunity from taxation—must all be taken into account before a just comparison can be established."

About the same time Professor Arthur T. Hadley in comparing railway freight revenue per ton-mile for different countries emphasised the intimate relation between "the length of average distance per ton carried" and the average receipts per ton-mile. Referring to relatively high average rates per ton-mile in France in the early eighties in comparison with average rates in Germany, and the United States, he stated that the failure to lower average rates in France was probably due largely to the failure to develop long distance traffic as other nations had developed it. In comparing average freight rates in Belgium with average rates in other countries, he explained that freight rates in Belgium "are much lower than anywhere else in Europe. Nominally they are about the same as in the United States. Practically they are lower for almost any given service, because Belgium does not have the enormous long-distance traffic which brings down the average in the United States."

Discussing the difficult problem of comparing American and English freight rates and emphasising the fact that English railway companies do not furnish and compile railway ton-mileage statistics, Professor Hadley said: "Any attempt at comparison of freight charges would be long, technical, and unsatisfactory. On high-class freight it is altogether impossible, because the English rates for such goods include collection and delivery. No one can tell how much we should allow for cartage, or whether we should take American freight rates or express rates, as our standard of comparison. An extremely rough estimate, not making allowance for any of the disadvantages to which English railroads are subject, would indicate that their charges per ton-mile on all traffic average are from fifty to seventy-five per cent. higher than ours."

In 1887 Mr. J. S. Jeans, a British statistician, comparing 1883 average receipts per ton-mile and average haul in the principal countries of continental Europe remarked that the shortest average haul on the Continent coincides with the highest average ton-mile rates. He also indicated that factors such as density of traffic, the proportion of minerals carried relatively to the total tonnage, proportion of one-way traffic, and weight of the load hauled influence the rates at which traffic is carried.

During the same year Mr. Edward B. Dorsey, an American civil engineer, concluded that for similar accommodation the freight charges are much less on American than on English railways. In his discussion of railway costs he attributed this difference in freight rates to the greater cost of construction of English railways (easier grades and curves) and to their higher cost of operation (greater speed, small tonnage of the freight trains) in comparison with the American railways.

It should be observed, however, that explanations similar to this one made by Mr. Dorsey were not considered by railway economic analysts as the major factors influencing railway freight rates. For instance, Dr. Henry C. Adams, in one of his studies comparing ton-mile revenues for different territorial railway groups in this country, stated that the "physical characteristics of railways" as one of the generally accepted factors in determining railway charges "has been greatly over-estimated, and it has been one of the results of recent railway statistics in this country to show that engineers have committed the error of laying too great stress upon curves and grade."

Mr. W. M. Acworth, a British railway expert, has also remarked: "It is common to speak as though the high range of charges on the English railways were due directly to their enormous capital expenditure. This, however, . . . cannot be admitted to be correct." He pointed out that no manager in England in fixing a rate ever takes into consideration what his line has cost, but confines himself solely to an individual rate looked at *per se*—how shall he obtain the largest amount of net revenue.

Later International Comparisons of Ton-mile Revenue.

During the nineties and the first decade of this century the comparative data on revenue per unit of freight traffic service has been discussed in various countries and erroneous conclusions were quite often drawn. Referring to the extent of the ton-mile revenue discussions in this country, it is interesting to quote a statement on the subject made by Professor William Z. Ripley. He said: "For a generation and particularly in connection with the Roosevelt legislation in 1906, volumes of written and oral evidence upon moot questions were based upon such figures. Specious and misleading reasoning upon a public question was perhaps never more common in the course of our history.

In November, 1905, Mr. Walter C. Noyes, President of New London Northern Railroad Company, published his book on "American Railroad Rates" in which he presented comparisons of ton-mile revenues between the railway systems of the United States and major European countries (except Russia) in a more systematic and comprehensive fashion than they had previously been made by other railway experts. Mr. Noyes remarked that the average charges per ton-mile do not show correctly the real differences between American and European rates and that the differences in average rates are not real unless due consideration is given to dissimilarity in traffic conditions affecting these charges.

In conclusion Mr. Noyes stated: "It is apparent . . . that the real difference in charges for similar services is very much less than that indicated by the comparison of average rates." "Therefore," he said, "we can only draw the most general conclusions from the comparison of charges . . . (1) American rates upon long-distance traffic and upon heavy shipments are very much less than the charges for similar services upon the European railroads; (2) charges upon short-distance traffic and small shipments are not materially different in America and Europe." Mr. Noyes also indicated that in comparisons of rates due consideration must be given to the fact that the American railroads do not receive financial assistance from the State treasury, that they operate on competitive basis, and that in order to obtain business they have been obliged to reduce the cost of transportation.

The question of relative adjustment of railway freight rates in given countries was also raised by Dr. Henry C. Adams in his study of Prussian and American railway freight rates (December, 1905).

The major portion of Dr. Adams' study consists of a comparison of the railway freight rates expressed in cents per ton-mile for selected commodities (bituminous coal, raw wool, woollen yarns, cotton yarns, coffee, and manufactured tobacco) actually moved between specified points in Prussia and in the United States.

Comparing these rates (expressed in cents per ton-mile) Dr. Adams concluded that the Prussian rates for a distance not exceeding the average haul on the Prussian railways (71.9 miles) are lower than the American rates, but for long hauls the American rates are lower than the Prussian rates. He also pointed out that whether or not Prussian railways place too great emphasis upon the short haul traffic and the American railways upon the long haul traffic is a question to be decided individually in view of conditions prevailing in each country.

The use of ton-mile revenue unit for international comparisons of railway freight rates was also criticised by the Bureau of Railway Economics in its 1915 comparative study of railway freight rates in various countries. Such comparisons give no indication of the specific rates which are the basis of the average receipts per ton-mile nor of the varying proportions in which different commodities enter into the total traffic, nor the different distances they are carried. Nor does a statement of average receipts cast light upon the conditions under which the traffic is handled. These conclusions led the Bureau of Railway Economics to base its comparison of railway freight rates in the United States and other countries upon selected typical rates for certain basic commodities (coal, iron ore, lumber, grain, stone, fertilizer, logs, iron and steel products, brick and textiles). The rates used were those under which a considerable volume of traffic actually moved by ordinary freight over the same or closely corresponding distances. The American rates, effective in the latter part of the calendar year 1911, were furnished by 18 principal American railways at the request of the Bureau. The rates of other countries (United Kingdom, Germany, Austria, Hungary, Russia, Holland, Sweden, Norway, Spain, Italy, Belgium, South Australia and South Africa) effective as a rule during 1910, were obtained from the series of published and unpublished documents prepared for the National Waterway Commission.

The Bureau, indicating that no attempt had been made to analyse the distribution of traffic by commodities or distances, stated that commodities, for which rates are shown in its report, represent from one-third to two-thirds of the total freight movement by rail, and that the results, therefore, may be regarded as fairly representative of freight levels in countries under consideration. In order to facilitate comparison, the Bureau, converted all (minimum weight) rates into cents per ton-mile and presented all data in a series of tables arranged by commodities so that each table represents a comparison of railway freight rates for a particular commodity in a foreign country with corresponding rates in the United States for approximately equal distances.

From its comparison of these (unweighted) average rates per ton-mile in foreign countries and the United States, the conclusion was reached that, "It is entirely within the truth to say that the freight level of the United States is lower than that in the countries of Europe."

When the comparison is made, however, between specific rates per ton-mile for particular commodities, it may be noted that the American rates are often higher than the European rates. This may be illustrated by the following analysis of the actual railway freight rates per ton-mile for certain basic commodities (for instance, coal, iron ore, lumber, stone and grain) in European countries as compared with the corresponding rates in the United States:—

Country.	Range of distances for which railway freight rates applied in European Countries.	Total number of rates in European countries compared with corresponding rates in the United States.	European rates lower than corresponding rates in U. S.	
			Number	Per cent.
	(Miles)			
		Coal.		
United Kingdom[1]	14 — 212	10	4	40.0
France	22 — 513	39	7	17.9
Germany	21 — 821	53	8	15.1
Russia	117 —1,423	12	4	33.3
Holland	70 — 212	49	32	65.3
Sweden	9 — 379	10	3	30.0
		Iron Ore.		
United Kingdom[2]	15 — 188	16	3	18.8
France	37 — 513	42	7	16.7
Germany	27 — 585	20	5	25.0
Belgium	6 — 158	10	5	50.0
		Lumber.		
France	37 — 513	34	19	55.9
Russia	52 —2,283	16	11	68.8
Holland	63 — 212	10	5	50.0
Sweden	9 — 438	10	10	100.0
Belgium	3 — 194	14	14	100.0
		Stone.		
France	37 — 513	30	12	40.0
Sweden	16 — 478	10	6	60.0
Belgium	6 — 130	11	8	72.7
		Grain.		
France	35 — 513	31	18	58.1
Austria	80 — 737	16	4	25.0
Russia	89 — 2,135	10	4	40.0
Sweden	11 — 1,044	10	5	50.0

Qualifications of its study were pointed out by the Bureau. "It is of course impossible in any tabular comparison of rates to present all differences in conditions in the countries compared." It was indicated that no attempt had been made "to discuss the relations between the railways and the respective governments with a view of tracing the effect of political motive in adjusting rates, or to bring out whether the railways are sustained entirely by their revenues or in part by taxation."

1. Cars furnished by coal mine proprietors. The rates include return of empty cars to the coal mine.

2. Rates include collection at sender's and delivery at consignee's sidings.

This survey of various studies on international comparisons of railway freight revenues per ton-mile indicates clearly that such comparisons are not significant unless due consideration is given to the kind of service rendered by railways and to the dissimilarity in economic and other conditions affecting railway freight traffic and rates actually charged. The latter factor also has a direct bearing upon the validity of any comparisons of actual railway freight rates in the various countries.

In the final analysis, the dissimilarity in economic and other conditions affecting railway freight traffic and rates (actually charged) accounts, to a large extent, for differences in ton-mile revenues of railway systems in countries compared. Also the relative adjustment of those freight rates to the economic and other conditions in countries is no doubt of greater significance and importance than the actual rates. Or, as Professor Zagorsky has said, each country must have her own tariff rates according to her economic, geographic and other conditions, and the absolute amounts of tariff rates are not of importance in comparison with a degree of their adaptability to the changing conditions and needs of production and consumption.

G. M. SAHAROV.

FRAUDS ON INDIAN RAILWAYS[1]

BY

V. R. SUNDARARAMAN, M.A., A.M.I.R.A.,

E. B. Railway.

Though this paper is entitled "Frauds on Indian Railways" it covers also those types of irregularities which go by the name of "misappropriations" both of a temporary and of a permanent nature. In the case of misappropriations (also described as "defalcations" or "embezzlements") the previous existence of money or material in the custody of the person committing the offence is implied, whereas a fraud can be perpetrated even without such a pre-requisite.

Departmental reports and statistics of frauds.—Instances of frauds are taken up then and there as soon as they are detected and their pursuit is conducted through the inspection or other reports started on each case. For a final consolidated report for the financial year one has to refer to the report of the Director of Railway Audit on the Appropriation Accounts of the Railways in India for the particular year. In the years prior to the final separation of audit from accounts this report used to be called the "Executive report on the Accounts of Railways in India" and was published in two series, the first consisting of individual reports on every one of the Class I Railways compiled by the respective Chief Auditors or Government Examiners, as the case may be, and the second being the consolidated report of the Accountant-General, Railways, for all the Railways. In course of time, the individual reports were abolished and even the consolidated report had its name changed first to the "Report on the Appropriation Accounts of Railways in India" and then merely to "The Railway Audit Report." In respect of the accounts for 1928-29, the first year of the former change, two reports were issued, one under the old name and the other under the new title. An analysis of these reports for the 11 years 1928-29 to 1938-39 reveals that as many as 93 cases of important individual frauds and misappropriations on Indian Railways had been detected in these years, besides a much larger number of similar attempts of a petty character.

The statistics classified by Railways.—A list of the reports containing the statistics referred to above is given as part I (items 1 to 12) of the "literature consulted" which forms an annexure to this paper. The items of important

1. Paper read at the last Conference.

individual frauds and misappropriations reported in these departmental publications may be classified by Railways as under :

Railways	1928-29	1929-30	1930-31	1931-32	1932-33	1933-34	1934-35	1935-36	1936-37	1937-38	1938-39	Total for 11 years.
N.W.	6	-	1	2	-	-	-	2	-	-	1	12
E.I.	2	4	1	1	4	5	-	-	1	1	-	19
G.I.P.	2	1	1	-	-	1	-	-	-	-	1	6
E.B.	1	3	-	1	2	1	-	-	-	2	1	11
Bur.	8	1	-	1	-	2	-	-	-	-	-	12
B.B.C.I.	1	1	1	1	-	-	-	1	-	-	-	5
B.N.	-	-	4	2	1	-	-	-	-	-	-	7
M.S.M.	1	-	-	-	3	-	1	1	1	-	-	7
S.I.	-	-	-	-	-	1	13	-	1	-	-	5
B.N.W.	-	1	-	-	-	-	1	-	-	-	-	2
A.B.	1	1	2	-	1	1	-	-	-	-	-	6
Cl.A/cs Off.	-	-	-	-	-	1	-	-	-	-	-	1
Total ..	22	12	10	8	11	12	6	3	3	3	3	93

Main types of Frauds.—A fraud is an act prompted by an intention to cheat the Railway of its dues. A person who has such fraudulent motives should, therefore, be so circumstanced as to be able to commit such an act. Members of the public who try to evade payment of the legitimate fares due to a Railway for the Journeys they perform by it commit one kind of fraud. Other outsiders not on the staff of the Railway but connected with it in capacities such as suppliers of labour or materials or both may try to take away from the Railway much more than what is due to them under the terms regulating the supply. These men, then, are committing a type of fraud. Then again, men connected with a Railway and forming part and parcel of its personnel may, in certain conditions in which they find themselves in tempting situations, fall a prey to the temptation and try to get-rich-quick at the expense of the Railway revenues. These men are perpetrating yet another kind of fraudulent act. There are also cases in which members of the outside public and the staff of the Railway collude with each other with the object of baulking the Railway of its revenues and sharing in the loot. These constitute a fifth category of frauds.

Besides the above which are frauds proper, there are also cases in which the person collecting moneys on behalf of the Railway deliberately fails to remit the same into the coffers of the Railway but tries to make the collection his own property either for a certain period (long or short) at the end of which the erring individual has every intention of paying in the amounts to the Railway or appropriate them himself for good. The former, which are really deferred payments, constitute "temporary" defalcation, embezzlement or misappropriation and the latter, "permanent" misappropriation.

Human nature and ingenuity being what they are, it is well-nigh impossible to circumscribe the limits in a Railway organisation within which alone frauds and misappropriations are possible. These may occur in almost any branch of a Railway office but those most frequently met with take place in any one of the following places :

(i) At stations or elsewhere in connection with station earnings ;
(ii) In the Cash and Pay Department ;
(iii) In executive offices including store yards and depots ; and
(iv) In connection with the payment of labour.

A more detailed classification of these frauds and misappropriations is given below :

(i) Those by non-Railway employees :
  (*a*) Ticketless travel ;
  (*b*) Other frauds in station earnings ;
  (*c*) Frauds in stores ; and
  (*d*) Frauds in other dealings with the railways.

(ii) Those by Railway Employees :
  (*a*) In station earnings ;
  (*b*) In miscellaneous receipts and remittances ;
  (*c*) In the cash office where large amounts of railway money are handled ;
  (*d*) In district office through bogus wage payments ;
  (*e*) Fraud in stores ;
  (*f*) In passes and P.T.O.'s ; and
  (*g*) Miscellaneous such as false personal claims.

The statistics classified by types.—The instances of important frauds and misappropriations reported by the Railway Audit Department in the 11 years 1928-29 to 1938-39 referred to in para. 3 *ante* fall under the headings of classification detailed in the foregoing paragraphs as under :

Year	Number under the different types of frauds.								Total.
	Station earnings Employees.	Station earnings outsiders.	Cash & pay staff.	Misc. outside public.	Through false muster rolls & pay-sheet.	In stores.	Cash in Dt. Office Inst. etc.	Misc.[1]	
1928-29	11	1	-	-	2	3	-	5	22
1929-30	6	-	2	-	2	2	-	-	12
1930-31	5	-	1	-	2	-	2	-	10
1931-32	2	1	-	-	1	3	1	-	8
1932-33	6	1	-	-	2	-	2	-	11
1933-34	7	1	2	-	-	1	-	1	12
1934-35	2	4	-	-	-	-	-	-	6
1935-36	1	1	-	-	1	-	-	-	3
1936-37	-	1	1	1	-	-	-	-	3
1937-38	-	1	1	1	-	-	-	-	3
1938-39	2	1	-	-	-	-	-	-	3
Total for the 11 years	42	12	7	2	10	9	5	6	93

1. By railway employees, including nuisance of Pass, etc., Concessions.

The above analysis reveals that by far the largest number of frauds and misappropriations occur at stations where the earnings of the Railway are collected and accounted for.

Certain leading types of frauds may now be described with examples and preventive tips.—

A. Frauds relating to station earnings :

I. *By outsiders :*—

(1) *Ticketless travel.*—The most obvious and the simplest (from the point of view of the *modus operandi*) of the frauds coming under this category is that of a passenger boarding a train without buying a ticket for his journey and trying to travel free of charge. This type does not offer much difficulty to the authorities in being dealt with and the following remedies either to or can efficiently prevent it:—

(*a*) The recent amendment of the Indian Railways Act making it a crime to attempt to travel free and the appointment of special magistrates at important and large stations such as Howrah and Sealdah to try ticketless travellers have acted as strong deterrents.

(*b*) The institution of an efficient and intensive system of ticket checking on running trains (the Crew Department).

(*c*) In the case of passengers either travelling without a ticket or with a lower class ticket in an upper class compartment the checking and collection of tickets at the compartments themselves on arrival at stations. This is particularly necessary in suburban trains running into big cities like Calcutta and Bombay with loads of student traffic.

(2) *Re-use of used or faked tickets.*—Under this category some of the most interesting examples of frauds are met with. Invariably the methods adopted are very ingenious and involve a regular gang of men trying to defraud the Railway. The detection of the type very often entails careful and prolonged observation, mostly with the aid of the Police staff.

The gang of outsiders who perpetrate this type may do so all by themselves but frequently they happen to be in collusion either with the station staff at both the starting and the destination stations of particular trips or with the accounts office staff who deal with the collected tickets. The following example of a fraud coming under this category is one of the cleverest ever detected. This consists in the fraudulent use of tickets by pasting the backs of short journey *fresh* tickets bearing the dates of the misuse to the used-up long journey tickets of much older dates. Here is the complete audit report of the case, omitting names of places :—

"A cooly contractor of "X" station was found on the evening of 10th September, 1927 bringing some coolies including women and children by train on $23\frac{1}{2}$ third class ordinary tickets which presented a suspicious appearance in that the front appeared old while the backs were fresh. The tickets were confiscated by the Travelling Ticket Inspector and the party was excessed as travelling without tickets.

The case was reported to the Police who, in the course of their investigations found that the tickets were originally sold from different stations, *viz.*, stations " Y ", " Z ", " X " and " M ", about 3 or 4 months previously and were missing at destination station " N ". It was also found that out of tickets issued from station "Y," to the neighbouring stations such as, stations " O ", "P", etc., about 24 were missing in collection on 10th September, 1927 on the same date that the cooly contractor was travelling and, when the tickets were closely examined, it was disclosed that the backs of the short journey tickets had been removed and pasted to the front portion of old tickets thus making it possible for them to be brought into use a second time.

The contractor absconded for several months but was eventually traced at station " Q " on 21st May, 1928 when he was found to be in possession of 3 pen-knives, a rubber and a small bottle of gum. The accused was tried by the Sessions Judge of that jurisdiction and sentenced to 2 years' rigorous imprisonment and a fine of Rs. 500/- in default, to suffer one year's rigorous imprisonment."

Needless to add that a simple device to prevent such frauds is to date the tickets on the front and not on the back sides.

II. Frauds by station staff.—The commonest of these is that of temporary misappropriation by deferring the accountal of collection in the station records and in the station balance sheet. The following is, however, a fairly exhaustive list of the various types of frauds which station staff are seen to indulge in :—

(1) Frauds in the issue of blank card tickets made possible by the erring persons securing their non-collection. An effective check against this is the substitution of blank " paper " tickets prepared in several foils by the carbon process for blank " card " tickets.

(2) *Re-sale of collected tickets.*—This is rendered possible through the collusion of the ticket issuing and ticket collecting staff of particular pairs of stations which are not very far apart and between which a number of trains run in the course of the day.

This can be effectively checked by stamping, punching or marking in some other suitable manner the number of the train for which the ticket is issued.

(3) Short accountal of tickets.

(4) Issuing tickets out of order with a view to temporary misappropriation.

(5) Showing issued tickets as non-issued and covering up the non-submission of these tickets with the statements of non-issued tickets by making gum impressions on the statements with a view to suggesting that the tickets were really submitted but lost in transit.

(6) Showing tickets as having been issued at concession rates though the correct fare-table rate has been collected.

(7) Frauds in luggage traffic by collecting at higher weights but accounting for the correct weight. This is possible only in the case of either illiterate or literate but indifferent passengers.

(8) Frauds in the collection of excess fares through collusions between the travelling ticket checking and the station staff.

(9) Accountal of " Paid " goods and parcel traffic as " To pay ". This can only give the wrongdoer a chance for temporary misappropriation as he will eventually be debited with the correct amount accountable by the Accounts Office.

(10) Frauds in the collection of wharfage, demurrage and storage charges. These are made possible by the Accounts Office not having the facilities to check the accuracy of the dates of receipts and deliveries of the parcels and the goods consignments. A *cent per cent.* check of the relevant station records by the travelling inspectors of Accounts will, however, bring to light these instances.

(11) Frauds in refunds of overcharges. The frauds consist in the submission of bogus claims by the station staff themselves at destination stations in the case of " To pay " traffic. Nothing but an education of the public will prevent this type of frauds.

B. Frauds in Stores.—Materials which fetch a value in the market such as the stores in the stores magazines of a Railway or coal, coke, etc., in charge of the officials of the loco Department place their custodians in the same position of temptation as does liquid cash. The commonest of the frauds coming under this category occur in " scrap " materials in the disposal of which, in collusion with merchants, unscrupulous and disloyal Railway employees seek a supplementary source of income.

C. Frauds in cash.—These occur either in departmental collections in District Office or in the cash and pay department of the Railway which receives the entire cash collections at stations. When cases of this type occur the Police have, invariably, to be called to help the Railway in the Investigation.

D. Frauds in Pass, Privilege ticket and other concessions.—The types of misuse of these are too well-known to be repeated here and the very stringent punishments prescribed for the offender are sufficient to keep down instances of the misuse.

E. Frauds through wage payment.—By far the commonest of these is to pay wages to men who are not regular employees of the Railway. There are generally two variants of this type. In the one case the men falsely mustered do not exist and the amounts supposed to be received by them are misappropriated by some one in the Executive office. In the other variety the men do exist, but are the private servants of the persons committing the crime.

Intensive finger print examination and surprise witnessing of staff payments by independent agencies such as responsible members of the accounts department will sufficiently prevent these frauds.

Prevention of frauds in general.—As a general tip it may be mentioned that more and more surprise spot checks should be arranged in place of the regular stereotyped departmental inspections. A healthy co-ordination between the Audit and the Accounts Departments in this respect is bound to have a salutary effect, as the wrong-doer will, then, have to face the combined attack of the two departments.

Another tip which will be found useful is to deal with instances of detected frauds departmentally instead of rushing to the court of law as, Railway documents do always offer a loop-hole with the aid of which the clever delinquent escapes the punishment due for the crime or his cleverer lawyer succeeds in effecting an escape for his client. Severe action taken on the result of properly-conducted departmental enquiries are, in most cases, sufficient to ensure the prevention of similar offences in the future.

The legal aspect.—In England there appear to be specific statutory enactments to deal with cases of frauds and a few of these are given below :

(1) The Statute of Fraud, 1671.
(2) The Statute of Frauds Amendment Act, 1828.
(3) The Mercantile Law Amendment Act, 1856
(4) The Sale of Goods Act, 1893.

In India except for certain types such as ticketless travel which come under the Indian Railways Act (recently amended) the Indian Penal Code appears to be the only legal instrument under which actions in cases of frauds lie in the Courts of law.

LITERATURE CONSULTED.

PART I. *Government of India Departmental Publications.*

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PART II. *Periodicals of the Institute of Railway Accountants and Auditors.*

(13) *Indian and Eastern Railways*, vol. 2, pages 111, 112, 193 to 195, 323, 324, 328, 362, 384, 400, 401 and 404 ; vol. 3, pages 18 to 20 and 166 to 168 ; vol. 4, pages 85 to 87, 310, and 452 to 456 ; vol. 5, pages 364 and 365 ; vol. 6, pages 150 and 151 ;

(14) *Railway Accounts and Finance*, vol. 1, No. 3, pages 178 to 182 and 208 to 210.

PART III. *Other periodicals.*

15. *The Accountant*, vol. XCVI, pages 745 to 747.

V. R. SUNDARA RAMAN.

GENERAL DISCUSSION ON "THE RELATION OF THE ACCOUNTS DEPARTMENT TO THE ADMINISTRATION."[1]

Mr. E. R. Seshu Iyer presiding.

Mr. E. R. Seshu Iyer : Gentlemen, the first item in this session according to the programme is a general discussion on the subject already announced, namely, "the Relation of the Accounts Department to the Administration." The subject, as you are all aware is one of great topical interest and I am sure most of you will have something to say on the subject. As I have to get away in the middle of the discussion I may not have the opportunity of offering my remarks at the close. I would, therefore, like to state what I have to say on the relation of the Accounts Department to the Administration.

I would like to introduce the discussion by reviewing the principal developments which have led to the present status of the Railway Accounts Department. The history of the Railway Accounts Department is as follows. Prior to the separation of Railway Finance from the General Finance of the country, both the accounts and the audit work on railways were under a single authority, namely, the Auditor-General. In 1924 when the question of the separation of Railway Finance was discussed, the Railway Board proposed that the Chief Accounts Officer should be under the control of the Agent.

The proposal was not accepted by the Legislative Assembly who were not quite confident as to the desirability of the Agents controlling expenditure. The Assembly insisted on keeping the Accounts Department independent of the executive. The Government accepted the views of the Assembly. Later on, the Railway Accounts Department was separated from the Railway Audit Department. The former works under the Financial Commissioner, Railways, the Controller of Railway Accounts providing the link between the Chief Accounts Officers and the Financial Commissioner. On the Audit side, a new appointment was created to serve as a counterpart to the Controller of Railway Accounts, namely, the Director of Railway Audit. Thus, the duties which were formerly undertaken by the Accountant-General, Railways, were split up and discharged by the Controller of Railway Accounts on the Accounting side and the Director of Railway Audit on the Audit side.

Although the above arrangements have been working fairly smoothly, the Executive were not satisfied with them. The reasons for this are partly psychological as the Executive seemed to labour under a sense of inferiority complex. Although the Chief Accounts Officer was agreeable to offer im-

[1] Third Session, East Indian Railway, 2-30 to 5 P.M. I

partially any financial advice to the Executive Officers, the latter thought that unless the Chief Accounts Officer is part of the Administration, he cannot give that loyalty and support which an Administrative Officer requires in a Commercial Department. The Pope Committee which was constituted in 1933 expressed the view that the independence of the Chief Accounts Officer somewhat militated against the loyal support the Administration expected from him. The Wedgwood Committee Report also endorsed the same view. The Railway Board decided therefore to reopen the question and put before the Public Accounts Committee of 1938 proposals for changing the system and placing the Chief Accounts Officers under the General Managers. The Public Accounts Committee were not quite keen but they agreed to a trial being given on two Railways (N. W. and G. I. P.) and said that they would pass final orders only after a report from the Auditor-General in the matter. The experiment has been in working for the past 1½ years and I must say that it worked quite successfully on the G.I.P. Railway. The reason for this is that the G.I.P. Railway was a Company-managed Railway up to 1925, and the Accounts Department used to work under the Agent, so that there was an automatic adjustment on its part during the period of the experiment. The experiment on the North-Western Railway, however, was not quite happy and the principal reason was due to the intervention of the personnel Branch. Under the Divisional System, the D. A. O. and the W. A. O. were placed outside the control of the C. A. O., as they were working directly under the orders of the Divisional and Workshop Superintendent's Workshops. There were few occasions on which the D. A. O. upset the orders of the C. A. O., by invoking the aid of the Divisional Superintendent. On the intervention of the Auditor-General, it was decided that the Accounts Department should be a separate entity, working directly under the C. A. O. The D. A. O. and W. A. O. are directly placed under the C. A. O. The latter's technical ability is to be judged by the C. R. A. and in regard to the financial advice portion the General Manager has to report on the C. A. O. With this change, the Auditor General stated to the public Accounts Committee that he had no objection to the temporary arrangements being made permanent. The Public Accounts Committee have agreed on these lines to the Accounts Office being transferred to the control of the Administration.

Gentlemen, I have given you a brief review of the principal developments and the recent decisions on the subject of the status of the Railway Accounts Department. The subject is now open for general discussion.

Mr. K. R. Rama Iyer, *Offg. Chief Accounts Officer, E.I.R.*: I had the good fortune to be on the North-Western Railway at the initial stage of the experiment and I was connected with the experiment. My impression was that the General Manager's Office was more keen on taking the administration of the Accounts Department than utilising his financial advice. I have worked both under the independent accounts department here on the East Indian Railway and under the accounts department under the control of the General Manager on the North-Western Railway. Frankly, I have not been able

to find any difference between the status of the Chief Accounts Officer and Financial Adviser of these two railways. I do not think that the General Manager or the Executive at Lahore was feeling more free to consult the Chief Accounts Officer than I find to be the case on the East Indian. One difficulty which was experienced on the North Western was as regards the control of the records. I am of opinion that the accounts records should be kept separate in the hands of the Accounts Department. I recall how under the experiment on the North-Western Railway it was only with great difficulty that the accounts department managed to keep its own files. My own personal feeling is that not much advantage is to be gained by placing the Chief Accounts Officer under the General Manager. If this system of placing accounts under the control of the General Manager is adopted on all railways I feel that the position of audit should be made more important and the audit organization may have to be strengthened.

Mr. B. K. Chatterji, *Chief Auditor, E.I.R.*: I agree with Mr. Rama Iyer that the Accounts Department under the control of the General Manager might make it difficult for the Chief Accounts Officer to maintain his position. The Chief Accounts Officer is not only the Officer for keeping the Accounts he is also vested with the responsibility of internal audit and check. It should not be forgotten that it is not possible for audit to look into all cases of difference. I cannot understand why the General Manager cannot consult the Chief Accounts Officer on an independent status freely. So far as I know I have not heard of any complaint lodged by General Manager that he could not do it so far under the present regime. Speaking for myself I feel that the independent accounts is a better system and I find that officers of our service are of the same opinion.

Mr. Seshu Iyer : Gentlemen, I find that so far we have had the opinion of the State Railway officers. It should indeed be interesting to have some views regarding the position of the Chief Auditor on the Company-managed railways.

Mr. K. Ramachandran : The recent proposals on the future of the Railway Accounts Department may introduce certain difficulties in respect of the personnel. At the present moment a good number of officers of the Railway Accounts service belong to the Indian Audit and Accounts service and bring to their work on railways a much wider experience which would certainly be of substantial benefit to the Railway Accounts Department. If the status of the Railway Accounts Department is lowered the officers of the Indian Audit and Accounts Service may not feel attracted by the conditions of service on railways under the proposed regime and it is a matter of some doubt as to whether the Railway Accounts service as a whole may not loose in the bargain. On the company-managed railways the Chief Auditor is, of course, technically and administratively under the control of the General Manager but then he is always at liberty to say what he feels and in case of difference he may insist on a reference to the Home Board. The Agent who feels like brushing aside the objections of the Chief Auditor takes a great responsibility. I think the Auditor-General has already said all that is to be said on the general aspects of the problem.

Mr. P. C. Mukherji : I find that the recent experiment has been objected to by almost everybody who has had a say on it. I wonder whether the need for independence is at all justified when the cry for independence is not attempted by any other department. If Accounts comes under the control of the General Manager there would certainly be a necessity for increased audit and consequently staff. I think one month's full audit may not be out of place.

Mr. B. K. Chatterji : I might remind Mr. Mukherji that the reason why accounts wants independence is that they have to audit. When they have to pass judgment on expenditure incurred or to be incurred they should certainly feel free to express their unbiassed and independent judgment.

Mr. C. Bhaskaraiya, *Chief Auditor, E.B.R.* : I would like to take up one aspect not touched by the previous speakers who all ranged themselves on one side in the discussion. Indian Railways are supposed to be worked on commercial principles and it is well that we follow the practice in the commercial world. This is also the attitude taken in the Acworth Committee's report. If Accounts is brought under the General Manager on the analogy of the commercial practice it is expected that accounts will be able to appreciate the executive's point of view better. It would be just as well if we consider the point given out by the President namely, that if Accounts is treated as part of the Administration it should be on a footing of equality with every other department and that the Accountant might hope to become even the General Manager of his own railway.

Mr. S. Seshadri : I may add a few words as regards the practice that obtains on my railway (M. &. S. M.). On my railway sanction for any expenditure must be certified by the Chief Auditor before the Agent's approval is given. Where there are differences the views of the Government Examiner are obtained and the point decided.

Mr. K. R. Rama Iyer : Has audit therefore to arbitrate ?

Mr. C. S. Rao : I feel that the Chief Accounts Officer should not be placed under two masters. The reasons already adduced by the previous speakers are sufficient to explain why accounts branch should not be brought under the control of the general administration. If it is done, audit must necessarily have to be strengthened.

REVIEWS.

EMERGENCY OR LESS-THAN-CARLOAD FREIGHT : ISSUED BY PENNSYLVANIA RAILROAD, U. S. A.

In this pamphlet are given the views of the Pennsylvania Railroad management as presented to the Senate Sub-Committee on Interstate Commerce in connection with the two bills S 3665 and S 3666 introduced in the Senate for the regulation of freight forwarders. The views of the Railroad management were stated by two executive officers, Messrs. J. F. Deasy and W. S. Franklin. The questions involved were about the methods employed by American railways in handling express forwarder and less-than-carload traffic and the possibility of improving such methods in the interests of economy and better service to the public. One of the proposals was the compulsory pooling of the country's less-than-carload freight traffic. Mr. Deasy stated his conclusion that it would be a destructive blow to quality of service and the spirit of enterprise and would inevitably result in making the public pay higher rates for a poorer service. He further characterised the proposal as a scheme to penalise resourcefulness "and reward indolent and inefficient carriers at the expense of the progressive ones". The maximum of efficiency and economy in the handling of emergency traffic can be achieved only by the railways themselves handling it directly.

Mr. Franklin suggested drastic revision in rates and simplification of the rate structure to make the less-carload service of the railways more attractive to shippers and bring back additional business to the rails. According to Mr. Franklin the emergency freight rate structure has become especially vulnerable to competition and now requires extensive changes. He proposed "quantity rates" which will be intermediate between the present carload and less carload rates. A second measure under consideration of the Eastern Railroads would affect a large group of commodities which are of higher density and load economically. They would all be rates of third class with large savings in freight costs to shippers.

SIMPSONS 1840-1940—HUNDRED YEARS OF TRANSPORT.

Messrs. Simpson & Co., Ltd., Coach builders and Motor Engineers, Madras, have commemorated a century of business with an attractive publication reviewing the enterprise of the firm from its foundation. In 1840 the Palky-bearer was a familiar object in the streets of Madras but horse-drawn vehicles were beginning to predominate. By 1856 the mechanically propelled vehicle in the shape of the locomotive made its appearance but road transport however was divided between the horse-drawn and hand-drawn vehicle up to the end of the decade. With the opening of the twentieth century the dreams of horse-less carriages gradually matured into reality. In the history of the evolution of inland mechanical transport in the Southern presidency, Simpsons had a fair share. With the construction of the Madras Railway, Simpsons built two first-class and eight composite coaches for the railway which were presumably used on the occasion of its inauguration in state by the Governor, Lord Harris on June 28, 1856. But the firm had varied other activities and were responsible for the construction of special vehicles to the Indian Princes and State Officials.

The commemoration volume is profusely illustrated with the type of vehicles such as dogcarts, landaus, victorias, etc. The reputation of the firm spread outside Madras as one of the best coach and carriage builders in the east. With the arrival of the self-propelled vehicles, Simpsons have kept pace with the increasing demands. The firm attempted to develop a steam vehicle, the first of which after completion had a successful trial to and from Bangalore but as individual sales were low the attempt was given up. During recent years the firm has kept up its progress, and with its workshop and other manufacturing facilities acts as one of the important suppliers of bodies for troop transport, ambulances, wireless vans, training vehicles and propaganda vans to the Government of India. The researches of the firm have achieved the production of "The Simpson's Producer Gas Plant" which has been successfully fitted to buses and lorries not only all over Madras but in the districts of the cities of Bombay, Bengal, Punjab and U.P. It is a remarkable record of which any enterprise may legitimately be proud. The volume has been produced in a befitting manner with a large number of interesting photographs.

FREIGHT LOSS AND DAMAGE ON COMMODITY PRICES AND CAR LOADING: ISSUED BY FREIGHT CLAIM DIVISION A. A. R., WASHINGTON.

This is a study issued by the Freight Claim Division of the Association of American Railroads. Because of the many questions raised as to the effect upon the amounts paid for freight loss and damage and of fluctuations in commodity prices the Committee of the Division on Prevention of Loss and Damage arranged for a study of the available data with the purpose of developing facts that might be used to answer such enquiries as well as to have the information in convenient form for use in replying to the many requests received for specific items. The publication presents in tabular and chart form the information available covering both freight loss and damage and wholesale commodity prices with related car loadings data added. Apart from a general summary of all commodities, statistics of 47 commodities are dealt with, embracing a period of 12 years, 1926-38.

QUIZ ON RAILROADS AND RAILROADING.

This is a remarkably interesting booklet which has been issued by the Association of American Railroads. Every day and every hour of the day railway employees are plying with questions about railways and the different phases of railway operations. In many instances answers are readily available and in many others they are not because the necessary facts or figures may not be conveniently at hand.

The booklet contains 400 questions and answers. They have been compiled so as to provide the public, railway employees and others interested in railways with accurate and succinct facts about the railway industry, its organization, history, size, physical plant, investments, capitalisation, operations, accomplishments and the part railways play as suppliers of transportation service, as fields of investment, as employers of labour, as buyers of the products of industry, and as contributors to taxes towards the support of the National State and Local Governments. Although the booklet is "dedicated to the curiosity of the American people" it will be found useful by all non-American readers. There is an exhaustive index to facilitate ready reference. If this is a fair sample of the attempts made by the American railways to evoke and sustain the interest of the public at large there can be no doubt that they have gone a long way towards enlisting popular goodwill.

OFFICIAL PAPERS.

PROCEEDINGS OF THE MEETING OF THE STANDING FINANCE COMMITTEE FOR RAILWAYS.

The proceedings of the Standing Finance Committee for Railways towards the end of January and the middle of February refer to a number of matters of interest apart from the consideration of the Budget demands. Among the various items dealt with mention may be made of the provision of increased facilities on the Dum Dum-Majerhat section and the decision to purchase the Tapti Valley railway. The Railway Board in recommending the purchase presented the figures to the Committee showing a return of $6\frac{1}{2}$ per cent. after providing for an amount out of the net earnings of the railway a sum which would make up in the course of the next nine years the value of the premium which government is now obliged to pay. From an administrative point of view, as the line is already worked by the B. B. and C. I. railway, no problems arise but the acquisition on 31st March, 1942, will save the labour involved in the keeping of separate accounts for the branch line company, correspondence with the company regarding accounts and capital works, etc., and separate rules of allocation, etc.

RAILWAY ACCIDENTS REPORT.

The Reports by the Government Inspectors of Railways of inquiries into certain accidents which occurred during the half-year ending 30th September, 1940 have been issued in the Railway Accidents Report No. 28. The Reports deal with two accidents, one on the B. B. and C. I. and the other on the B. N. Railway. The case on the former deals with the enquiry held to investigate the circumstances attending the derailment of No. 148 UP mixed train on the Broach-Jambusar-Kavi Narrow Gauge Branch on 3rd April, 1940, while that on the latter deals with the enquiry held to investigate the circumstances attending the Up Light Engine running into a motor bus between Benapur and Narayangarh on the 15th September, 1940. Both these accidents were of a minor nature.

Two other accidents which occurred during the half-year in question involving some loss of lives and casualties as also damage to railway property; one on the S. I. Railway to No. 7 Dhanushkodi Passenger Train between Panchalam and Trivandrum on 28th May 1940 and to No. 8 Dacca Mail between Chuadanga and Jayrampur on 5th August, 1940, were dealt with under separate pamphlets.

RAILWAY BUDGET 1941-42.

The Revised Estimates for 1940-41 and the Budget Estimates for 1941-42 were placed before the Legislature in February. The revised figures for 1940-41 held the surprise of the year in railway finance. Responding to the stimulus of war traffic and the effect of enhancements in freight rates and passenger fares, gross receipts reached the record total of Rs. 109.25 crores. Goods earnings established a new record of Rs. 74.60 crores. Passenger income increased after years of stagnation. The revised figure for working expenses and depreciation is Rs. 66.71 crores; net receipts amount to Rs. 44.54 crores, the highest level since 1924-25. The surplus after meeting interest amounts to Rs. 14.59 crores which also represents the highest figure since Separation. Under the present moratorium arrangements in respect of the repayment of the suspended contributions and the loans of depreciation fund general revenues would receive Rs. 7.15 crores leaving a balance of Rs. 7.44 crores to be transferred to the railway reserve funds but with a view to assist general revenues under the present emergency it was proposed to earmark for payment in 1941-42 another Rs. 1.82 crores being the approximate amount payable under the Convention of 1924 but due on the expiry of the moratorium in 1942-43. Out of the balance of Rs. 5.42 crores it was further proposed to make a reduction outside the Convention of one half as the payment against the debt of government. Thus in the aggregate, general revenues would receive Rs. 9.96 crores and after making allowance for writing down the cost of the dismantled lines the balance of Rs. 2.30 crores would be transferred to the reserve fund.

The estimates for 1941-42 are in essence a projection of the previous year into the current. A slight reduction is allowed for in view of grave uncertainties in the international sphere and through domestic reactions gross traffic receipts without allowing for any changes in rates and fares are placed a crore below last year's namely Rs. 108¼ crores. An increase of Rs. 1.89 crores is provided for in the working expenses on account of the anticipated increase in the cost of repairs and maintenance and the dearness allowance. Including the depreciation charges the total working expenses for the current year are expected to be Rs. 68.60 crores. Taking net receipts at Rs. 40.43 crores; the surplus after meeting interest works out to 11.83 crores. From this a contribution of Rs. 6.14 crores payable under the moratorium

arrangements and a further payment of Rs. 3.47 crores on the lines referred to earlier in connection with the revised estimates were proposed. The balance of Rs. 1.65 crores is to be placed in the reserve fund bringing its total to Rs. 3.95 crores.

The Works Programme for the current year includes a total expenditure of 18 crores. The cost of the purchase of the A.B. and the B.B. & C.I. railways amounting to Rs. 4.87 crores is provided in full. Another important item during the current year is the purchase of the Tapti Valley railway, 156 miles in length, at a cost of Rs. 12/3 crores payable only in 1942-43.

The programme of improving the conditions of railway employees received a further expansion. From January 1, 1941, provident fund benefit is offered to all lower paid employees of 16 years' service who are not at present eligible. The employees of two more railways, A.B. and B.N. will share the benefits of 'hours of employment' regulations.

The statistics based on the Revised Estimates for 1940-41 and the Budget Estimates for 1941-42 are summarised in the Tables I to III.

COMMERCIAL AND STRATEGIC LINES.

TABLE I.

(RUPEES IN LAKHS).

		1939-40	Revised Estimate 1940-41	Budget Estimate 1941-42
Mileage		M	M	M
	State-owned	29,797	29,691	29,691
	Worked lines	3,988	3,959	3,959
		Rs.	Rs.	Rs.
Gross traffic receipts	State-owned	97,65	109,25	108,25
	Worked lines	5,08	5,47	5,53
Operating expenses	State-owned	52,26	54,07	55,92
	Worked lines	2,51	2,56	2,62
Depreciation fund		12.59	12,64	12,68
Payments to worked lines		2,57	2,91	2,91
Net traffic receipt (state lines)		32,80	42,54	39,65
Net Miscellaneous receipts after deducting miscellaneous charges and surplus profits payable to companies		64	79	78
Net revenue		33,44	43,33	40,43
Interest charges		29,11	28,74	28,60
Surplus		4,33	14,59	11,83
Paid as contribution to general charges		4,33	9,96	10,18[1]
Transferred to railway reserve		..	4,63	1,65

Note 1. The balance of the loss in 1931-32 and the total loss in the following years to 1938-39 have been met by temporary borrowings from the Depreciation Fund.

Note 2. Credits for materials released from works not charged to revenue were taken in reduction of operating expenses up to 1931-32. From 1932-33 onwards they have been added to receipts and are included in net miscellaneous receipts. From 1936-37 they are taken in reduction of expenditure met from the Depreciation Fund. The amounts involved are as follows: in 1932-33 and 1933-34, 119 lakhs each; in 1934-35, 90 lakhs; and in 1935-36, 110 lakhs.

Note 3. Working expenses were reduced in 1930-31 by 166 lakhs by a credit from the Depreciation Fund for correction of past accounting adjustments and in 1924-25 by 179 lakhs by certain abnormal refunds of expenditure in previous years.

1. Includes 1.82 crores advance payment against contribution for 1942-43.

TABLE II.

Railway.	Operating Ratios.						Gross Receipts.			Working Expenses.		
	1939-40	1940-41	1941-42	1939-40	1940-41	1941-42	1939-40	1940-41	1941-42	1939-40	1940-41	1941-42
	Excluding depreciation			Including depreciation								
A. B.	58.6	57.1	59.0	77.7	75.8	77.7	200	207	207	159	161	165
B. N.	56.5	53.8	55.0	68.5	64.9	66.2	1080	1175	1175	740	762	778
B. B. & C. I.	48.3	45.5	47.1	58.1	54.2	56.0	1211	1353	1333	704	732	745
M. & S. M.	50.2	49.0	50.0	61.6	59.8	60.9	760	799	795	469	479	486
S. I.	56.5	50.8	53.2	70.6	62.3	66.0	520	590	577	367	372	380
E. B.	73.9	64.9	67.3	87.5	77.5	80.1	620	670	690	548	524	557
E. I.	49.8	45.6	48.2	61.4	55.9	58.8	2128	2425	2375	1307	1355	1396
G. I. P.	50.8	45.6	47.8	64.2	57.1	59.2	1355	1585	1575	878	910	939
N. W.	56.2	53.6	55.7	70.7	66.8	68.9	1635	1830	1815	1166	1230	1259

TABLE III.

(In Lakhs of Rupees)

Railway.	1939-40	1940-41	1941-42	1939-40	1940-41	1941-42	1939-40	1940-41	1941-42	1939-40	1940-41	1941-42	1939-40	1940-41	1941-42
	General Administration.			Repairs and Maintenance.			Operation excluding fuel.			Operation fuel.			Profit and Loss.		
A. B.	36.30	36.77	37.73	42.79	42.39	45.98	30.09	29.46	30.59	18.08	17.66	16.68	—54	47	—56
B. N.	152.44	158.00	162.41	232.82	235.20	237.59	165.13	173.35	182.18	63.01	67.43	66.75	20	92	77
B. B. & C. I.	161.85	170.97	168.73	186.12	201.73	205.79	180.59	182.04	188.31	88.39	91.53	92.98	218	332	282
M. & S. M.	103.02	103.19	103.80	114.81	119.79	123.57	102.49	107.14	108.95	74.94	71.28	71.10	55	87	78
S. I.	83.32	83.45	84.36	73.82	78.31	84.45	86.86	93.92	97.22	65.95	58.92	57.14	—20	45	21
E. B.	110.99	113.53	117.45	142.02	162.35	172.92	122.03	120.74	126.88	43.33	47.08	48.43	—121	48	—66
E. I.	267.16	267.28	271.29	338.47	373.69	383.48	340.97	343.78	355.19	116.88	117.77	116.81	234	487	399
G. I. P.	176.30	180.71	185.63	214.26	229.39	250.84	243.43	242.29	246.75	86.65	102.00	104.47	62	273	240
N. W.	236.02	241.58	248.27	291.69	326.31	346.37	233.52	236.49	240.98	189.24	205.19	206.99	—104	38	2

NOTES AND MEMORANDA.

THE BENGAL AND NORTH WESTERN RAILWAY.

Lt.-Col. T. Gracey, Chairman of the Bengal and North Western and the Rohilkund and Kumaon railway companies, in his statement accompanying the Annual Reports of the two railways referred to the question of State acquisition. He said, "the Boards do not know whether the Government of India intends to exercise the power to buy the undertakings in 1942 but should the properties be acquired it is estimated that the purchase price will give returns of about 250 per cent. to the ordinary stock holders of each company excluding the value of the company's reserves."

THE CHINA-BURMA RAILWAY.

It is understood the Chinese Government is floating a £2,500,000 loan to construct a railway from Kunming Unan province to the Burmese town of Lashio. It is expected to be a joint Chinese, British and American enterprise. Mr. Tu Chen Yuan who will be in charge of the construction of the line is reported to be on his way to the United States to negotiate with American railway interests.

Following consultations with His Majesty's Government and that of Burma it has been officially announced that the former has now agreed to provide funds for the construction of a new railway from the railhead of the Burma railways at Lashio to the boundary line of the Chinese railway—a distance of about eighty miles.

PEG BOARD ACCOUNTING.

As a means to obtain faster facts and figures, " Peg Board Accounting " is resorted to with great success in many businesses. What is meant by peg board accounting is readily indicated. This system aligns various data so that results or information of a like nature can be consolidated with the least amount of effort. If information which originates at different points is going to be combined at a certain office or department, the report should be uniform. Arrange the reports so that the desired information is within the range of the operator's vision. If there is more than one item of information on the reports to be consolidated watch the fold so that they can be folded uniformly and the information be shown at a desired location.

Peg Board accounting recognises the need for and provides for an orderly arrangement of forms and procedures. It permits quick, accurate consolidation of accounts and ready analyses—in short it provides for fast moving accounting operation. Naturally the result of this speeding up of

the whole accounting function is that analytical data or accounting statements are available for study and action while the information is " hot."

WAR TIME RESEARCH.

Lord Stamp in his address to the shareholders of the L. M. & S. Railway referred to the valuable work done by the Research Department and quoted an interesting example. One related to work on glass. Signal boxes must be in action during air raids, and signalmen are exposed to danger from flying glass. The Research Department invented a treatment of the windows of signal boxes which was so effective without interfering with clear vision that there has not yet occurred as yet a single man injured by glass splinters where the improvement was carried out. In one case the signalman literally wrapped in glass without being scratched ! This must have contributed very greatly to the confidence of the men and therefore to operating efficiency.

AMERICAN RAILWAYS IN 1940.

The American railways reacted in 1940 to the stimulus of war. Increasing volume of exports of materials abroad and development of the National Defence programme at home contributed substantially to an increase in railway traffic and earnings throughout the year 1940. For the year 1940 as a whole ton-miles increased 12 per cent. over 1939, while passenger miles increased only 5 per cent. ; total operating revenues were up by 7.5 per cent. and net railway income showed an increase of about 16 per cent. No general changes occurred in freight rates but by order of the Interstate Commerce Commission, Eastern passenger rates in coaches were reduced from a maximum of 2½ cents to 2 cents per mile. There were no changes in wages and working conditions during the year though two proposals were under consideration, namely, an increase in the statutory minimum wage of 30 cents per hour and a demand for a vacation of two weeks per year with pay. It is only with effect from March 1st, 1941, that the recommended minimum of 36 cents has been brought into effect.

American railways had their share in the defence programme and were affected by certain classes of goods traffic which showed marked increases as a result of the programme whilst others were adversely affected by changes in import and export movements as a result of the war. The year 1940, according to Dr. Julius H. Parmelee on whose annual review the present summary is based, carried certain significant implications which no realistic consideration of economic development can overlook. The re-election of President Roosevelt for the third term has increased the likelihood that for some years at least the trend in the United States will be toward more extensive Government control over business. In addition he observes " tax rates have already increased and seem likely to be further increased in a vain effort to balance the bugdet swollen to unprecedented peacetime proportions by the defence programme. This, together with industrial readjustments that will almost certainly result from that programme contribute many uncertainties to the immediate future of transportation."

Some difficulties were experienced as regards the relative shortage of equipment but it is expected that no difficulty need be experienced when the 1941 peak comes. Several records were broken in 1940 with respect to railway operating efficiency and economy and the year's performance, Dr. Parmelee observes, was the best in railway history.

The year 1940 is memorable for a large volume of legislative activity on transport matters. The principal items of legislation were

1. The Transportation Act of 1940;
2. The Railroad Unemployment Insurance Act amended;
3. The Railroad Retirement Act;
4. The Truman-Hobbs Bridge Act;
5. The Grade Crossing Elimination Act; and
6. The Train Wreck bill.

The principal features of these legislative measures will be found dealt with elsewhere.

THE BRITISH RAILWAYS.

The speeches of the Chairmen of the British Mainline Railways have during recent years become occasions for an authoritative review of British railway finance and developments in prospect. Of the speeches of the four chairmen that of the London Midland and Scottish Railways has always provided instructive reading but a melancholy interest attaches to Lord Stamp's address, as he has fallen a victim to Hitler's murderous list. On this occasion a large part of Lord Stamp's address was devoted to the questions on which there has been considerable public controversy. He took up the cause of the shareholder. Addressing the meeting, Lord Stamp said :

"You were given a right in 1921 to retain if the Railway Rates Tribunal could fix a rate to make, it 4.7 per cent. of your capital, a modest enough return as a practical maximum standard revenue . . . . You have through no fault of your own management received instead only an average return of 31/3 per cent. in the 18 years since amalgamation or a shortage of £107 millions below the amount contemplated by parliament as a reasonable return on the capital employed. Yet you ordinary stock-holders find yourselves now branded as war profiteers for exceeding a minimum of 1 per cent. on your stock, because with every unthinking man's hand against you in the immediate pre-war years 1935-37 your capital produced only 18 shillings 4 pence per cent. per annum. . . . I did not disguise from you that the principle of the agreement was not of our choice. The present Minister has said that he does not like it either, he cannot suggest a better, and it is difficult to detect any enthusiasm for it elsewhere, mainly because it does not guarantee the community against the effect of increased costs. But the burden of increasing costs which is borne for most products and service by the user is sought by an old principle to be thrown upon you or upon the taxpayer. Now whether the user of transport should be subsidised by the taxpayer is a political issue . . . but I can see no reason why the railway shareholder should not have a reasonable return on his money for the fullest use of his assets, and not be specially penalised because he was particularly unfortunate in pre-war years."

The terms of the agreement with Government has come in for a lot of criticism in the press and by public men. Referring to this, Lord Stamp

said that the possible schemes can all be reduced to three basic principles, which he explained as follows :

"First, the principle of a fixed payment or rental at one or more levels, practically independent of the actual services rendered. In this the State benefits by all increased traffic and bears the burden of all increased charges, wages, etc., and if they tend to outrun receipts, can subsidise the railway user as in the last war, or raise the cost for all on particular rates and fares as and when politically convenient. The charges made for Government traffic are then mere Treasury book-keeping. Second, the principle of payment on the basis of actual services rendered, in which the pre-war rate of profit for unit of service is maintained, whether the total service is more or less. Here increased costs fall on the State, except so far as the Government elect to raise rates and fares, but all savings or economies due to a larger volume of traffic accrues to the State. Third, the principle of leaving profits to be computed in the ordinary way with a guaranteed minimum on the one hand, in the case of a low volume, compensated by a profit sharing and limits if the volume is great. This logically involves provision for adjusting rates and fares to meet enhanced costs, if the regular criteria for adjusting rates to reach a standard revenue are taken away."

Lord Stamp referred to the charge that under the first two principles, the railways have no incentive to economical management, but under the third they have, as they have to stand the racket of all increased costs within their control. But the railways have also to suffer from every railway requirement that deprives them of any revenue they might make. "Whatever the scheme," he said, "increased costs are a fact. If the ordinary stockholder got nothing, they would not be absorbed. If increased costs go into charges the cry of inflation is raised. But a subsidy which widens an already unabridged budget gap can be no less inflationary. We may dodge awkward facts, but we cannot dodge the consequences of dodging them."

Lord Stamp exposed the ill-informed criticism of the increases in rates, which were only the automatic result of the provisions in a financial scheme for which Government are responsible. The Minister merely applied the arrangement which was an integral part of the agreement. But no other method, he declared, "would dodge the necessity for increases, unless the railway user is to be publicly subsidised, for costs of all materials have risen substantially, difficulties of working are very great and the wage bill is much increased. The money to meet these does not come from out of the blue, and the mere increase of traffic at the old rates would not suffice to meet the increased cost." The speeches of the other Chairmen, which were, shorter and not so aggressively on the defensive as Lord Stamp's, were generally to the same effect.

Sir Ronald Mathews speaking to the shareholders of the London and North Eastern Railway referred to the ever-increasing gap between the wages paid to those in civilian industry and members of the army forces. The adoption of what is known as the "time and line" basis in a high proportion of government contracts is undoubtedly a contributory factor to the increase in wage rates generally. It was in the circumstances, said Sir Ronald, difficult to accept with comfort the recent assurances of the Lord Chancellor that inflation was being avoided by every conceivable means.

The pegging of the cost of living figure by wider measures of price control and the holding of wages at their present levels would seem to be conceivable means of avoiding further inflation which should be adopted at once if the operation of the vicious spiral has to be checked in time.

The speeches of Mr. Charles Hambro and Mr. Robert Holland-Martin at the meetings of the Great Western and Southern Railway Companies respectively covered the same ground.

All the speeches referred to the proposals regarding the war damages. In view of the fact that the Government have taken over the railway undertakings separate figures as to the results of working are not published. But for the whole of the controlled undertakings the gross traffic receipts for the year amounted to £248 million an increase of £41 $\frac{3}{4}$ millions over 1939; the corresponding expenditure including the provision for war damage was £ 203.5 million, an increase of £35 million making a net increase of £6$\frac{3}{4}$ millions in traffic working. The total net revenue after making adjustments was £ 42$\frac{3}{4}$ millions, an all over increase of £ 2$\frac{1}{2}$ millions over 1939. The figure shows an increase of £2.9 million above the guaranteed net revenue and at this level the pool is divisible entirely among the controlled undertakings.

Despite the valuable work done under severe conditions by the railways there have been some criticisms which the speeches would have disposed of effectively.

RAILWAY OPERATION UNDER WAR CONDITIONS.

Lord Stamp gave a characteristic picture of the conditions under which British railways had to work apart from the snowstorms and blizzards and the sickness epidemic which reached serious proportions. The British railways had to learn to work in spite of blackout difficulties. With the beginning of intense enemy activity came its special problems—the slower speeds imposed during "alerts," the extinguishing of lights during raids and actual damage meant slower transits. But the resilience and recovery have been remarkable. Apart from these difficulties and the weight of traffic, priority has often to be given to special trains conveying the forces and stores or the supply of wagons to and the clearance of special traffic from the ports. The civilian conveyance has consequently often to take the second or even the third place. Apart from these causes the longer trains make station delay in getting passengers in and out, parcels traffic at night takes longer to handle and there is a shortage of train men. Regarding the allegations sometimes made that blocks in working are due to jealousies between the companies Lord Stamp said :

"These charges are absurd . . . we exchange stores and stock and take each other's trains without regard to any individual interest. Railways are laid out physically to deal with recognised flows of traffic and such lines of the low of averages and capable of dealing with considerably proportionate increased asset. But the increase now registered follows no pre-existing lines in quantity or direction and are coming upon the railway as it does from unusual quarters to unaccustomed destinations without any relation to allowed or existing facilities. At every end the increase represents a far greater strain on our resources than it would in ordinary times. In fact our genial Irish friend Lord Castleton said recently "Englishmen expect the railways not only to do their duty but also the impossible." Our great service departments have been so concerned in time of peace with strategy and the programme of requirements it entails that they have not given adequate thought to transport particularly as affecting industrial output. They have assumed that it would be available in any degree as and when wanted. Indeed only lately have they been learning to translate their requirements into their primary elements of raw materials, man power, ground space and equipment. Only when these have been ascertained and corrected has it been possible to demonstrate that however reasonable one department might be, taken together their demands may make nonsense. The Controller of the supply of one of these elements has not till then been able to say what priorities in allocation must be given and what steps taken to increase supplies or facilities to rates, exports and civil consumption—indeed to know what real pinch was coming and where. Only now is transport coming into their picture. The next item in the ignorance of unknown accretions to be thought worthy of notice is departments and contractors prefer the easy course of treating the railway system as something upon which any goods in any quantity at any time by any sender for any destination, can be dumped without prior notice but with full rights to require prompt and complete delivery. The idea that every one will gain if they take the trouble to think out the transport implications of any piece of work and advise the central government agency which by allocation and co-ordination will be able to tell us what the demands upon us over particular places at particular times are likely to be, is only lately gaining ground. It ought to be impossible for government department or contractor suddenly to forward 50 wagon loads to a consignee who has only facilities for unloading 2 or 3 a day, or for civil departments unbeknown to each other to make simultaneous demands upon a particular track to the extent of three times its capacity. We welcome the advent of a special Transport Adviser in the department like the Ministry of Supply co-ordinating the lines of industrial demands. But the precise needs carrying a good deal further should not stop at getting greater satisfaction for one department but to enable the demands of the national requirements as a whole to be continually and in particular places systematically brought into contact with the supply or facilities available in such places. In the United States long before any possibility of any war emergency Mr. Ralph Budd has been made Commissioner in charge of the Transportation Division of the National Defence Advisory Committee campaign established in the United States as an agency for bringing about co-operation and uniformity of effort and the first item of policy was stated as follows :

"To anticipate all transportation needs as far in advance as possible—the consideration of not only the amount and type of traffic to be carried but also the origin in which it will develop."

ECONOMY IN PAPER AND PRINTING STANDARDISATION.

A remarkable instance of economy in the cost of stationery and printing through a rigorous enforcement of standardisation of both paper and forms is related by Mr. J. L. Murphy of the American Telephone and Telegraph Co. in an article contributed to the Bell Telephone Quarterly.

The paper requirements of the Bell Telephone system for records, reports, correspondence, bills, orders, instructions, specifications, checks, and many other purposes, exceed 5,000,000 pounds. With a vast range of sizes and qualities in the market there were difficulties for selection. Some printers did not normally carry stock, and substitutes raised questions of qualities required by them. The American Telephone and Telegraph Company was asked to go into the problem. The engineers of this Company decided to establish a range of standard papers adequate for their requirements, according to basic types. They found an adequate range available in the regular commercial grades and concluded that, despite a volume sufficient to justify manufacture of special grades this should be aovided. As a preliminary to the technical standardisation, the papers already in use were analysed and tested for pulp composition, strength and other characteristics combining the technical information and the usage requirements. Thirteen grades were originally selected ranging from a low cost paper composed of ground wood and sulphite pulps, for temporary use forms, to 100 per cent. rag papers for permanent record purposes. This list has been raised to 23 standard grades.

All the many plain papers and hundreds of printed forms were systematically reviewed and standard grades were substituted for the papers in current use, with particular attention, directed to whether the grade employed was most suitable in each case.

Forms and papers that did not cut economically from standard ream size sheets were changed to sizes that would. Odd sizes in forms often come about because they are designed from the inside out, rather than outside in: that is the designer will draw the form and let over-all dimensions come as they will, rather than first approximating the size, selecting the nearest multiple of a standard ream size, and then designing the form within it. From the attention to size, not only more economical but also more practical, better looking sizes resulted. The use of coloured papers to designate the second and third copies of forms was minimized as they tended to lose their significance if used too widely and added to the cost by having to be printed separately and collated into sets.

As each form was reviewed, specifications established to cover the use, size, grade of paper, colour of ink, punching, binding etc., the data were available to plan centralized buying. The Company decided on the composition of the form and prepared a master plate, at its own expense, from which the printer was permitted to prepare his printing plates when his plates were worn out. The ownership of the master plate enables the Company to negotiate successfully bids with competitive printers as they are not put to the extra expense of resetting the composition and make plates for their own presses. The accurate knowledge of the quantity of the forms and papers required enabled the determination of stocks, and the printer was authorised to keep authorised stocks always during the life of his contract. As the printer can handle manufacturing quantities, costs were naturally lower.

The price for printing is based on its square-inch area, and the quantity to be printed. Composition and electro-plate charges are set at flat rates for square inch. Paper is priced on a pound basis. Definite scales of prices are established for other operations such as padding, collating, punching, etc.

Formerly, the hundreds of forms for each Company presented so many problems which has now been reduced to one of a review of a chart for paper selection or economical design of forms. The result has been an immense saving of expense, time and more efficient and orderly procedure for seller, buyer and consumer.

LEGISLATION IN UNITED STATES.

The principal legislative measure adopted in the United States in 1940 is the Transportation Act. It had a stormy passage through the Congress. For the first time in the history of transportation legislation, the Congress made a comprehensive declaration of national policy under which it has pledged itself to treat all modes of transport fairly and impartially. The declaration is worth quoting:

> "It is hereby declared to be the national transportation policy of the Congress to provide for fair and impartial regulation of all modes of transportation subject to the provisions of this Act, so administered as to recognise and preserve the inherent advantages of each; to promote adequate, economical and efficient service and foster sound economical conditions in transportation and among the several carriers; to encourage the establishment and maintenance of reasonable charges for transportation services, without unjust discriminations, undue preferences or advantages, or unfair or destructive competitive practices; to co-operate with the several States and the duly authorised officials thereof; and to encourage fair charges and equitable working conditions: all to the end of developing, co-ordinating and preserving a national transportation system of water, highway and rail, as well as other means adequate to meet the needs of the commerce of the United States, of the postal service and of the national defence."

The provisions of this Act are to be administered and enforced with a view to carrying out the above declaration of policy. In addition to extensive amendments to Part I and Part II of the Interstate Commerce Act, the new Act adds a new Part III dealing with water transport which is subjected to the Interstate Commerce Commission regulation with respect to rates, routes, practices, etc. The Act applies to carriers owned and controlled by the United States, and to carriers operating under interstate commerce on coast-wise, inter-coastal, inland or Great Lakes routes. The carriers handling foreign trade to and from United States port of transhipment are also subject to the Act. The Commission has now set up a Bureau of Water Carriers. The new Act repeals certain clauses of land grant rates requiring the Federal Government to pay applicable commercial rates for the transportation of goods and passengers except for military or naval property not destined for civil use or the carriage of the members of military forces or their property when travelling on official duty. The benefit from the repeal of these land grant rates is conditional on the carrier releasing the government from any claims on account of lands granted and a large number of such releases were filed already in 1940. The Act absolves the Interstate Commerce Commission from any initiative in the matter of rail consolidation proposals which is now transferred to the railways themselves. Any proposals emanating from them will be subject to the authorisation and approval of the Commission. As a condition of its approval of any consolidation the Commission will require "an equitable arrangement to protect the interests of the railroad employees affected," such protection being limited to a period not exceeding four years.

The present Act has amended the Reconstruction Finance Corporation Act so as to provide the extension of the date of maturity of the loans to 1955, the grant of loans to Receivers and Trustees of Railways and the increase of the revolving fund of the Corporation from $ 350 to $ 500 millions. The Reconstruction Finance Corporation is also authorised with the approval of the Commission to aid in financing the reorganisation, consolidation, maintenance or construction of railroads.

Under title 3 of the Act a Board of Investigation Research is to be established for the purpose of investigating :—

1. The relative economy and fitness of carriers by rail motor and water for transport service with a view to determine the service for which each type of carrier is especially fitted so as to develop a national transportation system in the United States ;

2. The extent to which the several classes of carriers have been subsidised by the Government ;

3. The extent to which taxes are imposed upon such carriers by Government agencies: and

4. Any other matter that may relate to transportation. The appointment of three members of the Board of Investigation and Research was announced on March 20, 1941, in conformity with the provisions hereunder.

The Railroad Unemployment Insurance Act endeavours to liberalise the amendments to Railroad Unemployment Insurance Act of 1938 with effect from November 1st. The two amending bills—one supported by railways, the other by railway labour—agree that unemployment benefits should be sufficiently increased although they differ as to the extent of such increase. The principal elements of liberalisation under the amendments which were finally adopted by the Congress were as follows :

1. A reduction of the waiting period of 15 days to 14 days and the provision for benefit payments for every day of unemployment in excess of 7 within that period.

2. Under the old act within each 15 day registration period following the waiting period benefit payments should be made for each day of unemployment only when in excess of 7 days. The new act reduces the registration period to 14 days and the availability of benefit when in excess of 4 days.

3. The scale of daily benefits is raised the maximum being from $ 3 to $ 4.

4. Similarly weekly benefits are greatly increased and the maximum number of days for which benefits are payable within a benefit year are increased from 80 to 100.

Under the Railroad Retirement Act employers are required to collect and verify to the Railroad Retirement Board individual reports of service and compensation prior to January 1, 1937, by June 30, 1943, involving presumably the service records of 1,200,000 individuals. The Act also grants credit toward annuities for military service rendered prior to January 1, 1937.

Under the Truman-Hobbs Bridge Act, railways may be required by the Secretary of War to construct bridges over navigable streams, the government bearing that portion of the expense attributable to navigation. The special interest in connection with this Act is that it failed final approval by reason of the "pocket veto" by the President in 1939. The reintroduction of a similar bill in April 1940 was similarly vetoed by the President. The Congress, however overruled the veto and the measure became law on June 21st.

According to the Grade Crossing Elimination Act, the annual appropriation of £ 20 millions has been made to meet the expense for the elimination in 1942 of grade crossing.

The Train Wreck Bill is the outcome of the malicious wrecking of a passenger train in 1939 which cost a number of persons their lives and the Congress has now made it a federal crime to wreck or attempt to wreck a train.

NEWS BULLETINS FOR CANADIAN TRAVELLERS

In view of the march of world events, bulletins for travellers on long distance trains of the Canadian National Railways are now being issued four times daily. Hitherto bulletins have been prepared night and morning on board the Continent Ltd. between Montreal, Tornto and Vancouver. The service has now been increased by noon and late evening bulletins. This news service is particularly welcome to travellers in areas where newspapers are not immediately available for distribution.

GOVERNMENT CONTROL OF UNDERTAKINGS.

A legal suit of first rate importance to all industrialists whose undertakings have been or may be made subject to Government control came before Mr. Justice Bennett in the Chancery Division on August 2, 1940. In that Court the plaintiff, E. H. Jones (Machine Tools) Limited successfully challenged the right of the Ministry of Supply to take over the control of the company. The Judge granted the company an interim injunction to restrain agents appointed by the Ministry from interfering with the control and management of the company's business. The injunction was suspended from operating for ten days pending a possible appeal by the Ministry. The substance of the case was that the Company, which was already operating under a form of control, received a letter on July 17 from the Ministry stating that from that day the Minister under powers conferred on him by Regulation 55 of the Defence Regulations had authorised two agents to carry on the company. The Chairman of the Company, Mr. E. H. Jones, also received a message from his bank that it had received instructions from the Minister to "freeze" all his banking accounts. The Judge held that the regulation in question exceeded the authority which Parliament had conferred on the rule-making authority. The consequence of holding that the regulation relied on was within the Minister's authority might have extraordinarily far-reaching effects.

INSTITUTE NEWS.

The New President.

Sir Cameron Badenoch was elected President of the Institute in succession to Mr. T. S. Sankara Aiyar. Sir Cameron entered office on April 1,1941.

Annual General Meeting.

The Annual General Meeting was held on February 14, with Mr. T. R. V. Sarma in the Chair. The following two resolutions were first proposed from the Chair and adopted by all standing :

1. "That the Council having learnt of the untimely death of Mr. S. C. Das Gupta hereby express their sense of deepest sorrow and regret at the loss of so worthy a Fellow of the Institute.

2. "That the Council having learnt of the untimely death of Mr. Arthur Melville Hayman, O. B. E., Past President of the Institute, hereby express their sense of profound sorrow and regret at the loss of so worthy a Fellow of the Institute."

The following resolutions were next proposed and carried unanimously :—

1. "That the Annual Report of the Council and the Accounts for 1939 as certified by Messrs. S. R. Batliboi, & Co., Honorary Auditors be adopted."

2. "That Messrs S. R. Batliboi & Co., Honorary Auditors be thanked for their services during 1939-40 and be re-elected Auditors for the Institute for the ensuing year."

3. "That Messrs. J. H. F. Raper, Member, Traffic Railway Board, and J. F. C. Reynolds, Agent and General Manager, South Indian Railway be elected Honorary Members of the Institute during the period of their tenure of office in the vacancies caused by the retirement of their predecessors."

The constitution of the new Council is printed on the cover page.

Birthday honours.

The members of the Institute have come in for a good share in the Birthday Honours List. At the head of the list come Sir Andrew Clow and Sir Jeremy Raisman who received the K. C. S. I. Knighthood is conferred on Mr. Leonard Wilson,

the Chief Commissioner of Railways. Mr. A. Duncan, Agent and General Manager, Bengal Nagpur Railway, receives the C.I.E. All are Honorary Members of the Institute. Rao Sahib M. Ramachandra Iyer, one of our active Fellows, has been made a Rao Bahadur.

New Members.

The Ballotting Committee of the Council have approved of the election of the following gentlemen to the class of membership indicated :—

Membership.—

Mr. K. K. Iyengar, Deputy, *Government Examiner, A.B. Railway.*

Associate Membership.—

Mr. A. N. Sarkara, *Superintendent, Counting Section, B. N. Railway.*

The following gentlemen have been admitted to the Institute to the class of membership indicated :—

Associate Membership.—

Mr. T. V. Sivaraman, *Accountant, N. W. Railway.*

Mr. Khawaja Abdul Waheed, *Accountant, E. I. Railway.*

Studentship.—

Mr. A. H. Kerr, *Inspector of Accounts, B. N. Railway.*

A. B. Railway Local Association.

Mr. D. M. Mason who was elected Secretary of the Association proceeded on military duty on March 2nd and Mr. K. Ramachandran was elected by the Committee as Secretary. A meeting was convened on March 1st and the Junior Medal of the Institute was presented to Mr. K. Ramachandran by the Chairman on behalf of the Council of the Institute. The award is in respect of the paper read by him before the Conference adjudged as the best by the Adjudication Committee of the Council.

OBITUARY.

Arthur Melville Hayman, 1882—1941.

Mr. Arthur Melville Hayman, whose unexpected demise was referred to in the last number of this Journal, had a very eventful career. He was born in 1882 in Madras and after receiving an interrupted education he passed the Matriculation Examination as a private student. He started life as a postal clerk stamping letters on Rs. 15 per month. Later on, changing one department after another he accepted the post of an accountant in the old Public Works Department, Railway Branch, at the age of 20. Meanwhile he was also preparing himself for the increasing responsibilities of his post. "I had learnt by heart from cover to cover" he said, "the Civil Service Regulations, the Codes of the Postal Department and the Account Codes of the Public Works Department; I also acquired some knowledge of law." In 1914 he was promoted to the Indian Audit and Accounts Service.

The next change in his career came with the outbreak of the last war. The projected military railway in Mesopotamia required the services of a competent Accounts and Audit Officer and Mr. Hayman was appointed to the post. His successful work in connection with the railway accounts there led to the offer of the post of Accountant-General, Iraq, by the High Commissioner of Iraq. The Government of India was, however, in need of his services. With the reorganisation of the Railway Board and the appointment of a Financial Commissioner, the central accounting machinery on the railway side underwent considerable changes and Mr. Hayman was appointed Deputy Director of Finance, Director of Finance, next when that post was created and later Controller of Railway Accounts in 1928. In 1930 he was selected for the post of the Member, Establishment and Labour, of the Railway Board, the first Indian that became a member of that Board. He retired prematurely in 1933 to join the Tata Iron & Steel Co. Ltd., Jamshedpur, as the Controller of Cost Accounts, an office which he held at the time of his death.

It is not easy to sum up the achievements of a life so full of activities in a period, particularly remarkable for reform by Government in all directions. His close association with the Railway Board for over a decade prior to the separation of Railway Finance from General Revenues in 1924-25, brought him into contact with every phase of railway development during the post-war years. His training under some of the most brilliant officers in the Railway Accounts to mention a few, Sir Frederic Gauntlett and Rao Bahadur K. Balarama Iyer, both of whom are happily with us now, also equipped him for his future work. His hand, to those who know, is to be seen in all the important changes which occurred during this period: the separation of finance, the Depreciation Committee of which he was a Member, the separation of Accounts from Audit, the creation of a Railway Accounts Service, the establishment of the Clearing Accounts Office, the improvements in the accounting and budgetting systems of Railway Accounts and legislative work. His

record as the Labour Member of the Railway Board was no less remarkable. The contribution made by railways to the deliberations of the Whitley Committee was largely through his initiative. He has earned the gratitude of railway employees for the expedition and promptness with which the Whitley Committee's recommendations were translated into practice on our railways. The application of the Hours of Employment rules, the revision of the leave rules, recognition of labour unions, the half-yearly meetings with the All India Railwaymen's Federation all these explain why since 1930 railway administrations have been more free from difficulties with labour than they were during the previous decade.

The qualities that Mr. Hayman brought to his tasks were thoroughness and efficiency. His ideas or proposals might not have been characterised by brilliance or idealism. But they were well thought out and met the situation admirably indeed. Whether in office, or in the Assembly, Committees or meetings, he was an arsenal of facts and figures, and with an unerring instinct, he deftly parried a blow or a thrust and waiting for the psychological moment carried his point. He proved the pedagogic definition of a genius, and his nature hungered for more and more activity. The institution of the All India Railway Sports activities, his work as the President of the Indian Hockey Association, and his visit in 1932 to the United States with the Olympic Hockey team reflect another side of his versatile nature. His work for his own community is only obscured by his more important work on our Railways.

Mr. Hayman was a Foundation Fellow of the Institute and its President during 1931-32. The inspiring address that he delivered at the Fourth Conference at New Delhi on the responsibilities and status of the Railway Accountant bears eloquent witness to the principles which he kept steadily in view and to which he exhorted the attention of all railway accountants and auditors.

With his departure, a large circle of his friends and admirers will miss a genial personality, essentially kind and understanding, who had a keen sense of humour and a smile for everybody.

Rama Prasad Roy, A. C. A., R. A., 1883—1941.

The news of the death of Mr. Rama Prasad Roy must have been received with great regret by our members, and others connected with the activities of the Institute. Mr. Roy was not enjoying particularly good health during the last few years and in September, 1940 he had an attack of jaundice and gall-bladder. He got better after treatment in a Calcutta nursing home for three months and looked his former self again. Apprehending a relapse he underwent an operation but sixteen days later he died from heart failure following haemorrhage, an end which was altogether unexpected. Since his retirement Mr. Roy was taking a considerable interest in the activities of the Institute by serving on the Council and some of the Committees.

A short sketch of his life based on information supplied by his family is given below :

Rama Prasad Roy belonged on his father's side to the well-known Kayastha zamindary family of Taki, 24 Parganas, Bengal. On his maternal side he is connected with the rich Mohanchand Ghosh family of Kidderpore. Rama Prasad was born on June, 15, 1883 at Dinajpur where his father was a Munsif. Like his elder brother, Bhudeva Chandra Roy, who was an advocate of the High Court and predeceased him, he received his education in the South Suburban School, Bhowanipore, the Presidency College and London Mission College. He did his graduate studies in the Duff College, later known as the Scottish Church College, where the late Dr. Henry Steven's fame, attracted the most brilliant of Indian students of the time. Incessant ill-health brought on by a virulent attack of malaria interfered with Rama Prasad's studies, and he could not take his degree.

In 1910, however, Rama Prasad proceeded to London to study accounts. He joined a well-known London firm of public accountants and for five years he put in very hard work. Reports about him from different sources during this period spoke highly of his work, diligence and character. After the professional tests he became a Chartered Accountant in August, 1916. Rama Prasad Roy was the second Indian to become a full-fledged Chartered Accountant. On the conclusion of his training in England, his record as an Accountant brought him to the notice of certain members of the Board of Directors of the Assam Bengal Railway, who appointed him an officer of the Audit Department of that Railway in 1917. His painstaking work and abilities gradually brought him to the position of the Deputy Chief Auditor of that Railway during the 17 years of his active service.

Rama Prasad recalls to one's mind memories of an earlier Calcutta generation. His interests were diverse. As a member of the profession he rightly attached a great deal of importance to accountancy which was testified by the intimate knowledge of the practical aspects of his subject and the good library he had built up. He had on several occasions mentioned to the present writer that his special love in accountancy was railway accounting, even during the days of his articleship. He was familiar with the literature in railway economics, rates and accounting and he had collected some valuable material on railway accounting. Since his retirement he had plans of bringing out a substantial work on general accountancy, and two others on investments and book-keeping. Not merely the spade work has been done but considerable advance, the present writer understood, has been made in the drafting of many chapters in the first and the second work. In recent years his interest in English literature revived and he contemplated an intensive pursuit of philosophy and religion.

Rama Prasad devoted a large part of his leisure to public work. He was connected with two educational institutions, the Shahanagar Boys' School and the Beltola Girls' College. As secretary of the Ratepayers' Association

he accomplished some constructive work for his Ward. He was a man of simple habits. By nature reserved, he had a distaste for ostentation and publicity . He always responded to any appeal for a noble cause. He enjoyed doing substantial social work without fuss or drum-beating and though a man of wealth he bore his wealth very lightly.

Rama Prasad Roy married somewhat late in life and leaves behind him his wife and a wide circle of friends to bemoan his loss. It is understood that he has willed away almost all his properties to charities.

L. A. N.

RAILWAY STATISTICS

Table I.—Ten/Eleven days Approximate Gross Earnings of all State-owned railways.

(In Lakhs of Rupees).

Period Ten/Eleven Days ending	Year. 1940	Year. 1941
10th January ..	293	309
20th January ..	281	327
31st January ..	307	379
10th February ..	283	329
20th February ..	286	360
28th February ..	314	295
10th March ..	300	339
20th March ..	—	—
31st March ..	331	378
10th April ..	297	345
20th April ..	308	315
30th April ..	304	314
10th May ..	224	310
20th May ..	311	315
31st May ..	336	356

Table II.—Monthly Progress of working Expenses of the Principal State-owned Railways.

(In Lakhs of Rupees).

Railways.	Up to January		Up to February		Up to March	
	1940	1941	1940	1941	1940	1941
A.B. ..	98	111	106	131	119	129
B.N. ..	486	507	529	558	609	620
B.B. & C.I. ..	471	491	515	535	580	600
E.B. ..	338	335	372	367	461	411
E.I. ..	878	898	962	988	1060	1100
G.I.P. ..	561	579	619	638	688	712
M. & S.M. ..	313	310	342	340	380	380
N.W. ..	756	764	829	843	920	968
S.I. ..	233	236	255	258	290	290
Tirhoot & Lucknow Bareilly.	68	66	74	73	89	87
Other Railways ..	22	22	24	23	29	291
Total ..	42,24	43,19	46,27	47,54	52,25	53,26

Table III.—Progress of up-to-date Earnings of the Principal state-owned Railways.

(In Lakhs of Rupees)

Railway.		Total earnings for the period (ten/eleven days) ending							
		January 10th	January 20th	January 31st	February 10th	February 20th	February 28th	March 10th	March 31st
	1940	153	158	164	170	176	181	187	200
	1941	161	168	175	181	187	192	198	209
	1940	818	850	887	921	956	990	1027	1102
	1941	911	943	984	1020	1057	1086	1126	1199
	1940	924	960	999	1034	1070	1110	1149	1225
	1941	1028	1072	1125	1172	1219	1259	1305	1,400
	1940	473	492	512	530	546	564	583	622
	1941	503	525	548	572	592	608	633	677
	1940	1628	1687	1750	1813	1875	1934	2004	2151
	1941	1828	1894	1969	2050	2124	21 5	2273	2426
	1940	1014	1057	1101	1137	1180	1231	1270	1360
	1941	1194	1247	1304	1364	1427	1476	1538	1648
	1940	575	595	618	640	663	688	710	765
	1941	614	635	660	683	708	729	752	805
	1940	1239	1286	1337	1382	1425	1481	1527	1633
	1941	1392	1451	1521	1588	1650	1701	1758	1882
	1940	405	417	432	446	460	478	492	526
	1941	451	465	484	500	517	533	550	585
	1940	148	155	162	169	176	183	189	203
	1941	176	183	191	198	206	212	219	232
	1940	43	44	46	48	50	51	53	56
	1941	44	46	47	48	50	51	54	57
	1940	7420	7701	8008	8291	8577	8891	9191	9843
	1941	8302	8629	9008	9377	9.737	10032	10406	11120

STATEMENT SHOWING THE PROGRESS OF UP-TO-DATE WAGON LOADINGS ON CLASS I RAILWAYS.

		Period ended							
		January 10th	January 20th	January 31st	February 10th	February 20th	February 28th	March 10th	March 31st
..	1940	922167	957289	1001046	1040638	1079021	1113644		1234228
	1941	980171	1,01,1707	1051719	1089082	1127254	1154644	1189232	1262008
..	1940	617841	637252	661013	681619	704566	725500	746093	792799
	1941	573774	591642	614818	634219	656013	672876	692127	732870
..	1940	162221	172090	183255	192234	201548	212061	218463	235216
	1941	151083	160281	170014	178264	185587	191312	198375	215563
..	1940	123163	129282	135901	140610	145879	153131	157237	166849
	1941	119271	127028	136239	144243	152013	157879	164690	178946
Miscellaneous smalls ..	1940	1346604	1394202	1444771	1495791	155450	1594827	1643269	1749061
	1941	1417[illegible]	1469346	1528014	1579072	1630717	16720535	1720677	1821930
Miscellaneous full wagons ..	1940	2059968	2161120	2270808	2368534	2471025	2582816	2680121	2884073
	1941	2123363	2220527	2339147	2438854	2547048	2631594	2732226	2946773
Home Line Stores and Materials ..	1940	352092	363678	376002	388983	400575	411997	423612	447485
	1941	338813	349466	362759	373687	385853	395764	406509	431251

E.B.
E.I.
G.I.P.
M. & S.M.
N.W.
S.I.
Tirhoot & Lucknow Bareilly.
Other Railways .. 2.
Total .. 42,24 43,

CURRENT PERIODICALS.

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