Volume XVIII • No 3 • March 1958 | 3

International Transport Workers' Journal

In this issue:

Monthly Publication of the International Transport Workers' Federation

Volume XVIII • No 3 • March 1958

International Transport Workers' Journal

3

Monthly Publication of the ITF

Head Office: Maritime House, Old Town, Clapham Common, London SW4
Telephone: Macaulay 5501-2
Telegraphic Address: INTRANSFE

Branch Offices: MEXICO – Avenida Morelos 20, Desp. 504
Mexico, D.F.

ASIA – Kokutetsu Rodo Kaikan, 1, 2 – chome, Marinouchi, Chiyoda-Ku, Tokyo

Forthcoming meetings:

Geneva	25-28 April 1958 Seafarers' Section Conference
Geneva	2-3 June 1958 Fishermen's Section Conference
Amsterdam	23 July - 1 August 1958 25th Biennial Congress

Comment

THIS IS THE STORY of two stewardesses – one British, one Dutch. Most people will have heard of the first – she was one of the crew of the BEA Elizabethan carrying the Manchester United football team which crashed at Munich Airport. Her bravery in the rescue operations, like that of the rest of the crew, was praised on the front pages of newspapers throughout the world. Some of the newspapers also mentioned her age – she is thirty-seven. We quote that fact, not because we wish to be ungallant, but because it has a bearing on what was happening to our Dutch stewardess, and to a number of her colleagues, at approximately the same time. She had just been informed that her employer, KLM, had decided to compulsorily retire her because she had reached the age, not of thirty-seven, but of thirty-five. The reasons given by KLM for its decision are rather obscure; it is reported as having spoken in the vaguest possible terms of 'a variety of reasons' (unspecified) for applying this arbitrary age limit. The stewardesses suspect that the real reason is more transparent. They believe that it is connected with that strange doctrine, on which we have had occasion to comment before in these columns, that in an air stewardess looks are more valuable an asset than experience, that youth in itself outweighs years of faithful service. We for our part cannot help wondering what the survivors of the Munich air crash would think of this doctrine. Probably not very much.

When members of one of our American affiliates were facing a similar threat to their employment four years ago, we called on the company concerned to think again. We are glad to report that it did. We would like to repeat that advice to KLM and invite them to abandon their plan to arbitrarily retire women who have served them well in the past and who could give them and their passengers equally good service in the future.

Railroads and railroad workers

by R. C. COUTTS, *ITF Director of Regional Affairs; Vice-President, American Train Dispatchers' Association*

THE PURPOSE OF THE SERIES OF ARTICLES which begins in this issue is to give the transportation workers in other countries some insight into the problems of railroad workers in the United States, and to explain at least briefly how those problems are disposed of.

Because of the many differences in railroad transportation systems throughout the world, there should first be some brief description of railroads in the United States – something of their organization and operations. Following that we shall briefly discuss the US railroad trade unions, and something about how they are organized and how they represent their members. There are many differences between conditions in the United States and other areas of the world. These differences explain, in some measure, why workers' problems are handled in the particular manner which prevails in any one country as compared with another. For, what may be efficient and effective in one country might not be so in another. But there are some fundamental problems which, basically, are much the same throughout the world. Because of this fact, what will be said later about the Railway Labor Act which governs all railroad workers in the United States may be useful to our railroad friends in other countries.

The railroads in the United States

One of the important differences between railroads in the United States as compared with those in other countries is that US railroads are owned and operated by private corporations. In many countries railroads are owned and operated by state and national governments.

Although privately owned and operated, the US Government, through its Interstate Commerce Commission, regulates all rates charged by the railroads for transportation of goods and passengers. That Commission also has some responsibility for the enforcement of national laws governing safety – such as the law pertaining to the maximum hours which may be worked in any one day, the inspection of locomotives and signalling appliances, and enforcing the safety requirements for passenger and freight cars.

But the important fact to be pointed out is that railroads are privately owned and operated, and there are many different railroad companies. That fact has an important bearing upon the history of the organization and functioning of US railroad trade unions.

The many different railroad companies in the United States form a network which provides rail transportation in all of the forty-eight states. Some railroads extend for more than 10,000 miles and may operate in ten or more states in various parts of the country.

For the accounting and statistical purposes of the Interstate Commerce Commission all railroads are divided into two classes. Class 1 railroads are those whose annual operating revenues exceed $3,000,000. Class 2 railroads, (and they are relatively unimportant), are those whose annual operating revenues are less than $3,000,000. At the present time there are 111 Class 1 railroads in the United States, having a total of approximately 225,000 miles. Recent statistics show that seventeen of these 111 Class 1 railroads, each of which operates more than 5,000 miles of line, have a total mileage of 144,894 – or about 65 per cent of the total mileage for all railroads.

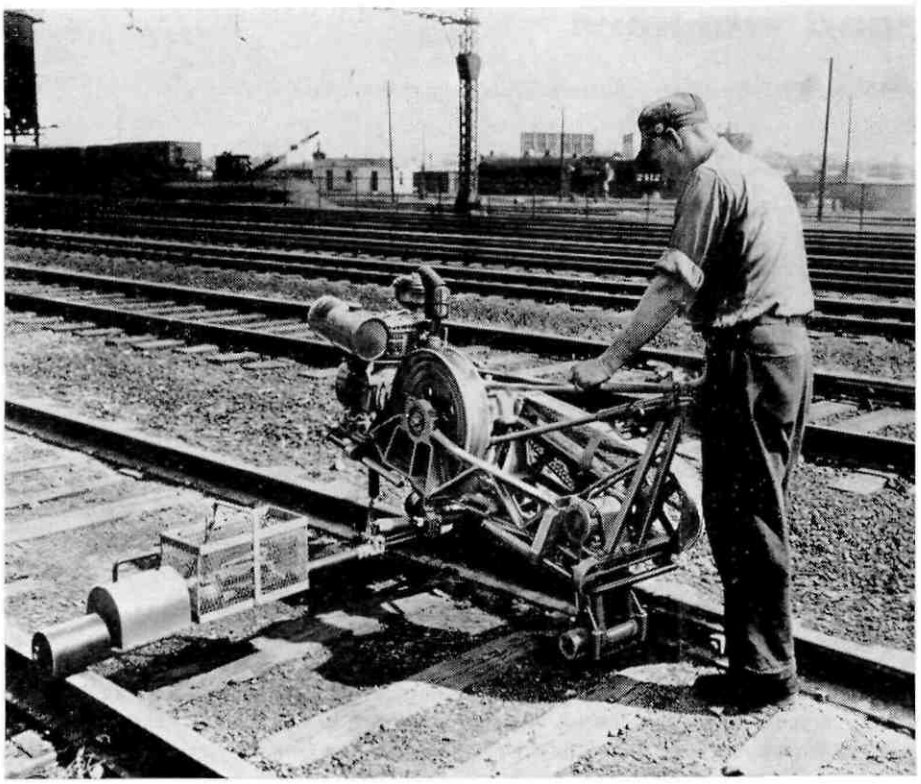
The largest railroad is the Atchison, Topeka & Santa Fe, which owns and operates 13,139 miles of tracks. It extends from Chicago, Illinois, the country's most important railroad center, located in the north central portion of the United States, westward to the Pacific Ocean and southward to the Gulf of Mexico. It is an interesting fact, however, that there is no one railroad which extends from the Atlantic Ocean to the Pacific Ocean. Nor is there any one railroad which extends from the Dominion of Canada to the Gulf of Mexico. This is largely because the economic and industrial development of the United States began on the Atlantic coast and extended westward to the Pacific Ocean.

These few general facts are sufficient to indicate that the railroad transportation system in the United States is both large and complex.

Engineering characteristics

Perhaps the most important single fact regarding the engineering characteristics of

Passengers relax in the vista dome of a Burlington car. Comfort and American railroads are almost synonymous, but behind the comfort is labour force of many thousands, some of whose problems are dealt with in this series of articles



Maintenance-of-way crews can cover greater distances than was ever previously possible by using modern machines such as this new one-man power wrench (Nordberg Manufacturing Corp.)

US railroads is the uniformity of standards – both as to tracks and equipment.

Railroads constructed at various times in some countries operate over tracks which do not have a uniform gauge (width). For example, some railroads in South America have tracks with a one meter gauge. Others have a gauge in excess of five feet (approximately 1.5 meters). But US railroads have a uniform gauge throughout the country, this being four feet, eight and one-half inches (1.44 meters). There is a very small and unimportant section of railroad with a narrower gauge and located in a mountainous region.

All locomotives, and all passenger and freight cars are constructed so as to operate on the uniform gauge. There are some minor differences in the engineering standards of locomotives and equipment, but, generally speaking, they are unimportant.

Each railroad owns its own locomotives and its passenger and freight cars, and all other equipment necessary to operate on its own tracks. One freight car (goods car), may be loaded with goods at New York and cross the US from east to west to San Francisco, California, on the Pacific Ocean, without the necessity of unloading the car at the end of one railroad and reloading the goods into a car of the next railroad. That one car, on its trip from New York to San Francisco will be transported by several different railroads before it reaches its destination. Each car is identified by the initials or name of the owning railroad and by a number.

In the example just described, when the car arrives in San Francisco its cargo will be unloaded for the first time since it left New York – more than 3,000 miles to the east. At San Francisco that same car may be loaded with other goods destined for some point in the Dominion of Canada. From Canada it may be loaded yet again with goods destined for a point on the Gulf of Mexico, and again being transported to its destination by several different railroads. That one car may be away from the tracks of the owning railroad for many weeks or months before being returned to the owner's tracks. But for each day that that car is off the tracks of the owning railroad, the railroad on whose tracks it may then be located must pay a uniform daily rental to the owning railroad. At the same time, that owning railroad is also paying the same uniform rental for the cars owned by other railroads which may be on its tracks at that time.

The typical freight cars used on the US railroads vary in length from forty to fifty feet (12.2 to 15.2 meters) and for the most part are of all-steel construction. The capacity varies from forty to sixty tons, with fifty tons capacity probably the average. Under the lawful regulations of the US Interstate Commerce Commission all freight and passenger cars must be equipped with automatic coupling devices and automatic air brake equipment of specified engineering standards. Any car, therefore, may be transported on the tracks of any railroad without any technical or mechanical adjustments.

Perhaps the most important technical change which has occurred on US railroads in recent years is the greatly increased use of diesel locomotives. This change has occurred principally since the close of World War II. Today the great majority of passenger and freight trains throughout the entire country are operated by diesel locomotives. And the few railroads which now operate some steam locomotives are being equipped with diesel motive power as rapidly as steam locomotives are being retired from service.

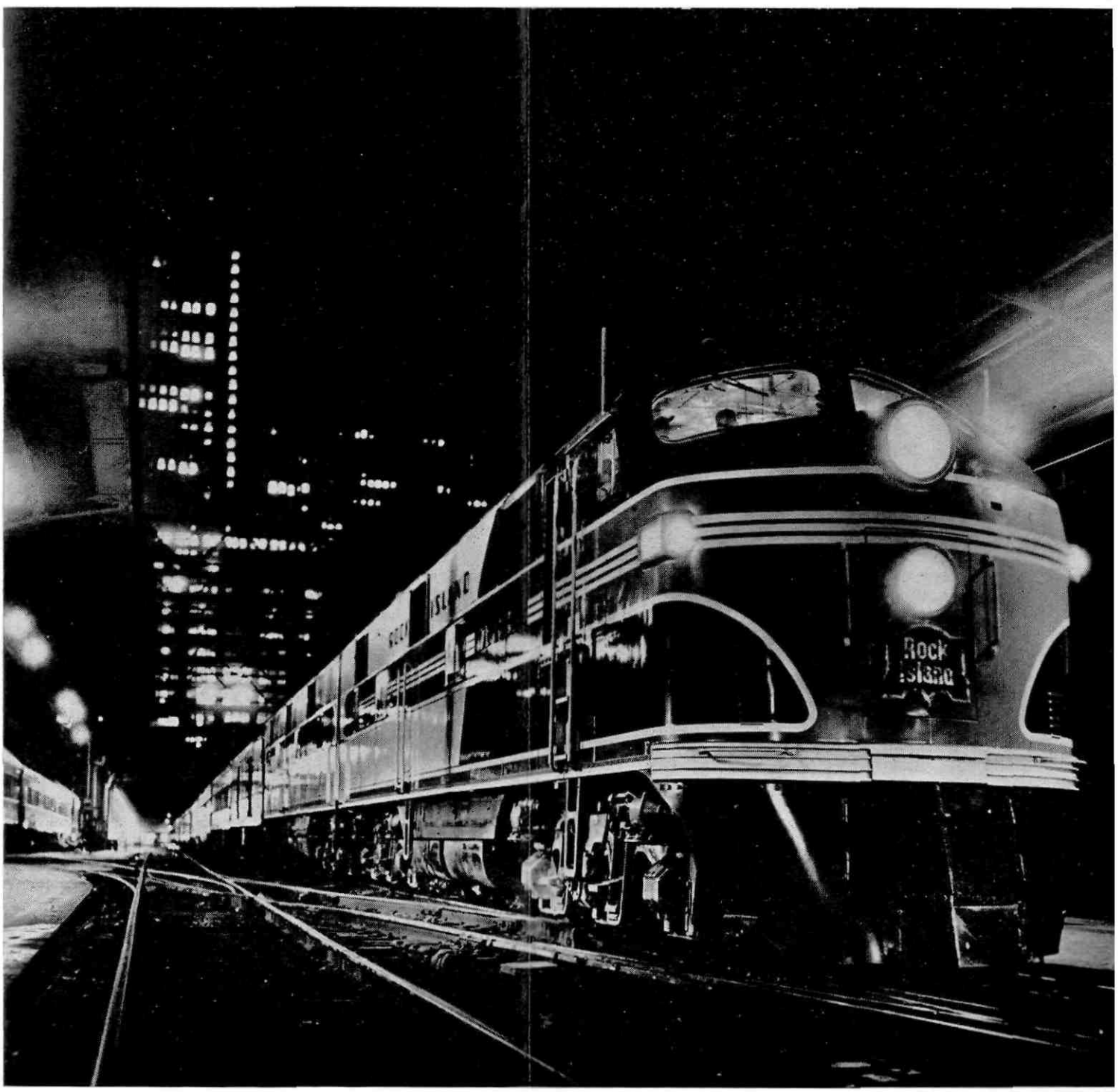
The diesel locomotive is more powerful than a steam locomotive and it produces a more steady power. A diesel can be used continuously more than ninety per cent of the time while a steam locomotive is available for use less than fifty per cent of the time. Also, the efficiency of a steam locomotive varies greatly according to the quality of the fuel and boiler water which is used. In some respects a diesel unit is more efficient in the cold winter areas.

A diesel locomotive is powered by inexpensive fuel, which eliminates the necessity for maintaining expensive coal, oil and watering facilities. Steam locomotives require thousands of cars of coal which must be transported from the mines to coaling stations – sometimes hundreds of miles distant and at great expense.

Because a diesel locomotive produces greater and a steady electric power through its motors, longer trains are operated and at greater speeds. In addition, the necessity for frequent stops for fuel and water are almost completely eliminated. It is not unusual for a train to operate at sustained high speeds for more than 100 miles without stopping.

Three diesel locomotive power units cou-

The Rock Island Line's 'Golden State Limited' on its run between Chicago and the Pacific Coast. The use of diesel locomotives has been one of the most important technical changes of recent years. Today the great majority of passenger and freight trains are operated by diesel locomotives



Most freight cars are of all-steel construction, are between 40 and feet long, and have an average capacity of 50 tons. They must be equipped with automatic couplings and air brakes

pled together frequently haul 100 to 150 freight cars at speeds ranging between fifty and sixty-five miles per hour with a crew of five – a conductor, an engineer (driver), a fireman, and two brakemen (guards). In a few states there are laws which require three brakemen (guards) on trains which consist of more than a minimum number of cars. But, generally speaking, all trains operate with a crew of five workers.

Because diesel-powered freight trains are much longer than those formerly handled by steam locomotives, and operate at higher speeds, there is an increasing use of radio equipment on locomotives and the caboose (the rear car of the train in which the conductor and one guard ride). Many present day freight trains are so long (somewhat more than one mile, or approximately 1.6 kilometers) that it is impossible to communicate by hand signal or by lantern from one end of the train to the other. So, many locomotives and cabooses are now equipped with radio to assure instant communication between all members of the crew.

One very important effect which has resulted from the increasing use of diesel motive power is that it has reduced the number of employes required for handling freight traffic. Fewer trains are necessary because the trains are much longer. Also, discontinuance of steam locomotives has reduced the number of mechanical employes necessary to maintain the motive power – such as machinists, boilermakers, etc. On the other hand more electricians and diesel mechanics are required. But the net result has been the abolishment of a number of mechanical employes' positions.

The same is true of other departments on the railroads because of technological improvements. For example, much of the work now necessary to maintain tracks in good condition is done by machinery, where formerly it was done by hand work. Also, much of the complex work of keeping records and accounting is now performed by electronic office machines. Many serious problems have arisen with the coming of automation in the US railroad industry, and a number of such problems confront the workers at this time.

Railroad workers in the US

As of December, 1956, the total number of railroad workers on US railroads was reported to be 1,017,834. Except for the period of World War II, the number of railroad employes has shown a downward trend for some twenty-five years or more, principally as the result of technological improvements to which we have just referred. The volume of railroad traffic has not decreased. On the contrary, it has increased. And because of this, the productivity of each railroad worker has also greatly increased.

The situation was recently summarized very clearly by an outstanding US economist who represents railroad unions in most of their programs which concern wages and working conditions. In testifying before a committee of the United States Congress he is quoted as having said that since 1945 'total railroad employment has declined about forty per cent, and average employment has fallen about 30 percent.'

'The long run decline in railway employment', he said, 'has not caused declining traffic. On the contrary, railway traffic in 1946 was forty per cent above 1920, while employment was fifty per cent below 1920.' This makes it clear that the reduction in railway employment is largely the result of technological improvements – automation. And it is very evident that automation is not confined to the United States. It is spreading through many areas of the world, and has recently been the subject of serious discussion in the International Labor Organization.

Aviation and road transport

In addition to automation a tremendous increase in aviation and road transport has also affected railroads and railroad employment.

Like the railroads, commercial air lines and motor bus and truck transport are privately owned and managed. Also like the railroads, both are subject to some government regulation regarding permissible hours of daily work, rates charged, and the enforcement of safety standards.

Especially during the past thirty years a vast network of concrete highways has been constructed throughout every state in the US. In many cases these paved highways parallel railroads. As the mileage of these paved highways has been greatly extended from year to year, so also has the use of motor trucks for the transportation of goods greatly increased. Many motor truck transportation companies operate their trucks across the entire country. Most of the goods which these companies trans-

Except for a very small and unimportant section of road, United States railroads have a uniform gauge throughout, namely four feet, eight and one half inches (Delaware & Hudson Railroad)

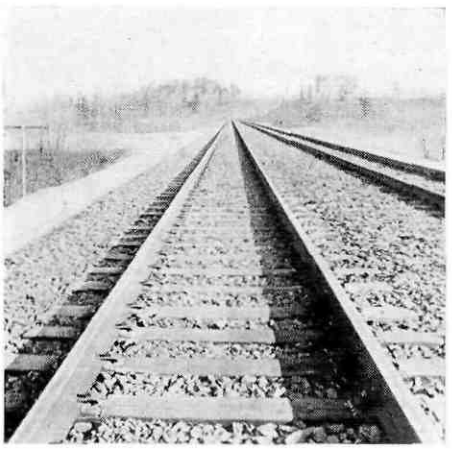
port would otherwise be transported by our railroads.

In addition to the vastly increased use of motor trucks transportation there has been a tremendous increase in the use of both motor busses and privately owned automobiles on the highways. As a result, both passenger and freight traffic has been diverted from the railroads to motor transportation. Today almost all passenger and freight traffic transported by US railroads is what is termed 'long haul traffic'. For short distances the traffic is almost completely carried by motor trucks, busses or private automobiles.

The situation regarding air line traffic is no less serious. This can be illustrated by the fact that commercial air companies, operating out of Chicago, transport more passengers to the Pacific coast than are transported in first class railroad accommodations. The reason for this is very clear. For one may fly from Chicago to San Francisco, non-stop, in seven hours or less. On the fastest railroad train the same trip requires almost forty hours. And the train trip, using first class accommodations, costs more than the trip by air!

It is very clear, therefore, that railroad workers in the US are faced with some very serious problems.

(To be continued)



More buses for New Delhi

STARTLING RESULTS in increasing productivity in individual operations by the introduction of better techniques have been reported by ILO experts in various parts of the world but none have been at once so large and so visible as the buses plying in New Delhi's wide and tree-lined streets.

To New Delhi's two million and more citizens, transport has always been a difficult problem.

India's capital, and its twin city of old Delhi, sprawl over a large area of the sun-drenched North Indian plains. The main public transport is the omnibus but breakdowns and delays in repairs put a heavy strain on the service. And as the city is growing, the distances and the strain on the bus service are also increasing.

Citizens, waiting long hours in the sun for the bus that did not seem to come, were therefore glad to hear that repairs were being speeded up and more buses were being put on the road thanks to new techniques introduced in the city transport workshops by a productivity specialist sent by the International Labour Organization.

Their morning papers told them that the number of buses off the road would be cut by fifty per cent following the introduction of the new techniques and that the output of repaired vehicles from the central workshops was being increased from sixty-four every four weeks to ninety-six. This meant that there would be thirty-two more buses to carry people back and forth, representing an increased revenue of over a million rupees a year.

In the workshops themselves, the improvements had resulted in greater job satisfaction and better relations between workers and management, and incentive schemes to raise earnings with output were under consideration.

Introduction of jigs and holding devices made it possible for workers to produce more with less effort.

Training courses carried out so that the new techniques might sink deep, have already begun yielding results.

An investigation carried out by four trainees, including the works manager, had a somewhat startling result: they found that twenty-eight immobilised buses, which had been cannibalised for spare parts, could themselves be brought into service within six months. Most of the spares needed for them already existed and in fact had to be used before they got obsolete.

Work on this project was immediately begun and both trainees and citizens are happy that another way has been found of augmenting the fleet.

The New Delhi project is only one of a series of productivity projects carried out by ILO experts in India over the past few years and which culminated in the Government setting up a national productivity organization in Bombay within the newly established Central Labour Institute.

Marked growth in Indian shipping

THE INDIAN MERCHANT FLEET has quadrupled since pre-war days, increasing from 125,000 to 559,000 gross tons. Of this, 40,000 tons are employed in coastal traffic, the entire trade of which is now carried by Indian vessels compared with only one-third before the outbreak of the Second World War.

Indian shipping, which had not penetrated beyond the coasts of India, Burma, and Ceylon before the war, is now operating farther and farther afield e.g. to Europe, Australia, the Far East and Japan, Malaya, West Africa, Black Sea ports and the Persian Gulf.

Facilities for training personnel are also being augmented, the training ship Dufferin having been reorganized in 1949 and a fully equipped marine engineering college established in Calcutta, with a branch in Bombay.

Nevertheless, the country is still far from the target of two million tons set in 1947, the present fleet being sufficient to carry only five to six per cent of the country's overseas trade. It represents one-half per cent of total world tonnage.

Educating Dutch boatmen's children

THE ACT MAKING UNIVERSAL EDUCATION COMPULSORY in the Netherlands dates back to 1901. The Chamber passed the Act by fifty votes for to forty-nine against, and the Minister of Education at the time stated that he had no great expectations as regards compulsory schooling for the children of inland waterway workers but was all the more hopeful of results from private initiative. He was doubtless referring to various education funds for these children. The first of these was started by a clergyman in the province of Friesland in 1870. He raised a fund by collecting money from private individuals for the purpose of supplying financial aid to inland waterway workers who wished to give their children an education ashore. His example was followed by others and a number of funds were subsequently established.

In this connection it is well to bear two facts in mind. In the first place, the funds were obtained from private citizens as a practical expression of their sympathy for the poor. The authorities were in no way concerned, and it was not until 1900 that the government stepped in with a subsidy of 3,000 guilders. Since then the position has changed very considerably. Today, this subsidy is in the region of 1,818,000 guilders (about £181,000). In the second place, grants to meet lodging expenses were, and still are, paid to individual parents through the medium of the education funds. Inland waterway workers seeking a grant apply to one of the funds. The trustees study the case and pass it on to the Ministry with their recommendations. The fund subsequently pays the parent in accordance with the Ministry's award.

Up to 1890, the children attended ordinary schools. In that year, however, a special school for the children of inland waterway workers was opened in Groningen. This was followed by others, and by 1907 there were seven such schools in the major 'tying-up' centres. These, however, were not sufficient to cover needs. Statistics produced in the year 1910 reveal that, of the 9,400 children registered, eleven and a half per cent were attending school regularly, forty-two and a half per cent attended at irregular intervals, and forty-six per cent were without any form of education.

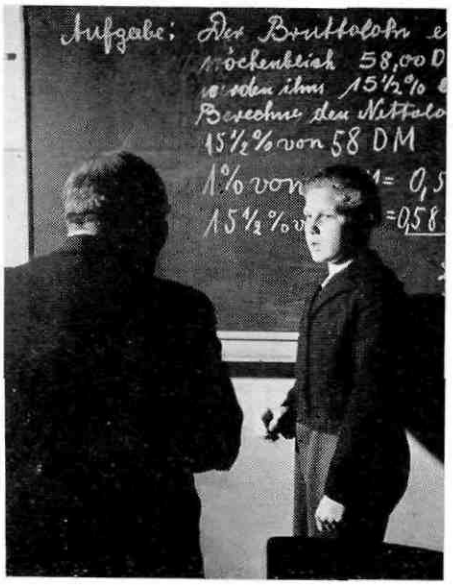
Not the type of school you're used to? However it seems a perfectly normal way of doing things to these children of Dutch inland waterway workers and other children might even envy them

In 1915, the first boarding school for these children was opened in Vreeswijk. The curriculum had to be worked through in three years which meant a longer school-day than at the ordinary elementary schools. This system was soon adopted by other schools.

At the present time, the children of inland waterway workers either attend ordinary schools and board out or special schools established for their benefit. Instruction in the latter has been regulated by statute since 1950.

There are two distinct types of school for the children of inland waterway workers: the inland port schools (i.e. schools situated in the places where the craft berth), and continuation schools. Of the former thirty are in the Netherlands, whilst two are in Ruhrort (Western Germany). Of the thirty schools in the Netherlands, twenty-three have combined classes with an ordinary primary school. Children are admitted to these schools at the age of six. Syllabuses are the same in all schools as regards compulsory subjects. School books are provided and each child has a progress record book in which details of his progress are recorded. On completion of a lesson, the pupil is tested to see whether he has

In Germany too, as is mentioned in this article, special schools have been established to cater for the education of children whose only home is a barge travelling up and down the Rhine



effectively grasped the subject-matter and his progress record marked accordingly. Teachers can see at a glance to what point in the syllabus the pupil has advanced and there is general agreement that the system works admirably. It also develops the child's powers of independent study.

When they reach the age of eight, these children may be admitted to the continuation school. This provides a four-year curriculum. There are twenty-two schools in the country, five of them combined with ordinary primary schools. Fifteen of them are boarding establishments. Where the school has no boarding facilities, the children are placed in the care of 'foster parents'. Extra periods are also worked in hese schools and experience has shown hat normally endowed children by this means acquire the same knowledge in four years as those attending other schools in six. The desideratum is that children of inland waterway workers attend a 'berthing place' school from 6 to 8 years of age, go on to a continuation school for four years, and then receive instruction for a further two years at a 'berthing place' school. Parents themselves are progressively realizing the importance of full-length schooling for their children. Although there is insufficient time available to give extensive schooling at the 'berthing place' schools, this is not the case at the continuation schools, and here the instruction given is the same as that in an ordinary primary school.

The country's educational authorities, however, do not believe it desirable to make attendance at school compulsory in the case of inland waterway workers' children. Compulsory schooling in the case of the average worker on land merely means short periods of absence from home. In the case of inland waterway workers' childeren it entails physical separation from parents and home influences for very much longer periods and denotes a threat to family life.

Every eighth Swiss is motorized

MOTORIZATION IS PROGRESSING RAPIDLY in Switzerland. Although there has been a considerable drop in the sales of motorcycles and motorscooters, this has been more than offset by increased sales of motorized cycles and cars. In the case of the latter. there is a growing tendency to prefer the smaller models. For the third year in succession, the total number of mechanized vehicles for passenger and goods transport has increased by more than 60,000 vehicles. The Autumn 1957 census revealed a total of 668,000 vehicles compared with 607,000 on the same date in 1956. Compared with the previous year, the number of passenger cars increased by twelve per cent, whilst motorized cycles and station wagons increased by twenty-three per cent.

Of the present total of 668,000 vehicles, 415,000 are passenger and goods cars of various types, and 253,000 motorized cycles of all kinds. Passenger and goods vehicles include 347,000 motorcars, 14,000 station wagons, 17,500 delivery vans and 30,000 lorries. Of the 253,000 mechanically propelled cycles, 75,000 are motorcycles as generally understood, the remainder being motor-scooters and cycles with auxiliary engines. The average over the entire country is 132 mechanically propelled vehicles to every 1,000 inhabitants, i.e. every eighth Swiss is motorized.

Tranquilizers and road safety

HUNDREDS OF RESEARCH PROJECTS are at present being conducted throughout the US in an attempt to learn more about the effects of tranquilizers on human behaviour. Of the millions who may be expected to take tranquilizer pills this year, many will be driving cars under the influence of these anxiety-reducing drugs. No-one knows what such mass use will mean in terms of highway safety, and the US National Safety Council believes that law enforcement agencies, traffic judges and fleet safety men should have a guide to present knowledge on the subject even if it is too early yet to supply them with final answers. It is suggested that satisfactory answers need to be found to four main questions posed by the use of tranquilizers: are muscular co-ordination and reaction time impaired?; are alertness and reaction to stimuli reduced?; are social attitudes and obedience to law and convention altered? and what bad effects, if any, result from their combination with alcohol or other drugs?

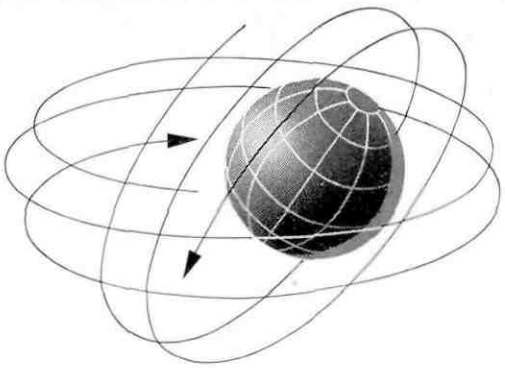
A study of current research in this field and discussion with eminent pharmacologists who have conducted experiments with the drugs have failed to give fully satisfactory answers to all these questions. It may take years of research before definite conclusions can be reached on the relationship between the use of tranquilizers and road safety.

Argentine to build inland waterway network

A NETWORK OF INLAND WATERWAYS is projected by the Argentine Government. The scheme, which includes the construction of two canals linking the rivers along the Bolivian frontier with the railways in north-east Argentina and creating outlets to the rivers Paraguay and Parana, is of considerable economic significance not only to Argentina but to other South American countries as well.

Once they are completed, the canals and associated river and railway systems would give land-locked Bolivia access to the Parana and the sea as well as permit Chile to trade with northern Argentine, Paraguay and Brazil without necessity for the long sea voyage through the straits of Magellan.

Round the World of Labour



Crew problems on atomic-powered ships

IN THE COURSE OF A RECENT SPEECH at the South Shields Marine and Technical College, the General Secretary of the ITF-affiliated British Merchant Navy and Air Line Officers' Association, Brother D. S. Tennant, revealed that his organization was giving very close attention to the problems which might face the crews of future atomic-powered merchant vessels. Brother Tennant also stated that he had already been in touch with the British Ministry of Transport to seek consultation with it on such problems.

Expressing the hope that Britain would not lag behind other nations in developing an atomic-powered tanker, Brother Tennant said that such ships however presented the Association with much to think about, particularly as regards the safety of crews.

'An illustration of what can happen was recently seen at Windscale (British Atomic Power Station at which a fall-out accident recently occurred)', he went on, 'but apart from mistakes of the kind that apparently happened at that important atomic centre, we must bear in mind that ships can collide and can go ashore and consequently the dangers for those serving on board from radio-active fall-out must be removed. We are preparing for consultation with the Ministry of Transport on these aspects of this latest development.'

But even further than this he had already seen it suggested that there should be an atomic-powered 65,000 ton submarine oil tanker.

'This may be a very enterprising scheme on paper', he said, 'But I wonder if officers and crews will be forthcoming for, say, sixteen hours loading in the Persian Gulf, fifteen to twenty days at sea or under the sea, discharging in a similar number of hours and then returning for another cargo. Tankers in their present form are not everyone's cup of tea and I think if this development takes place they will have to look for some nuclear-powered robots to operate this class of ship.'

Later in his speech, Brother Tennant also dealt with the menace to traditional maritime nations posed by the tonnage now being operated under flags of convenience. He said that he was sure that one effective way of combating it would be for the Government to set aside a considerable proportion of the tax levied on shipping, which could be released to assist owners in finding funds for new ships.

He believed that if a realistic step of this kind could be taken, one of the prime reasons for the growth of flags of convenience would be removed. He added, 'I think also if owners got together internationally and agreed among themselves to stop chartering these ships and public utility corporations did the same the effect would soon be felt.'

Safety of life at sea

THE US HOUSE MERCHANT MARINE COMMITTEE has called for an international conference as soon as possible on new safety at sea rules. The Committee contends that it is of vital importance to put into effect lessons learned from the sinking of the 'Andrea Doria' in July 1956 after collision with the Swedish liner 'Stockholm' off Nantucket. The Committee which had been charged with investigating the sinking last summer recommended an international conference to bring the 1948 Convention on Safety of Life at Sea up to date. The United States are reported to favour a conference in the spring of 1959, whilst Britain is understood to prefer 1960.

Fishing co-operatives key to industry's development

THE FUTURE DEVELOPMENT OF FISHERIES in many parts of the world may largely depend on the organization of co-operatives among fishermen, according to Mr. F. E. Popper, chief of Economics Branch in the Fisheries Division of the United Nations Food and Agricultural Organization. This was particularly the case in under-developed countries where there was urgent need to increase fish production but little chance of the necessary capital investment by private industry, he added.

'This question of investment has always been a big problem in the fishing industry of all countries,' said Mr. Popper. 'The element of risk is greater – risk of loss of boats, gear and equipment, risk of failing to locate and catch the fish, risk of rapid deterioration of the catch and of fluctuating prices and markets.'

In some countries, like Britain, the United States, Japan, Canada, South Africa, Western Europe, conditions have encouraged big investments in fishing from private sources. But even in some of these, co-operatives have played a significant role from the fishermen's point of view.'

Inland waterways prosper in USA

SOME STATISTICS have recently been released on the amount of traffic carried by US Inland Waterways during 1955. They confirm a trend which has been evident for several years now towards a greater use of this form of transport. In 1932 the ton-kilometres of traffic on US waterways was about half as much again as that in France, but by 1955 the Americans were doing sixteen times more business than their French counterparts.

It is also revealing to see how inland waterway transport has fared in comparison with other means of transport. In fact it comes out very well from the comparison as the following table (in ton-miles) shows:

	1940	*1945*	*1950*	*1955*
Railways	375	684	591	628
Road transport	51	56	126	226
Great Lakes	96	113	112	119
Inland waterways	22	30	52	98
Pipe-lines	64	123	129	203

In terms of percentages this is:

	1940	*1945*	*1950*	*1955*
Railways	61.7	68.0	58.5	49.3
Road transport	8.4	5.6	12.5	17.7
Great Lakes	15.8	11.2	11.1	9.4
Inland waterways	3.6	3.0	5.1	7.7
Pipe-lines	10.5	12.2	12.8	15.9

NMU members vote for new Union building plan

MEMBERS OF THE NATIONAL MARITIME UNION, AFL–CIO, have approved a $20 per year increase in their dues to finance the construction of new union halls in twenty-seven port cities on East, Gulf and West Coasts, the Great Lakes and major river routes.

The building program and dues increase were among seventeen proposals voted on by the seamen. All were approved. Others included provision for holding national conventions of the union at three-year instead of two-year intervals and the establishment of uniform procedures by which members can bring union officials to trial for violation of their constitution.

The entire amount of the dues increase will be earmarked for buildings and maintenance. The increase will bring annual dues to $80 per year.

A building in New York City to house the union's national headquarters and port facilities, expected to cost more than $5,000,000, will be part of the building program. Buildings in twenty-six other ports are expected to cost between $150,000 and $600,000 each.

Except for the New York City structure, all the NMU halls will be modelled after the union's building in Mobile, Ala., which was completed two years ago (see photo). They will be of brick construction with a translucent dome of brick and plastic spanning the structure's main hall. They will contain hiring halls, meeting rooms, administrative offices and recreational facilities. All buildings will be completely fire-resistant and air-conditioned. Parking space will adjoin all buildings.

The program calls for construction of three buildings per year. The order of construction has not yet been decided. Priorities will be decided by the Union's national council based on condition of existing facilities and availability of suitable locations.

The union now has under construction a $500,000 building in Baltimore, Md., which is expected to be completed early next year. Plans have been completed and land purchased for another building in Norfolk, Va., but start of construction there has been delayed by a dispute over zoning regulations.

European railway employment

Total staff employed on railways at end of 1956:

Country	1955	1956	*Increase or decrease on 1955* %
Austria	76,800	76,000	— 1.0
Belgium	78,200	78,900	+ 0.9
Denmark			
(State)	27,400	26,900	— 1.8
(Private)	3,900	3,800	— 2.6
Federal			
Germany	472,900	481,700	+ 1.9
France	368,700	366,300	— 0.7
Great Britain	563,000	570,500	+ 1.3
Ireland	17,700	16,900	— 4.5
Italy (State)	158,500	162,800	+ 2.7
(Private)	18,100	16,800	— 7.2
Luxembourg	5,300	5,100	— 3.0
Netherlands	33,500	32,600	— 2.7
Norway	25,700	25,400	— 1.2
Sweden	61,200	62,500	+ 2.1
Switzerland			
(Federal)	38,900	39,600	+ 1.8
Turkey	57,700	58,800	+ 1.9

(Provided by United Nations Economic Commission for Europe – Transport Division)

Tweedledum and Tweedledee

ONE OF THE FIRST TASKS undertaken by the recently-formed Australian Flight Stewards' Association was to seek a limitation of the number of hours that flight stewards can be worked in the air. As a first step the Association endeavoured to have applied to flight stewards the existing Department of Civil Aviation regulation which sets a maximum of 1,000 flying hours per year. However, when the union attempted to put forward these proposals it found itself in rather a predicament, for it was unable to discover whether the Department of Civil Aviation or the employer, Qantas Airlines, was responsible. The Association's official organ, *Skyline*, describes what happened as follows:

'The union broached this matter with Qantas and DCA. Qantas had a very firm policy on the matter. They simply said that it was not an industrial matter. It was a matter concerning safety and should be taken up with DCA.'

'Fair enough!'

'We took the matter up with DCA.'

'DCA also have a firm policy on the matter. They wrote back and told us "it is the view of the Department that the matter covered in your letter is an industrial question to be resolved between your Association and Qantas Airways".'

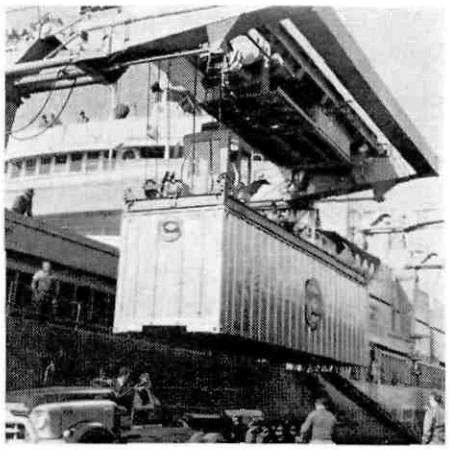
Incidentally, when the matter was taken up with Qantas in the first instance, the company was told by our affiliate that many of its members had worked more than 1,000 hours per year. In reply, the company claimed that very few did so, but it did admit one steward had worked more than 1,100 hours. On the other hand, a union survey indicates quite definitely that many stewards have been exceeding the 1,000-hour limit and one has flown over 1,400 hours.

Qantas stated that they would undertake to try and keep stewards to within the 1,000-hour limit, but they reserve the right to exceed that limit if they wish.

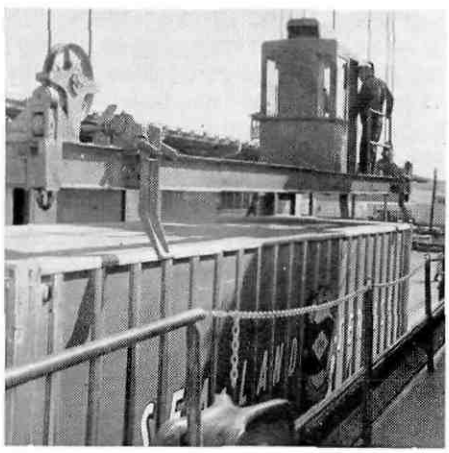
Summing up, *Skyline* comments as follows:

'The present position is an absolute farce. DCA still say this is a matter for Qantas. Qantas still maintains it is a matter for DCA. If there is no need for flight-time regulations for stewards, why do they agree to 'generally observe them'? If on the other hand 'they generally observe' the limit of 1,000 hours per year, why won't they agree not to exceed the 1,000 hours?'

1

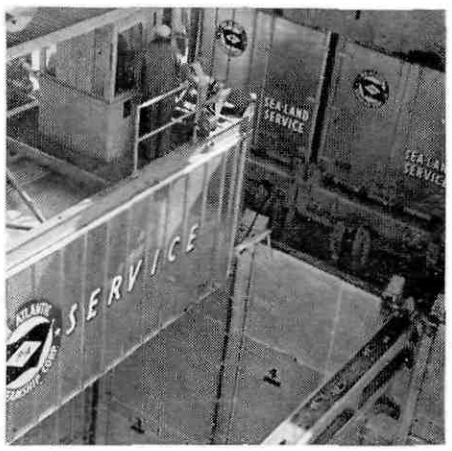


2

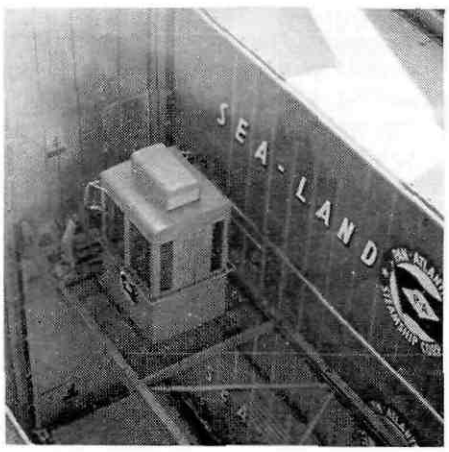


3

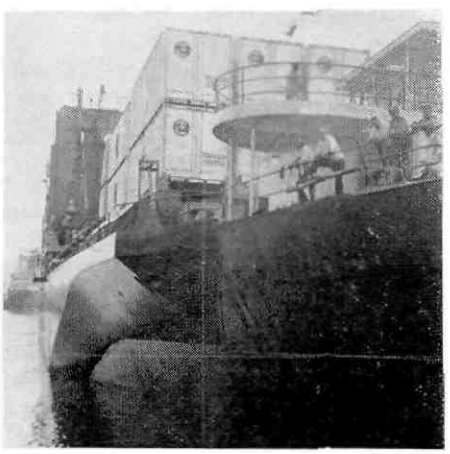
4



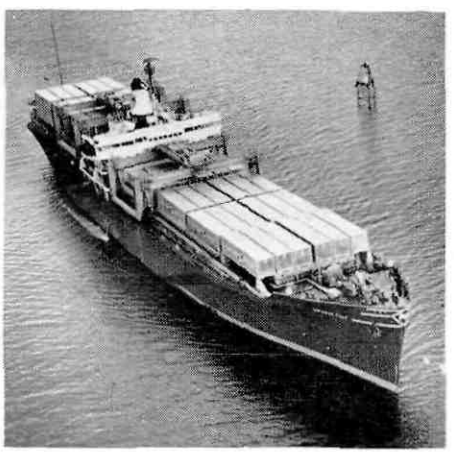
5



6



7



8

Down to the sea with trucks

Photos supplied by Seafarers' International Union

A NEW DEVELOPMENT IN THE TRANSPORTATION OF GOODS by sea comes from the United States where a transport company has recently put a 'lift-on' ship into service. The principle of this new-style transport of goods by sea is the stowing of uniform-sized truck-trailers in the holds of specially converted vessels by means of shipboard travelling cranes. Each 'lift-on' ship has two cranes, one fore and one aft. The entire crane can travel lengthwise on wheeled legs along built-in rails. In addition, the crane operator can manoeuvre a trailer-carrying lift at right angles to the ship, moving up and down or across the deck. The truck trailers are specially designed with releasing gear enabling them to be lifted off their wheels.

They have reinforced corner posts strong enough to support up to four other trailer bodies stacked on top of them in the hold. The company operating this sea-land freight service expected to have a fleet of six of these trailer-ships on its books by January.

Meanwhile another US company has announced plans for a 'lift-on lift-off' service between the Great Lakes and South Atlantic ports. Two 8,500-ton lake freighters are due for conversion under this programme in preparation for a full coastwise service when the St. Lawrence Seaway is opened in 1959. The ships will carry 400 specially constructed vans each. In some quarters, the 'lift-on lift-off' development on land/sea transportation is viewed as an attempt to help rehabilitate coastwise shipping, which has been in decline since World War II.

1
Broadside view of the first of the C–2s to be converted into a container-ship as part of a combined sea-land freight service. This vessel reveals a radically different superstructure as she undergoes sea trials off Mobile. Some six of these converted ships are due to be placed in service during 1958

2
A loaded truck trailer being lifted by the specially designed ship crane. Locked in the crane platform, the trailer body is hoisted vertically to deck level. Crane and truck then travel horizontally inboard until they are positioned over the hatch. The crane extension, projecting over the quayside, folds back at the joint when the ship is at sea. On arrival at port of destination, the truck trailer will be lowered onto a similar chassis and driven away for highway delivery

3
The travelling crane operator is about to pick up the trailer body. The special design of the trailer includes a corner locking socket into which fits a locking pin on the corner of the platform, thus ensuring secure lift

4
A loaded truck trailer body being lowered into the hold which is specially machined to keep the trailer bodies in place during the voyage. The entire operation of lifting the trailer from its detachable chassis, swinging it over the side and lowering it into the hold, is handled by specially designed cranes on the superstructure

5
The crane operator is depositing the trailer body into the ship's hold. Guide rails on the bulkhead hold the containers in place. The latter are reinforced at corners to enable them to be stacked

6
Having deposited and released the trailer body, the travelling lift emerges from the ship's hold

7
Fully loaded and underway with the crane extension folded back. Note the 'blister' on the hull

8
The fully-loaded ship shows radically new deck gear. Note how the entire crane body can move forward or aft on rails to any hatch. This service is at present being operated from Port Newark, New Jersey, to Miami, Houston and Tampa

Follow my leader

WHEN THE ENTIRE CREW of an East German trawler recently asked for and obtained political asylum in the Swedish port of Skanör, the East German authorities sent another trawler to bring the first one back. Unfortunately for them this operation proved to be a complete failure. The crew of the second trawler have profited from their colleagues' example and also asked for political asylum.

Better promotion prospects demanded

THE GERMAN RAILWAYMEN'S UNION has approached the Federal Ministers for Transport and Finances with a view to ending the state of affairs on the German Federal Railways whereby promotion in the case of a number of permanent railway officials is blocked. The Union has pointed out that many railway employees holding the status of permanent officials (Beamte) are prevented from advancing to a higher and better-paid grade owing to the budgetary establishment providing no posts to which they could be promoted. In effect, therefore, these officials were not being paid salaries commensurate with the value of their services.

Following urgent representations by the Union, the Federal Parliament asked the government in the summer of 1957 to take steps to ensure that the Federal Railways budgetary establishment was amended so as to provide better promotion prospects. Some improvement is noticeable in the railways administration's establishment proposals for 1958, although they still fall short of justifiable expectations. Pointing out that it now remains for the appropriate Ministries to approve these without cuts, the Union has expressed the hope that the present Minister of Finance will show a better understanding of the legitimate aspirations of the railwaymen than was the case with his predecessor in office.

Working hours in Germany

ACCORDING TO THE LATEST STATISTICS (for May 1957), the average working week for men in German industry was 46.9 hours. The average for women was 43.9 hours. These are paid hours, the actual hours of work, excluding breaks, etc., were 42.6 for men (a reduction of 3.6 hours or 7.8 per cent in the figure the previous February) and for women 40.3. The average hourly wage increased by 2.5 per cent for men and 3.7 per cent for women as against the February figure. The average hourly wage increased by 2.5 per cent for men and 3.7 per cent for women as against the February figure. The average hourly wage was DM 2.35 and DM 1.46 respectively.

They work in Transport

Walter Grötzinger, author of our article, seen in the driving cab of an Ae6/6 locomotive

THE LOCOMOTIVE DRIVER HOLDS A SPECIAL PLACE AMONG SWISS RAILWAYMEN, as he does in other countries. The ordinary traveller does not notice him particularly, it is true, as he wears an ordinary lounge suit as he climbs into his cab, a small suitcase or briefcase in his hand. In the cab, he dons his overalls, puts a coloured scarf around his neck and a peaked cap on his head. The case he is carrying with him also holds details of his schedules and relevant instructions. A good look in and outside the locomotive to ensure himself that everything is in order – locomotive and driver are now 'formally' introduced – and he is ready to move off.

For the ordinary traveller or onlooker it is just another case of a train on the move; for the driver, however, it is the real beginning of his day's work. During the trip he has to make various kinds of checks, as practically every train has its own peculiarities requiring differences in the manner in which it is driven. In spite of weather conditions, punctual or late departure, a passenger load of only twenty or as many as 1,000, or, in the case of a freight train, a load of twenty tons or 1,500, the driver must see to it that he arrives at his destination safely and on time. In doing so he must ensure that he makes the most economic use of traction power, keeps a good lookout for all signals, observes all regulations on maximum speeds, and at the same time, handles rolling stock in general and his locomotive in particular with the greatest care. A modern Swiss Federal Railways locomotive of the type pictured here costs something like 1.8 million Swiss francs. The graph recording speeds throughout a trip built into the speedometer is handed in every day for checking purposes. It has occasionally been described as the only 'railwayman' never known to lie.

The most important qualities of a locomotive driver are independence and a sense of responsibility. His skill is perfected over years of driving. Anyone wishing to take up a career as an engine-driver must have had four years' apprenticeship as a mechanic, electrician or fitter in trade or industry and have passed the craft examination at the end of his apprenticeship. He must further have had one year's experience in industry, have Swiss nationality, be fit for military duties, be of good character, and possess normal powers of sight and hearing as well as ability to distinguish colours. Applicants who fulfil these conditions may enter the railway service as train service trainees subject to their passing certain examinations designed to test their suitability. On entering service, trainees are first employed on locomotive maintenance for not less than one year. This preliminary training is necessary because an engine-driver is required to drive thirty different types of locomotive (electric, diesel and steam) and must be able to effect occasional repairs to apparatus and appliances if they break down.

Trainees are given dozens of regulations and descriptions which they are expected to study in their free time whilst they are acting as assistant driver. On the basis of this material they should be able to pass the numerous examinations they will have to undergo during the years to come, some of which last for days. Before reaching the maximum in their grade, engine driver grade I, trainees will have to serve in the following grades: assistant engine driver grade II, assistant engine driver grade I, temporary engine driver, engine driver grade II. The top grade, engine driver grade I, is reached at an age between thirty-two and forty. Before that time comes, however, the driver will have been thoroughly examined at regular intervals on his knowledge of service regulations, on his powers of sight and hearing as well as his colour vision. He will similarly have been medically examined by the railways medical officer.

For more than eighty per cent of the time he is driving the locomotive driver is alone in his cabin. Whilst on duty, and three hours before going on duty, a driver must not take any alcoholic drink. According to their length of service drivers are allocated to groups consisting of ten to twenty-two men. Drivers know in advance from the annual duty roster their turns of duty as well as when their sixty rest days fall. Drivers start ten to twenty-two day turns on the late shift the beginning of which is made later each day with the result that on the last turn they start work at midnight, i.e. on the early shift. Drivers thus drive a different train every day over a different route with a different locomotive.

Swiss drivers work on an average seven and three quarter hours a day, but on occasions the working day can be as long as nine and three quarters hours. Free time is given in compensation for any time worked above the average and time over nine and three quarter hours a day is also paid. The rest period between two working days amounts to eleven hours on an average, but on occasions may be reduced to nine hours. A minimum of thirty-three hours constitutes a rest day. Annual leave is two weeks up to thirty-four years of age, three weeks from thirty-five to forty-nine years of age, and four weeks from the fiftieth year. Full pension entitlement amounting to sixty per cent of pay accrues after thirty-five years of pensionable service. Age of retirement on pension is sixty-five.

Locomotive drivers grade I are on wage scale twelve under the Swiss salary scales. Annual salary after some twenty years' service amounts to Sw. frs. 12,450 (£1 equals 12.24 Frs.). To this basic salary are added the cost-of-living, family and local allowances and sundry pay supplements. From a driver's salary thirteen per cent to eighteen per cent must be deducted according to locality to cover taxes and contributions to benevolent and pensions funds as well ad old age and dependents' insurance.

Swiss engine drivers belong to a union catering for all grades of footplate staff forming an industrial group of the ITF-affiliated Swiss Railwaymen's Union (SEV). Membership of this industrial group is 3,300, which is about ninety per cent of all footplate staff.

The Swiss locomotive driver likes his job and is proud to serve the nation and the transport industry.

Contributed by W. Grötzinger, Basel

Navigational accidents on the Rhine

THE TOTAL NUMBER OF CRAFT engaged in Rhine navigation is not known. A census taken at various points characterized by a heavy density of traffic, however, reveals some interesting and useful information. Thus, the part of the lower Rhine between Emmerich and Duisburg carries very heavy traffic. In 1956, some 150,000 river craft of all types passed through the frontier control at Emmerich. On busy days, as many as 600 craft were counted. Traffic drops off a little towards the middle Rhine, the total number of craft passing the control point at Coblenz being 115,000 in 1956. During certain busy days in the Summer of 1957, however, as many as 400 craft or more passed down or up the river at this point. Above Mannheim, traffic falls off considerably, only about 30,000 craft checking through the frontier control post near Karlsruhe.

Traffic on the Rhine has shown a steady upward trend from 1950 to 1956 in terms of number of craft and goods transported, both having increased by fifty per cent to seventy-five per cent in that period. The increase has been greater in the case of volume of goods carried than in the number of vessels – from which it may be inferred that there is a tendency to employ larger craft in the transport of goods.

Details of navigation accidents on the Rhine are compiled every year by the authorities responsible for the safety of navigation on the river and published by the Central Commission for Rhine Navigation. The breakdown is: locality, frequency, nature of accident, and cause. The figures include all craft concerned irrespective of nationality.

In 1950, the total number of accidents on that part of the Rhine which flows through German territory was 381. In 1956 the number had grown to 643. Taking 1950 as 100, the index for 1956 is 170. Of the 643 navigational accidents which occurred during 1956, about fifty per cent happened on the middle Rhine, forty per cent on the lower Rhine, and ten per cent on the upper reaches of the river.

Causes of accidents may be grouped under three main heads: running aground or into navigational structures, wrecks or other underwater obstacles; collisions with other craft or permanent structures; and sundry causes.

Running aground is often determined by the nature of the fairway and the behaviour of the current. As might be expected, this type of accident was highest on the upper Rhine where the water is shallow and the fairway narrow. Such accidents were also frequent along the middle Rhine owing to the swift current where the river breaks through the Rhine gorge. On the lower reaches of the river, however, where the fairway is wide and the current comparatively sluggish, few accidents are attributable to this cause. During the period 1950 to 1956, the average percentage of all accidents attributable to this cause was eighty per cent on the upper Rhine, forty per cent on the middle Rhine and twenty per cent on the lower Rhine.

On the upper Rhine, the number of accidents due to the second main cause, i.e. collision, is negligible. On the middle stretches of the river, however, forty-five out of every hundred accidents are the result of collisions, whilst the percentage on the lower Rhine is as high as sixty.

Each section of the river, therefore, is characterized by certain specific types of accident. In the same way, the accident statistics reveal causes which are more typical of one part of the river than another. The human error factor, i.e. faulty handling of craft, the main cause of all accidents, is particularly high in the case of the middle and upper Rhine. Mechanical faults (engine failure, steering, towline) as a cause of accident are found primarily on the lower and middle Rhine. The lower Rhine is more affected by weather conditions (fog, gales, floods) than other parts of the river, although the middle stretches are not altogether free of accidents attributable to these causes. On the upper reaches only an occasional accident is ascribed to 'meteorological conditions'.

Accidents attributable to the bad state of the fairway, comparatively common immediately after the war, are now very few. 'Other causes' account for a considerable proportion of the total number of accidents. The published statistics, however, do not attempt a breakdown of this third heading.

Although the accident figures for the section of the river between Emmerich and Rheinfelden show an increase over the period 1950-56, they are still relatively low, and occasion no disquiet. At times and at certain points it may appear that traffic on the river has reached its maximum density. This, however, is not the case. The authorities responsible for the safety of navigation on the river are very much alive to their task, and of late have increased their efforts to ensure that passengers, craft and cargoes pass up and down the river with a maximum of safety.

Denmark has idle shipping

A RECENT SURVEY shows that twenty-eight vessels totalling 103,000 tons are idle in Danish ports. Several more are expected to be laid up during the coming weeks. The Danish Shipowners' Association has asked various Danish ports to reserve space for idle ships. Reason for the lay-ups is stated to be lower freight rates.

The flight dispatcher's contribution to safety

by F. B. ANGELOPOULOS

FEW PEOPLE ARE IN AGREEMENT on how a flight dispatcher contributes to safety. Some think the flight dispatcher is a direct contributor to the safety of flights, which of course is not literally true. The Oxford dictionary defines 'directly' to mean – 'without the intervention of a medium'.

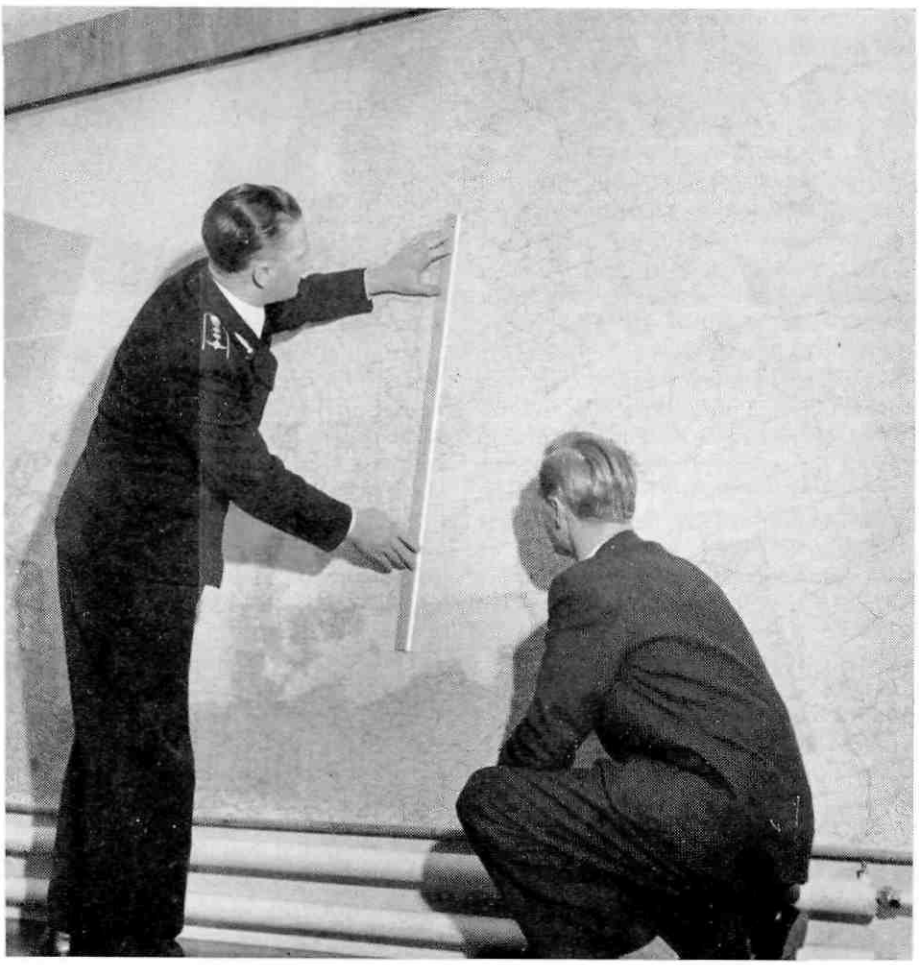
Before anyone becomes excited over this statement I had better clarify it. I said directly – not indirectly. Everyone knows a flight dispatcher contributes indirectly to the safety of flights. The only people who are direct contributors to the safety of flights are the flight crew. This is a fact and no one will deny it.

The question therefore arises, how does a flight dispatcher contribute to safety indirectly? I believe this to be a positive question and an important one. Since the profession of flight dispatching evolved and this evolution began some time after aviation had begun, it will be necessary to begin with a brief summary of the history of aviation.

From the very beginning man had a great desire to fly. Perhaps he was jealous of the birds. The first person to put this desire into effect was a mechanic by trade. He worked and dreamt and he built an aeroplane. When this aeroplane was ready he could not find any pilots around who were checked out, so he flew it himself and broke his neck.

Later more and better mechanics built something which could take off and come down all in one piece. When enough of these machines had been built a certain kind of a person took a tremendous interest in them. The manner in which he learned to manipulate these machines was astounding. It seemed he had previous experience in this field. From here on this amazing person was known as a pilot. Being a pragmatist and a materialist he began flying people and freight for a price, and commercial aviation began.

As this type of aviation expanded, a fellow found himself doing a lot of small jobs. One of his main duties was to advise people what the pilot was going to do before he did it. Apart from this very unrewarding guessing game he was constantly beleaguered by queries. When is the aeroplane leaving? How many passengers will it take this time? How much mail can we load on it? I hear Fogville had a mist storm. Is the aeroplane still planning to land there – if not, all passengers with heart ailments would rather take the bus, and so on. Of course no one, including this crystal gazer, knew the answers.



Knowledge came with the arrival of the pilot to the scene. When he arrived he supplemented his vast meteorological knowledge from what he had already amassed while playing golf or digging crab grass from his garden by a few quick glances at the weather map. After this he made the decisions. He let the harassed one know that the aeroplane would depart on schedule and advised him how much gasoline he would require. As soon as this information was released there was a great to-do loading the aeroplane. Frequently it departed underloaded or overloaded.

As aviation became more complex the pilots were required to come to the airport a lot earlier to make decisions. Sometimes there were as many as ten of them. One wished to depart immediately and two more decided to hold for two hours and the rest were all for going home. Passengers began to demand some order and the owners could see they were going to lose a lot of money if they did not provide it. So the

Flight dispatching has now evolved into a profession and its greatest contribution is safety

owners said to the harassed fellow who was hanging weather reports and answering telephones – 'you there! you are now responsible to plan these flights according to our policies'. They gave him three text books. One on meteorology, the other on navigation and a book binder with three pages called the company manual, containing company policy.

He worked hard. He planned flights well in advance. He cancelled and delayed them until morning when the pilots could see where they were going. Consistent with the number of errors he made, the company manual increased in size. He became a professional at his work and the pilot hardly ever disagreed with his planning. In fact he felt very dependent on this man and learned to respect him. And, there evolved the profession of flight dispatching.

Today the flight dispatchers' main efforts are directed to maintaining order in the airline. Every flight is flown on paper, long before it is scheduled to depart. If it cannot be flown on paper safely, it is delayed or cancelled. Airlines cannot hope to remain in business if these decisions are not made well in advance of departure time. This authority is vested in the flight dispatcher. Only through the proper use of a professional flight dispatcher can the airlines claim to be giving proper consideration to safety, comfort and service to passengers, and to the published schedule.

Because of these responsibilities the flight dispatchers' greatest contribution to the airline is safety. This is true because where there is order there is efficiency and where there is efficiency there is a greater degree of safety.

Since flight dispatching has now evolved into a profession and its greatest contribution is safety, those governments who have not already done so, should take steps to see that this profession does not, because of ignorance and selfishness, evolve all over again. The price for such an evolution has already been paid!

From Flight Dispatcher, Toronto

The International Radio-Medical Centre in 1957

THE ACTIVITIES of the International Radio-Medical Centre (CIRM) continue to expand. The report of the Centre, a non-profitmaking voluntary organization for dispensing medical assistance to seafarers by radio, for 1957 shows that 8,633 messages were handled (as against just over 7,000 in 1956), 1,170 seafarers treated (840) and twentyfour air-sea missions (seventeen) completed in collaboration with naval and air force authorities.

During the year the CIRM managed to obtain the use of additional radio facilities which will improve its service considerably in the future. Another facility welcomed by the head of the Centre, Prof. Guido Guida, has been the provision of a corvette of the Italian Navy, for training personnel and transporting patients.

Two new ventures started by the Centre are the compilation of a four-language 'code-book for the transmission of medical messages in cipher' and the establishment of a section to study 'the problems of social and medical assistance to seamen'.

Paying for insurance by forced labour

IN HUNGARY it is possible to end up doing forced labour for being involved in a motor accident, writes the Italian newspaper *Discussione*.

The paper described how a Hungarian taxi driver had collided with a car belonging to the Italian Legation in Budapest. The taxi was undamaged, no one was hurt, but the Legation's car was smashed beyond repair.

The Tribunal that tried the case agreed that the taxi driver was to blame, *Discussione* continued, and ordered the insurance company to pay up. However, the insurance company, a State concern, had meanwhile arranged with the Tribunal for the taxi driver to be sent to a coal mine to do forced labour until he could refund the money they had to pay out.

This action left the taxi driver's family without means of support, and they would have starved if the Italian Legation had not taken care of them.

What kind of sleepers?

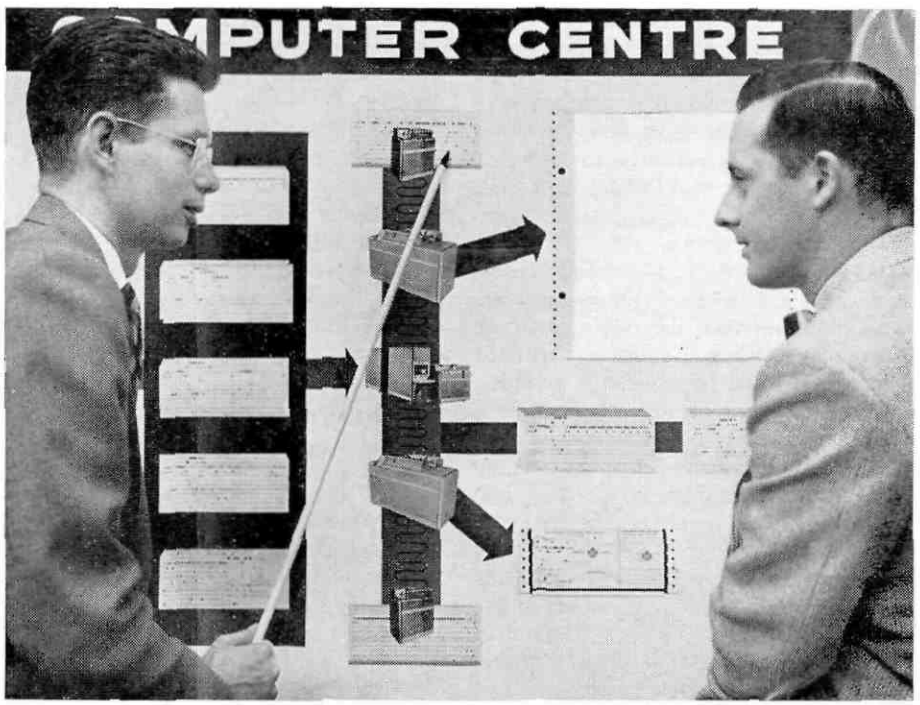
EVERY YEAR over the world's railway network some 100–120 million sleepers have to be renewed. This is a costly business – sixty per cent of the cost of track renewals coming under this heading. Railway managements have naturally sought ways and means of reducing these costs, and a conference of railway engineers was held in Munich in the Spring of 1957 to study the problem.

Statistics quoted at the conference revealed that the Swedish, Norwegian and USA networks had wooden sleepers throughout. Of the ten countries for which figures were quoted, Germany, France, Britain, Italy, Sweden, Norway, Austria, Switzerland, the USA and India, only four had laid concrete sleepers. They are Germany (6%), France (3%), Britain and Austria (1%).

The use of steel sleepers is much more extensive, however. More than two-thirds (68%) of the Swiss Federal Railway network is laid with steel sleepers, whilst the percentage in the case of the German Federal Railways is forty-three. The Indian network also shows extensive use of steel sleepers, twenty-six per cent on the narrow-gauge and twenty-seven per cent on the broad-gauge railways. (In the case of the latter, twenty per cent of the network has wooden sleepers whilst the remainder is laid on cast iron plates.) In addition to these countries, a moderate use of steel sleepers is shown by France, Italy and Austria.

Electronic brain solves Canadian rail pay problems

Railway accounting departments constitute one important sector of the transport industry in which the impact of automation is already making itself felt on a fairly extensive scale. Data processing machines are now revolutionizing railway accountancy techniques on both sides of the Atlantic. The following report, which we reproduce by kind permission of "Canadian Transport" describes the system now in operation at the Canadian National Railway's new Computer Centre in Montreal.



The supervisor of computer programming at the Montreal centre illustrates a point for the operations manager by referring to the payroll chart. The centre has been in existence since 1 May 1957

AN ELECTRONIC BRAIN that can do 1,300 additions or subtractions a second without ever coming up with the wrong answer is taking over the huge job of processing the Canadian National Railways payroll for the Central Region.

This mathematical marvel, now in operation at the new CNR Computer Centre in the International Aviation Building in Montreal, is officially known as the IBM Type 650 Magnetic Drum Data Processing Machine but people who have watched it perform are more inclined to think of it as a sort of 20th century Aladdin's 'genie'. It can work wonders!

The calculations made by the electronic computer dazzle the mind. It can do sixty multiplications of ten digit numbers per second, or fifty divisions per second. It can locate a fact in about 2.4 thousandths of a second. It can provide the company with an infinite variety of valuable statistical material. It can, if necessary, serve as company accountant, inventory clerk, purchasing and billing department, paymaster and statistician. It can take the drudgery out of accounting and reduce mountains of paper work to a minimum.

But before the 650 computer can perform any work it must be fed a tremendous amount of data to be stored away in its complex brain and it must be told exactly how to select this data from its 'memory' and how to use it. The machine has no intelligence of its own despite its remarkable feats.

'Stupid Giant'

'It is,' remarked R. D. Armstrong, vice-president of accounting and finance, 'a powerful but exceedingly stupid giant.'

The 650, with its panel of flashing lights and its electronic gadgetry, is the central attraction of the company's new computer centre but it requires the help of other vital but less dramatic machines to do its work. Satellite equipment set up to work with the electronic brain includes two accounting machines, two summary punches and a read-punch unit. All the machines, clustered together in a special air-conditioned room, are open to public view through lobby windows in the aviation building.

The new centre will progressively take over the pay computing and production of pay cheques for the entire system. It will also take on other functions requiring mass data handling as the 'integrated data processing' program in the CNR expands.

The CNR payroll is a big one. Every year, in fact, the company issues nearly three million cheques.

The computer, with its satellites, can issue some 1,500 cheques an hour which means the entire Central Region payroll can be put out in about forty hours. The tireless 650 will be available on a twenty-hour day basis with a four-hour period allowed for servicing.

Besides putting out the payroll, the 650 will supply CNR's management with statistical material which will help company officers make policy decisions. Fast, accurate information from this inanimate Einstein will enable management to see the troublesome situations building up well in advance. Shortages of certain types of equipment, for example, will be spotted long before they occur. Remedial action can be taken ahead of time. As one official explained: 'The computer will permit the business executive to look through the

windshield while he drives his vehicle where previously he had only the rear view mirror.'

Many other jobs

The computer may also fill other roles. It may be used for car tracing and freight car allocation. It is likely to play a big part in maintaining pension and staff records. It can supply operating and capital budget control data. It can be used for cost accounting, inventory accounting and billing.

Establishment of the computer centre in Montreal is part of the company's current integrated data processing program. The program itself is designed to increase the effectiveness of CNR's clerical and accounting operations and to reduce the endless flutter of pieces of paper through scores of company offices. While the improvements and greater efficiency will reduce company costs, they will also benefit employees. Under the program, a number of lower-paid clerical positions are being eliminated but there will be an increase in the number of higher-rated positions.

'Our program is an evolutionary one, not a revolutionary one,' emphasized Mr. Armstrong, and personnel already employed by the company are filling the new jobs opened as the result of the program. But Mr. Armstrong points out that the new program will demand adjustments. Employees will have to learn to do new things in new ways.

CNR's automation program has been carried out in two sequences. First, the company converted from manual methods to conventional tabulating equipment; now it is proceeding to fully integrated data processing. The new data processing department was established May 1st 1957.

The 'heart' of the 650 computer is a cobalt-nickel plated metal cylinder or drum 16 inches long and four inches in diameter that spins at 12,500 revolutions per minute. The surface of the drum is subdivided into cells, each of which will store data being processed as well as instructions that specify how it is to be processed. To solve a problem, a set of instructions is designed and stored on the surface of the drum as a pattern of magnetized spots. The instruc-

George Harrison,
Grand President, US Brotherhood of Railway Clerks

Profile of the month

'THE BATTLE IS RAGING FOR THE MINDS AND CONSCIENCES OF MEN, and poverty and degradation and exploitation are the thing that men respond to and cause them to trade their freedom for these godless ideologies that are now prevailing throughout the world.'

George Harrison was coming to the end of his speech on the subject of regional activities at the ITF's 1956 Congress. It was a speech which made a marked impression on the international audience both in its content – a neat summary of the ethical and self-interested motives, equally compelling, for the strong to aid the weak – and in its delivery – which revealed a man of vision and sincerity.

Like most of the leading figures in the free trade union movement he has somehow found time in a long and busy career to take on responsibilities outside his immediate trade union functions. Political (National Academy of Political Science), welfare (the National Council of the American Heart Association), religious (National Council of the Churches of Christ in the USA) and official (White House Conference on Highway Safety) bodies have come to value his advice. Twice the US Government has tapped his abilities and industry, first as assistant to the Director of the Economic Stabilization Administration and later as assistant to the Director of the Office of Defence Mobilization.

Activities such as these – and their variety is as remarkable as their number – are taken very seriously, but of course must take second place to George Harrison's main preoccupation, his trade union work.

He is, first and foremost, Grand President of the US Brotherhood of Railway and Steamship Clerks, Freight Handlers, Express and Station Employees (mercifully more usually known as the Brotherhood of Railway Clerks – although the full title much more accurately describes the union's field of organization). He has been head of this large union (it numbers well over 300,000 members) since 1928. Six years before, he had been elected Vice Grand President at the age of twenty-seven. He was certainly something of a trade union prodigy for he was the General Chairman of the Missouri Pacific Railroad System Board of Adjustment in 1918, only a year after joining the union.

As leader of a large union he inevitably plays a prominent role in the national trade union centre. In 1934 he was made a Vice President of the American Federation of Labour and when the AFL merged with the Congress of Industrial Organizations he became a Vice President of the merged body. He serves on the AFL–CIO Executive Committee and is Chairman of its Education Committee. As for the railwaymen's national organization, he is a member of the US Railway Labor Executives' Association (which is an ITF affiliate) and was chairman of the Association from 1935 to 1940.

If there were forty-eight hours to a day, all this would be enough for most men but George Harrison has even managed to add international commitments to his field of activity. He has been an American workers' member of the ILO Governing Body and was one of the American delegates to the London conference which saw the birth of the ICFTU. He has recently been appointed Chairman of the AFL-CIO International Affairs Committee.

Everyone is an internationalist today, whether they like (or realize) it or not, but he is an internationalist from conviction, concerned, as he said at Vienna, with his 'freedom as one of the citizens of the world'. For many years a recognized national figure he has made his mark in international labour affairs and although this has not drawn the publicity which his national activities necessarily attract it is valued none the less highly by his friends and colleagues in many parts of the free world.

The Brain. Known as the console, the machine is the brain of this new rail accounting system

tions are then 'read' by the machine. Any magnetized spot recorded on the drum will remain there permanently, or until it is erased by recording another spot on the same location. The machine may be turned off completely without losing its 'memory'.

The human need

The 650 can, when instructed, prepare and produce almost any information that can be derived from almost any conceivable combination of facts contained in its memory, or introduced through its input mechanism. But the computer can do absolutely nothing without this initial instruction. Preparation of programs for the CNR computer has been under way since September 1956 and each program, or set of instructions, is thoroughly checked before it is fed into the machine. A faulty program would be poison to the 650.

The computer, despite its wizardry, is not infallible. If the machine is told to do the wrong thing, and the wrong thing is something it can do, it will cheerfully go ahead and do it faster than practically any other machine in the world.

But once the computer has been properly programed it becomes completely intolerant and will only process input data which is in accord with the instructions in its memory. In a case of input that is not valid the machine will stop and indicate in the console lights the location of the error.

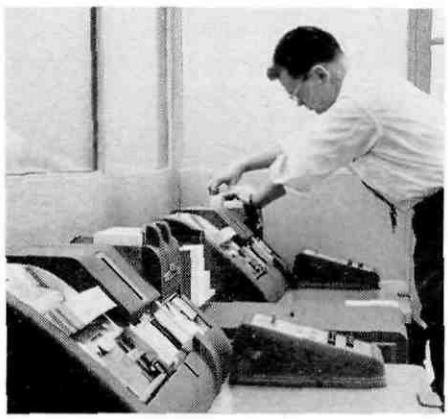
CNR officers decided that the payroll job should be the first task taken on by the computer because Canadian National's payroll operation involves large masses of complex but fairly repetitive work, all of which must be performed within a tight time schedule. CNR employees work at 260 different trades and have many variants in wage scales, basic pay plans and arbitraries. There are 300 different payroll deductions which makes the actual computation of the payroll one of the most complex large-scale accounting operations in Canada.

North Bay, Toronto, Montreal

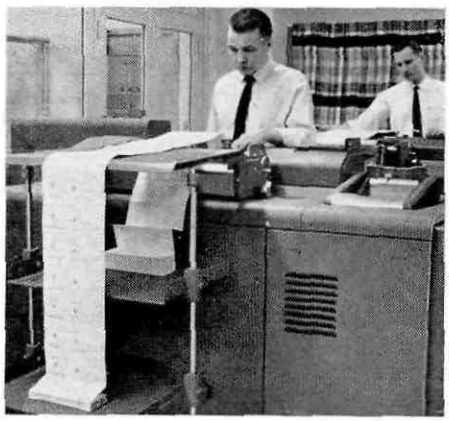
Here is how the new payroll system will work: When Joe Railroader of North Bay, Ont., finishes work all necessary information is sent to the Toronto office where it is converted to punch cards. These cards can be either mailed to the computer centre in Montreal or sent over a new 'transceiver' network which allows operators literally to 'send holes through the air'. Blank cards placed in the transceiver machines in Montreal pick up these holes from cards fed into the machines in Toronto. In Montreal, the punched cards containing information on the hours of work and rates of pay are placed in one of the auxiliary units working with the computer. The computer analyzes the information according to the instructions it has been given, comes up with the right answers and then passes them on to one of the satellite machines which prints the cheque, along with a payroll statement. The cheque is sent to North Bay, Ont., by return mail.

All the time the computer is operating,

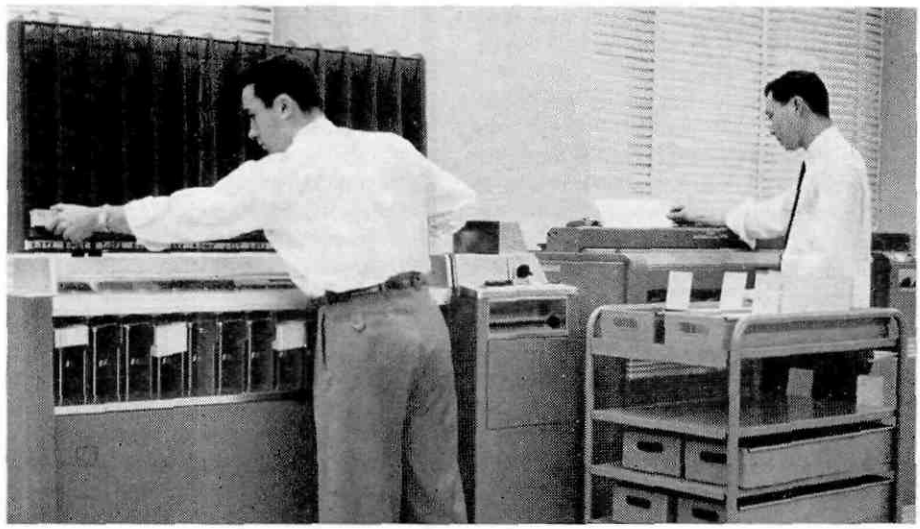
(continued on the next page)



Toronto transreceiver. Manned by John McBratney, this machine relays information to the accounting department in Montreal by a punch-system that almost sends holes through the air



Checking cheques. A few miles of cheques roll out of the new electronic machines every year at the remarkable rate of about 1,500 an hour. Central Region's payroll takes only 40 hours



Jimmy Walker (left) is busy operating an electronic sorter that shuffles cards at really astonishing speeds to match punched holes, while his colleague is engaged in looking after a statistical sorter

What they're saying

Seamen are not gangsters

THE ABOVE STATEMENT needs to be emphasized. That is why we want to underline the fact that every decent seaman should continually try to impress on young people who go to sea that life on board is a well-ordered and respectable one and that those who cannot adapt themselves to it should look for some other field of activity. Of course, there are also a number of older persons who do not fit into such a life and they, too, should seek employment ashore in order not to spoil other people's existence at sea.

Such general reflections as these come to mind every time that one hears of a new case of hooliganism on board. For the most part these acts of hooliganism occur just when the ship in question is being laid up and the whole crew are signing off. It is obvious that discipline must be tightened up so far as such regulations are concerned. Those who remain on board the vessel should see to it that crew members signing off leave everything in good order. If anyone makes a mess or destroys equipment he should immediately be brought to book and made to clear up after him before he leaves the ship. If that does not help, then the incident should be reported to the union, which can prevent unsuitable elements from going back to sea. However, if this sort of thing happens at the very moment when the whole crew leaves the ship it is, of course, more difficult for any check to be made by crew members. For it is often those who leave the ship last who are the guilty ones. On the other hand either the shipping company or the officers can often prevent such things from occurring before paying off, by making an inspection to see that everything is in order.

We must put an end once and for all to this type of hooliganism. No one should be able to spoil the good name of the seafarer or allow others to do so.

Merimies (Finnish Seamen's Union)

Bargaining on safety

UNIONS HAVE PLAYED A MAJOR ROLE over the years in making work safer, but there is still room in virtually every industry for substantial improvement in existing safety conditions.

Until a major accident strikes, however, safety is rarely a dramatic part of collective bargaining or daily work procedures. Even with the best intention, and even though its importance may be acknowledged by management and union, safety procedure often lapses into a routine matter, with sensitivity to hazard blunted.

Unions should therefore take stock of safety activities periodically without having to be prodded by a series of accidents. The beneficial results may not be measurable, but they are nonetheless present: Almost every union can benefit from a fresh look at its safety activities. The pay-off is in members' limbs and lives.

AFL-CIO Collective Bargaining Report.

'Cheap' flags are false flags

Die Tat of Zurich said in a recent issue that 'the cheap flag countries give foreign shipowners freedom from taxes in return for small registration fees and annual charges. These vessels thus secure a considerable competitive advantage in the world freight markets and this advantage influences freight rates with the result that goods are carried more cheaply. These small states therefore render a valuable service to the consumer.'

Apart from the fact that it has yet to be proved that the consumer really benefits from cheap freight rates – in other words that these savings reach the customer instead of disappearing into the pockets of the 'middle-men' – it would be idle to imagine that the consumer's interests are the prime motive for registration under cheap flags. We do not attribute such high-mindedness to the owners who commission their ships under these flags or to those who invest their capital in these ships.

The chief attraction is tax exemption and the fact that ships under false flags (that is the more correct description) are not brought within internationally accepted safety standards. It is not for nothing that many such ships are designated as floating coffins by seafarers.

Swiss Transport Worker's Union

Shorter hours or extra goods

TECHNOLOGICAL CHANGE means higher productivity. We can, and probably will, choose to take part of the gain in the form of shorter hours. But we may choose to take much, or most, of it in the form of extra goods and services, especially services. There are still a great many people, even in Canada, with the second highest standard of living in the world, who are going short of things we like to think of as commonplace: decent housing; modern household facilities (running water, baths, flush toilets, electric or gas stoves, mechanical refrigerators, washing machines, vacuum cleaners, telephones, furnaces, automobiles). We could do with a lot more schools, more hospitals, more roads, more parks. Most of us, even in Canada, are a very long way from having even all the modern conveniences that already exist, let alone the new ones technological change is making possible. We are a long way from

(continued from page 58)

it is possible to tell what is going on inside its complex 'brain' by watching the flashing lights on the console of the machine. Information is now fed into the machine on cards but eventually officials plan to use magnetic tape as the input medium. This will permit even faster processing.

CNR officials admit that the computer is no cure-all for all the problems of company accounting. If not properly operated, it could in fact become a Frankenstein and introduce even worse problems than now exist. And even when the 650 is working at full efficiency, there will still be a place for more conventional equipment in the company's accounting operations.

But all the people working with the new electronic 'genie' agree that it is a remarkable machine. And one thing is sure: it will not run a railroad by itself. Human brains and human skills are still the company's most valuable assets.

being as healthy as we could be, or as well educated; we are long way from having all the literature and art and music and travel we could enjoy. We are a long way from having all the fun we could. And even if we arrive fairly soon at a point where we feel we have enough of everything we can think of wanting, there are the people in the hungry two-thirds of the world. *They* are not going to run out of wants in a hurry.

So I don't think lack of wants will force us to cut hours. We may well find that, even with all the latest improvements, there is quite enough work to keep everybody busy forty hours a week. Of course, we may not *want* to be busy forty hours a week; we may *choose* go take our extra productivity in spare time rather than goods or services. But that is a different thing from being *forced* to take spare time by economic or social necessity.

Dr. E. A. Forsey, CLC Director of Research

Which are the colonial powers?

AFTER WORLD WAR II the Western powers granted freedom and independence to India, Pakistan, Ceylon, Burma, Indonesia, Malaya, the Philippines, Vietnam, Laos, Cambodia, Israel, Syria, Lebanon and Jordan in Asia; liberated Ethiopia, granted independence to Libya, the Sudan, Tunisia, Morocco and Ghana in Africa; and to the Federation of the West Indies in the Western Hemisphere.

During the last seventeen years, the Soviet Union has deprived of their freedom and independence Poland, Czechoslovakia, Bulgaria, Rumania, Hungary, East Germany and Albania; grabbed and incorporated into the Soviet Union Lithuania, Latvia, Estonia and the Eastern provinces of Poland, the Rumanian provinces of Bessarabia and Bukovina, the Carpathian-Ruthenia province of Czechoslovakia, half of the East-Prussia province of Germany, invaded and carved out large slices of Finland, annexed Tannu Tuva from China, detached and removed from Chinese control the vast province of Outer Mongolia, penetrated Inner Mongolia, Manchuria and Sinkiang, seized the Chinese ports of Dairen and Port Arthur, attempted to seize North Persia and parts of Turkey and annexed the Japanese Kuriles Islands and Sakhalin.

Mao Tse-Tung's China followed the example of the Soviet Union. After the Chinese communists seized power they invaded and occupied Tibet, grabbed part of Burma and even attempted to seize some Indian territory. Chinese 'volunteer troops' in Korea and North Vietnam helped to install puppet colonial governments.

From ICFTU Radio Service

Pioneer spirit still lives on

THE BIG AIRLINES OF TODAY are organized and administered in such a way that much of the uncertainty, and hence the adventure, of early aviation has disappeared. But in services such as those provided by the Saskatchewan Government Airways in Canada some of the spirit of the pioneer era, of the famous Canadian 'bush pilots', still lingers, with the pilots having to rely on visual contact with the ground for navigation.

The Airways are ten years old and have delivered over 100,000 passengers safely to out-of-the-way destinations. The Airways workers are organized by the Canadian Brotherhood of Railway Employees and Other Transport Workers (an ITF affiliate).

International Transport Workers' Federation

President: H. JAHN
General Secretary: O. BECU

7 *industrial sections catering for*

RAILWAYMEN
ROAD TRANSPORT WORKERS
INLAND WATERWAY WORKERS
PORT WORKERS
SEAFARERS
FISHERMEN
CIVIL AVIATION STAFF

- Founded in London in 1896
- Reconstituted at Amsterdam in 1919
- Headquarters in London since the outbreak of the Second World War
- 174 affiliated organizations in 58 countries
- Total membership: 6,500,000

The aims of the ITF are

to support national and international action in the struggle against economic exploitation and political oppression and to make international working class solidarity effective;

to cooperate in the establishment of a world order based on the association of all peoples in freedom and equality for the promotion of their welfare by the common use of the world's resources;

to seek universal recognition and enforcement of the right of trade union organization;

to defend and promote, on the international plane, the economic, social and occupational interests of all transport workers;

to represent the transport workers in international agencies performing functions which affect their social, economic and occupational conditions;

to furnish its affiliated organizations with information about the wages and working conditions of transport workers in different parts of the world, legislation affecting them, the development and activities of their trade unions, and other kindred matters.

Affiliated unions in

Argentina • Australia • Austria • Belgium
Brazil • British Guiana • British Honduras • Canada
Chile • Colombia • Cuba • Denmark • Ecuador • Egypt
Estonia (Exile) • Finland • France • Germany • Ghana
Great Britain • Greece • Grenada • Hong Kong
Iceland • India • Indonesia • Israel • Italy
Jamaica • Japan • Kenya • Luxembourg
Malaya • Mauritius • Mexico • The Netherlands
New Zealand • Nicaragua • Nigeria • Norway
Nyasaland • Pakistan • Panama • Paraguay
Philippines • Poland (Exile) • Republic of Ireland
Rhodesia • St. Lucia • South Africa • South Korea
Spain (Illegal Underground Movement) • Sweden
Switzerland • Tanganyika • Trinidad • Tunisia
Uganda • Uruguay • United States of America

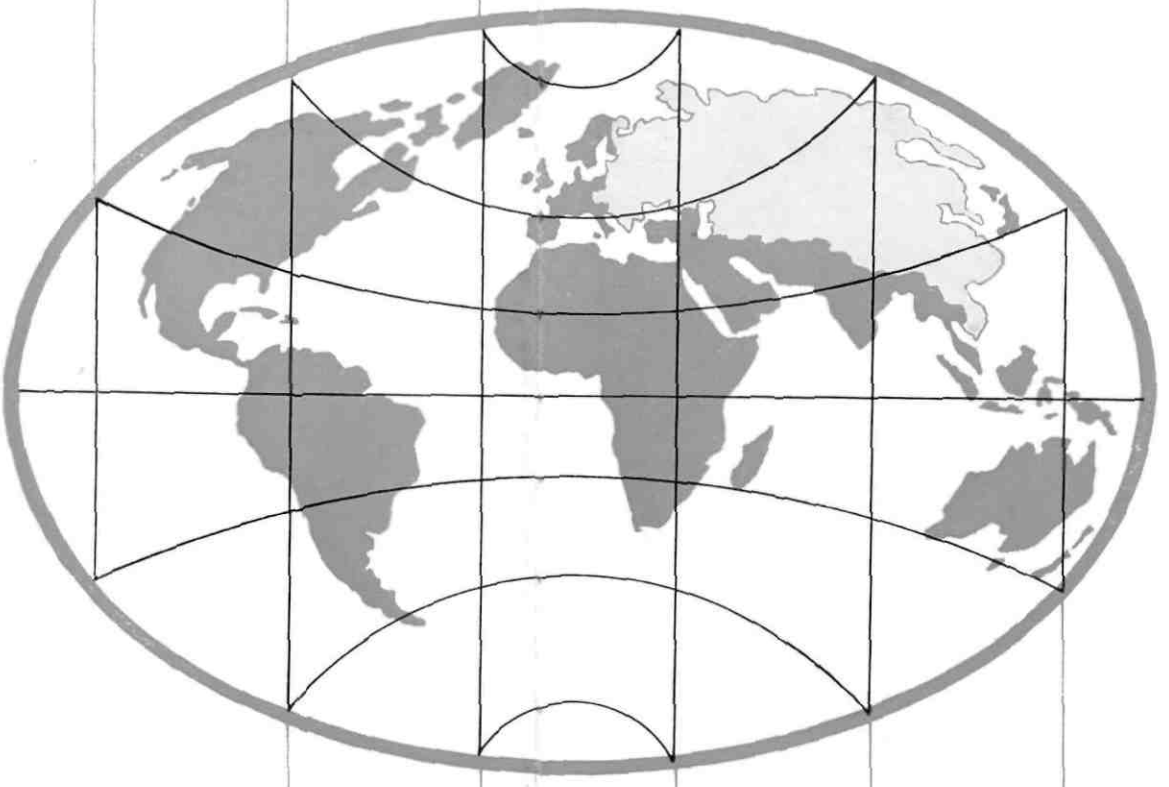
Publications for the world's transport workers

International Transport Workers' Journal

Internationale Transportarbeiter-Zeitung

ITF Journal (Tokyo)

Editions of Journal



Pressebericht

Editions of Press Report

Pressmeddelanden

Communication de Presse

Transporte (Mexico City)

Press Report Two separate editions in English issued in London and Tokyo

Printed in the Netherlands by Coster, Amsterdam