

International Transport Workers' Journal

12



in this issue

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Jets cut costs

Dolabella—a proving ground for ship automation

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Improved medicine at sea

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Cover Picture: A VC10 jet of the British Overseas Airways Corporation in flight. (BOAC Photo.)

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ROAD SAFETY AND VEHICLE LOADS

A Norwegian committee has been studying the problem of accidents in road haulage which are caused by unsafe loads and has recommended a number of specific methods whereby different types of load may be made more secure.

UNSAFE LOADS IN ROAD HAULAGE are a serious accident risk. A load which has been badly secured or which is not properly balanced on the loading platform of the vehicle may shift as a result of swerving, sharp braking or sudden acceleration. The resulting accident may well be fatal for the driver. The danger of loads crashing forward into the cab, as often happens in such circumstances, is a serious one. When this occurs, cabs built of ordinary materials or without any special devices to protect them are invariably crushed by the weight and momentum of the displaced load. The driver is usually killed or badly injured.

Consideration of this problem in Norway led to the setting up in the road haulage industry of a special committee to study the various loading methods applied for different types of vehicles

and different types of freight, and to recommend methods which would ensure the maximum degree of safety.

A few examples of the safety measures which the committee found to be appropriate and which it has listed and explained in an illustrated brochure are given below.

The forces involved

To get an idea of the forces which exert pressure on a load, we may consider what happens when a vehicle of normal power and dimensions carrying a load of 4 tons is suddenly set in motion at the maximum rate of acceleration of which it is capable. The load will tend to stay where it is and there is a risk that it may fall from the back of the vehicle. The force of the load's resistance will be in the order of 1,000kg. If the vehicle is suddenly braked the load, which has no brakes, will tend to

continue in motion since, before the moment of braking, both load and vehicle were travelling at the same speed. The pulling force which will exert itself on the load, drawing it towards the cab, may be as much as 2,500kg. Swerving will exert a centrifugal force on the load which will tend to force it over to one side of the vehicle. At a speed of 50km. per hour, swerving in a radius of 50m., the force influencing the load will be about 1,500kg. This force becomes proportionally greater the higher the speed and the sharper the swing. It is important to note that a twofold increase in speed means a quadrupling of the lateral force.

Friction between the load and the platform will to a certain extent counteract these forces, but friction alone will not by any means be suf-

ficient to ensure that the load stays in position. There must be sufficient fastening gear—strong chains, ropes and other equipment—to secure the load.

Loading platforms

Many accidents are caused by deficiencies in the loading platform or its equipment, and it is important that the platform should be firmly secured to the vehicle's chassis and be kept in a good condition in all respects.

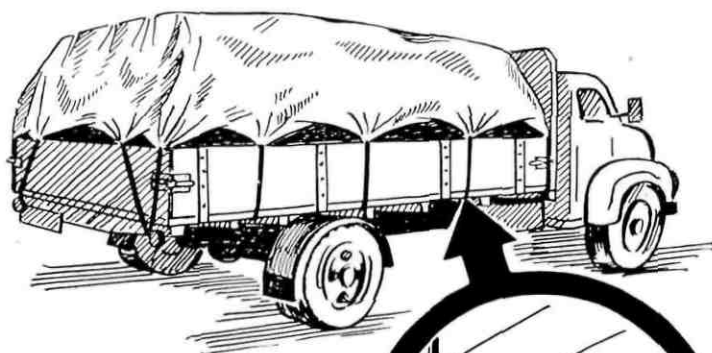
The locking devices on the platform walls must be solid and so constructed that they cannot drop out of position while the vehicle is in motion. The locks at each corner should be self-locking. The side walls should also be equipped with tensile metal supports whose lower ends protrude below and underneath the bases of the walls.

On the underside of the loading platform, along its edges, there must always be a sufficient number of solid hooks or other devices to provide secure attachments for chains and ropes.

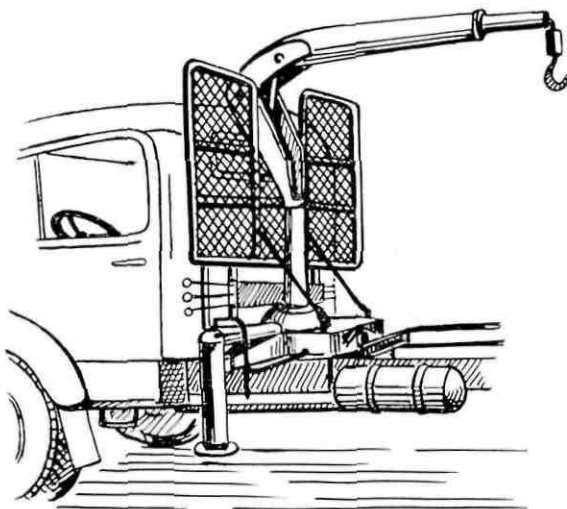
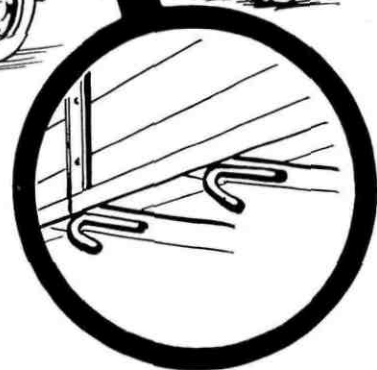
Accidents often happen in which drivers' cabs are crushed or damaged because the load has shifted following a collision or abrupt braking. Heavy or long loads, such as beams, timber and tubes, are particularly dangerous. To protect the cab and the driver the platform wall at the forward end should be solidly constructed, extended upwards to a sufficient height and be reinforced by two tough steel frame members fixed to the chassis under the loading platform. For timber transport a structure made of tensile steel mesh can be recommended as additional protection for the cab.

When cylindrical objects, such as vats, cable drums, etc., are loaded the cab can be given extra protection by the use of wedge shaped stops which are placed at the forward end of the platform. Similar devices may be used at the rear end to stop the load from falling backwards off the vehicle. Iron devices are obtainable with spikes which hold fast to the platform on pressure from the load.

All ropes and chains must be well secured and checked regularly during a trip. The first check must be made



Tarpaulins and straps or ropes must be of good quality. Fastening hooks must be welded to iron mountings which are firmly anchored to the platform or chassis.



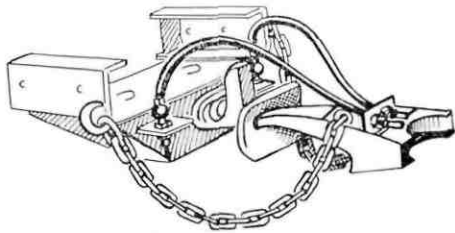
Cabs on vehicles for timber transport must be protected from damage resulting from movement of the load on heavy braking, in collisions, etc. The protective frame can be part of a stand for loading equipment.

shortly after setting off, so that all necessary adjustments can be made. If a tarpaulin cover is used, it must be drawn tightly over the load and secured firmly so that it cannot blow off. A rope should be tied over the cover.

Trailers

A large number of coupling devices are available for securing trailers to the traction vehicle. Some are constructed to bear a horizontal pulling force and

are therefore only suitable for 2-axled trailers; others are built to support such a force vertically and can be used for single-axled trailers. Decisions as to what type and strength of coupling is to be selected should be determined by the maximum trailer-load which the vehicle is able to take, either on one or two axles. An unbreakable rule should be that home-made couplings are never used: only properly designed, factory



A method of securing trailer couplings. The safety chains and brake cables are attached to the coupling mounting on the trailer. In the event of breakage, the brake cables become unattached and the brakes are automatically applied, bringing the vehicle and its trailer to a halt.

made couplings guaranteed for specified loads should be fitted.

Of equal importance is that the couplings should be fixed securely to the vehicle. The cross beam onto which the device is mounted should have the right dimensions and should be soundly built into the chassis. On most vehicles

not built to take trailers the original cross beam needs to be replaced by a stronger one. Welded mountings are of doubtful efficacy since it is difficult to ensure the correct kind of welding for the materials involved. The most effective mounting is obtained by screwing or riveting, possibly in conjunction with welding. The coupling should be mounted strictly according to the manufacturer's directions. The coupling shafts on the trailer must of course also

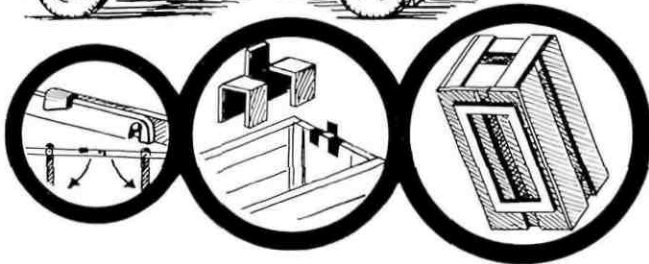
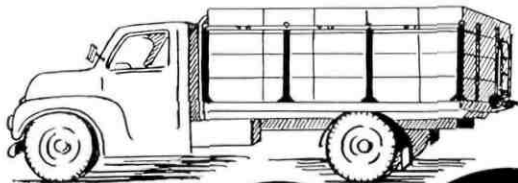
be made to the required specifications and must be solidly mounted on the trailer.

No less important for the coupling to function correctly is that it should be regularly checked and properly maintained.

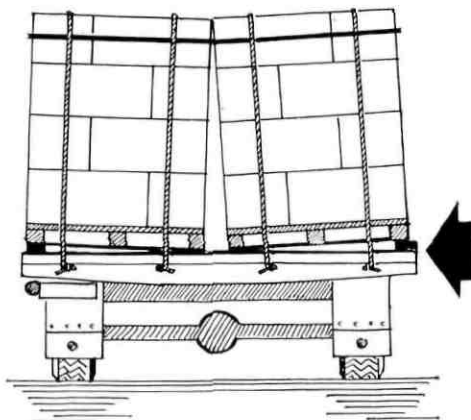
The position of the coupling exposes it to the pernicious effects of mud and grease. It should therefore be cleaned and greased and its efficient functioning checked at frequent intervals.

Wear and tear must also be checked. Roller bearings should not have changed their shape — distortion should not be more than 1mm. in the case of ordinary bearings or 3mm. in the case of spring bearings. With drawbar coup-

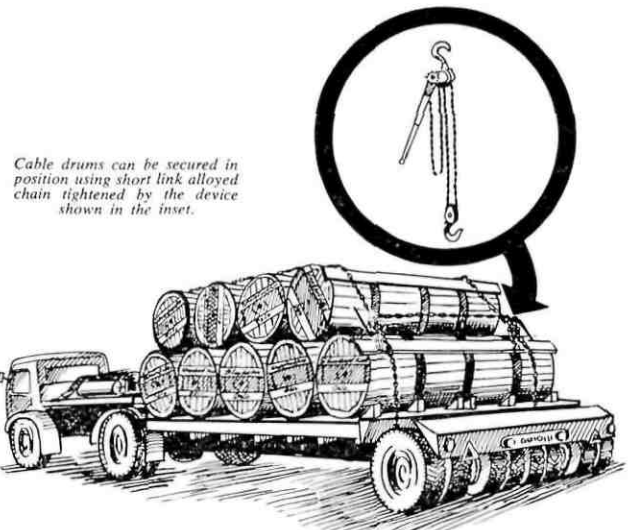
Some methods of securing loads



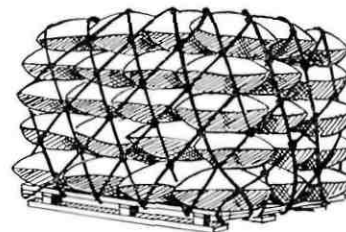
Spars must be sturdy and be high enough to hold the top layer of crates or boxes in place. Crossbars between the spars should be hinged to the spars so that they can be unfastened and dropped to facilitate loading and unloading. Clumps fitted to crates are a good means of binding the load. Well designed crate bottoms provide added stability.



Pallets should be positioned on the loading platform in such a way that they lean over slightly towards the middle. Blocks 1" thick can be used to tilt the pallets. It is also important to secure the load on the pallets themselves. Ropes should be tied over the load and the side walls should remain in position while the vehicle is in motion.

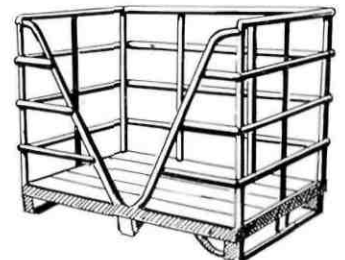


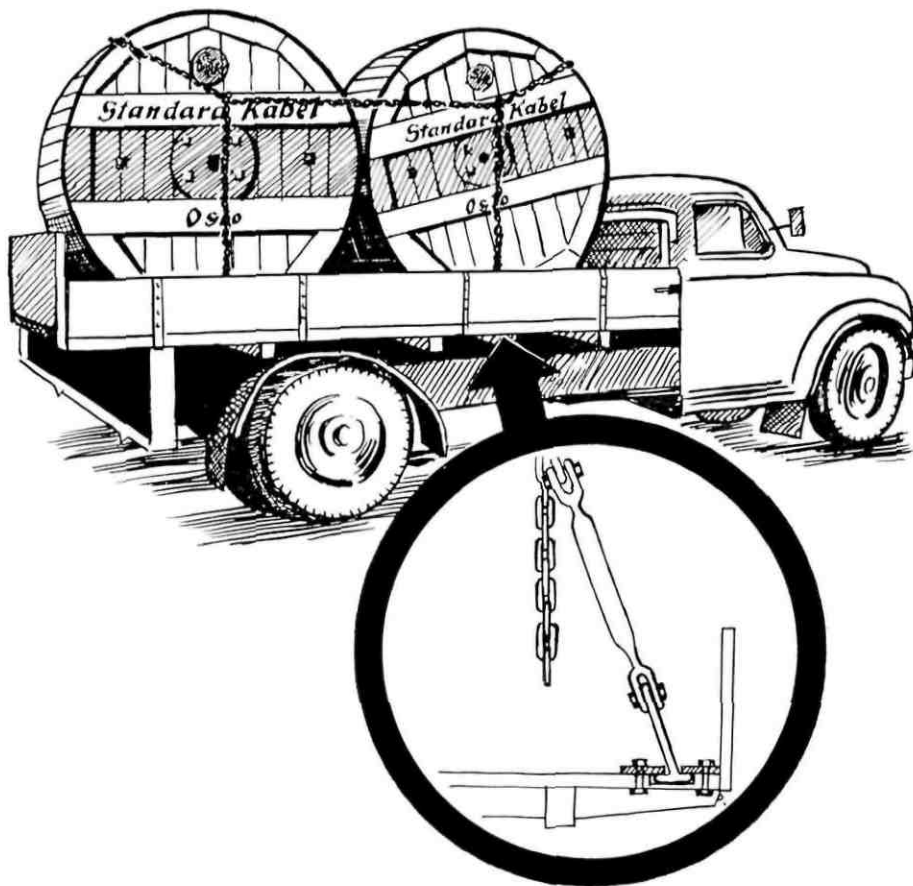
Cable drums can be secured in position using short link alloyed chain tightened by the device shown in the inset.



Sacks can be kept in place on a pallet by securing a jute net over them. A larger jute net can also be used fastened to the rope hooks under the loading platform to cover secure the entire load.

Pallets can be provided with various types of enclosing grids. Pallets should be prevented from shifting on the platform by securing them with ropes or by fitting spiked bases.





Cable drums should be secured with chain arranged and anchored as shown. Alloyed short link chain in $\frac{3}{8}$ " thicknesses should be used.

loading platform. The illustrations show a few examples of recommended methods.

Transport of timber and wood products

When tree trunks are loaded, either a lorry with single-axled trailer or a bogie vehicle should be used. When an ordinary two-axled vehicle is used without a trailer, the load at the rear end becomes too great for safety and adversely affects steering. For logs or timber in short lengths, of course, ordinary trucks can be used.

Loading banks and spars must be made by recognized manufacturers and properly suited to the type of transport for which they are intended.

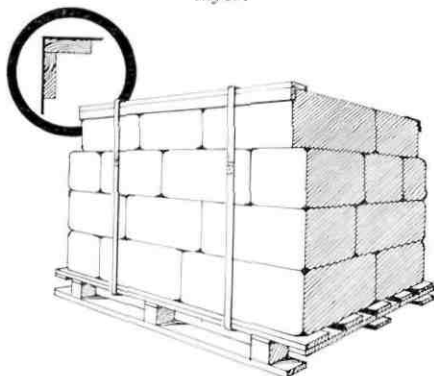
Turning banks should be mounted on a swivelling base which is firmly anchored to the chassis. The mountings which anchor the spars to the bank should be firm and tight so that the spars remain fixed in a perpendicular position and hold the load within the

(Continued on page 279)

lings distortion between the eye of the drawbar and the bolt should not be more than 3 to 5mm.

Couplings should be checked regularly and thoroughly for cracks and other damage in their mountings. Any faults discovered should immediately be repaired, and worn out parts replaced. These repairs and replacements should be carried out by properly qualified workshop personnel.

Smooth cardboard boxes, paper packages, etc., should be bound together with some kind of frictional material between each layer.



Accidents are not infrequent in which the coupling gives way and the lorry is separated from its trailer. These accidents can be avoided by the use of extra securing equipment between the lorry and the trailer.

One of the illustrations shows an effective securing system. It ensures automatic braking as soon as the brake cables become disconnected. The brake cables and safety chains are fitted to the coupling mountings on the trailer, but the brake cables are slightly shorter than the safety chains.

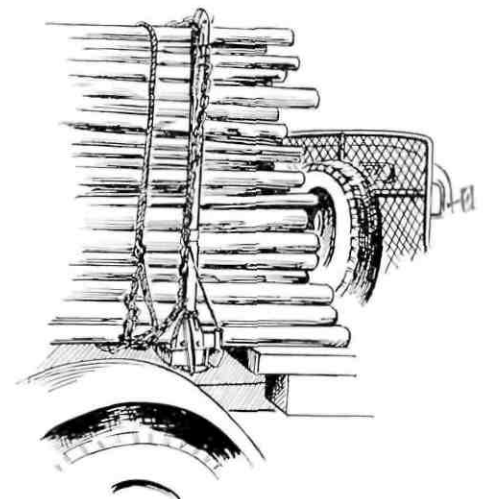
If the couplings break, the brake cables are pulled out of their connections, the brakes go into action, the chains draw tight and the lorry and trailer come to a standstill.

For the system to work properly, all welding must be done by specialists and the toughest possible type of chain must be used.

Methods of securing loads

Different methods must be used for securing different types of loads to the

Each pair of spars should be secured together by chains between the two tops or by separate chain arrangements on the outside of each pair of spars. A length of rope or steel hawser should also be tied around the load at points close to each pair of spars. If the load is crooked or has a smooth surface, it should also be secured midway between the spar pairs. The load must be 'humped' at the top, so that there is no vacant space between it and the ropes, etc. Alloyed chain must be used and this must be of at least $\frac{3}{8}$ " thickness in short links $\frac{1}{2}$ " in long links. Steel hawser must be at least 10 mm thick.



'TRADE UNION RIGHTS' —IN SPAIN

by JOSEP PALLACH

THOUGH THIS YEAR MARKED the 30th anniversary of the Spanish civil war, there was little official observance of this event in Spain. In recent months, strong currents of restlessness — underground, up to now — have begun to manifest themselves openly. This restlessness is rooted in two fundamental facts: General Franco's age and health have caused concern to his followers and forced them to consider the problem of his succession; simultaneously, even the slight lifting of the heavy veil of censorship which has covered the country for 30 years has revealed the great economic, social, and political problems which still exist — and that these problems must be solved at the same time as the problem of the dictator's succession.

The main question being posed is the future social order. In Spain, as is well-known, there are no free trade unions. There is a so-called vertical organization copied from the Fascist corporate bodies — to which both employers and workers belong. This organization is directed by representatives of the so-called 'political line,' that is, by the Falangist officials named by the Chief of State. In spite of these 'trade unions' the Spanish working class has manifested its will and has struggled towards its recovery by making use of the fundamental weapon within its reach: the strike.

For many years, the right to strike, as interpreted by a Penal Code, has been violently repressed and the strikers cruelly condemned by the courts which consider the strike 'a transgression against the state'. Some months ago, a modification of Article 222 of the Penal Code was approved by the government. The right to strike was not approved, but the existence of 'labour conflicts' within business enterprises was admitted.

In less than 10 weeks, more than 30 of these 'labour' conflicts' broke out in various regions of the country: Asturias, Basque Region, Madrid,

Andalusia, Cataluña. They involved metal workers, textiles, mines, chemical industries, and the production of electricity. They include foreign capital enterprises — Firestone, Hispano-Olivetti, Perkins, Schneider — as well as Spanish state and private capital

A reorganization of the ITF's publications will take place in the course of 1967. This will bring about the following changes: in the New Year the JOURNAL will appear every three months, instead of monthly as at present, and the NEWSLETTER will appear every month, instead of fortnightly as at present. At the same time two additional publications will be issued: a bulletin on technological changes in the transport industry and a bulletin on collective agreements and working conditions will appear every three months.

enterprises: Basconia, S.A., Bosuga, Aeronautic Constructions, Mieres, Chorro Hydroelectric.

As always, the 'vertical trade unions' not only do not help the strikers, but,

in the service of management and of the state, fight them. This does not matter. Often, the workers are directed by 'enlaces' and 'jurados,' shop stewards, elected at the plant level, who act without legal guarantees. According to official information, more than 1,800 of these shop stewards have been fired recently. In Spain, there are eight million wage earners and they aspire to acquire the same rights enjoyed by their companions in the free world. Today, the question of trade union freedoms is openly posed before the country and before public opinion.

After 30 years of total censorship, the government has been compelled to modify the Press Law. Within the framework of the basic situation in which all political parties except the Falange are prohibited and all trade union rights and freedom of association are denied, authorized journals (and among them, those from Catholic Action), may now publish news which was formerly forbidden. Thus, news about the strikes and about the repression, along with the verdicts of the Tribunal of Public Order, are now being published. Some journals — few of them — dare to comment on events from a point of view which differs from that of the government. Such critical comment has led to their being fined and suspended. In a few weeks, for example, *Signo*, journal of Catholic Action; *Juventud Obrera*, (Working Youth), journal of the Catholic Working Youth; *ABC*, monarchist mouthpiece in Madrid, have been suspended.

In Barcelona, the students gathered in a Free Assembly and the Capuchin Monks offered their monastery to hold the forbidden meeting. The police raided the monastery. One hundred students and teachers were arrested; several were set free but others — eight representatives of the different schools, elected by their classmates — were held in the police station.

It was reported that they were maltreated, and more than 200 priests, after visiting the Archbishop to protest, presented themselves before the police,

asking clemency for those arrested. Some of these priests were maltreated by police agents. A fine of three million pesetas was imposed on the intellectuals who protested: the most important individuals of the social sciences, art, and law faculties were fined. Nineteen teachers from the university were fined. The representatives of more than 20 Catholic organizations have addressed the bishops of the whole world, protesting and affirming that the principles of the Council are not put into effect in Spain.

In the face of these realities, there are two roads open to those who rule today: to intensify the repression or to open the doors to the great aspirations of the people so that they might recover their democratic freedoms and freely decide their destinies. There is no doubt that the second road is difficult, arduous, but it is the only effective means for solving the problem.

For several years, Spain has been carrying on negotiations to enter the Common Market. Today, after the European agreement on agriculture, success in these negotiations is most urgent. But the negotiations have reached a stalemate, precisely because of the anti-democratic regime which continues to rule the country. In view of this situation, the Trade Union Alliance declared a year ago, in its address to the Amsterdam Congress of the ICFTU, that the Spanish working class 'needed the support of the free trade unions in order to acquire the trade union rights enjoyed by their colleagues in the free countries.'

During the Amsterdam Congress, several workers from Madrid visited with some trade union leaders in order to acquaint them with the attitude and determination of the Spanish workers to obtain the right of trade union association, freedom of speech, the right to strike, and to elect their own trade union representatives. As is known the police arrested these workers when they returned to the Spanish capital. Recently, the Tribunal of Public Order tried them. They defended themselves courageously, affirming their ideas

clearly and forthrightly. They are convinced that today, more than last year, the road to peace and prosperity for our country lies in the re-establishment of the essential freedoms—difficult as this may be—and in the first place through the restoration of trade union freedoms.

The attorney of the Tribunal asked for three years of imprisonment for Marianno Nuero, Antonio Nogues, metal workers, and for Gonzalez Quesada, communication worker, and five years for Manuel F. Montesinos, a labour lawyer, who was also in Amsterdam. He asked 13 years of imprisonment for Jose Buria, Hermes Piquer, and for the author of this article—even though the three of us have lived for many years in France where it is not a transgression to work for trade union freedom; nor to visit with free trade union leaders.

The trial aroused great interest among the foreign and Spanish press. It took place in the presence of representatives of free trade unions. The prosecuting attorney was forced to retract the absurd charges against us three. But he persisted in his no less absurd charge against our four companions, residents of Madrid. The court then pronounced the sentence. It condemned our colleagues to several months of prison.

This is the last trial—for the moment—of the infamous court. And we ask ourselves: How long is this situation, which produces restlessness, distress, and disorder in our country, going to last? Will prison sentences continue to be pronounced against the free trade unionists? Will those struggling for freedom for Spain continue to be arrested, tried, and imprisoned?

This problem, which the Spanish people face 30 years after the civil war, is of the most vital importance and it is up to us to resolve it. We have observed that this process towards freedom has already begun and that, in the working spheres of Spanish society, there are already prepared democratic nuclei which offer positive perspectives of liberty.

But it is also the responsibility of the free trade union organizations throughout the free world to respond in their own field of action by helping us in this struggle. It is also the responsibility of these free labour organizations to bring to bear all necessary pressure on their democratic governments so that these governments—in the first place, the government of the United States and those of the free European countries—know the urgency of their supporting the forces seeking the return of the democratic freedoms in Spain which needs them more than ever.

The common cause of freedom and democracy in Europe and in the world depends, in great part, on the success of this action.

Union attack on faulty lorries

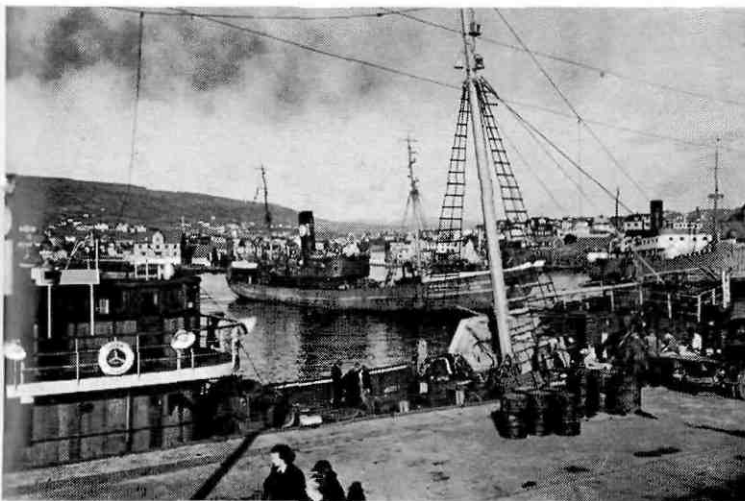
LORRY DRIVERS in Scotland have been advised by their union to refuse to drive vehicles which in their opinion are so defective that they would be a danger to themselves and other road users. The Scottish Commercial Motormen's Union has assured drivers that any action taken against them by employers as a consequence of this advice would be fought with all the means at the union's disposal, including strike action.

* * * *

Air cushion pallets developed

A NEW CARGO HANDLING concept using air cushion operated pallets has been developed in the United States. This device will lift a 4½-ton unit load on a cushion of air about one fifteen-hundredth of an inch thick. The unit load can then be moved by one man to any part of the hold. A compressor in the engine-room provides compressed air to the holds, and the Hoverpallet, as the device is known, is inserted under the unit load before inflation.

Two Hoverpallets are to be utilized in each of two new passenger-car ferries on the Irish Sea crossing. It is envisaged that cargo will be palletized on the quay, then lifted into the hold and distributed by the air cushion equipment. In addition, car decks will be specially strengthened to carry unit loads in the off season.



The harbour at Thorshavn, capital of the Faroe Islands. The scene reflects the overwhelming dependency on fishing of the Islands' 36,000 inhabitants. (Danish Government picture.)

Wage determination in the Faroese fisheries

A number of small communities dotted around the world's coastlines are either wholly or very heavily dependent on fishing for their livelihood. It is interesting in this connection to take a look at how one such community, the Faroe Islanders, manage their fisheries and in particular, for trade unionists, to examine how the proceeds are shared amongst the men who bring in the catches. A research paper presented to the Institute of Social Studies at the Hague last year by Jákup í Jákupsstovu, Secretary of the Faroese Fishermen's Union, dealt with the subject of wage determination and working conditions for fishermen in the Faroe Islands. Some of the things he had to say are set down in this article.

THE FAROES ARE A GROUP of eighteen small islands in the North Atlantic about 285 km. from Great Britain, 450 km. from Iceland and 600 km. from Norway. Most of the surface area of the islands consists of moorland and hill country and is unsuited to cultivation. On the coastal fringes a certain amount of vegetables and fodder for small herds of cattle can be grown and the moorlands support some sheep, but the 36,000 islanders are overwhelmingly dependent on fishing for their livelihood. Proximity to the fishing grounds of the North Atlantic and the North Sea and good landing conditions provided by the many small inlets and quiet fiords around the coasts are the great economic advantages of the Faroes.

The Faroese are a Nordic people speaking a language akin to Icelandic and Norwegian. Though the territory remains under the Danish Crown, the Faroese are a proudly independent people and run their affairs through their own national legislature. Their dependence on fishing to earn a living is illustrated by the fact that between 1952 and 1956 fishery products accounted for between 95 and 99 per cent of the country's total exports: i.e. about 37 per cent of the Islands' total fish product. The only other steady export product is mink furs, and even

this depends on the fisheries, since the reason for having mink farms in the Faroes is the easy access to fish offal — the main foodstuff used in mink farming.

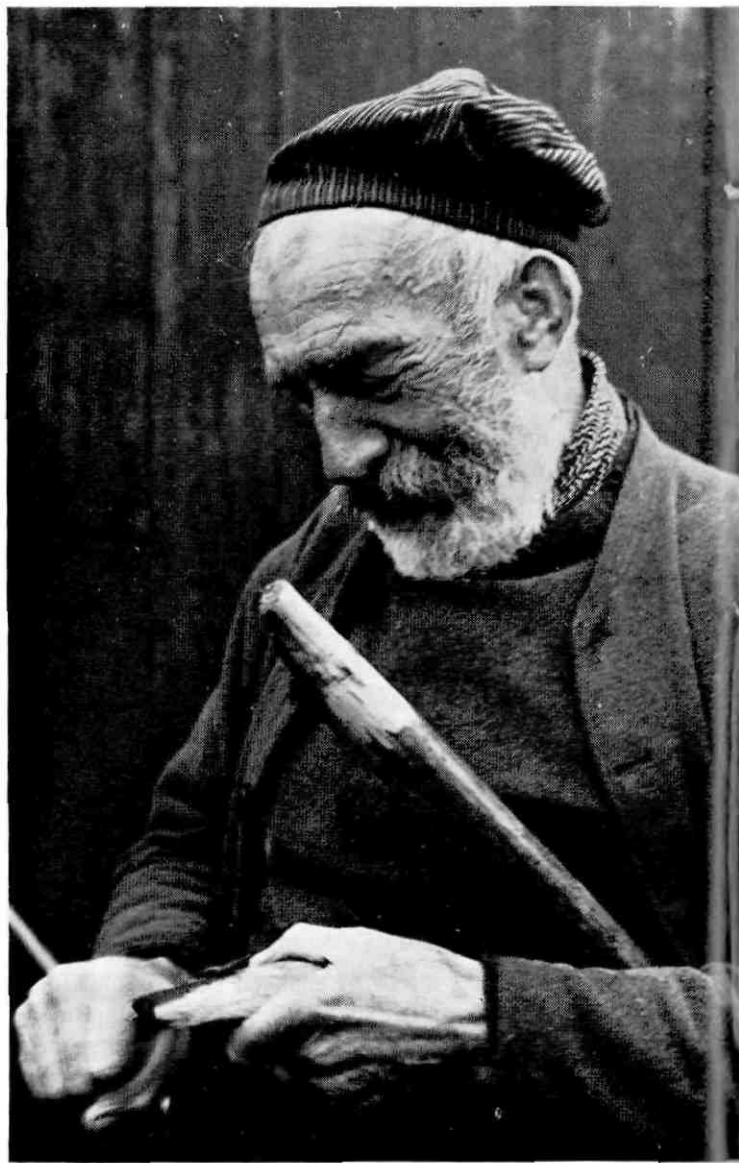
The total value of Faroese exports of fish and fish products in 1964 was about £6½ million or \$18 million. In 1964 4,029 Faroese men signed on aboard fishing vessels as full-time or part-time fishermen. On 1 June 1964 a total of 2,071 Faroese men were actively engaged in deep sea fishing. Over half of these were aged between 15 and 34 and amounted to 22 per cent of all

Faroese males in that age group. These figures, however, do not take into account the numbers engaged coastal fishing, who do not sign on. A recent comprehensive survey put the proportion of able-bodied men in the Faroes engaged in fishing of all kinds at 70 per cent.

Both the fishermen and the vessel owners are organized and the skippers too have their union. The constitution of the Fishermen's Union (Fiskímannafelag) requires that every man who signs on aboard a fishing vessel must be a member and be covered by the collective agreement between the union and the Vessel Owners' Association.

The system of payment practised in the Faroese fisheries is based on a percentage share of the proceeds from the catch plus, for some fishermen, a guaranteed minimum wage.

Two kinds of sharing systems operate, depending on fishing methods and type of fish caught. One system



No place in the Faroes is more than a few miles from the sea, and the sea is very much a part of the islanders' lives. Most of what they have comes ultimately from the fisheries. The moors support some sheep but these have to be taken by sea (left) to trading stations and slaughterhouses on the mainland. The old man (right) has spent all his life in fishing and probably still goes to sea with his sons and grandsons to help with the catch. (Photo left: Danish Government.)

gives the crew a percentage of the total gross market value of the catch with no deductions made for operational expenses. The second system, which is more general, provides for a higher percentage but of the *net* proceeds, i.e. what is left when deductions have been made to pay operating expenses incurred on the trip (provisions and supplies, insurance, replacement of damaged gear, etc.). Under the former system, whatever the size of the catch, the crew get a share. But under the system of net sharing, they can only

take a share if the catch has been large enough to cover all expenses. Thus after a very poor trip, the crew would get something under the gross sharing system but possibly nothing at all where the second system is operated. On the other hand, after a particularly good trip, the crew will be much better off under the system of net sharing. Crews usually express a preference for gross sharing, since by this method they are always sure of getting something from a trip. But the net sharing method is the one used in most of the Faroese

fisheries, despite the protests of the crews that no other industry leaves its workers unpaid until all operating costs have been covered.

Fishing is a risky business. Small operators owning only one vessel are more exposed to risk than the fleet operators, who are in a position to balance out their losses. A recent survey of the Faroese fishing fleet showed that 188 vessels of 20 gross registered tons and over are owned by 130 operators. These may be fishing companies operating several boats, in-

dividual owners, owner-skipper, skipper's cooperatives, fishermen or fishermen's cooperatives. In the Faroes one quarter of the total number of vessels belong to five undertakings owning over 1,000 grt each and nearly a third of the total tonnage together. A third of the fleet of vessels belongs to owner-skipper or skipper's cooperatives and a quarter is owned by fishermen and fishermen's cooperatives. The remainder belong to individual owners and small companies. But the lines of demarcation between the three main ownership groups — owners ashore, skipper and fishermen — are not very sharp. Some skipper-owners go ashore to manage their businesses and the shareholders in the fishermen's cooperatives include non-fishermen.

The worst effects on fishermen's earnings of an unsuccessful trip are offset by the guaranteed minimum wage, which is paid from a special fund operated by a joint board on which fishermen, owners, officers and Government are all represented. The minimum wage, which is index-regulated, at present ensures that fishermen's earnings do not fall below 1,365 krónur* per month. Of this amount 1,110 Kr. can be paid to the fisherman's dependants while he is out on a trip.

*1 kr. is worth approximately 1 UK shilling or 14 US cents.

Three generations in one boat. In the Faroes a boy learns to handle a pair of oars at an early age, and he will continue to obey the call of the sea till he is very advanced in years.



There are strong arguments for instituting a regular fixed wage for fishermen, which would replace the share system. But for the men to accept this, it would be necessary to establish a wage rate providing a level of earnings equal to or higher than that to which they are accustomed. The difference between the income they can expect under the share system and the amount the owners could be expected to agree to as a fixed contractual rate of pay would be too great for the fixed wage system to be at all attractive to crew members.

An important feature of the share system is that it acts as an incentive. A share in the proceeds from the catch presupposes a share in the responsibilities the trip imposes. The crew will naturally do their utmost to bring in the best quality fish and in plentiful quantities, when they know that the amount of money they will take home depends on the size and quality of the catch.

Share percentages are fixed by collective agreement at different rates for different types of fishing, depending on the efficiency of the craft and fishing gear in use. For some fisheries a joint share is paid, and here the collective agreement specifies the maximum number of shares into which the joint share may be divided, thus ensuring that the individual's earnings are not lowered by the signing on of too large a crew. In others each crew member gets an individual share, so that the burden of excessive crew complement would fall on the owner and not the crew collectively. The joint share varies between 50 per cent, paid on the net sharing principle (i.e. after running costs have been deducted from the gross proceeds) aboard certain low-efficiency craft, and 30 per cent, paid on the gross sharing principle (i.e. calculated directly on the gross proceeds of a catch) in the more productive fisheries. Aboard steel trawlers catching fish for icing the individual share system is practised, with deductions made from gross proceeds only for insurance, sales expenses and radio officer's salary. Fishermen on these ves-

sels get a fixed wage of 300 kr. per month in addition to their normal share percentage of 0.55 or 0.65 each. Here, however, a special bonus of 0.1 per cent per man is also paid when the catch fetches more than £9,000.

The collective agreement specifies the items for which in the different fisheries deductions are to be made from gross proceeds before the crew can take their share. These items are: ice, salt, coal, oil, barrels, bait, harbour dues, wages to port of sale (fishermen manning vessels carrying a catch to a foreign port for marketing are paid a fixed daily wage of 35 kr.), landing expenses, sales expenses, crew insurance, catch insurance, vessel insurance, radio officer's salary and provisions. Under the gross sharing system, of course, no deductions are made before the crew get their share, but this system is only applied in two branches of fishing. In the other eight fisheries provided for in the collective agreement deductions are made for some or most of these items depending on the type of vessel and the particular operations in which it is engaged.

Under the net sharing system fishermen may sometimes be at a disadvantage, owing to the fact that they have little control over the cost of supplies. The vessel owner employing them may also be the merchant who supplies the materials and equipment to be taken on board. In this case it is possible for prices — and therefore deductions from the gross proceeds — to be fixed at an artificially high level. A vessel owner may also be the fish dealer to whom the catch is sold, and who would have an interest in keeping the price down so that he makes the maximum profit on resale. In either case the owner makes a sizeable profit at the expense of his crew. The difficulties of controlling the deductions in the net sharing system partly explain the fishermen's antipathy to it and their preference for the gross sharing system.

The collective agreement already limits amounts which are to be deducted for certain items and requires that supplies brought on board should be paid

for at wholesale price plus charges for carriage. Supplies provided by the owner should be paid for at retail price less 10 per cent. However, fishermen's leaders are of the opinion that if more effective controls could be exercised, the fishermen would not be so strongly opposed to the net sharing system and that this, together with the guaranteed minimum wage, would provide a better system of wage payment than the gross system. If a fixed percentage for deductions could be laid down the crew would have the assurance that their share in

the proceeds of the catch was not kept at an artificially low level; and with the guaranteed minimum wage (which could be financed from fixed deductions for expenses), to insure them against unsuccessful trips together with a larger share percentage than under the gross sharing system they would be generally better off but would stand to gain more on successful trips. The question of sharing systems and the level of deductions for operating expenses has been a subject of considerable disagreement between the fishermen and the owners

and has caused several strikes. The problem has still not been resolved.

On the question of selling prices, however, it should be mentioned that, technically speaking, Faroese fishermen have a share in the actual catch, though in practice this becomes a share in the proceeds. But if they disagree with the price which is to be paid for the fish they are entitled to receive their share of the catch itself and to dispose of it as they wish. Getting a fair price is no easy matter when the wholesalers and the vessel owners are closely linked, but the Fishermen's Cooperative established in 1954, although it does not operate on a large scale, has enough influence to prevent prices from being fixed at too low a level.

The quest for an efficient system of payment satisfactory to both sides in the Faroese fisheries presents the fishermen and their Union with problems, some of which have been indicated in this article. They can learn much from the practices of the other fishing nations of Europe, where the same basic system of catch sharing applies. But conditions in the Faroes, where the population is small but almost totally dependent on fishing for its livelihood, differ considerably from those in the larger countries with their diversified economies. The Faroese have had to apply all their native resourcefulness to solving problems connected with the fishing industry and with making it more productive. But the results of this concentration of effort must not be allowed to benefit only the controlling interests in the industry. The men who crew the boats also want to improve their standard of living: their union is seeking to devise a method of payment which will guarantee them their fair share of the wealth which comes to their islands from the sea.



The crews of Faroese fishing vessels are paid mainly by means of a share in the catch. Under the net-sharing system, crew members are paid a percentage of what is left of the proceeds of the catch after operating expenses have been deducted. The fishermen's collective agreement specifies the percentages for different types of catch and the expenses for which deductions are to be made.



(BOAC Photo.)

Jets cut costs

A REPORT ISSUED RECENTLY by the International Civil Aviation Organization (ICAO) contains some interesting facts and figures about the costs of operating modern air transport services. The ICAO report, entitled *Air transport operating costs*, shows conclusively that jets cost less to run than their predecessors in the air. On international flights the average cost per tonne-kilometre sold by the airlines of countries represented in ICAO went down by one third between 1951 and 1964. The true cost per tonne-kilometre available dropped by 41 per cent. over that period, but increases in capacity which have resulted from the introduction of the very large aircraft which many airlines now use have reduced load factors from 62.7 per cent. in 1951 to 55.9 per cent. in 1964. Hence the drop in unit costs for transport actually provided is only 33 per cent.

Domestic services, however, present a different picture. On domestic flights there has actually been a small increase in the average cost per unit carried. Load factors dropped from 62.5 per cent in 1951 to 50.0 per cent in 1964, which is almost double the decrease on international services. Thus, although the average cost of providing a tonne-kilometre of air transport capacity on domestic services — not taking account of the amount sold — has gone down by 17 per cent, the decrease in load factors has actually brought about an overall increase of 4 per cent in the cost of units carried.

The explanation for this is contained in ICAO's report:

'The sharp upward turn in the trend lines for aircraft speed and capacity (and resultant productivity) is, of course, the consequence of the introduction into service of the long range

jet aircraft in 1959. These aircraft — the various models of Boeing 707 and 720, the Douglas DC8 and Convair 880 and 990 — have, on average, about twice the speed and twice the payload capacity of the long range 4-engine piston aircraft. The impact of the long range jets showed first on international services, because they are employed mainly on the long haul routes which are predominantly international. Their effect on domestic services has been less pronounced because only a few states have domestic routes long enough to support many such aircraft.

Cargo carriers and helicopters

The report sees good economic prospects for cargo aircraft, but shows that helicopters are considerably more expensive to operate than fixed-wing aircraft.

'The data on categories of cargo aircraft also shows the effect of produc-



Since the beginning of the period covered by the ICAO report on air transport costs, the major airlines of the world have equipped themselves with modern jet aircraft. The result has been a considerable reduction in operating costs on those services for which jets are commonly used. In the picture is a Comet 4B belonging to British European Airways. (BEA Photo.)

tivity on direct unit cost. When an aircraft is arranged for the carriage of cargo rather than passengers, the payload capacity of the aircraft is greatly increased by the absence of the various passenger facilities. It appears that the average capacity of the 4-engine piston aircraft is increased from 7.9 to 15.4 tonnes, that is almost doubled, while that of the 4-engine jet goes up from 14.7 to 39.0 tonnes, over two and a half times. It happens also that average stage length is increased by about 100 per cent for the 4-engined piston group and 30 per cent for the 4-engine jets, with the consequence that airborne speed is increased by about 10 per cent for the former group and 5 per cent for the latter.

Because of these increases in payload capacity and speed, the average productivity of the cargo aircraft is between two and three times greater than that of the passenger version. Direct unit costs for the cargo version, in spite of lower utilization rates, are almost 25 per cent less in the case of the piston category and almost 60 per cent less for the jets. The very low

direct cost of 3.1 cents per tonne-kilometre available achieved with the 4-engine cargo jets by United States domestic trunk carriers in 1964 suggests that as an increasing proportion of the world's air cargo is carried on all cargo services in large jet aircraft, it will be possible to reduce the average cargo rate from its 1964 level of 20.4 cents per tonne-kilometre performed. With these aircraft, if one assumes indirect costs are 50 per cent of direct and a 60 per cent load factor, the total cost per

A British European Airways Sikorsky S61N helicopter. Helicopters have not the same qualities of operational economy as have fixed wing aircraft. (BEA Photo.)



tonne-kilometre performed would be under eight cents.

Helicopters are still far removed from fixed wing aircraft. Unit costs, utilization, stage length, payload capacity and speed are of a completely different order of magnitude. For example, the direct operating cost per tonne-kilometre available for turbine engine helicopters in 1964 was 104 cents, or six times the 16.8 cents achieved with 2-engine turboprop fixed wing aircraft.

However, with helicopters as with the fixed wing types, the inverse relationship between productivity and unit cost is apparent. Comparing the two categories, the average productivity of the turbine helicopter is seen to be higher by about 130 per cent, and the average direct unit cost lower by 33 per cent than those of the piston type helicopter.

Immediate prospects

For the near future (until about 1970) such factors as the more widespread use of turbofan engines, development of laminar flow and boundary layer control techniques, lighter structures, and the appearance of stretched versions of existing types, suggest that direct unit costs of the subsonic jets, and thereby the unit costs of the world's air transport fleet as a whole, may be reduced still further.

Manufacturers of such new twin turbofan aircraft as the short and medium range Lear 40, F-28, BAC One-Eleven, Boeing 737 and DC-9 claim

that these aircraft will effectively reduce direct unit costs for jets in their range group. In addition stretched versions of long range jets such as the Douglas DC-8-61/62/63 series now in production will bring direct unit costs for both passengers and cargo below their present lowest level. The DC-8-61 and -63 will have a payload capacity about 66 per cent greater than the DC-8-50 which, with the same speed, should give them 66 per cent greater productivity.'

Long-term prospects

For the 1970s there exists the possibility of very much larger subsonic jets such as the projected Boeing 747 and Douglas DC-10 with a capacity of the order of 500 seats instead of the 250 in the coming DC-8-61/63. These relatively large aircraft may be expected to bring direct unit costs still lower.

'Before these appear, however, supersonic transports may be placed in service . . . There are too many new factors involved to allow reliable estimates to be made of their direct unit costs. Their capacity will be similar to that of present or soon-to-be-introduced subsonic jets, but their optimum cruising speed will, of course, be two or three times greater, which should give them a correspondingly higher productivity. However, their speed and the limitations that may result from engine noise and sonic boom make them less flexible than subsonic jets in airline operation. If this proves to be so, low utilization rates may have an adverse effect on unit costs.

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Publications received

International Trade Union Movement from its Beginnings to the Present Day, by Hans Gottfurcht, published in German by Bund-Verlag, Cologne. This is a paperback book, giving a shortened history of the international labour movement based on the author's book on the same subject.

The World's Commercial Vehicles 1830-1964, by G. N. Georgano, published by Temple Press Books, London, at 25s. This survey of commercial road

vehicles covers over 130 years of production ranging from a steam carriage of 1830 to the latest diesel-engined goods and passenger vehicles. The book includes details of nearly 4,000 manufacturers from 32 different countries. In addition, past and present addresses, dates of manufacture and a description of the types of vehicle produced and their motive power are included.

Non-wage Incomes and Prices Policy — Trade union policy and experience, published by the Organization for Economic Cooperation and Development (OECD), Paris. This background report for a trade union seminar contains chapters on: Pressures on unions to participate in an incomes policy; The processes of income determination, and methods of control; Trade union aims in this field, and union participation in decision making; Methods of price control; Control systems in various countries. No actual seminar was held, but there was a meeting of rapporteurs whose papers are contained in a supplement to the report.

Low Income Groups and Methods of Dealing with their Problems, published by the OECD. This supplement to a trade union seminar report contains papers prepared on the subject, giving reports on approaches to the problem in Norway, the United Kingdom, France, the United States, Canada, Japan and Italy, and on the special problems of old people, deprived families, and low wage earners.

Wages and Labour Mobility (French & English), published by the OECD. This gives abstracts of selected articles on the subject from a wide variety of sources in the United States, the United Kingdom and Germany, and studies of methods of wage determination in France, Canada and the Netherlands.

Comparative Study (in French) of legislative protection for young workers in the countries of the European Economic Community, published by the EEC, Brussels. This lists statutory provisions on hours of work, rest periods, night work, holidays, medical examination, training, etc.

Sudan Transport, by Richard Hill, published by the Oxford University Press at 42s. This traces the history of railway, marine and river transport in the Republic of the Sudan, dealing in particular with the transition on the railway from steam to diesel traction and on the river from side-paddle gunboats to the present age of diesel craft.

The Urban Transportation Problem, by J. R. Meyer, J. F. Kain and M. Wohl, published by the Harvard University Press at 96s. This book is a research study into certain widely held views about methods of mass transportation in the United States; and an attempt to examine whether new and better ways can be found of providing satisfactory urban transport services.

Productivity Bargaining, by Ken Jones and John Golding, published by the Fabian Society in the Fabian Research Series, at 4s. 6d. This contains an examination of productivity agreements in Britain, how they have worked in practice, and the problems which have been encountered. Appendixes give details of major agreements and related developments since 1960.

Training of Dockworkers, Great Britain, 1966, published by the National Dock Labour Board. This illustrated booklet reports on the training programmes currently being run by the Board, which comprise both classroom and practical instruction.

Twenty Years OeTV (Zwanzig Jahre OeTV), published in German by the German Union of Transport and Public Service Workers. This very attractive illustrated book traces the post-war history of the union and contains articles on the present-day working conditions of its members in many branches of German life.

* * * *

Periscope aid for one-man bus crews
NEW DOUBLE-DECK buses ordered by Manchester Corporation may have periscopes and electronic seat-counters fitted so that they can be operated single-handed by the drivers. The periscope and counter would enable drivers to check the seating situation on the upper deck.

DOLABELLA

A proving ground for ship automation



The ss *Dolabella* (68,500 dwt), built in 1966 for the Société Maritime Shell of France.

SHELL HAS DEVELOPED a revolutionary new system of automated engine room control which will enable an oil tanker to be 'driven' in normal conditions by one man from the bridge, with the engine room unattended. The 65,000 dwt tanker *Dolabella*, completed at St. Nazaire for Société Maritime Shell, of France, is a floating test bed for proving these advanced techniques in service. A combined team of experts drawn from Société Maritime Shell and from the Marine Technical Division of Shell International Marine in London have been working on the new system in Paris for 2½ years. This team, with the close collaboration and technical assistance of the builders, Chantiers de L'Atlantique, are responsible for the

design of the complete automation installation.

This is how it works: The deck officer of the watch on *Dolabella's* bridge will stand at a telegraph console and move a single lever along a conventional scale graduated from 'full astern' to 'full ahead'. By doing so, he will transmit an electrical signal which will open the steam valve until speed rises to the indicated figure. He will thus directly control the speed of the propeller and the movement of the ship.

The conventional order — such as 'half speed' or 'full ahead' — is illuminated both at an engine room control centre (an extension of the bridge) and on a panel in the engine room. The engine room will be unattended, but television cameras mounted at six points will give the engineer on watch in the engine room control centre a continuous picture of what is going on below. In case of emergency, he can instantly take over remote control of the machinery by switching to 'manual' at his own console. The bridge then demands a movement with the speed control lever as before, but this only signals a 'request' to the engine room control centre on the bridge. The signal is acknowledged by a system of bells,

lights and push buttons similar to the conventional telegraph system. As an additional safeguard against failure of remote controls, a conventional manual control system is retained in the engine room itself.

Computer and alarm system

A computer installed on the bridge of *Dolabella* additionally monitors temperatures and pressures in the engine room, and these are recorded at pre-set intervals on a typewritten log. It also calculates boiler, turbine and propeller efficiencies and fuel consumption, but has no part in the bridge control scheme. An alarm panel shows the position and type of more than 100 'alarm' points by illuminated push buttons. Any departure from the normal detected by the computer causes the corresponding lamp to flash on and off and a klaxon to sound until the operator acknowledges the warning by pushing the button. A special typewriter attached to the computer records the nature of the alarm. All 'alarms' are flashed additionally to the control console.

Cargo handling

Cargo handling and discharge operations will be controlled from a central cargo room on the main deck that will provide hydraulic remote control of all

essential cargo valves, continuous level indications for all tanks, and remote control of cargo pumps. The computer capacity is such that in future it can be programmed for cargo loading and discharging operations.

With such a novel control installation as that in *Dolabella*, and automated cargo handling in addition, it is believed that a total crew of about 30 will be adequate, with perhaps fewer as more experience is gained. It is no longer logical to keep the traditional demarcation between deck and engine room personnel, and the crew will be divided in this way:

The Master in overall command, will co-ordinate operations and maintenance through the Head of Operations and the Head of Maintenance departments.

The Head of Operations will not keep watch but will be permanently 'on call'. His staff will consist of three officers, three seamen and a radio operator, who

will be supplemented by men from the repairs and maintenance section in abnormal conditions.

The Head of Repairs and Maintenance will have under his control a staff of 14, nearly all of them specialists. They will be concerned with the maintenance and repair of machinery and equipment, and the manual operation of vital services if the automated systems fail or when they are under repair. Maintenance and repair work will be done during the day, and at night the engine room will normally be unattended.

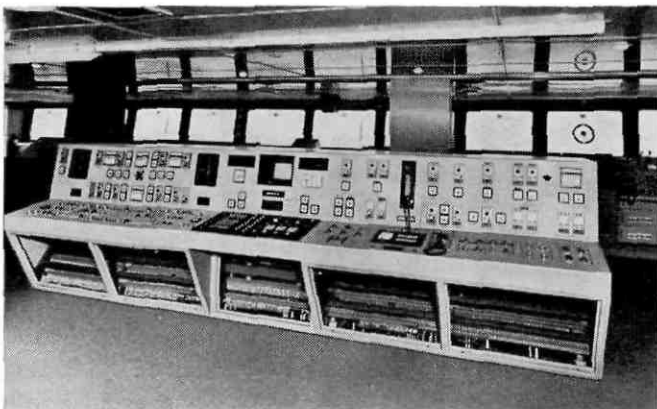
The manning of *Dolabella* will be by present officers in the Shell fleet who have taken special courses to study the construction, operation and fault diagnosis of all the major components of the automated system. All senior officers would eventually be capable of leading the dual watch.

The new techniques will, however, call for a complete reappraisal of the

training and organization of officers and crew. New ratings will receive a basic training course that will fit them for either deck or engine room. A nucleus of officers is being built up with experience of the type of equipment they may be expected to use within the near future.

In the long term the whole training system will require a new approach. Identical basic training will be provided for future officers who will become 'heads of departments' and eventually masters of automated ships, and specialized training will be given in navigation, electronics and engineering. Officers in all those branches will be able to rise to positions of command.

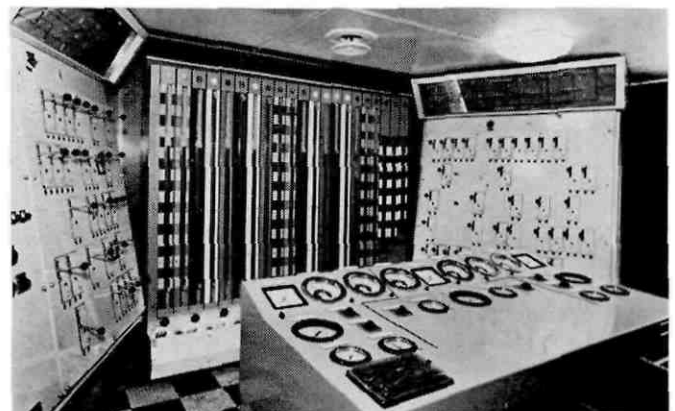
The new era of the 'complete officer' is being taken very seriously in several maritime countries, and the next few years should see a growing acceptance of a logical approach to the manpower aspects of maritime automation.

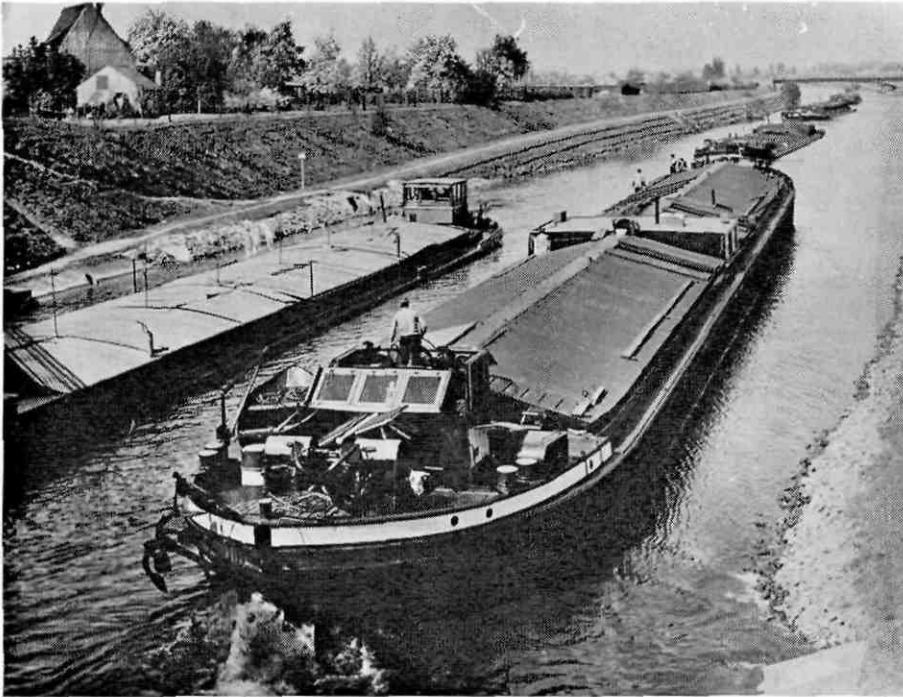


Above: Automatic bridge control of the main engines. Orders may be transmitted automatically to the main engines, thus controlling directly the speed of the propeller and the movement of the ship. Below: The engine room control console is the nerve centre of the *Dolabella's* entire automatic control system. (Photos: Shell)



Above: The system of automated engine room control installed on the *Dolabella* enables an oil tanker to be 'driven' in normal circumstances by one man from the bridge, with the engine room unattended. Below: The cargo control room. Loading and discharging operations can be controlled by one man. (Photos: Shell)





Barges on the Mittellandkanal near Hanover, Germany. Among the most serious problems besetting Germany's inland navigation at present is that of excess capacity. (West German Government picture.)

Problems facing inland navigation in Germany

The German Transport and Public Service Workers' Union (öTV) has recently been giving attention to the problems of the German inland navigation industry and their repercussions on the union's members in the industry. Our affiliate is particularly concerned about the liberalization of the transport market which is to be brought about as part of the Common Market countries' programme of economic integration and the possible effects of this liberalization on Germany's inland navigation.

AMONG THE MOST PRESSING problems which today preoccupy Germany's inland navigation industry are excess capacity, the absence of any effective controls on the part of the authorities over transport rates, the preponderant influence of the large combines in the inland navigation freight tariff committees, and the subsidies which foreign governments make available to inland navigation in their countries.

Excess capacity, which restricts the economic viability of transport by inland waterway, has its origin primarily in the nature of the industry itself. Although technical advances have been achieved in controlling the

flow of rivers, periods of low water still occur. At such times inland waterway vessels dare not risk using available loading space to the full.

But there are other factors involved in the problem of excess capacity.

Transport policy and the structure of the industry itself are also partly responsible. Amendments to German transport legislation in 1961 brought about a liberalization in freight markets. As a result of these amendments the transport carriers themselves — through the Federal Railway Board, the road transport rate boards and the inland navigation freight tariff committees — apply for the remuneration required for the transport services they provide. Thanks to these law amendments the Federal Railways were able by way of internal cost balancing to introduce special competitive rates, aimed in particular against the inland waterways. Apart from the large combines, undertakings in inland navigation have no means of absorbing such costs internally.

The problem of excess capacity in inland navigation has been made more acute by the spread of pipelines, fluctuations in the fuel and power markets, the movement inland of refineries and the coastward movement of processing industries. Whether losses of freight in coal transport can be retrieved from the transport of building materials, ores and chemicals (synthetic materials, artificial fertilizers, for example) remains to be seen. Competition from foreign-flag tonnage is increasing on the German waterways. Inland navigation policy in many European countries is structured with the primary aim of supporting seaports. Transport chains are set up which provide for carriage of goods by sea and inland waterway at through rates. Transport by inland waterway as part of this system is thus provided either free or at reduced rates. A shipment, say, from New York to Mannheim will not be loaded aboard German vessels for its passage along the Rhine, if it can be carried free or at subsidized rates on vessels of another flag. Further advantages which foreign-flag tonnage enjoys include favourable interest rates on credit and tax concessions of various kinds. The fact that German operators are sometimes compelled to sell

uneconomic tonnage to foreign owners sets the German inland navigation industry at a further disadvantage, since, when the demand for transport rises, this tonnage is put into service in competition with German shippers. To provide a solution to this problem the Central Rhine Commission had devised a plan whereby operators whose vessels are temporarily tied up might be subsidized from a common fund to which all undertakings would contribute.

Against a method of this kind of sharing the burden caused by loss of business the Commission of the European Economic Community recommends capacity regulations at national level to provide for the effective, long-term elimination of surplus, obsolete, and uneconomic tonnage. State subsidies would enable individual owners to combine with more productive concerns or to set themselves up in some other trade.

The Central Association of German Inland Waterway Transporters complains of inadequate controls on the observance of tariffs decided upon by the freight commissions and approved by the Ministry of Transport, and demands a system of fines for infringements of compulsory transport regulations.

In this connection it is worth pointing out the influence which port industries holding shares in the large combines have on the rates decided upon in the tariff committees. The influence of the cargo-handling concerns — which have an interest in keeping transport charges as low as possible — exerted through the combines, which do not need to take cost factors in the industry fully into account owing to the possibility which exists of internal absorption of costs, prevents tariffs from being adapted in line with the cost situation where competitive conditions show this to be feasible.

The level of freight tariffs is also often under pressure from the individual vessel owner as well as from the combine-linked operators and from excess capacity. Because this type of

owner usually operates in the framework of a family business and can represent members of his family as being self-employed persons he does not feel bound by regulations governing working conditions and can therefore undercut the general level of tariffs.

The Commission of the European Economic Community has laid down that the Community's common transport policy should be implemented in two stages. During the first stage, which will remain in force until 1969, national provisions are to be retained, except in international transport. In international rail and road transport within the Community bracket rates (i.e. compulsory maximum and minimum rates) will be imposed, whilst in inland navigation the Community regulations provide for

reference tariffs (i.e. recommended upper and lower rates only). From 1970 all carriers of freight whether engaged in national or international transport will be subject to the reference tariff system exclusively.

Concerned at the present situation in German inland navigation industry, briefly described here, the Union of Transport and Public Service Workers (ÖTV) has serious reservations about the liberalization of the transport market which the EEC programme will bring about. The Union is anxious to safeguard its members' jobs and working conditions and wishes to see transport by inland waterway in Germany survive and prosper under conditions of fair competition with its rivals in other countries.

Tugboats on the Rhine waiting to be put into service.

(ILO picture.)



Round the world of labour

ICFTU plans 2nd World Economic Conference

ALTHOUGH THE UNITED NATIONS in 1960 launched what it called the Development Decade, and 1965 was designated International Cooperation Year, no significant progress has been made towards accelerating the economic growth of the developing countries. The failure of the developed nations to come to grips fully with this problem has materially contributed to the present imbalance in world trade and development.

It is against this unfavourable background that Knight Maripe, in *ICFTU Features*, assesses the prospects and possibilities of the Second World Economic Conference which the ICFTU plans to hold next year. The Conference will endeavour to devise ways of giving new impetus to the lagging economic efforts of the developed nations to come to grips with the widening poverty gap which exists between the rich and poor nations. A programme of action is to be worked out to mobilize the forces of the trade union movement in the industrial world to work with and reinforce the efforts of the trade unions in the developing countries.

The international family of the free trade union movement is determined to become a driving force within the intergovernmental bodies dealing with basic economic and industrial problems. The Conference will want to stress the fact that no problems can be resolved merely by adopting unanimous resolutions within these intergovernmental bodies. The developing nations need powerful practical support from the advanced nations if they are to be in a position to carry out the objectives of such resolutions.

Of crucial significance will be the Conference discussion on international monetary problems. A major reform of the international monetary system

seems to be urgently required, and the Conference will therefore discuss new methods of international cooperation to solve this problem. It will also evaluate the changing pattern of the international capital markets; the financing of economic expansion in the advanced countries; export credits and other ways of financing trade; private foreign investment; aid and technical assistance; and all aspects of economic and social development.

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EEC unions press for united Europe

AT THEIR FIFTH General Assembly in Rome last month, representatives of the free trade unions within the European Economic Community declared their determination 'to achieve the United States of Europe in equal partnership with the United States of America.' Trade unions in the EFTA countries, particularly in Great Britain, were urged to exert all possible influence on their governments to join the EEC.

The unions also called for a strengthening of the powers of the European parliament. They reaffirmed their opposition to the entry of Spain and Portugal into the Common Market, supported the association of Israel, and criticized the inadequate progress made in the field of social policy within the EEC. The rigid wages policy was also attacked on the grounds that it did not ensure a fair distribution of the national income.

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Amsterdam cabmen act against pirate taxis

TAXI DRIVERS IN AMSTERDAM have been carrying on a campaign against drivers who use their cars to ply for hire illegally. In an attempt to bring the law-breakers to justice and eradicate the piracy which they claim is taking the bread from their mouths, the cabmen driving in twos and threes, have been

tracking down the pirate cabs and driving them into corners. When the police arrive, however, there is not always a case to be made out—for example if the passengers refuse to pay. But one such operation was successful. A cabman and his wife rode in two different bogus taxis to prearranged destinations. They paid with marked banknotes, and when the pirates were later trapped by the cabman's colleagues and caught by the police it was possible to prosecute them. The taxi drivers are hoping by their action to focus attention onto these abuses and to have loopholes in the law closed.

* * * *

British general purpose crews agreement

THE BRITISH NATIONAL UNION of Seamen has reached agreement with Shell Tankers (UK) Ltd. on a six-month experimental scheme for general purpose crewing on board some of the company's 18,000-ton tankers. The agreement includes six special points to safeguard the crew's interests. They are that: the general purpose crews may only be ratings on company service contracts; all crew members are to be volunteers; there will be freedom to revert to traditional working; the ratings will be given leave after six months; there will be further negotiations when the six-month trial period is over; the union may at any time send representatives to the tankers to act as observers.

Maintenance work on the vessels concerned is to be kept to the minimum and deck, engine room and cargo-handling machinery is extensively automated.

The crew will work under the supervision of a management team which will include the master, as chairman of the team, the first mate, the chief engineer, the second engineer, and, at the outset, a temporary training officer. The team will set up a planned system of main-

tenance, and crew members will be set to work on deck or in the engine room as required.

* * * *

Stewards' School in Piraeus

A NEW SHIP'S STEWARDS School commenced operation in Piraeus recently. A total of forty students have been admitted this year. The 18-month course offered by the school is divided into three six-month terms, the second of which, coinciding with the summer season (1 April to 1 September) will be spent aboard Greek passenger ships for practical training. During this period the student stewards will be paid wages as regular members of the crew and assigned in succession to all tasks in the catering service department.

In order to raise the quality of the steward service, it has been decided that as soon as the first group of students have completed their training on 31 March 1968 only those in possession of a certificate from the school will qualify for employment as stewards aboard Greek passenger ships.

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Women to work on Greek ships

THE GREEK MINISTRIES of Education and Merchant Shipping have given their approval to the opening of a merchant navy training school for women. The school will train stewardesses for Greek passenger liners and cruise ships. The establishment of the school, the first of its kind for women in Greece, has been hailed as a milestone in the history of Greek merchant shipping. It will open up a new field of employment in a country where there have been few job opportunities for women.

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Trade union mission to Indonesia

AN INTERNATIONAL TRADE union fact-finding mission has recently returned from Indonesia. Sponsored by the International Confederation of Free Trade Unions and its Asian Regional Organization, its task was to make an on-the-spot study of trade union conditions and prospects in Indonesia. The mission was led by ICFTU President Bruno Storti, and had a full exchange of views with leaders of all the most represent-

ative trade union centres in the country, including GASBIINDO (Federation of Indonesian Islamic Trade Unions), which at the same time submitted an application for affiliation to the ICFTU. The members of the mission also had talks with government leaders about the political situation in Indonesia.

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Accident prevention in inland navigation

A MEETING WAS HELD recently in Paris of experts from France and Germany concerned in the prevention of accidents in inland navigation. The main object of the meeting was to compare methods of collecting statistics concerning accidents at work, and to make use of them in stepping up accident prevention programmes. Wide-ranging talks took place on such questions as the times of day when accidents were most frequent, their chief causes, and the best means available for minimizing risks.

A further meeting was planned for November to pursue the comparative study of accidents at work and their statistical expression, and to harmonize methods with effect from 1 January 1967.

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Rhine Commission is 150 years old

THE CENTRAL COMMISSION for the Navigation of the Rhine recently celebrated the one hundred and fiftieth anniversary of its formation. The Commission was set up by the Congress of Vienna in 1815, and has its headquarters in Strasbourg. It is charged with the observation of the principles of freedom of navigation and of equality of treat-



ment of vessels of all countries, with the maintenance of prosperity and suppression of hindrance in all technical, fiscal, customs, regulatory and judicial domains. Seven countries belong to the Commission: Belgium, France, Germany, Great Britain, the Netherlands, Switzerland and the United States.

When the Commission was first set up the Rhine was used only by sailing barges of up to 400 tons. Horses towed the vessels up-stream and it took at least a fortnight to travel from Rotterdam to Cologne. Nowadays vessels of 4,000 tons are not unusual, and the same journey can take less than two days.

(Continued from page 264)

breadth of the vehicle. Joints on spars which are split into sections should be secured with bolts and locks, so that the sections cannot spring out of the joints.

Attachments on banks or spars should preferably not be welded, since this tends to weaken the material. Bolted mountings are better.

It is important that all bolts, locks, securing gear and other equipment are always in their place and that they should be regularly maintained.

Accidents are often unnecessary and are therefore doubly tragic. But it is not such a difficult thing to secure a load so that it does not come adrift. Nor is there any excuse for transport operators to avoid taking appropriate safety measures simply because none of their vehicles has been involved in an accident in which loading was a factor. The accident cannot be prevented after it has happened. Precautions must be taken so that it cannot happen.

The cooperation which has developed between the Norwegian authorities and the transport operators, transport users and manufacturers of safety equipment has created favourable conditions for new legislation on the safe securing of loads transported by road haulage vehicles. Continued consultations will ensure that any new regulations will have as practical a basis as possible.

What's new in transport?

Channel tunnel to be built

THE BRITISH AND FRENCH Governments have now officially decided to go ahead with the project to build a tunnel link between the two countries. If all goes well work may begin on the tunnel in 1968, and by 1975 it should be fully operational, thus bringing to fulfilment a dream cherished by men on both sides of the English Channel for over a century and a half — a dream that has at times come close to realization but has always receded into the realms of what might one day be.

As long ago as 1802 Napoleon conceived the idea of building a tunnel under the Straights of Dover as a means of gaining access to Britain. Since then the idea has been considered and re-considered; studies have been made and tentative plans formulated. But serious moves towards the construction of a tunnel have always foundered on objections from vested interests in both countries and from influential personalities in Britain who thought that a tunnel link would destroy the strategic advantages of living on an island.

These objections no longer have any relevance in the context of today's requirements. The need for fast and efficient mass passenger and bulk freight transport between England and the Continent of Europe has grown phenomenally in recent years and promises to continue growing. With the sophisticated defence systems of today, the strategic arguments no longer apply.

The recent decision of the British and French Governments to proceed with plans to build the tunnel was therefore logical and necessary. The decision reached between the two Ministers concerned, Mrs. Barbara Castle (Transport) for Britain and Mr. Edgar Pisani (Equipment) for France, is a political one, laying down the form which the tunnel will take and the way in which it will be operated. The tunnel will be

bored through the earth under the seabed rather than laid in the form of tubes on the seabed. It will be a rail link, providing special trains to carry road vehicles. It will be operated by a joint Anglo-French public authority, but the construction will be financed by private capital. Both Governments are satisfied that there are no longer any technical or economic obstacles in the way, but a number of financial and legal aspects have to be studied. To this end a number of working groups have been set up which will report on the various matters still to be clarified. Once questions of financing and the legal details (for example, the status of the operating and building authorities and the relationship between them) have been cleared up, a treaty can be signed by the British and French Governments and, once the necessary legislation has been passed on both sides of the Channel, preparations can be made for the work to begin.

The total cost of construction is estimated at between £155m and £170m. Both Governments are confident that there will be enough traffic to make the tunnel an economic proposition. No reliable estimates can yet be made on the level of fares and tolls, but it is thought that the cost of transporting a family car and three passengers through the tunnel will be about 25 per cent lower than by current surface rates.

The project, when finally completed, will, in addition to fostering an increase in trade between Britain and the Continent, open up a number of new possibilities for transport development. There has, for example, already been talk of routing freight from North America through British ports and over the British and French rail networks through the tunnel to destinations on the Continent. The extended use of containers in transatlantic shipping and the construction of the Channel Tunnel

would make possible fast freight liner services between railheads in North America and on the Continent of Europe.

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Tunnel-train being tested in US

THE RENSSELAER POLYTECHNIC Institute at Troy, NY, is developing a model prototype of an 'air gulping' train that would run on a cushion of air in a tunnel. The train would be powered by radio waves emitted from the tunnel walls. It would suck in air in front and thrust it to the rear in propeller-shaped swishes of air. Speeds of 500 miles an hour and a capacity of 100 or more passengers have been mentioned.

* * * *

New step towards construction of barge carrier

A SHIPPING COMPANY in New Orleans, Lykes Brothers, have applied to the US Maritime Subsidy Board for a construction subsidy to build three barge carriers to ply between the US Gulf Coast and ports in the United Kingdom and Europe. The new ships will have a length of 875 ft. and a beam of 106 ft. They will have a deadweight of 25,625 tons at the design draft of 31 ft. and a deadweight of 40,000 tons at the maximum draft of 39 ft.

The original concept of the 'Sea Barge Clipper' was that of a carrier which submerged in port to float the barges on and off. Whilst it had many advantages, this system had the disadvantage of a 68 ft. draft requirement for loading the barges on the upper deck. The modified design has eliminated the draft problem. In the new design, an elevator rated at 2,000 tons, with a lifting and lowering speed of 6 ft. per minute, will load and discharge the loaded barges. It is estimated that the three barge carriers — each loaded with 38 barges of cargo — will have the cargo delivery capacity of about twelve conventional general-cargo ships.

According to the designer, each barge will be able to be loaded on, or unloaded from, the vessel in about 25 minutes.

The barges' dimensions allow them to be integrated with regular tows on US inland waterways. In an emergency, landing craft could be handled on all three barge decks, and the carriers could also be easily adapted for roll-on, roll-off operations.

The barge carrier, below the lower barge deck, is essentially a tanker; the tanks, with a total capacity of 1,200,000 cu. ft., may be fitted as required to carry ballast, fuel oil, liquid cargoes or grain.

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Rationalization and automation on Switzerland's railways

THE REDUCTION OF THE WORKING week from 46 to 44 hours recently decided on for state-employed workers in Switzerland is involving the Federal Railway administration in some hard thinking on how to maintain its services unimpaired without recruiting a large number of workers and incurring capital expenditure which will not bring any great long term returns.

Private industry can usually absorb temporary drops in output resulting from cuts in working hours in the expectation that improved productivity will in due course take up the slack. Advance planning and a certain amount of overtime where necessary, as a transitional measure, can overcome most difficulties. But a large public transport undertaking which has its functions precisely laid down in law and has its timetable to observe cannot apply the same flexibility in honouring its obligations to customers.

As far as the Swiss Railways are concerned the cut in hours must be absorbed without extensive new recruitment, owing to internal financial limitations and to the shortage of labour in Switzerland as a whole. Most measures of rationalization which could result in an immediate reduction of labour requirements were taken in 1959 when hours were cut from 48 to 46 per week. Means immediately available of rationalizing operations so

as to accommodate the new reduction in hours are thus severely limited. The Railway Administration has however one area in which savings in working time can be made. Customers today are making less demands on Saturday collection and consignment services for slow part load traffic. The closure of the consignment centres on Saturdays would therefore have little effect on the services as a whole. This would in turn enable economies of working time to be made in marshalling yards which deal with slow part load freight. In conse-

quence cuts representing 9 per cent could be made in freight train timetables, providing further savings. Another area for economizing will be offered by the introduction of new fast passenger services between important centres such as Zürich and Geneva, on which route 13-minute cuts per trip will be possible. Other little used services will at the same time be discontinued, and the overall result may be a saving of 90 hours per day in train time.

But quite apart from measures to deal with the problems posed by the cut in

Freezer trawlers

THE RAPID TECHNOLOGICAL progress in shipbuilding of the 1960s, which is already beginning to change the face of the world's merchant fleets, is now making itself felt in the fishing industry. A sign of the times is the introduction of more and more freezer or factory trawlers into the fleets of the major fishing nations. In Great Britain alone some ten freezer trawlers entered service during 1966. Over twenty factory/freezer vessels now trawl from British ports, and it is expected that the total number will be approaching 40 by the end of 1967.

One of the new vessels, the 245½ft. *Marbella*, on a 48-day maiden voyage to Newfoundland waters, demonstrated the catching and holding capacities which can be achieved by returning home with a record freezer catch of 613 tons.

The ship in the picture, the 234ft. *Ross Vanguard* (1488 GRT), one of the most recent of these trawlers to enter service with a British fleet, can freeze 550 tons of fish on each trip. She carries a crew of 25, and among her special features are improved working space on a special factory deck and a better view of work in progress astern from the bridge.



Versatile new amphibious vehicle from Japan



A JAPANESE COMPANY, Ishikawajima-Harima Heavy Industries, has recently developed a completely new type of versatile amphibious vehicle for use on dry land or soft muddy surfaces. The vehicle consists of a water-tight body mounted on four rotor drums with spiral fins.

The vehicle, known as 'Dorothy', is expected to have a wide range of uses on soft snow, sand and mud. The rotor drums are driven by a diesel engine, and when travelling over water or soft surfaces they rotate in pairs in opposite directions to thrust the vehicle forward or backwards. On hard or sandy surfaces the vehicle runs sideways with all rotor drums revolving in the same direction.

'Dorothy' is already in use in the field of civil engineering, and is expected also to be used for the transport of cargo and passengers over difficult terrain.

hours of work the Federal Railways have far-reaching plans for the rationalization of operations in both the technical and administrative fields. Since the modernization programme of 1945 until the end of last year the Federal Railways had to raise very little in the way of investment funds on the open market. Of the 4,000m Swfrs. needed for construction work during this period, over 84 per cent came from current receipts. The budget for 1967 provides for expenditure of 450m Swfrs., which is part of a long term development plan for execution between 1965 and 1970. Of this sum, 250m Swfrs. is destined for renewal of old and obsolete equipment. The remaining 200m Swfrs. is earmarked

for the financing of rationalization and the improvement of services.

Plans for the future include the progressive introduction of automated processes in various railway operations, such as remote controlled signalling, route selection by trains, control of locomotives by track signals, automatic train composition in marshalling yards and, eventually, automatic couplings.

The plans are geared to enable the railway to make the maximum use of its natural technical advantages in providing those services which it is best able to provide and which are most urgently required of it. This will mean the extension of certain services and the curtailment of others.

Extensive rationalization is also envisaged for the commercial and administrative side of the Federal Railways' operations. Centralization and mechanization of accounting procedures has already begun and is being extended. Accounting and sales procedure in the issue of passenger tickets is being improved by the installation of ticket printing machines which produce tickets on demand and at the same time register the amount involved in each sale for accounting purposes. Under the old system large supplies of preprinted tickets have to be kept in stock and the accounting work done separately. Problems arising from the reduction of working hours with regard to times of opening and closing of booking offices are being overcome to some extent by the installation of ticket automats and money changing machines. These are especially useful at peak periods in heavily frequented stations to eliminate queues at ticket offices, and at small unattended stations in outlying districts.

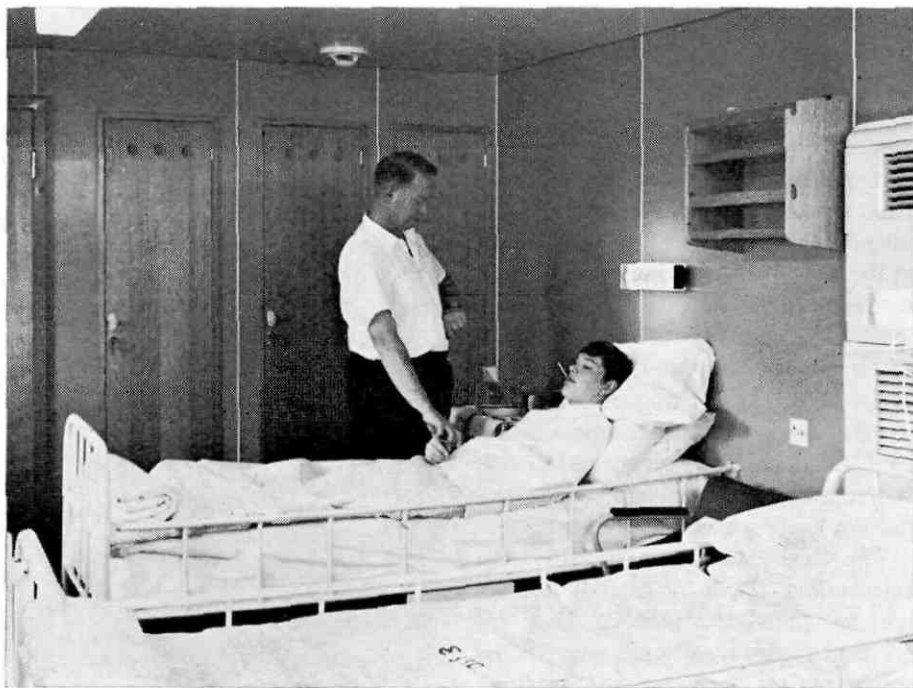
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Radio Medical Centre in difficulties

THE INTERNATIONAL RADIO Medical Centre in Rome is reported to be running into financial difficulties. Created in 1935, the CIRM was for twenty years supported and financed solely by its founder, Professor Guido Guida, who placed at the Centre's disposal a part of his own surgery for the installation of the first radio-telegraph equipment. In 1950 CIRM was raised to the status of a foundation and was officially recognized by the Italian government, and from 1955 on was granted £9,250 a year to consolidate and develop its services. In 1960 the grant was increased to £16,500.

The Centre's services, however, have rapidly outstripped its resources, and staffing difficulties have been encountered because it has been unable to pay adequate salaries. Professor Guida has now appealed to the Italian government, and to seamen's unions, for further financial support. (The Welfare Fund of the ITF's Special Seafarers' Section has in the past made regular grants to the Centre.)

Improved medicine at sea



When there is no qualified doctor on board, which is usually the case on ships which do not carry passengers, the captain or one of his officers—the Chief Steward in this picture—has to perform routine medical duties. It is essential that some adequate form of guidance is available on board. (Esso picture.)

FIVE YEARS' WORK by the Joint ILO/WHO Committee on the Health of Seafarers has recently culminated in the completion of a coordinated scheme for medical assistance to ships at sea. The work has involved the unification and modernization of the three existing forms of medical aid at sea: the ship's medical guide, the medicine chest and, in cooperation with IMCO, the means of obtaining medical advice by radio.

The new Medical Guide gives the ship's master (or his appointee) a basic knowledge of the broad aspects of medicine, so that he can:

- give first aid;
- administer practical treatment over a prolonged period;
- make a radio call to a distant doctor for help or advice.

Exact statistics on the incidence and causes of sickness and death at sea are scanty because of the short-term service of many seamen and because of a lack of universal seafarers' medical documents. In 1958 research by the World Health Organization revealed a markedly higher frequency of accidents and invalidism among seafarers as compared with the general population. Since

ancient times, the risk of a seafarer carrying infection from one port to another has been recognized. And because of his calling he is more exposed to certain illnesses than most land dwellers. Scurvy has long since lost its terrors, but venereal diseases remain a health problem. Gastro-intestinal disorders, accidental injuries, skin diseases, mental illness, dental diseases, and in some countries tuberculosis, all have a high incidence among seafarers.

The new Medical Guide advises the latest and most reliable treatment for all these diseases, with a full recognition of the special nature of the seafarer's way of life and of the social and psychological problems inextricably bound up with it.

But since illness is no respecter of persons and is likely to appear when least expected, the Medical Guide covers almost the entire range of human disability: headaches to leprosy, varicose veins to bubonic plague, snake bite to maternity. Each ailment is explained in straightforward, uncomplicated language, further clarified by the many illustrations.

Contagious disease can rapidly

incapacitate a crew. The Guide consequently gives essential advice on the isolation and care of communicable diseases. More important, it lays great stress on preventive medicine and explains the necessity on board ship of personal cleanliness and hygienic surroundings. The kitchen crew, for example, is given advice on testing the freshness of food before use.

The medical Guide takes close account of the contents of the new standard Medicine Chest; in drawing up its recommendations on this, the Joint Committee on the Health of Seafarers began with the contents of the chest recommended in 1958 for ships of all nations not carrying a doctor. To this have been added new essential medicines, instruments, appliances, dressings and general medical equipment.

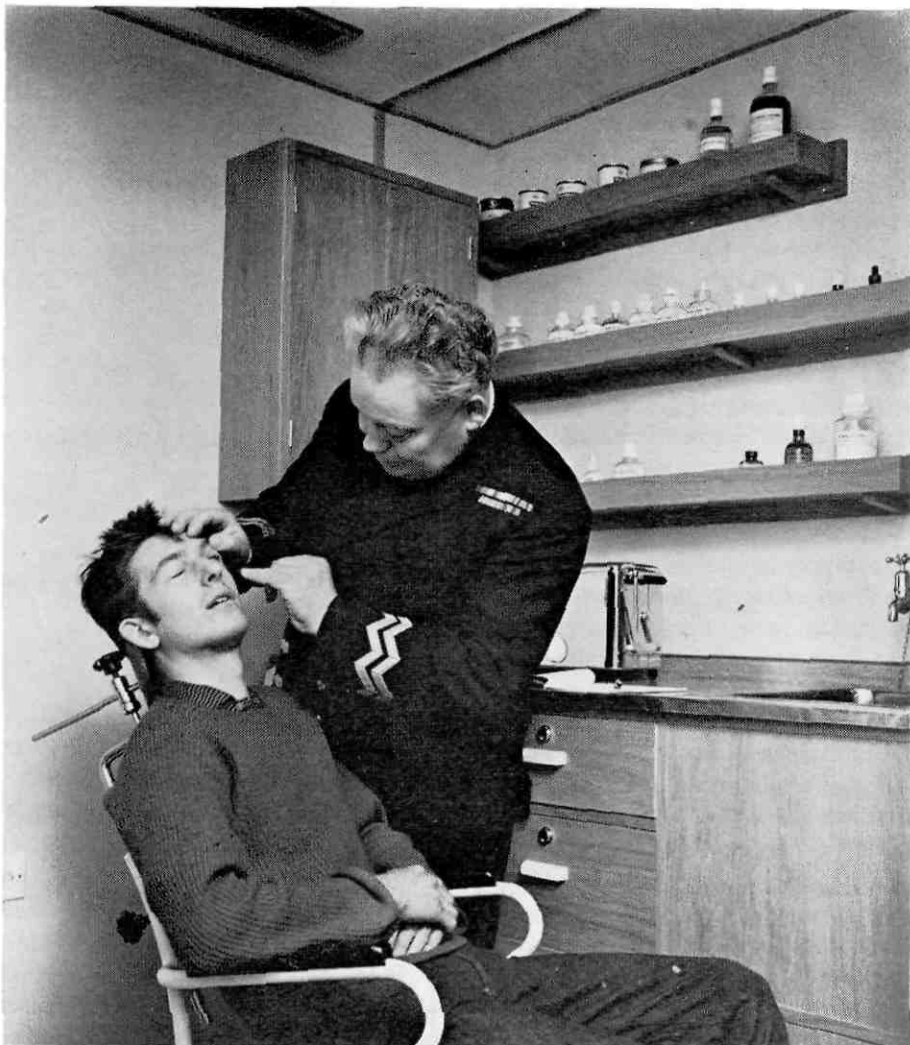
Both the Guide and the Chest will be revised at periodic intervals to keep pace with the march of science. However, no matter how thorough the precautions, there are times when there is no substitute for a doctor's help. The International Code of Signals was in drastic need of revision in order to be able to handle this situation. The medi-

cal part of the Code provided only one-way service. One could communicate certain symptoms, but no code existed for treatment and recovery advice. This meant that coastal radio stations could receive medical requests from merchant ships, the radio station telephoning the request on to a doctor at the nearest hospital, but the decoded messages often left the doctor with insufficient idea of what was required, or else the doctor's reply could not be properly coded for transmission back to the ship. Verbal communication could also be used between ship and shore, of course, but in many cases they did not share a common language.

The new Medical Section of the International Code of Signals has six hundred different sentences. They are grouped in three sections: one for the ship's master, one for the replying doctor, and one with phrases common to both. The transmission of messages in cipher remains the quickest and most practical method, since a hundred-word message can be transmitted in a few cipher groups, and ciphered messages overcome all language barriers.

All that remains is for the maritime nations of the world to adopt these proposals for improved medical service. The Guide can be adopted as a whole, or used to revise existing guides. The Chest can serve as every ship's basic check list. The improved Code of Signals should be the easiest to implement, and it is hoped that copies will be sent to every radio room without delay. The Coordinated Scheme marks a new advance in a wide and continuing effort to provide the seafarer with conditions of life and work as close as possible to those enjoyed by worker ashore.

Top: *The new coordinated medical aid scheme prepared jointly by the International Labour Organization and the World Health Organization specifies all medicaments and instruments which a ship's medical chest should contain so that minor ailments may be treated. (Esso picture.)* Bottom: *The ILO/WHO coordinated scheme for medical assistance also contains a standardized code of signals, worked out in consultation with the Inter-governmental Maritime Consultative Organization, for summoning rescue services or receiving instructions from doctors and specialists ashore. (Photo: Marconi International Marine.)*



International Transport Workers' Federation

General Secretary: HANS IMHOF

President: HANS DÜBY

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
- 339 affiliated organizations in 84 countries
- Total membership: 6,500,000

The aims of the ITF are

to support the national and international action of workers in the struggle against economic exploitation and political oppression and to make international trade union 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 to organize in trade unions;

to defend and promote, internationally, the economic, social and occupational interests of all transport workers;

to represent 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

Aden * Argentina * Australia * Austria * Barbados * Belgium
Bermuda * Bolivia * Brazil * British Honduras * Burma
Canada * Chile * Colombia * Congo * Costa Rica * Curaçao
Cyprus * Denmark * Dominican Republic * Ecuador
Estonia (Exile) * Faroe Islands * Finland * France * Gambia
Germany * Great Britain * Greece * Grenada * Guatemala
Guyana * Honduras * Hong Kong * Iceland * India
Indonesia * Israel * Italy * Jamaica * Japan * Jordan * Kenya
Lebanon * Liberia * Libya * Luxembourg * Madagascar
Malawi * Malaya * Malta * Mauritius * Mexico * The
Netherlands * New Zealand * Nicaragua * Nigeria * Norway
Pakistan * Panama * Paraguay * Peru * Philippines * Poland
(Exile) * Republic of Ireland * Republic of Korea * Rhodesia
St. Lucia * Senegal * Sierra Leone * South Africa * South
Vietnam * Spain (Illegal Underground Movement) * Sweden
Switzerland * Taiwan * Trinidad * Tunisia * Turkey * Uganda
United Arab Republic * United States of America * Uruguay
Venezuela * Zambia

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