

For a few years from 1956, the only source of liquid helium in Britain was the National Physical Laboratory, which supplied it at £5 per litre. Growing demand led the NPL to encourage the British Oxygen Company (BOC) to take over the task of supplying helium but, despite the increasing market, BOC made little change to the price until Oxford Cryogenics entered the field. BOC has said that the high price was necessary to cover the costs of research and development—costs that Oxford Cryogenics, which entered a ready made market at a later stage, did not have to absorb.

Oxford Cryogenics has a different version of events. While paying full tribute to the present management of the BOC division concerned, it says that before 1963 liquid helium was so highly priced and difficult to obtain that there was a noticeable brake on the expansion of low temperature research in Britain. BOC did not deliver helium and customers had to arrange for their own supply by taxi and rail. Oxford Cryogenics began supply in 1963 with little more than a telephone and a second-hand delivery truck and within a few weeks had captured a substantial part of the market.

Since that time, prices of liquid helium have fallen from about £5 a litre to between £2 and £3, depending on quantity and other factors. Though competition is undoubtedly one factor in this reduction, the expansion of the market has also helped. So, too, has the acquisition by BOC of a share in a Canadian helium source. Previously the US Bureau of Mines had a near monopoly of helium.

Oxford Instruments is disposing of its liquid helium business because its primary purpose of making helium more readily available has been accomplished. The company's principal sphere of interest is in making apparatus for high magnetic fields and low temperatures. Serious trading began in 1963 and the company's turnover had passed £250,000 by 1967.

RAILWAYS

Transport Transported?

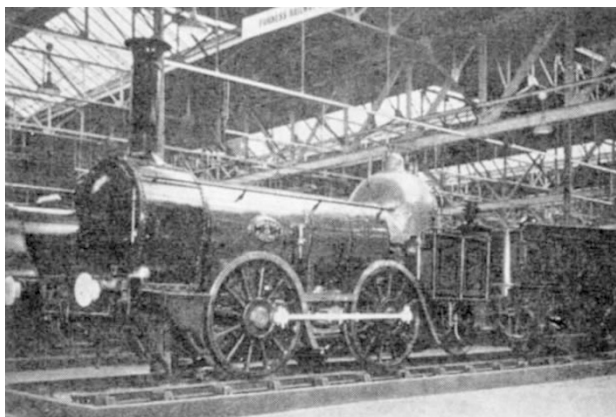
THE Museum of British Transport, part of the Railways Board and at present occupying what used to be a tram depot in Clapham High Street, London, may be moved to a new site in York. This recommendation has been made after an investigation last year of the finances and management of British Rail and is just a small part of the policy to rid the railway of its deficit by 1971. The museum at Clapham houses a fine collection of rail and road relics and is one of three transport museums in Britain. The other two, at the railway centres of York and Swindon, are, strictly speaking, purely railway museums. Just now the three museums are run by the Railways Board, but the plan is to transfer the Swindon museum to Swindon Borough Council and to amalgamate the Clapham and York museums at York under the Department of Education and Science.

It is important to be clear just what this involves. The Clapham museum claims to have the largest collection of rail and road relics under one roof, including 13 locomotives and some 22 buses, trams and trolleybuses. The prize exhibit is obviously the magnificent streamlined locomotive "Mallard", built at Doncaster in 1938 and holder of the world speed record for steam traction. The museum also has on

show other railway equipment, and a fascinating collection of royal coaches, including those used by Queen Victoria and by King Edward VII. On a smaller scale, all the paraphernalia of road and rail travel is there—the ticket machines, posters station signs and notices. To move the museum to York has some logic in the sense that it gathers together two of the important collections into a national museum, but it would mean that London then has no substantial exhibition of railway equipment.

The economics of the situation are that the Railways Board, in its efforts to improve its financial position, quite rightly feels it should no longer be saddled with the expense of running the three museums. The museum at Swindon is chiefly concerned with the history of the Great Western Railway and, as the development of Swindon is very much bound up with the development of the railway, it is sensible that the museum should be transferred to the borough council, which in any case already has much to do with running it. The York and Clapham museums are to come under the Department of Education and Science—where they clearly belong—and will be combined as an out-station of the Science Museum.

Last year, visitors to the three museums totalled about 350,000, and the gross revenue was £48,000. Like museums in general, the three transport museums



Two of the exhibits at Clapham. Locomotive No. 3 of the Furness Railway Co., delivered to the railway in 1849 and withdrawn from service in 1898; and a K-type omnibus of the London General Omnibus Co., 1919—the first design to have the driver seated beside the engine.

are losing money; last year the excess of expenditure over receipts amounted to £51,100, a little better than the figure for 1966 when the excess was £53,000. The Railways Board is not divulging figures for each museum separately, but York seems to be breaking even, while the Clapham museum is said to be running at a considerable loss. The plan is to sell the sites at York and Clapham and to use the money to obtain a new site at York. A locomotive shed at York station is under consideration. The road vehicles at Clapham—many of them at one time London buses—belong chiefly to the London Transport Board and are not to be transferred to York.

It is undeniable that the old tram depot at Clapham is not an ideal site for a transport museum. For one thing there is no railway to the museum, so the locomotives have to complete the last part of their journey by road with all the difficulties that this involves. By their nature, the locomotives and road vehicles need space to be seen to the best advantage, and the site at Clapham is beginning to contain more exhibits than it can reasonably hold.

But if the museum has to move, and it is by no means obvious that this is necessary immediately, it is worth finding another site in London. One idea has been to placate the preservationists by retaining St Pancras station, once it has closed down, as a monument to Gothic architecture and giving it a useful function as a railway museum. Until a new site becomes available, there are in any case plenty of museums which would be only too pleased to look after any of the 71 steam locomotives scheduled for preservation by the Railways Board some of which have not yet been housed. What is clear is that the country where rail transport started ought to have room for a railway museum in its capital.

BRITISH ASSOCIATION

New Members Wanted

THE General Committee of the British Association has drafted new rules for membership as part of a serious effort to solve its financial problems. At the general assembly which concluded the Dundee meeting last week, Sir Peter Medawar, the newly installed president, said that the council had realized that the association must become more self-supporting. The first objective is to stop subsidizing members' activities. As things are, attendance at the annual meeting is included in the four guineas annual membership fee, although it actually costs about £11 for each member attending the meeting. The new proposal is that ordinary membership should cost less but that there should be a more realistic charge for attendance at the meeting. Members will be entitled to receive the *BA Record* as part of their membership and will be able to obtain the other BA journal, *The Advancement of Science*, at a reduced price.

The hope is that these proposals—which will have to be approved by the privy council—will increase membership. To the same end, there is also a proposal to set up a British Association of Young Scientists (to be known as BAYS). All young people with an interest in science and technology will be eligible for membership. They will pay different annual subscriptions, considerably less than adult members, according to

whether they are full-sized BAYS, aged fifteen to eighteen, or junior BAYS, younger than fifteen. The intention is that BAYS will organize their own activities in branches throughout Britain with help from existing branch or area committees. The full privileges of the BA will be open to the young scientists, and the hope is that many more than the 200,000 who have recently been active in the BA young people's programme will be encouraged to join an organization which has so many distinguished adult members. A gift of £2,000 a year for three years has been given by the International Publishing Corporation to assist in the launching of BAYS. The activities of the young scientists are to be publicized in the journal *Science in Action* which IPC is to publish for young people fortnightly from September 19 this year. The BA has promised to put experts at the disposal of the editors to act as advisers and suggest contributors. It will be interesting to see who profits from this bargain.

These moves are all intended to increase interest in and thus the membership of the BA, which now stands at about 2,500. Whether they are successful remains to be seen. In view of the fact that other sources of income have not been forthcoming, the membership will have to increase dramatically to carry the BA out of its present financial doldrums.

COMPUTER BUREAUX

Code of Conduct

IN the United States, 35 per cent of computer service bureaux—firms whose assets are a computer and a staff of computer personnel—fail in their first year. Computer service bureaux in Britain are eager to avoid a similar situation, and their trade association, the Computer Service Bureaux Association (Cosba), has therefore drawn up a code of conduct to help its members and to protect their customers. The business of supplying computer services through bureaux is rapidly growing. The annual turnover of bureaux in Britain is at present £15 million and is said to be increasing by some 30 per cent a year. Last year, the bureaux realized they had no collective voice to air their opinion on matters vitally affecting them, especially the Post Office plan to set up a data processing service, so Cosba was founded in January 1968.

The code of conduct now published is mandatory on members of the association. There are also recommendations about standards of service which are not obligatory and a list of clauses considered suitable for inclusion in the contract between bureaux and clients. The security of business information crops up under all three headings, and it seems to be agreed that all information from clients will be treated as confidential. Cosba also reassures its members' clients that if a bureau fails to carry out a contract, another will be found to complete the work.

Even so, one of the recommended contract clauses, if implemented, suggests that the first clients of a bureau may be at a disadvantage. The clause stipulates that patent, copyright and other property rights in programs written under contracts will be vested in the bureau concerned, which will reserve the right to use all or part of them for other applications. The inference seems to be that when the same program can be