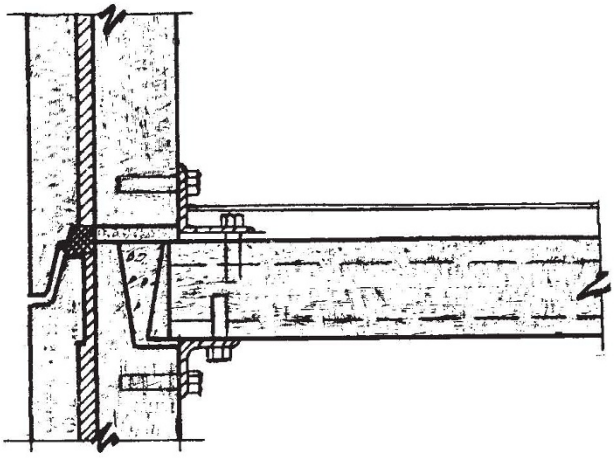
The GLC expects that the work will be easy to carry out. The advantage of the type of anchor fixing used is that the holes are cleanly and precisely drilled to the correct depth where required with little noise and with practically no damage to decorations.

The estimated cost of strengthening the twenty-nine blocks is £750 a flat, and the bill for the whole exercise of removing gas, providing and installing electrical appliances, and strengthening, is expected to approach



Junction of floor and wall, showing the type of strengthening brackets which are to be fitted.

£1·5 million for these blocks alone. The GLC is hoping that the Government will provide at least 50 per cent of its total costs, but this may be wishful thinking if all the other councils with blocks of the Ronan Point type or similar start making claims. It is also not clear whether the GLC's method will be suitable for blocks having a different arrangement of walls on plan, whether of the Taylor Woodrow Anglian construction (like Ronan Point and the GLC blocks) or of some other large panel system. The GLC advises that "each block must be treated as an individual case".

GAS

Problems of Conversion

THE gas industry is perhaps a surprising candidate for the title of the fastest growing business in Britain. But within the next two to three years, gas sales in Britain should double—and double again in the two to three years after that. "This is a rate of expansion for a basic industry almost unprecedented in post-war Europe", says Mr L. W. Andrew, director of the Gas Council research, development and testing establishment at Watson House in west London. Natural gas from the North Sea, though it has not been the only reason for the surge in demand, is certainly the only way of meeting it, and the conversion of Britain's 25 to 30 million appliances is going ahead as fast as possible. Gas men tend to get lyrical about methane ("It's a beautiful gas", says Mr Andrew), but burning it in existing equipment calls for a good deal of ingenious conversion.

The principal drawback is that natural gas will not burn well in the non-aerated burners which have been the mainstay of the industry's expansion over the past ten years. In this kind of burner, gas simply issues from a jet and burns. Because no air is drawn into the barrel of the burner, it burns quietly and keeps clean, which saves on maintenance costs. Why it works is something of a puzzle, but one that it has become important to solve. Nobody has yet devised an entirely satisfactory non-aerated burner for natural gas, although there are now several designs which may fill the bill. One of the most interesting is the matrix burner, developed at the British Petroleum Research Centre at Sunbury on Thames. This consists of a bundle of parallel tubes with their ends formed into hexagons which fit together like a honeycomb. Gas emerges from the burner through slits left between the neighbouring hexagons and mixes with air which comes through the tubes themselves. The burner is quiet and apparently efficient, but needs a chimney to draw air through it.

But the main problem in converting to natural gas is simply the scale of the task. Of the 25–30 million appliances to be converted, only 6 million are still in production. The manufacturers have agreed to supply conversion sets for another 14·5 million appliances which have been out of production for less than fifteen years, and for a few more which, though older, are still in use in sufficiently large numbers to justify it. Appliances even older than this—some seem to have been designed to last for ever—also have to be converted by the area gas boards. In extreme cases, where conversion is impossible or unreasonably expensive, the gas boards will replace the appliance with a modern one, free of charge. The task of Watson House is to approve the conversions worked out by the manufacturers, and to prepare detailed instructions so that the gas fitters employed by the area gas boards can make the conversions as quickly and reliably as possible. The general principle is to achieve exact parity of performance before and after conversion, though this may not always be possible. With 7,500 different types of appliance to convert, the job is a vast one. "In two years' time", Mr A. E. Sharman of Watson House observes cheerfully, "we'll be converting each year as many appliances as the Dutch converted in their entire programme". By that time, everybody hopes that the cost of conversion, expected to run at about £30 a household, will be near target. At the moment, each house is costing about £5 more than it should; but labour is a very large element in the costs, and should fall as fitters become more experienced.

MEDICINE

New Regius Professor

DR RICHARD DOLL, deputy director of the Medical Research Council's Clinical Research Centre and director of the MRC Statistical Research Unit since 1961, has been appointed Regius Professor of Medicine at Oxford. He succeeds Sir George Pickering, who has retired to be master of Pembroke College. The director of the MRC Statistical Research Unit with a particular interest in epidemiology may not at first sight seem the obvious choice for the Regius chair of medicine at Oxford. But quite apart from any particular bond of kinship which the Prime Minister—who formally

makes the appointment—may have felt towards a man who has recently crossed swords with the magazine *Private Eye*, Dr Doll emphasized last week that throughout his career he has maintained an active interest in clinical medicine and teaching. For the past twenty years, he has done clinical research at the outpatient department of the Central Middlesex Hospital, where he is an honorary associate physician. And as a result of his work on gastroenterology, he has also been elected a member of the British Society of Gastroenterology and an honorary member of the American Gastroenterology Association. Dr Doll lectures at the London School of Hygiene and Tropical Medicine and

at University College Hospital on epidemiology. He emphasized that there is also at Oxford a chair in clinical medicine, so the Regius professor need not be, and often in the past has not been, a clinician.

Dr Doll intends to continue his research in epidemiology, and says that he will have good facilities and at least as much time for research as at present. The teaching and administrative load at Oxford will occupy no more time than the work involved in planning the Clinical Research Centre. The Department of Medicine has only six established posts and there are no vacancies, but the Nuffield Committee has apparently given a substantial sum so that he can take a nucleus of a research team with him. He hopes to take at least two of his current staff at the Statistical Research Unit. It remains to be seen what will now happen in the Statistical Research Unit of the MRC, which was intended to become the division of epidemiology at the Clinical Research Centre.

MEDICAL RESEARCH

Computer for Medicine

At midday last Tuesday the Medical Research Council's new computer centre in London was officially opened by Mr Edward Short, the Secretary of State for Education and Science. With the addition of this £280,000 GEC 90/300 computer, the MRC now owns about six computers and also has access to several others. The new unit is the biggest yet and is intended to be a central facility for MRC staff in London.

The new computer is an American machine manufactured in Britain under licence by GEC–AEI Automation Ltd. It has a general speed of operation and access time of 2–5 microseconds and 32,000 words of fast core store. The computer, which is being programmed in Fortran, also has a fast line punch, a fast card reader and five magnetic tape decks. This machine was particularly chosen for the fine range of software which is incorporated and which includes a large disk store of 500,000 words—particularly useful for problems involving large quantities of information.

The computer was installed last autumn (19 months late) and has been working for the past two months. The unit, however, has for a year been compiling a library of standard programs which can be applied to many of the service tasks. There will be analyses of both large and small-scale clinical and epidemiological studies and the computer will also be used for keeping records of MRC expenditure.

One team at the unit is at present exploring the application of computers in medicine and biology while another is using the computer to recognize microscopical preparations of chromosomes in the hope of finding an automated process which will be 100 times faster than human methods. Other research activities of the unit will be concerned with problems of mathematical modelling and medical data processing.

Dr Clive Spicer, the director of the unit, estimates that the running cost of the unit will be about £60,000 a year, excluding the depreciation of the computer. It is hoped, however, that this unit will be directly linked with another new computer which is to be installed at the Clinical Research Centre at Northwick Park, thus providing an even better service.

SOCIETIES

Togetherness at Last

After a year and a half of scarcely perceptible activity, merger discussions between Britain's three largest chemical societies are now in full swing, and the presidents of the Chemical Society, the Royal Institute of Chemistry and the Society of Chemical Industry hope that they will have concrete proposals to put before their members within the next month or two.

Abortive attempts to streamline the organization of the chemical societies were made in 1941 and again in 1960, but this time, according to Sir Ronald Nyholm and Mr Leslie Williams, the presidents of the Chemical Society and the RIC, it should be possible to arrive at a workable solution—which is just as well since "what is now at stake is the future standing and prestige of chemistry in the community and a failure to take action on this occasion will have much more serious and lasting consequences". The latest move toward collaboration was made in 1967 when the societies agreed (*Nature*, **215**, 1116; 1967) that Sir Eric Bingen, a former deputy chairman of Imperial Chemical Industries Ltd, should conduct an independent investigation into ways and means of rationalizing the activities of the three organizations. Nothing much seems to have happened until Sir James Taylor, an industrialist and former president of the Institute of Physics and the Physical Society, took over in 1968