

While the Trust may plan projects and make specific assignments to selected institutions, it will not make grants to existing institutions in respect of their work as a whole, nor interest itself in purely local projects. The Trustees also conclude that juvenile delinquency is only one aspect of the much wider problem of family welfare. The term 'juvenile delinquency' will no longer be used for describing a special branch of Trust interest; any such schemes will from now onwards be included under "Community Services and Social Welfare".

The Trustees record that the actual expenditure on village halls increased from less than £12,000 in 1951 to more than £17,000 in 1952, and they express the hope that all the promises made, totalling £80,000 in respect of eighty-four schemes, will have been fulfilled before the end of the present quinquennium. Full reports on two experiments in rural case-work, in Oxfordshire and in parts of Northumberland and Durham, indicate the reality and urgency of problems of family welfare in the countryside and the serious lack of co-ordination of effort among the agencies concerned with welfare services. Two schemes in the programme of the Family Welfare Association are still in an early stage; but the work of the Family Service Units has now extended to Birmingham, Leicester, Sheffield and York and in cordial relations with the local authorities concerned.

Under "Education and Youth Services" a start has been made with the Taunton Museum scheme, which is distinguished for the quality of its collections and by the housing of them in a historic building. The Trust has provided £6,000, chiefly for the provision of cases and other display material, while the Pilgrim Trust has granted £3,000 for repairs to the fabric. Proposals for reorganization and improved display at thirteen other local museums have also been approved, and a grant has also been promised to the Outlook Tower Association of Edinburgh for the reorganization of the Scotland Collection in the Outlook Tower. A special and final grant of £7,500 was made to the National Central Library, and good progress was made during the year with the development of the machine designed to enable sighted people to communicate with those who are both blind and deaf. An investigation was also sponsored into the reactions of youthful audiences to films of various types.

INSPECTORATE OF FACTORIES IN GREAT BRITAIN

ANNUAL REPORT FOR 1951

A FEATURE of the annual report of the Chief Inspector of Factories for the year 1951 (Cmd. 8772; London: H.M.S.O., 1953; 6s. 6d. net) is a brief historical survey of changes in the industrial picture, so far as safety, health and welfare are concerned, during the fifty years since the consolidating Factory and Workshop Act was passed in 1901. Many changes in industrial location have taken place, and road transport has revolutionized the siting of factories, while the ever-increasing use of bicycles, omnibuses and other transport for the journey to work has made it much less essential to have the factory immediately close to the workers' homes. Many small firms have been amalgamated or swallowed up into large combines or have disappeared,

but the great bulk of premises under the Act remain small; for example, 90 per cent of the locksmith work in the Black Country is still carried on by small family businesses, only two factories employing more than a thousand and only eleven more than a hundred, most of them employing less than a dozen. Most chain-makers employ less than twenty, and in their works the only step made in mechanization is the substitution of electric for hand blowers.

The number of factories without power has declined continuously from 137,648 in 1901 to 26,464, while those with power are now 212,245 compared with 95,664 in 1901. Mechanization, moreover, has eliminated much of the grinding load of hard dirty work and heavy lifting, and the changed attitude to mechanization is illustrated by the advertisements of a large bakery, which in 1901 claimed that "all bread was made by hand" and in 1951 boasted of bread "not touched by the human hand". The external aspect of factories has changed considerably, as has the composition of the labour force; but a major contribution to the greater cleanliness of to-day has been made by the greater variety of paints available, and the use of vacuum cleaners and of more suitable floorings. The much better illumination of recent years has also been a valuable stimulus to cleanliness and good housekeeping, as have the provisions of the Factories Act, 1937, which made compulsory weekly cleaning and the daily removal of refuse.

All reports agree that improvements in lighting are among the most important benefits of the past fifty years; but although regulations made under the 1901 Act laid down a standard for sanitary accommodation, poor accommodation, badly maintained, is still found in multiple buildings in large towns. Although few local authorities carry out routine inspections, relations with the local authorities appear to be much more friendly than at the beginning of the century. The standards of air space were raised by the Act of 1937 to 400 cu. ft. per person from the 250 cu. ft. of the 1901 Act; but while much remains to be done in regard to process steam, great advances have been made in ventilation, more particularly in the application of local exhaust to remove dangerous dust or fumes. New risks, however, continually arise, and where the sanctions of the general law and voluntary action are insufficient, each new hazard has been dealt with by special regulations. Every year, too, brings fresh reports of improved methods of mitigating or eliminating high temperatures in such trades as laundries, glass works or steel works, and also of improved methods of securing adequately warm temperatures.

Already in 1901, though the steam engine was still the main driving-force in industry, in spite of considerable inroads by the gas engine, inspectors were commenting favourably on the rapid development of electric power; and during the past fifty years all other forms of motive power have gradually declined. The individual drive and the sectionalization of transmission machinery have greatly reduced the dangers from revolving transmission machinery, and during recent years much attention has been given to the spacing or re-spacing of looms. A great deal has been done since 1901 in the provision of guards; but, in spite of the further obligation of the 1937 Act in regard to fencing dangerous machinery, occupiers still complained in 1951 that they were obliged to add to the fencing of many machines. Legal provisions regarding the reporting of accidents have varied during the years so that no valid con-

clusions can be drawn from a comparison of the 1,035 fatal accidents and 82,725 non-fatal accidents in 1901, with the corresponding figures of 944 and 159,693 in 1925 and 828 and 182,616 in 1951. Moreover, inspectors have sought increasingly to foster a positive attitude to accident prevention by stressing the importance of training and organization for safety.

Deaths and serious injuries from works fires, as distinct from burns from local sources, have been rare throughout 1951, and in all trades with special risks to health the records and memories of fifty years show a similar pattern. First there was the gradual, and sometimes grudging, realization of the source of danger to health, powerfully stimulated by the work of the medical inspectors and by individual research carried on by enlightened firms; search was then made for substitutes for the dangerous materials, with experiments in their use and special inquiries, followed, wherever agreement on voluntary action could not be obtained, by prohibition or control by special regulations. New techniques learned by sometimes unwilling management and men brought unexpected success after initial hostility to new materials. Where the dangerous material could not be eliminated, progress has been by way of total enclosure of the plant or by fitting local exhaust ventilation, with special provision of facilities for washing, protective clothing and regular medical examination. In the chemical industry enormous advances have been made in improving atmospheric conditions by exhaust ventilation, condensing plants and dust filtration units; but the increased use of inflammable and toxic solvents in the boot and shoe trades has brought new risks which are not yet completely removed. As a result of the introduction of low-solubility and leadless glazes, for the first time since records were kept there were no cases of lead poisoning in the Stoke district in 1944, and in 1947 the Pottery (Health) Regulations made the use of raw lead glaze illegal.

The biggest improvements in welfare—a word unknown to the 1901 Act and owing its legal existence to welfare orders made under the Police, Factories, etc. (Miscellaneous Provisions), Act of 1916—have come during the past ten years. Canteens were rarely found before 1914, but are now accepted as a necessity by most firms and workers, in spite of complaints, sometimes unjustified, about the quality of the food or service. In the same period has come a strong movement towards all forms of joint consultation, while throughout the half-century the attitude of management generally has greatly changed. Washing facilities were a luxury at the beginning of the century and only became compulsory in all factories under the 1937 Act. Each year since 1945 has recorded increased effort to give sufficient washing accommodation in attractive surroundings; but much less has been done to bring about really first-class cloak-room accommodation. In 1901 also the provision of protective clothing was rare. Now it is increasingly provided by firms as and when the process appears to need such clothing, and overalls are now often provided as a part of the works scheme for good appearance and good discipline. Outside the factory it is increasingly difficult to guess the type of work carried on by persons one meets in the streets.

No feature of the past half-century has been more striking than the reduction of working hours. In 1901 the usual working week was about fifty-five hours in most trades, the 1901 Act allowing sixty hours for women and young persons in non-textile

factories, with a twelve-hour period from Monday to Friday and an eight-hour period on Saturdays. The working day in the Midlands and North of England was usually 6 a.m. to 6 p.m., with half an hour for breakfast, one hour for the midday meal and no authorized short breaks. Partly as the result of scientific study of fatigue, from 1918 the forty-eight hour week came to be recognized as normal and received legal sanction as a maximum for women and young persons more than sixteen in the 1937 Act. The five-day week which gained popularity in the 'thirties, particularly in the new industries in the South of England, became almost universal after the Second World War except in a few trades. The harsh asperities of shift-work have also been greatly softened.

At the beginning of 1902 there were ninety-five inspectors, including thirty-eight junior inspectors, and about thirty-four inspectors' assistants, as well as a principal lady inspector and a staff of eight lady inspectors. At the beginning of 1951 there were 322 inspectors and more than fifty vacant posts. The composition of the inspectorate had also changed. In place of the one medical inspector of 1901 there was a senior medical inspector and twelve medical inspectors, while the electrical inspector first appointed in 1902 has now been succeeded by a senior electrical inspector and thirteen electrical inspectors. The one engineering adviser of 1901 was the predecessor of the eighteen inspectors in the present engineering and chemical branches under the senior engineering and the senior chemical inspectors. Prosecutions in 1901 were more numerous but were largely for illegal employment of one kind or another, which does not occur on any scale at present. The basic principles on which inspection has been founded appear to have changed little, and the inspector's main task is still in the factories.

As regards the year 1951, the report expresses the view that the need for economy in the use of power, materials and labour compels a constant striving for greater efficiency which, although not always ensuring higher standards of safety, health and welfare, tends on the whole to improve working conditions. Those points of some general interest which emerge are, first, the establishment of a communal health service in one of the oldest trading estates in England which has assisted a factory manufacturing basic lead carbonate and lead nitrate in improving health conditions. Steps have been taken to equip a laboratory at the London School of Hygiene and Tropical Medicine, as an extension of this side of the health service, and a chemist has been engaged to undertake, *inter alia*, the estimation of lead in samples of air collected by the health engineer. The second matter is the attention given to radiological developments in industry. Special visits to representative factories using X-rays for the radiographic, fluoroscopic or crystallographic examination of castings and other materials have indicated that a very high standard of equipment, installation and use prevails. The question of protection in handling the large services of up to and just over a curie of cobalt-60 now available from Harwell, however, has caused some concern, and although no new permanent applications of radioactive tracers to routine industrial factory processes were reported during the year, it is likely that this new technique will soon be widely applied. The third point is further evidence of the capacity of persons more than sixty years of age to do useful work in industry without increased liability to accident.