

ment also left much to be desired. No proper regulations or conditions were available. The idea of a meeting of experts in fire matters from all parts of the world is a proper one, and will no doubt lead in the future to others, where the experience gained will result in arrangements being made whereby the fire service will be materially benefited.

Our next visit was paid to the London Metropolitan Fire Brigade. In the absence of Commander Wells on his annual holiday, the second officer, Mr. S. G. Gamble, very kindly showed us over several of the stations and fire-floats. We also attended the Central Station, Southwark Road, and were present at several of the weekly exhibition practices. At this station all the recruits are instructed and tested preparatory to their being entered for active duty. On the public day the recruits go through all their ordinary drill with the manual and steam fire-engines, and also practise with life-saving appliances, scaling-ladders, life-lines, and the large-wheeled escape. A turn-out drill by the regular firemen also takes place. An alarm is rung by the officer, and all the plant is horsed and turns out as if to a real alarm. Considering that the horses are stalled across the yard from the engine-room, the times (about 24 seconds) were very creditable. At this station are very complete establishments for the manufacture and repair of most of the appliances in use by the department. Very large store-rooms are also filled with the general requisites of such an institution, and the organization seems almost perfect. The plant of the Metropolitan Brigade is horsed by contract at so much per head. The contractor supplies all horses required, arranges their feeding, and takes all responsibility.

The London County Council, under the representations of the brigade authorities, are making every effort to improve the fire-protection service in this great city. New stations are being built in several parts, and equipped according to modern ideas. The buildings are of a fine character, and are as near perfect for the purpose as possible, adequate accommodation for men, horses, and plant being provided, and every provision made for rapid response to calls. The fire-alarm system is pretty complete, but great improvements are contemplated.

Most of the other fire-stations visited in the United Kingdom are almost repetitions of the London Brigade, but it is surprising to find in use in some of the smaller cities plant and appliances of a very superior character, showing that the authorities recognise the importance of adequate protection from fire. One thing noticeable outside London is the predilection shown for chemical fire-engines. Quite a number of these are in use throughout the Kingdom, and the number is increasing as they become better known. The Glasgow Station, quite recently furnished at a cost of £70,000, is very complete, and is acknowledged to be one of the finest in the world. The buildings, plant, and alarm system seem as near perfection as possible.

While in London we visited the office of the British Fire Prevention Committee. This institution was formed in 1897, and has for its principal object the direction of public attention to the need for increased protection of life and property from loss by fire by the adoption of preventive measures. The fire protection referred to is more in the direction of proper building regulations than in the generally accepted terms referring to fire brigades. The institution is composed of a number of gentlemen professionally interested in the subject of fire prevention, and among its members are found the principal scientists of Great Britain, including the leading experts in the engineering, architectural, and allied professions. It has a very complete testing station, at which tests and reliable research on the question of fire-resistance are conducted. The committee's reports, giving the results of these tests on materials, methods of construction, &c., are published, with complete diagrams, illustrations, &c., and are supplied to members. In time the results of the experiments and the data obtained will be of great service to all concerned in this important work.

We inspected a very useful invention at the Charing Cross Hospital, where some rooms were being fitted with partitions and ceilings manufactured by the Fireproof Partition Company. The framework consists of a channel-iron, fixed on floor and ceiling; into this is fitted studs of I iron, $1\frac{1}{2}$ in. by $1\frac{1}{4}$ in., about 2 ft. 6 in. apart. Inserted in the grooves are sheets of corrugated steel, about 28 in. gauge. The corrugations are of dove-tail shape, $\frac{7}{8}$ in. square, which forms a key for the plaster. The partition is then plastered on both sides, and forms a strong fireproof wall; it can also be used for ceilings.

Another invention which we had the pleasure of inspecting were the fire-proof lights, known as "Luxfer Prisms." These are constructed of glass about $\frac{1}{4}$ in. thick, on one side of which are corrugations or prisms, for the purpose of refracting the light. These prisms are about 4 in. square, and it is the method of glazing that renders them proof against great heat. The squares of glass are fixed into plates of any size by thin copper strips, laid on edge between the squares. The whole frame is then placed in a bath and a copper bead is deposited on the strips by electricity, thus binding all the squares in a solid metallic frame. Although the glass may be completely shattered by fire and water, the frame until actually melted holds the glass in position. While being a wonderful diffuser of light, it is at the same time a perfect check to the passage of flame. This feature makes it specially suitable for use in lifts and light-wells.

For the same use is Pilkinton's "wired glass." This consists of thick glass in the centre of which is embedded ordinary galvanised-wire netting. This also resists extreme heat before collapsing.

Another material in considerable use is non-flammable wood. A chemical preparation, after the wood has been properly prepared, is forced into all the pores by great pressure, and the effect is therefore permanent. The wood can only be burned by extreme heat, and as the chemicals used have a tendency to fuse under a high temperature they add to its protection. The wood having been under treatment over a month under all conditions of temperature, the possibility of warping or shrinking is prevented. Also, because of the volatile and fermentable constituents having been driven off, the liability to rot is removed.

We inspected the automatic fire-alarm system installed by the Pearson Company in the Cripplegate district of London, the scene of the great fire some three years ago. In this vicinity