

FIRE AND FIRE EXTINCTION.

(From the Insurance Record.)

A numerous company of gentlemen interested in the important question of how best to prevent the spread of fires in the crowded areas of the City, and a number of volunteer firemen who took part in the Lord Mayor's Show, assembled on Tuesday evening at the London Institution, Finsbury-circus, for the purpose of hearing a lecture on "Fire and Fire Extinction," by Professor Vivian B. Lewes.

Sir Frederick Dixon-Hartland, M.P., presided, and briefly introduced

The lecturer, who for an hour and a quarter held his audience spell-bound as he recounted and illustrated the numerous discoveries of gases that had taken place during the last three decades. Le Voyager, the Professor explained at the outset, found that the oxygen of the atmosphere was essential to combustion, and then worked on from that point until he was convinced that many substances that would not burn in air would burn in hydrogen and oxygen. Zinc, for instance, said the lecturer, quickly caught fire when placed in a vessel containing the latter gas, while a watch-spring would burn in oxygen as freely as tinder would in air. The heat required to melt the spring was 1,500 deg. Centigrade, and that enormous energy was developed by the combination of the iron and the gas. After this experiment, continued the lecturer, Le Voyager was able to enunciate that combustion was really the evolution of energy brought about by chemical combination. Paper contained chiefly carbon and hydrogen, while coal consisted of from 70 to 90 per cent. of the former. Many, he said, would laugh at the idea that the rusting of iron generated heat; yet the heat caused by the rusting of iron filings coming into contact with sawdust was frequently the cause of disastrous outbreaks. The ignition point of some materials was very low, while, on the other hand, there were articles in which the point was correspondingly high. Fortunately, he said, they had not to contend with the worst of all kinds of fire, viz., fires at sea. The ignition of a coal cargo was one of the most serious calamities with which that trade had to deal. Spontaneous ignition of coal only took place, however, where there was a bulk of about 500 tons, so there was very little fear of an outbreak from that cause in their homes or shops. Oily waste and rags were frequently the cause of fire. The heat nursed by the non-conducting cotton waste gradually rose until the ignition point was reached, and the flames bursting forth had been responsible for the destruction of many buildings and workshops. Proceeding to deal with the question of fire extinction, the Professor explained that they could either decrease the temperature of the burning mass below ignition point, or cut off from the fire the oxygen of the air, which were necessary to carry on combustion. At the Cripplegate fire 66,000 tons of water were thrown on the buildings, or down the

drains, and the amount of heat thus rendered latent would have taken up the total combustion of 13,200 tons of wood. The secret of effectively playing water upon a burning building was to have an immense force behind it. The Professor next proceeded to point out several defects in the "so-called" fire-proof building, and stated that he was distinctly opposed to stone staircases, and too much ironwork. Very little heat was required in order to bring about the downfall of these modern staircases; while the old wooden erection would ensure safety in a fire for a much longer period (Hear, hear.) No building, he assured his hearers, could ever be made so fire-proof as to resist the fierce furnace within it, and the great window space in front, through which the flames were forced right on to the buildings opposite was responsible in a large degree for the spread of great fires. In conclusion, the Professor urged that the window space should be decreased as much as possible, and that thin steel "blinds" should be substituted for the present reflectors, in order that they might be closed up in case of fire. The flames shooting from a burning warehouse opposite would, he said, thus be prevented from smashing the glass of the windows and coming into contact with the inflammable substances inside.

Sir Frederick Dixon-Hartland, in moving a vote of thanks to the lecturer, deplored the fact that a public body in London had made it compulsory that in workshops of a certain size stone staircases should be erected.

A vote of thanks to the Chairman terminated the proceedings.

FIRE INSURANCE IN 1898.

There is no longer room to doubt that the results of the current year will prove disappointing to most offices transacting fire insurance business outside the limits of the British Isles. Evidence is accumulating from all quarters, showing that the fire wave, for some not-readily understandable cause, has been traversing the globe from end to end; and with respect to many districts it is now generally recognized that the premiums received will barely suffice to cover actual losses, without counting the lesser item of working expenses. Several theories have been put forward to account for this wide-spread evil. Perhaps the most plausible, at first sight, lays the blame at the door of providence in the shape of an unusually dry and fine summer; and, so far as special descriptions of risks are concerned, the explanation is satisfactory enough. To a certain point, and to that point only, the argument holds good; but it is not of a nature to satisfy all requirements. The weather has undoubtedly been dead against the fire underwriter, both here and in many parts of the continent; but it has not been hot and dry all over the two hemispheres, and unfortunately, the "fire fiend" has been at work practically everywhere. Complaints are far too prevalent and far-reaching to leave any roof for questioning the view that other and more subtle agencies have been in steady operation,