

for the practice of physic is situated, and being on the upper floor has the great advantage of having an open roof. It has accommodation for 330 students. Contiguous to this class-room there are a small museum and a retiring room for the professor while south of these there are a practical room and museum belonging to the surgical department, the class-room for which is situated immediately above the bone-room, in the south-east corner of the buildings, and by the addition of a gallery has accommodation for 530 students. The upper floor of the range of buildings which forms the south side of the south court, and measures 107 ft. by 39 ft., has been utilised as the dissecting-room. The roof has been formed in ridges and glazed towards the south, and affords as much steady light as it is possible to get. The floor below has been divided so as to give accommodation for various sections. Adjoining the anatomy class-room on this floor there are a microscope room, 40 ft. by 17 ft., with splendid north light, along with accommodation for assistants and demonstrators; while the remainder of the space on this flat has been allocated to a laboratory, 40 ft. by 21 ft. (for teaching physiological chemistry), a histological laboratory, and other rooms requisite for this department of research.

Coming now to the west front—that facing the meadow walk—the first thing which attracts notice is the physiology class-room, 9 ft. square, having a preparation room, 30 ft. by 18 ft., on the east side, and a gallery on the west side, where microscopes have been laid out for the use of students. Above this class-room there are the galvanometer and other rooms for the physiological and histological departments. The midwifery and pathology sections have been provided with suites of rooms in this front between the physiology and chemistry sections. The class-rooms throughout are constructed internally on the same principles, and thoroughly ventilated. Behind the professor's platform, and almost on a level with the lowest benches, are two concealed openings for letting into the room currents of cold air, which, after circulation, is drawn through large ventilators near the roof to the great shaft. This shaft rises above the buildings 175 ft. from the base, and its suction is increased by 10 ft. of hot water coil and the tubes leading to it. The introduction of a flanged and grooved patent window-frame makes the windows air-tight and lock-fast. In the chemical department the arrangements are of a most effective description, and must prove of decided advantage both to the professor and his students; for instead of each student hitherto having to make small quantities of oxygen and hydrogen as he might require it, the more economical method of making gases in large quantities and laid on to the various working tables has been adopted. The same method has likewise been carried out in regard to distilled water—the heating apparatus connected with the department being brought into use.

VON PETTENKOFER ON THE POISONOUS EFFECTS OF COAL GAS.

THE general question of the action of coal gas, whether before or after combustion, naturally connected with the subject of the influence exercised by its various component parts on the human organism there are, however, several important points specially relating to the action of gas which has escaped from underground pipes, and it is to this portion of the subject that Dr. von Pettenkofer has lately been giving special attention, the facilities as to experiments afforded by the Munich Hygienic Institute having been of notable assistance in its elucidation. The circumstance that in its passage through a layer of earth gas loses its smell to a considerable extent, renders such escapes particularly dangerous. In a lecture recently delivered, Dr. von Pettenkofer gave some interesting details of authenticated cases, in which results of a more or less serious character had been produced by causes not at first apparent, but which had been afterwards referred to the effects of underground escapes of gas. At Roveredo two sisters who slept in the basement of a house, awoke on three successive mornings suffering from violent headache and a general feeling of illness. This circumstance was attributed to the effects of an iron stove with which the apartment was heated, which was removed previous to the fourth night, when the mother shared the same room. The night was extremely cold and the roadway was frozen. On the following morning one of the inmates making their

appearance, the door was broken open, and the three women were found motionless, the daughters being dead and the mother so affected by gas-poisoning that she only survived a few days. A similar case occurred in 1871 at Cologne, when three persons of one family were killed in a single night. In 1879 the superintendent of a convict prison at Breslau died, and it was not until his sons had been found unconscious after sleeping in the room where he had died that the effects of gas were distinctly traced in connexion with his decease. The young men soon recovered when brought into the fresh air. In all these cases the gas escaped from broken pipes under the roadway, and situated at a distance respectively of 35, 98, and 35½ feet from the apartments where it had exercised a noxious influence. Another instance has been recorded in Breslau, where the distance was 115 feet. At Cologne the gas passed through a sewer-channel and through the floor, while in the other cases it traversed layers of earth. Dr. Max Grueber has proved that the removal from gas of its carbonic oxide allows it to be safely mixed with the air breathed by animals, which would, under ordinary circumstances, suffer from the presence of that oxide. Hence Dr. von Pettenkofer urges the necessity of gas engineers studying the question of its removal, such treatment having been successful with reference to other chemical agents. Carbonic oxide acts upon the blood-corpuscles. The expulsion of oxygen from them allows of the union of the oxide with hæmoglobin in such a manner that the presence, even to a very limited extent of this combination, renders the blood unserviceable for vital processes. Dr. Grueber's researches have also demonstrated that the noxious properties of the agent in question rather depend upon its degree of concentration than upon the duration of its action, the human organism having at its command the means of freeing itself from carbonic oxide when present in small quantities. Though acting directly on the blood, carbonic oxide, according to experiments on animals, affects by means of that fluid the brain and spinal marrow. Unsteadiness in movement and weakness follow, and when the concentration is of a high degree, convulsions and death ensue. It is calculated that human life could not exist for more than thirty to sixty minutes under the influence of carbonic oxide at a high degree of concentration. The want of uniformity in the effects described in reference to the three instances quoted is attributed, by Dr. von Pettenkofer, to the inequality of the proportion of carbonic oxide present in the air of the rooms at various times. The fact of these cases having, as a rule, occurred in winter has been the subject of detailed investigation, and the result arrived at by Dr. von Pettenkofer is that the normal heat of the rooms had attracted the gas, the difference of temperature between the internal and external air being much greater in winter than in summer. The variation in the degree of cold between one night and another would, in his opinion, sufficiently account for the difference in the gravity of the effects produced on the various occasions referred to, the gas being in some instances less forcibly attracted than in others.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE annual general meeting of this Society was held at 53, Berners-street, on Tuesday, the 13th inst., at 5 P.M., Sir James Paget, Bart., President, in the chair. From the report read and adopted it appeared that the members of the Society number 370, no increase on the previous year; eleven new members had been elected during the year, six had died, and five had resigned. Fifty-seven widows and five orphans were in receipt of grants, three widows less than in 1882; no fresh applications for assistance had been made during the year. A sum of £2776 had been distributed and the expenses of the year amounted to £226. The receipts available for payment of grants and expenses had been £3160. Two legacies had been paid, which, with a life subscription of thirty guineas, had been added to the funded property, making an increase of £311 10s. to the amount standing in the names of the trustees. Mr. James T. Ware and Sir Erasmus Wilson were elected Vice-Presidents in the place of Sir James Paget, elected President on the retirement from office of Sir George Burrows, and Mr. Charles Hawkins resigned. Dr. Kempster, Mr. Felce, Mr. Brodhurst, Mr. B. T. Lowne, Dr. Herbert Davies, and Dr. Russell Reynolds