

entre les mains pendant la durée du siège qu'il fut impossible de le réparer et que les intentions presque testamentaires de Le Verrier n'ont pu recevoir aucune exécution.

W. DE FONVIELLE.

St. Broing, 23 avril.

The Ammonia Flame.

It is generally recognised that Strutt's discovery of an active form of nitrogen is one of the most interesting results of recent investigations: it may be opportune, then, to direct attention to a phenomenon which seems to have some connection with active nitrogen. The colour of the flame of ammonia burning in oxygen is yellow, and of the same tint as the nitrogen glow in Strutt's experiment; the spectrum of the light emitted is similar. The structure of the flame is also exceptionally interesting; it consists of an inner bright yellow cone and an outer, almost non-luminous, flame. It would seem that the ammonia is first of all split up into nitrogen and hydrogen, and that the light of the inner cone is due to the combination of nitrogen atoms to nitrogen molecules, as is suggested in the case of the nitrogen glow, while in the outer flame hydrogen burns to water and some nitrogen combines with oxygen to give nitric oxide. An analysis of the products of combustion showed that nitrogen and water were the main resulting substances, but that nitrogen peroxide was also produced in considerable quantity.

There are one or two other points which support this view of the combustion. The shape of the flame is interesting; most flames which are due to the combination of substances have a pointed cone with more or less inflected sides, when the gases issue from a circular orifice; but in the ammonia flame the inner cone always assumes a rounded apex like a thimble, the outer flame being similar to the usual inflected pointed type of flame. The explanation of the difference in the structure of the flames appears to me to be plain, if in the inner cone a simple decomposition is occurring at a distance from the orifice depending on the velocity of the issuing stream of ammonia, while in the outer cone a combination is occurring with oxygen which is being drawn up along with the flame, as in an ordinary combustion.

Another point about the combustion which seems to support this view of the actions occurring in the flame is that it is difficult apparently to make oxygen burn in an atmosphere of ammonia or to get mixed oxygen and ammonia to burn, though such a mixture may explode if in correct proportions. I think, then, the above view of the cause of the luminosity is preferable to that which would ascribe it to the production of nitric oxide.

ALFRED C. EGERTON.

R.M.A., Woolwich.

REPORT OF THE TUBERCULOSIS COMMITTEE.

IN a report just issued, the Departmental Committee on Tuberculosis, appointed in February by the Chancellor of the Exchequer "to report at an early date upon the considerations of general policy in respect of the problem of tuberculosis in the United Kingdom in its preventive, curative, and other aspects, which should guide the Government and local bodies in making or aiding provision for the treatment of tuberculosis in sanatoria or other institutions or otherwise," has made a pronouncement the importance of which will be realised only as the advice followed in that report

comes to be followed and its suggested provisions put into force.

Up to a recent date the treatment of tuberculosis has been left, to a very large extent, to voluntary effort, and whilst excellent work has been done by the various associations that have undertaken this work, aided later by municipal and other health authorities, and eventually by Government and the Local Government Board, there has been a sad lack of coordination and want of organisation. This has militated seriously against the success of the campaign undertaken against the white plague. In the report now before us we have the "opinion" of a body of experts who have considered the question of the prevention and treatment of tuberculosis on what may be described as a national scale. These experts have already been engaged in some department or other of the crusade. Legislators, administrators, heads of institutions specially designed for the treatment of tuberculosis, medical officers of health, and other members of the medical profession, each in turn has brought some special knowledge and experience to bear, with the result that we have no pressing forward of incomplete or ill-considered schemes, no exaggerated claim for any special method of treatment, and no presentation of a panacea for all cases of tuberculosis.

The committee has taken its duties and responsibilities very seriously, and is evidently impressed with a sense of the importance of its functions. It has looked beyond those who are already in an advanced stage of tuberculosis, and has brought within its purview the measures that must be adopted to prevent the affection of those who are still sound or who suffer but slightly. Further than this, however, it is in full accord with the framers of the Act that much of what is now being contemplated is based on the knowledge that has been gained by research, in the ward to some extent, but primarily in the laboratory. It is impossible, of course, to affirm that in time we might not have reached our present viewpoint as regards the general treatment of tuberculosis in its various forms by a careful clinical study of the disease and a prolonged study, by rule-of-thumb methods, of the various drugs and certain of the modes of treatment; but it may be affirmed, and that most strongly, that this could not have been during the life of the present generation, and probably for several of those succeeding. Experimental investigations carried on by Villemin and Chauveau, by Burdon Sanderson, by Cohnheim and Salomonsen, and finally by Robert Koch, brought us, however, by a "short cut" to a point from which the rate of advance along the above and other lines has been phenomenally rapid; of this we have evidence in the report now before us.

The first aim under the Insurance Act is to find out tuberculous patients, and this, it is suggested by the Committee, is to be done through the "dispensary"; the second is to prevent the spread of the disease by the administrative work of our public health departments and our hospitals:

the third is to bring the patients to as high a state of physical health as possible through the agency of dispensaries, hospitals, sanatoria, open-air schools, and the like. Whilst all this is going on, however, the laboratory investigator is to be encouraged to contribute to that stock of knowledge on which most of the administrative preventive and curative methods of dealing with tuberculosis are based. The public health authority, both central and local, the tuberculosis expert, the general medical practitioner, the voluntary anti-tuberculosis organisation, and the laboratory worker are brought together in the scheme of the committee; funds are provided—whether in sufficient amount still remains to be seen, but they are a good beginning—and the scheme starts under the most favourable auspices. That an enormous amount of good will be effected no one can doubt; that a whole-hearted attempt is being made to get the best of the scheme is equally certain; and should modifications or alterations have to be made in the future, it will be only as more light is thrown upon, and a better view obtained of, a very difficult and complicated question.

SARDINES IN SCIENCE AND COMMERCE.

IT has been suggested to us by a correspondent that the publication of the full text of Alderman Sir George Woodman's judgment in the recent "sardine" case, referred to in NATURE of April 25 (p. 194), would be of interest. In our article Sir George was incorrectly stated to have said that the industry of packing the immature pilchard in tins was started in 1882; this date, as will be seen from the subjoined report with which he has kindly favoured us, should have been 1822.

"My decision is that the term 'sardine' is of French origin. It is the French name for the pilchard, the fish scientifically known as *Clupea pilchardus*. The industry of packing the immature pilchard in tins was started in France in 1822, and the fish so packed and imported into this country were universally known as 'sardines.' The word 'sardine' has now become Anglicised, and I hold that the meaning of the term is 'the immature pilchard prepared and packed in oil in tins.'

"This is not what the defendant sold. The 'Skipper sardines' sold by him were the Norwegian fish known as the 'brisling.' The 'brisling' is the *Clupea sprattus* of the same family but of a different species from the *Clupea pilchardus*, and is the same fish, allowing for differences caused by local environment, as the English sprat. There was a false trade description.

"The defendant has not proved that, prior to the passing of the Merchandise Marks Act, 1887, the description 'sardine' was generally applied to any small suitable fish prepared and packed in oil in tins, but I am satisfied that for the last twenty years at least the use of the term 'sardines' has been extended in commerce, especially amongst retail traders, to include any such small fish so packed and prepared. To the defendant, who started his own business in 1903, and was selling Norwegian sardines twenty years ago, the word had this extended meaning. He also knew that the Norwegian Government had

formally adopted the word 'sardines' to describe the brisling packed in oil. He, in my opinion, believed that the description he applied was a true description, and, notwithstanding the very able legal arguments I have just listened to from Mr. Bodkin, I hold that he has proved that he acted innocently within the meaning of Section 2, Subsection 2 (c) of the Merchandise Marks Act of 1887. I therefore dismiss the summons."

We should like to have similar legal pronouncements upon several other commodities which are sold under misleading trade descriptions. For instance, the names under which furs are sold in shops often conceal from the public the nature of the animals from which the furs have been obtained. It is regarded as permissible by dealers and tradesmen to describe the fur of white rabbit, dyed, as "chinchilla coney," Australian opossum as "Adelaide chinchilla," American opossum as "Russian marten," and Belgian hare as "Baltic lynx." Such designations seem to us to be just as misleading as describing sprats as sardines when they are packed in oil. Again, quarry-owners and contractors for road-metal claim that any stone used for this purpose may be described as "granite," with the result that limestones or other inferior rocks for road-making are purchased by local highway authorities under the impression that they are obtaining true granite. We make no claim to impose specific scientific terms upon the common vocabulary or the labels of commerce, but we are sure that the trade custom of describing one thing as another of a superior class cannot be justified by any satisfactory standards of precision or ethics.

THE ROYAL SOCIETY CONVERSAZIONE.

THE first of this year's conversazioni of the Royal Society was held at Burlington House on May 8, and was, as usual, largely attended. Many objects and experiments relating to recent work in science were on view, and in the course of the evening short demonstration lectures were given by Mr. C. V. Boys on soap bubbles, the Hon. R. J. Strutt on active nitrogen, particularly as to the striking effects of pressure and temperature on active nitrogen, and Dr. J. S. Haldane on mountain sickness and acclimatisation to high altitudes.

We are unable to find space for a list of the numerous exhibits, but we extract from the official catalogue a few descriptions of some of the chief objects of interest.

ANTHROPOLOGY.—*Mr. W. Dale*: Palæolithic flint implements from the gravel beds of the River Test at Dunbridge, Hants, at about 100 to 150 ft. above Ordnance datum. The implements are diverse in form and in the character of their patination. A marked feature is the presence of pointed forms quite unwater-worn, which have acquired the white colour of the upper part of the gravel. These are taken as dating the gravel, and assigned to the St. Acheul period. The largest and most pointed is even considered to belong to a later and transitional period. In the same gravels are found older and water-