yellow colour, which gives it the distant resemblance to a hornet from which it derives its name, but this is confined to its colour, for the long, tapering Asilus differs altogether in shape from a hornet.

The species of the next family, Bombyliidæ, are stout and hairy, and those of the typical genus Bombylius have a remarkable resemblance to small Bombi (humble-bees), from which, however, the two wings and the long straight proboscis at once distinguish them. The two remaining families dealt with in this volume are of small extent, and perhaps of less interest than the two first. The Diptera are a somewhat neglected order of insect, but are more studied now than formerly, and we are sure that Prof. Lundbeck's work will be found very useful to English entomologists, for whose benefit it is written in their own language. The order Diptera is probably the largest of the seven great orders of insects except the Hymenoptera, and we wish Prof. Lundbeck long life that he may be able to complete the work which he has so well begun.

Moving Loads on Railway Underbridges, including diagrams of Bending Moments and Shearing Forces, and Tables of Equivalent Uniform Live Loads. By H. Bamford. Pp. iv+78. (London: Whittaker and Co., 1907.) Price 4*s.* 6*d.* net.

THIS is a reprint in book-form, with additions, of a series of articles which appeared in *Engineering* in the autumn of 1906. Those who have had any experience of such work will know how tedious is the process, as usually conducted, of determining the maximum straining actions on a railway girder supported at the ends, due to any given type of train load, and will appreciate the methods here given, which are characterised by directness, simplicity, and comparative brevity. The author uses analytical computation with systematic tabulation, and also, as an alternative method, graphical diagrams based on a clever adaptation of the ordinary bending and shearing force diagrams. By one or other of these methods, and especially the latter, the "equivalent" uniformly spread loads for both maximum bending moments and shearing forces are quickly and easily determined. The investigation is limited to the force actions on the bridge taken as a whole, and does not consider separately the resistances offered by the platform and main girders, but so far as the subject is dealt with the author is to be congratulated on having produced a most useful and practical work.

Practical Floor Malting. By Hugh Lancaster. Pp. iv+211; with numerous illustrations. (London: *The Brewing Trade Review,* 1908.) Price 12*s.* 6*d.* net.

CONSIDERING the economic importance of floor malting in this country, it is somewhat remarkable that no work on the subject possessing any claim to thoroughness has hitherto been published. We hoped to find that the present book filled the void, but although it is a useful addition to the literature of malting, it cannot in its present form be regarded as a complete technical treatise on the subject. The author is evidently thoroughly conversant with the practice of floor malting, but owing, presumably, to lack of literary experience, he has not done justice to his knowledge, and the book is marred by many signs of hasty writing. As it stands, however, the work is distinctly a useful one, and we have nothing but praise for the ten collotype plates it contains which illustrate the differences existing between the various types of barley employed in malting. These plates are of exceptional merit, and add very much to the value of the book from a technical point of view.

LETTERS TO THE EDITOR.

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of* NATURE. *No notice is taken of anonymous communications.*]

Students' Physical Laboratories.

IF a protest is not made, I see some danger of the pioneer work done towards organising physical laboratory work for students in University and King's Colleges in London being inadvertently ignored, and everything of that kind attributed to Finsbury. Probably, indeed, the sound work unobtrusively done in early days is known to very few. Allow me to say, therefore, from personal knowledge, that students were admitted to physical laboratory work in these colleges before 1872—in one of them, I believe, in 1866—and that the course of quantitative laboratory instruction through which I was myself put by Prof. Carey Foster, in topographical circumstances of some difficulty, was of high value; and, indeed, reached a standard of accuracy not readily eclipsed in any students' laboratory with which I have since become acquainted.

To take a single instance, Carey Foster described his "bridge" method in 1872, and students were regularly familiarised with it. I remember also making a series of well-designed experiments on moments of inertia, on the kinetic torsion of wires, and on determinations of g by falling bodies and chronograph as well as by pendulums. We also used to measure E.M.F. by the potentiometer method, then called Poggendorff's; while other practical subjects were conduction of heat, rates of cooling, specific and latent heats, on the lines of Regnault; absolute density of liquids, by weighing in them a gauged ivory sphere, density of gases, &c.; a long series on magnetic moments and terrestrial magnetism in the light of Gauss's theory; the usual optical measurements and some less usual; Siemens's pyrometer (then under test for a British Association Committee); much work with a tangent galvanometer and resistance boxes—then comparatively new—on Ohm's and Joule's laws; measurements of electrochemical equivalents, &c., &c.; all before 1875. In one of the last-mentioned determinations a platinum basin was used and a weighable deposit obtained, very much on lines afterwards rendered secure and classical by Lord Rayleigh.

Indeed, I went through most of the things done in laboratories to-day which do not involve instruments of more recent date, and in 1875 we published a joint paper, "On the Flow of Electricity in a Plane," wherein the equipotential lines were plotted by an experimental method handier and more accurate than had been possible in previous observations of the kind—a method invented entirely by Carey Foster (see *Phil. Mag.*, December, 1875, §§ 47–50, with an incomplete continuation in 1876).

It is true that in those days attention was paid to the principles of pure physics rather than to technology; and undoubtedly, as technical work became prominent, other laboratories went far ahead in such subjects as the design of practical measuring instruments and in facilities for large-scale work.

But without suggesting for a moment that a word too much has been said in praise of the energetic pioneers in the field of practical work and electrical engineering, it will, I feel sure, be admitted that to say (as on p. 74) that before 1875 only five persons had experimented in electricity in Great Britain, that the Finsbury system was radically different from anything which previously existed, and that before 1879 professors had merely shown experiments at the lecture table, is to make statements which involve a considerable amount of exaggeration, and unintentionally misrepresent the facts.

I take it that the novelty at Finsbury chiefly lay in the permanent installation of a number of ingenious appliances, whereby a crowd of evening students could be put through a useful course of practical work, such as would give them some preliminary idea of measuring physical quantities, and infuse their otherwise abstract notions with something definite and concrete, without the necessity for periodical preparation and clearing away by an impracticably large assistant staff.