

I am sorry that I cannot completely agree with another statement in the paper. The lecturer writes the following:—"Some attempts have been made to determine the state of flow in the neighbourhood of flat plates and circular cylinders, but the solutions obtained have failed to indicate the commencement of eddying motion."

I cannot say as to whether he is referring in this sentence to my investigations of the stability of the laminar flow along a flat plate lying in the direction of the stream ("Nachrichten d. Ges. d. Wissenschaften z. Göttingen," p. 21, 1929), and the later application of my method to the flow inside a rotating cylinder by Dr. Schlichting ("Nachrichten d. Ges. d. Wissenschaften z. Göttingen," p. 160, 1932). In any case, I cannot approve of the criticism.

In the above mentioned paper of mine, it has been shown that certain oscillations or, as Mr. Fage may say, periodical eddies, may be superposed on the basic flow at the proper Reynolds numbers without dying out and even with increasing strength. Thus, the instability of the mentioned laminar flow under certain circumstances agreeing in a satisfactory manner with the experiments has been proved. On the other hand, also the wave length of these oscillations or the spacing of the eddies and the travelling velocity of the latter have been given. It would also be possible to calculate the velocity distribution in the mentioned eddies. Therefore, I cannot see why the theoretical investigations have failed to indicate the commencement of eddying motion.

W. TOLLMEN,

California Institute of Technology.

Sir,—I wish to thank Dr. Tollmien for his written contribution to the discussion, which was inadvertently omitted in the general reply in last month's Journal. The criticism there made was justifiable, and mention should have been made in the paper of Dr. Tollmien's theoretical prediction of the breakdown of laminar flow.

Yours faithfully,

A. FAGE.

REVIEWS

The Measurement of Air Flow

By E. Ower, B.Sc., F.R.Ae.S. Published by Messrs. Chapman and Hall. Price 15/-. 2nd Edition.

This book deals with various methods of measuring air flow, and the principles of the pressure tube anemometer, plate orifice, Venturi tube, the vane and hot wire anemometer, etc., are discussed with the aid of much mathematics. There is also a chapter on manometers and another on examples from practice.

The effect of the author's experience as assistant in the Aerodynamics Department of the National Physical Laboratory can be seen in the way the subject matter is dealt with, and the book will appeal more to the research department of the firm concerned rather than to the engineer, who does not usually require such detailed knowledge of the instruments he uses. The theory of the watch is usually only vaguely understood even by those who use the instrument constantly for scientific research purposes.

The book is useful as it contains a complete description of modern methods of measuring air flow, written by an author who is an authority on the subject, and those who are interested in this subject scientifically will find the work a valuable addition to their library.