

The temperature inside the vacuum flask is maintained constant by adjusting the outside temperature to such a value that heat will leak out as rapidly as the gas brings it in. Several hours may be required for this adjustment. When a steady state has been reached, the stream of gas is stopped and electrical energy is applied to the heating element, R_1 . The magnitude of the electric current is increased or decreased until a steady state is again reached with all temperatures the same as when the gas was flowing. The amperage and voltage are measured by the potentiometer, P . By finding the rate of flow of the gas in grams per second, the difference in temperature, T_1-T_2 , and the calorific value of the electric current, the specific heat at constant volume may be determined.

So far two experiments upon oxygen have been completed. The data have been recorded in Table 1.

TENNESSEANS AT THE A. A. A. S.

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As usual several Tennesseans took an active part in the New Orleans meeting of the American Association for the Advancement of Science. Our Secretary, Dr. John T. McGill, was on the Section Committee of Section C (Chemistry) and also represented the Tennessee Academy of Science at the conference of the Secretaries of the State Academies.

Edwin B. Powers and Lula M. Shipe of the University of Tennessee presented a paper on *The Physiology of the Respiration of Fishes. VI. The Effect of the Oxygen and Carbon Dioxide Tensions of the Water Upon the Number of Red Blood Corpuscles in the Blood of the Blue Cat, Ictalurus Punctatus Rafinesques*, before the American Society of Zoology. Powers (with Thressa A. Hickman) also presented another paper before this same society on *The Physiology of the Respiration of Fishes. VII. The Oxygen and Carbon Dioxide Dissociation Curves of Whole Blood*. Other papers presented by members of the faculty of the University of Tennessee were: *Observations on the Flight of Noctuid Moths*, by W. W. Stanley from the Agricultural Experiment Station, before the Entomological Society of America; *Experiments on the Control of Arsenical Injury on Peach*, by S. Marcovitch and W. W. Stanley, before the American Association of Economic Entomologists; *Notes on Certain Elements of the Flora of the Great Smoky Mountains*, by H. M. Jennison of the Department of Botany, before the Botanical Society of America. G. M. Bentley, State Entomologist, presented

(Continued on Page 36)