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Change in Resistance of Bismuth Single Crystals at the Melting Point

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taken much more rapidly and the fidelity of the results is, in the limit of observation, the same.

DEPARTMENT OF PHYSICS,
STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA.

SERVICEABLE HOMEMADE APPARATUS

E. HOBART COLLINS

Four pieces of apparatus, a mounting for a gyroscope, a Newton's second law of motion demonstration, a short wave oscillator and a stroboscope for measuring phase change in A. C. circuits are described. For the latter two the actual apparatus is shown. Each piece is an effective teaching device and can be made for a small fraction of the cost of purchasing similar equipment from the manufacturers. The ideas for these pieces of apparatus have been picked up in various places and no special claim for originality is made.

PARSONS COLLEGE,
FAIRFIELD, IOWA.

CHANGE IN RESISTANCE OF BISMUTH SINGLE CRYSTALS AT THE MELTING POINT

J. HENRY SCHROEDER

The resistances of seven single crystals of bismuth of various orientation, were measured as the temperature gradually increased to a few degrees beyond the melting point. It was found that the change from solid to liquid did not occur suddenly when the melting temperature was reached, but began at a temperature about two degrees below and continued to a temperature about one and one-half degrees above the melting point. As an explanation it is supposed that bismuth undergoes a change in crystal structure near the melting point and that this crystal structure persists in the liquid bismuth.

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