

A FEW EXPERIMENTS WITH LIQUID AIR.

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[Abstract.]

Three experiments were given, using the liquid as a refrigerant. (1) The resistance of manganin wire at the temperature of liquid air; (2) the absorption of heat by conduction into the liquid; (3) the action of a Cu-Fe thermostat when placed in the liquid.

(1) The temperature coefficient of manganin wire was found to agree fairly well with that found by Dewar. Cooling the wire to the temperature of liquid air caused it to undergo no permanent change.

(2) By connecting a block of copper through a copper rod to a bath of liquid air the temperature of the block of copper can be reduced to nearly that of the refrigerant. This principle enables any intermediate temperature to be maintained. By this method a connecting rod of copper about $\frac{1}{2}$ sq. cm. in area and 20 cm. long froze a cu. cm. of mercury placed in the block of copper in $6\frac{1}{4}$ minutes.

(3) A Cu-Fe. thermostat was found to be very sensitive, and it was also noticed that the same coefficients hold at the temperature of liquid air.

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NOTE ON AN ATTEMPTED ANGLE TRISECTION.

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THE ZOÖLOGICAL SURVEY OF MINNESOTA.

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With the establishment of the Geological and Natural History Survey in Minnesota provision was thereby made for collecting and describing the various faunal forms of the State. For a number of years after the survey was established work was done only along geological lines. In 1886 there appeared a list of the Aphidæ of Minnesota, by Mr. O. W. Oest-