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High-Pressure Apparatus for the Measurement of Electrical Resistance at Low Temperatures

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High-pressure cells for use at liquid-helium temperatures have taken a variety of forms. The ice bomb of Lasarev and Kan (1)¹ was one of the first of these, followed by the clamping device of Chester and Jones (2). Stewart and Swenson (3) developed a cell which made use of the compressibility of solid hydrogen, thus permitting pressure to be varied during an experiment, and later Brandt (4) employed a cell in which a comparatively massive specimen was surrounded by a layer of graphite lubricant in a close-fitting pressure chamber. Another technique, usable at least to liquid nitrogen temperatures, is that of Souers (5), who placed his Bridgman anvils in thermal contact with copper blocks which were cooled directly with liquid nitrogen. A new concept in apparatus is described in the paper.

¹Numbers in parentheses designate References at the end of the paper.

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