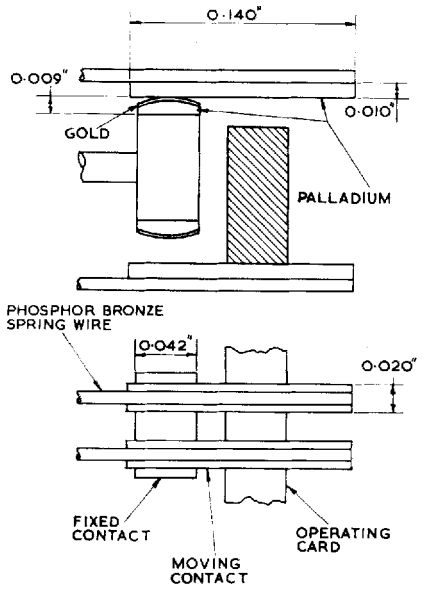
The contact arrangement in the miniature wire spring relay



inch thick, welded longitudinally to the phosphor-bronze spring wires.

Adjustment and maintenance of the contact assemblies have been made simple and straightforward and the contacts are readily cleaned by moving a strip of lint-free parchment paper, moistened with a solvent, between the surfaces.

With a non-inductive load or with proper protection on inductive loads, the life of these contacts is confidently expected to be equal to or greater than the mechanical life of the relay—at least 200 million operations.

J. C. C.

Ultra-pure Hydrogen from Water

AN ELECTROLYTIC DIFFUSION CELL

Hydrogen of high purity is frequently needed for specialised laboratory processes where the total demand does not justify the installation of hydrogen cylinders, thermal diffusion cells and their associated control gear.

Such requirements, it was suggested by A. S. Darling in 1963 (*Platinum Metals Rev.*, 1963, 7, 126), might well be satisfied by the use of small electrolytic diffusion cells fitted with silver-palladium alloy cathodes. Metals Research Limited, of Cambridge, have now engineered such a self-contained portable electrolytic cell, known as the GASPAK-H, based on Johnson Matthey's British Patent 973,810.

In developing a commercial unit from the laboratory prototype, numerous improvements have been introduced. The cell is thermostatically controlled and the cathode is an assembly of silver-palladium tubes. An internal de-ioniser protects the cell itself from water-borne contamination and fully automatic pressure switches, level controls and safety devices make it suitable for permanent connection, if required, to water and electrical supplies.

The GASPAK sits comfortably on any bench and will produce up to 150 ml per minute of hydrogen at pressures up to 100 p.s.i. When operated as a portable unit its reserve capacity of two litres of water permits five days' continuous operation at full capacity. Its controlled output is very suitable for gas chromatography, small sintering furnaces, or for hydrogenation experiments in organic chemistry.

The portable electrolytic hydrogen generator developed by Metals Research Limited