cm^2/V.sec, we obtain an electron concentration of 10^{16} to 10^{20}. For such carrier concentrations we ought easily to have been able to determine the Hall constant, since for magnetic fields of H = 22,000 Oe and a current of 1 A in a sample 0.1 cm thick the Hall emf E = $1.4.10^{-2}$ V, since for.....the Hall constant R = 6.3 cm^3/C. We could easily have measured a value of E = $1.4.10^{-2}$ V, since out apparatus had a sensitivity of 2.10^{-8} V.

Fig. 1.

Fig. 2. ..... .

Key

1) Oe

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3. Effect of a Magnetic Field on the Electrical Resistance of Chromium Sulfides. Measurements of this effect showed that, for compositions of 50 to 56 at.% S, $\Delta R/R$ had an extremely small value, beyond the sensitivity of our apparatus. Exceptions were the chromium sulfides with sulfur excess (58 to 59 at.%), for which we were able to measure the change of resistance in a magnetic field ; however, ...had a negative sign, i.e., it behaved anomalously (see Fig. 2).

The only previous example of a fall in resistance in a magnetic field was tellurium (a semimetal), as indicated by R. A. Chentsov /3/.

The immeasurably small values of the Hall effect in chromium sulfides with sulfur contents of.....at,% and also the absence of any influence of magnetic field on the electrical resistance of