

The gall bladder presents a very striking instance of the equivocal or antidrome blaze current.

In conclusion I should like to be allowed the pleasure of thanking my husband for continual help and sympathy in my work, and to record my appreciation of and gratitude for the method of investigation, and simplified arrangement of electrical apparatus which renders it easy to study the many fascinating problems of animal and vegetable electricity.

On the Compressibility of Gases between One Atmosphere and Half an Atmosphere of Pressure." By LORD RAYLEIGH, O.M., F.R.S. Received January 17,—Read February 2, 1905.

(Abstract.)

The present memoir contains a detailed account of the observations referred to in the Preliminary Notice of February, 1904. In addition, results are now given for air, carbonic anhydride, and nitrous oxide. In the following table are recorded the values of B for the various gases at specified temperatures, B denoting the quotient of the value of *p* *v* at half an atmosphere by the value at the whole atmosphere :—

Gas.	B.	Temperature.
Oxygen	1·00038	11·2
Hydrogen	0·99974	10·7
Nitrogen	1·00015	14·9
Carbonic oxide	1·00026	13·8
Air	1·00023	11·4
Carbon dioxide	1·00279	15·0
Nitrous oxide	1·00327	11·0

By means of a formula given by D. Berthelot the compressibilities at 0° C. are inferred, and applied to deduce the ratio of densities as they would be observed at 0° C. under very low pressures. According to Avogadro's law these are the relative molecular weights. From the densities of nitrogen and oxygen we get N = 14·008, if O = 16. Again, from the densities of oxygen and nitrous oxide we find N = 13·998. The former is probably the more trustworthy.