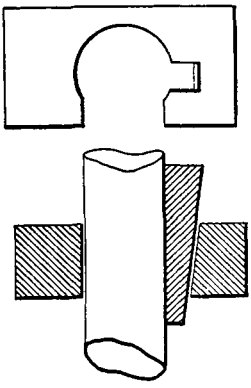
These two men had the theory of combustion in their grasp, and almost explain it in their writings, that they were unconscious of this fact is surprising.

The publishers of these Reprints are to be thanked for placing before the chemical world the work of these two men in such a handy and attractive form. A digest of a work is good, but the original furnishes the only true satisfaction. So these little books should be extremely valuable to the student, by enabling him to see the discovery of oxygen in its original shape.

OWEN L. SHINN.

NOTES.

Convenient Burette Clamp.—A convenient form of burette holder may be made from the appended sketch. A simple wedge being employed in place of the screw clamp to hold the tube in position. The surface of the wedge bearing on the tube should be slightly curved to ensure accurate contact. Cork is not necessary on bearing parts, as very slight pressure on upper end of wedge causes the tube to be held with great rigidity. Holder should be made of maple, wedge of hickory or other hard wood.—*Clarence Quinan.*



A New Atmospheric Element.—Lord Rayleigh and Professor Ramsay announce the discovery of a supposed new element contained in the atmosphere to the extent of about one per cent. Two methods of separation have been used. The first method consists in passing high tension electrical sparks through a mixture of equal bulks of air and oxygen confined over potash solution until no further diminution in volume ensues. The excess of oxygen is then absorbed by alkaline pyrogallate. The second method consists in removing the oxygen from air by red hot copper and the nitrogen by heated magnesium. The remaining gas has a sp. gr. of 18.9 and is more inert than nitrogen.

Wm. Crookes has examined the spectrum of the gas when the

induction spark is passed through a tube containing the new gas under an exhaustion of eight mm., and finds that "the spectrum is a very definite and characteristic one, and the lines differ in position from those of nitrogen. The appearance more resembles a metallic spectrum, and no flutings similar to those of nitrogen are to be seen." Professor Dewar suggests that the new element may be an allotropic form of nitrogen analogous to red phosphorus, and that the processes of preparation may be really methods of manufacture. E. H.

The Post-Mortem Detection and Estimation of Strychnine—Allerton S. Cushman. (*Transactions of the Academy of Science of St. Louis*, **6**, 537.)

The author recommends the following method for the detection and estimation of strychnine in toxical cases: The mass to be examined is comminuted and digested over night at a warm temperature with water acidulated with acetic acid, filtered through muslin and then through paper, the solution evaporated, an excess of eighty per cent. alcohol added, boiled, filtered, and extraction repeated. The liquid is then evaporated, the residue taken up with water and a little acetic acid, and the solution shaken repeatedly with acetic ether, as long as anything is extracted—twelve extractions may be necessary. A volume of acetic ether equal to that of the solution is now added, and sodium carbonate to alkaline reaction. After shaking, the acetic ether is separated and the extraction repeated. The strychnine is usually moderately pure as obtained by the evaporation of the acetic ether, but for quantitative estimation it is dissolved in dilute acetic acid, filtered, the solution extracted with ether-chloroform (1 : 1), ammonia added, and the extraction with ether-chloroform repeated twice. The residue obtained by evaporating the ether-chloroform is nearly pure and is weighed. Two experiments with known amounts of strychnine mixed with considerable amounts of meat, sugar, starch, and water, and allowed to stand in a warm place for two weeks, gave a recovery of about eighty-seven per cent. of the strychnine present. Directions for chemical, crystallographic, and physiological tests are given. Two toxical cases in which the method was applied are also given. W. A. NOYES.