

Patents.

No. 2948. *July 24th*, 1878. F. G. VEDOVA, of Smyrna. "**Improvements in the Manufacture of Materials containing Tannic Acid.**"

The inventor takes the peculiar excrescences found on the oaks in Asia Minor and neighbouring countries, also the young shoots, acorns, and leaves of the same trees, and after washing the excrescences with a weak solution of sodium carbonate, in order to remove their gummy coating, pulverises and compresses the materials, and exports the products under the name of "vedovine." Another product is obtained by extracting the tannic and gallic acids by means of hot water, and evaporating the strained infusion to an extract. J. M. H. M.

No. 3341. *August 24th*, 1878. J. P. RICKMAN, of London. "**Manufacture of Ammonia.**"

A project for the manufacture of ammonia from the nitrogen of the atmosphere. Inclined retorts, filled with oxidisable matter such as coke, are heated to about 1,000° F., and a mixture of steam and air in suitable proportions is driven through the red-hot mass. Any ammonia formed passes out of the top of the retort, and is collected in water or dilute acid. Another method is to saturate the coke with potassium carbonate and blow in air alone, the retort being heated to 1,800° F. After a certain time it is allowed to cool down to 1,000° F., when a mixture of steam and air is injected which decomposes the cyanogen at first formed, with production of ammonia. J. M. H. M.

No. 5016. *December 7th*, 1878. H. J. HADDAN. "**Treating Ores containing Silver and Copper.**" (Communicated by J. DE BAXERES DE TORRES and A. DROUIN, both of Madrid.)

This patent is for the chloridising of silver ores in the wet way by means of an acidulated solution of common salt (or other chloride), instead of, as in the dry way, hitherto practised, by roasting with salt. Ores containing sulphur and arsenic are roasted previous to the treatment with salt solution; a little black oxide of manganese is added to facilitate both the roasting and the chloridising processes. Any copper contained in the ores is dissolved by the acidulated salt solution, together with the silver chloride formed, and from this solution the silver is precipitated by metallic copper, and the copper by metallic iron. J. M. H. M.