

Non-explosive Collodion.—Dissolve in alcohol and ether pure, well-washed gun-cotton; filter thoroughly and distil off the ether and alcohol until the thick residuum can be cast, while still warm, into moulds. After cooling, cut the gelatinous mass into bits, and dry them by evaporating the remaining alcohol. Dissolve again in alcohol and ether and the collodion will be neither explosive nor subject to spontaneous combustion.—*Chem. Ind.* C.

The Mineral Wealth of Great Britain.—The mineral wealth of Great Britain is shown by the fact, as officially stated, that the product of coal was, in 1877, 134,610,763 tons, as against 133,344,766 tons in 1876; of iron ore the product was 16,692,802 tons, against 16,841,583 the previous year; lead ore, 80,850 tons against 79,095 in 1876; tin ore, 14,142 tons, against 13,688 in the year before; copper ore 73,041 tons, against 79,252 in 1876, and salt, 2,735,000 tons. The total value of minerals and metals obtained from the mines, etc., of the United Kingdom in 1877 reached £68,281,405, viz.: £18,742,960, the value of the metals; £47,113,767, coal, and £2,424,679, minerals, earthy, not reduced, together with the value of salt, clays, etc. But the great item in these returns is the vast quantity—6,608,664 tons—of pig iron, of the value of more than \$80,000,000, and it is estimated that in the manufacture of this metal between 15,000,000 and 16,000,000 tons of coal were used.

Molecular Constitution of Liquids.—R. Pictet has shown that in solid bodies there is a simple relation between their atomic weight, their length of calorific scintillation, and their temperature of fusion. This relation is a consequence of the universality of the laws of attraction, and of the most simple representation of the temperature, regarded as the *amplitude* of the calorific oscillations. On passing from the solid to the liquid state, each solid molecule should contain at least two liquid molecules. Since the molecular cohesion of all bodies is equal at the melting point, on departing from that point the lengths of calorific oscillation should be functions of molecular masses for equivalent aberrations of temperature. If we compare all liquids at their boiling points we should be able to deduce the same numerical formula as for solids. Pictet confirms these views by a comparison of theoretical and observed results in twenty-three solids and sixteen liquids.—*Comptes Rendus.* C.