any other person in possession or expectancy.’ Thc property which is liable to pay the duty is in realty or leasehold estate in thc United Kingdom and personalty—not subject to legacy-duty which the beneficiary claims by virtue of English, Scottish or Irish law. Personalty in England bequeathed by a person domiciled abroad is not subject to succession duty. Successions of a husband or a wife, successions where the princi­pal value is under £100, and individual successions under *£20,* are exempt from duty. Leasehold property and personalty directed to be converted into real estate are liable to succession, not to legacy duty. Special provision is made for the collection of duty in the cases of joint tenants and where the successor is also the predecessor. The duty is a first charge on property, but if the property be parted with before the duty is paid the liability of the successor is transferred to the alienee. It is, therefore, usual in requisitions on title before conveyance, to demand for the protection of the purchaser the production of receipts for succession duty, as such receipts are an effectual protection notwithstanding any suppression or misstatement in the account on the footing of which the duty was assessed or any insufficiency of such assessment. The duty is by this act directed to be assessed as follows: on personal property, if the successor takes a limited estate, the duty is assessed on the principal value of the annuity or yearly income estimated according to the period during which he is entitled to receive the annuity or yearly income, and the duty is payable in four yearly instalments free from interest. If the successor takes absolutely he pays in a lump sum duty on the principal value. On real property the duty is payable in eight half-yearly instal­ments without interest on the capital value of an annuity equal to the annual value of the property. Various minor changes were made. By the Customs and Inland Revenue Act 1881, personal estates under *£300* were exempted. By the Customs and Inland Revenue Act 1888 an additional 1/2% was charged on successions already paying 1% and an additional 11/2% on successions paying more than 1%. By the Customs and Inland Revenue Act 1889 an additional duty of 1% called estate duty was payable on successions over *£10,000.*

The Finance Acts 1894 and 1909 effected large changes in the duties payable on death (for which see Estate Duty; Legacy). As regards the succession duties they enacted that payment of the estate duties thereby created should include payment of the additional duties mentioned above. Estates under £1000 (£2000 in the case of widow or child of deceased) are exempted from payment of any succession duties. The succession duty payable under the Succession Duty Act 1853 was in all cases to be calculated according to the principal value of the property, *i.e.* its selling value, and though still payable by instalments interest at 3% is chargeable. The additional succession duties are still payable in cases where the estate duty is not charged, but such cases are of small importance and in practice are not as a rule charged.

*United States.*—The United States imposed a succession duty by the War Revenue Act of 1898 on all legacies or distributive shares of personal property exceeding $10,000. It is a tax on the privilege of succession. Devises or distributions of land are not affected by it. The rate of duty runs from 75 cents on the $100 to $5 on the $100, if the legacy or share in question does not exceed $25,000. On those of over that value the rate is multiplied 11/2 times on estates up to $100,000, twofold on those from $100,000 to $500,000, 21/2 times on those from $500,000 to a million, and threefold for those exceeding a million. This statute has been supported as constitutional by the Supreme Court. Many of the states also impose succession duties, or transfer taxes; generally, however, on collateral and remote successions; sometimes progressive, according to the amount of the succession. The state duties generally touch real estate successions as well as those to personal property. If a citizen of state A owns registered bonds of a corporation chartered by state B, which he has put for safe keeping in a deposit vault in state C, his estate may thus have to pay four succession taxes, one to state A, to which he belongs and which, by legal fiction, is the seat of all his personal property; one to state B, for permitting the transfer of the bonds to the legatees on the books of the corporation; one to state C, for allowing them to be removed from the deposit vault for that purpose; and one to the United States.

**SUCCINIC ACID,** C2H4(CO2H)2. Two acids torresponding to this empirical formula are known—namely ethylene suc­cinic acid, HO2C∙CH2∙CH2∙CO2H and ethylidene succinic acid CH3∙CH(CO2H)2.

*Ethylene succinic acid* occurs in amber, in various resins and lignites, in fossilized wood, in many members of the natural orders of Papavcraceae and Compositae, in unripe grapes, urine and blood. It is also found in the thymus gland of calves and in the spleen of cattle. It may be prepared by the oxidation of fats and of fatty acids by nitric acid, and is also a product of the fermentation of malic and tartaric acids. It is usually obtained by the distillation of amber, or by the fermentation of calcium malate or ammonium tartrate. Synthetically it may be obtained by reducing malic or tartaric acids with hydriodic acid (R. Schmitt, *Ann.,* i860, rr4, p. 106; V. Dessaignes, ibid., i860, 115, p. 120; by reducing fumaric and maleic acids with sodium amalgam; by heating bromacetic acid with silver to 130° C.; in small quantity by the oxidation of acetic acid with potassium persulphate (C. Moritz and R. Wolffenstein, *Ber.,* 1899, 32, p. 2534); by the hydrolysis of succinonitrile (from ethylene dibromide) C2H4→C2H4Br2→C2H4(CN)2→C2H4(C02H)2 by the hydrolysis of *β*-cyanpropionic ester; and by the condensation of sodiomalonic ester with monochloracetic ester and hydrolysis of the resulting ethane tricarboxylic ester (RO2C)2CH∙CH2∙CO2R4 this method is applicable to the preparation of substituted succinic acids. It is also produced by the electrolysis of a concentrated solution of potassium ethyl malonate.

It crystallizes in prisms or plates which melt at 185° C. and boil at 235° C. with partial conversion into the anhydride. It is readily soluble in water. Aqueous solutions of the acid are decomposed in sunlight by uranium salts, with evolution of carbon dioxide and the formation of propionic acid. Potassium permanganate, in acid solution, oxidizes it to carbon dioxide and water. The sodium salt on distillation with phosphorus trisulphide gives thiophene. The esters of the acid condense readily with aromatic aldehydes and ketones to form γ-di- substituted itaconic acids and γ-alkylen pyrotartaric acids (H. Stobbe, *Ann.,* 1899, 308, p. 71). γ-Oxyacids are formed when aldehydes are heated with sodium succinate and sodium acetate. Numerous salts of the acid are known, the basic ferric salt being occasionally used in quantitative analysis for the separation of iron from aluminium.

*Succinyl chloride,* obtained by the action of phosphorus penta­chloride on succinic acid, is a colourless liquid which boils at 190° C. In many respects it behaves as though it were dichlorbutyro-lactone, c∙h<co>'≈ . on reduction it yields butyro-lactone, and when condensed with benzene in the presence of aluminium chloride it yields chiefly τ-diphenylbutyro-lactone. *Succinic anhydride,* C2H4(CO)2O, is obtained by heating the acid or its sodium salt with acetic anhydride; by the action of acetyl chloride on the barium salt; by distilling a mixture of succinic acid and succinyl chloride, or by heating succinyl chloride with anhydrous oxalic acid. It crystallizes in plates which melt at 120° C., and distils without decomposition. It is slowly dissolved by water with the formation of the acid. It combines readily with the meta-aminophenols to form rhodamines, which are valuable dyestuffs. Heated in a current of ammonia it gives *succinimide,* which is also obtained on heating acid ammon­ium succinate. It crystallizes in colourless octahedra which melt at 125-126° C., and is easily soluble in water. When warmed with baryta water it yields succinamic acid, HO2C·CH2·CH2·CONH2; and with alcoholic ammonia at 100° C. it gives succinamide. The imino hydrogen atom is easily replaced by metals. Distillation with zinc dust gives pyrrol (g.v.). By the action of bromine in alkaline solution it is converted into *β*-aminopropionic acid. *Succinamide,* C2H4(CONH2)2, best obtained by the action of ammonia on diethyl succinate, crystallizes in needles which melt at 242- 243° C., and is soluble in hot water. *Succinonitrile,* C2H4(CN)2, is obtained by the action of potassium cyanide on ethylene dibromide or by the electrolysis of a solution of potassium cyan- acetate. It is an amorphous solid which melts at 54-55° C. On reduction with sodium in alcoholic solution it yields tetraethylene diamine (putrescein) and pyrollidine.

*Methyl succinic acid* (pyrotartaric acid),HO2C∙CH2∙CH(CH2)∙CO2H, is formed by the dry distillation of tartaric acid ; by heating pyruvic acid with concentrated hydrochloric acid to 180° C. ; by the reduction of citraconic and mesaconic acids with sodium amalgam; and by