SOLAN GOOSE. See Gannet.

SOLARIO, Antonio (c. 1382-1455), a painter of lead­ing importance in the Neapolitan school, is commonly called Lo Zingaro, or The Gipsy. His father is said to have been a travelling smith. To all appearance Antonio was born at Civita in the Abruzzi, although it is true that one of his pictures is signed '‘Antonio de Solario Venetus,” which may possibly be accounted for on the ground that the signature is not genuine. Solario is said to have gone through a love-adventure similar to that of the Flemish painter, Quintin Massys. He was at first a smith, and did a job of work in the house of the prime Neapolitan painter Colantonio del Fiore ; he fell in love with Colantonio’s daughter, and she with him; and the father, to stave him off, said if he would come back in ten years an accomplished painter the young lady should be his. Solario studied the art, returned in nine years, and claimed and obtained his bride. The fact is that Colantonio del Fiore is one of those painters who never existed ; consequently his daughter never existed, and the whole story, as relating to these particular personages, must be untrue. Whether it has any truth, in relation to some un­identified painter and his daughter, is a separate question which we cannot decide. Solario made an extensive round of study,—first with Lippo Dalmasio in Bologna, and afterwards in Venice, Ferrara, Florence, and Rome. On returning to Naples he rapidly took the first place in his art. His principal performance is in the court of the monastery of S. Severino—twenty large frescos illustrat­ing the life of St Benedict, now greatly decayed ; they present a vast variety of figures and details, with dexterous modelling and colouring. Sometimes, however, Lo Zingaro’s colour is crude, and he generally shows weakness of draughtsmanship in hands and feet. His tendency is that of a naturalist,—the heads life-like and individual, and the landscape backgrounds better invented and cared for than in any contemporary. In the Studj gallery of Naples are three pictures attributed to this master, the most remarkable one being a Madonna and Child Enthroned with Saints. The heads here are reputed to be mostly portraits. Solario initiated a mode of art new in Naples ; and the works painted between his time and that of Tesauro are locally termed “ Zingareschi.” He had many scholars, but not of pre-eminent standing— Nicola Vito, Simone Papa, Angiolillo Roccadirame, Pietro and Ippolito dal Donzello. It has often been said that Solario painted in oil, but of this there is no evidence.

SOLDER is a metallic alloy or metal employed for cementing or binding together two metallic surfaces. The solder is applied to the surfaces to be united in a molten state, and it is therefore generally either a more fusible body than the metal to be acted on or it is presented in a more fusible condition. The process of autogenous soldering consists in uniting the individual metallic edges themselves by melting and fusing them in the heat of the oxyhydrogen blowpipe or by means of an ignited blast of mixed coal gas and air. Autogenous soldering is extensively used in connexion with large plumber work. Ordinary solders are divided into hard and soft classes, the hard comprising such as require a red heat for their melting. The soft solders used by plumbers and tinsmiths consist of variable mixtures of lead and tin, and for pewterers’ use bismuth is added to these. The hardest brazing solder has equal parts of copper and zinc, and for softer qualities increased amounts of zinc with tin and sometimes antimony are employed. For fine jewellery alloys of gold, silver, and copper are used ; silver solder is employed for inferior qualities, and even common soft solder finds extensive employment in the jewellery trade. Silver is the proper solder for German silver manufactures

also ; and gold is the medium for joining the edges of platinum vessels. In soldering, the metallic edges to be united must be free from oxidation and dirt ; and to keep them unoxidized during the operation several fluxes are used, such as borax in brass soldering, rosin and solution of zinc chloride for tin-plate, zinc chloride for zinc, rosin and tallow for lead and tin, and olive oil in pewter work. Special machinery has been devised for the soldering of the tinned cases now so extensively employed in the preserved food trade. In common soft soldering the solder is melted and applied to the joint by a heated iron or copper soldering bolt, but solders are also applied by being melted on in the open fire, or in the muffle furnace, by immersing the joint in a bath of molten solder, or by pouring the molten material on the joint. In dealing with hard solders the heat of the blowpipe flame is used.

SOLE. Soles are a group of Flat-Fishes *(Pleuronectidæ),* which is represented by numerous species in all suit­able localities within the temperate and tropical zones ; they become, however, scarce in the southern parts of the southern temperate zone, and are absent altogether in some districts—for instance, on the coasts of southern Australia. Many of the species enter fresh water freely, and some have become thoroughly acclimatized in it. Soles are a highly specialized type of flat-fish ; their mouth is very narrow, twisted round to the blind side, and small teeth are developed on that side only. As they always lie or swim on one side, the pectoral fins have ceased to have a function, and consequently these organs are reduced in size, and in many of the species are mere rudiments or are lost entirely. The eyes are small, invariably on the right side of the fish, the upper occupying a position more or less in advance of the lower. Soles are littoral fishes, inhabiting sandy bottoms, shifting with the season from shallow into somewhat deeper water. Like all flat-fishes they are carnivorous, but feed on small animals only; none attain to a large size, scarcely exceeding that of 2 feet. Of the forty species known of the genus *Solea,* four are found on the British coast ; the one most gene­rally known and commercially most important is the Common Sole *(Solea solea)* ; it seems to occur in greater or less abundance on all flat coasts of Europe, but its numbers have been considerably thinned within the last quarter of a century, at least on the British coasts, doubt­less in consequence of the introduction of the trawl. At any rate, that over-fishing is the cause of the decrease of this valuable table fish is amply proved by the fact that simultaneously with the quantity the average weight of the fish has been diminished, soles of 12 inches in length and of 8 ounces in weight being now in many localities the largest that can be obtained. At present young specimens form the majority of the soles in the market, and are sold under the names of “slips” or “tongues.” During the breeding-season, which falls in the months from February to April, soles lose much of their flavour. It is a singular fact that male soles seem to be almost unknown, and some ichthyologists account for it by sup­posing that the males remain much smaller than the females, and are overlooked in consequence. The Lemon Sole *(Solea aurantiaca)* is much less esteemed than the common sole, and more rarely seen in the market, prob­ably because it is locally distributed in deeper water. It is of a yellow colour, marbled with brown and irregularly spotted with black ; the pectoral fin is ornamented with an ovate black spot on its hinder half. Even when this bright coloration has disappeared in the fish after death, it may always be distinguished from the common sole by its large dilated nasal opening on the blind side, which is surrounded by a broad fringe. The Variegated Sole *(Solea variegata)* is at times taken in considerable numbers