

Coppering Iron.—For the past ten years M. F. Weil has been testing specimens of cast and wrought iron and steel which have been coated with copper by his methods, without requiring any intermediate deposit or any finishing touches. The homogeneity of the deposits reproduces the most delicate details of ornamentation, so as to give the articles the artistic value of bronze. The cyanides, which are injurious to the health of workmen and which greatly increase the cost of coppering, are replaced in his methods by organic acids or by glycerine, materials which are cheap and which have the advantage of not being decomposed. The baths require no renewal of organic materials, provided they are properly supplied with oxide of copper. The well-known property of alkaline-organic solutions, of rapidly dissolving oxide of iron without attacking the metallic iron, facilitates the perfect cleansing of the pieces. When the oxide of copper requires renewal, the exact amount which is needed is determined by a very easy test. Various other metals, such as nickel, cobalt, antimony, tin, etc., can be deposited upon iron and other metals by his processes.—*Comptes Rendus.* C.

Improvements in Bleaching.—A medal has been awarded by the Société Industrielle de Mulhouse to Charles Weber & Co. for bleaching cotton thread upon bobbins and spools without passing through the various customary processes. Their method enables them to reduce the cost from 25 to 40 per cent., according to the fineness of the thread. They are thus able to export their products into various countries where they could never have been sold in a crude state. They use great monolith vats, of a cubic form and with a capacity of six cubic metres (7·848 cubic yards). The spools, carefully packed, are placed in these vats, which are then closed by granite covers hermetically sealed. The heavy covers are easily managed by means of overhead traveling cranes. The spools are completely bleached in these vats, from which they are removed to improved dryers. Pure water being one of the indispensable conditions for their process, they bored a well with which they connected a forcing pump and filters. The pump is so constructed that it can also be employed for extinguishing fires. The washing and bleaching waters are rendered inoffensive by passing into four great cement wells where they deposit their impurities. Many American improvements have been introduced in their machinery.—*Bull. de la Soc. Industr.* C.