

Bronzing Liquid.—Dissolve 10 parts aniline red and 5 parts aniline purple in 100 parts of 95 per cent. alcohol, in a water-bath; then add 5 parts benzoic acid, and heat the mixture until the greenish color changes to a light bronze-brown. This liquid, when brushed upon metal, leather or wood, produces a beautiful bronze effect.—*Bayer. Ind. u. Gewerbeblatt.* C.

Precaution against Fire-damp.—The connection of mining explosions with low barometric pressures has long been noticed. In the colliery of Seraing barometers have been lately placed near each of the ventilators, with directions to give the ventilating fans 75 turns per minute in fine weather, 80 turns in changeable weather, and 85 turns in stormy weather.—*L'Echo Indust.* C.

Alcohol in Animal Tissues.—M. J. Bechamp finds that alcohol may be detected in a large variety of animal tissues, even during life, as well as after death, in such quantities as to throw great doubt upon the evidences of alcoholic poisoning which have hitherto been regarded as conclusive. While agreeing with Pasteur, in most of his views as to the nature of ferments, he thinks that the bacteria which appear in the putrefaction or other alterations of animal tissues do not come from atmospheric germs, and he recounts a number of experiments which seem to confirm his views.—*Am. de Chim. et de Phys.* C.

Utility of Solar Boilers.—M. Abel Pifre describes a variety of modifications of Mouchot's apparatus, adapted both to domestic and to industrial use. He thinks that they are of especial importance in connection with the projected railway to Central Africa. The Barbary figs, which are very abundant, yield about 25 per cent. of alcohol, more than the sugar beets. A single solar boiler, with a reflector of five metres diameter, can distil, without cost for fuel, 200 litres (52·8 gal.) of this alcohol per day, the raw material costing nothing, and the refuse being valuable for the food of cattle. The importance of this result becomes evident upon considering that Algiers imports every year more than 30,000 hectolitres (792,500 gals.) of alcohol, and that it will need to import still more for the manufacture of its wines, which require the addition of alcohol in order to bear transportation. Pifre is now experimenting upon the conversion of solar heat into electricity, and of the electricity into mechanical work, by the intervention of a Gramme machine.—*Mem. de la Soc. des Ing. Civ.* C.