

JOINING RUBBER.—Rubber is easily joined and made as strong as an original fabric, by softening before a fire and laying the edges carefully together, without dust, dirt, or moisture between. The edges so joined must be freshly cut in the beginning. Tubing can be united by joining the edges around a glass cylinder, which has previously been rolled with paper. After the glass is withdrawn the paper is easily removed. Sift flour or ashes through the tube to prevent the sides from adhering from accidental contact.—*Ibid.*

A NEW SUBSTITUTE FOR QUININE.—Among the specimens of drugs exhibited in the International Exhibition in Vienna is the *Echisess scholaris*, a plant of the natural order *Apocynæ*. It is especially abundant at Luzon, in the province of Batanga, in the Phillipine Islands, and its bark has long been used by the natives, under the name of dita, as a remedy in all kinds of fever. Herr Gruppe, an apothecary in Manilla, has found it in an uncrystallizable very hygroscopic bitter substance, to which he has given the name of ditain. The principal Spanish physician in Manilla, Dr. Miguel Zina, has given it to numerous hospital patients under his care, and has found that ditain is not only a perfect substitute for quinine, but that its use is not followed by any disagreeable results which often attend the use of quinine. It is given in the same doses and in the same way as quinine. In many cases, also, its activity as a tonic was well marked. The ditain is prepared from the bark in the same way as quinine from cinchona: 100 grammes of bark give 2 grammes of ditain, 0.85 gramme of sulphate of lime, and 10 grammes of a perfectly inactive extractive matter. A single tree yields a large quantity of bark without injuring its growth. It is calculated that the price of ditain in Europe would be about 160 francs per kilogramme (3s. 6d. to 4s. per ounce).—*British Medical Journal.*

ANOTHER PREVENTIVE OF MERCURIAL POISONING.—A few months since we gave the results of some experiments which indicated that chlorine gas would prevent the dangers which workmen suffer in mercury mirror factories. A later suggestion, which was made to the French Academy, is to use ammonia. M. Myer has employed it with success in the mirror factory at Chauncy for several years. Since 1858 no workman has been attacked by the mercury, while those men who were subject to the attacks of the disease have since suffered more rarely and less severely. It is recommended that the ammonia should be thrown round the shops in the evening rather than in the morning.—*Four. of App. Chem.*

PORTABLE INK.—At a recent meeting of the Frankfort Polytechnic Association, Prof. Boettger exhibited a novel kind of ink, which is adapted to take on journeys and exploring expeditions. White blotting-paper is saturated with aniline black, and several sheets are pasted to form a thin pad. When wanted for use, a small piece is torn off and covered with a little water. The black liquid which dissolves out is a good writing ink. A square inch of the paper will give enough ink to last for a considerable writing, and a few pads would be all that an exploring party need carry with them. As water is available, the ink is readily made.