

Although garancine thus prepared gave colours similar to madder, yet they were wanting in solidity. This effect, especially as regards purples, was overcome by Messrs. Pincoffs and Schunck by taking principally garancine prepared as above, but thoroughly depriving it of acid, and submitting it to the action of high-pressure steam, when the substance called verantine is decomposed or modified so as to stain the whites less and not to interfere with the purple-dyeing power of alizarine. The advantages possessed by this product, which is now so extensively used in calico printing, that several millions of pieces have been dyed with it, are, as stated by Messrs. Pincoffs and Schunck, as follows:—It produces good lilacs economically and without soaping; great promptitude and regularity in the production; facility of producing combination of lilacs with catechu, lilac and chocolate, and lilac and orange, which results cannot be obtained so satisfactorily with madder or garancine; production of lilac shades graduated *ad libitum* as to cost. Lastly, economy of mordants. I shall again refer to this in speaking of calico printing.

*Specimens of Alizarine Styles.**



Mr Higgins has lately devised a method of preparing commercial alizarine, which differs from that of Messrs. Pincoffs and Schunck, in that he boils garancine, carbonate of soda, or a little ammonia. The liquor, which is alkaline at starting, becomes acid after being boiled twenty-four hours, which converts the garancine into alizarine.

* Kindly supplied by Messrs. Pincoffs & Co.