is very little short of the theoretical yield; 271 parts $HgCl_2$ require for decomposition 332 parts KI, and should produce 454 parts (6·701) HgI_2.

Another method which may be easily and economically pursued is that in which iodide of iron is used instead of iodide of potassium. The relative prices of iodine and iodide of potassium are generally as 21 to 19, and 254 parts iodine are equal to 332 of iodide of potassium. If, therefore, we mix 3·75 parts of iodine with 4 parts of cold water and sufficient iron wire to saturate, allowing the mixture to stand for several hours, heating towards the close of the reaction, we shall obtain a solution of iodide of iron equivalent in iodine strength to the quantity of iodide of potassium required to decompose 4 parts of perchloride of mercury. The yield will be about 6·7 parts, and the quality of the product is equal to that produced in any other way, but the precautions of using the iron solution as soon as possible, and of washing the precipitate as soon as deposited, must be observed; otherwise the product might be contaminated with a basic ferric chloride, which in time, is thrown down. It will be seen that this method is as economical as could well be devised; the operator getting the profits of the manufacturer of iodide of potassium, minus the labor of the former in making the iodide of iron.

The last process which we shall notice is that devised by Mr. Williams, described in the *Chicago Pharmacist*, and also published in this Journal (Vol. vii., No. 1). In this, the use of a large quantity of water, for the solution of the mercuric salt, is obviated by employing a concentrated solution of chloride of ammonium, in which the mercuric salt dissolves readily. Four parts of perchloride of mercury are dissolved in four parts of water to which 2 parts of chloride of ammonium have been added, 5 parts of iodide of potassium are dissolved in 5 parts of water, and the solutions are mixed. It will be seen that, in this way, 9 parts of water suffice for solution, while, otherwise, at least 70 would be required. This is a great convenience, especially when large quantities are operated upon; but, according to trials which I have made, the method is not economical, on account of the biniodide being soluble in the solution of chloride of ammonium. By draining the newly formed salt, as soon as deposited, the loss may be rendered smaller than if water were at once added to the mixture; but the product will not exceed 6·150