DYE

The following process for preparing this elegant yellow colour, is extracted from Tizzon's *Phil. Mag.* vol. 13. When made, it will fall into a fine powder, and require no grinding. There is not to be found either in the vegetable or mineral kingdoms, any other substance which yields so elegant a yellow colour as the weld.

Take of pure carbonate of lime, (fine washed whiting) any given quantity: say four pounds; put it into a copper boiler, and add to it four pounds of soft water; put a fire under the copper and raise it to a boiling heat, and keep stirring with a deal stick till the whiting be completely divided and form with the water a consistence quite smooth. Then add for each pound of whiting three ounces of alum previously pulverised tolerably fine. The alum must be added gradually, and the operator should keep stirring with his deal stick during the administration; for a double decomposition is effected, accompanied with effervescence, and carbonic acid is discharged. Thus, if the alum were not administered gradually the boiler would overflow from the violence of the effervescence, and if the whiting were not well divided previously to the introduction of the alum, the distribution among the whiting would be unequal, and the colour injured. When the effervescence ceases, the basis is properly prepared. The fire may then be drawn, and it may remain for any length of time without injuring, till the other materials are ready. Place the weld with the roots uppermost, in another copper boiler, poured in soft water enough to cover every part containing seed, and boil them not more than fifteen minutes; then take them out, place them, with their roots uppermost, in a tub to catch the liquor which runs from them, and pass the liquor in the copper with what runs from the weld in the tub, through a flannel filter, to intercept the seeds and fucula; and thus the colouring matter is prepared.

It is impossible to say what quantity of welds should be employed to any given quantity of whiting: for some bundles will contain three times as much seed as others. It is well, however to know, that if too much colouring matter be prepared, it may be kept in an earthen or deal vessel for many weeks, without sustaining any injury.

Having filtered a sufficient quantity of the weld, put a fire under the boiler containing the basis, and add the weld liquor till the colour be attained. When
sufficient colouring matter is added to the basis the fire should be raised to a boiling heat, and the work is finished. In order to be satisfied with the greatest strength of colour is attained, take a little out on chalk, which will absorb the moisture instantly, when it may be laid on paper with a brush, and received perfectly dry in a few minutes.

The contents of the furnace should then be put into a deal or earthen vessel to precipitate. The next day the liquor may be poured off, and the colour may be placed on large pieces of chalk, which in a few hours will absorb the moisture, and it will then be fit for use. The liquor poured off from the colour, may, with the addition of water be used again, and the old weds may be boiled a second time, and taken out previously to the addition of fresh weds, so that no colouring matter will be lost.