IMPORTANT DISCOVERY.—COMPLETE REVOLUTION IN THE ART OF PAINTING.

A very important improvement in the preparation of paint, both as to durability and cheapness, and in avoiding the deleterious effects of the lead used at present, has been recently introduced by a French painter in Paris. The substitution of the white of zinc for the white of lead is the great fact of the discovery, and it would seem that the improved paints have been sufficiently tested to warrant their general use. We find the following interesting article translated from the French by the New York *Tribune*, and as it contains some useful information on painting generally, we give our readers the benefit of the whole article as early as possible:

The new invention of which we have spoken, considered in any point of view, either as regards the serious evils for which it offers a remedy, the resources which it creates in the greatest and most precious of the arts —Painting; the economies which it realizes, and the beauty which it procures, must excite universal interest in the highest degree. It is nothing less in fact than a complete revolution in the process of painting in oil.

If you open any of the reports of the Sanitary Council, presented every year to the Prefect of the Seine, you will always find an article entitled *Intoxication Saturnine*, which will always tell you in the words of the report of 1841, with but trifling variations in the numbers, 302 *sick*, taken with the Saturnine Affection, (Painter's Cholic,) viz: 237 workers in white lead; 43 house-painters, &c. &c., have been admitted in the hospitals; 289 have been cured, 12 are dead ,one became insane, and has been taken to the Asylum Bicetre, &c.

Now, then, let us repeat it again: In the nineteenth century, when science has made such great progress, surmounted so many obstacles, overcome so many difficulties, a product of almost primary necessity, manufactured by a large number of workmen, who are beset by a cruel infirmity, who are constantly decimated by death, a product used by a multitude of artists, exposed daily to its deleterious influence; this product, we say, still held its place, already necessary, always sought after, casting a scornful defiance upon humanity leagued together in vain against it!

Mr. Leclaire, a well known house-painter, who was the first to introduce in his establishment that excellent system of joint-stock association, of equitable division of profits, and of mutual assistance, which a happy emulation will realize every where, we trust at least, had yearly the misfortune of seeing many of his workmen affected with violent cholic, with paralysis, insanity, and even death itself, or forced in the prime of life to give up their avocations, with the sad prospect of letting their families sink into poverty and misery.

The deadly influences which every year prey upon so many victims have only one and the same cause, viz: *the use of colors in oil having lead for their base*, for these colors and these oils, by their property of oxydation, are cruel homicides.

The enemy, then against which, first of all, it was necessary to declare uncompromising war, over whom it was necessary to obtain a brilliant victory, was Lead, which had become, by an inexorable necessity, the main ingredient of all painting in oil. After that came the tints obtained by a combination of copper, also easily oxydised, and consequently greatly deleterious.

As we desire always, in all of our articles, to enable our readers to acquire the greatest amount of clear and practical knowledge possible, we shall here enter into some details upon the subject.

The fundamental colors in painting, those by means of which all tints possible are obtained, are white, black, yellow, red and blue, and for greater facility green is added; grey is a mixture of black and white, green a mixture of yellow and blue, violet and indigo are mixtures of red and blue, &c. &c.

The most important of the primitive colors, that which it is the most essential to render perfectly innocuous and unchangeable, is white, which enters into the composition of nearly all paints.

The white exclusively employed now is the white oxyde or carbonate of lead, of which that called the white of silver is only a more perfect variety. But the oxyde of lead is at once a violent poison and eminently subject to decomposition; it becomes dirty and black, and is destroyed by contact with sulphurous vapours, which are so abundant in nature that it is impossible, with every imaginable care, to protect it from their corroding influence.

For the yellow, we have the chromes and the orpines, and also the ochres, which are durable but deleterious; the chromes and the orpines are as fugitive and dangerous as white lead. The orange mineral is equally homicidal.

The blues, composed of cobalt, &c., leave nothing to desire; they have all the durability and innocuousness that are needed.

The greens are either too dear for house-painting, like Veronese green, or worthless, like the green of commerce, or deleterious to the system, or subject to rapid decomposition, like the green of copper, verdigris, &c.

The blacks, like the blues, are perfect.

This brief enumeration shows us that the great and difficult problem presented, which Mr. Leclaire sought to find a solution of, with so resolute a purpose, may be summed up in the production of

First: A white, dazzling, unchangeable, inoffensive, and endowed at the same time with all the desirable properties of white lead.

Second: A yellow, a substitute adapted to all tints and shades, and without the objections in the yellows named above.

Third: A red, fixed and brilliant.

Fourth: A green, intense and exclusive of all preparations of copper and lead.

This is not all yet. The colours employed must not, before all, compromise the health of the artists or workmen, while they produce perfectly the desired effect. As regards the tint, it must effectually resist the destructive influence of all the corroding substances naturally or accidentally combined with the atmosphere. An indispensible auxiliary was an oil that would dissolve readily and dry in a short time. But the oil hitherto used, having these properties, contained a salt of lead (litharge) which was poisonous and disagreeable. It was then necessary to discover a new drying, innocuous and unchangeable oil.

Here, then, was the problem to be resolved by Mr. Leclaire. He worked at it assiduously for years, and finally obtained, by easy and certain means, and with great economy:

First: A pure and dazzling white—the oxyde of zinc.

Second: A gold, lemon and straw yellow—a preparation of the oxyde of zinc.

Third: An excellent red, having for its base sulphate of antimony.

Fourth: A number of fine greens, resulting from the oxyde of zinc and the sulphate of cobalt.

Fifth: A perfect drying oil, which is obtained by boiling 100 pounds of linseed oil with five pounds of per oxyde of manganese.

For several years Mr. Leclaire has made exclusive and successful use of his various discoveries in colours and the drying oil. The experience of every day, made