

on the largest scale in more than six thousand public and private establishments—the departments of war and of public works, the bank of France, the prefecture of police, the railroad depots, &c., demonstrate, or rather, establish beyond question, the following facts:

First: The new colours with their base of zinc, manganese, &c., are not injurious to the health of the workmen employed in their manufacture, the painters who use them, or the occupants of freshly painted houses. In the establishment of Mr. Leclaire an average of a dozen workmen were formerly attacked with painters' cholera yearly, and some, more unfortunate, suffered five or six attacks of this dreadful disease. Since the introduction of the oxyde of zinc and the oil prepared with manganese, not a single workman has been poisoned.

Second: The new colours are infinitely more solid and durable than the old: they are not affected by sulphurous vapours; they preserve, everywhere and always, their primitive tints, even in sulphuric bath rooms; and they have a property still more precious, namely: When they are cleaned by simple washing they resume their original brightness; while the old colours, when washed even with acids, which dissolve a portion, remain dull and spotted, and for the simple reason that everything which decomposes stains them.

Third: The white of zinc is so much superior to the white of lead, that when the framing of a panel is painted with the best white lead and the centre with zinc white, the contrast makes the framing look yellow and grey and offensive to the eye. In such a comparison even the Venetian white loses its purity. The white lead appears to absorb the light, while the white of zinc reflects it completely, and is brilliant and transparent.

Well! All the new colours invented by Mr. Leclaire, when compared with those having their bases in lead or copper, possess a preeminence as marked as the white of zinc does over that of the white of lead. They are at once richer, brighter, and fresher in tone. It is quite impossible, with the white of lead and the oil prepared with litharge, to obtain the delicate and tender tints which the white of zinc and the oil prepared with manganese give with great facility and in infinite variety.

Fourth: an important consideration.—By the employment of the new colours a great economy of time and money is obtained.

Experience has fully proved that if we compare the quantity of white lead with the white of zinc, or the quantities of oil necessary to prepare these two substances, the advantage of at least thirty per cent., is in favour of the white of zinc, which covers better with equal weight.

The application of the white zinc is as easy and requires no particular care.

The white of zinc dries in a shorter time.

There is then, *economy* in the cost of the primary material; *economy* in the quantity necessary to produce a given effect; *economy*, incalculable, in the durability; and *economy*, no less remarkable, in the quality of being easily cleaned and restored to original purity with fresh water!

We have spoken freely and earnestly on this subject, because, first, it is a question concerning one of the latest and most important branches of industry in the civilized world; and, secondly, a brilliant scientific discovery successfully introduced by long years of labour and constant sacrifice which were necessary to triumph over culpable indifference, blind routine and irrational opposition.

Now the truth begins to triumph. We have seen more than sixty certificates of our most renowned painters and architects, who have fully tested the discovery of Mr. Leclaire, and confirm all his assertions respecting its advantages. In place of a deadly substance there is given to the world a new material, which with the

advantages of beauty, durability, economy, &c., has no dangerous effect in its preparation or use. It is a great conquest of science.

We learn that Mr. Leclaire has received the decoration of the Legion of Honor. Never was a distinction more gloriously and meritoriously earned.

GRANDFATHER WHITEHEAD'S

LECTURES TO LITTLE-FOLK.

(From the *Family Friend*, a little English monthly periodical of very great merit.)

LECTURE I.

My Dear Boys and Girls—I intend giving you some very pleasing and instructive lectures. I wish you to love knowledge and virtue, because thereby you will be made happy and prosperous in your future lives. I hope to come to you frequently and to tell you, upon each occasion, something that it will please you much to understand. In these days, it is very bad for any one to be without knowledge. There was a time when there were no books, no paper, no pens, or ink; things now brought to light were then unknown; people used to believe in false gods, worshipped wooden images, and were in great dread of wicked spirits, which they supposed to exist. They had no comfortable houses wherein to dwell; no glass to admit the light, yet shut out the wind and rain; they had no proper fire-places, with chimneys to carry away the smoke, but used to live more in the style of the gipsy tribes, roaming from place to place, having no one dear spot to call home. They were in danger of wild beasts—in our country there were many wolves, which are animals, something like dogs, but very wild, hungry, and fierce; these often used to kill the beasts which people desired to keep for food, and sometimes they used to kill and eat the people themselves. The people, too, were rude, and very cruel, and instead of loving one another, they used to quarrel, fight, and kill each other; and they used to do this because they were ignorant; they knew not what it was good and profitable for them to do. But now we enjoy peace. We may go to bed at night without fear of being robbed by men, or devoured by wild animals. And although there are some wicked men now, who do their fellow-creatures wrong, they are comparatively very few, and are ignorant and idle men, something like those of old; they do not love the knowledge and virtue which I wish you to prize, and therefore they are disobedient to God, and bad towards their fellow-creatures.

I am not intending to give you a long lecture now; but merely a few words of introduction and promise as to what your Grandfather Whitehead hopes to do in the future. I know that this is your holiday time—that you love your holidays, and ought to have them. I know how much you delight to come home with your parents—to enjoy your family parties—to meet with your uncles and aunts, and cousins and companions, and talk about the merry Christmas and the New Year, and to sit by the fireside and tell anecdotes, and ask riddles, and try puzzles, and enjoy the fun of amusing conversation cards! And then the nice things which are about at Christmas!—the cakes—the puddings—the roast-beef, and the geese! These are all welcome things, and serve to make the time pleasant both to old and young.

But hereafter, when the pudding and the cake are gone, and the time comes for reading and learning, then I hope to tell you many things on what is called Science, and to explain to you how many wonderful inventions have been brought about, and how they are carried on. In the old times the people living in different places could seldom see or hear from each other; and if they travelled fifty miles it took them a long time of weary and often dangerous exertion. But now, the wonderful inventions