



MY notice, in the September number, of the fact that development and fixing might, by the employment of kachin, be carried on simultaneously, has brought many inquiries as to where the new developer could be got. and up till a few days ago I was unable to answer the question. Now, however, the "new" developer turns to be an old friend in a new form.

Pyrocatechin, in pure white crystals, as advertised by the Scovill & Adams Co., and doubtless to be found at all the stockhouses, is said to be just what was recently introduced as kachin, and whether or not that be so is of little consequence, as pyrocatechin is equally available for simultaneous developing and fixing. It should not be forgotten, however, that in any case a full exposure is required.

THE KROMSKOP.

Although a little too late in the day, I want to say a word about this exquisitely beautiful instrument as an ideal present and an inexhaustible source of pleasure to every lover of the beautiful.

In the pursuit of photography in natural colors we are no nearer than when the first experiments were made, more than fifty years ago, and the probability of ever reaching that goal is as likely as that we shall find two hills without a howe (a valley) between them. In photography in the colors of nature, however, Ives has reached a degree of perfection little short of marvelous. For some reason best known to himself, he has spent the last few years in England perfecting and exploiting the kromskop, till it became one of the most attractive exhibits at the scientific and other soirées, and created a degree of enthusiasm almost unparalleled; but now he has returned to Philadelphia, whence it is being sent all over the country, delighting all who see it.

I have followed the kromskop from its inception, and written of it many times, but never saw it till a few weeks ago, and then I found it the old, old story, "the half had not been told." No description can convey anything like a true idea of the beauty or perfection of the, what seems to be, almost created colors. Three photographs, differing nothing apparently from ordinary lantern slides, are laid on the steps of the instrument, so simply that a child may do it, and instantly they are clothed in all the glowing colors of nature, not the too often dim and dingy colors of the palette, but with all the brilliant purity of the spectrum, and in all the shades which charm the florist.

A NEW LIGHT FOR PORTRAITURE.

There is nothing new in portraiture by the light from the burning of magnesium ribbon in oxygen, or even in placing the combustion chamber over a miniature gasometer from

which it is supplied, as included in the patent recently granted in this and other countries, to the British Platinotype Company. Such an arrangement was introduced and to a considerable extent employed thirty years ago; but for various reasons it did not take. For one thing, it was expensive. For each exposure the combustion vessel had to be filled, and there was a difficulty in getting rid of the fumes, when repeated exposures were to be made. There was a loss of oxygen, too, from the means employed to light the magnesium; and, altogether, the apparatus was too clumsy for transportation when it was required to be used outside the studio.

In the apparatus, as patented by the Platinotype Company, all these objectionable qualities are eliminated, the action made automatic, and the cost reduced to little more than a cent for each exposure; and that in a way so simple, that it seems absurd that it was not thought of long ago.

The arrangement consists of a wide-mouth tubular bottle holding about sixty ounces, the tube or opening being about two inches from the bottom. The bottle is fitted with a rubber cork and vulcanite cap, through which run two brass rods with electrical terminals, and connected at the lower ends, which reach to one-third of the bottom by a short length of fine platinum wire. Tightly fitted into the tube of the bottle is a tube of rubber, connected with the gasometer, containing about a foot of oxygen, which, from the weight of the bell, and the bottle standing on it, is under a pressure of about one and a half atmospheres. Between the rods is a clip by which to fix a suitable length of magnesium ribbon, about five inches, or sufficient to burn from one and a half to two seconds. Round the platinum wire, and touching the ribbon, is placed a piece of touch paper, paper soaked in a solution of potassium nitrate; and a battery of sufficient strength to heat the wire completes the installment.

The apparatus is placed to the right, and a little to the front of the camera; and both sitter and lens are protected from the light by a semi-cylindrical reflector which sends it, not in their direction, but to the wall. This wall is covered with white paper, which sends the light to the sitter and background in a softly diffused state, the shadows being lighted by a screen or reflector on the opposite side.

From this, it will be evident that when the combustion chamber is once filled with oxygen, and the ribbon in place, it is only necessary to press the button to make the exposure; and that only as much of the gas will be consumed as is required to combine with the quantity of ribbon employed, and that that quantity will be automatically supplied as fast as it is consumed.

Of all the plans for the taking of portraiture by artificial light, this is undoubtedly the best, the simplest and the most economical; and I have no doubt that both in and out of the studio it will come into very general use. I should have said that the bottle contains an inch or two of water, kept below the level of the oxygen supply tube, which, by a shake, absorbs the fumes, the finely divided magnesium oxide; and there are spare "candles," so that exposures may be made, one after another, without delay.

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