

listens to the music; a fifth sits with an embroidery frame on her lap, engaged at work; another sits before a writing desk, or Davenport, writing a letter; while another stands by with a letter in her hand, apparently in conversation with the last. The scene is simple and domestic; a family group at home. The grouping is admirably managed, the photography exquisitely perfect and delicate, at once excellent in definition, light and shade and pictorial effect.

Another new style is a full-length *carte de visite* portrait of a gentleman, front view, and on the back of the card is pasted the portrait of the same person, in the same position but taken from his back, and this being reflected in a little piece of looking-glass placed in front of the back picture, you see the whole of the gentleman at one glance, both front and back view.

A New Intensifying and Toning Agent.

We have to bring a new agent under the attention of our readers, which appears to possess specific advantages which render it well worthy of attention, inasmuch as it is easy to use, very efficient as an intensifier for negatives, and is also a valuable toning agent for transparencies. Dr. Towler tried some successful experiments, and published a more definite formula, recommending a ten-grain solution of ferridcyanide of potassium, and a ten-grain solution of sulphate of uranium, to be mixed in equal proportions. Again we heard of experiments being tried with signal failure.

We have, however, during the last week or two, tried a series of experiments with the most satisfactory results, and we can now, not only explain how these may be secured, but also the cause of failure in the hands of some of those who have unsuccessfully tried the experiment. We will first state the formula and mode of working. Take—

Ferridcyanide of potassium 10 grains
Water 1 ounce

Dissolve and mix with a solution of—

Persulphate of uranium 10 grains
Water 1 ounce

This mixture is a clear solution of a deep red brown; and poured over a finished and washed negative, it at once changes the deposit (which, after simple iron development, is generally of a grayish color) into a rich non-actinic chocolate brown tint, and, if its action be continued, into a purple brown or warm black. This is effected without risk of stains or disadvantages of any kind that we have discovered. There is a remarkable similarity in color to that produced with Schlippe's salt, but the operation is much simpler, as the negative requires no preparation, and no subsequent treatment beyond washing. The first plate to which we applied the solution was an old glass positive, of bright silvery color, which had been taken many years. A bright scarlet color was at once communicated to the whites, which, on drying, became a reddish brown, but very non-actinic in character. Applied to a negative of somewhat insufficient intensity, the tint at once produced was a rich chocolate brown, both by reflected and transmitted light, rendering the negative more non-actinic in color, without sensibly increasing the deposit, and thus securing an important con-

dition of delicacy as well as intensity, the requisite printing quality being obtained without piling up deposit and risking coarseness.

As a toning agent for transparencies nothing could be better. The rich, deep, warm brown at once assumed, or the deeper purple brown, approaching black produced by a continued application appears to us all that can be desired in collodion transparencies for any purpose. The freedom from risk or stain or injury of any kind, so far as our experience has gone, is most valuable. The solution may, if desired, be made stronger, and its deepest effect produced more rapidly if desired; but it appears to us that the strength we have indicated is the best for practical purposes. The solution may also be used over and over again, until its efficacy is exhausted.—*American Paper.*

Photographic Engraving.

The great advantage of the process for obtaining photographs on copper plates, which we described last week, consists in the circumstance that photographs so obtained may be readily "bitten in," so as to enable the plate to be printed from just as though they were ordinary engraved plates—the result, however, being a far more perfect reproduction of the original photographic picture than could be obtained by the most skilful mechanical engraving. When it is desired to etch a photographic picture obtained on a copper plate by this process, the plate, after having been dried must be varnished on the back and sides, but not on the face, must have all the black dust composing the shadows of the pictures carefully removed, must next be well washed under a strong jet of water, and must then, without first drying, be plunged into the liquid to be employed as a mordant. A suitable mordant is one consisting of one part of nitric acid, two parts of a saturated solution of bichromate of potash, and five parts of water. Where more convenient, the nitric acid may be replaced by sulphuric acid. The quantity of this mordant used in the first instance should be simply enough to completely cover the plate, but from time to time, as the liquid turns blue, more should be added, the action of the mordant being continued for a whole day, or for even longer, according to the temperature. The mordant acts only on the bare copper, and does not effect those parts of the plate which are covered by silver, so that the result is an incised engraving fit for printing from. If, instead of treating the plate as thus described, the black dust composing the dark parts of the original picture be not rubbed off, and the mordant used consist of iodine associated with either bichromate of potash or nitric acid, an engraving in relief will be obtained, the iodine acting only on the parts of the plate on which there is a deposit of silver, and from this engraving in relief a reversed proof, suitable for printing from, may be procured by the galvanoplastic process.

On the Artistic Colouring of Photographic Portraits.

(From the "British Journal of Photography.")

So difficult is the task of training a good colorist, that even the accomplished artist feels his inability in endeavouring to impart the information