

THE TOMB OF ITMAD-UD-DAULAH AT AGRA.

work it is therefore a *sine qua non* that at the time of painting the plaster should be damp, and to obtain this "it is essential that a given amount of plaster be laid on for the painter at a time, and therefore frescoes are readily recognised by the joinings in the plaster most frequently following the outlines of the figures or other objects. It is sometimes confounded with tempera or distemper painting," a method of painting in which "solid pigments are employed, mixed with water as a medium, in which some kind of gum is dissolved to prevent the colours scaling off." The latter system is much easier to work than the former, but it is not suitable for external decoration, as it will not stand exposure to the weather; as the colours being surface deep, do not become part and parcel of the stucco. In the preparation of walls intended for fresco painting, great precautions have to be taken to get them perfectly even, as inequalities are not only unsightly, but allow dust to accumulate to the detriment of the painting. Lime and sand, and lime and marble dust, were and are still frequently used in the preparation of what is technically termed the intonace, or finishing coat, upon which the fresco is painted.

The Romans were most particular in the preparation of their walls, and we are told that "they faced their walls to be painted with a lining of brick on edge, separated by a small space from the main structure, to which it was attached, secured by leaden clamps, as a precaution against damp; and that three preparatory coats were laid on this brick facing, the first consisting of lime, powdered brick, and pozzolano. The finishing coat was frequently composed of lime and powdered marble, after which it was painted over by a durable process, the secret of which is now lost." Fresco painting was for a time superseded by mosaic decoration, but was resuscitated in the 13th century. In the present day it is extensively practised by the Italians, and in Germany there is a good modern school; and although England has not produced any great school of mural painters, she has made a struggle on behalf of the art, as may be seen from the paintings lining the corridors and other walls of the Houses of Parliament.

During the Middle Ages a mean was arrived at between tempera and fresco painting. The walls were finished off as for fresco painting, and each day, before work commenced, the surface was soaked with water, and thus, to an extent, the colours were absorbed into the walls.

In India at the present day, mural painting is in vogue, and a quantity of modern work is to be seen on the walls of the Jeypore Museum. Two kinds of walls are used for the purpose, and are known as the "glazed" and the "rough or dull." The first is prepared with marble dust mixed with lime in equal parts, which, when dry, is slightly and gently moistened with water and polished with a fragment of stone or burnt brick. A solution of stone lime is then applied, and the whole polished; and when this is done, a third solution is laid on, of cocoa nut, prepared by grinding with water the inside of a dry nut on a stone. The entire surface is then again polished, but this time with a soft pad of cloth in lieu of stone. The "dull or rough surface" consists of ordinary lime plaster coated with *khamir*, a mixture of gum and chalk. If a monochrome background is to be used, the colour is washed in before commencing to paint the fresco, but if the subject requires one in polychrome, the surface is left white and the tints filled in afterwards. The beautifully coloured polished walls one so often sees in India are a species of fresco work, and the colours are applied whilst the stucco is damp, and then polished as above described. A number are to be seen in the baths at Fathpûr Sîkrî and about the Agra buildings.

Before an artist commences to colour in fresco he most carefully studies out his designs, prepares a cartoon of it, which when correct he pricks through, and transfers it to the wall by means of a bag containing powdered charcoal, or by the use of a stylus. The lines thus made are carefully gone over with a fine brush containing ink or some other colour. The principal and most ancient colours used by Indian artists in mural decoration are:—Chalk, lamp black, *gaw-goli* (Indian yellow), which when prepared produces what is known as *saudhra*, a lovely yellow with a tinge of red in it; *hirmizi* (Indian red), *ingur* (vermilion), *lajward* (ultramarine), *nil* (indigo), *sindur* (red lead), white lead, green stone, yellow stone, pink stone, and *mohawar*, which is used in the place of crimson lake and is prepared from lac. These are gradually being superseded by English colours, and the native pigments are, I am told, becoming obsolete; notwithstanding, the artist of Hindustân firmly believes they are more lasting and durable than those prepared in Europe. Many of the pigments, if not very finely ground, are well washed in water. The *gau-goli*, or Indian yellow, contains uranic salt, and this, before grinding, must be eliminated by thorough washing; if not, its colour will change, and in time fade altogether. A simple way of purifying it is to bind the colour in a cloth and immerse it in water for a night. In the morning this is changed, and the process repeated two or three times, after which it is fit for use.

The colours are generally prepared in a solution of gum, but sometimes in water only, in which case the gum is added afterwards, practice determining in what quantity. Most of the colours are ground on a smooth stone, but some are merely mixed with water and afterwards filtered through a cloth. Two assortments of gum are employed, the white and the *khair*. The former can be mixed with all colours, with the exception of indigo, lamp black, and red lead, in the preparation of which it is customary to use the latter only. The native artist generally makes his own brushes as he requires them, and for ordinary work prepares them from the hair of the goat and deer; whilst for subjects requiring a high finish, squirrel's hair bound in pigeon's quills is brought into requisition. These brushes are beautifully made, and from experience the writer knows that they are quite equal,