occupy its whole area and suffer no ray to enter it which does not come from some part of the coloured surface; the spectrum will be seen deficient in all those rays which the object does not reflect, and which belong to its complementary colour. The use of this little instrument, at once simple, portable, and inexpensive, will be found to afford an inexhaustible source of amusement and interest. To the florist, on a bright sunny morning, the analysis of the tints of flowers and leaves, or the hues of a butterfly's wing, and of every variety of coloured object;—to the water-colour painter, the study of the prismatic composition of his (so fancied) simple washes of colour and the effects of their mixture and superposition;—to the oil painter, that of the various brilliantly coloured powders which mixed with oil form the material of his artistic creations, are all replete with interest and instruction.

(46.) If instead of a reflected colour we would examine a transmitted one, as in the case of a coloured glass, or some natural transparent coloured product,—if in the form of a plate or lamina, it may be laid over the slit, and when directed to any bright white light (as that of a white cloud), its spectrum will be exhibited—if a coloured flame, the slit may be placed close to it, but if a liquid, it will be preferable to make it its own prism by enclosing it in a hollow prism formed of plates of glass cemented together, when the differences arising from difference of the thickness of the medium traversed by the refracted rays will be more easily studied.

(47.) The colours of transparent media—such as