

not in its present state of perfection, but in a way which indicated its capabilities. The gelatine dry plate could not be made in perfection until after the gelatine itself had been improved so as to render it suitable for this purpose. It is to the perfection of the extremely sensitive dry plate that the great popularity of photography is to be attributed. Barring the bicycle, probably no craze was ever so widespread as that of modern photography. Methods of manipulation and improvements in lenses and apparatus have kept pace with improvements in the art itself, and the large demand for apparatus and material effected a corresponding reduction in prices. Lenses have been devised for every use, and the very recent improvements in optical glass have rendered it possible to produce lenses which are marvels of perfection.

#### Apparatus.

It is needless to mention the improvements in cameras and portable apparatus, for we think it would be almost a rarity to find a family of which some member is not practically interested in photography. A great impetus was given to modern photography by the invention of the hand camera, and more particularly that of the magazine hand camera. Magazine cameras in great variety have been brought out. Most of them have been fitted for the use of roll films or cut films, but a small proportion are arranged for receiving glass plates. Such cameras have been made as large as 8 x 10. The beautiful modern folding camera, being very light and portable, has become a great favorite with both professionals and amateurs. It is even more portable than the magazine camera.

From the ordinary side window as a source of illumination, the daguerrotypist turned to the skylight, and special skylights, some of them of large size, were constructed and used

to great advantage in the production of pictures which have never been surpassed in soft, delicate shading.

After the invention of highly sensitive plates it was possible to make a good picture with a smaller skylight, also with a good sidelight when suitable screens were provided. With sensitive plates came the use of artificial lighting, and flash-lights for instantaneous work in the night and in caves and dark places.

Since the development of the electric light many photographic establishments have been fitted out with electric lighting apparatus, permitting of taking portraits at night and in cloudy weather. An additional advantage in the use of artificial light is that of carrying on the work on the first floor, thus saving stair climbing or travelling in the elevator. With proper management, the amateur photographer may procure flashlight pictures at home in the evening which compare favorably with daylight work.

#### True Color Values.

Early in the history of photography it was noticed that true color values were not rendered in any photographic pictures. Yellow, red and green always appeared darker in the picture than in the object, while blue and violet appeared lighter. To correct this defect in photographic pictures the plates were made color-sensitive by coloring them with applied dyes, or by incorporating the dyes with the emulsion used in coating the plate. The difference between pictures taken with orthochromatic plates and those taken on ordinary plates is very noticeable. Colored screens have been used in connection with ordinary rapid plates for securing similar results, and in copying paintings, tapestries and other works of art depending upon color value for effect. Both the yellow screen and the orthochromatic plates have been applied simultaneously.