

## Artistic Lighting

by James Inglis

1897 The Photo Beacon Co.

### Chapter 11, By Flash Light.

Most of my efforts at portraiture have to be made in the evening, which, thanks to flash light, is now perfectly possible, and very excellent results can be secured in this way. For those uninitiated it may be explained that flash light is produced by the combustion of the metal magnesium which is, for this purpose, provided in fine grains, either alone or mixed with some substance that causes it to burn very rapidly.

When magnesium is used alone it must be burned in a lamp specially made for that purpose; but I may as well say at once that for such portrait work as is described in this book the metal when used alone is practically useless, as to get sufficient exposure the flame must continue for a few seconds, and its intensity will cause the sitter to either close the eyes or at the very least to contract the pupils, giving them a fuzzy appearance that spoils the effect.

So, for portraiture one must use the explosive compound, which may be discharged either by touching it off with a taper or by a lamp specially designed for the purpose. I most unhesitatingly recommend that a lamp be used, because when the powder is fired by touching it off the sitter knows what is coming and braces himself for the ordeal. The result can easily be understood.

It may not be out of place here for me to say a few words about the dangerous nature of flash powder, it is just as much an explosive as is gunpowder or dynamite, and must be handled with even more care, as it will, under certain conditions, go off even more easily than will either of those named. And the trouble is, nobody knows what these conditions are. Generally, one may give the powder almost any kind of careless handling without dire results; but at some unexpected moment, with conditions exactly similar as far as one can judge, a little friction will explode the powder.

So, beware of friction. The powder usually comes in ounce quantities, stored in wooden boxes. The lid is fastened down by the label, and this must be cut before the box can be opened. Here is how to handle the box at this stage: First cut the wrapper all the way around, then, holding the bottle; at arm's length, prize up the lid with the blade of the knife, working all around until the lid drops off. Before putting the lid on again, always blow away any powder that may be adhering to it or to the edge of the bottle, for it is here the danger lies. A few particles of the powder wedged in between bottle and lid will undergo friction when the latter is being removed, and while the chance is a remote one, it is within the bounds of possibilities to have an explosion with a nasty burn or the loss of a finger or two as a result. So, blow away all adhering powder, and see that the bottle is always stood right end up. In opening, follow the directions just given, so that if an explosion should occur there will be no fingers near to get hurt.

Flash lamps are on the market at prices ranging from \$1. I have worked with many of them and can say that, for all that the average amateur wants to do, one of the cheapest kinds is good enough. Some of the more expensive machines are provided with quite an array of burners, but a long series of experiments has proved to me that they are worse than useless, for I find that the best results are got when the powder is concentrated at one point.

Before starting in to serious work I would advise the beginner to make a study of lighting by the aid of an ordinary gas flame; or, if that be not convenient, a kerosene lamp. The former generally hangs in the center of the room about eight feet from the floor, so that a sitter placed about six feet from it will be in proper position. The photographer should seat himself beneath the flame, but about a foot and a half to one side, and should study very closely the changes in the lighting that result as the sitter turns his head first to the one side and then to the other. It will take many nights' study until he is able to appreciate fully all the little points set forth by Mr. Inglis; but by and by his eye will become educated, and when that is attained, he will be able to make good portraits by flash light. All that is necessary is to place the lens where his eye was, and to discharge the flash lamp in front of the gas flame, taking care of course that the lamp is behind the line of the lens so that no rays can strike in and fog the plate.

More exact work can be done with a stand machine. When a lamp of this kind is used it is a good plan to get a piece of gas pipe about a foot long, to one end of which is fitted a gas burner, while the other should be so shaped that it will permit of rubber tubing being attached to it. A screw clamp should be soldered to the pipe so that it can be fastened readily to the machine in such a way that the gas flame will be about eight inches above the pan that carries the powder. On connecting the rubber tubing with the chandelier and the piping, and lighting the gas all other lights in the room being turned out, the photographer has just as much control over his lighting effects as if he were in a studio.

Suppose I tell how I work. The sitter being posed, the camera is focused, this being greatly aided by getting the subject or a friend to hold a burning match alongside the face about level with the cheek bone. When the flame is sharply defined on the ground glass there is not much wrong with the face.

The sitter is now asked to look past one side of the camera, and the lamp is placed on the other side of the instrument just a little behind the lens. By raising or lowering the flame, by moving it to one side or another, as the occasion requires, the best effect is soon got. It may serve as a guide to the beginner to say that I generally find the best position of the flame to be about a foot to one side of the lens and a little over two feet above it. This is with a distance of six feet from the sitter; of course, at a greater distance those measurements would be proportionately increased.

The quantity of powder to be used is very important. In my experience I find that when using a fast plate, the lens working at f-8 — that is, largest stop — about 12 grains is necessary, when the distance from sitter to lens is six feet. In actual practice I do not weigh, but measure out with a metal mustard spoon which holds about that quantity. The following table shows the amount of powder required at different distances; the lens supposed to be working at f-8. With f-11 one must, of course, double the quantity, and with f-16 it must be quadrupled, Smaller stops than f-16 are practically inadmissible in flash-light work;

6	feet	.....	12	grains
8	"	.....	42	"
10	"	.....	66	"
12	"	.....	96	"
15	"	.....	$\frac{1}{3}$	ounce
20	"	.....	$\frac{1}{2}$	"
25	"	.....	1	"
30	"	.....	$1\frac{1}{2}$	"

for children I use a little less powder; for elderly people a little more, to counteract the yellowish tinge that old faces acquire.

In profile portraiture the very same principles apply. I usually take the shadow of the ear as my guide; the effect that can be secured is shown in the illustration. There is no necessity to turn out all the lights in the room before making an exposure, as I find I can leave the lens uncovered a full minute without any harm resulting, and this with a strong gas flame only six feet from the sitter.

The chief drawback to flash-light portraiture is the smoke it creates. This simply cannot be avoided, and until it has cleared away it is useless to make a second exposure. It is a good plan to pull down the upper sash of one of the room windows about a foot just before the lamp is discharged, if this be on the "lee" side of the room the smoke will make its exit at once, and if a window opposite can also be opened the current of air will help matters considerably.

Let me conclude with a few words of warning. You cannot handle the powder too carefully; and, if possible, never have your fingers on the cap of the bottle when removing it, but prize it off with a table knife. Never put the powder on the pan while the lamp is burning; powder first, light the lamp afterward, and thus prevent a serious accident.