

coated therewith, and the gelatine is then transferred to the surface to be coated; in this state it is subject to injury by moisture, and, in order to render it permanent, must be subjected to chemical treatment. In both the processes above referred to much time is occupied, and considerable expense necessarily incurred.

In carrying the present invention into effect, I prefer that the prints or designs should be on a well-sized, hard paper; but when this is not the case, and the paper is unsized or insufficiently sized, I lay the prints or designs down on a level surface, and sponge both sides thereof with a warm solution of starch or other sizing material, and then hang them up to dry; if calendered or rolled after this treatment, the paper is then in the condition preferred to be used. I then prepare a sufficient quantity of albumen by taking the whites of eggs and breaking up the mass into a uniform liquid by a beating machine or whisk, as is well known to persons conversant with the preparation of photographic albuminized paper; I then coat the printed surface of the paper (the same having been previously dried) with the albumen thus prepared. It is desirable to introduce into the albumen, during the operation of breaking or whisking, matter of a deliquescent nature, such as chloride of calcium or nitrate of ammonium; and I find that about one per cent. of such substance is sufficient for the purpose of preventing the albumen on the paper becoming thoroughly desiccated, as in this state it is conveniently rendered insoluble. The paper having become dry, in the ordinary sense of the term, I proceed to render the surface coating insoluble (in the same sense as varnishes are insoluble) by means of steam or boiling water. The like result may be obtained by the use of well-known chemical solutions and hygroscopic gases possessing the property of rendering albumen insoluble; but I prefer the use of steam, as being cheaper.

The following is a convenient mode of carrying out this portion of the process:—The coated sheets of paper are suspended from rods or cords in a steam chest properly protected to avoid loss of heat by radiation. A small amount of aqueous vapour is allowed to pass from the steam generator or boiler through the steam chest; and when the latter is filled the steam is turned on, and the temperature raised to at least from 170° to 190° Fah. as rapidly as possible. The sheets of paper, with their surfaces thus protected, are then removed, and at once piled face downwards, the result of the treatment above described being that the prints or designs are covered with a most efficient protective coating, whilst the prints or designs have a depth and tone imparted to them which have been unattainable by the methods hitherto adopted, from the fact that the black or deep shadows have a greater amount of surface given them than the high lights.

Having thus declared and ascertained the nature of my said invention, and the manner in which it is to be performed, I would observe, in conclusion, that what I consider novel and original, and therefore claim as constituting the invention secured to me by the said hereinbefore in part recited letters patent, is the application of albumen to the surfaces of lithographs, photo-lithographs, and like printed surfaces, as and for the purposes hereinbefore described and set forth.

IMPROVED PHOTOGRAPHIC FRAMES.

BY G. P. BERGEN AND C. T. BAINBRIDGE.

This patent consists in an improved mode of producing frames for photographs. It is described as follows:—

The invention consists, firstly, in a card or card frame of paper, or other material, having an opening through it for exhibition of the picture, and framed with an embossed border round the opening on the front side or face of the card or frame.

The invention also consists in a card or frame of the character described, with a cavity in its rear for reception of the picture.

Likewise the invention covers the production of a card or frame by simultaneously punching the paper, or other material of which it is composed, to form the opening for exhibition of the picture, and embossing the border of the opening.

And the invention further consists in a combination, with automatic feeding devices for feeding a continuous strip of paper or other materials, of mechanism for punching in regular order a series of openings in the same, and embossing the margins or edges of said openings, including, also, means for simultaneously cutting the strip into cards or frames of the required length or size.

Correspondence.

NON-ACTINIC LIGHT FOR OPERATING ROOMS.

SIR,—In the PHOTOGRAPHIC NEWS of May 7th is an article, which I have perused with much interest, on "Yellow Light for the Studio." The subject being one to which I have for several years given some attention, perhaps you will kindly allow me space for a few remarks thereon.

I am glad to observe that you do not speak of the "dark room," for one cannot help calling to mind the veritable "dark rooms" of former days, into which the followers of the black art were wont to vanish from the sight of their wondering sitters, and there perform those magical incantations by which the anxiously expected portrait should presently be made to appear. These deeds of darkness are now, happily, things of the past, and the apartment in which these important operations are carried on is, or may be, as well lighted as any other. I feel convinced that the subject is one which merits particular attention, and am glad to see that you recommend the testing of the yellow light by exposing a sensitive film for a certain time before it. I feel the more interested in this point from the fact that, some four years ago, I suggested the same method as the only reliable means of ascertaining the quality of the medium used; and I remember that I then received a sharp rap on the knuckles from the editorial ruler in consequence, which, I trust, has had due effect on my subsequent behaviour.

The plan I adopt for testing the relative value of different samples of glass, &c., as adiacinic (not non-actinic) media, may be useful to some of your readers, and is as follows:—I have an old quarter-plate dark slide, to the front of which (the sliding shutter having been removed) is attached a clip composed of two pieces of wood about three-eighths of an inch thick, lined on their inner surfaces with velvet, and hinged together at one side by a strip of leather; two openings are cut quite through these—one circular, the other square—of about 1 inch in width, and a short tube of cardboard fitted to each, extending inwards so as nearly to touch the surface of the prepared plate when in its place; these serve to keep the two openings quite distinct. Any two pieces of glass, or other material, being placed over the two openings respectively, and the hinged flap brought down and retained by an elastic band, the sensitive plate is introduced and exposed to daylight for (say) five to eight minutes; on developing, the amount of actinic effect, if any, or the relative degrees of action through the two openings, is readily appreciated and distinguished by the difference in the form of the apertures; at the same time that the presence of any fogging due to causes other than that of light is rendered apparent.

I have found the above plan to answer well, and I feel sure that those who try it, or something similar, will derive much advantage from it.—I am, sir, yours obediently,
Stockwell, May 21st, 1869. C. W. SMART.

WET COLLODION IN THE FIELD WITHOUT A TENT.

DEAR SIR,—Mr. Whiting is wrong if he thinks that my letter about his camera was written in an unfriendly spirit, or that I wished to disparage it. Fair criticism is, I think, desirable, and in this case it has given him the opportunity of answering what was considered an objection.

I quite agree with Mr. Gulliver, that the drawback to this method of working without a tent is the difficulty of coating a plate properly when the wind is blowing, but I imagine it is a difficulty that may be overcome; and I suggested, in a letter to the NEWS some time since, that possibly some means might be found of preventing the collodion from drying quickly, so as to enable the plates to be coated