

UNITED STATES PATENT OFFICE.

CLAUDE LÉON LAMBERT, OF PARIS, FRANCE.

IMPROVEMENT IN CARBON PHOTOGRAPHS.

Specification forming part of Letters Patent No. **171,392**, dated December 21, 1875; application filed January 4, 1875.

To all whom it may concern:

Be it known that I, CLAUDE LÉON LAMBERT, of Paris, France, photographer, have invented Improvements in Producing Carbon Photographs; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is an improvement in process for producing carbon photographs or sun-pictures, produced in salts of chromium or other pigments, combined with gelatine or its equivalent, and rendered permanently insoluble by the action of light.

As a preparatory step in carrying out the invention, I take a glass plate, upon which I first apply a greasy coating, and then a layer of normal collodion, after which I immerse it in cold water. I then remove from the printing-frames the pigmented papers, and apply one on the coated glass plate, but while the plate is still in the bath. I then remove both together—glass and paper—and subject it to slight pressure for a few minutes, after which I immerse in warm water, and develop the positive print, which, according to the length of exposure, will make either a transparency or a picture seen by reflected light. It is upon this latter feature (the picture seen by reflected light) that the invention is based.

The positive picture having been thus developed, I then only have to immerse it in a bath containing from ten to fifteen per cent. of gelatine in solution, and to apply the card upon which the photograph is to be mounted, and which is also passed through this bath. The picture is then allowed to dry completely, and the image is then detached, and remains as brilliant and glossy as the glass with which it was in contact. This brilliancy is not produced by a layer of gelatine, but by the image itself, which is completely insoluble, and will, consequently, bear considerable friction, and may even be wetted without affecting its appearance or durability.

By the above process I obtain an image which is, in fact, unalterable, and which is itself preserved by an almost unattackable body, (insoluble bichromated gelatine,) *i. e.*, the picture itself, and which is obtained in its true aspect—that is to say, non-reversed. Thus, in practice, it will not be necessary to have two poses to produce a pendant—that is to say, two portraits of persons face to face.

The gradual strengthening which I apply to the salts of chromium consists of a solution of eleven ounces (three hundred grams) of water, one drop of liquid ammonia, and fifteen grains (1 gram) of sugar, in addition to which is added, according to the desired intensity of the negative, a few drops of saturated solution of permanganate of potassa. The negative obtained from a transparent positive is then placed in a bath containing the above solution, and, if it is desired to obtain still greater intensity, some more saturated permanganate of potassa is added. The negative, thus strengthened, will produce prints of the same quality as would the original negative. In this manner, also, transparent positives may be intensified, in order to impart greater brilliancy to the negative to be obtained therefrom.

To obtain prints in salts of chromium on ordinary albumenized paper, with borders in a scale of different tints, which contrast with that of the picture, I take ordinary albumenized paper of any quality, and expose it to light after sensitizing; then place it in the press, taking care to preserve a blank for the picture, with a black or yellow mask, and in this manner obtain an impression from a negative of any ornamental border, with a blank space reserved for the picture. I then precipitate it with hyposulphite, and fix as in ordinary cases, and, if necessary, apply it to my oval or square photographs. I thus obtain tints which harmonize perfectly—one for the picture, and the other for the border.

I claim—

1. A compound consisting of eleven ounces of water, fifteen grains of sugar, one drop of liquid ammonia, and a few drops of permanganate of potassa, to form a bath in which a negative obtained from a transparent positive may be immersed, and thus intensified.

2. The process of obtaining double-tinted prints in salts of chromium and on ordinary albumenized paper, by placing the sensitized paper in a press, the blank for the picture being covered with a black or yellow mask, and the whole being then precipitated by hyposulphite, as described.

CLAUDE LÉON LAMBERT.

Witnesses:

CHARLES DESNOS,
ROBT. M. HOOPER.

Handwritten signature/initials