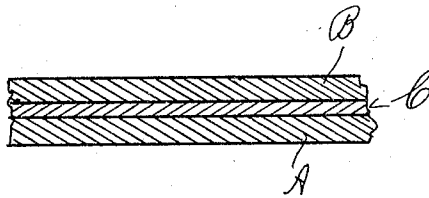


No. 778,947.

PATENTED JAN. 3, 1905.

C. L. A. BRASSEUR.  
CARBON TRANSFER PAPER.  
APPLICATION FILED MAY 14, 1902.



Witnesses  
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## UNITED STATES PATENT OFFICE.

CHARLES L. A. BRASSEUR, OF NEW YORK, N. Y.

## CARBON TRANSFER-PAPER.

SPECIFICATION forming part of Letters Patent No. 778,947, dated January 3, 1905.

Application filed May 14, 1902. Serial No. 107,245.

*To all whom it may concern:*

Be it known that I, CHARLES L. A. BRASSEUR, a citizen of the United States, and a resident of New York city, in the county of New York and State of New York, have invented a certain new and useful Improvement in Carbon Transfer-Paper, of which the following is a specification.

Many attempts have been made to produce photographs in colors by what is known as the "indirect methods." The majority of the processes thus evolved have had but little commercial value, owing to the difficulty of cheaply duplicating prints absolutely or even closely approximately alike in color distribution and hues. The prints produced by these processes are either made by superimposing a plurality of dyed partial images or prints or by the use of a "patterned screen," in combination with a photograph whose negative is taken behind a similarly-patterned screen. In neither of these cases is there a duplication of prints absolutely or even closely alike in color save at a prohibitive cost.

The primary object of the present invention is to secure uniformity in the intensity and the hue of each of the colors used, whether in a color-photograph or in a patterned screen, whereby uniformity of results may be had and staining be avoided.

Among other objects of the invention are the securing of great intensity of the hues, the reduction to the minimum of the thickness of the protective layers, and the impermeabilization of the color-prints.

To these and other ends the invention consists of a pliable support, a film of unsensitized soluble gelatin or what for the purposes of this invention is its equivalent—to wit, insoluble gelatin prepared in such a way that it will become soluble by the action of light (Poitevin's process, ferric chlorid or of iron and tartaric acid) or by suitable chemical reagents, or both—said film containing dyes, pigments, or mineral colors or a chromogenic compound, preferably other than silver compounds, and between said film and said support a layer of easily-soluble material, such as gum, albumen, wax, varnish, &c. By preference

the said support consists of paper, but celluloid or mica may be used.

The drawing shows in greatly-enlarged section an embodiment of the invention.

The color may be dissolved in the gelatinous solution and, if desired or necessary, fixed so that it will not "run" when subsequently wetted, or it may be a chromogenic compound, such as in Freer's process. The support A must be of a nature such that the gelatin film B can be removed readily therefrom without injury to the film, and the soluble gum or other material C used to facilitate the transfer must be one which can be dissolved without injury to the layer of gelatin.

This "carbon transfer-paper," as it may be called in analogy to the nomenclature used in reference to the "carbon-papers" of commerce, (which contain pigments other than the black or india ink originally used,) can be prepared in ordinary coating-machines when the layer of soluble gelatin or its described equivalent may be of a thickness such that it will set when spread by such machines; but when excessively-thin films, as those not over the one one-thousandth of an inch, are required for special use, as in the manufacture of patterned screens or color-photographs consisting of superimposed prints and when great regularity or uniformity of thickness is required, as in said patterned screens, I prefer to first flow the gelatin on the finest and plainest plate-glass, the glass being prepared to prevent adhesion thereto of the film and when the gelatin is dry to squeegee upon it the gummed paper and then to strip the whole film. This flexible film may now be transferred on glass of a poorer and cheaper grade, since its flexibility permits it to be pressed down into all the inequalities of the surface thereof, and the paper removed, thus leaving a coating perfectly uniform as to thickness, and color also if the gelatin has had the color dissolved therein, as above mentioned. In any event the color is uniform, even when the film has a chromogenic compound therein. It is remarked that the method of preparing the film upon a plate-glass support permits of the accurate determination of the thickness of the

film and its luminosity and of the spectroscopic determination of the wave lengths transmitted, as well as their various percentages before the paper is squeegeed thereon and the whole stripped from the plate-glass support.

Once the carbon transfer-paper is made it may be used at any time. Since the color is fixed, the paper may be wetted in cold water and be squeegeed on the surface on which it is to be printed. After being squeegeed upon the last-mentioned surface the paper is removed, leaving an absolutely uniform film of a predetermined color ready to be sensitized and printed under the desired negative, after which the unacted-upon parts are removed in a known manner. After impermeabilization or other protection of the print so made another film may be squeegeed upon the support, overlying the said print of course, and is then sensitized, printed, developed, and washed without staining the underlying image or print in the slightest, since the second film is put on cold. After the impermeabilization or other protection of the second print a third film may be transferred in like manner upon the support and be sensitized, printed, &c., thus giving a final composite print in which no one film is stained or discolored by another. In the old methods where the films are poured on hot staining is very likely to result, and it is very difficult if not impossible to determine whether the film is uniform in color or not,

the presence of images in other colors interfering with proper observations.

By the use of my above-described improvement uniformity in thickness of the film and its color are both attained and staining is avoided. The result is that the final or composite color-photograph or patterned screen is correct as to intensity and hue in every part thereof.

By the phrase "a film of colored soluble gelatin" in the claim hereof I include its equivalents, a gelatin containing a chromogenic compound other than a silver compound, and also a gelatin which may be rendered soluble—that is to say, the gelatin may contain dyes, pigments, mineral colors, or a chromogenic compound other than a silver compound and be "colored" within the meaning of my claim.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

A photographic "carbon transfer paper" or tissue consisting of a pliable support, a film of colored soluble gelatin, and a film of easily-soluble material interposed between and connecting the said colored film and said support.

Signed at New York, in the county of New York and State of New York, this 13th day of May, A. D. 1902.

CHARLES L. A. BRASSEUR.

Witnesses:

FRANK RYALL,  
HERMAN LEWIS.