

UNITED STATES PATENT OFFICE.

ALBERT L. CLAPP, OF MARBLEHEAD, MASSACHUSETTS.

TRANSFERRING OR EMBOSSING PAPER.

1,398,770.

Specification of Letters Patent.

Patented Nov. 29, 1921.

No Drawing.

Application filed November 15, 1919. Serial No. 338,349.

To all whom it may concern:

Be it known that I, ALBERT L. CLAPP, citizen of the United States, residing at Marblehead, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Transferring or Embossing Paper, of which the following is a specification.

This invention has for its object to produce a "transfer" or "embossing" paper so called, which may be employed as a base or carrier for the layer or coating of "transfer material" such as ink, which is to be transferred by heat and pressure to the object, (e. g. rubber, leather, wood, cloth, paper, etc.) to be printed.

It is necessary that the base or carrier should be of such character as to be coated primarily with the ink or transfer material, and yet give up the coating quickly when it is subjected to the pressure of a heated die or stamp. Such inks or transfer materials may be prepared from gums dissolved in alcohol, in combination with dyes, pigments or metallic powders; from rubber, gutta percha, pontiniac, etc.; from gums which are soluble in solvents of the benzene group; or from many other materials.

I have heretofore found it necessary to employ a relatively high grade parchment paper, as the carrier for the transfer material, but I have discovered that by treating various relatively low grade paper with glycerin or some equivalent hygroscopic material, a carrier for the transfer material is produced, which gives up the said material readily under heat and pressure.

In accordance with my process, I may employ any suitable paper having the requisite strength, such as that made from sulfite, rag or sulfate stock. This paper is first impregnated with glycerin or equivalent solution of hygroscopic or deliquescent salt. If desired, the glycerin may be diluted with water, but I prefer to employ it in undiluted condition. For example in impregnating a ream of Kraft paper (30 pounds by weight), I employ about five pounds of glycerin. After impregnation, the sheets are ready for the reception of the ink.

In making an ink or transfer material

suitable for printing on rubber, for example, I may employ rosin, 10 parts; shellac, 2 parts; and 10 parts of aluminum bronze or gold bronze; which are thoroughly mixed in alcohol. By a suitable coating machine, the resulting mixture is applied to the paper.

I have found that by first treating the paper with a hygroscopic material, such as glycerin, it is possible to use a thinner layer of ink, and at the same time obtain a better impression than heretofore without smutting. A paper thus treated is smooth and repellant to the ink, under the influence of heat and pressure, and yet is capable of holding the ink when cold.

While I have described an ink as containing an adhesive and as being applied by a coating machine, it is immaterial, broadly stated, what transfer material is used or how it is applied. For example, I may use as transfer material the various chalk leaves or gold or silver leaf. In fact I have discovered that my paper as herein described, is particularly applicable for use in connection with such transfer material as gold or silver leaf, since it permits the transfer of the gold or silver with clear cut design on the material to be printed or embossed, and that the gold or silver leaves the paper readily under heat and pressure.

Having thus explained the nature of my said invention and described a way of making and using the same, but without attempting to set forth all of the forms in which it may be made or all of the modes of its use, what I claim is:

1. A transfer paper consisting of a paper base impregnated with a hygroscopic material and having an exterior layer or surface coating of a transfer material which may be transferred by heat and pressure to the object to be printed.

2. A transfer paper consisting of a paper base impregnated with glycerin and having an exterior layer or coating of transfer material adapted to be transferred by heat and pressure to the object to be printed.

In testimony whereof I have affixed my signature.

ALBERT L. CLAPP.