

UNITED STATES PATENT OFFICE.

ALONZO R. LITTLE, OF YORK, NEBRASKA, ASSIGNOR OF ONE-THIRD TO EZRA H. SMITH AND ONE-THIRD TO THERON E. SEDGWICK, OF YORK, NEBRASKA.

POWDER FOR USE IN MAKING OVERLAYS.

No. 908,586.

Specification of Letters Patent.

Patented Jan. 5, 1909.

Application filed January 27, 1908. Serial No. 412,880.

To all whom it may concern:

Be it known that I, ALONZO R. LITTLE, a citizen of the United States, residing at York, in the county of York and State of Nebraska, have invented a certain new and useful Powder for Use in Making Overlays, of which the following is a specification.

This invention relates to overlays for half-tone or other printing plates and process of making same, and has for its principal object the provision of a means for readily producing overlays for this purpose, without the necessity of heating, drying or etching.

Another object is to provide an overlay process for use in connection with ordinary zinc etchings, steel engravings, electrotypes or common type, as required.

The nature of my invention consists in the novel process for forming the overlay, and includes the use of an especially prepared powder in connection therewith, as hereafter explained.

The overlay is prepared as follows: A composition upon the surface of an ink roller is first prepared, by distributing with the ink thereon Canadian balsam or balsam of fir; this may be accomplished by dropping the balsam of fir upon the ink upon the roller, and for this purpose half-tone ink is preferred; the amount of balsam of fir or Canadian balsam used may be, substantially, one drop an inch or one and one-half inches apart, and distributed thoroughly with the ink upon the roller.

After the press has been inked by use of the above composition, and after the form has been locked on the press in the usual manner with enough superfine and super calendered book paper placed upon the platen or cylinder to obtain a good impression, a sheet,—preferably, of heavy Manila paper is placed over the book paper. An impression is then made on the Manila sheet, and a repeated impression may also be made to the end that the composition, first mentioned, will be clear and fresh.

The impression upon the Manila sheet now being adequate, clear and fresh, I employ a powder and apply it thereon, said powder consisting of ingredients and in proportions, substantially, as follows: resin, 18 parts; sulfur, 1 part; magnesia, $\frac{1}{2}$ part; and graphite, $\frac{1}{4}$ part, these ingredients being first thoroughly ground and mixed. This powder may be applied by rubbing it upon the fresh

printed impression, and brushing away that which does not adhere. I then produce two more impressions upon the surface of the powder which has adhered to the balsam of fir and ink, and the above process produces the overlay. I then place a heavy draw sheet over this overlay.

It will be noted that heating or drying, by this process, is not required, and it is considered that an overlay, produced as described, may be very economically prepared.

If the half tone or cuts are too high for press work, they may be shaved down; or if too low, they may be underlaid until they are made type high.

The impression should be repeated so that the supply of composite ink and balsam of fir is adequate at the time the powder is applied, and at least two impressions are generally made upon the Manila sheet before applying the powder.

After the overlay has been prepared and the heavy draw sheet placed thereon, a proof may be taken on good enamel book paper. This proof should show perfect tones. For some cuts, however, it will be necessary to repeat the operation,—that is to say, the printed impressions are again made upon the unfinished overlay; powder is again applied, surplus powder removed, and impressions again made upon the surface of the powder which has adhered, and another draw sheet placed thereon.

By the process as above described, the balsam of fir and ink is distributed upon the Manila sheet by operation of printing, a certain amount of powder adhering to the printed part; continued impressions prepare the surface of the overlay to receive another coating of the powder, and this may be repeated until the tones are substantially changed and perfected, the number of repetitions depending upon the surface conditions of the cuts or half tones.

By the above process the resin operates to build up the solids; the sulfur and magnesia dries the overlay by absorbing the moisture, and the graphite polishes the surface of the overlay.

It will be understood that the process for making the overlay is useful in connection with any printing plate, as well as a half tone, and that the invention is not limited to the use of a Manila sheet; while a Manila sheet is preferred, card board, press board, celluloid

or aluminum may be used for the same purpose as the Manila sheet.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent, is,—

1. A powder for use in producing overlays for printing plates which consists of resin, sulfur, magnesia and graphite.

2. A powder for use in producing overlays

for printing plates consisting of resin, 18 10 parts, sulfur 1 part, magnesia, $\frac{1}{2}$ part and graphite $\frac{1}{4}$ part.

In testimony whereof I have affixed my signature in presence of two witnesses.

ALONZO R. LITTLE.

Witnesses:

C. H. KOLLING,

H. M. CHILD.