May 15, 1928. 1,669,821

A. GRASS

PROCESS OF MAKING PRINTING PLATES

Original Filed May 31, 1921

Fig. 1.

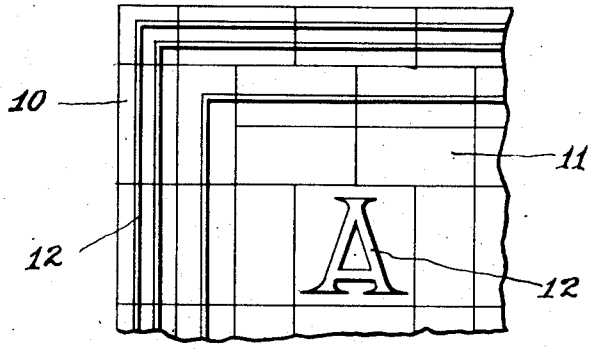


Fig. 2.

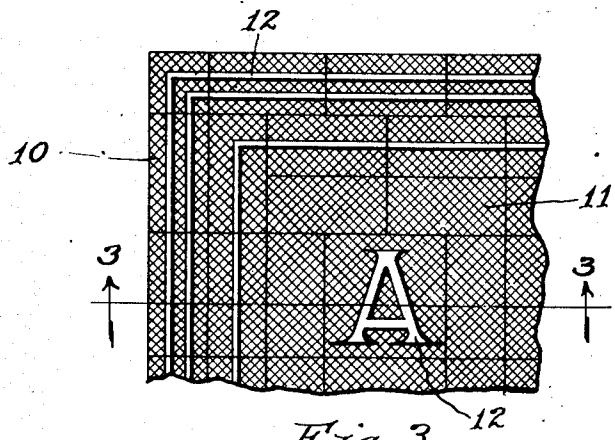
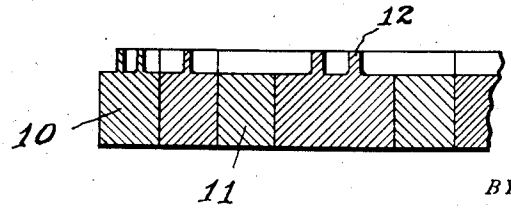


Fig. 3.



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UNITED STATES PATENT OFFICE.

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PROCESS OF MAKING PRINTING PLATES.

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This invention relates to the preparation of relief, intaglio or embossed letters or characters, for photographic reproduction incident to the preparation of a zinc printing plate or the like.

Prior to my invention it has been generally the custom to prepare the set-up matter for photographing in the preparation of a zinc plate by bringing the faces of the type or characters into a nearly perfect plane. This process has been known in the industry as "make-ready" and has been extremely costly and tedious. It has required an unusually high degree of skill. The characters which, of course, may consist of letters, figures, geometrical designs, or the like, are first assembled in the desired relation and thin strips of paper, metal, or other suitable material are placed under such of the type or units as are too short to accurately reach the desired plane. When the operator believes the type are accurately positioned in the surface plane a proof is taken. This proof discloses any unevenness that may exist, and an effort is then made to readjust such type as may still be short of the printing plane. In practice this procedure is frequently repeated again and again, and until the proof sheet is satisfactory. The finally accepted proof is then photographed.

A principal object of the invention is to obviate the necessity for any make-ready and its attendant expense, and at the same time to obtain a plate sharper, clearer, and of more exact design than is possible with the earlier described method.

Another important object of the invention is the provision of a simple process for accomplishing this result which will not require the high degree of skill needed in the make-ready process, which will not require the preparation of special type or other equipment and which is equally and readily applicable to use in connection with any typographic printing medium as for example, single-type, lino-type, border-type, etc.

Numerous other objects and advantages of my present invention will be apparent from the following description, which taken in connection with the accompanying drawing, illustrates a preferred embodiment thereof.

On the drawing

Fig. 1 is a partial plan view of some set-up matter before being rendered ready for photographing; and

Fig. 2 is a similar view of the same after treatment in accordance with my invention, and

Fig. 3 is a section on the line 3—3 of Fig. 2.

My invention contemplates the elimination of the necessity for taking a proof and the photographing in the first instance of the type set-up. In accordance with my improved process the type is first set up in proper arrangement and all but the type or character faces are then rendered non-actinic so that when the photographic exposure is made the sensitized surface receives impression only from the type faces or exposed actinic surfaces.

This may conveniently be done by painting the entire surface of the set-up with a brush, or otherwise, and with some non-actinic substance, such as black paint, and then removing this substance, by wiping or otherwise, from the relief surfaces. Referring to the drawing, Fig. 1 shows a type set-up, or rather a part of a type set-up. The built-up design consists of an assemblage of unit blocks 10 and 11 positioned in proper relation to each other to form the desired design. Certain of these blocks are provided with relief or raised portions 12, the faces of which provide the printing surfaces. Fig. 2 illustrates the set-up after it has been treated by painting or otherwise to render non-actinic all of the exposed faces except the printing surfaces of the type or other characters.

It is believed that the invention and many of its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described being merely a preferred embodiment thereof.

I claim

1. The process of preparing matter for photographic reproduction incident to the preparation of a photographic plate, which comprises arranging the type or other characters having portions projecting above sur-

rounding or intervening spaces and in substantially the same plane, covering all exposed faces with a non-actinic substance, and then removing said substance from the surfaces of the projecting portions.

2. The process of preparing matter for photographic reproduction incident to the preparation of a zinc plate, which comprises arranging the type or other characters having portions projecting above surrounding or intervening spaces and in substantially the same plane, covering all exposed faces with a non-actinic substance, and then wiping said substance from the surfaces of the projecting portions.

3. The process of preparing matter for photographic reproduction incident to the preparation of a photographic plate, which comprises setting up the type, and providing a non-actinic coating upon all but the portions or faces of the type which it is desired to photograph.

4. The process of preparing matter for photographic reproduction incident to the preparation of a zinc plate, which comprises arranging the characters having portions projecting above surrounding or intervening spaces and rendering all but the outer faces of said characters non-actinic.

5. The process of photographic reproduction incident to the preparation of a zinc plate which comprises setting up the type, rendering all but the printing surfaces of said type non-actinic and photographing.

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