To all whom it may concern:

Be it known that I, CARL RICHTER, a citizen of the German Empire, and a resident of Bremen, Germany, have invented certain new and useful Improvements in Processes for Preparing Autotype-Negatives, of which the following is a specification.

The object of this invention is to clear the lights of autotype or photomechanical printing-plates, in which, as is well known, the ordinary printing process leaves small points on the surface where these surfaces ought to be perfectly white, this clearing being effected by means of a subsequent exposure of the negative to light through a second screen of a different kind.

In the accompanying drawings, Figure 1 represents the first or cross screen used in my improved process. Fig. 2 represents the second or point screen. Fig. 3 represents the picture to be reproduced. Fig. 1* represents the negative of said picture when produced by the first screen only, and Fig. 2* represents said negative when produced by both screens.

Briefly stated, the object of the invention is to reduce the openings of the negative shown in Fig. 1* to about one-half at the light portions of the picture.

The process consists in systematically removing the single elements which the cross-screen, Fig. 1, leaves in the lights of the picture—i.e., in the shadows of the negative, Fig. 1*. To this effect the negative after being exposed to the action of a point-screen, Fig. 2, in which the distance between the centers of the covered elements is equal to double the distance between the centers of the openings in the cross-screen. Thus a process-negative prepared in the ordinary way in a screen-camera before being developed is subjected to a short second exposure after the cross-screen has been replaced by a point-screen. In this way the lights of the negative are further exposed, but only at those places which are not protected by the covered parts of the point-screen. A copy prepared by this negative, Fig. 2*, appears in the deep portions like one prepared by the ordinary screen process; but the number of printing elements in the lights is reduced by one-half, so that a much deeper etching of the plates is rendered possible.

What I claim is—

1. A process of preparing autotype-negatives which consists in first exposing the negative through a cross-screen and then exposing it through a screen provided, at the points corresponding to the openings of the cross-screen, with uniformly alternating covered and uncovered elements, substantially as specified.

2. A process of preparing autotype-negatives which consists in first exposing the negative through a cross-screen and then exposing it through a point-screen, substantially as specified.

3. A process of preparing autotype-negatives which consists in first exposing the negative through a cross-screen, and then exposing it through a point-screen, the distance between the centers of the covered elements of the point-screen, corresponding to double the distance between the centers of the openings of the cross-screen, substantially as specified.

Signed by me at Bremen, Germany, this 22d day of April, 1905.

CARL RICHTER.

Witnesses:
W. SHEPPE,
GG. JANSEN.