

No. 675,272.

Patented May 28, 1901.

T. S. FOX.  
HALF TONE NEGATIVE.  
(Application filed Apr. 27, 1900.)

(No Model.)

Fig 1



Fig 2

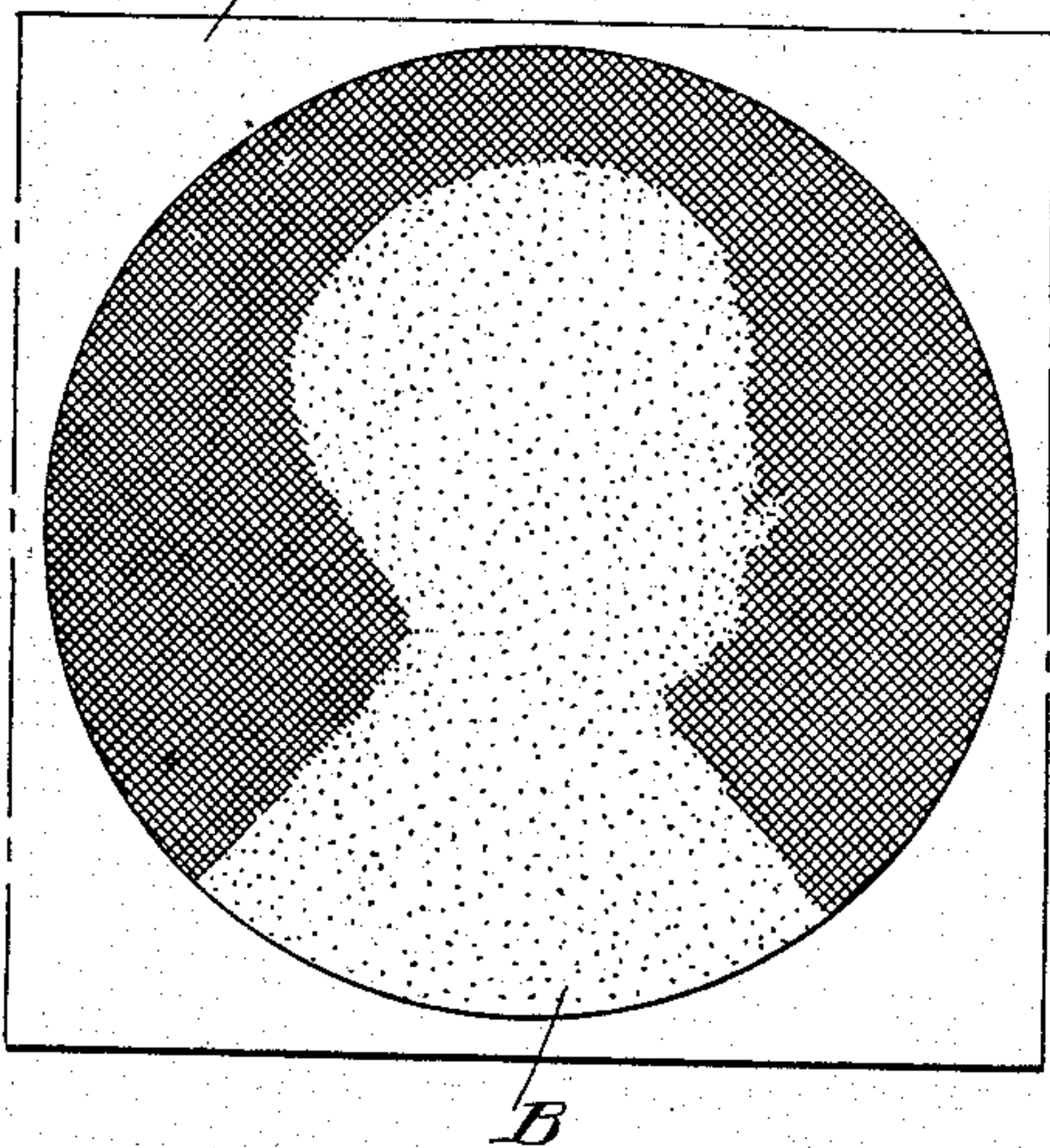
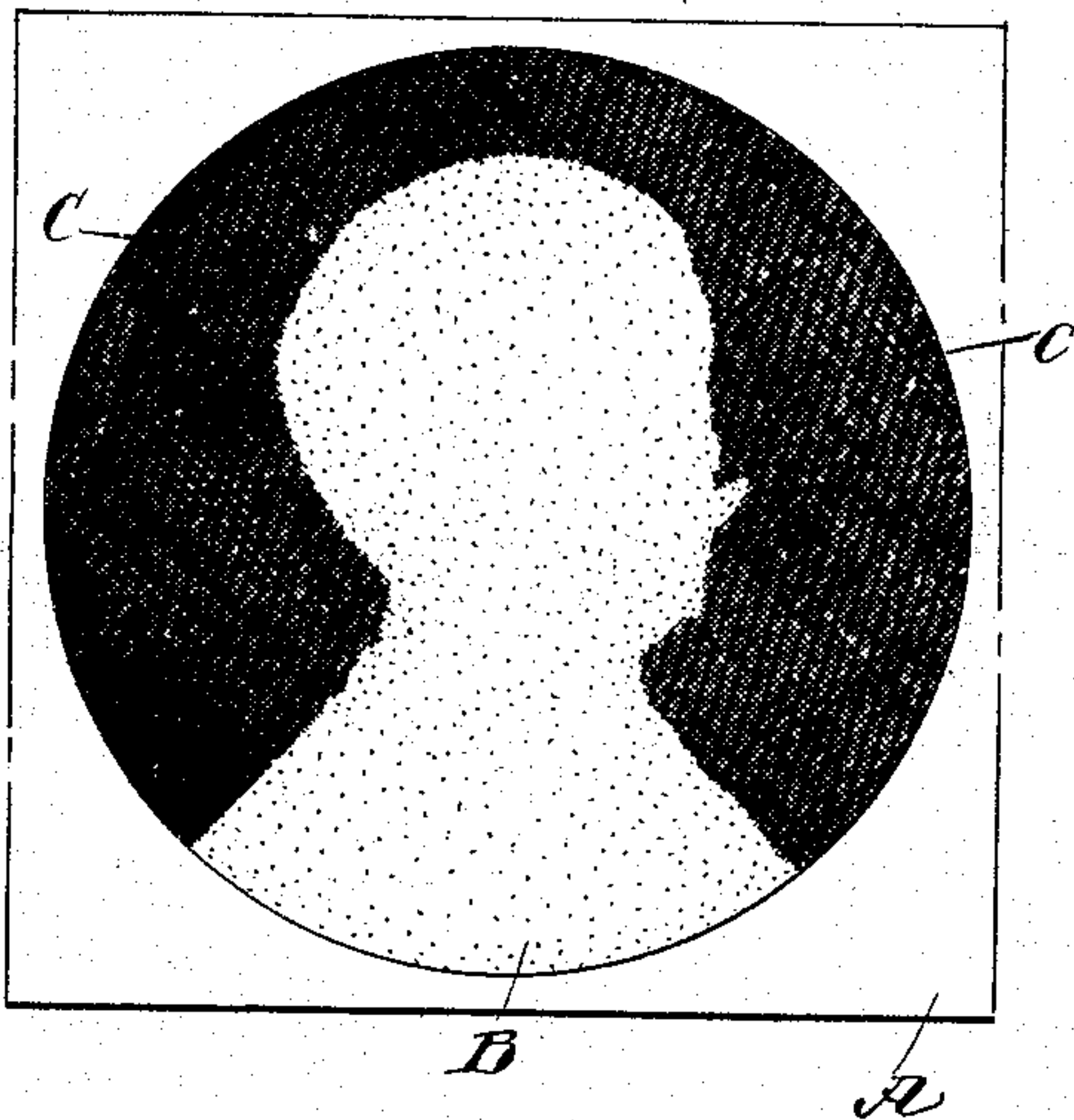


Fig 3



WITNESSES:  
*George H. Cheney*  
*Rev. J. Foster*

INVENTOR  
Thomas S. Fox.

BY *M. M. M.*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

THOMAS S. FOX, OF BROOKLYN, NEW YORK.

## HALF-TONE NEGATIVE.

SPECIFICATION forming part of Letters Patent No. 675,272, dated May 28, 1901

Application filed April 27, 1900. Serial No. 14,602. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS S. FOX, a citizen of the United States, and a resident of the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Half-Tone Negative, of which the following is a full, clear, and exact description.

The invention relates to photo-engraving and printing processes; and its object is to provide a new and improved half-tone negative for photo processes and reinforced at any desired part to permit of producing a final print of high quality, especially in the high lights of the subject.

The invention consists of a half-tone negative having reinforced portions in the shape of opaque lines, dots, stipples, or the like.

It is understood that the term "half-tone negative" means a negative that has been broken by the intervention of a half-tone screen into opaque lines, dots, stipples, grain, &c., having transparent openings between the lines, dots, stipples, grain, &c. In the half-tone negative the same texture pervades all parts—i. e., according to the texture of the half-tone screen used—and in order to give different texture to different parts it has heretofore been the practice to engrave by hand or rule by a machine line by line or dot by dot into the etched plate.

To avoid a large part of the hand or rule work, which is slow and expensive, I provide the method presently to be described in detail, reference being had to the accompanying drawings, forming a part of the specification, and in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a face view of an ordinary half-tone negative. Fig. 2 is a like view of the same with a portion "stopped out," and Fig. 3 is a similar view of the same with the non-stopped-out portions reinforced.

An ordinary half-tone negative A (see Fig. 1) of the subject to be reproduced is first prepared in the usual manner and then coated with a transparent varnish, after which that portion of the film of the negative which is not to be reinforced or changed is preferably stopped out with gum or other substance B,

laid over the varnish coating at such portion of the negative film. A flexible printing-film—such, for instance, as shown and described in Letters Patent of the United States No. 214,493, granted to B. Day on April 22, 1879, and known as the "Day" film—is then inked in the usual manner and placed over the varnished film on the negative and pressed down upon the portions not stopped out, so as to make an impression by printing dots, lines, or stipples C upon the surface of the negative film at the portion not stopped out by the gum. This impression reinforces the dots or lines already on the negative film. The Day film is then removed and the gum at the stopped-out portions is now washed off. With the gum pass any ink dots or lines that may have accidentally been imprinted on the gum upon pressing the inked Day film, as above described. The negative plate is now dried and then black lead or bronze or other powder is applied on the film on the negative plate either by the use of a camel's-hair brush or by dusting it on the film, the powder being readily absorbed by the ink dots or lines of the impression made by the Day film to give more body to the ink and render the dots or lines thereof opaque. The plate thus prepared is now ready for printing or for making printing-plates in the usual way.

From the foregoing it is evident that the impression made by the Day film on the negative plate may or may not register with the dots or lines already on the plate-film. If the dots or lines of the impression intersect the dots or lines already on the relief negative plate, then a variegated but exceedingly strong effect is had in the final print, it being understood that the reinforced portions of the negative plate produce extremely high lights in the final print.

By making an impression with the Day film, as described, a portion of the dots, lines, or grain already on the relief negative is deadened to such an extent as to form in the final print clear white spaces, half-tones, and all gradations of the copy or subject at the portion not stopped out. Ordinarily the impression does not register with the relief dots, lines, or grains already on the negative plate,



and hence in the final print the clear spaces appear in rows crossing the dots and lines between the dots at angles.

It is not necessary to use varnish, as the negative film may be mounted upon a celluloid or other thin transparent support, and the reinforcing can be done on the side opposite the film or a thin transparent film may be laid upon the negative and made to adhere thereto and serve as a protection to the negative film, and upon this additional film the work of reinforcing may be done. It is also not absolutely necessary to use a Day film, as other means may be employed to make the desired impression on the portion or portions to be reinforced. For instance, an inking-roller with a lined, stippled, dotted, or grained surface may be employed or a piece of ribbed material, such as silk or satin, may be used as the inking medium. It is also not absolutely necessary to stop out the portion not to be reinforced, as a skilled operator can make the ink impression on the portion to be reinforced without making an undesirable impression on the part not to be reinforced. The stopping out by the use of gum, as above stated, positively prevents, however, such undesirable ink impression on parts not to be reinforced.

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

1. As a new article of manufacture, a half-tone negative having ink impressions, in the form of dots or lines, overlying a portion of the dots or lines thereof, as and for the purpose set forth.

2. As a new article of manufacture, a half-tone negative having dots, lines, stipple, or grain printed on a portion of the same, over the dots, lines, stipple or grain thereof, as set forth.

3. As a new article of manufacture, a half-tone negative having an ink impression in dots, lines, stipple, or grain produced on a portion of the same, over the dots, lines, stip-

ple or grain thereof, the dots, lines, stipple, or grain of the impression intersecting those of the negative, as set forth.

4. As a new article of manufacture, a half-tone negative having an ink impression produced on portions of the same, the impression consisting of lines, dots, stipple or grain and overlying the dots, lines, stipple or grain of the negative, and an opaque substance applied to the impression, as and for the purpose set forth.

5. The herein-described method of reinforcing half-tone negatives, consisting in producing ink impressions in the form of dots, lines, stipple or grain on portions of the negative, over the dots, lines, stipple, or grain of the same, as set forth.

6. The herein-described method of reinforcing half-tone photonegatives, consisting in first making an imprint with ink in dots, lines, stipples, grain or the like onto the portion of the negative to be reinforced, the imprint overlying the dots, lines, stipples, grain or the like and the space between the same of the said half-tone negative, and then rendering the ink of the said reinforcing imprint opaque, as set forth.

7. The herein-described method of reinforcing portions of a half-tone photonegative, consisting in stopping out with gum the portions not to be reinforced, then making an impression on the portion to be reinforced by applying ink thereto, then washing out the gum on the stopped-out portion, and finally applying an opaque substance to the ink, to cause the latter to absorb the opaque substance and thereby render the ink of the impression opaque, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOMAS S. FOX.

Witnesses:

THEO. G. HOSTER,  
GEORGE W. PEARSALL.