

(No Model.)

H. R. MAAS.

PROCESS OF SHADING DRAWINGS.

No. 282,653.

Patented Aug. 7, 1883.

Fig. 1.



Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

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PROCESS OF SHADING DRAWINGS.

SPECIFICATION forming part of Letters Patent No. 282,653, dated August 7, 1883.

Application filed August 19, 1882. (No model.)

To all whom it may concern:

Be it known that I, HARRY R. MAAS, of Burlington, in the county of Burlington and State of New Jersey, have invented a new and valuable Improvement in Processes of Shading Drawings; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view. Fig. 2 is a perspective of the stone.

This invention relates to a process for making drawings for transfer to stone to print from, and has for its primary object the preparation of a drawing upon any ordinary or prepared paper or any other material and transferring directly to the printing-stone.

The second part of my invention has for its object to provide an improved process for producing the stipple or dotted or similar work upon drawings.

Heretofore stippling or dots, wave, straight, or curved lines of different widths or spaces, or the various combinations of the same, or other delicate portions of the shading or drawing of pictures or other objects for printing lithographically, have been made or produced by rubbing a crayon on a roughened or grained stone, or to draw or dot with a pen on a smooth surface or stone. Such operations are slow and expensive, each dot or stipple being made separately and distinctly by hand; and the process heretofore used consists in the use of transparent films having an inked printing-face in relief. Such films are attached to the stone or object upon which the drawing is to be made by means of an elaborate mechanical adjustment, whereupon a stylus or other instrument is used for pressing or printing on the stone the desired portions of the film designed to be used in the picture. The time required for such operation and to change the films for obtaining different relief-surfaces for the picture and inking the same in order to produce the necessary combinations of effect is a source of expense and annoyance. Again, another process heretofore employed is to make the drawings upon paper with a pre-

pared roughened or stippled surface. The objection thereto is obvious. The paper having a uniform prepared surface gives a corresponding effect in the picture. Hence such process will not give the requisite variety of effects, as stippled work can only be obtained on dotted or stippled-surfaced paper and line or grained work or similarly marked or prepared paper. When the first two processes are practiced, the drawing made upon the stone has to be taken upon prepared paper and then put down on the printing-stone. Such operation causes the drawing to lose much of the delicate shading and gives to it a coarse and unfinished appearance. My invention avoids all such disadvantages, and stippled or dotted work, grained, curved, or waved lines are obtained or produced on the printing-stone of great sharpness and delicacy. Consequently more open, cleaner, and more distinct impressions are obtained. The work upon such stone being better defined, it is not so apt to clog or choke up and smear, as has been the case with work engraved in the usual way.

My invention accordingly consists in first taking a plate or piece of paper, card-board, celluloid, stone, various fabrics or similar materials or metals, or combinations of the same, such surfaces being either smooth or already roughened. Such surfaces may be roughened to form dots or stipples, grained, curved, or waved lines or combinations thereof, and such original plate I call a "relief-plate." A series of the plates are provided, one having dots formed thereon in relief, another curved lines, and so on until, if desired, a plate is obtained for every conceivable shade or combination of shades used in picture or object drawing. The number of such plates may be varied as desired, depending greatly upon the skill and judgment of the artist or operator in the use of them for the making of the picture. The paper upon which the outline of the drawing is made is placed upon the relief-plate, and a smooth pencil or crayon is rubbed with gentle pressure over such portions of the picture whereon the stipples or dots or other shading as appear in the relief-plate are required, and such stippled dots or other shading are in a short time reproduced upon the paper by such rubbing over the roughened surface with the crayon. If a different style of stipple is de-

sired upon the drawing than is formed on any one of the plates first used, another plate is introduced, which in turn may be replaced by others, and so continued until the drawing is
5 completed. Many styles of work can therefore be reproduced in one drawing by combination of as many different relief-plates as may be desired. If outlines, solid sharp lines, lettering, &c., are wanted upon the drawing, the
10 roughened plate is replaced by a smooth surface, and thus all the combinations possible of use can be readily obtained. Hence it is obvious that by simply exchanging the relief-plates or originals, as prepared or roughened
15 to produce different styles and sizes of dots, lines, &c., a monotonous uniformity of shading is avoided. After the drawing is so prepared it is transferred to the printing-stone and impressions taken therefrom. Such impressions are clear and distinct, giving a finished
20 appearance to the drawing. From the fact that the engraving upon the stone is distinct and open the ink does not clog or choke up the same nor smear thereon.
25 In the accompanying drawings, Fig. 1 is a perspective view, wherein A shows a prepared roughened plate, B the drawing arranged there-

on, and C the pencil or crayon for forming the shading thereon. Fig. 2 shows a perspective of the stone. 30

The paper upon which the drawings are made by my improved process may be plain or of any other desirable or suitable make, no special preparation of the same being necessary. 35

What I claim as my invention is—

The process of preparing drawings, pictures, &c., to transfer on stone or other material that may be printed from, which consists in first preparing one or a series of plates
40 having stipples or dots, waved, curved lines, or other shading formed thereon in relief, then placing a sheet of paper or the picture thereon, and reproducing such shading upon said paper by means of a pencil or crayon, and then
45 transferring said drawing directly to the stone, substantially as shown and described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

HARRY R. MAAS.

Witnesses:

MATT. CLIFTON,
GEORGE W. SELTZER.