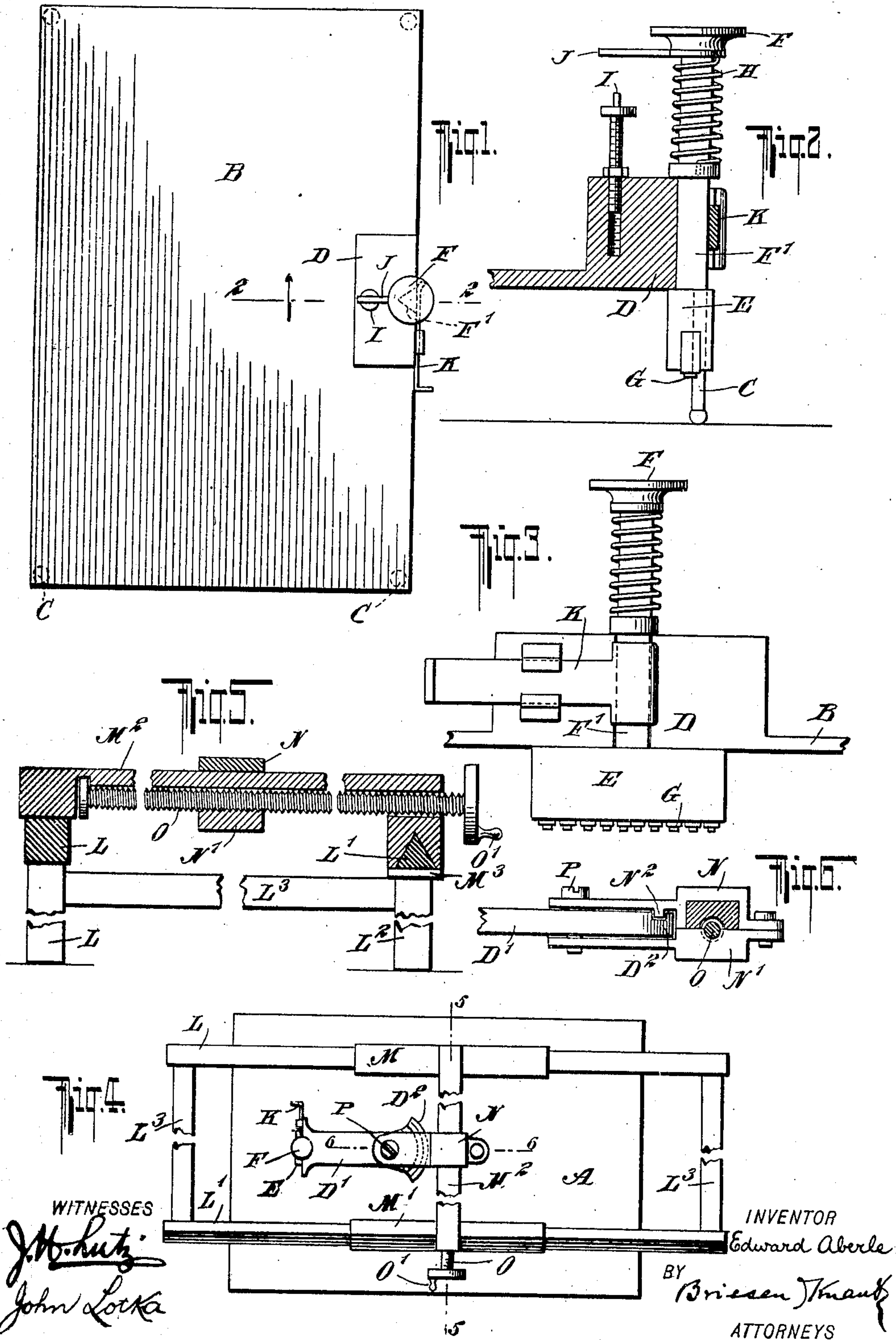


No. 885,418.

PATENTED APR. 21, 1908.

E. ABERLE.  
REPRODUCTION OF MAPS AND THE LIKE.  
APPLICATION FILED AUG. 31, 1906.





# UNITED STATES PATENT OFFICE.

EDWARD ABERLE, OF NEW YORK, N. Y.

## REPRODUCTION OF MAPS AND THE LIKE.

No. 885,418.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed August 31, 1906. Serial No. 332,747.

*To all whom it may concern:*

Be it known that I, EDWARD ABERLE, a citizen of the United States, and a resident of the borough of Brooklyn, county of Kings, city and State of New York, have invented certain new and useful Improvements in the Reproduction of Maps and the Like, of which the following is a specification.

My invention relates to the reproduction of maps and the like by lithography and like printing or manifolding processes, and has for its special object to facilitate the putting in of words and lettering and at the same time secure a very clear impression of such words or lettering.

My invention is applicable to the lithographic process in which the drawing on stone is made with lithographic ink, and to the process in which the matter to be printed is etched into the surface of the stone.

I will now give a detailed description of my invention as applied to the first mentioned process.

The accompanying drawing shows in Figure 1 a plan view of a tool devised by me for applying the lettering; Fig. 2 is a vertical section on line 2—2 of Fig. 1; Fig. 3 is a partial face view of such tool; Fig. 4 is a plan view showing a lithographic stone with another form of my tool in position; and Figs. 5 and 6 are vertical sections on lines 5—5 and 6—6 respectively of Fig. 4.

I first produce the line work of the map on the stone A, either by drawing directly on the stone, or by any suitable transferring or other process. The insertion of words or letters is done subsequently by means of a tool of the character of that shown in the drawings. The form of the tool represented in Figs. 1, 2 and 3 comprises a plate or table B which is adapted to form a handle through the medium of which the operator or draftsman may move the tool from place to place and press it against the stone A on which it rests by means of the legs C, preferably rounded at their lower ends to facilitate shifting the tool without scratching the stone. Upon or adjacent to the table B is a guide D for the vertical movement of a stamp comprising a holder E provided with a handle F and exchangeable type G made of elastic material such as rubber. A spring H normally keeps the stamp in its raised position, (with the holder E abutting against the underside of the table) and an adjustable stop I working in conjunction with a finger J

on the stamp, limits the downward movement of the stamp so as to regulate the pressure of the type against the stone and enable the operator to obtain substantially the same amount of pressure at each depression of the stamp.

The edge of the table B adjacent to which the stamp is located forms a guide enabling the operator to properly place the tool on the stone, or if he does not think this accurate enough, he may put a ruler or other straight bar on the stone against the two legs C which are at the ends of the said edge.

The type will be inked, and ought to differ from ordinary type in that it will not be reversed, but will have an appearance like printed characters. The impression produced on the stone by such type will therefore be reversed, that is, it will have the same appearance as ordinary print seen in a mirror. Of course, in printing from such a stone the letters will be reversed again, so that they will have the ordinary appearance. The elasticity of the type will enable it to conform to the surface of the stone, and a very sharp outline will be obtained. Owing to the provision of the stop I the same amount of pressure will always be applied to the type, insuring a degree of uniformity which otherwise would be practically impossible even with considerable skill. The operator would adjust the stop until a specimen impression made with the stamp shows that the right amount of pressure is being exerted; after this, no adjustment will be required, but notwithstanding the rapidity of the work, uniformly sharp and clear results will be obtained. Of course, the type may form a straight line or a curved line as required, holders for the one kind or the other being well known. The stamp proper is removable from its guide D so that stamps of various kinds may be used as the work may call for. For this purpose the stem F' of the stamp moves in a (triangular) guideway open on the face of the guide D, and a movable spring keeper or slide K is employed for temporarily holding the stamp in its guideway. By sliding the keeper K to the left in Fig. 3, the stamp is released so that it can be withdrawn forward.

In the construction illustrated by Figs. 4, 5 and 6 I employ two parallel guides L L' along which is adapted to slide a carriage consisting of two members M M' connected by a cross-bar M<sup>2</sup>. One of the members, M,



simply rests on its guide L, the other member M' being held by one or more retaining bars M<sup>3</sup>. The guides L L' are supported by legs L<sup>2</sup> and held by braces L<sup>3</sup>. On the cross-  
 5 bar M<sup>2</sup> a slide N is movable transversely, and the lower section N' of this slide is made with a screw-thread in engagement with a feed-screw O rotatably mounted in the cross-bar M<sup>2</sup>. To the slide N is pivoted at  
 10 P an arm D' which is similar to the guide D in that it has a guideway for the stamp, and this guideway and stamp may be constructed exactly as in the form of the tool first described. The arm D' may have an arc D<sup>2</sup>  
 15 engaging a projection N<sup>2</sup> of the slide so as to brace the arm as the stamp is pressed down. With this second form of my tool, the stamp can be adjusted readily to any portion of the stone A, and by turning the arm D' on its  
 20 pivot P, the stamp can be placed at any desired angle, and secured in such position, if desired, by tightening the pivot screw and thus clamping the arm.

When the invention is used in connection  
 25 with the process in which the lines are etched into the stone, metal types would preferably be used to form an impression in the wax or other temporary protective layer covering the stone. These types would of course not  
 30 be inked, but in other respects the manner of carrying out my invention would be the same as described in connection with the other process, that is, the type would be

facing like print instead of being reversed, and the stop would govern the pressure so as  
 35 to render it uniform at each operation and secure clear and even impressions.

What I claim and desire to secure by Letters Patent is:

1. The herein described process of repro- 40  
 ducing maps and the like, which consists in first applying the line-work to a plate or surface, then stamping entire words or ab-  
 breviations on the plate or surface at one time and limiting the pressure applicable 45  
 during this operation so that every letter of every word or abbreviation will receive the same amount of pressure, preparing the plate for printing, and making an impression there-  
 50 from.

2. The herein described process of repro- 50  
 ducing maps and the like, which consists in first applying the line-work to a plate or surface, then stamping the lettering on the  
 plate or surface while limiting the pressure 55  
 applicable during this operation, preparing the plate for printing, and making an impression therefrom.

In testimony whereof, I have hereunto  
 signed my name in the presence of two sub- 60  
 scribing witnesses.

EDWARD ABERLE.

Witnesses:

JOHN LOTKA,  
 JOHN A. KEHLENBECK.