

(No Model.)

J. W. ROBBINS.
PROCESS OF PRODUCING METALLIC RELIEF PLATES FOR
PICTORIALLY BURNING OR SEARING WOOD.
No. 475,047. Patented May 17, 1892.

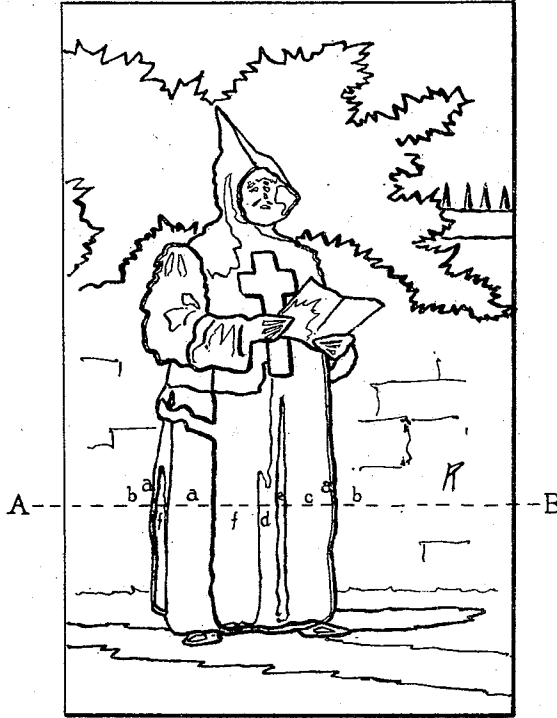


Fig 1.



Fig 2.

WITNESSES

J. M. Hartnett.
B. M. Williams.

INVENTOR

John W. Robbins
By his Atty
Sherry Williams.

UNITED STATES PATENT OFFICE.

JOHN W. ROBBINS, OF BOSTON, MASSACHUSETTS.

PROCESS OF PRODUCING METALLIC RELIEF-PLATES FOR PICTORIALLY BURNING OR SEARING WOOD.

SPECIFICATION forming part of Letters Patent No. 475,047, dated May 17, 1892.

Application filed January 21, 1891. Serial No. 378,534. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. ROBBINS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Etching Metal Plates, of which the following is a specification.

Pictures or drawings belonging to the class known as "poker pictures" are produced by searing wood with hot irons.

My improvement consists of a process of etching a metal plate so that after this plate has been heated and applied to a surface of wood for the purpose of burning into or searing the same an effect of gradation of light and shade and variety of texture is produced; and my invention also consists in a plate adapted to be heated and provided with relief or raised lines and surfaces of varying height.

To carry my invention into effect I first make a drawing on a plate of steel, copper, brass, German silver, or other suitable metal. What are intended to be the darkest portions in the reproductions—viz., in the wood surface—are in this metal surface "stopped out"—that is, covered with varnish or shellac. The rest of the surface of the plate is then lowered by being eaten away with acid, or, if necessary, grinding. In order to produce a number of gradations of light and shade, therefore, the plate is "bitten" by the acid several times—that is to say, after stopping out (with varnish or shellac) the part of the plate which is to produce the deepest shadow in the reproduction and lowering the rest of the surface by acid, as above mentioned, then the parts which are to produce the next darkest shade in the reproduction are covered with varnish and the plate bitten again. This is repeated until all the desired gradations have been obtained. After this plate is heated it is obvious that when it is placed against a wooden surface the highest part of the plate will burn the deepest into the wood, the next highest part will burn less deeply, and the next still less deeply, each part producing an appearance more or less dark, according to its relative height.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a plan view of a plate produced by my process. Fig. 2 is a section on line A B, Fig. 1.

The parts *a* of the plate are the highest portions and were stopped out at the beginning of the process, having received no acid, and hence, when applied to a wooden surface, burn the deepest and produce the darkest shade. The parts *b* have been bitten once by the acid and were then stopped out and produce the next darkest shade. The parts *c* have been bitten twice and produce a still lighter shade. The part *d* has been bitten three times, and the part *e* has been bitten four times and produces the lightest shade, while the part *f* has been bitten five times by the acid, and when the metal plate is pressing against the wooden surface this part does not come in contact with the wood, and hence does not burn it at all, but leaves the surface white or in its natural color. During this process the texture of foliage, gravel, grass, cobbles, &c., is produced by a manipulation of stopping-out varnish or shellac on the metal while it is being bitten by the acid. This plate, after being etched in the above-described manner, may be used to produce an indefinite number of pictures or decorations on wood, the effect being the same as in what are known as "poker pictures" or drawings made by searing wood with hot irons. It is particularly adapted for interior decoration and furniture embellishment.

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

1. The process of producing metallic relief-plates for pictorially searing or burning wood, consisting in first reducing portions of the surface of the plate to leave irregular lines or surfaces in one plane and then further reducing portions of the surface first reduced to leave irregular lines or surfaces of a height varying from those first produced, substantially as described.

2. A metallic plate adapted to be heated and provided with pictorial relief or raised lines and surfaces of varying heights, the lines which are in the same plane being irregular, substantially as described.

JOHN W. ROBBINS.

Witnesses:

HENRY W. WILLIAMS,
J. M. HARTNETT.