UNITED STATES PATENT OFFICE.

HOWARD S. INGERSOLL, OF LANSING, MICHIGAN.

IMPROVEMENT IN ENGRAVING.

Specification forming part of Letters Patent No. **133,860**, dated December 10, 1872.

To all whom it may concern:

Be it known that I, HOWARD S. INGERSOLL, of Lansing, in the county of Ingham and in the State of Michigan, have invented certain new and useful Improvements in Process for Marking Metal Surfaces Preparatory to Engraving; and do hereby declare that the following is a full, clear, and exact description thereof.

The nature of my invention consists in a process for marking metal surfaces, such as spoons, forks, door-plates, or any metal surface upon which figures, letters, or engraving of any kind is required.

To easily and correctly engrave upon a metal surface it is absolutely necessary that the configuration should first be made on the surface before the operation of engraving is begun.

Heretofore difficulties have been experienced by engravers on account of the letters, figures, or configurations which are first marked on the plate being out of a true line, being blurred, or otherwise irregular, so that when the plate is engraved it is oftentimes imperfect.

One of the most common processes used by engravers is to "lay out" and engrave one or more letters on one of the plates to be marked, fill the creases of the letter or letters thus engraved with printers' ink or other like article, and then apply the metal on the wrist of the operator, so that the impression of the letter or letters is left upon the wrist. The duplicate, triplicate, and so on pieces of metal to be marked are applied to the wrist, one after the other, and receive the impression therefrom. By this mode it will be perceived that the impressions must necessarily grow weaker and become blurred as the numbers increase, and the letters, &c., cannot always be made clearly and correctly. This mode could only be used where more than one article required the same configuration; in other cases each article had to be "laid out." By my process I claim to effectually obviate the difficulties heretofore had in this line.

My process is both simple and effective; and consists in the employment of a rubber or other flexible type, substantially as hereinafter set forth.

I take a type made with an India-rubber or other flexible face, having the letter, number, or other configuration upon it, and apply common washing-soap to its surface. I then apply the surface thus prepared to the metal by gently pressing upon it. When the type is withdrawn an impression is left upon the metal surface which is plainly visible, and from which the engraving may be readily done.

Various equivalents may be used in lieu of soap, such as whiting, plaster of Paris, tallow, ink, or any other suitable substance which may be colored of an opposite shade to that of the surface to be marked.

I find upon experiment that a flexible type is necessary, because it will more readily leave a good impression and adapt itself to curves and uneven surfaces, and will not deface the metal to be engraved, especially if the metal is of a thin character. A metallic type I believe to be impracticable, inasmuch as it cannot well be made to mark the metal, and is very liable to deface the same.

In preparing the face of the type with the soap or equivalent impressive material it is only necessary to gently wet the soap (or other substance) and rub one of the fingers of the hand over upon the substance, and then gently rub the coated finger upon the type.

I find that a common article of washing-soap is both a cheap and effectual substance, as it soon dries so as not to be easily rubbed off, and contains a sufficient amount of grease to make the engraving to be cut more easily.

Engravers, in using my process, should be provided with alphabets of the different styles of type, so that any name or initials can be quickly marked upon the metal surfaces desired.

I am fully aware that a rubber or other flexible type is not new; hence I disclaim such, broadly, as being my invention.

What I claim is—

The process for marking metal surfaces preparatory to engraving thereon, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 11th day of September, 1872.

HOWARD S. INGERSOLL.

Witnesses:
EDM. F. BROWN,
C. L. EVERT.