UNITED STATES PATENT OFFICE.

THOS. MACKENZIE AND A. TROCHSLER, OF BOSTON, MASSACHUSETTS.

MODE OF MARKING AND ORNAMENTING PAPER.

Specification forming part of Letters Patent No. **23,304**, dated March 22, 1859.

To all whom it may concern:

Be it known that we, T. MACKENZIE and ALBERT TROCHSLER, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful process of obtaining indelible autographs and other inscriptions or ornamental or other devices in paper, and thus so improving the paper as to render it an improved article of manufacture; and we do hereby declare that the following is a full, clear, and exact description of the same.

This invention relates to an improved article of manufacture—viz., paper for writing, printing, and other purposes, having impressions of similar appearance to but more sharply and clearly defined than and of as indelible a character as the water-marks produced in the manufacture of paper.

The object of the invention is to provide for the identification and prevent the forgery of letters or other documents, checks, bank-notes, or any other papers of value.

To enable others to make use of our invention, we will proceed to describe the manner in which it is performed.

If a fac-simile of an autograph is desired, the autograph is written in lithographic writing-ink upon a piece of paper and transferred in the usual manner of transferring writings in lithographic ink to a lithographic stone or plate of zinc prepared as for the ordinary lithographic or zincographic process; but any other inscription or device may be either written or delineated on paper and transferred to the stone or zinc, or written or delineated, reversed directly upon the stone or plate with the same kind of ink. The stone or plate is then treated as for lithographic or zincographic printing, and the inscription, design, or device charged with an acid-proof ink made of a mixture of equal parts beeswax and asphaltum, reduced by spirits of turpentine to about the consistency of cream, said ink being applied with a roller in the usual manner of charging lithographic stones. Nitric or other acid is then poured over the stone or plate till it is eaten away around and between the lines of the inscription or design till the latter stands up well in relief. The ink is then washed off with spirits of turpentine, and the stone or plate is ready to be used to produce the impression, which is done by passing it, with the paper, through a lithographic press. We prefer to use a press with a zinc tympan, and to prevent the sharp edges of the raised surface of the stone or plate cutting the paper, or the said edges being broken by the pressure applied, a thin sheet of paper may be pasted over the stone before it is used to produce the impressions.

It is essential in the production of an improved paper that great pressure be employed in stamping the designs. Otherwise no useful resut will ensue. The fibers of the paper must actually be condensed and leave the paper so thin as to admit the light through the parts marked by the design. Ordinary printing, either by stone or types, without ink will not answer the purpose. In such cases the paper is merely embossed, its surface being left uneven and unfit for writing purposes.

Having thus described our invention, we claim and desire to secure by Letters Patent—

As an improved article of manufacture, paper for writing, printing, and other purposes, having indelible marks or designs stamped thereon by condensing the fibers thereof by pressure, as herein shown and described.

THOS. MACKENZIE.
ALBERT TROCHSLER.

Witnesses:
THOMAS ROWEAN,
CHARLES A. BAILEY.