

UNITED STATES PATENT OFFICE.

WALTER B. CARR AND AUGUSTUS G. FRENCH, OF ST. LOUIS, MISSOURI.

MATRIX-BOARD.

SPECIFICATION forming part of Letters Patent No. 507,485, dated October 24, 1893.

Application filed April 15, 1892. Serial No. 429,343. (No specimens.)

To all whom it may concern:

Be it known that we, WALTER B. CARR and AUGUSTUS G. FRENCH, citizens of the United States, residing in the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Matrix-Boards, of which the following is a full, clear, and exact description.

Our invention relates to a new and useful improvement in matrix boards, and consists, generally stated, in forming a matrix board of a semi-porous blanket, and forming on one of its faces, an impression sheet, as will hereinafter more fully appear.

In the papier-maché process, in common use, a thin sheet of prepared matrix paper is laid on the form of type, the face of which has been previously treated. The paper is dampened and then dabbed with a beating brush, or the soft paper otherwise forced into all the interstices between all the letters in the form. Paste is then freely applied to the upper surface of the paper and a second sheet of matrix paper applied. A second coating of paste is then applied and the whole reinforced with a backing of thick matrix-board. When a matrix-rolling machine is used, the different layers of paper and paste are previously prepared and then together, as one thickness, applied to the surface of the form of type, and with a superposed double thickness of blanket above the matrix-board, the soft paper is forced into the interstices in the face of the form by subjecting the whole to the force of the press. The subsequent treatment, in each case, is similar, and is as follows:—The form of type, with the soft, damp paper and interposed paste, is subjected to a high temperature to dry out the paste and the paper. When the matrix press is used, this is effected by heating the bed-plate of same. It is obvious that the matrix and the type cannot be separated until the matrix has been thus hardened by heating,—i. e., the type of the form is necessarily heated also. It is in this particularly that the main objection to this process exists, the heating of the type being, not only objectionable on account of the necessary subsequent distribution of the type, but also a positive source of destruction, to a greater or less degree, to the type itself. The comparative slowness of the process is also objectionable, particularly in newspaper work, where the gain of time in the work, after the copy

is received, of preparing the matter for the press, is of paramount importance. There is, comparatively speaking, delay in the consecutive treatment of the different thin sheets of matrix-paper and in the subsequent drying out of the paste.

Our invention may be considered a modification and improvement of matrix board hereinbefore described and its means of application, and its prime object is to provide means to overcome these objections.

The matrix board consists, generally stated, in a single sheet of Manila or other ligneous fiber, one side of which is finished, so as to give it the properties of woven paper, while the other side is left in its original semi-porous state, thus making the impression sheet a part of the blanket, which parts heretofore, have been applied separately in use, which our process obviates.

To produce a matrix-plate—the sheet of matrix-board is simply dampened slightly, placed face downward on the form of type and the dampened, soft paper forced, by any convenient means, into the interstices of the type, forming an intaglio impression of the face of the form. The matrix-board is then removed from the form and hardened by drying by any convenient means. The consistency of this single board, without any paste, retains the form given its face by the type and permits its being removed from the type and subsequently heated, to dry it, without heating the type. This is its main feature of advantage over former methods, and, not requiring a succession of thin sheet placings and pasting, it is comparatively a quicker process, even in this stage of the process. Also the drying out is comparatively quicker.

We claim—

As a new article of manufacture, the herein described matrix board consisting of a semi-porous blanket forming a backing for the impression sheet, and an impression sheet formed on the blanket, substantially as described.

In testimony whereof we have affixed our signatures, in presence of two witnesses, this 13th day of April, 1892.

WALTER B. CARR.
AUGUSTUS G. FRENCH.

Witnesses:

H. K. WAGNER,
EDWARD O'FARRELL.