F. A. POOLE.

COMPOSITE MOUNTING BOARD FOR ELECTROTYPES AND OTHER PRINTING PLATES.

APPLICATION FILED SEPT. 17, 1909.

995,715. Patented June 20, 1911.

Fig. 1.

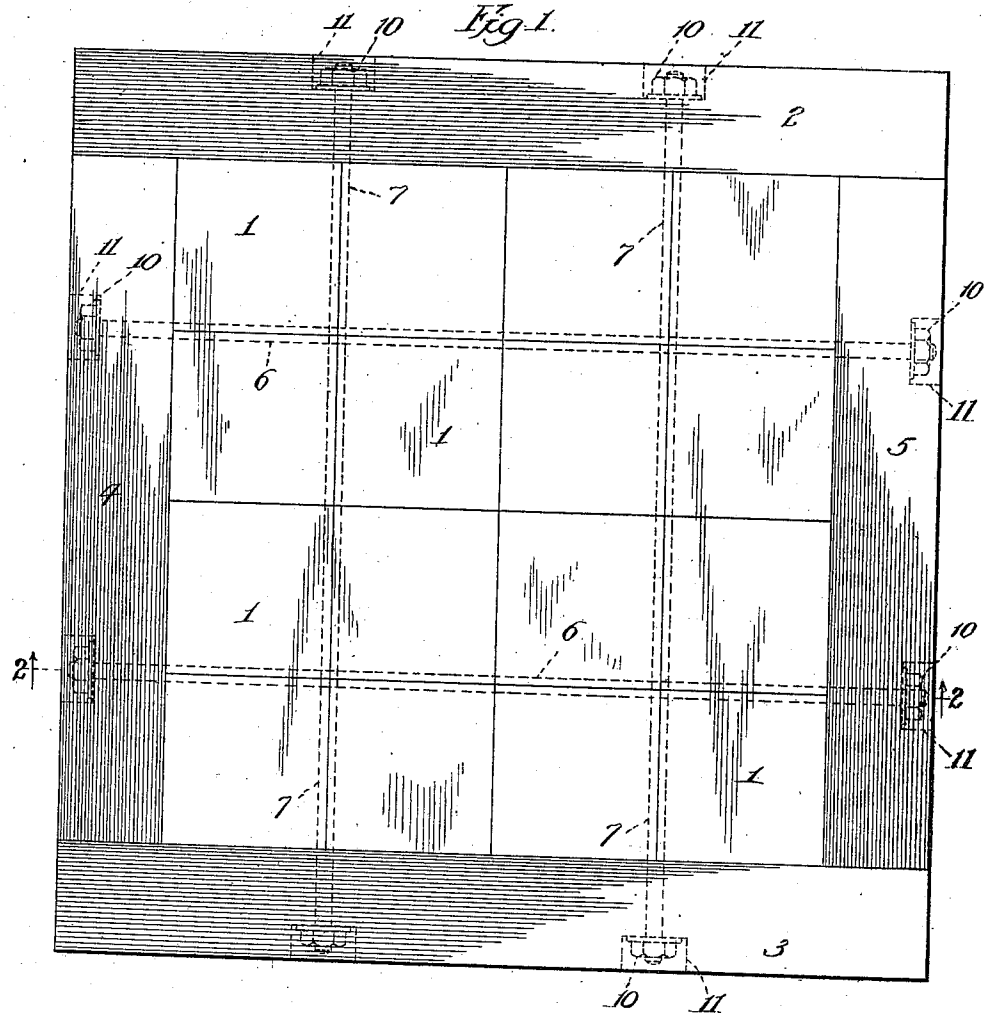


Fig. 2.

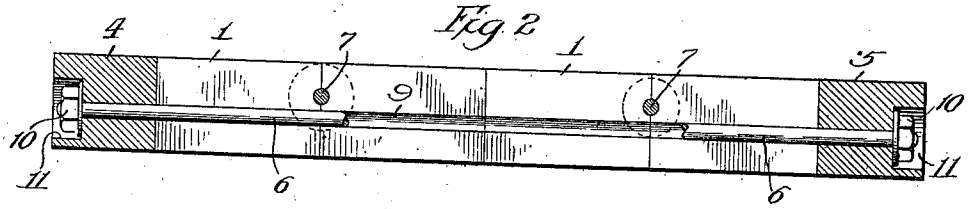
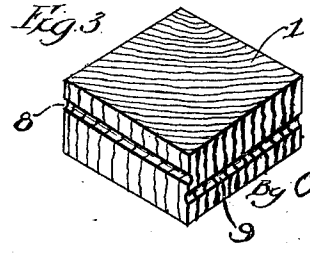


Fig. 3.



Witnesses:
E. C. Davison
Charles J. Schmidt.

Inventor:
Frederick A. Poole
By Offield, Towle, Graves & Offield,
Attys.

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FREDERICK A. POOLE, OF CHICAGO, ILLINOIS.

COMPOSITE MOUNTING-BOARD FOR ELECTROTYPES AND OTHER PRINTING-PLATES.

995,715. Specification of Letters Patent. Patented June 20, 1911.

Application filed September 17, 1909. Serial No. 518,173.

To all whom it may concern:

Be it known that I, FREDERICK A. POOLE, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Composite Mounting-Boards for Electrotypes and other Printing-Plates, of which the following is a complete, clear, full, and precise specification.

My invention relates to a composite mounting board for electrotypes and other printing plates and the important objects of the invention are to produce a flexible non-warping and non-splintering board having a rigid plate receiving surface of uniform height; to produce a board which is durable and adapted to be used over and over; to provide an arrangement whereby any size board can be quickly built up by the printer thereby making it unnecessary to have special men for this purpose; to provide a board which is more solid under impression; and in general to provide a board whose construction is simple and durable and which will give the greatest efficiency.

The various features enumerated above are produced in a construction involving the use of small polygonal blocks fitted together edge to edge to form an unbroken board, with means for locking the blocks together. The blocks are preferably cut from mahogany wood which will not warp and whose expansion and contraction are very little, and the grain of the blocks when assembled being at an abrupt angle with the plate receiving surfaces of the board.

In the accompanying drawing which illustrates the embodiment of my invention, Figure 1 is a plan view of a finished board, Fig. 2 is a sectional view taken on plane 2, Fig. 1, and, Fig. 3 is a perspective view of one of the unit blocks.

The blocks 1 may be of any suitable material, though I prefer to cut them from mahogany wood, as this wood will not warp and has a very low expansion coefficient. The blocks can also have any polygonal shape so they can be fitted together to form a continuous board. The most practical arrangement, however, is to have the units in the form of flat square blocks. Any number of these blocks can be readily assembled to form a continuous unbroken board of any size. The blocks are all uniform and therefore will always closely fit when assembled. After assembly the blocks can be held together in various suitable ways. As shown in Figs. 1 and 2, the assembled blocks are surrounded by transverse and longitudinal inclosing strips 2, 3 and 4, 5, and transverse and longitudinal tie bolts or rods 6, 6 and 7, 7 respectively are used for drawing the strips together and against the blocks to force and to lock the blocks closely together edge to edge. To accommodate the tie rods each block has cut in two of its adjacent sides grooves 8 and 9, the grooves being parallel to the receiving faces of the block but being in different horizontal planes. The transverse and longitudinal tie rods are also in different horizontal planes so they may pass by each other, and the distance between the planes of the rods is equal to the distance between the planes of the grooves 8 and 9 of each block, so that when the blocks are properly assembled the tie rods can pass through adjacent grooves 8 and 9. The blocks are arranged in transverse and longitudinal sets of two rows each, each transverse set receiving a tie rod 6 between its rows of blocks and likewise each longitudinal set receiving a tie rod 7 between its rows of blocks. The grooves 8 and 9 of each block are preferably of equal distance from the central horizontal plane of the block so that there will be more or less interchangeability of the blocks. The blocks of each set are brought together with their upper grooves in line to form the bore for the upper tie rod and with the lower grooves also in line to form the bore for the lower tie rod, as clearly shown in Figs. 1 and 2. After assembly of the blocks to build up any size of board the strips 2, 3, 4 and 5 are applied and the tie rods slipped into place through the strips and through the bores formed between the blocks whereupon clamping means such as nuts 10 are applied to the threaded nuts of the rods, the strips having preferably pockets 11 for entirely receiving the nuts, as best shown in Fig. 2. When the nuts are drawn tight the blocks will be forced together with their edges in close contact and their upper and lower faces forming continuous receiving surfaces against which electrotypes or other printing plates may be secured. The blocks are preferably cut so that when assembled to form a

board their grain will run at an abrupt angle with the receiving surfaces of the board and preferably at right angles thereto so that the surfaces of the blocks can be finished much more accurately and uniformly to form perfect receiving planes. The board is also much more solid under impression as compared with prior boards in which the grain of the sections runs lengthwise thereof. A board split up of cross-grain blocks, as described, is also less affected by temperature and consequently is more free from warping and distortion. The mahogany blocks constructed and arranged as described will therefore produce a board which is entirely uniform as to thickness, which is exceedingly durable and solid and which is free from warping, distorting or splintering, while yet sufficiently flexible for purposes of the art in which it is to be used.

The inclosing strips 2, 3 and 4, 5 are preferably of the same thickness as the blocks, and the grain of the strips should preferably run lengthwise to give the greatest strength. The strips form part of the board and may be of the same height as the blocks with the upper faces thereof in the receiving plane.

For prior boards for electrotype or other plates special skill is necessary for construction and assembly, but with my improved board such special skill is not required. The printer himself can very readily and in short time assemble a number of blocks and secure them together to form a board of any required size. The blocks are cut to be true so that when assembled perfect receiving surfaces will result. If the plate is no longer desired it can be removed from the board and the board used for other plates, or the board can be taken apart and the blocks used for building up other boards. The blocks being of the same size and therefore the distances between the tie rods being equal, the side strips can be cut from stock strips having the proper cross section and having counter-sunk holes drilled therethrough. The printer can then, after assembling the blocks, cut from the stock strips any desired length of short strips, which will be sure to fit.

I do not desire to be limited to the exact construction and arrangement as shown and described, as for example, the unit blocks could be triangular or hexagonal or of any polygonal shape so that they could be fitted together to form unbroken boards. The blocks could also be of different kinds of wood or of some composition or other substance, and each block could have the grooves 8 and 9 extending entirely around its sides, in which case the blocks would be completely interchangeable. The inclosing strips instead of being of wood could be of metal or other material.

The broad feature of my invention resides in the use of small uniform blocks built up and held together to form a unit board.

I desire to secure the following claims by Letters Patent.

1. In a composite mounting board for printing plates, the combination of a plurality of blocks adapted to be fitted together edge to edge to form an unbroken receiving surface for printing plates, each block having grooves cut in and across adjacent side faces thereof and in different planes, and straight clamping rods for passing through said grooves for locking the blocks together in their arranged order.

2. In a composite mounting board for printing plates, the combination of a plurality of similar rectangular blocks adapted to be fitted together edge to edge to form a continuous receiving surface for printing plates, each block having grooves forming longitudinal and transverse channels when the blocks are fitted together, and longitudinal and transverse clamping rods for passing through said channels and for clamping the blocks together, the longitudinal and transverse channels being in different planes.

3. In a composite mounting board for printing plates, the combination of a plurality of similar rectangular blocks adapted to be fitted together edge to edge to form a continuous receiving surface for printing plates, each block having grooves cut in two of its sides, said grooves forming longitudinal and transverse channels when the blocks are fitted together, and longitudinal and transverse clamping rods for passing through said channels and for clamping the blocks together, the longitudinal and transverse grooves being in different planes.

4. In a composite mounting board for printing plates, the combination of a plurality of similar wooden blocks arranged in longitudinal and transverse rows edge to edge to form a smooth receiving surface, longitudinal and transverse channels extending through the assembled blocks in different planes, and bolts passing through said channels for rigidly clamping together the blocks in transverse and longitudinal direction, the fibers of said wooden blocks running at right angles to said receiving surface.

5. In combination, a plurality of similar blocks arranged edge to edge in longitudinal and transverse rows to form a continuous board, longitudinal and transverse channels extending through the assembled blocks in different planes, longitudinal and transverse strips engaging the assembled blocks, the transverse strips having openings registering with the longitudinal channels and the longitudinal strips having openings registering with the transverse channels, and bolts

extending through said openings and channels to securely clamp together the blocks and strips in transverse and longitudinal direction to form a self supporting, rigid and complete board, the ends of said bolts being countersunk in said strips to leave a smooth peripheral edge for the board.

In witness whereof, I hereunto subscribe my name this 11th day of September, A. D. 1909.

FREDERICK A. POOLE.

Witnesses:

CHARLES J. SCHMIDT,

NELLIE B. DEARBORN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."