

UNITED STATES PATENT OFFICE.

ISRAEL AMIES, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVED APPLICATION OF EMBOSSED VENEERS.

Specification forming part of Letters Patent No. **13,899**, dated December 11, 1855.

To all whom it may concern:

Be it known that I, ISRAEL AMIES, of the city of Philadelphia and State of Pennsylvania, have invented the new and Improved Art of Embossing Veneers so as to Represent Carvings in Wood; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention consists in placing veneers of plain or fancy woods, prepared by the process herein described, or any equivalent to the same, between dies, one of which (the matrix) has its surface carved in relief to the desired pattern and the other or plate die having cavities corresponding to the projections of the matrix. One or both dies are moderately heated, and with the prepared veneer between them submitted to a considerable pressure. On removing the veneer one of its faces represents in relief the pattern on the dies, and has all the appearance of an elaborate wood-carving. The cavities on the opposite side of the veneer I afterward fill up with any suitable plastic substance, and this being sufficiently dried and smoothed off, the embossed veneer is ready to be glued or otherwise attached to articles of furniture or other ornamented wood-work.

In order to enable others to practice my invention, I will now proceed to describe the manner in which it is carried into effect.

I will suppose that a series of twenty imitations of wood-carvings of one pattern are required. I take twenty pieces of ordinary veneer of the description of wood and size desired. These I polish on one side, removing all the saw-marks and other imperfections, the opposite side being partially smoothed with sand-paper. I now take each piece of veneer separately and paste on the back sheets of paper, and leave the whole of the twenty pieces a sufficient time to allow the wood to partially absorb the moisture of the paste. While the veneers are yet damp I place them separately between the heated dies, and submit the same to the action of any suitable press. As the projecting portions of the matrix come in contact with the pasted paper on the back of the veneer, the heat has a tendency, through the moisture already imparted to the wood by the paste, to reduce the veneer to a partially plas-

tic substance, yielding readily to the action of the relief on the matrix until the latter has by the pressure forced and compressed the wood into the cavities of the plate-die. The veneer I allow to remain a sufficient time between the dies to allow the wood, paste, and paper to become perfectly hard and dry—an effect produced in a moment by the heat communicated from the dies. The veneer is now removed, the pattern on the plate-die, even to the most minute parts, having been communicated to the polished side of the veneer. The remainder of the twenty veneers are now submitted in succession to the dies with a similar result. After filling the cavities at the back of the veneer with any suitable plastic substance and the same smoothed off the imitations of carvings in wood are ready for the ornamenting of any description of wood-work.

It should be here observed that the paste and paper on the backs of the veneers perform two important offices: first, that of reducing, in combination with the heated dies, the veneers to a partially plastic substance, yielding without splitting the wood; and, secondly, forming, after the dies have efficiently pressed the veneers, a substance at the back solidified by the heat and firmly attached to the veneer, preventing the reliefs from collapsing or altering their form after the veneer has been removed from the pressure. I have found by experiment that ordinary flour-paste is well adapted for the above purpose, and that in treating ordinary veneers the paper used should be of the consistency of the finest letter-paper.

I wish it to be understood that although I have described one particular process of treating veneers before my improved art of embossing is practiced thereon, I do not desire to confine myself to that process in every minutiae, as the same may be modified or equivalents substituted; but

I claim—

The employment of embossed veneers in the construction of furniture and for other ornamental purposes, in the manner set forth.

ISRAEL AMIES.

Witnesses:

HENRY HOWSON,
THEODORE BERGNER.