

United States Patent Office.

E. T. LIGON, OF DEMOPOLIS, ALABAMA

Letters Patent No. 69,001, dated September 17, 1867.

IMPROVED MODE OF UNITING STEEL OR IRON WITH COPPER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, E. T. LIGON, of Demopolis, in the county of Marengo, and State of Alabama, have invented a new and "Improved Mode of Covering Steel or Iron with Copper;" and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The present invention relates to a new mode of covering steel with copper, which consists, first, in serrating or otherwise roughening the surface of the steel to be covered by passing the same through and between rollers suitably formed to serrate or roughen the same, or by means of a planing machine with suitable cutters. Second, in then bringing and placing the said serrated steel plate with the copper plate in contact with such surface, and with borax or other flux between the two plates, after which the two plates are placed upon a thick bed-plate of cast iron or steel, previously heated to or above the melting point of copper, which bed-plate is placed on the lower disk of the press, the upper disk of which is made hollow, and with a non-conducting substance inside.

Pressure is now brought to bear; the steel plate expanding under heat, the hot or melted copper is forced into the indentations and body of the steel, where, as the steel cools, it is closed or shut up, thus fastening the copper thereto, and producing a permanent adhesion or union of the two metals.

I claim as new, and desire to secure by Letters Patent—

Uniting steel or iron and copper, substantially as described.

E. T. LIGON.

Witnesses:

THOS. J. FOSTER,

A. T. HENLEY.