

J. A. Thompson,

Uniting Wood.

No. 110,089.

Patented Dec. 13, 1870.

Fig. 1.

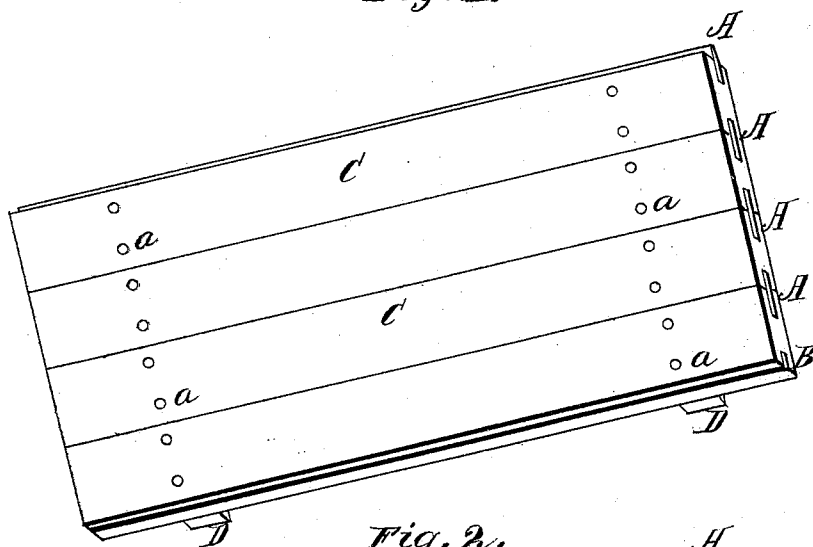
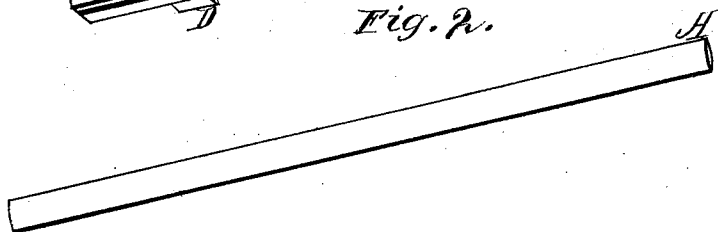


Fig. 2.



Witnesses

Edw. F. Brown
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Inventor

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UNITED STATES PATENT OFFICE.

JOHN A. THOMPSON, OF AUBURN, NEW YORK.

IMPROVEMENT IN METHODS OF UNITING WOOD.

Specification forming part of Letters Patent No. **110,089**, dated December 13, 1870; antedated November 26, 1870.

Be it known that I, JOHN A. THOMPSON, of Auburn, in the county of Cayuga and State of New York, have invented a new and useful Improvement for Uniting Wood by Tongue and Groove; and I do declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, and to the letters marked thereon.

The nature of my invention consists in the formation of a metal tongue of an elliptical or double-wedge form, so it may be driven into a sawed groove of lesser thickness than the tongue, by which a tight joint with the wood may be secured and greater strength and evenness obtained than is possible to secure by means of the ordinary mode.

The application of this tongue and groove will be found of great advantage for the following purposes: the jointure of staves and heading, when strength and security in the cask are requisite; the union of plank in the construction of flumes and water-tubes, of lumber for car and other roofs, and for sheathing under all circumstances. It is also applicable to the planking of boats and vessels, furnishing a more secure water-joint than can be done with calking; also, the matching of floors and water-tables in buildings, salt-evaporating baths, and roofs, and all conditions where wood is requisite to be firmly united.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct a tongue of iron or other suitable metal, of varying widths to suit the conditions of the work to be joined, making them from one-half inch (or less) to one inch, or even greater, and in thickness from one-twentieth of an inch to one-eighth or three-sixteenths of an inch, in form curving slightly from the center toward each edge until near the edge, which is brought down more rapid, so as to enter the groove readily.

The thickness I prefer for light work is one-sixteenth of an inch, and one-half inch in width, to enter a groove one-twentieth inch and not more than three-sixteenths deep. This tongue is rolled to form, by the ordinary well-known means, by rolls provided with a corre-

sponding concave groove in the face of each, and adjustable guides to force its true entrance between the rolls when brought to the desired width and thickness. It should then be passed, while heated, through a bath of bees-wax and rosin, about three parts of the former to one of the latter, or a bath of paraffine mixed with the above, or other well-known protective agents preventing oxidation, after which it is passed through rolls to clean off the excess of the coating, and then perfectly straightened by means of a straightening-machine, and packed in suitable lengths for transportation and use.

Banca or sheathing metal, or any non-oxidizable metal of sufficient fineness, or galvanized iron, or electro-plated metal may be substituted, if preferred.

I cut my groove by means of a saw held firmly between two collars, its edge projecting sufficient to cut the required depth. This saw may be placed upon the ordinary grooving-machines in place of the cutters.

Wood, for the purpose of securing a continuous tight joint, should be taken from the center of the log, or be sawed from the circumference of the tree toward the center, as staves are split and sawed, as this will secure the best results.

In using this tongue, I unite the pieces by interposing any known lasting and preserving paint, or boiled oil, and then by driving the parts well together I secure a water-tight union.

For roofs or outside sheathing round-head screws will be found best, and the holes for their reception should be so small that a perfect fit of the shaft is secured. These should be dropped in the bees-wax and rosin bath before being used.

I do not claim, broadly, the uniting of wood by a metal tongue, as the same has been known and used.

What I claim is—

The method herein described of uniting wood in various forms by metal tongues where water-tight joints are required.

JOHN A. THOMPSON.

Witnesses:

EDM. F. BROWN,
H. N. MYGATT.