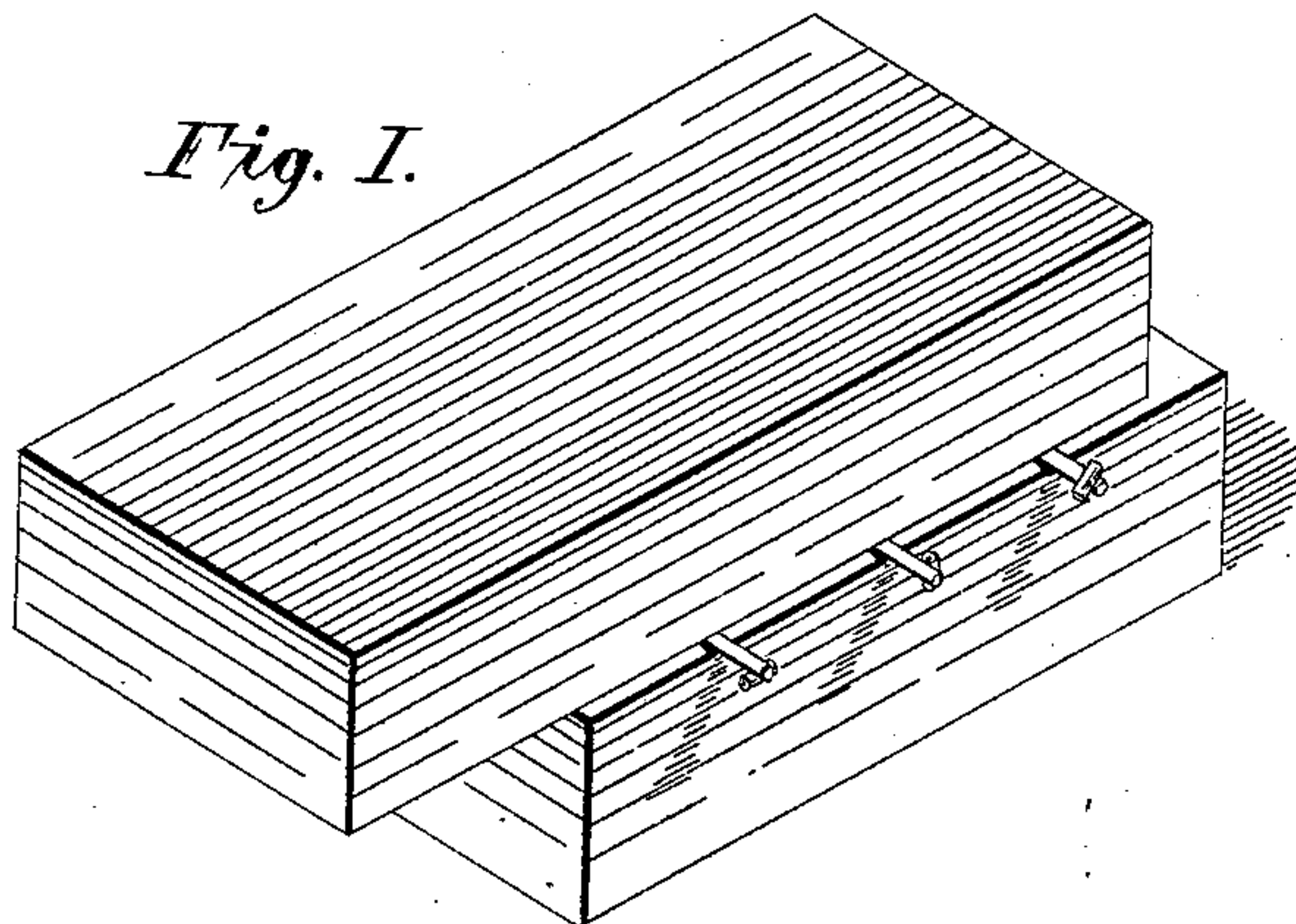
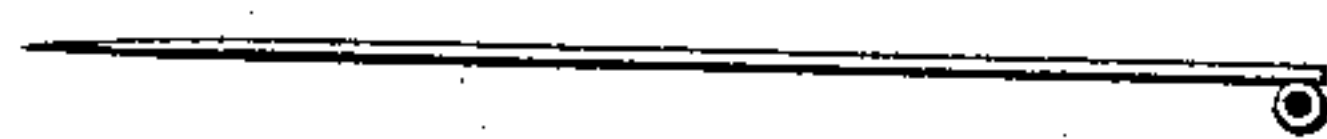


W. H. HATHAWAY.  
Method of Manufacturing Pin-Tongues for Jewelry.  
No. 201,244. Patented March 12, 1878.

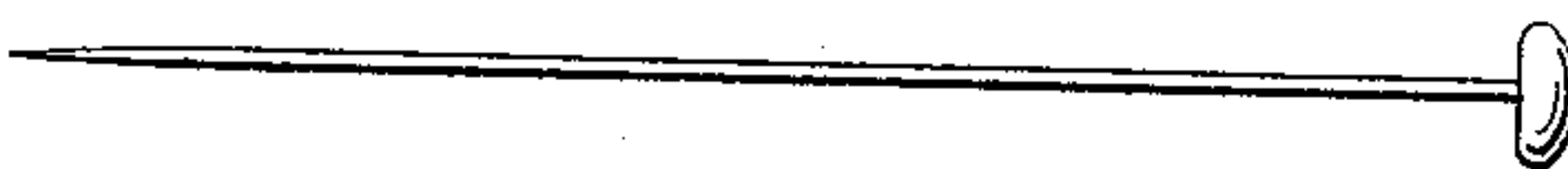
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES

*William L. Coop*  
*Joseph A. Miller Jr.*

INVENTOR

*W<sup>m</sup> H. Hathaway*  
*by Joseph A. Miller*  
*Attorney*

# UNITED STATES PATENT OFFICE.

WILLIAM H. HATHAWAY, OF PAWTUCKET, RHODE ISLAND.

IMPROVEMENT IN METHODS OF MANUFACTURING PIN-TONGUES FOR JEWELRY.

Specification forming part of Letters Patent No. **201,244**, dated March 12, 1878; application filed December 3, 1877.

*To all whom it may concern:*

Be it known that I, WILLIAM H. HATHAWAY, of Pawtucket, in the county of Providence and State of Rhode Island, have invented new and useful Improvements in a Method for Hardening Pin-Tongues for Jewelry; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to an improved method of manufacturing pin-tongues for jewelry; and consists in soldering the hinge-eye or a knob or head to the tongue before hardening the latter, and then subjecting the tongue to a rolling action between suitable plates, whereby the metal composing the tongue is condensed, hardened, and stiffened, and thus prevented from bending when subjected to ordinary use.

Figure 1 represents two plates arranged to reciprocate, and between the same tongues, pins, or skewers in the act of being rolled transversely. Fig. 2 represents a tongue for jewelry-pins, provided with a hinge-eye; and Fig. 3, a pin or skewer to which a head has been soldered.

When a hinge or a head is soldered to a tongue or skewer, the heat used anneals and softens the portion subjected to such heat; and

heretofore the tongue or skewer had to be held by a pair of pliers, and the softened portion condensed by a burnisher. This is a slow and costly operation, and requires skill to finish the tongue or skewer perfectly straight.

By my improved method of manufacturing tongues or skewers they are rolled between two plates under pressure, and no particular skill is required for such operation. The tongues or skewers are finished perfectly straight, producing a better article in less time and without requiring skilled labor, and the same will be perfectly round, which is not the case when they are hardened with a burnisher, or in any other manner now in use.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The method of manufacturing pin-tongues for jewelry, substantially as hereinbefore set forth, the same consisting, essentially, in soldering the heads to the tongues before hardening the latter, and then subjecting said tongues to a rolling action between suitable plates or dies, whereby they are hardened and stiffened, substantially as set forth.

WM. H. HATHAWAY.

Witnesses:

JOSEPH A. MILLER,  
JOSEPH A. MILLER, Jr.