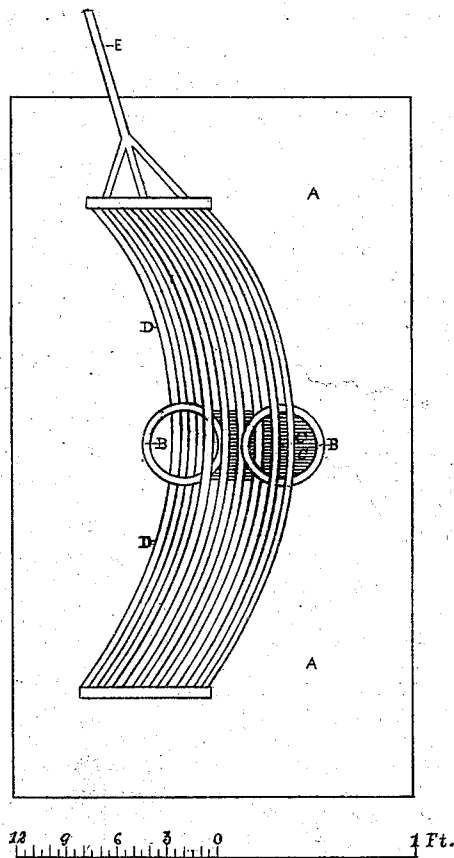


A. WILSON.

Apparatus for Tempering Umbrella Ribs, Steel Strips, &c.

No. 136,197.

Patented Feb. 25, 1873.



WITNESSES:

Franklin E. Feltow.
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ARTHUR WILSON, OF BIRMINGHAM, ENGLAND, ASSIGNOR TO JAMES CONAWAY AND JOHN LOCKEN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR TEMPERING UMBRELLA-RIBS, STEEL STRIPS, &c.

Specification forming part of Letters Patent No. **136,197**, dated February 25, 1873.

To all whom it may concern:

Be it known that I, ARTHUR WILSON, of Birmingham, England, have invented an Improvement in the Process and Machine for Tempering and Straightening Steel Strips, of which the following is a specification:

The object of my invention is to temper and straighten strips of steel to be used in the frames of umbrellas and for similar purposes.

The accompanying drawing illustrates my invention.

A is a slab or table, suitably supported upon which rest the metallic rings B B, in which are inserted a series of wires, C C. D is a griddle, composed of convex metallic bars and traversed by the rings B B, carrying the wires C C that are heated to the requisite degree. E is a handle, which enables the operator to propel the griddle backward and forward.

The operation of my invention is as follows: Steel strips are put in with the heated wires C C and enter the rings B B; then the griddle D is superimposed on the combined mass of steel strips and heated wires, and the rings B B protrude through the interstices of the bars of the griddle D, which is moved to and fro by the operator for the purpose of commingling the steel strips with the heated wires to communicate to the strips a sufficient degree of heat, so that the griddle D may, by its reciprocating action, simultaneously straighten and temper the steel strips. These strips are covered with oil before they are put in with the heated wires, and the oil is ignited by

contact with the heated wires; the reciprocating movement of the griddle is continued so long as the ignition lasts, and when it ceases the strips are found to be tempered and straightened, as desired. Subjected to this treatment the strips become elastic and pliable, and peculiarly adapted for the use for which they are intended.

Heretofore umbrella manufacturers in this country have been compelled to import the ribs and stretchers for their frames, as they were unable to produce them at a cost that would enable them to compete with the foreign makers. My invention, however, will so reduce the cost of production as to enable the American manufacturers to make their own ribs and stretchers and render them independent of foreign manufacture, thus materially promoting American industry and giving employment to domestic labor.

I claim as my invention—

1. The process of tempering and straightening steel strips, in the manner and for the purposes substantially as described.

2. The combination of the slab or table A, the rings B B, the wires C C, the griddle D, and the handle E, or their equivalents, arranged, constructed, and operating in the manner and for the purpose substantially as described.

ARTHUR WILSON.

Witnesses:

FRANKLIN E. FELTON,
SAML. N. SMALL.