

J. W. Martin.

Wood-Bending Machine.

N^o 99,925.

Patented Feb. 15, 1870.

Fig. 3.

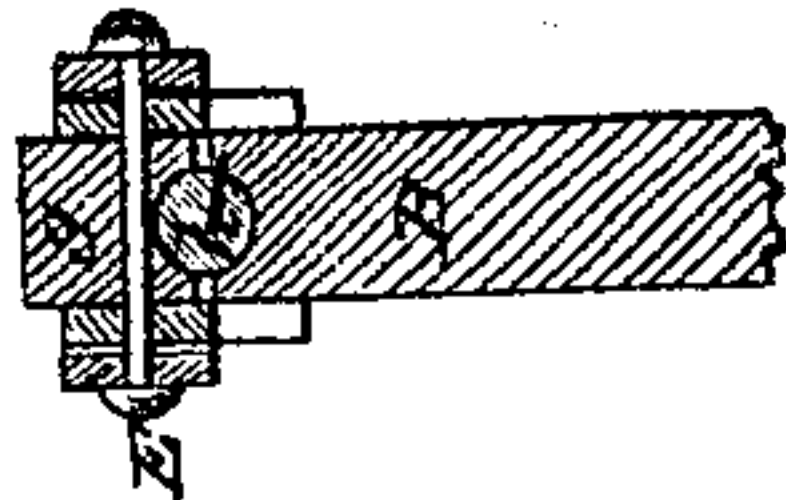
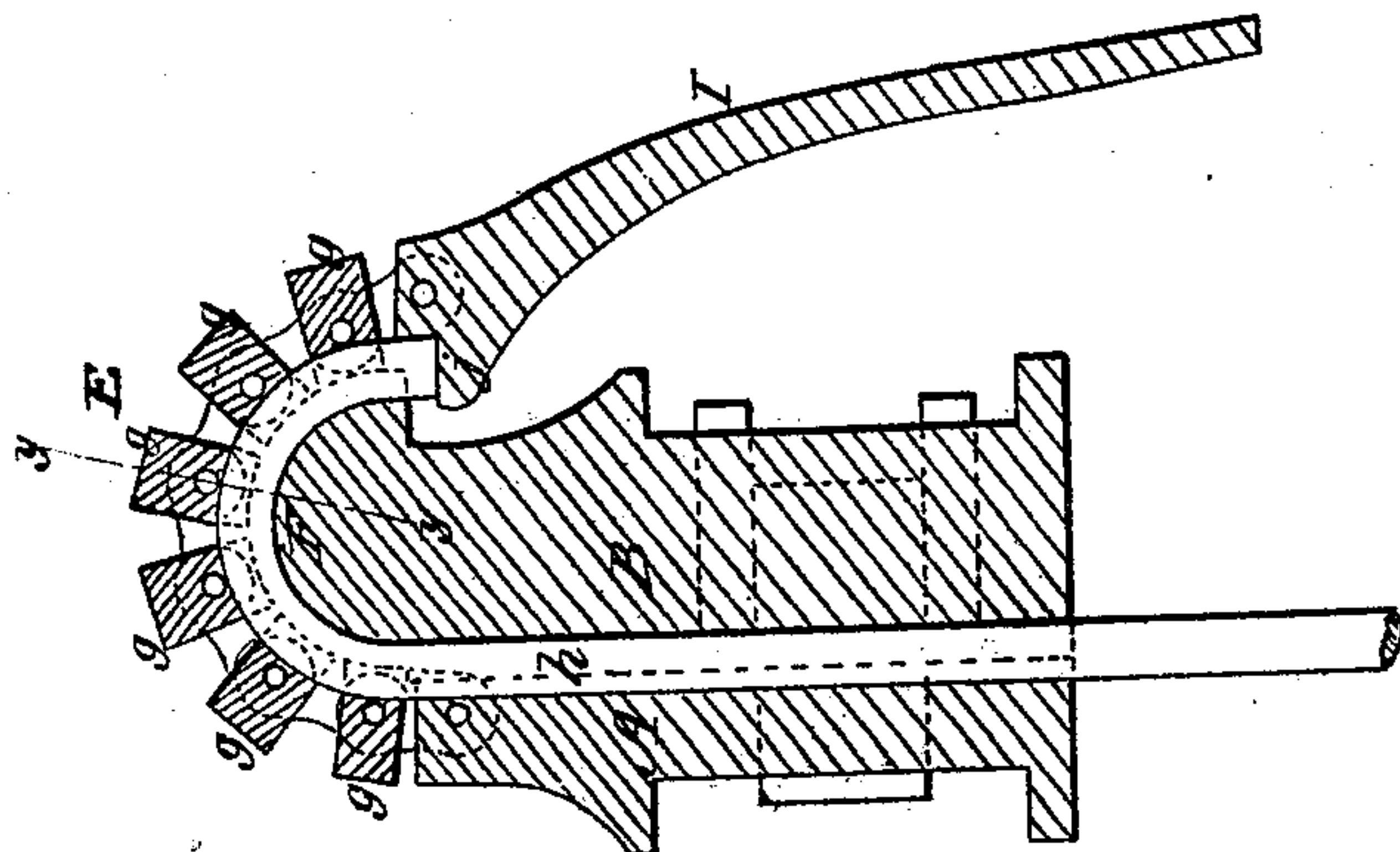


Fig. 2.



Fig. 1.



Witnesses:

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Inventor:

J. W. Martin
PER Munn & Co. Attys.

UNITED STATES PATENT OFFICE.

JAMES W. MARTIN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO HIMSELF AND WILLIAM A. DROWN, JR., OF SAME PLACE.

IMPROVEMENT IN WOOD-BENDING MACHINES.

Specification forming part of Letters Patent No. 99,925, dated February 15, 1870.

To all whom it may concern:

Be it known that I, JAMES W. MARTIN, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented a new and Improved Wood-Bending Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a new and useful improvement in machines for bending wood, designed more especially for bending handles for umbrellas, parasols, and canes, but applicable to many other purposes; and it consists in a segmental chain, and in the general combination and arrangement of parts, as hereinafter more fully described.

In the accompanying drawings, Figure 1 represents a central section of the machine through the line *x x* of Fig. 2. Fig. 2 is an edge view. Fig. 3 is a cross-section of Fig. 1 through the line *y y*.

Similar letters of reference indicate corresponding parts.

The stock or body of the machine consists of two parts, which in the operation of bending are gripped together in a vise. A is the part to which the chain is attached. B is the form or mold. These parts slip together edgewise, and are guided and held in the proper position by a guide-strap, C, on each side of the part A; and by the two lugs D D, on one side of the part B, as seen in the drawings. E is the chain. The two parts of the stock (A and B) are grooved on their edges where they come in contact, so as to fit the article of wood which is placed between them to be

bent. The curve or form F is also grooved, as are also the inner sides of the segments *g*, as more plainly seen in Fig. 3, where *h* represents the wood to be bent.

I is a lever, which is attached to the end of the chain.

The operation is as follows: The stick being properly prepared for bending, by steaming or boiling, is placed between the two parts A and B in the groove before mentioned, and the parts are then gripped in a vise. The chain is extended so that the grooved segments will be on a line with the grooved edge of A, and the piece of wood *h* is placed so that its end strikes the projecting lip *j* of the lever. The wood being firmly gripped, the lever is turned down, bringing the segments and wood into the groove of the mold or form F, as seen in Fig. 1. The groove in each segment forms an arc or segment of a circle, which circle corresponds with the hook or circle to be bent. When the lever is brought down to the position seen in the drawings, it is fastened to the stock, and the wood is left in the mold until it becomes sufficiently dry to preserve its form.

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

The apparatus above described for bending hooks upon the ends of canes, umbrella-handles, and analogous articles formed of round wood, consisting, essentially, of the bending-stock A B F, sectional grooved links *g*, and lever I *j*, all constructed and arranged as and for the purpose specified.

JAS. W. MARTIN.

Witnesses:

LEWIS W. MARTIN,
EDWARD EVANS.