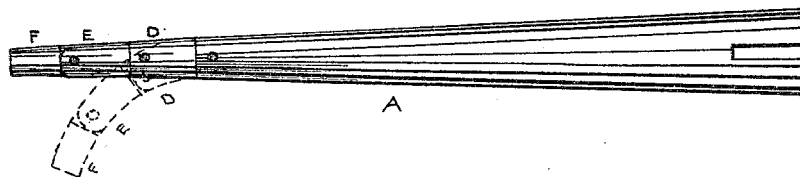
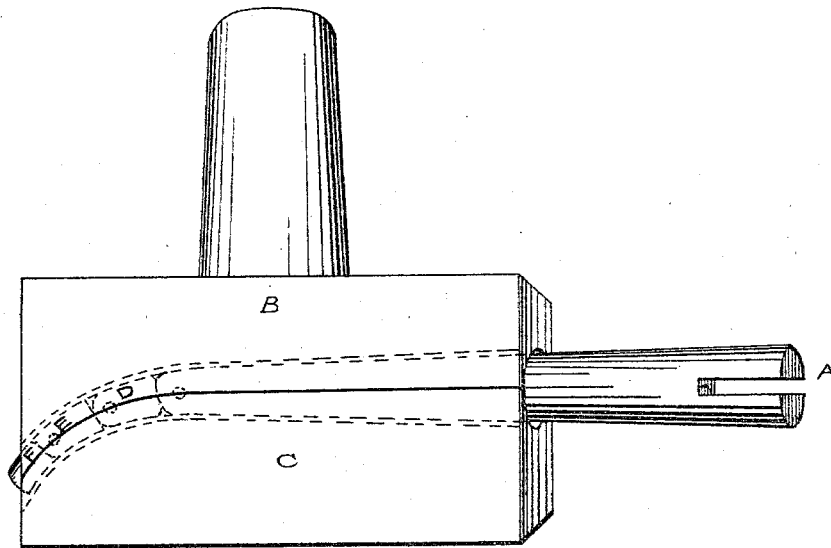


DANIEL HAYES & JOHN MARTEN.

Improvement in Machines for Bending Spouts.

No. 115,852.

Patented June 13, 1871.



Witnesses

Wm. F. Engley

H. C. Wilder

Inventors

Daniel Hayes

John Marten

UNITED STATES PATENT OFFICE

DANIEL HAYES AND JOHN MARTEN, OF CAMBRIDGE, MASSACHUSETTS.

IMPROVEMENT IN MACHINES FOR BENDING SPOUTS.

Specification forming part of Letters Patent No. 115,852, dated June 13, 1871.

To all whom it may concern:

Be it known that we, DANIEL HAYES and JOHN MARTEN, both of Cambridge, in the county of Middlesex and Commonwealth of Massachusetts, have invented a new and useful Device for Bending Spouts; and we do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawing and to the letters of reference marked thereon.

Our invention consists of a jointed mandrel or pith of steel or other suitable material to be used in connection with curved dies, by means of which the spouts are bent.

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

A represents the rigid portion of our mandrel, and F E D the jointed portion. The joints

are secured by rivets and adapted to receive a curved form, as shown by dotted line. B and C are dies, having the curve intended to be given to the spout.

In operation, the mandrel or pith is placed inside of the spout to be bent by the action of the dies, and it is prevented from collapsing by the pith, which yields within it to conform to the shape of the dies.

Having described our invention, what we claim is—

The mandrel A, having one or more joints, D E F, in combination with curved dies, as and for the purpose set forth.

DANIEL HAYES.
JOHN MARTEN.

Witnesses:

JOHN GOOD,
W. F. ENGLEY.