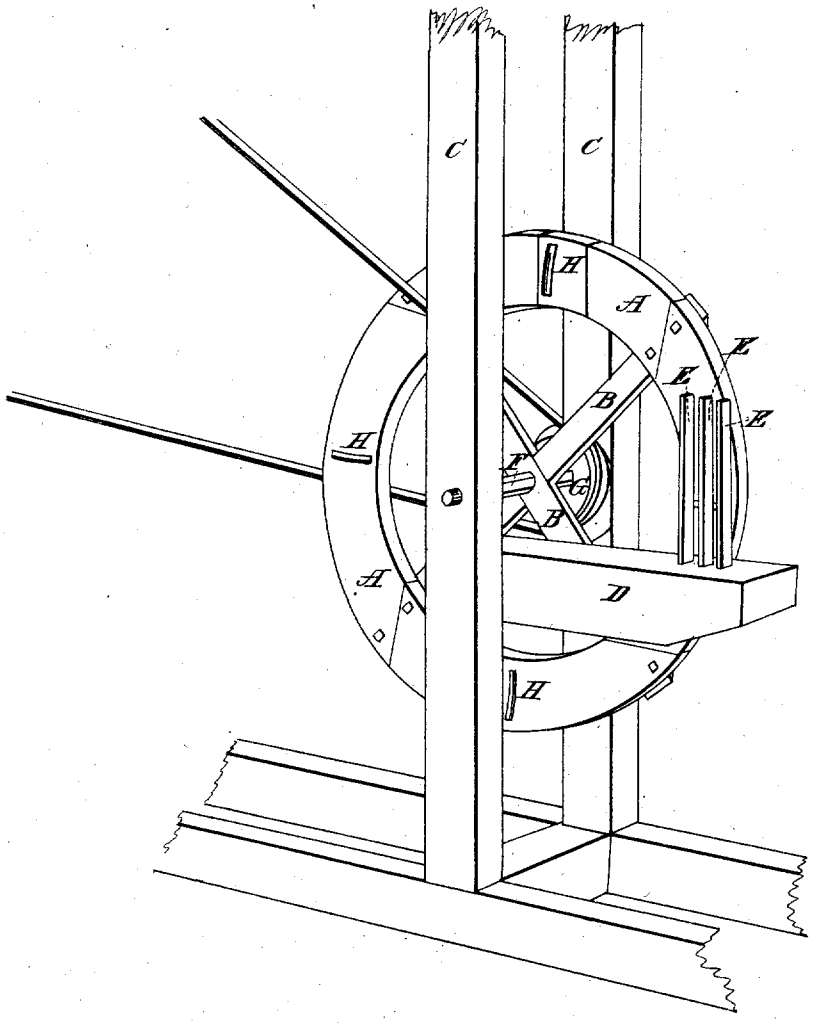
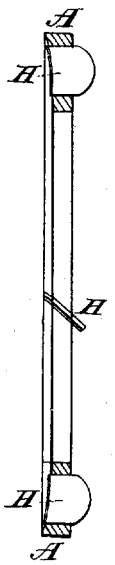
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I. FOBES.

STAVE JOINTER.

Patented Aug. 3, 1831.





Aug. 3. 1831 6684X

Isaac Forbes, Bridgewater Massachusetts

Letters Patent.

The Schedule referred to in these Letters Patent, and making part of the same, containing a description in the words of the said Isaac Forbes himself of his improvement called the Stave Jointer.

To all to whom these presents shall come.

Be it known that I Isaac Forbes of Bridgewater, in the County of Plymouth and State of Massachusetts, have invented, caused to be made, and applied to use, a new and useful improvement in the art of Coop=ering or of making Barrels or Casks; which consists in dressing the staves by a Machine which I call the aforesaid Stave Jointer, and that the following is a full and exact description of the construction and operation of the said Machine as invented by me. This Jointer consists in the form of a wheel or section of a hollow sphere to turn on an axis which passes through the centre thereof. The jointing face or cutting side thereof should be turned out in a concave form like or similar to the inner surface of a common Wooden Dough Trough, or (to form the staves in straighter near the ends or that part thereof which shall come on the chime hoop of the Cask) the face of the Jointer should be somewhat flatter or less concave toward the periphery approaching the form of a thin flat mouth. said wheel or Jointer is perforated near its periphery and at proper distances to receive four or more Knives irons or cutters which are held in their place by wedges or screws, and the edges thereof are ground and adjusted to correspond to the concavity of the face of the Jointer so that when the jointer is caused to revolve briskly on its axis by the application of power thereto (by means of a crank, pulley and belt or gear) and the edge of a stave is steadily held against the face thereof in the direction of a chord line to the circle of the jointer the cutting edges of projecting therefrom will each in succession cut shavings from the stave and thus immediately reduce its whole length to the required

form

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bevel and move at the same operation; after which the stave
is to be shifted so as to bring the other edge thereof in like manner
in contact with the jointer face where a like operation completes
the jointing of the stave. The dimensions and appearance form of
the jointer may vary according to the sizes and proportions of the
casks for which the staves to be jointed therewith are intended.
A convenient one for jointing Barrel staves should be about seven
feet in diameter with a rim about one foot deep and three or four inches thick
and bolted to the ends of two pieces of dressed timber crossed
middle in the form of a cross and thus constituting the frame
of the wheel or jointer. An iron shaft is firmly fixed in the centre
of the wheel and constitutes the axis. The rim is perforated to receive
four or more jointer irons or cutters of such width or so arranged
that nine inches of the depth of the rim or jointer face may at least
twice in the course of a revolution present a cutting edge to a stave
which may be held against any portion of the said depth. The degree
of concavity should be about one inch and a half in the depth of six
here spoken of. Two upright posts properly secured at top and bottom
to the building in which the jointer operates or to any other fastening
form supports in which the jointer axis turns; and in the front
post at half the length of the stave below the axis is framed a timber
which extends along close by the face of the jointer in nearly a horizontal
direction to the length of the semi diameter of the jointer and forms a
rest on which the end of the stave stands during the process of join-
ing, in this rest and close to the jointer face are inserted in a per-
pendicular direction five or more guide pieces between which the staves
is placed and which serve to aid the workman in holding it in the right
position while jointing. The reason why I have recommended so great a
depth of jointer face and extent of cutting edge is that there are gen-
erally different widths of staves in the same cask and in order
to give each its proper form the narrow staves should be held across
the periphery during the process of jointing, and as the width increases
more toward the axis. The proper position however to form

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the staue to the curve and bevel desired is specially attained by the workman and as each will proportion his cranks to suit his own fancy. a further description deemed not to be necessary. I would observe however that the conveave surface of the jointer may be made sufficiently deep or extensive and have a corresponding number of cutters inserted therein to joint staves for any sized casks with the same jointer if it be desired; and may revolve either in a vertical, horizontal, or oblique position.

What I claim as my own original invention is the principle by which the requisite curve is given to the whole length of the staue at one operation by cutters adjusted to a conveave or concaevie wheel and screwed thereto while the said wheel receives a rotary motion during the process of jointing the staue. which principle I apply in the conveave jointer constructed and used agreeably to the foregoing specification

In testimony of all which I hereunto set my hand and seal this eleventh day of July in the year of our Lord one thousand eight hundred and thirty one. at Bridgewater aforesaid.

Witnesses
Daniel Mitchell
Bela Mitchell

Isaac Tolley

(Patented 3 August 1831)