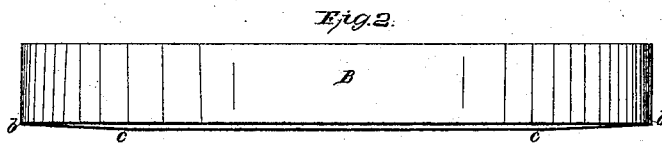
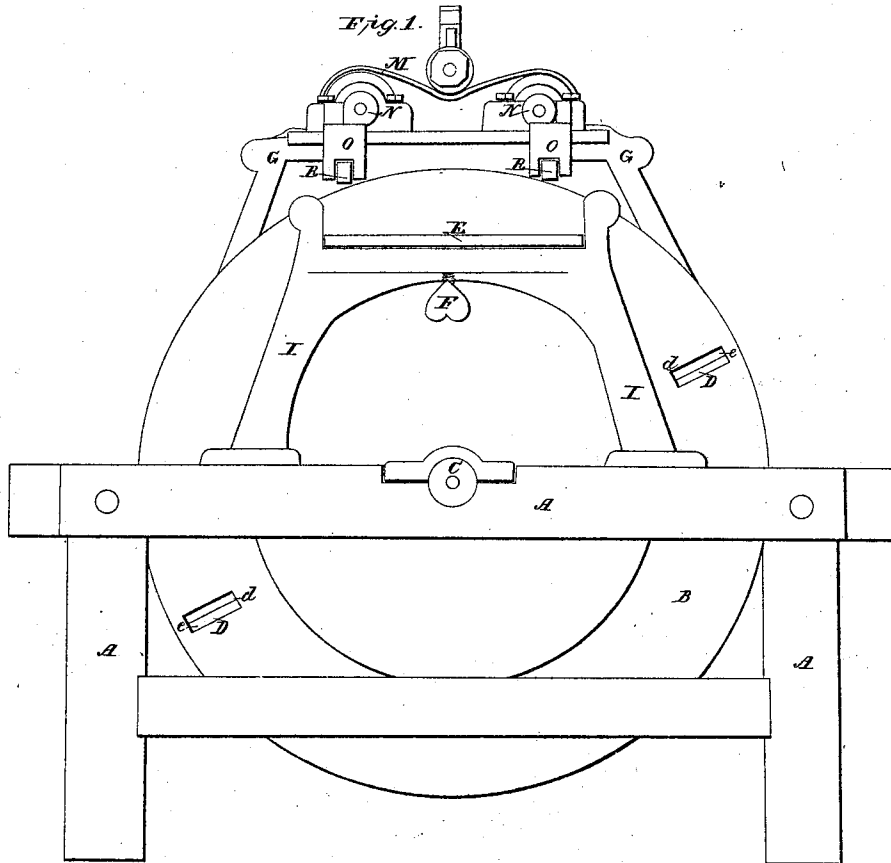


W. Trapp,
Jointing Staves.

N^o 43,935.

Patented Aug. 23, 1864.



Witnesses:
M. Robinson
S. Reed.

Inventor:
William Trapp.
per
Daniel Breed.
Atty.

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Fig. 3.

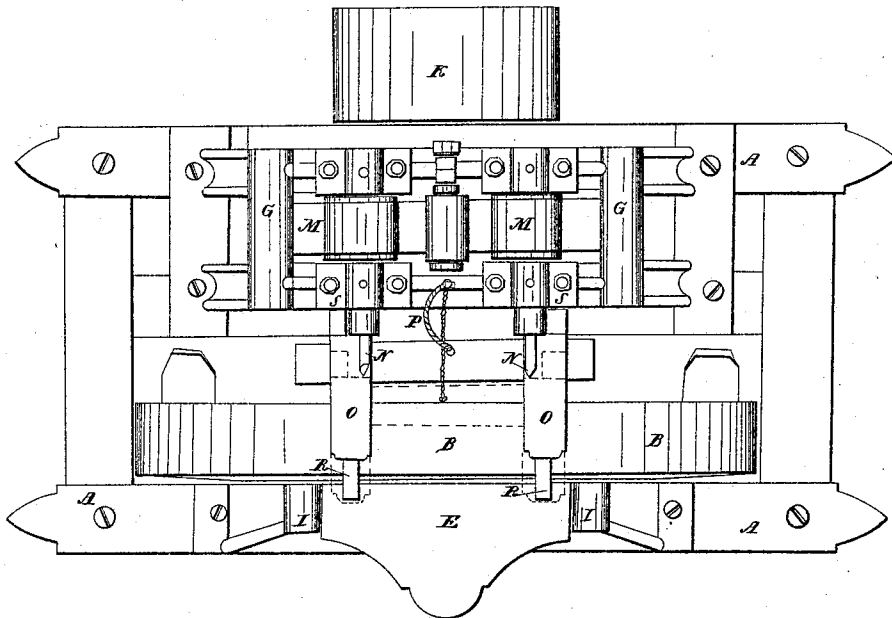
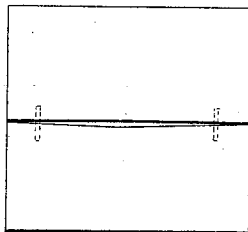


Fig. 4.



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M. Robinson
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UNITED STATES PATENT OFFICE.

WILLIAM TRAPP, OF ELMIRA, NEW YORK.

IMPROVEMENT IN MACHINES FOR JOINTING HEADINGS FOR BARRELS.

Specification forming part of Letters Patent No. **43,935**, dated August 23, 1864; antedated August 18, 1864.

To all whom it may concern:

Be it known that I, WM. TRAPP, of Elmira, in the county of Chemung and State of New York, have invented a new and useful Improvement in Machines for Jointing Headings for Barrels and other Casks; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

In making a good joint between two pieces of barrel-heading it is necessary to cut the two pieces in such manner that they will meet at the ends when put together and leave the joint open along forward and in the middle. Thus is formed what coopers call an "open joint," which may be kept permanently tight. If the two edges of the heading be planed off straight and then put together like cabinet or joiner's work, the shrinking of the wood at the ends of the joint or near the staves will open the joint and produce a leak. These facts render it very difficult to joint barrel-heading by machinery, yet I have succeeded in entirely overcoming the difficulties and have made a machine that will joint the heading with great rapidity and accuracy.

My invention consists in arranging and operating a rotary jointer, cutter or cutters, so as to joint pieces of barrel-heading hollow or concave in the middle, in order to make a cooper's or open joint when two pieces of heading are put together.

In the accompanying drawings, Figure 1 is a front view of my boring and jointing machine combined. Fig. 2 is a top view of my revolving jointer detached from the machine. Fig. 3 is a top view of my boring and jointing machine united. Fig. 4 is a direct view of two pieces of heading put together, showing the open joint.

My combined machine is mounted upon any suitable frame, A. The rotary jointer B, Fig. 1, is carried by the shaft C, which receives motion by means of the power-pulley K, Fig. 3. This jointer has two cutters, D. The face of the jointer looks obliquely outward, as indicated by the line *b c*, Fig. 2, so that the corner *d*, Fig. 1, of the cutting-edge projects

further in front than the corner *e*, and begins to cut first. The piece of heading to be jointed is placed upon the bed E, which is made adjustable by means of the thumb-screw F. As the piece of heading is pressed against the cutters, the middle of the piece first meets the cutters, and consequently the joint is cut hollow, as seen in Fig. 4, where two pieces of heading are put together to form a hollow joint.

In making barrel-heads the pieces of heading are laid upon the movable carriage O, and pressed by hand against the bits N, which received motion from the belt M, operated by a pulley on the shaft C, as above described. Any two pieces of heading thus bored will fit together. When a piece is bored, it is immediately put down on the bed E, and jointed as above specified.

I am aware that both plane and concave rotary jointers are in use, but neither of these will cut a concave upon the edge of a piece of barrel-heading. Therefore I do not claim either of these or the boring machine, but confine myself to the peculiar improvements above specified.

My machine is especially intended for making barrels, but it is also applicable to all other casks.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. The above-described rotary jointer B, with its face looking obliquely outward, for the purpose of jointing pieces of heading hollow or concave, and thus making an open joint, substantially in the manner and for the purposes set forth.

2. The construction and arrangement of the above-described jointing and boring machine provided with the rotary jointer B and bed E, and the bits N and movable carriage O, all operated substantially in the manner and for the purpose described.

WILLIAM TRAPP.

Witnesses:

DANIEL BREED,
A. MOORE.