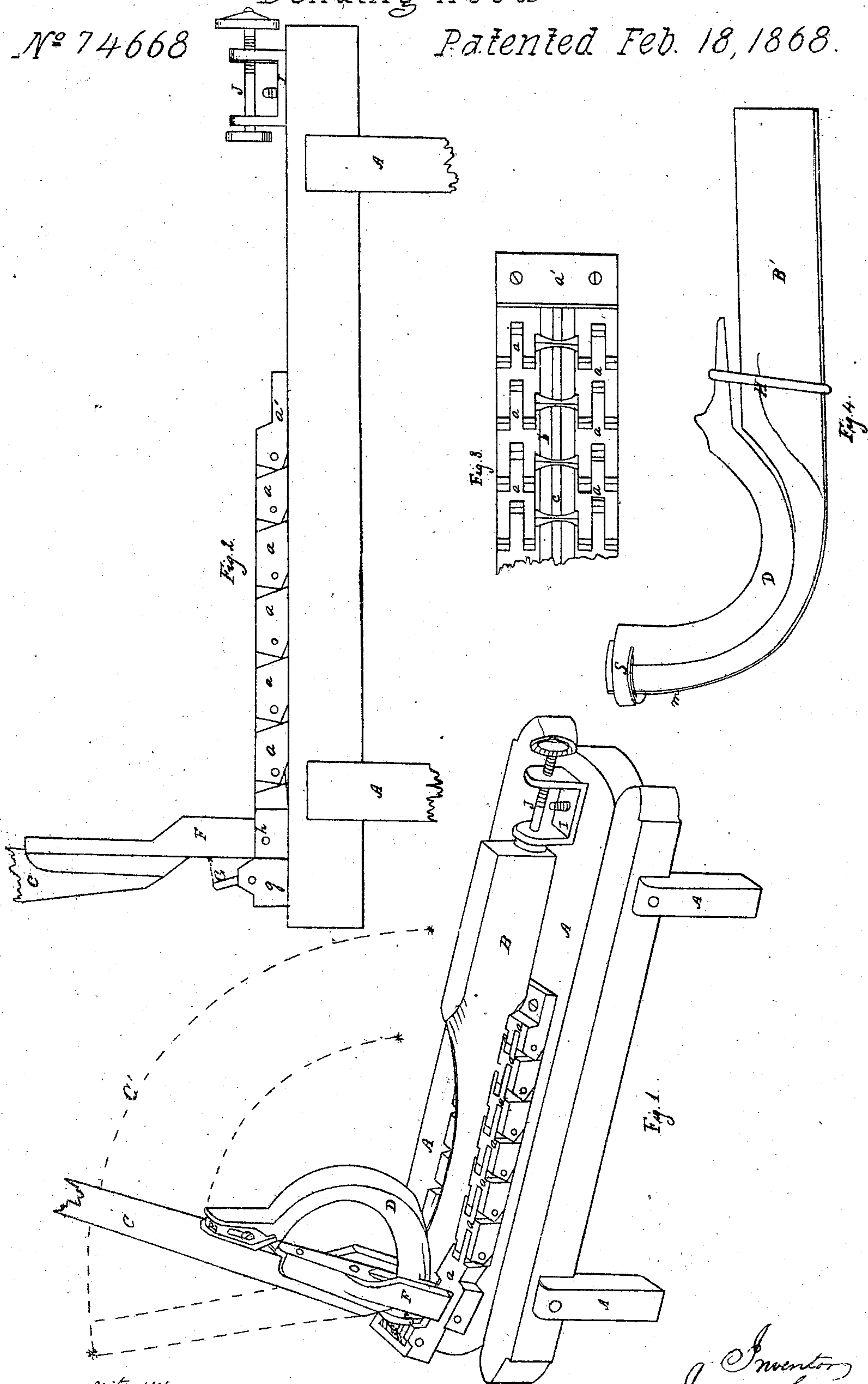


J. Conner.

Bending Wood

N^o 74668

Patented Feb. 18, 1868.



Witnesses

Joseph H. Swan
J. Stover

Inventor
James Conner
By Wm. F. Linn
his attorney

United States Patent Office.

JAMES CONNER, OF RICHMOND, INDIANA.

Letters Patent No. 74,668, dated February 18, 1868.

IMPROVEMENT IN WOOD-BENDING MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES CONNER, in the city of Richmond, county of Wayne, and State of Indiana, have invented a new and useful Improvement in Wood-Bending Machines; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view,

Figure 2 a longitudinal elevation,

Figure 3 represents a section of the flexible chain, and

Figure 4 a view of the former after the process of bending, with the timber attached.

The same letters in the different figures relate to corresponding parts of the machine.

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

A represents the table or bench for supporting the devices. B represents a piece of timber inserted and ready for the operation of bending. A compound chain, composed of sections *a a a a*, riveted together and secured to bench A, at its end *a'*, by screws or in any suitable manner, serves to support the timber laterally during the process of bending, and also to protect its outer surface from fracturing while bending. In order to obviate any contraction of the inner surface of said chain in bending, a channel is made in the same, longitudinally and centrally, as shown at *b c*, fig. 3, to a depth approximate to the plane of the rivets, connecting said chain. For economy and convenience in constructing said chain, I propose to make the same by casting the section *a a a a*, as described, and thus obtain a much cheaper device than can be made in any other manner. D represents the former on which the timber is bent. Said former is connected with lever C, during the operation of bending, in a temporary manner, being held at one end by plate E, the latter having a projecting edge notched to receive the former, D, and hold the same laterally, as seen in fig. 1. The lower end of lever C is attached to a bifurcated socket, under which end and between which bifurcates F the lower end of former, D, terminates in proximity to the pivoted head-block G. The said lower end of former, D, is provided with a solid ring or stirrup, as shown in fig. 4. The aforesaid pivoted head-block G is situated in the box-termination, *g*, of the chain. Sections *h* of said chain are mortised to receive the bifurcates F, into which the latter are secured by bolts.

The operation of bending is as follows: The lever C is raised, as shown in fig. 2, and the timber, after being properly steamed, is placed in the channel of the compound chain, with one end inserted between the bifurcates F, through the stirrup or ring on the end of former, D, and resting against the pivoted head-block G. The opposite end of the timber is secured to the bench by the thumb-screw J. The mortises in sections *h* of the chain into which bifurcates F are secured are greater in length than the corresponding width of said bifurcates, thus allowing the lever C an independent action in the direction shown by dotted lines *C'*, the aforesaid independent action being sufficient to allow the ring or stirrup on former, D, to, clamp the end of the timber B, by a twisting grasp, and thus, before the operation of bending commences, prevents the said former from slipping off or loosing the grasp on the timber during the operation of bending. This arrangement of a rigid ring or stirrup on the end of the former also greatly facilitates the operation of bending, by obviating the use of inconvenient adjustable devices for that purpose. The pivoted head-block G adapts itself to any peculiarity of shape on the end of the timber, and also thus prevents fracturing said timber by the equalized division of its pressure during the operation of bending.

In fig. 1, the devices are shown in the position occupied immediately after the operation of bending begins. To complete the operation the lever C is brought down to a position parallel to bench A, when a clamp, H, as shown in fig. 4, secures former, D, to the timber, when they may be removed to make room for another operation of bending. For the better protection of the timber from fracturing, a metal strap, *m m*, is applied to the timber, by laying the same in the channel of the chain previous to inserting the timber, and thus said strap is secured to the timber.

Having thus fully described my said invention, I will proceed to set forth what I claim, and desire to secure by Letters Patent.

1. I claim the former D, when provided with stirrup S, and operating substantially as set forth, and for the purpose described.

2. I claim also the pivoted head-block G, arranged and operating substantially as set forth, and for the purpose specified.

JAMES CONNER.

Witnesses:

JOHN H. POPP,

JOSEPH RIDGE.