

W. P. Letchworth.

Wood-Bending Machine.

No 81,095.

Patented Aug. 18, 1868.

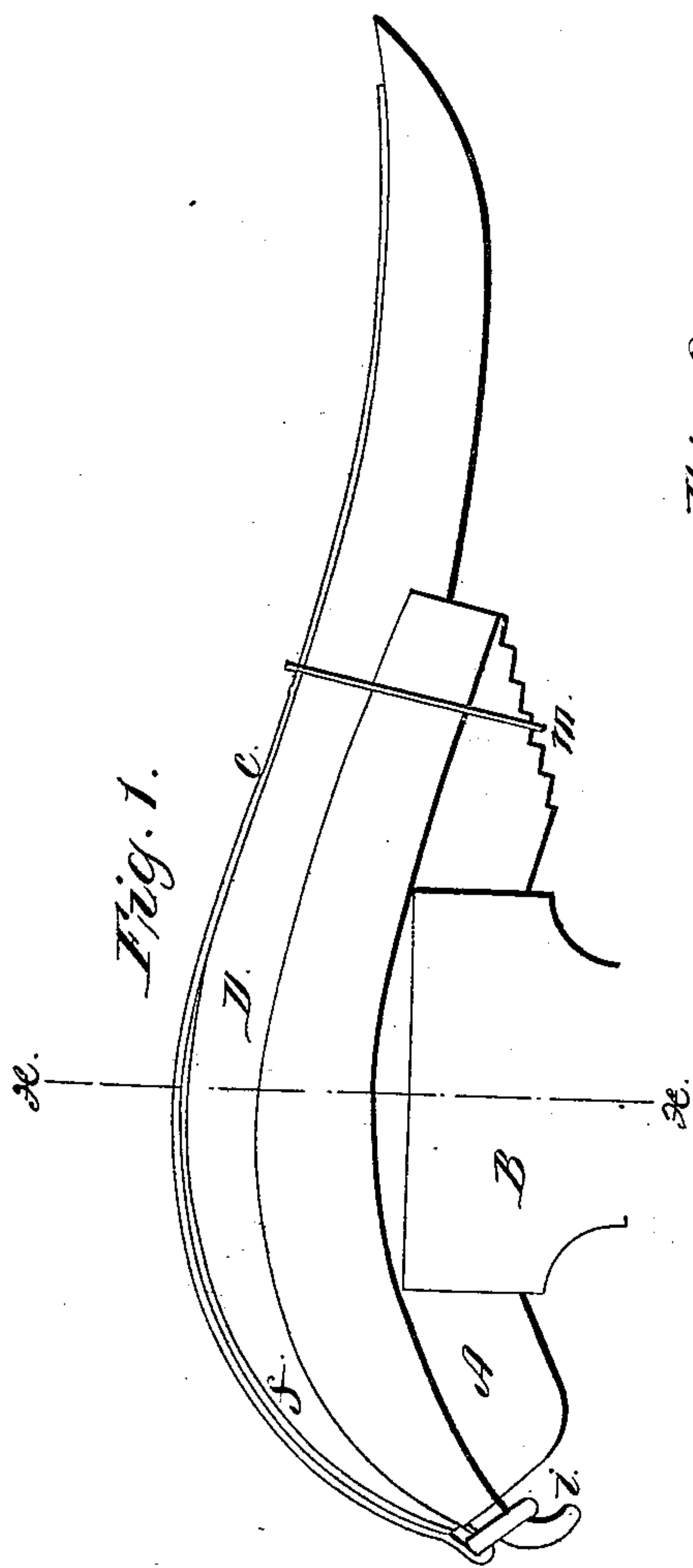


Fig. 3.

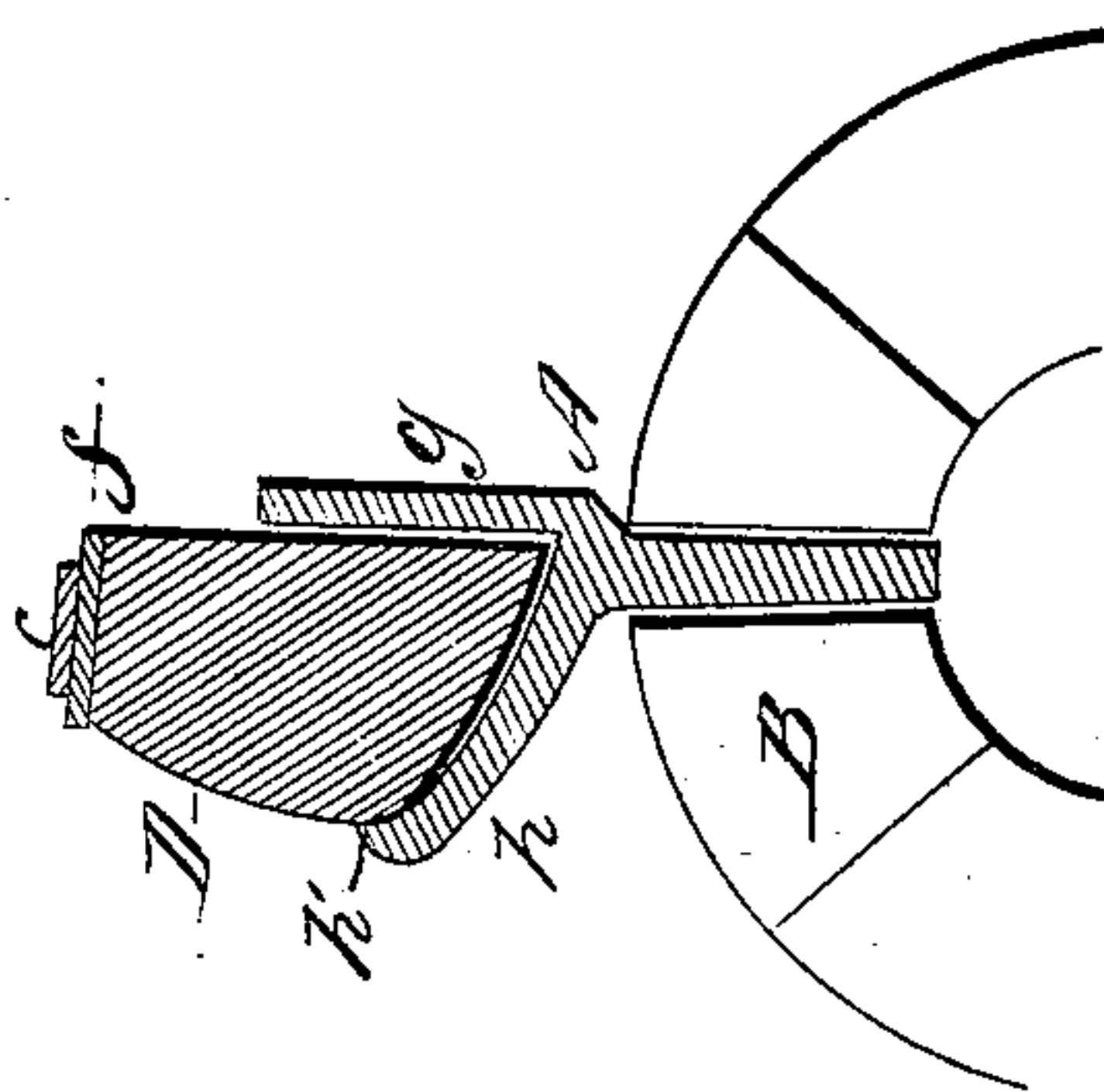
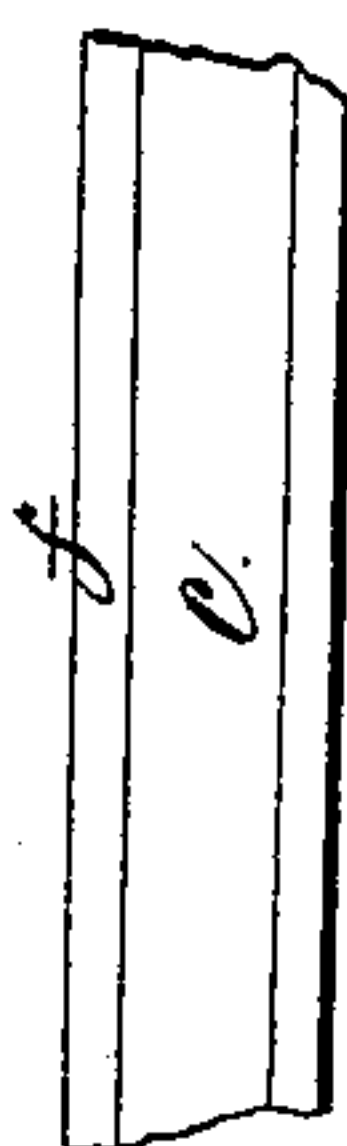


Fig. 2.



Witnesses:
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United States Patent Office.

WILLIAM P. LETCHWORTH, OF BUFFALO, NEW YORK.

Letters Patent No. 81,095, dated August 18, 1868.

IMPROVEMENT IN MACHINES FOR BENDING WOOD.

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, WILLIAM P. LETCHWORTH, of the city of Buffalo, in the county of Erie, and State of New York, have invented a certain new and useful Improvement in Apparatus for Bending Hames; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation.

Figure 2 is a plan view of a portion of the iron strap on the back of the hames, and the auxiliary strip used while bending the latter.

Figure 3, a cross-section, in plane of line *x x*, fig. 1.

Like letters designate corresponding parts in all the figures.

The design of my invention is the construction of an apparatus by which hames can be properly bent after they have been fashioned to the required shape, which process can be accomplished at a much less expense before bending than afterwards.

The invention consists of a frame or former, provided with a groove or channel, made to conform, or nearly so, with the inner bevelled edge of the hames, in which the latter is retained in proper position while it is being bent. It also consists, in combination therewith, of the use of a thin slip of metal on the back of the hames, between it and the strap, during the process of bending, for the purpose of preventing the wood from breaking or splintering at the edge, and reducing the friction.

In the drawings, A represents the former, preferably cast in iron, of the required shape; B, the frame or vise for holding the same; D, the wooden portion of the hames, and *e* the usual metallic strap fastened to the back or outer edge. *f* is a thin strip of metal, of a width equal to or a little more than that of the back of the hames, which is temporarily inserted between the strap *e* and that portion of the hames which is to be bent.

The casting A is formed with two flanges, *g h*, the former vertical, to fit the inner side of the hames, and the latter diverging therefrom, so as to conform with the bevelled side, and made of sufficient width to form a channel of the shape of a bent hames, which will sustain the latter in proper position while it is being bent. One end of the form A terminates in a hook, over which engages the ring *i*, at the lower end of the hames. The opposite end is provided with a series of notches or steps, *n*, in which a link, *m*, or equivalent, which slides on the hames and notched end of A, is adjusted for retaining the hames in the latter after it has been bent.

The metallic strip *f* being made of the full width of the back of the hames, and of a length equal to the bent portion, hugs the latter more tightly than the strap *e* otherwise would, that, being usually made of less width than the hames does not protect the edges, which are very liable to break and splinter up, but which the use of strip *f* effectually prevents.

The great advantage of my improvement is, that it enables the wooden portion D of the hames to be properly fashioned before they are bent, which, being readily accomplished by machinery, effects a great saving over the ordinary method of first bending the timber and then shaping the hames by hand.

Each hames being bent on an inflexible form, must render them all of the same uniform curvature.

The hames being worked to the proper size, and shaped and ironed, are prepared by steaming in the usual manner before bending, which may be effected by lever or other mechanical power over the described apparatus.

Another advantage is, that the strap *e* is more easily fastened to the hames before it is bent than afterwards, and it fits more closely than it could be made to if not applied till after the hames are bent.

In bending hames according to the old method, an iron strap is secured temporarily to the hames, which has afterwards to be removed, in order to finish the latter, the use of which my improvement dispenses with, as the same strap that is employed while bending the hames remains permanently attached, as before stated.

What I claim as my invention, is—

The herein-described device for bending hames, consisting of the former, A, notched at one end, and provided with a hook at the other, and employed in connection with the strip *f*, all constructed and arranged in the manner and for the purpose set forth.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

WM. P. LETCHWORTH.

Witnesses:

JAY HYATT,

ALBERT HAIGHT.