E. CONRAD.

Attachment for Wood-Working Machinery.

No. 210,919. Patented Dec. 17, 1878.

Fig. 1.

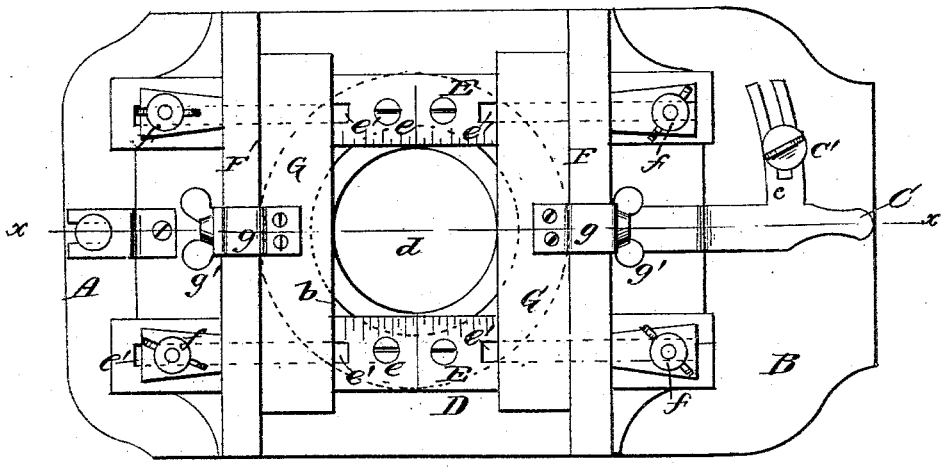
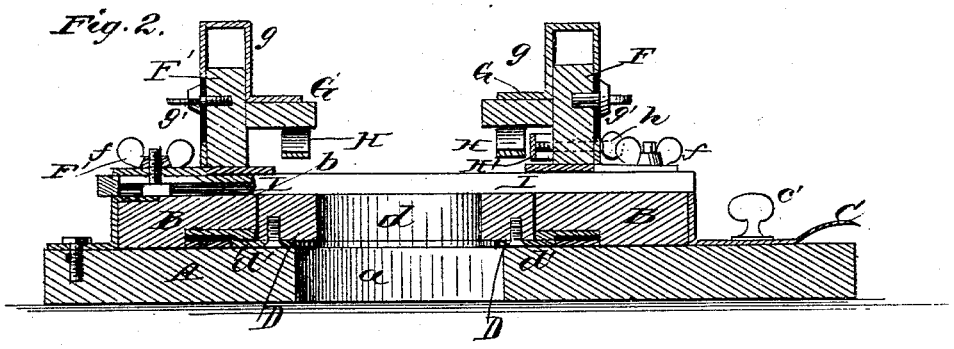


Fig. 2.



Witnesses:

Fred. G. Dieterich

Edgar C. Walford

Inventor

Eli Conrad

by DeWitt C. Allen

Atty.

UNITED STATES PATENT OFFICE.

ELI CONRAD, OF MARYSVILLE, OHIO.

IMPROVEMENT IN ATTACHMENTS FOR WOOD-WORKING MACHINERY.

Specification forming part of Letters Patent No. **210,919**, dated December 17, 1878; application filed December 15, 1877.

To all whom it may concern:

Be it known that I, ELI CONRAD, of Marysville, in the county of Union and State of Ohio, have invented certain new and useful Improvements in Attachments for Wood-Working Machinery; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being made to the accompanying drawing, forming a part of this specification, and in which—

Figure 1 is a top-plan view, and Fig. 2 is a longitudinal sectional view on the line *x x*, Fig. 1.

The object of my invention is to provide a carriage for feeding wood-working machinery where it is necessary to plow, groove, mold, or rabbet circles or parts of circles, such as in window and transom sashes, which has heretofore been imperfectly done by hand with chisels, and at great expense; and to this end the invention consists in the combination and arrangement of parts, as will be hereinafter fully described, and pointed out in the claims.

In the drawing, A represents a table provided with a hole, *a*, through which the head-block, carrying bits for molding, plowing, or grooving, passes. B represents a second table, removably pivoted to one end of table A, and which is provided with a circular hole, *b*, directly over hole *a* in table A. This table is adapted to be moved around on table A in the arc of a circle by means of a handle, C, for a purpose hereinafter described, and is adapted to be secured in any desired position by the slotted curved plate *c* and set-screw *c'*, arranged at the opposite end from which said table is pivoted.

D represents a revolving circular wooden or iron plate, provided with a circular hole, *d*, and arranged to fit within the circular hole *b* in table B, said table being rabbeted out on its under side, so that the flange *d'* of the plate D will be flush with the under side of said table when placed therein. E E represent two slotted cross-bars, secured upon opposite sides of the circular plate D by screws *e e*. F F' represent adjustable guides, secured in the slots *e' e'* of the cross-bars by means of the set-screws *f f*. These guides are provided with supports G G, secured thereto by the slotted pieces *g g*, fitting over said guides, and the set-screws *g' g'*, whereby said supports are adapted to be vertically and transversely adjustable, if desired. Each support is provided on its under side with a spring, H, for holding the material in place being operated upon, and also for accommodating irregularities in width or thickness of same.

Secured to the inner side of guide F is a spring, H', which is adjusted by the set-screw *h*, passing through said guide, and by which the material to be operated upon is securely held in place, although allowed sufficient yielding motion when required. The guide F is also provided at its lower end with the strip I, to prevent small sash from dropping down after passing inside of the cross-bars. The cross-bars are provided with a scale of inches and fraction of inches for accurately adjusting the guides.

Operation: The sash to be molded or plowed is placed upon the cross-bars E E, and then forced under the guides and retained in place by the springs. The attachment is then placed upon the table A, and secured thereon by the slotted curved plate and set-screw. Power then being applied, straight sides of sash may be worked by pushing the sash through the attachment until the bit approaches the circular part of the sash, when the attachment, with the sash, may be turned around in either direction until the whole is finished as desired. The attachment may be further moved or adjusted, to suit the necessities of the case, by means of the handle C, attached to the table B.

I claim as my invention—

1. The combination, with the table A, provided with the hole *a*, of the table B, provided with the movable circular plate D, having hole *d*, and mechanism connected therewith, substantially as described, for holding the article to be operated upon, substantially as and for the purpose specified.

2. The combination, with table A, having hole *a*, of the adjustable table B, provided with movable circular plate D, having hole *d*, substantially as and for the purpose herein shown and described.

3. The combination, with the guides F F′, of the supports G G and springs H H, substantially as and for the purpose herein shown and described.

4. The combination of the adjustable guides F F′, adjustable supports G G, springs H H, and adjustable spring H′, substantially as and for the purpose herein shown and described.

5. The combination, with the table B and movable plate D, of the slotted cross-bars E E, adjustable guides F F′, supports G G, springs H H, and adjustable spring H′, substantially as and for the purpose herein shown and described.

ELI CONRAD.

Witnesses:
SHOBAL P. MULFORD,
CHRISTIAN M. GRAHAM.