

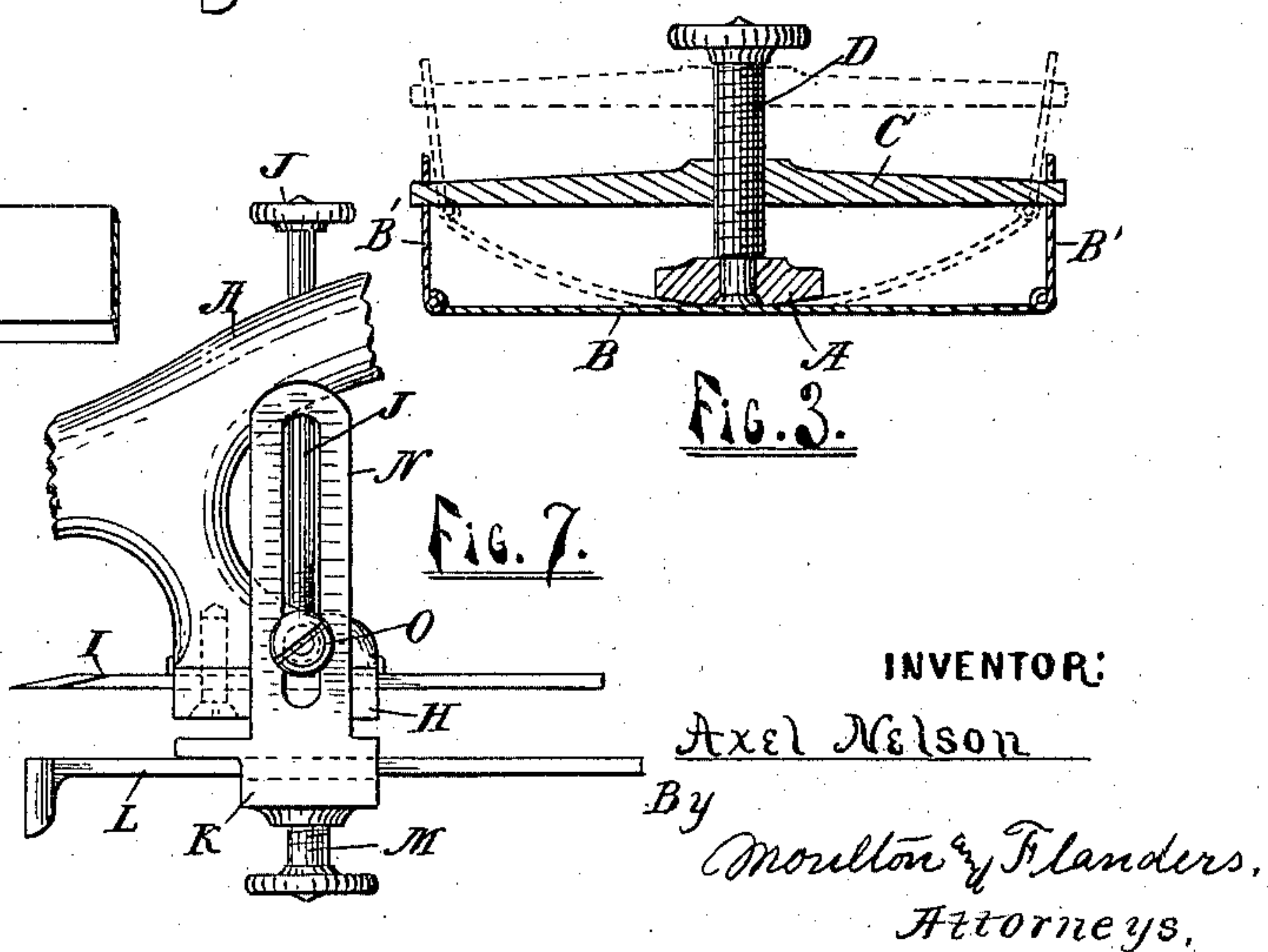
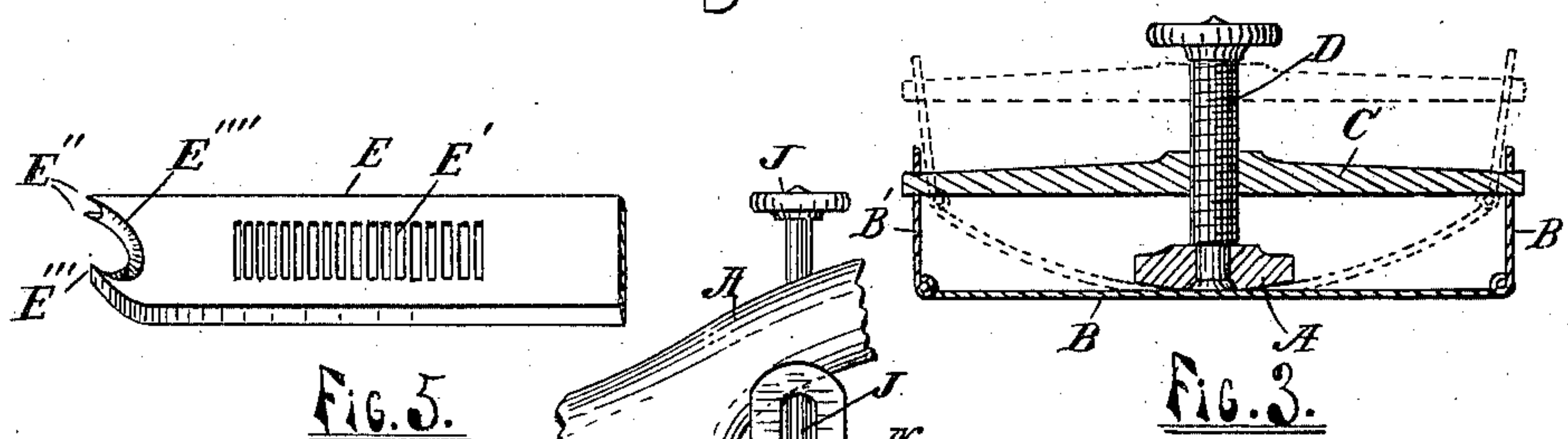
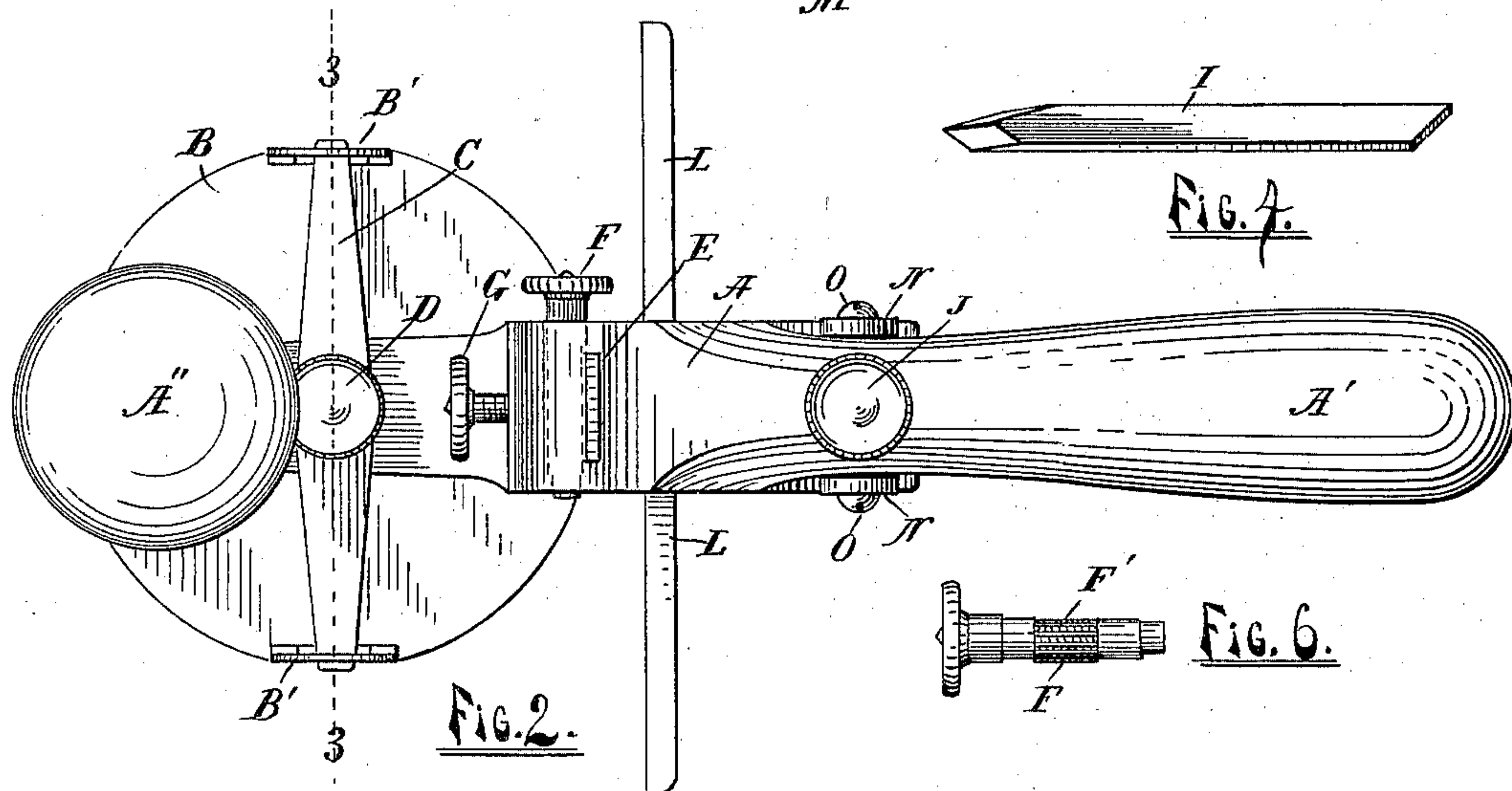
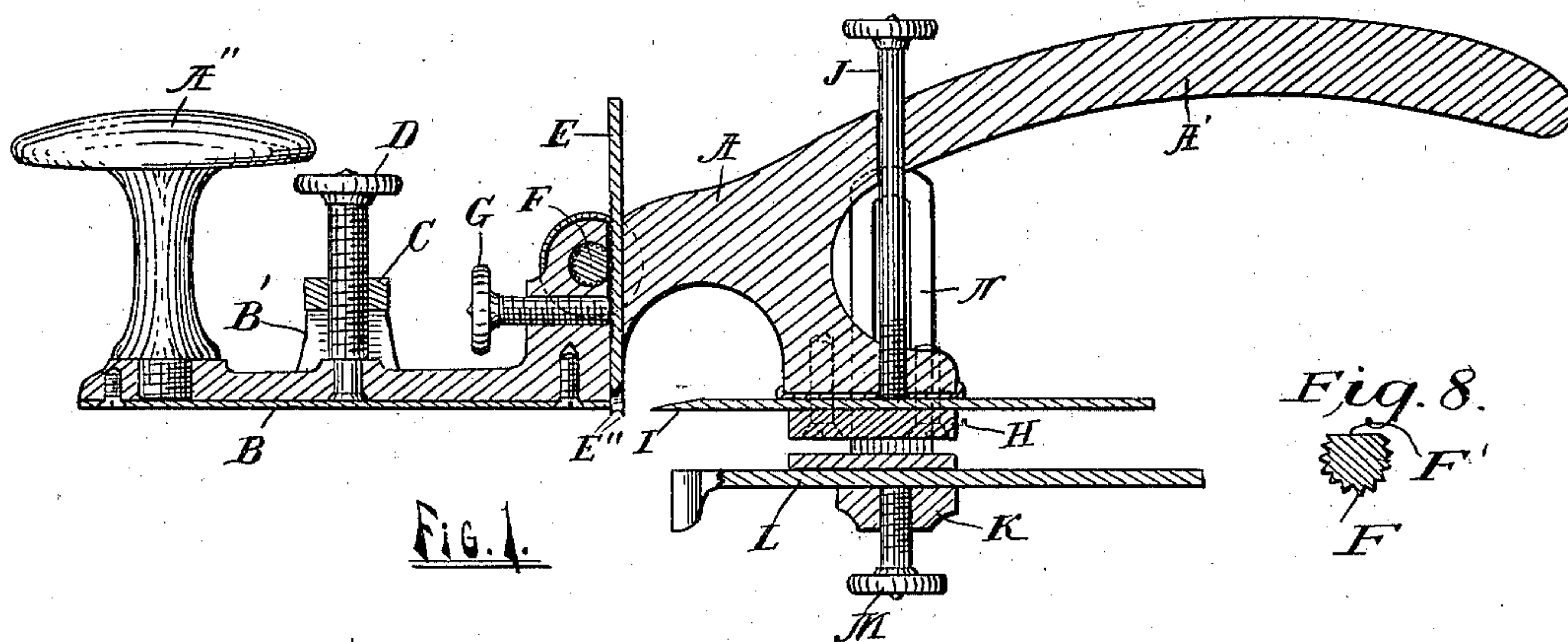
**No. 656,656.**

**Patented Aug. 28, 1900.**

**A. NELSON.**  
**VENEER TRIMMER.**

(Application filed Dec. 16, 1899.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

AXEL NELSON, OF GRAND RAPIDS, MICHIGAN.

## VENEER-TRIMMER.

SPECIFICATION forming part of Letters Patent No. 656,656, dated August 28, 1900.

Application filed December 16, 1899. Serial No. 740,518. (No model.)

*To all whom it may concern:*

Be it known that I, AXEL NELSON, a citizen of the United States, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Veneer-Trimmers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improved veneer-trimmer; and its object is to provide the same with certain new and useful features herein-after more fully described, and particularly pointed out in the claims, reference being had to the accompanying drawings, in which—

Figure 1 is a longitudinal vertical section of a device embodying my invention; Fig. 2, a plan view of the same; Fig. 3, a transverse section on the line 3 3 of Fig. 2; Fig. 4, a detail of the horizontal trimming-cutter; Fig. 5, an enlarged detail of the vertical grooving-cutter; Fig. 6, a detail of the adjusting-pin; Fig. 7, a detail in side elevation of a portion of the device, and Fig. 8 a transverse section of the pinion F.

Like letters refer to like parts in all of the figures.

A represents a suitable frame formed of a suitable casting, having a handle A' extending therefrom at one end and a knob A'' at the other end, by which knob and handle the tool is manipulated when in use.

B is a flexible plate attached to the horizontal under side of the frame and of substantially-circular form, provided at its opposite sides with upwardly-extended straps B', hinged to the edge of the plate.

C is a transverse bar engaging openings in the straps B' at its respective ends and having a screw-threaded opening at the middle engaged by a vertical screw D, rotatively attached to the frame, whereby the bar is raised and lowered to bend the plate B in a more or less convex form for working on concave surfaces, or concave for working on convex surfaces, or adjusting the plate flat for working plane surfaces by turning the screw D to raise or lower the bar C.

E is a vertical grooving-cutter extending through an opening in the frame and adjusted

by means of a pinion F, extending transversely through the frame and rotative therein, said pinion being adapted to engage a rack E' in the cutter E and also provided with a flattened side F', whereby when the pinion is turned with said side toward the grooving-cutter E the latter may be withdrawn from the frame.

G is a set-screw for holding the cutter E in place when adjusted by the pinion, this grooving-cutter consisting of a suitable piece of steel, as shown in Fig. 5, having spurs E'' at its forward angles to sever the timber at each side of the proposed groove and a chisel E''' to follow the spurs and remove the timber and also having the lateral throat E'''' between the spurs and chisel for the escape of the chips.

I is a horizontal trimming-blade (shown in detail in Fig. 4) arranged with its cutting edges in the plane of the lower face of the flexible plate B and clamped between a removable block H, attached to the under side of the frame A, and binding-screw J, extending upward through the frame.

K is a vertically-adjustable head in which is an adjustable gage-bar L, secured by means of a set-screw M. This head is provided with parallel slotted plates N, extending upward in vertical grooves in the side of the frame, whereby the head is vertically adjusted and secured by screws O passing through the slots. It will be observed that the gage and blade I and also that the blade I and grooving-cutter E may be transposed at pleasure.

From the foregoing description the operation of my device will be readily understood.

For trimming veneers attached to the edge of the work and projecting above the corner of the same the grooving-cutter E is raised out of contact with the work and the gage L adjusted so that it will run on the surface of the veneer, with the blade I projecting sufficiently beyond the same to sever the veneer and the plate B set either flat or bent, as may be necessary, to traverse the surface of the work at right angles to the surface of the veneer. When thus adjusted and applied, the blade I will sever the veneer exactly in the plane of the surface contacted by the plate B and leave a true square corner to the work. For trimming veneers laid on the sur-



face of the work and projecting over the edge of the same the blade I is put in place of the cutter E and the gage L set to engage the edge of the work. For cutting grooves parallel to the edge of the work the blade I is set back out of contact with the work and the grooving-cutter E lowered sufficiently to cut the groove, and by adjusting the gage L and applying the same to the edge of the work the groove will be made by the cutter E at a uniform distance from the edge of the work. If required to cut a deeper groove than can be made by one stroke, the cutter E is lowered by slightly turning the pinion F at each succeeding stroke until the groove is of sufficient depth. In the event that a groove is to be at a greater distance from the edge of the work than the gage can be set the blade I and block H, together with the head K and gage L, can be removed by detaching the block H, in which event there will be nothing below the face of the plate B, and the tool can then be traversed over the surface of the work in any direction. For engaging the edge of raised panels the gage is put in place of the blade I and the head K detached. For grooving or cutting on the edge of the work the cutter I or grooving-cutter E is put in place of the gage L and vertically adjusted. Various other changes can be made adapting the tool to various other uses.

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

1. The combination of a frame having a suitable handle, a grooving-tool inserted in the frame, a flexible plate attached to the frame, a transverse bar connected at its ends to the respective sides of the plate, and a screw engaging a threaded opening in the bar, substantially as described.

2. The combination of a frame having a handle at one end and a knob at the other end, a vertically-adjustable grooving-tool in the frame and provided with a rack, a pinion rotative in the frame and engaging the rack in the tool, a flexible plate attached to the frame at right angles to the grooving-tool, a transverse bar above the plate, straps hinged to the plate and engaging the ends of the bar, a vertical screw rotative in the frame and engaging a screw-threaded opening in the bar, substantially as described.

3. The combination of a frame having a handle, and a horizontal surface to traverse the surface of the work, a cutting-blade in the plane of the horizontal surface and attached to the frame, and a gage to engage the edge of the work, substantially as described.

4. The combination of a frame having a handle, a flexible plate attached to the frame to traverse the surface of the work, means for bending said plate, a blade attached to the frame, and having its cutting edge in the plane of the surface of the flexible plate, and a gage to traverse the edge of the work, substantially as described.

5. The combination of a frame having a handle at one end and a knob at the other end, a horizontal flexible plate attached to the frame, means for bending said plate, a horizontal blade attached to the frame and having its cutting edge in the plane of the under surface of the flexible plate, and a vertically and horizontally adjustable gage beneath the cutting-blade to engage the edge of the work, substantially as described.

6. The combination of a frame having a handle at one end and a knob at the other end, a flexible plate attached to the frame, a transverse bar attached to the respective edges of the plate, a screw engaging a threaded opening in the bar, a horizontal blade having its cutting edge in the plane of the under surface of the flexible plate and adjustably secured to the frame, and a vertically-adjustable head having a horizontally-adjustable gage attached thereto, substantially as described.

7. The combination of a frame having a handle and a knob, a horizontal plate attached to the frame, a vertical grooving-tool near the edge of the plate and vertically adjustable, a horizontal blade having its cutting edge in the plane of the under surface of the plate and longitudinally adjustable, a removable block beneath the blade, and an adjustable gage detachably secured to the frame, substantially as described.

8. The combination of a frame having a handle at one end and a knob at the other end, a horizontal flexible plate attached to the frame, a transverse bar above the plate, straps hinged to the opposite sides of the plate and engaging the ends of the bar, a screw rotative in the frame and engaging a threaded opening in the bar, a vertically-adjustable grooving-tool in the frame having a rack, a pinion engaging the rack, a horizontal blade in the plane of the flexible plate, a removable block and a set-screw to hold the blade, a head having parallel slotted plates to engage grooves in the frame and adjustably secured thereto, and a gage adjustable in the head, substantially as described.

9. The combination of a frame having a handle, and a horizontal under surface, a vertically-adjustable grooving-cutter having a rack in its side, and a pinion rotative in the frame and engaging the rack, and also having a flattened side to release the tool, substantially as described.

10. The combination of a frame having a handle, a vertical and a horizontal cutting-tool interchangeably secured in the frame, and a gage attached to the frame and interchangeable with the horizontal cutting-tool, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

AXEL NELSON.

Witnesses:

LUTHER V. MOULTON.

MILES V. EASTERBY.