

C. F. BRAND.

Machines for Bending Sheet-Metal.

No. 143,558.

Patented Oct. 14, 1873.

FIG. 1

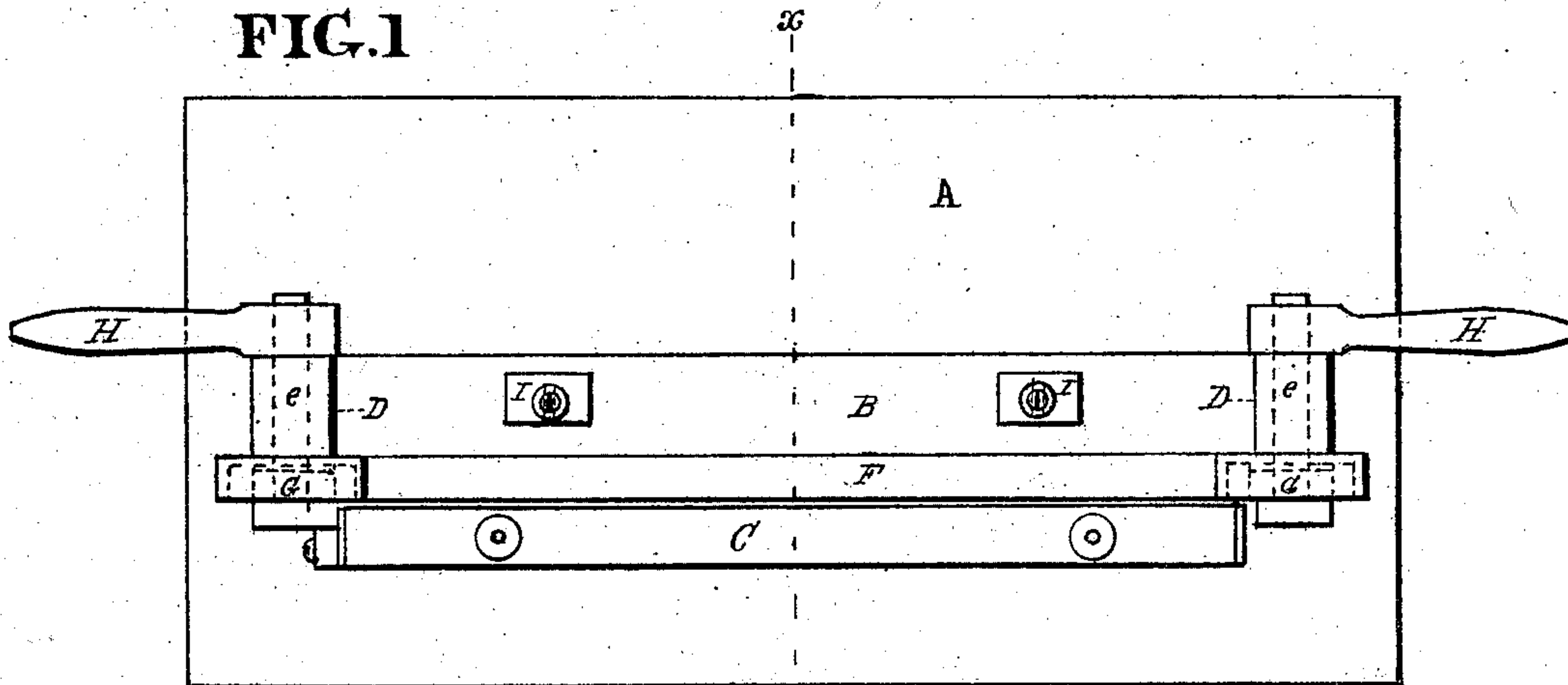


FIG. 2

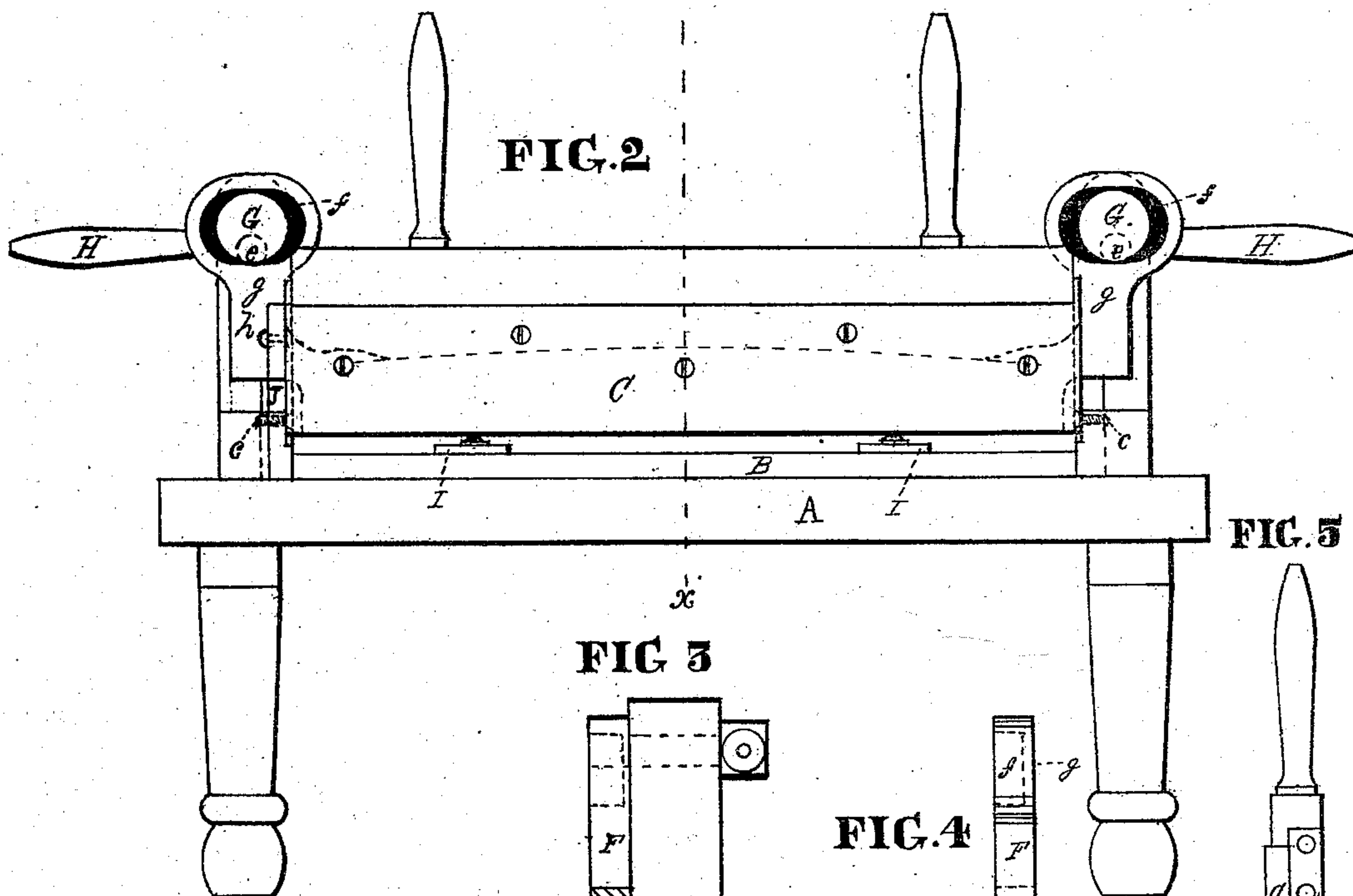


FIG. 3

FIG. 4

FIG. 5

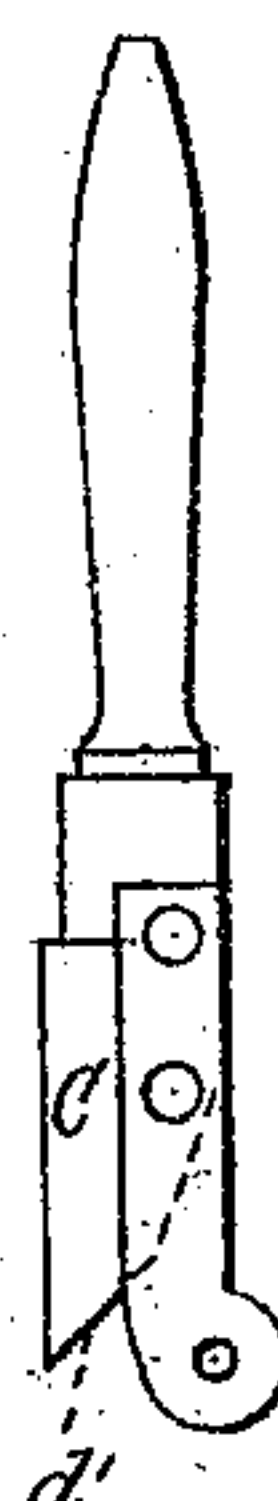
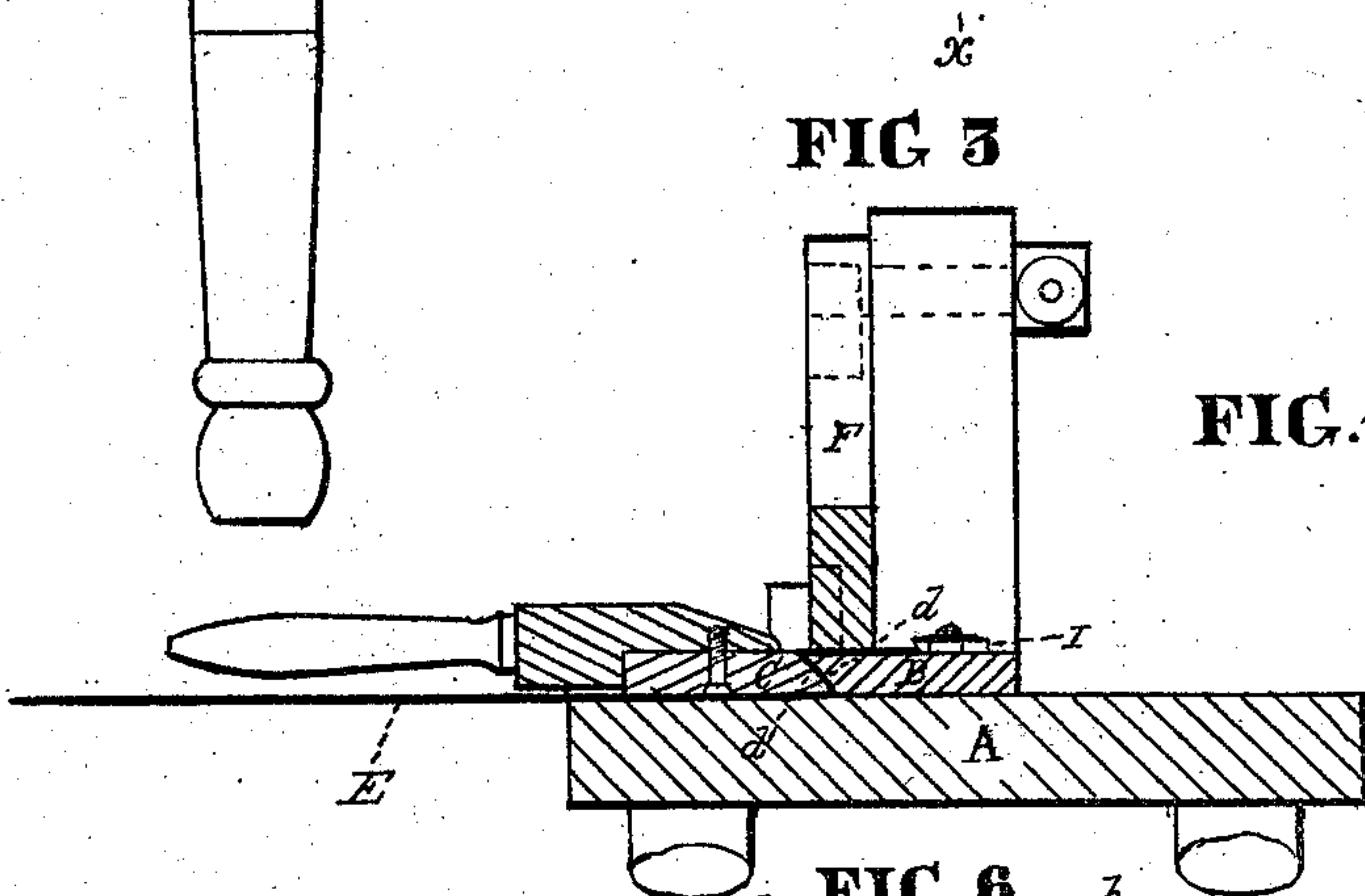
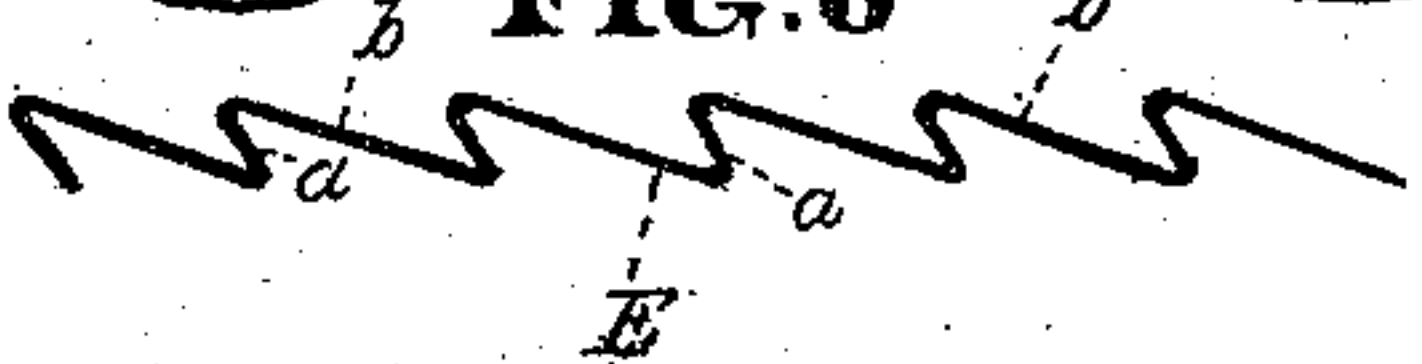


FIG. 6



Witnesses

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Stephen Ustick



# UNITED STATES PATENT OFFICE.

CHARLES F. BRAND, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF  
ONE-HALF HIS RIGHT TO PHILADELPHIA ARCHITECTURAL IRON  
COMPANY.

## IMPROVEMENT IN MACHINES FOR BENDING SHEET METAL.

Specification forming part of Letters Patent No. 143,558, dated October 14, 1873; application filed  
March 11, 1873.

*To all whom it may concern:*

Be it known that I, CHARLES F. BRAND, of the city of Philadelphia and State of Pennsylvania, have invented a Machine for Making Sheet-Metal Plaster-Laths, of which the following is a specification:

My invention relates to the combination of a stationary plate having a beveled edge and a lever-plate having a corresponding beveled edge with a bench, in such a manner as to form a succession of angular grooves in sheets of metal for holding the plaster, the sheets being held securely on said stationary bevel-plate during each operation of the lever by means of a horizontal bar while in a state of rest, upward and downward movements being given to said bar, for receding it from the sheets for their forward movements, and holding them securely during the formation of the grooves, by means of eccentrics or their equivalents.

Figure 1 is a plan view of the machine. Fig. 2 is a front elevation of the same. Fig. 3 is a cross-section at the line *x x* of Figs. 1 and 2. Fig. 4 is an edge view of the stationary form-plate B. Fig. 5 is a like view of the lever-plate. Fig. 6 is a cross-section of a sheet of iron after it has been passed through the machine.

Like letters in all the figures indicate the same parts.

A is a bench, to which the several parts of the machine are connected for forming sheet-metal laths, having short receding angles *a* and surface angles *b* for confining the plaster, as shown in Fig. 6. B is a form-plate permanently connected to the bench A, and C a lever-plate having fulcrum-pins *c c*, which project from the housings D D. The plate B and lever-plate C have, respectively, beveled edges *d* and *d'*, whereby the angles *a b* are formed in the sheet E, when the lever is brought to its horizontal position, as seen in Fig. 3. F is a horizontal clamping-bar for holding the sheet securely on the form-plate B during the formation of the angles. It is operated by means of

eccentrics G G on the stud-pins *e e*, which project from the sides of the levers H H, the eccentrics moving in the recesses *f f* of the arms *g g* of the bar. The distance apart of the receding angles *a* is regulated by means of the adjustable stops I I. (Seen more clearly in Fig. 1.)

The operation is as follows: The clamping-bar F having been brought to its elevated position, as seen in Fig. 2, and the lever-plate C to its vertical position, as represented, it turning freely upon its fulcrum-pins *e e*, one edge of the sheet of iron is placed against the gage-stops I I, and the clamping-plate F is brought down and held firmly on the sheet E by the action of the eccentrics G G, as the levers H H are brought to a reversed position. Then the pivoted prop J, which is hung by means of the pin *h* to the lever-plate C, and holds it in its elevated position, is swung outward at its free end to disengage it from the bench A, and the lever-plate C is brought down to the horizontal position, as seen in Fig. 3, thereby bending the sheet and forming a surface angle, *b*, and receding angle *a* at one operation. The lever-plate C and clamping-bar F are then elevated, as before, and the sheet moved forward, with the angle *a* resting against the gage-stops I I, and the clamping-bar F and lever-plate C again being brought down to their lower position to form another pair of angles, *a b*, to the sheet, and so on over its whole surface, bringing the cross-section of the sheet into the form represented in Fig. 6.

I claim as my invention—

The combination of the beveled-edge lever-plate C and stationary bevel form-plate B with the bench A and clamping-bar F, for forming the angles *a b* of the sheets E, substantially as described.

CHARLES F. BRAND.

Witnesses:

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