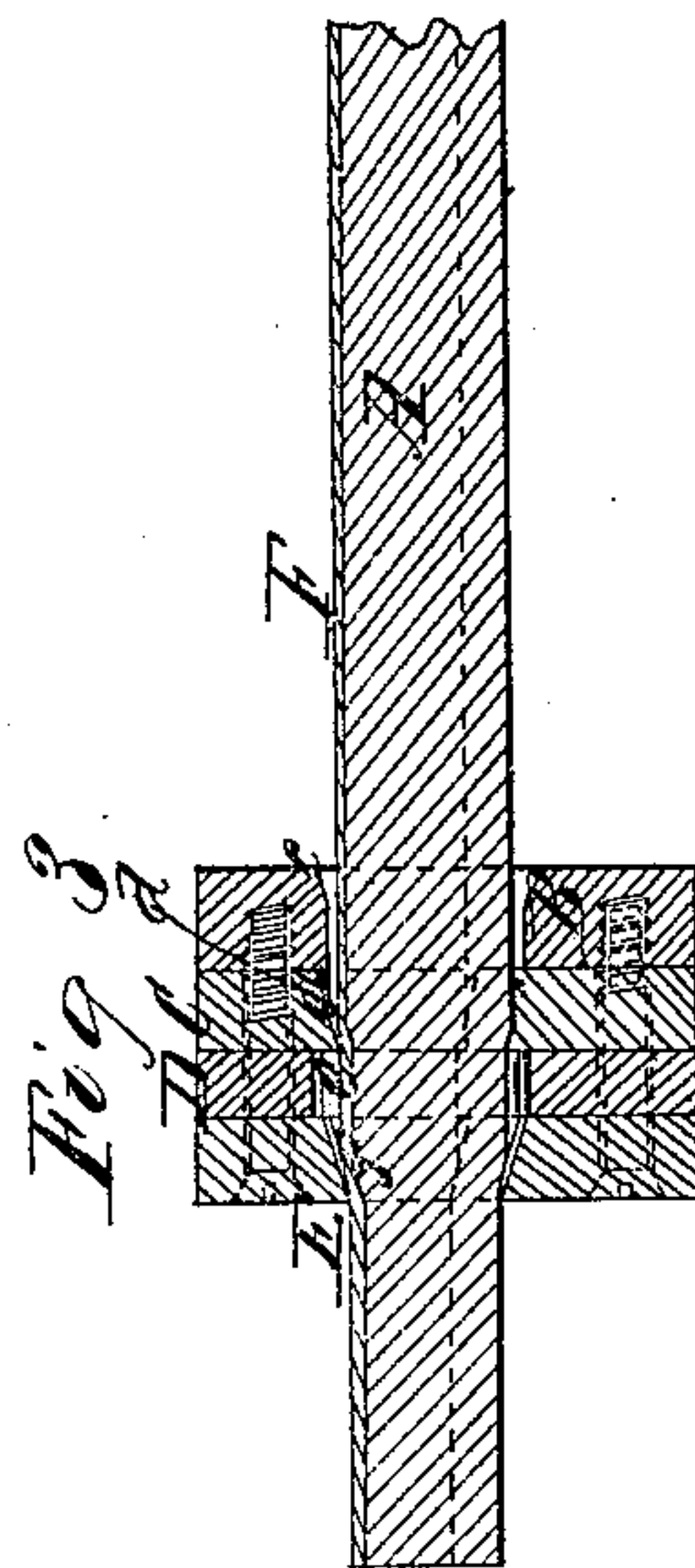
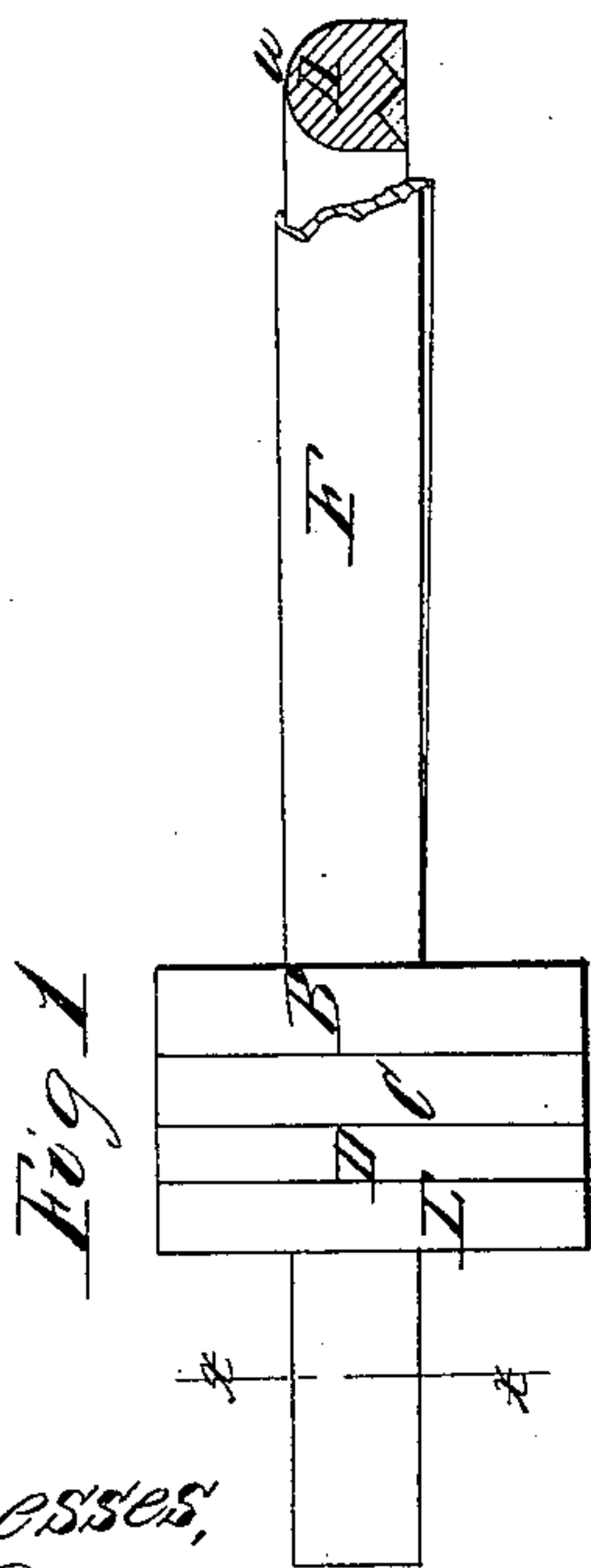
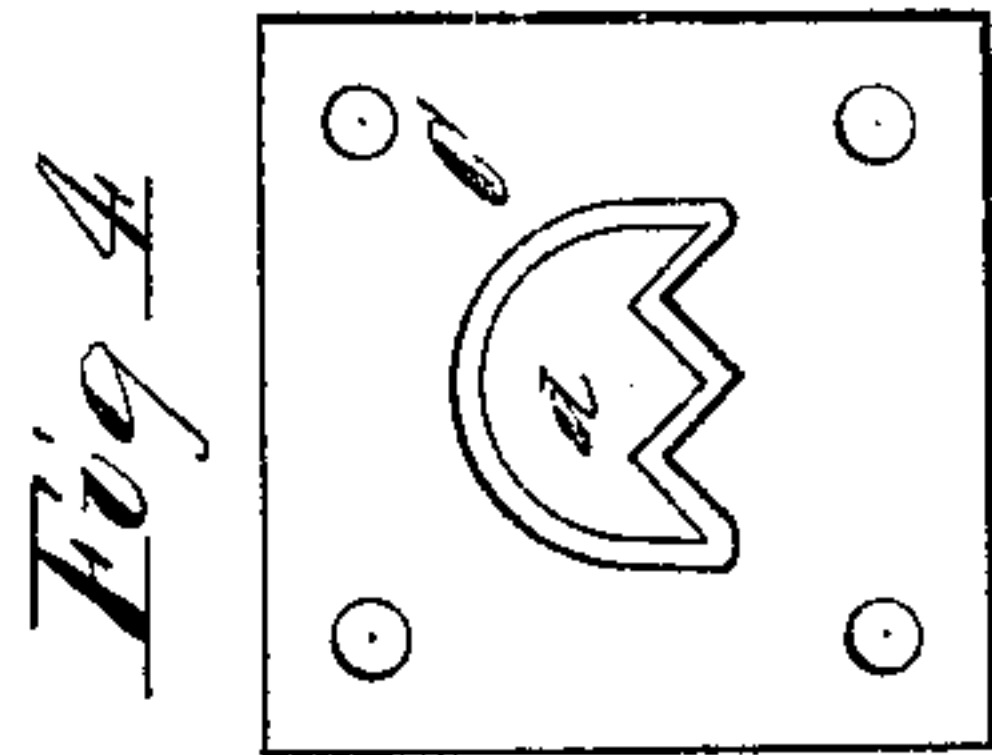
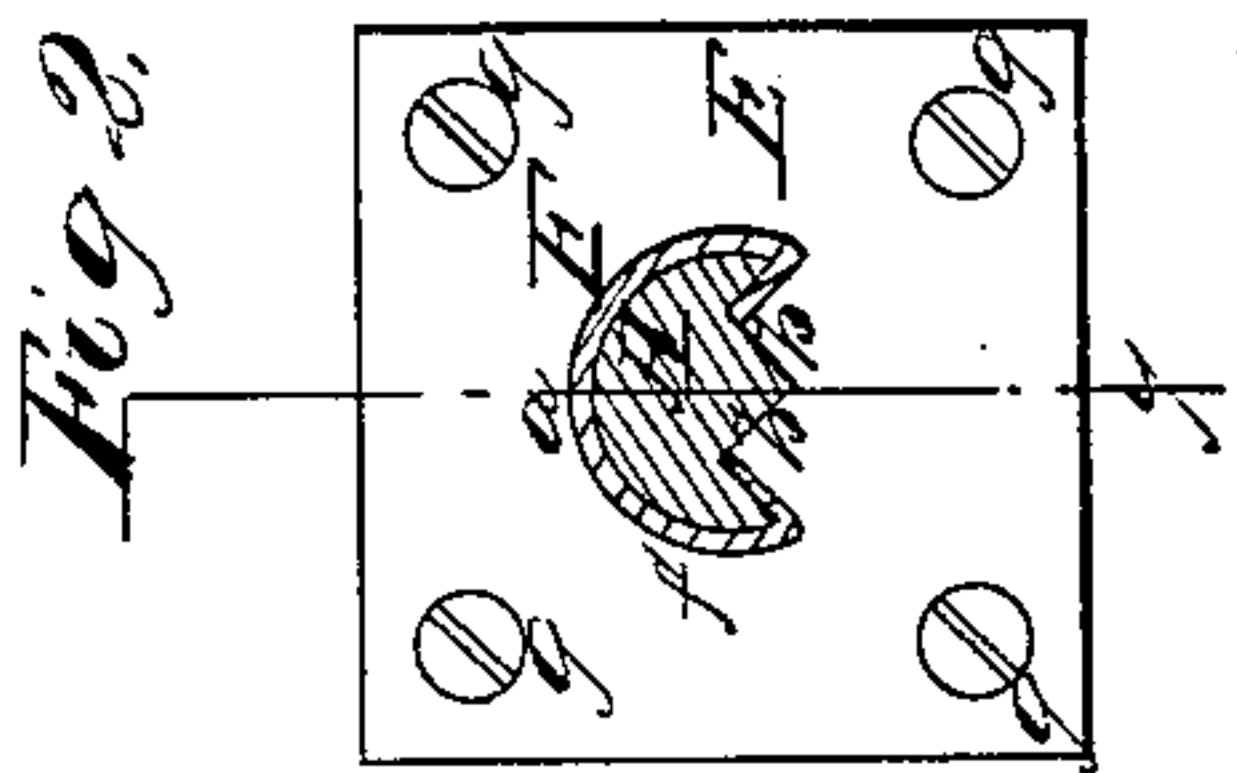


A. J. Campbell,

Covering Sash with Sheet-Metal.

N^o 43,008.

Patented June 7, 1864



Witnesses,

*J. H. Hall
Chas. Reed*

Inventor,

A. J. Campbell

UNITED STATES PATENT OFFICE.

ANDREW J. CAMPBELL, OF NEW YORK, N. Y.

IMPROVED TOOL FOR MAKING METALLIC SASHES.

Specification forming part of Letters Patent No. 43,008, dated June 7, 1864.

To all whom it may concern:

Be it known that I, ANDREW J. CAMPBELL, of the city, county, and State of New York, have invented a new and Improved Tool or Implement for Manufacturing Metallic-Covered Sashes for Show-Cases and other Articles which are Provided with such Sashes; and I do hereby declare that the following is a full, clear, and exact description of the same, which will enable any one skilled in the art to make and use the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side view of my invention; Fig. 2, a transverse vertical section of the same; Fig. 3, a longitudinal section of the same taken in the line *yy*, Fig. 2; Fig. 4, a detached view of one of the dies of the same.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to a new and improved tool for covering with sheet metal the wooden bars or rails of sashes, such as are used for show-cases and for similar purposes.

The object of the invention is to obtain a tool for the purpose specified which will perform the work at a single operation and in a perfect and expeditious manner.

A represents a portion of a wooden bar or rail designed for a metallic-covered sash. This rail is of the usual form, semi-cylindrical at one side, *a*, and having two longitudinal V-shaped grooves, *b b*, at its opposite side, as shown in Fig. 2, the semi-cylindrical side *a* being at the outer side and the grooves *b b* at the inner side, to receive the edges of the glass plates.

B represents a block of hard wood, in which a hole, *c*, is made corresponding in form to a transverse section of the rail A, but larger and made of flaring form gradually contracting from the outer to the inner side of the block B, as shown clearly in Fig. 3. The block B may be of any suitable or desirable thickness, and to it there is secured a metal plate, C, which may be of iron or steel, and having a hole, *d*, made through it precisely similar to the hole *c* of the block B, but of rather smaller dimensions and of slightly-flaring form, like *c*.

D is a wooden block at the opposite side of the plate C, and having a hole, *e*, made in it to admit of the rail A passing through it, the hole *e* being of any proper form.

E is a plate, which should be of steel, and has a hole, *f*, made through it rather smaller than the hole *d* of C, but of similar form.

The block B, plate C, block D, and plate E are all secured together by screws or bolts *g*.

The operation is as follows: The metal F, with which the rail A is covered, is cut of a suitable width, placed longitudinally on the rail A, and one end of the latter with the metal upon it is inserted in the hole *c* and forced through the same, as well as through the hole *d* of plate C, the hole *e* of block D, and the hole *f* of plate E. The rail and plate E are drawn entirely through the tool. The hole *c* in the block B bends the metal F around the rail, the hole *d* in plate C still further compressing the metal around the rail, while the hole *f* of plate E compresses the metal snugly around the rail and completes the work. The wooden block D merely serves to keep the two plates C E at a proper distance apart, its hole *e* not performing any function toward covering the rail with the metal.

I would remark that the metal F may, previously to the rail A being inserted in the hole *c* of block B, have its edges bent under A, to secure it in proper position while being forced or drawn through the tool. This device performs the work in a perfect and thorough manner, and admits of it being done very expeditiously.

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

A tool or implement for covering with sheet metal the rails or bars of sashes, composed of a series of wooden blocks and metal plates provided with holes, and arranged substantially as described.

A. J. CAMPBELL.

Witnesses:

GEO. W. REED,
M. M. LIVINGSTON.