

(No Model.)

H. A. DAVIS.
WORK HOLDING DEVICE.

No. 281,244.

Patented July 17, 1883.

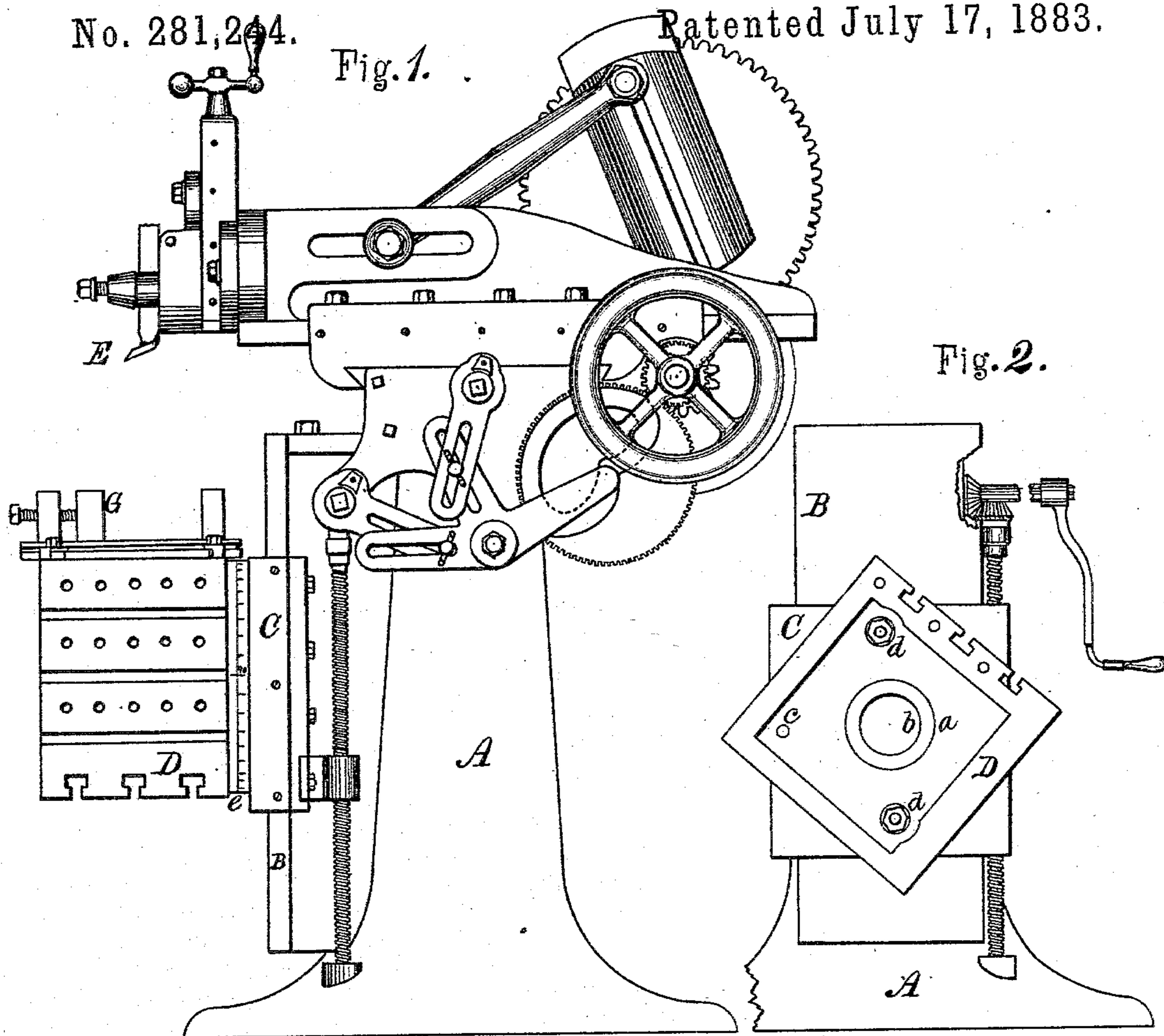


Fig. 3.

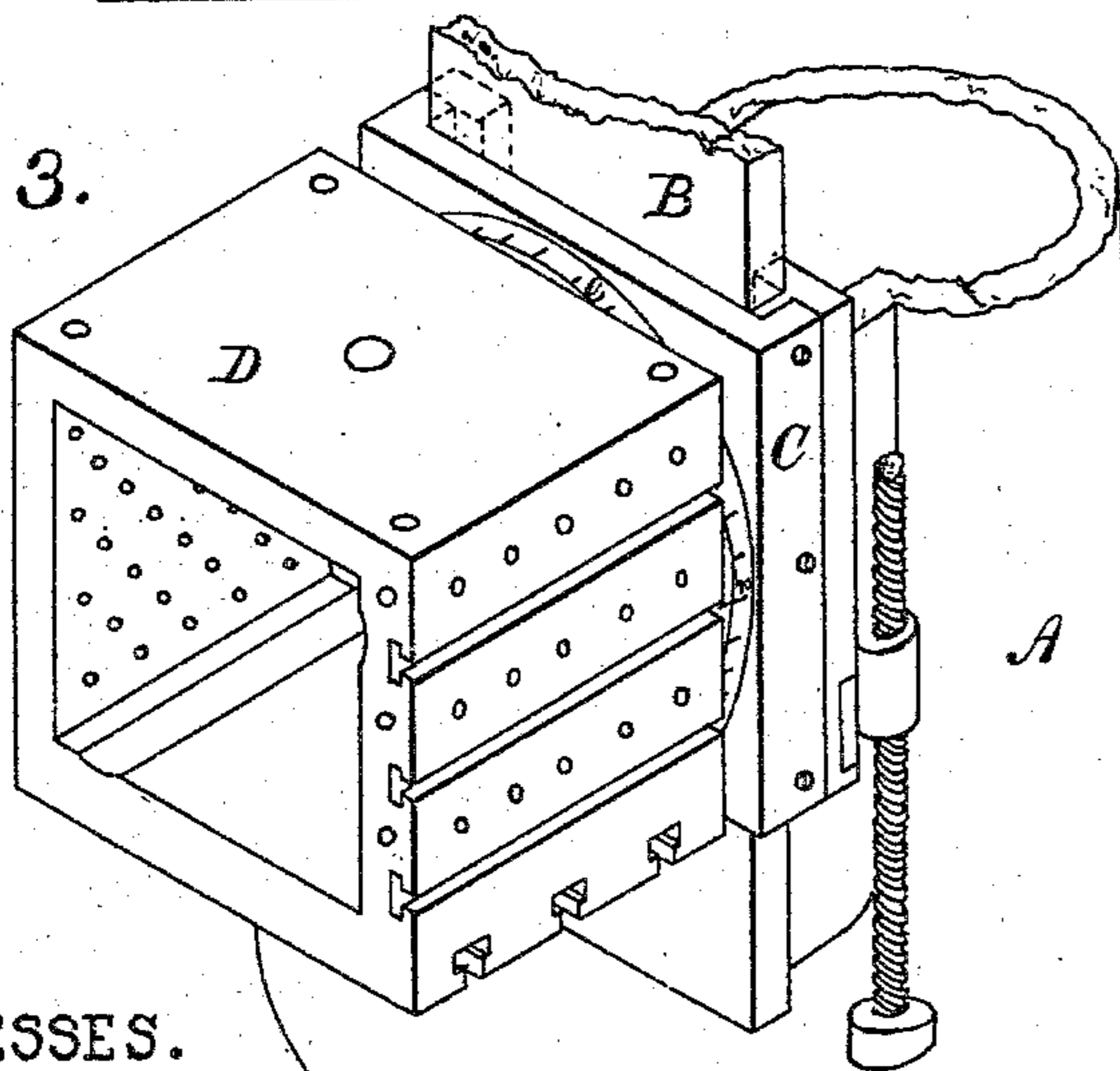
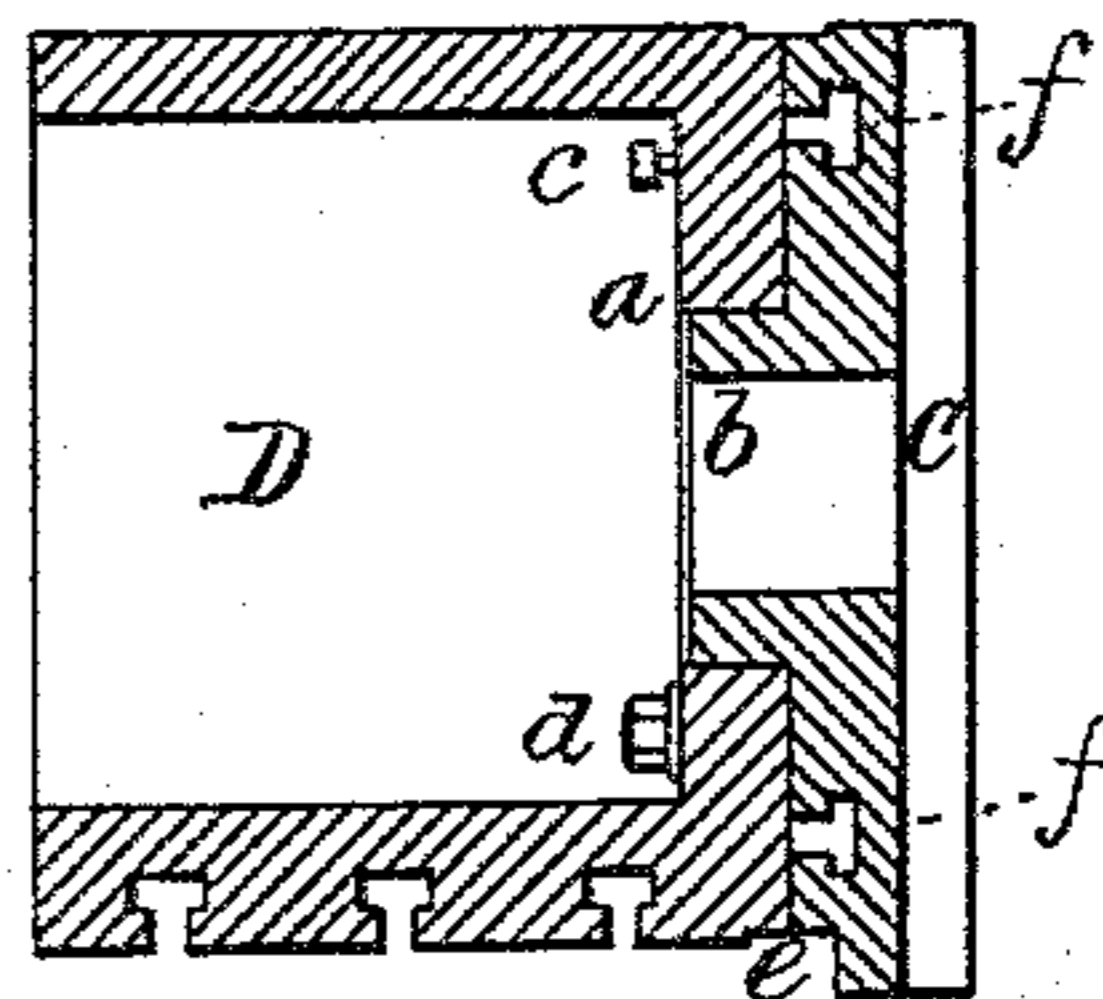


Fig. 4.



WITNESSES.

Asa M. Swain.
William C. Stevenson.

INVENTOR.

Henry A. Davis.

UNITED STATES PATENT OFFICE.

HENRY A. DAVIS, OF LOWELL, MASSACHUSETTS.

WORK-HOLDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 281,244, dated July 17, 1883.

Application filed June 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY A. DAVIS, a citizen of the United States, residing at Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Planing-Machines; and I do hereby declare the following to be such full, clear, and exact description of the same as will enable those skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to that class of planing-machines known as "shapers;" and it consists in the construction and arrangement of a rotating work-table and the adjacent operating parts of the machine.

The objects of my improvements are a greater number and variety of working sides to the table for holding work, vise, centers, or any of the usual special attachments to the machine, which can be quickly rotated to the desired position and firmly secured in that position at any lateral angle with the plane of motion of the cutting-tool; and in the convenience of planing bevels by placing the table in an angular position. I attain these objects by the mechanism illustrated in the drawings, in which—

Figure 1 is a side elevation of the complete machine. Fig. 2 is a front elevation of the work-table, slide, and vertical feed-screw. Fig. 3 is an isometric view of the work-table, slide, and portions of the vertical feed-screw and supporting-column; and Fig. 4, a vertical cross-section of the work-table and carrying-slide on a plane cutting the axes of the rotating table and the supporting-column.

In all the figures like letters refer to like parts.

The supporting-column A may be of any suitable form, having a projecting planed way, B, to receive the carrying-slide C, which is fitted to the way B in the usual manner.

The mechanism for raising and lowering slide C, which, when operated automatically, at each backward or return stroke of the reciprocating cutting-tool E becomes a vertical feed motion, also the mechanism (usually called the "horizontal feed") automatically moving in a horizontal plane at a right angle with the stroke or cutting motion of the tool, that part of the machine which carries the reciprocating cutting-tool E, and that for oper-

ating the reciprocating cutting-tool E, may be of any suitable device, that shown in the drawings forming no part of my invention.

The carrying-slide C has a circular projection at *e*, corresponding to a like one on the back of the work-table D, and having on its circumference divisions corresponding to the degrees of a circle, as shown in Figs. 1 and 3. In the face of this raised circle is made the annular slot *f*, for the heads of the holding-bolts *d d*, which pass through the back of the rotating work-table D. This table may have two or more working sides. I prefer the form shown in the drawings, similar to a cubical box, with a round hole in the bottom at *a*, made to fit the bearing *b*, projecting from the slide C, as shown in section, Fig. 4. As shown isometrically, Fig. 3, the rotating table D has four working sides, each with a different arrangement of slots and holes, for greater convenience in fastening work to be operated upon, or special attachments, one kind of which, the vise G, is shown in Fig. 1. The pin *c* fits corresponding holes in both C and D when either of the sides of D are parallel with the plane of the horizontal feed motion of the cutting-tool E. By removing the pin *c* and loosening the holding-bolts *d d*, as shown, the work-table D can be quickly adjusted either side up or either side at any desired angle to the plane of the horizontal or vertical feed motion of the machine.

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

1. The rotating work-holding table D, of a form substantially as shown, and secured in the manner described by means of the bolts *d d* in the annular slot *f* of the slide C, which table may be adjusted to different angles with the plane of the feed motion of a planing-machine, as and for the purpose specified.

2. The combination of the work-holding table D, adjustable laterally to any desired angle, and the carrying-slide C, having an automatic feed motion, by which the slide C, together with the table D, approaches or recedes from the plane of motion of the reciprocating cutting-tool E, all substantially as and for the purpose specified.

HENRY A. DAVIS.

Witnesses:

ASA M. SWAIN,
WILLIAM C. STEVENSON.