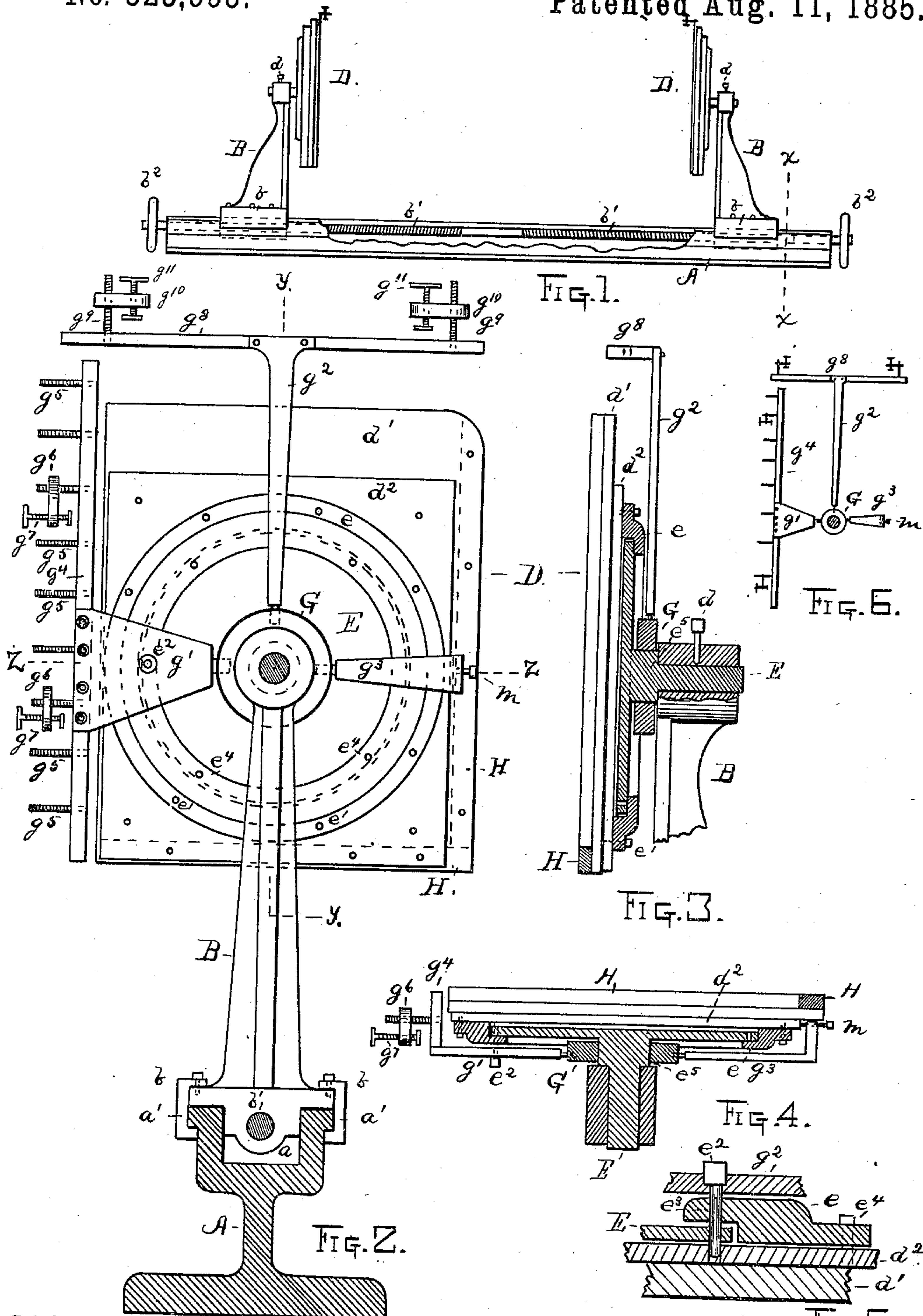


(No Model.)

E. K. PATTEN.  
CLAMPING MACHINE.

No. 323,955.

Patented Aug. 11, 1885.



WITNESSES:

Pierre Paul Bastard,  
Charles D. H. Hoxie,

INVENTOR.

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# UNITED STATES PATENT OFFICE.

EDWARD K. PATTEN, OF UTICA, NEW YORK.

## CLAMPING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 323,955, dated August 11, 1885.

Application filed April 13, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD K. PATTEN, of the City of Utica, in the county of Oneida and State of New York, have invented a new and useful Improvement in Clamping-Machines, of which the following is a specification.

My invention relates to a machine for clamping and turning, in the process of manufacture, boxes, dressers, and other articles having six or more sides; and it consists in two revolving clamping disks constructed and mounted to rotate on their axes. The uprights on which these clamping disks are mounted are simultaneously movable in and out for clamping or releasing the article to be constructed and embrace the various combinations of mechanism hereinafter more fully explained and claimed.

In the accompanying drawings similar letters of reference refer to corresponding parts throughout the several views.

Figure 1 is a side view of my machine; the broken lines indicate a portion of the bed piece removed, exposing a right and left hand screw. Fig. 2 is an end view of my machine, taken at line *x x*, Fig. 1. Fig. 3 is a section view of the clamping-disk and a section of the upright on which the disk is mounted, taken at line *y y*, Fig. 2. Fig. 4 is a section view of the clamping-disk, taken at line *z z*, Fig. 2. Fig. 5 is a section view of the clamping-disk, showing the construction of the same and the means of securing the disk in position, as hereinbefore more fully described. Fig. 6 is a side view of the collar and arms carrying and supporting the centering and retaining clamps, illustrating the general construction of the same.

Having described my invention in relation to the figures illustrated in the accompanying drawings, I will now proceed to describe the same by reference to the letters marked thereon.

A represents the bed-piece constructed preferably of cast-iron of the required length, having a longitudinal groove or opening for the reception and operation of a right and left hand screw.

a represents the groove. The upper surface of the bed-piece is provided with a projecting surface, *a' a'*. Mounted on the bed-piece are

two uprights, B B, constructed to move on the bed-piece and held thereto by gibs *b b*. These uprights are moved horizontally simultaneously by right and left hand screws *b' b'*, moved by hand-wheels *b<sup>2</sup> b<sup>2</sup>*. By moving the hand-wheels the uprights are simultaneously moved out or in for clamping or releasing the article.

D D represent two clamping-disks mounted and revolving on stationary hubs, rigidly held in uprights B B by a set-screw, *d*. The revolving disks are constructed preferably of wood and iron. The face *d'*, is constructed of wood of the required size. *d<sup>2</sup>* is constructed of iron, and is fitted to stationary hubs E E, and is held to the same by circular band *e* by means of stay-bolts *e'*, passing through the same and tapped into *d<sup>2</sup>*, and is so constructed as to rotate at the will of the operator, and may be held stationary at any desired position by means of pin *e<sup>2</sup>*, which may be inserted in aperture *e<sup>3</sup>*, which passes through the circular band *e* into *a<sup>2</sup>*, as indicated in Fig. 5.

*e<sup>4</sup>* represents holes in circle *e* for the reception of the pin *e<sup>2</sup>*. Similar holes are furnished in plate *d<sup>2</sup>*. It is obvious that other means of holding the rotating-disk at any desired angle may be used without interfering with my invention.

E represents a stationary hub provided with a flange, as indicated in Fig. 2, to which the disk is attached by means of circle *e*. This stationary hub is provided with a central shank, *e<sup>5</sup>*, which fits into a bearing in the upper portion of uprights B B, and is rigidly held by stay-bolts *d d*. Fitted on the shank of the stationary hubs is a circular collar, G, into which are inserted and rigidly held three arms, *g' g<sup>2</sup> g<sup>3</sup>*. *g'* extends to the outer edge of the rotating disk, and is provided with extension-arm *g<sup>4</sup>*, rigidly held thereto by bolts. In the outer surface of this arm, and inserted therein, are thread-bolts, on which nuts *g<sup>6</sup> g<sup>6</sup>* are moved by turning the same on the screw-threads. In the opposite end of these nuts, and working in the same, is a centering and clamping bolt, *g<sup>7</sup> g<sup>7</sup>*, with the broad head, as indicated in Fig. 2. Arm *g<sup>2</sup>* is let into the collar, and extends above the rotating disk, to which extension-arm *g<sup>3</sup>* is rigidly held by bolts. In the upper surface of this arm are two screw-bolts, *g<sup>9</sup> g<sup>9</sup>*. Working on these bolts



are nuts  $g^{10}$   $g^{10}$ . In the opposite ends of these nuts, and working in the same, is a centering and clamping bolt,  $g^{11}$   $g^{11}$ . These clamping-bolts are provided for centering and clamping the article in position between the rotating disks. On the face of the disks D D are brackets H H, so constructed as to embrace two angles of the article to be manufactured.

The article to be constructed is placed between the two rotating disks and clamped therein. The same is then centered and clamped by means of the thread-bolts and nuts by turning the nut on the thread-bolt in the arms. The article is crowded into the angle formed by brackets H H on the face-plate of disks D D, thereby clamping and rigidly holding the article to be constructed.

$g^3$  represents an arm rigidly held in the collar and extending to the outer surface of disks  $d^2$ , forming an angle, as indicated in Fig. 4, through which a stay-bolt passes, which bears against the edge of the plate  $d^2$  for equalizing the bearing of the collar on the shank of the hub.

$m$  represents the stay-bolt.

Disks  $d^2$   $d^2$ , the collar, and arms all rotate simultaneously when pin  $e^2$  is removed, thereby releasing them from their union with the stationary hub, produced by inserting the pin in the apertures, as indicated in Fig. 5. It is quite obvious that these arms might be attached to plates  $b^2$  without interfering with my invention.

I am aware that clamping-machines have been heretofore provided with bed-pieces and stationary uprights in which are journaled rotating disks, one of which is moved in an adjustable box, and in the rim of the clamping-disks means are provided for centering the article, and I am also aware that clamping jaws moved by right and left hand screws have also been provided—combinations of mechanism not embraced or claimed by me.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a clamping and turning machine, the main bed-piece, the uprights, and the stationary hubs rigidly secured to the uprights, in combination with the revolving disk, provided with brackets and clamps to the stationary hub upon which they revolve, and the clamps for centering and securing the article to be turned, secured to a sleeve back of said disks, and clamping the articles between the disks, substantially as set forth.

2. In a clamping and turning machine, the main bed-piece, the horizontally-adjustable uprights screw-threaded in opposite directions, and provided with a shaft which adjusts the same, and which is correspondingly screw-threaded in opposite directions from its center, in combination with the stationary hubs rigidly secured to the upright, the revolving disk mounted thereon, and the clamps and brackets for securing the article to be turned, with means for rigidly holding the disks to the hubs, substantially as shown.

3. In a clamping and turning machine, the main bed-piece, and the horizontally-adjustable uprights screw-threaded in opposite directions, and provided with a shaft which adjusts the same, and which is correspondingly screw-threaded in opposite directions from its center, in combination with stationary hubs rigidly secured to the uprights, the revolving disks mounted on the hubs, the clamps and brackets for securing the article to be turned in place, the sleeve G on the hub E, and the equalizing-arm,  $g^3$ , rigidly secured to said sleeve simultaneously moved with the clamping-disk, with stay-bolt  $m$ , substantially as shown.

4. In a clamping and turning machine having bed-piece, uprights, hubs, and clamping-disks mounted thereon, to be rotated as shown, in combination with the brackets on the face of the clamping-disk, with arms pivoted to the uprights, constructed and mounted to simultaneously rotate with clamping-disk, with means for centering and holding the article against the brackets on the face of the clamping-disks, substantially as shown.

5. In a clamping-machine having a bed-piece, two uprights supporting stationary hubs and in combination with clamping-disks mounted on the hubs, constructed to rotate thereon, with locking device for securing the disk to the hubs, substantially as shown.

6. In a clamping and turning machine constructed as shown, the combination of the adjustable uprights simultaneously moved by the shaft and screw-threads, as shown, with clamping-disk mounted on the uprights to be simultaneously rotated, substantially as shown, for the purposes stated.

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Witnesses:

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GILBERT DE MARCE.