

No. 618,667.

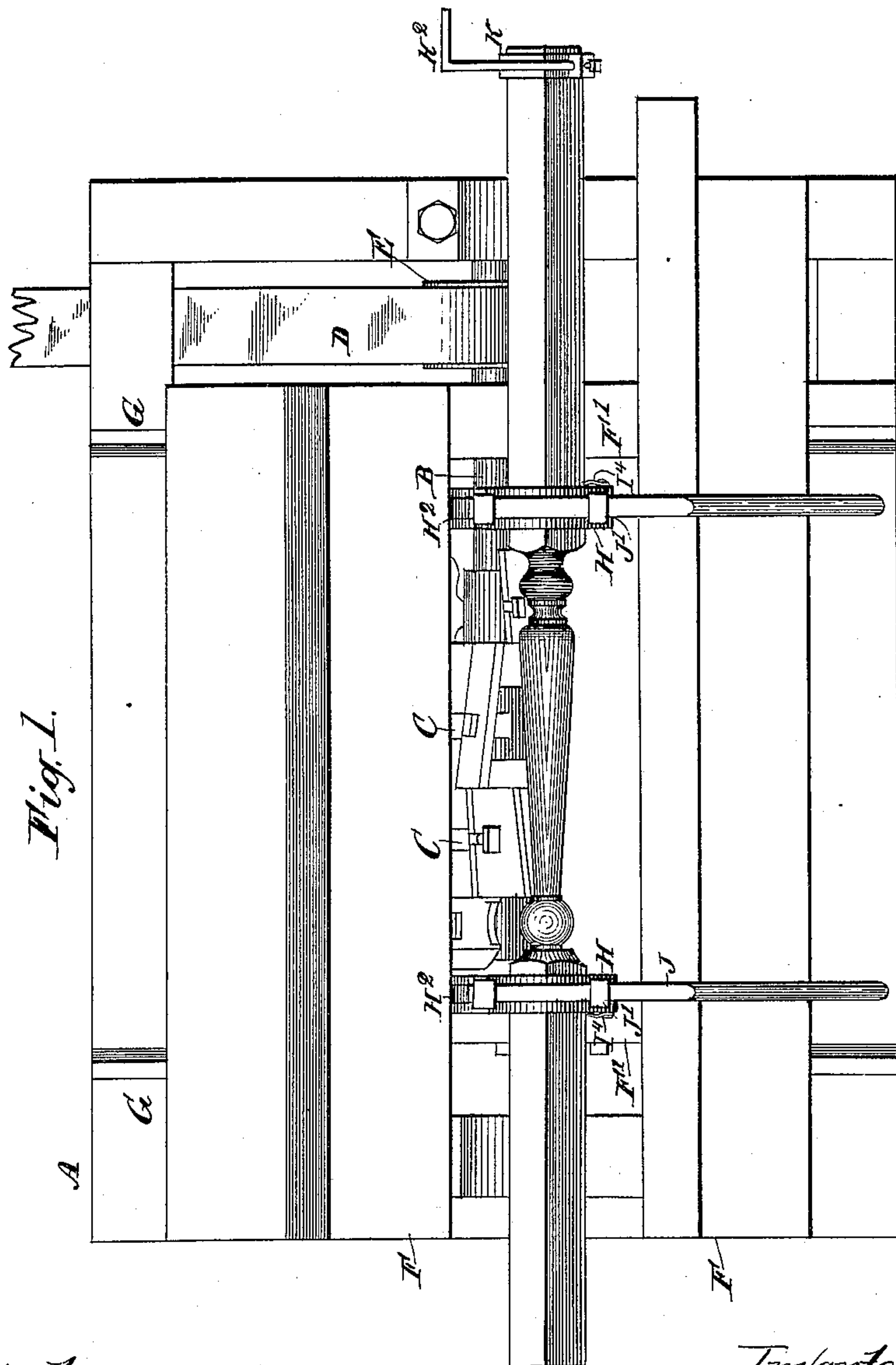
Patented Jan. 31, 1899.

R. HARRIS.
POST TURNING MACHINE.

(Application filed Mar. 15, 1897.)

(No Model.)

2 Sheets—Sheet 1.



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J. F. Groat.
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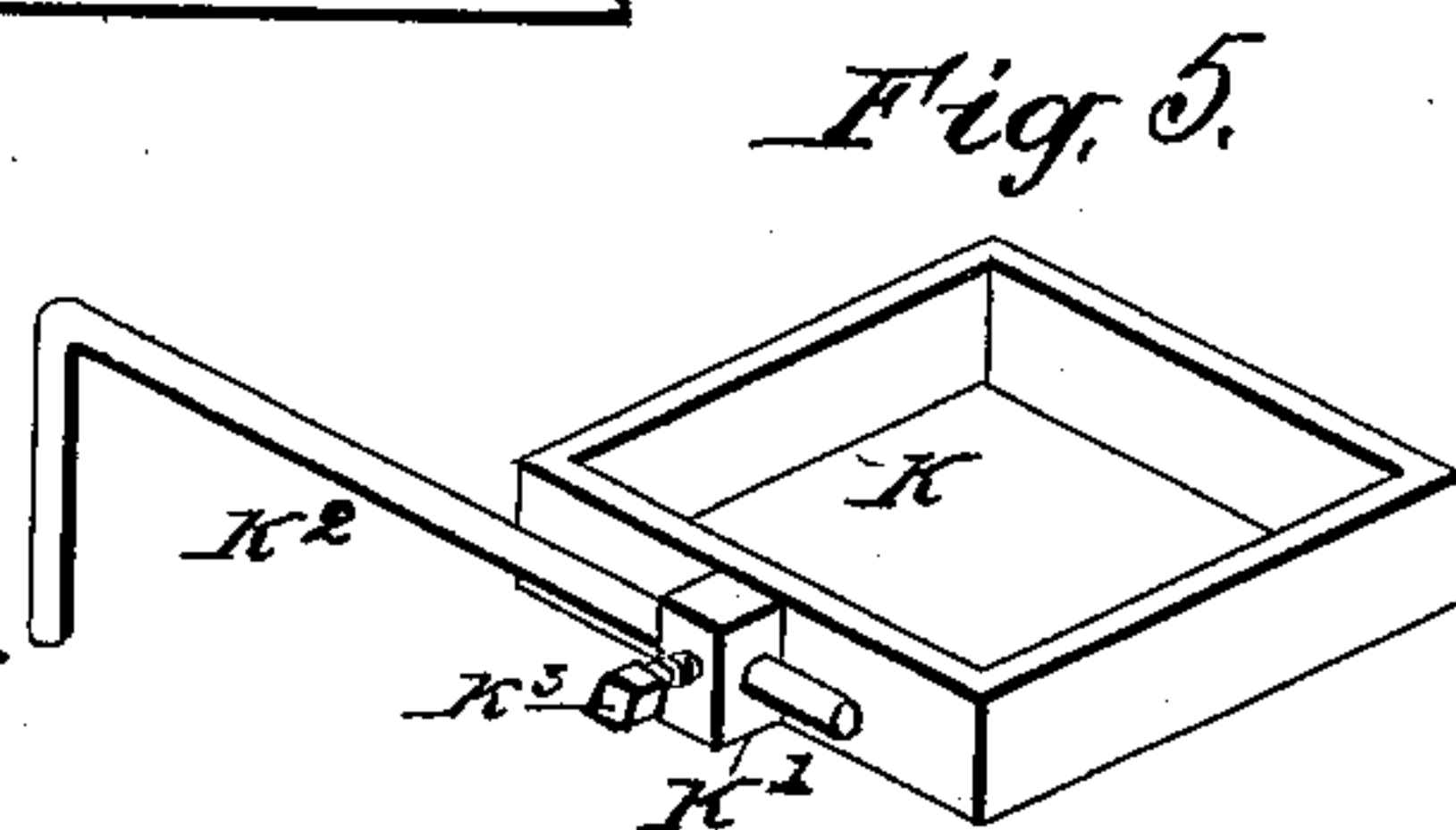
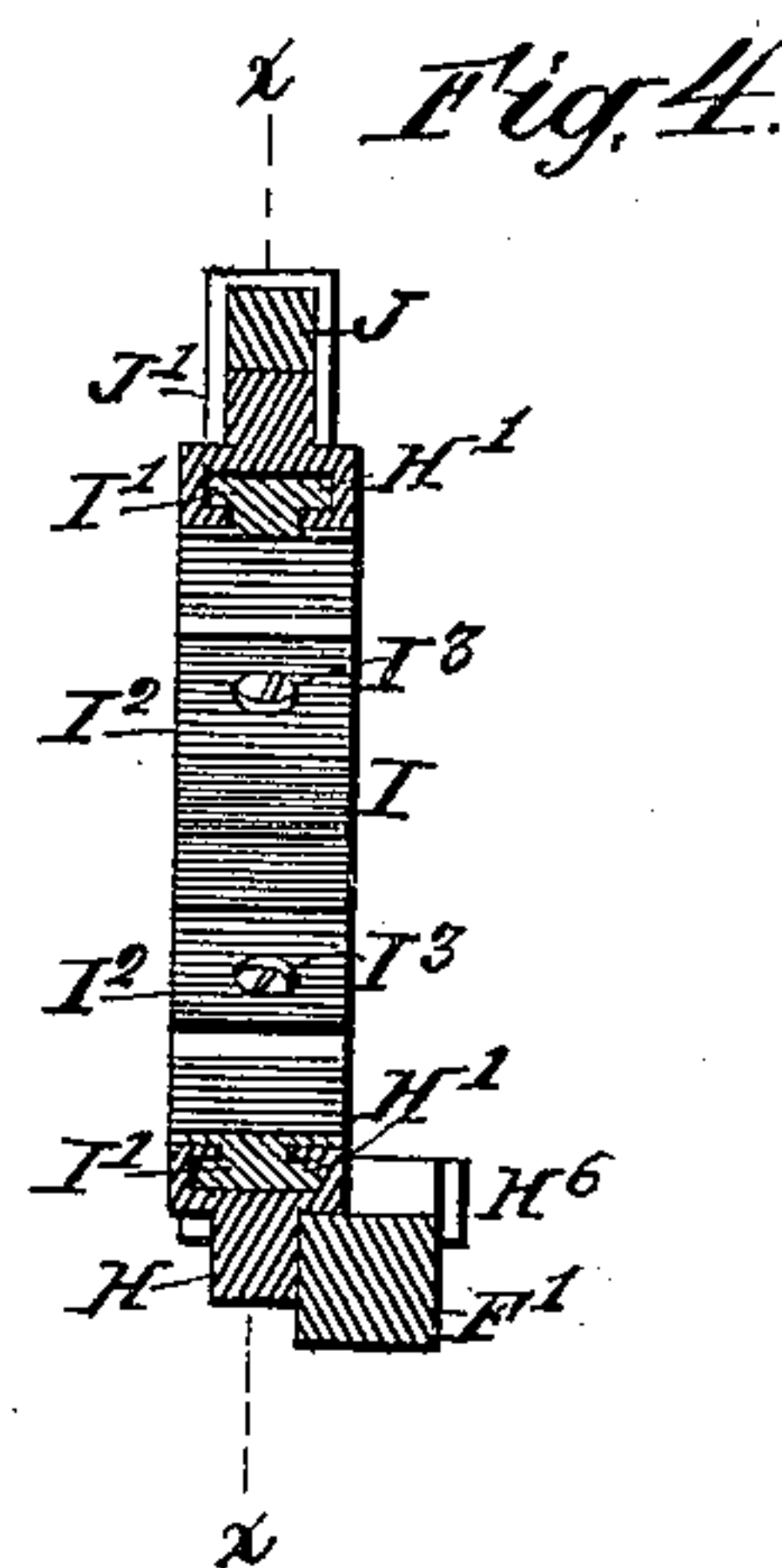
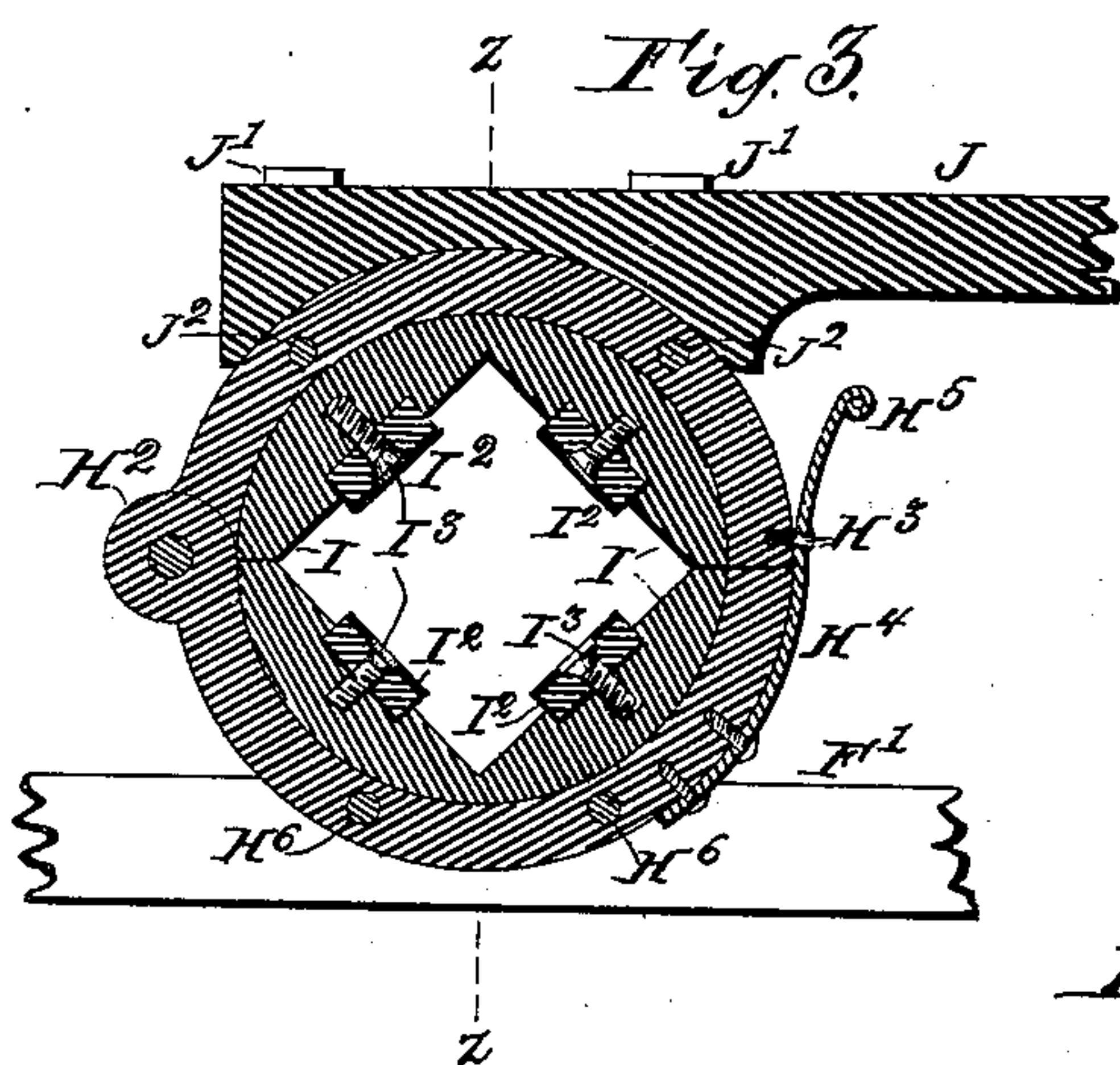
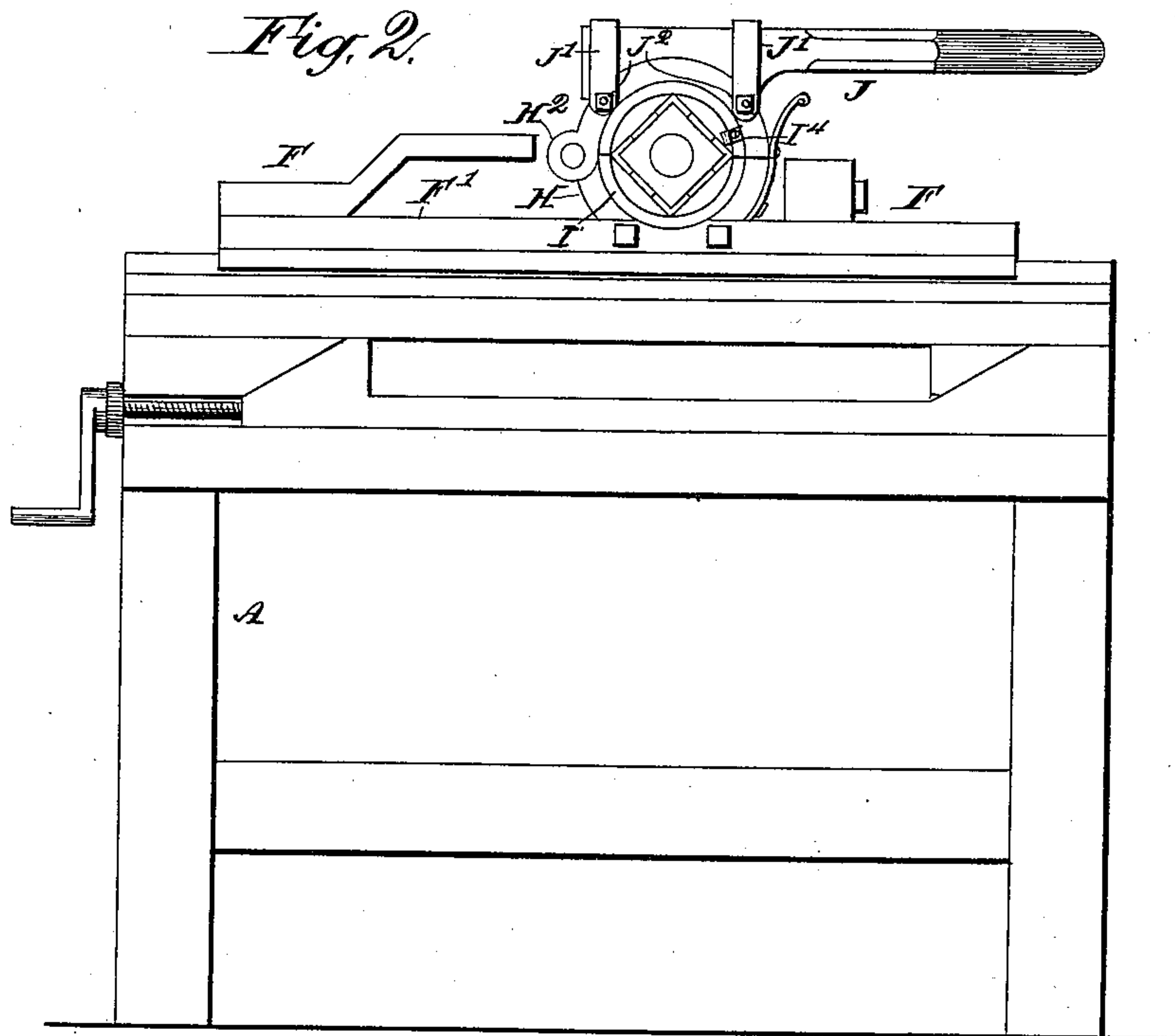
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UNITED STATES PATENT OFFICE.

RUTLEDGE HARRIS, OF CEDAR FALLS, IOWA.

POST-TURNING MACHINE.

SPECIFICATION forming part of Letters Patent No. 618,667, dated January 31, 1899.

Application filed March 15, 1897. Serial No. 627,725. (No model.)

To all whom it may concern:

Be it known that I, RUTLEDGE HARRIS, a citizen of the United States, residing at Cedar Falls, in the county of Black Hawk and State of Iowa, have invented certain new and useful Improvements in Post-Turning Machines; 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.

This invention relates to machines for producing ornamental forms in wood—such as porch-columns, newel-posts, and the like—by the operation of rotating cutters in planes transverse to the timber.

The invention consists in an improved device for holding large pieces, such as porch-column stock, while being operated upon and adapted to allow such stock to be revolved in contact with the cutters, whereby the figure produced is made circular in cross-section.

In the accompanying drawings, forming a part of this specification, Figure 1 is a plan view of the device as applied to a woodworking-machine of the type designated. Fig. 2, Sheet 2, is an end elevation of the same as seen from the left. Fig. 3 is a transverse section of one of the holders in the line $x x$ of Fig. 4—that is to say, transverse as regards the piece of timber held. Fig. 4 is a section of the same in the line $z z$ of Fig. 3. Fig. 5 is a view of the crank device for turning the stick of timber when in position.

Similar letters of reference indicate corresponding parts.

The machine in the main is of a common and well-known type, consisting, essentially, of a frame A, on which is mounted a mandrel B, carrying a set of cutter-heads C and revolvable by a belt D on a pulley E near one end of the mandrel. A carriage F slides back and forth on transverse ways G G and is adapted to carry the piece operated upon across the rapidly-revolving cutter-heads and above the same.

The object of this invention is to provide a convenient device for holding a squared stick and turning the same while being operated upon by the cutters.

To some suitable part of the carriage F, as to the transverse bars F' F', are attached two

divided and hinged bearing-rings H H. These are provided with suitable annular bearings H' H', which are preferably T-shaped in cross-section to receive the correspondingly-shaped rim I' of clamping-blocks I I. At the back side the two parts of the bearing-rings are hinged together at H², and on the front side one of them is provided with a stud or catch H³, adapted to engage with a hole in a spring-catch H⁴, whereby the parts are locked together as in use. An upwardly-extending tailpiece of the spring H⁵ permits the easy disengagement of the spring and stud when it is desired to open the bearing to remove the work. The lower half of each bearing-ring is suitably secured to its supporting-bar, as by bolts H⁶ H⁶. To the upper half of the bearing-rings are attached handle-bars J J by suitable stirrups J' J' and bolts J² J².

The clamps I I are semicircular circumferentially and on the opposite side have a reëntering angle of ninety degrees. Each block is independent of the other, so that when the bearing-rings are opened the clamping-blocks also open, provided, of course, that each block is within the bounds of its own half of the ring. In the adjacent faces of each clamp-block are set abutments I² I², made of wood faced with rubber or the like, there being sufficient elasticity to compensate for slight differences in the sizes of the posts. Where a considerable difference in size exists, different-sized abutments are used.

To prevent the upper clamp-block from slipping out of its bearing-ring, especially after becoming worn, a spring I⁴ is secured to the bearing-ring and presses on some part of the clamp-block, as the face thereof. This holds the clamp-block in place and admits of the post being laid in place on the lower blocks without inconvenience or annoyance.

The device for turning the post when in position is a rectangular band K, provided with a lug K' on one side, with a hole therein to receive a crank K². A suitable set-screw K³ holds the crank in position. The band is of a suitable size to receive one end of the post, different-sized bands being provided for the different sizes of stock to be turned.

It is to be noted that the bearing-rings are attached to the carriage close to the outer-

most cutter-heads. The effect of this is to prevent undue springing of the post, which would cause rough and uneven turning, and the better to center the post as to the part
5 to be turned, especially if it is not perfectly straight.

The operation of the device is very simple. To place a post in position for turning, the operator releases the catch H^1 and throws
10 back the handle-bar of each bearing-ring. The post is then laid, corner down, in the lower clamp-block. The handles are then brought to a locked position, when the post is firmly held in place. The crank being at-
15 tached to one or both ends of the post, the operator slides the carriage back until the post is at the proper point for the cutter to produce the desired figure on it and turns it slowly a single revolution. The return of the
20 carriage to its original position and the removal of the turned work complete the operation.

The construction is such as to avoid the necessity for thrusting the post through bearing-rings endwise, which is both laborious and
25 tedious. It is also more or less dangerous, especially if the carriage happen to be near the revolving cutter-heads at the time the post is inserted.

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

1. In a machine of the described character, the combination with a sliding carriage, of a
35 pair of divided and hinged bearing-rings, one part of each pair secured to the carriage, a suitable hand-lever attached to the other half

of each ring, a catch adapted to lock them together when closed, and a pair of clamp-blocks mounted revolubly in each ring by
40 an interlocking connection adapted to prevent radial displacement, substantially as described.

2. In a machine of the class described, the combination with a sliding carriage, of a pair
45 of divided and hinged bearing-rings provided with internal, annular grooves, T-shaped in cross-section, a spring-latch adapted to lock the halves of each ring together, and a pair
50 of clamp-blocks for each ring, with circumferential rims fitting the grooves of the rings, and reëntering angles opposite thereto adapted to receive two sides of the timber to be held, substantially as and for the purpose set
forth.

3. In a machine of the class specified, the combination with a sliding carriage, of a pair
55 of divided and hinged bearing-rings, suitable means for locking them in closed position, a pair of clamp-blocks revolubly connected with
60 the halves of each ring by an interlocking connection adapted to prevent radial displacement and corresponding internally to the shape of the stick, in cross-section, and detachable elastic cushions set in the internal
65 faces of said clamp-blocks and retaining-screws therefor, substantially as and for the purpose set forth.

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

RUTLEDGE HARRIS.

Witnesses:

HUGH MCCARTNEY,
N. H. HARRIS.