

(No Model.)

J. H. BRINTON, Jr.
LATHE DOG.

No. 485,405.

Patented Nov. 1, 1892.

FIG. 1.

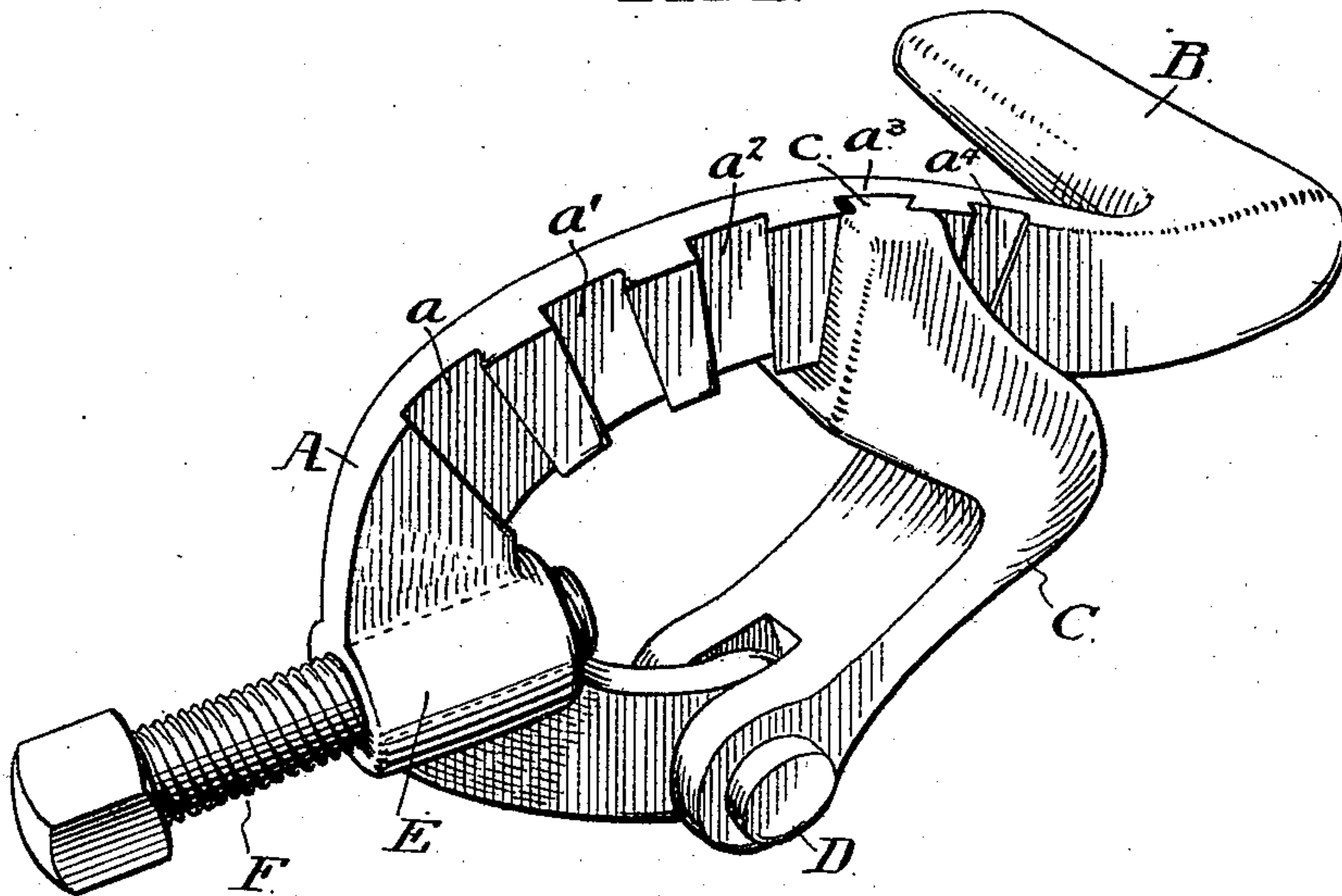
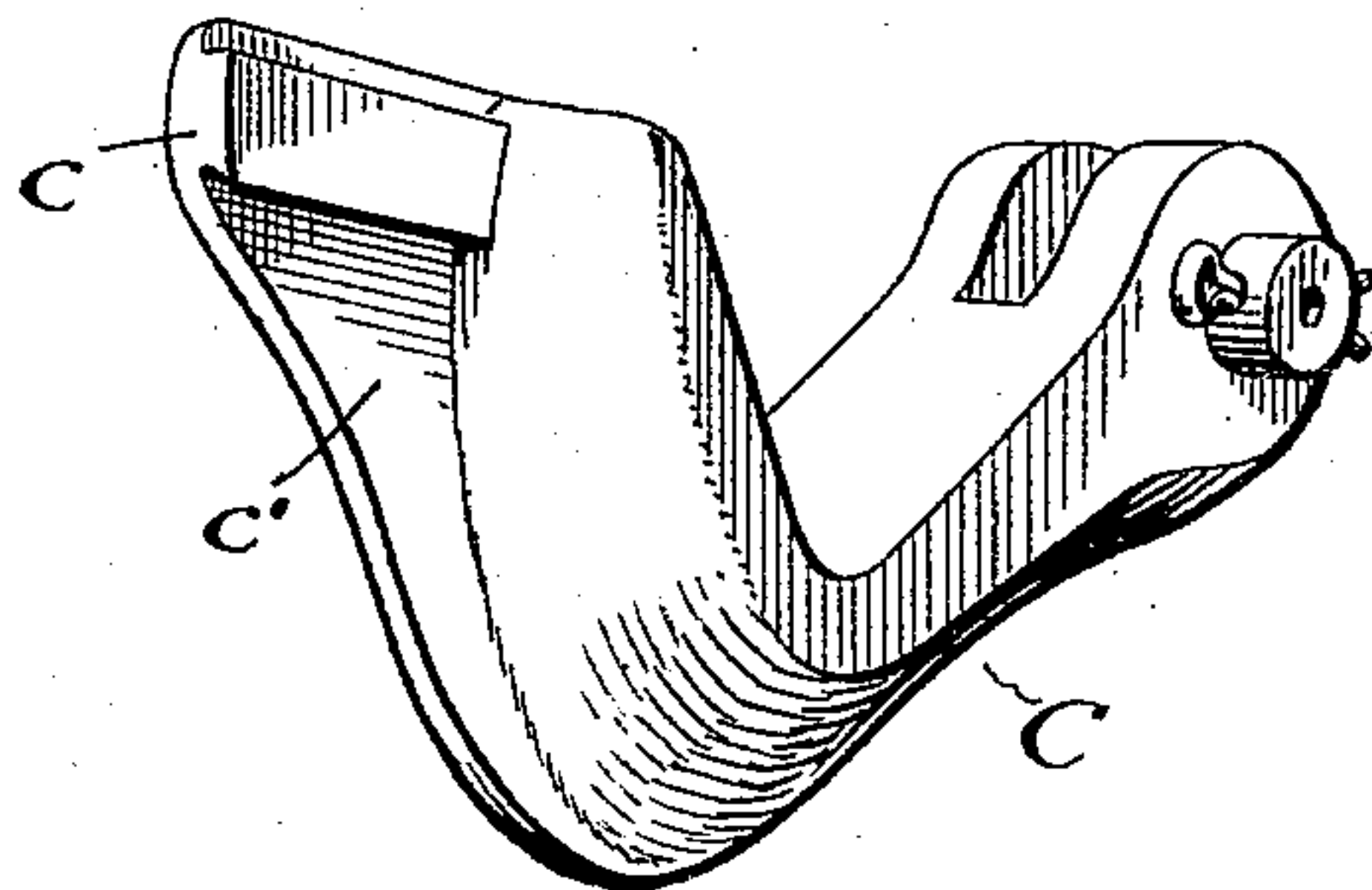


FIG. 2.



WITNESSES:

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LATHE-DOG.

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Application filed February 10, 1892. Serial No. 421,003. (No model.)

To all whom it may concern:

Be it known that I, JOHN HILL BRINTON, Jr., of Philadelphia, in the State of Pennsylvania, have invented a certain new and useful
5 Improvement in Lathe-Dogs, whereof the following is a specification, reference being had to the accompanying drawings.

In said drawings, Figure 1 represents a front view in perspective of my improved lathe-dog; and Fig. 2 is a view in perspective of the rear side of the pivoted latch, which forms an element thereof.

The object of my invention is to provide a lathe-dog which can be readily adjusted
15 throughout a wide range to fit objects of different diameter without the use of detachable parts, and which at the same time insures the most advantageous grip in all positions of adjustment.

Referring to the drawings, A represents the main body of the device, in form substantially the segment of an oval, its longer side terminating in the laterally-projecting tail-piece B, which is of the usual construction. At the
25 apex of the body is an internally-threaded boss E, adapted to receive the bearing-screw F. The front face of the body A is provided at intervals with radiating grooves $a\ a'\ a^2\ a^3\ a^4$, respectively arranged at short intervals, but so arranged as that the intervening portions of the metal shall afford a sufficiently-strong bearing for the gripping-latch C, which is pivoted to the body at D. This latch C has the configuration indicated in Fig. 2—that is
35 to say, its inner face is concave, preferably in the form of a wide V, whose angle is somewhat less than ninety degrees. The inner face of the latch is preferably somewhat wider than the thickness of the body, but the outer edge of the latch is thinned down, as indicated at
40 c' , so as to form a flat bearing-surface of considerable extent, adapted to rest against the proximate face of the body. At the outer or free end of the latch is an elongated lug c , whose configuration is such as to enable it to engage snugly in any one of the grooves $a\ a'$, &c. Said grooves are undercut slightly upon the faces which are farthest from the bearing-screw, and the lug c upon the latch is correspondingly undercut, so that when in position it cannot be jarred out laterally. The
50 pivot D of the latch is so arranged as to per-

mit a slight lateral play thereof sufficient to allow the lug c to be lifted laterally out of the notches in order to shift the latch from one position to another. 55

The operation of the device is as follows: The shaft or other object which is to be turned having been centered in the lathe, the latch is opened wide, so as to permit the body to be
60 slipped over the object. The latch is then closed and its lug c brought into engagement with one of the grooves $a\ a'$, &c., the selection being of course determined by the diameter of the object. The bearing-screw F is then
65 turned until the proper grip is obtained, the points of contact being (in the case of a circular shaft) the end of said screw and two given points upon the inner face of the latch. The configuration selected for the latch bears
70 such a relation to the arc through which it is adjustable as to afford in every position bearings on each side of a line coinciding with the projected axis of the screw F.

I consider the radial grooves in the face of the body, in combination with the lug upon the latch, the most desirable form of holding device; but it must be understood that I do not limit my claim to any specific form of holding device, as in some cases it may be possible to substitute a pin passing through the end of the latch or some other equivalent form of holding device for the grooves, with substantially the same results as where they are employed. 85

I am aware that the use of a pivoted latch having a concave face, in combination with a body having a face of similar shape, is old, and I therefore disclaim the same; but, so far as I am aware, in all such devices the grip upon the object was sought to be obtained by the leverage of the latch alone, and consequently they failed to hold the object with the firmness which is characteristic of my invention, where in addition to an adjustable
90 latch, providing in itself two bearing-surfaces, the direct pressure of a screw is brought to bear upon the object in a line which is intermediate between the two bearing-points afforded by the latch. 95 100

Having thus described my invention, I claim—

1. The combination of the segmental body, the concave latch pivoted at one end to said

body, means, substantially as set forth, where-
by the free end of said latch may be adjust-
ably secured to said body, and a bearing-screw
mounted in the apex of said body independ-
5 ent of the latch-securing devices, the project-
ing axis of said screw being in a line which
intersects said latch in proximity to the cen-
ter of its concavity, whereby in all operative
positions of the latch the direction of press-
10 ure of said screw is in a line between two
bearing-surfaces upon the latch, substantially
as set forth.

2. The combination, with the body having
radial grooves arranged at intervals thereon,
of the latch pivoted to the end thereof, said 15
latch having a wide V-shaped inner face and
a flat surface along its outer edge adapted to
bear upon the proximate face of the body, and
the lug adapted to engage in said grooves,
substantially as set forth.

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Witnesses:

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