

(No Model.)

F. L. OSGOOD.
LATHE DOG.

No. 435,945.

Patented Sept. 9, 1890.

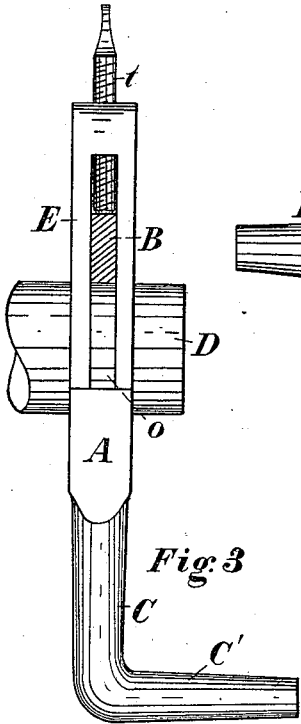


Fig. 3



Fig. 2

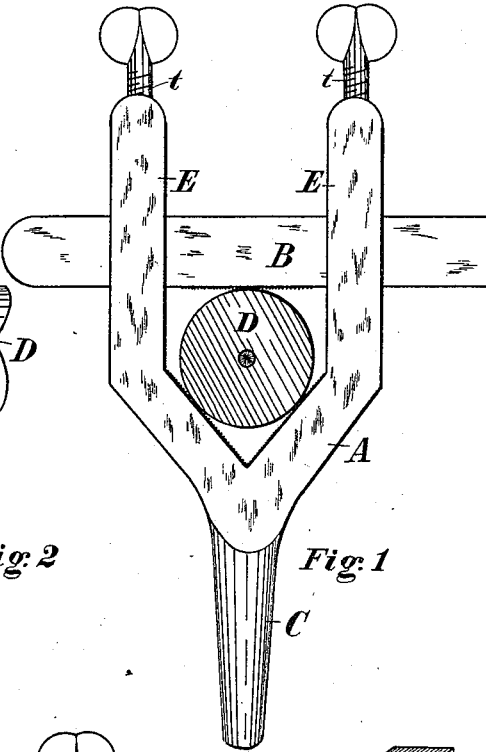


Fig. 1

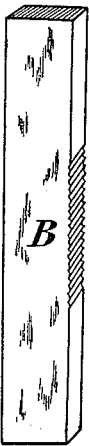


Fig. 4

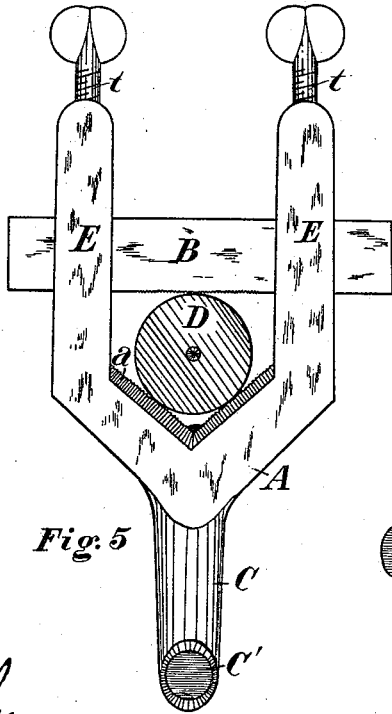


Fig. 5

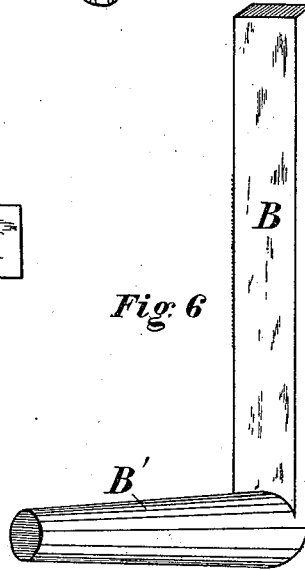


Fig. 6

Witnesses
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UNITED STATES PATENT OFFICE.

FRANK L. OSGOOD, OF BANGOR, MAINE.

LATHE-DOG.

SPECIFICATION forming part of Letters Patent No. 435,945, dated September 9, 1890.

Application filed January 25, 1890. Serial No. 338,118. (No model.)

To all whom it may concern:

Be it known that I, FRANK L. OSGOOD, a citizen of the United States, residing at Bangor, in the county of Penobscot and State of Maine, have invented a new and useful Adjustable Lathe-Dog; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention consists of an improved adjustable lathe-dog for holding work in metal-turning lathes, and is illustrated in the accompanying drawings, in which—

Figure 1 represents a front elevation of my improved lathe-dog. Fig. 2 shows a side elevation of the same. Fig. 3 is a similar view of my device with the tail constructed on the end of the body of the dog. Fig. 4 is a perspective view of one of the clamping-bars used in my device. Fig. 5 is a front elevation of my improved dog as constructed in Fig. 3. Fig. 6 is a perspective view of the clamping-bar of my device with the tail constructed thereon.

Similar letters of reference refer to correspondingly like parts throughout the several figures.

The object of my invention is to provide a new and useful lathe-dog that can be attached and detached without removing the work from the lathe, that is adjustable to admit various sizes of work and face-plates, and will not require a wrench to clamp the same.

Referring to the drawings, A represents the V-shaped body of my improved dog, having each end extended and projected parallel with each other a sufficient distance to form the legs E E. These legs are each provided with a longitudinal slot *o o*, cut therein in the same plane and extending from their junction with the V-shaped body to very near their extremities. Through these slots *o o* the clamping-bar B of my device is inserted, which bar, as will be hereinafter explained, is used to clamp my improved dog to the work.

The surface of the interior angle of the V-shaped body A is preferably serrated, which roughness, when the tenacity of the metal will permit, can be formed directly upon the metal body itself, or, as shown in Fig. 5 of the drawings, formed on a strip of hard-tempered

steel bent, fitted, and fastened within this angle in any well-known and suitable manner. This serrated portion of the body A forms the jaws or part that bears against the work when my device is used, and the advantage of this roughened surface is to secure a firm grip or hold upon said work to prevent the dog from slipping.

If desired, a longitudinal projection or spur C may be cast upon the body A to extend from the center of that portion opposite the projection of the legs E E. This spur C will form a convenient handle for holding the dog when adjusting and clamping it to the work, and also serves as a projection to bear against the stud in a face-plate when such is used.

Extending through the ends of the legs E E are tapped holes adapted to receive thumb-screws *tt*, through which the latter are turned and entered into the slots *o o*. These thumb-screws *t* furnish means for adjustment of the clamping-bar of my device, as their ends bear against the clamping-bar B when the latter is within the slots *o o* and press the same against the work. The clamping-bar B is a straight steel bar of sufficient length and size to enter the slots *o o* in the legs E E of the dog and bridge the intervening space between them. It is preferably serrated upon the edge usually used against the work to secure a firmer hold of the latter, and I also think it best to construct this bar long enough to have one end formed and bent at right angles to serve as a tail B', which latter part extends into the slot in a face-plate when my device is used.

By constructing the tail B' upon one end of the clamping-bar B my improved dog will have increased clamping power upon the work, and it can be readily understood that the tail B' can be made to enter the slot in any size of face-plate by simply adjusting the clamping-bar to increase or diminish the distance of the said tail from the center of the dog, as the case would require.

In practice when the tail B' is extended quite a distance from the center of the body of the dog, the force expended in turning the lathe-spindle produces a purchase and increased grip of the clamping-bar B against the work or shaft D, (shown in Figs. 1 and 2 of the drawings,) for the thumb-screw *t*, bearing against the clamping-bar nearest the tail end,

forms the fulcrum against which all power in turning the work or shaft D is received in a direction lengthwise of the screw, and if the distance from the thumb-screw to the bearing portion of the clamping-bar B against the shaft D is less than from the same screw to the tail B', the increased clamping power will be in the same proportion as the ratio of the two distances. The opposite thumb-screw *t* will serve as a check and similar fulcrum when the lathe chatters or is run backward. Thus the clamping pressure of my improved lathe-dog upon the work to which it is attached is always the same when turning in either direction, and the said dog has no tendency whatever to release its hold or to slip.

The tail of my improved lathe-dog can, if desired, be constructed at the end of the spur C, as shown at C' in Figs. 3 and 5 of the drawings. The tail can be cast with and of the same material as the body of the dog, and is very convenient and cheaper in manufacturing dogs of a large size where sufficient increase of metal would be used to secure the necessary strength. With this latter construction the clamping-bar B would be simply a straight steel bar having only sufficient length and size to extend through the slots *o* and bridge the space between the legs E E.

By using lathe-dogs constructed as hereinbefore described it is not necessary to have as many sizes on hand, as four of this construction will have the same capacity as twelve of the common lathe-dogs. Thus I combine cheapness with greater utility.

Another great advantage gained in using this style of lathe-dog is that it can be attached and detached from the work after the latter has been fitted in the lathe.

Having thus described my invention, what

I claim, and desire to secure by Letters Patent of the United States, is—

1. An adjustable lathe-dog having a V-shaped body with extending parallel legs, said legs containing longitudinal slots therein, for the purpose described, in combination with a clamping-bar extending through said legs and the thumb-screws adapted to adjust and clamp the said bar, in the manner described, and substantially as shown and set forth.

2. An improved adjustable lathe-dog, consisting of the combination of the V-shaped body having projecting parallel legs provided with longitudinal slots therein, with a clamping-bar adapted to extend through said slots and having one end bent at a right angle, for the purpose described, and the thumb-screws entering the parallel legs and adapted to fasten the said bar, in the manner set forth, and substantially as shown and described.

3. An improved adjustable lathe-dog, consisting of the combination of the V-shaped body with extending parallel legs and provided with a projection extending from that portion opposite the projection of the legs, with a clamping-bar having a right-angle bend and adapted to pass through longitudinal slots in the said legs, and the thumb-screws entering the end of each leg in such manner as to fasten or clamp the said clamping-bar, in the manner described, and all substantially as shown and set forth.

In testimony whereof I have hereunto subscribed my name this 21st day of January, A. D. 1890.

FRANK I. OSGOOD.

Witnesses:

JAMES H. KENNEDY,
THOMAS F. MAHER.