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2,884,025

WOOD TURNING ATTACHMENT FOR LATHES

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FIG. 1.

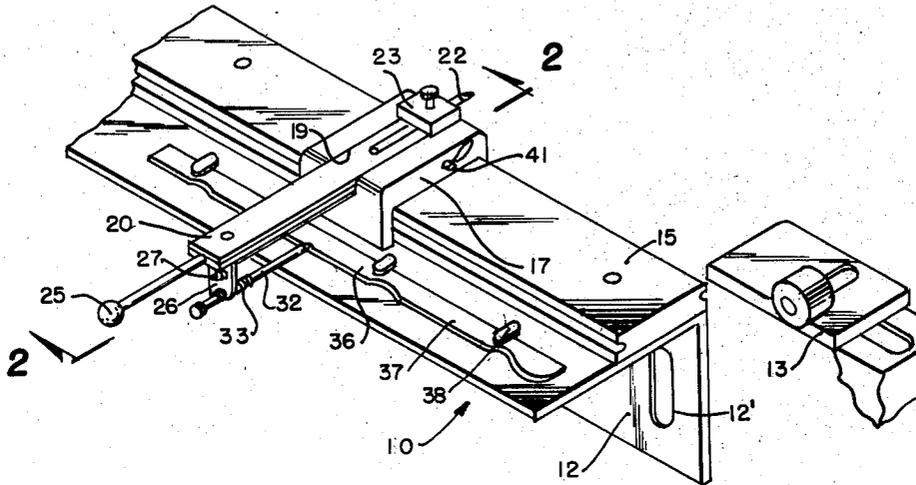


FIG. 2.

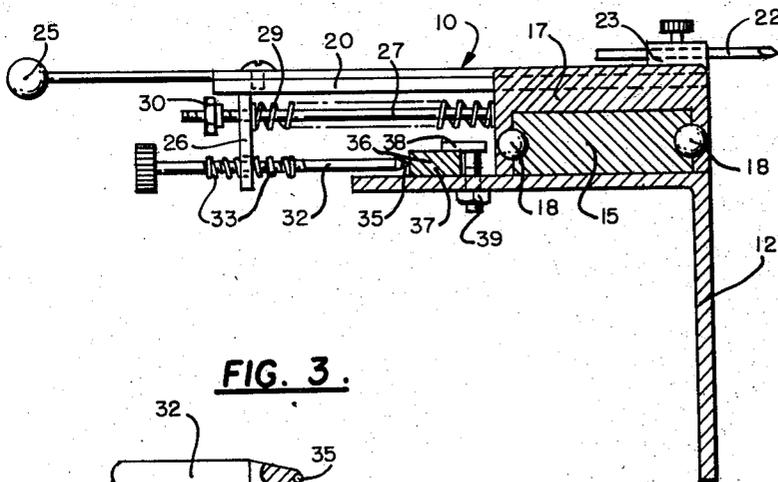
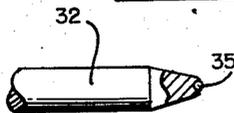


FIG. 3.



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1

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WOOD TURNING ATTACHMENT FOR LATHES

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3 Claims. (Cl. 142—55)

This invention relates to machine tools and more particularly to a wood turning attachment for lathes.

It is an object of the present invention to provide an attachment for wood lathes that is adapted to enable the operator to turn a design on the work piece with a minimum amount of effort and trouble.

It is another object of the present invention to provide a wood turning attachment for lathes of the above type wherein substantially any pattern may be readily duplicated as many times as required after the first setting has been made, whereby a home wood lathe may be used to mass produce substantially any quantity of identical articles.

Other objects of the invention are to provide a wood turning attachment for lathes bearing the above objects in mind which is of simple construction, has a minimum number of parts, is inexpensive to manufacture and efficient in operation.

For other objects and for a better understanding of the invention, reference may be had to the following detailed description taken in conjunction with the accompanying drawing, in which:

Figure 1 is an exploded perspective view of a wood turning attachment made in accordance with the present invention;

Figure 2 is a transverse cross sectional view taken along line 2—2 of Figure 1; and

Figure 3 is an enlarged fragmentary view of the follower rod forming a part of the present invention.

Referring now more in detail to the drawing, a wood turning attachment 10 made in accordance with the present invention is shown to include a main angle bracket 12 which is adapted to be secured, such as by nuts and bolts extending through an opening 12' therein, to a bed clamp 13 which is carried upon the bed of the wood lathe. An anchor rail 15 is secured to the upper surface of the bracket 12 for slidably supporting a slide 17 thereon for longitudinal movement. Balls 18 provide a substantially frictionless carriage for facilitating the longitudinal movement of the slide 17.

A tool carrier 20 is slidably received within a recess or groove 19 in the top of the slide 17 for movement transversely of the rail 15. A cutting tool 22 is clamped in proper position upon the top of the carrier 20, such as by means of a clamp 23. A handle 25 extends rearwardly from the opposite end of the carrier 20 for facilitating the manipulation of the cutting tool 22 in actual use. As is more clearly shown in Figure 2 of the drawing, a plate 26 depends downwardly from the bottom of the tool carrier 20, through which a guide rod 27 extends that is secured to the slide 17. A compression spring 29 encircles the rod 27 between the slide 17 and plate 26 so as to normally urge the tool carrier 20 in a direction away from the work piece on the lathe. An adjustable stop nut 30 carried at the outer end of the rod 27 limits this outward movement. A follower rod 32 is also slidably supported upon the plate 26 but is maintained in a substantially central position by means of oppositely acting compression springs 33 that are disposed between spaced parts of the rod 32 and opposite sides of the plate 26. As is more

2

clearly shown in Figure 3 of the drawing, a ball element 35 is rollably carried by the inner end of the follower rod 32 for engagement with the pattern surface 36 of a template 37 that is secured to the bracket 12 by means of template clamps 38. These clamps 38 have lugs that overlie the template 37 and studs which extend through the bracket 12 and are engaged by lock nuts 39 so as to secure the template in properly orientated position upon the bracket 12.

In use, the template 37 is first constructed from any desirable material, such as wood, plastic, or the like so that the guide surface 36 thereof corresponds substantially to the surface configuration of the wood piece to be turned. The template is then secured in place as shown in the drawing and a follower rod 32 engaged therewith. The engagement of the follower rod automatically limits the inward movement of the tool carrier 20 and cutting tool 22 toward the work piece when urged in that direction by a pushing action against the handle 25, which movement is also yieldably resisted by the compression spring 29. As the work piece is cut, the slide 17 is moved back and forth along the rail 15, so as to turn the work piece down to the proper finished dimensions, approximately the outline of the template guide surface 36. Of course, a finish cut should always be made so as to produce as fine a finished surface as possible. A locking clamp 41 is also carried by the slide 17 so as to prevent transverse movement of the tool carrier 20 when it is desired to turn a straight cylinder without any deviations that might otherwise result.

While various changes may be made in the detail construction, it shall be understood that such changes shall be within the spirit and scope of the present invention as defined by the appended claims.

What I claim as new and desire to protect by Letters Patent of the United States is:

1. A wood turning attachment for lathes comprising, in combination, a bracket, means for securing said bracket to the bed of a wood turning lathe, a cutting tool slide, a longitudinal rail secured to said bracket and slidably supporting said slide, a cutting tool carrier slidably supported upon said slide for reciprocating movement transversely of said rail, a follower carried by said tool carrier, and guide means secured to said bracket for engagement with said follower for directing the longitudinal and transverse movement of said follower and said carrier, said guide means comprising a template having an outline corresponding to the surface configuration of the work piece to be turned, said cutting tool carrier including a depending plate, a guide rod secured to said cutting tool slide and slidably received within said plate, a spring encircling said guide rod acting between said plate and said cutting tool slide yieldably urging said tool carrier in a direction away from said work piece, and a handle integral with said cutting tool carrier for effecting movement thereof against the action of said spring.

2. The combination according to claim 1, wherein said follower comprises a rod extending through said plate, and a centering spring adapted to yieldably position said follower in a central position upon said plate.

3. The combination according to claim 2, wherein said follower rod includes a ball rollably carried by one end of said follower rod for engagement with said template.

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