Sept. 21, 1943. A. M. STABINSKI 2,330,154

WAYS FOR LATHES AND LIKE MACHINES

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Fig. 1.

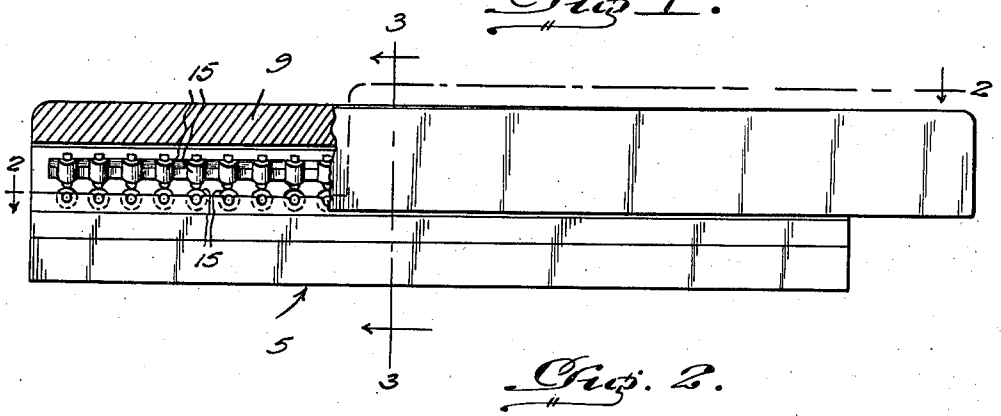
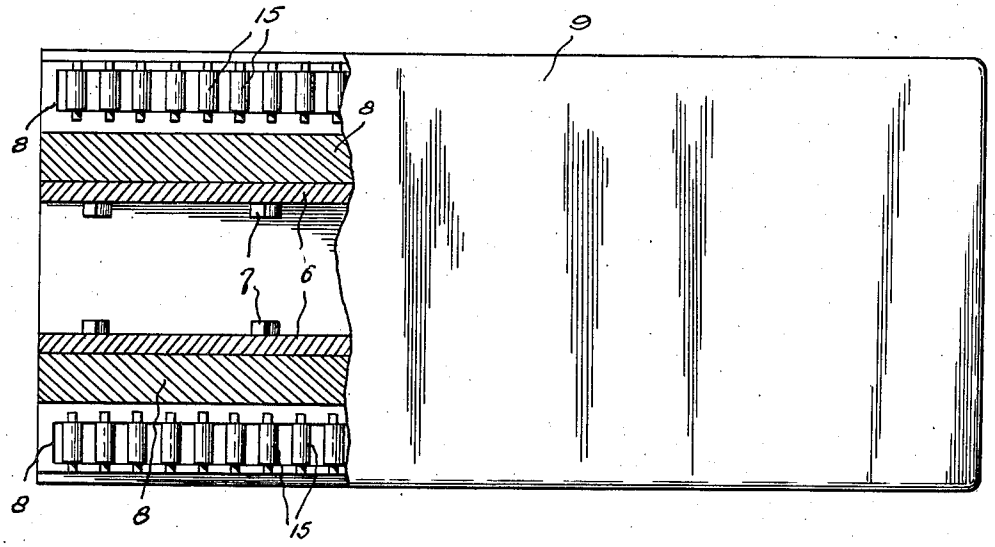



Fig. 2.



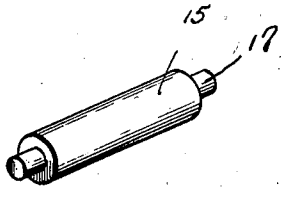




Fig. 4.

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Fig. 3.

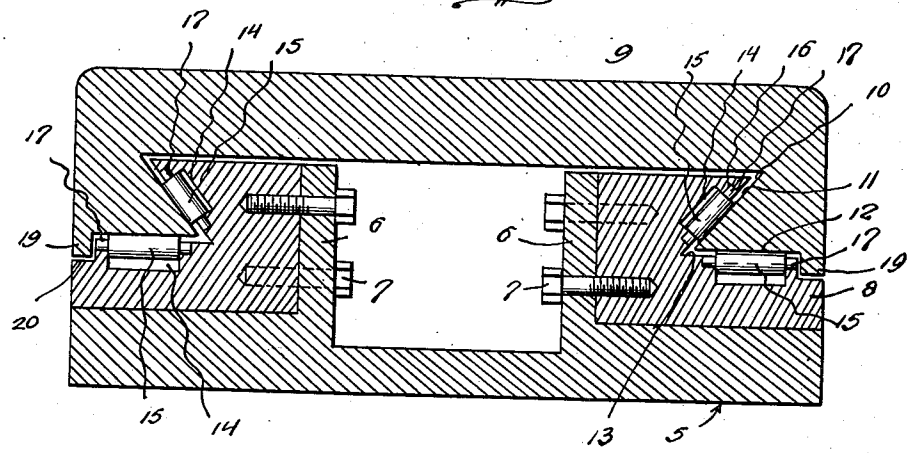



Fig. 5.

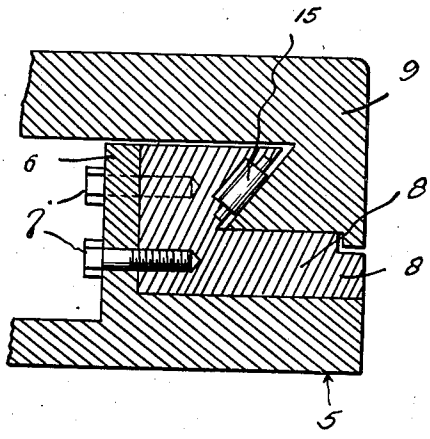
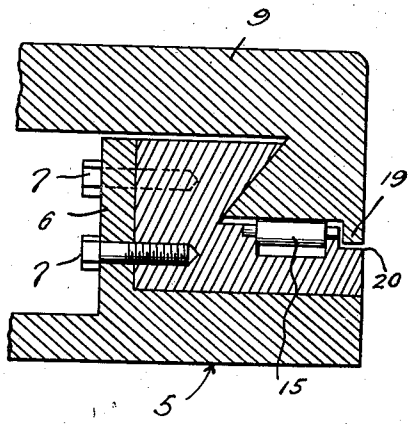



Fig. 6.




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Patented Sept. 21, 1943 2,330,154

# UNITED STATES PATENT OFFICE

2,330,154

## WAYS FOR LATHES AND LIKE MACHINES

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Application December 22, 1942, Serial No. 469,831

3 Claims. (Cl. 308—6)

This invention relates to lathes and similar machines having a slide which travels on ways of a bed casting, and has reference more particularly to improved ways and bearings for the slide. The primary object of this invention is to assure the slide moving freely and accurately and to provide a simple means for combatting wear or defects which may occur and that may affect the free and accurate movement of the slide by having easily removable bearing frames and the rollers thereof if worn or damaged may be quickly replaced by others, thereby reconditioning the ways of the machine for further efficient service by said machine.

With these and other objects in view as will become more apparent as the description proceeds, the invention consists in certain novel features of construction, combination and arrangement of parts as will be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which

Figure 1 is a side elevation, partly in section, illustrating a slide and a bed casting of a lathe or similar machine equipped with the present invention.

Figure 2 is a sectional view taken on the line 2—2 of Figure 1.

Figure 3 is a transverse sectional view taken on the line 3—3 of Figure 1.

Figure 4 is a perspective view illustrating one of the rollers.

Figure 5 is a fragmentary transverse sectional view illustrating a modified form of my invention.

Figure 6 is a view similar to Figure 5 illustrating another modified form of my invention.

Referring in detail to the drawings, the numeral 5 indicates a bed casting of a lathe or similar machine constructed in accordance with my invention. Formed on the top face of the bed casting are vertically arranged spaced attaching flanges 6 extending the full length of the bed casting and provided with openings to receive stud bolts 7. The flanges 6 cooperate with the top face of the bed casting 5 in providing seats extending longitudinally of the bed casting on which rest removable bearing frames 8 provided with screw threaded sockets to receive the stud bolts 7 whereby the bearing frames are firmly secured on the seats against accidental displacement but which will permit easy and quick removal thereof when desired.

The slide of the machine is indicated in entirety by the character 9 and its under face is constructed to provide a dovetail shaped groove or channel presenting converging roller-engaging surfaces 11 and horizontally arranged roller-engaging surfaces 12.

The bearing frames 8 are provided with V-shaped longitudinally extending grooves 13 and formed in the walls of said grooves are spaced recesses or pockets 14 to partially receive rollers 15 that contact the faces 11 and 12 of the slide. The bearing frames 8 are further provided with grooves 16 connecting with the pockets and forming seats for pintles 17 of the rollers. The seats 16 open outwardly through the walls of the V-shaped channels or grooves 13 of the bearing frames so that the rollers may be easily removed or replaced in the bed frame when the slide is removed therefrom.

Thus it will be seen that the slide may move with a minimum amount of friction on the bearing frames and be prevented from having lateral movement relative to the bed casting, consequently assuring accurate sliding movement of the slide at all times.

The slide at opposite sides thereof is provided with flanges 19 extending into grooves 20 of the bearing frames but spaced from the walls thereof so as not to create friction between the slide and the bearing frames. The clearance between the walls of the grooves 20 and the flanges 19 is such as to assist in excluding dirt and other foreign matter from the surfaces 11 and 12 of the slide and the rollers 15.

As shown in Figure 5, the bearing frames 8 may have the rollers 15 arranged only in the outwardly inclined walls of the V-shaped grooves or channels to contact with the walls 11 of the slide while the walls 12 rest on the horizontal walls of the grooves or channels of the bearing frames.

Referring to Figure 6 it will be seen that the rollers 15 may be only located in the horizontal walls of the V-shaped grooves or channels of the bearing frames and engage with the walls 12 of the grooves or channels of the slide while the walls 11 contact the upwardly and outwardly inclined walls of the V-shaped grooves or channels of the bearing frames.

The arrangement of rollers shown in Figures 5 and 6 to some extent will reduce friction between the slide and the bearing frames. However, the arrangement of the rollers shown in Figures 1 to 3, inclusive, provides a maximum reduction of friction between the slide and the bearing frames. In either form of the invention,

the bearing frames are easily removable after the removal of the slide and can be replaced by others if damaged or worn. Also, the rollers thereof may be easily removed and replaced by others if damaged.

While I have shown and described the preferred embodiment of my invention, it will be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention claimed.

Having thus described my invention, what I claim is:

1. In a device of the character described, a bed plate including spaced flanges cooperating with the top face of the bed plate in providing seats extending longitudinally of said bed plate, bearing frames detachably secured in the seats and provided with grooves, a slide having a groove receiving therein the bearing frames and providing portions extending into the grooves of the bearing frames, and anti-friction means between said bearing frames and the slide.

2. In a device of the character described, a bed casting including spaced attaching flanges cooperating with the top face of the bed casting in providing seats extending longitudinally of said casting, bearing frames supported by said seats and detachably secured to the flanges and provided with V-shaped grooves having converging walls, a slide having a dovetail shaped groove receiving therein the bearing frames and providing portions extending into the grooves of the bearing frames, and anti-friction rollers arranged between the slide and the bearing frames.

3. In a device of the character described, a bed casting including spaced attaching flanges cooperating with the top face of the bed casting in providing seats extending longitudinally of said casting, bearing frames supported by said seats and detachably secured to the flanges and provided with V-shaped grooves having converging walls, a slide having a dovetail shaped groove receiving therein the bearing frames and providing portions extending into the grooves of the bearing frames, said bearing frames within the converging walls of the grooves thereof provided with pockets, and anti-friction rollers journaled on the bearing frames and partly lying in the pockets and contacting walls of the slide.

ANTHONY M. STABINSKI.