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FORMER FOR LATHES.

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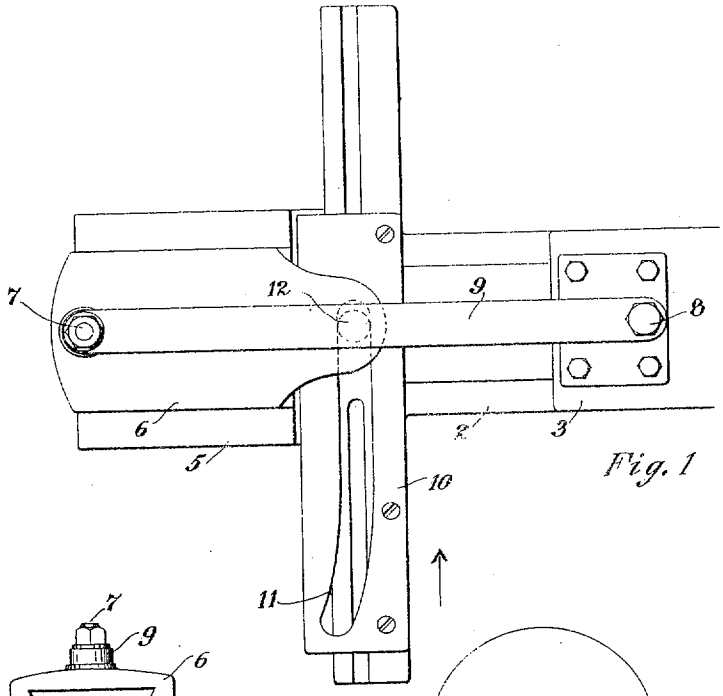

Fig. 1

Fig. 3

Fig. 2

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FORMER FOR LATHES.

1,018,184. Specification of Letters Patent. Patented Feb. 20, 1912.

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To all whom it may concern:

Be it known that I, GEORGE E. GREENLEAF, a citizen of the United States, residing at Plainfield, Union county, New Jersey, have invented certain new and useful Improvements in Formers for Lathes, of which the following is a specification.

This invention pertains to improvements in formers for lathes designed to guide the turning tool in a path departing from parallelism with the axis of the lathe for the purpose of producing longitudinally curved contours on the work produced.

The invention will be readily understood from the following description taken in connection with the accompanying drawing in which:—

Figure 1 is a plan of a former exemplifying my invention: Fig. 2 is a side elevation of the same: and Fig. 3 a rear elevation of the rear pivot-carrier.

In the drawing:—1, indicates the lathe-bed: 2, the carriage. 3, the tool-holder: 4, the tool, all of the parts thus far referred to having no peculiarities: 5, a guideway crosswise of the lathe and disposed at the rear of the bed and fixed to the bed at any desired point along the length of the bed: 6, a rear pivot-carrier mounted to slide freely on guideway 5: 7, a vertical pivot carried by pivot-carrier 6: 8, a vertical pivot carried by the tool-holder: 9, a link connecting the two pivots: 10, a former-plate rigidly secured to the carriage: 11, a longitudinal slot in the former-plate, the slot being illustrated as having a straight portion and a curved portion: and 12, a roller projecting from pivot-carrier 6 down into the slot of the former-plate.

Assume the carriage to be feeding in the direction of the arrow of Fig. 1. Pivot 7 partakes of no motion but roller 12 is traversed by the straight portion of the slot in the former-plate. The result is that pivot 7 is maintained at a fixed distance from the vertical plane of the axis of the lathe and, as link 9 swings on pivot 7, the tool-holder is drawn toward the vertical plane of the lathe-axis, and the point of the tool will describe a circular arc having the length of the link for a radius. Therefore, with a former-plate having a slot entirely straight, work may be produced with a curved longitudinal contour whose radius is determined entirely by the length of the link. While the roller has traveled in the straight portion of the slot there has been no sliding movement of pivot-carrier 6 on its guideway. But when the roller reaches the curved portion of the slot then rearward motion will be imparted to pivot-carrier 6, and pivot 7 will be carried farther from the vertical plane of the lathe-axis and the curvature of the longitudinal contour produced upon the work by the point of the tool will be of less radius than that due to the mere length of the link, while if the curve of the slot were in the opposite direction the curvature of the contour produced by the tool would have a radius greater than that represented by the length of the link.

The former-plate is removably secured to the carriage and it follows that the slot in the former-plate may be given such form as to produce any desired curved contour on the work being turned, and that, by employing selective former-plates, various contours of work may be provided for, and it will at once be recognized that the device is extremely simple and substantial.

I claim.

1. A former for a lathe comprising, a guideway disposed transversely of the lathe-bed and secured to the lathe-bed, a pivot-carrier fitted to slide in said guideway, a pivot carried by the pivot-carrier, a pivot carried by the tool-holder of the lathe, a link connecting the two pivots, a former-plate secured to the carriage and having longitudinal guiding surfaces, and a connection between the pivot-carrier and the guiding surfaces of the former-plate, combined substantially as set forth.

2. A former for a lathe comprising, a guideway disposed transversely of the lathe bed and secured to the lathe-bed, a pivot-

carrier fitted to slide in said guideway, a pivot carried by the pivot-carrier, a pivot carried by the tool-holder of the lathe, a link connecting the two pivots, a former-plate carried by the lathe-carriage and provided with a longitudinal slot, and a projection carried by the pivot-carrier and engaging said slot, combined substantially as set forth.

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