

D. H. TEAS & G. T. REISS.

LATHE DRIVER.

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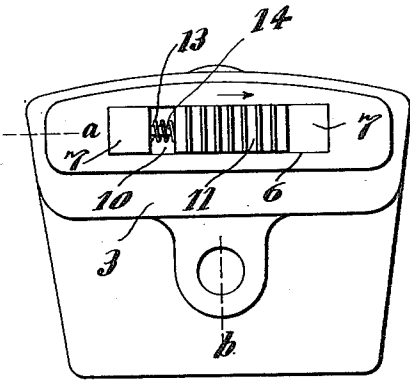


Fig. 1

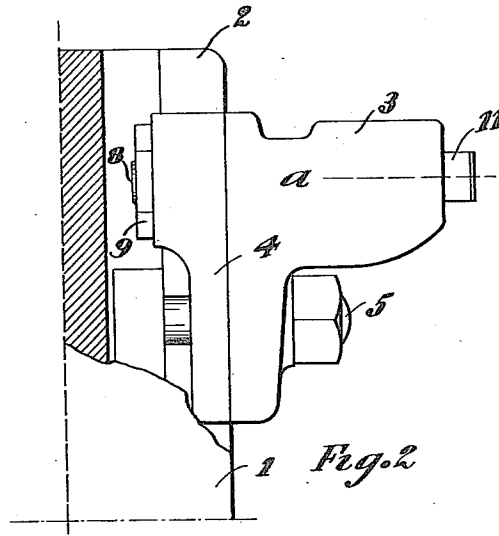


Fig. 2

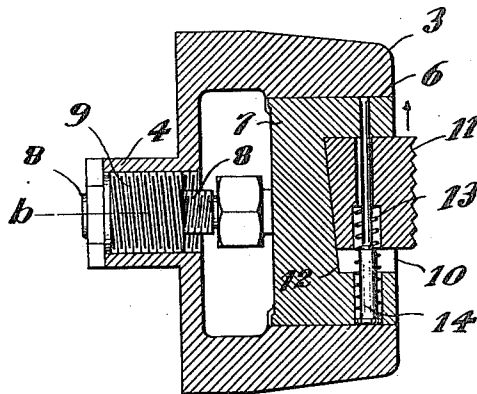


Fig. 3

Witnesses

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UNITED STATES PATENT OFFICE.

DANIEL H. TEAS, OF NEW HAVEN, CONNECTICUT, AND GEORGE T. REISS, OF HAMILTON, OHIO, ASSIGNORS TO NILES-BEMENT-POND COMPANY, OF JERSEY CITY, NEW JERSEY.

LATHE-DRIVER.

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To all whom it may concern:

Be it known that we, DANIEL H. TEAS, a citizen of the United States, residing at New Haven, New Haven county, Connecticut, post-office address care of Niles-Bement-Pond Co., 111 Liberty street, New York, N. Y., and GEORGE T. REISS, a citizen of the United States, residing at Hamilton, Butler county, Ohio, post-office address care of Niles Tool Works, Hamilton, Ohio, have invented certain new and useful Improvements in Lathe-Drivers, of which the following is a specification.

This present invention pertains to lathe drivers employed in the turning of steel tired railway wheels, and relates to improvements in the class of lathe drivers known as Teas' drivers, this class being exemplified in Teas's United States Patents No. 770546, No. 815659, and No. 853273. In the drivers of this class the serrated blocks drive by the bite of their teeth, engaging the outer face of the tire, the drivers being secured to the face plates of the lathe and being forced up to the biting work by means of screws. While, in such drivers, provision has been made for the automatic increase of the biting power, it has been found that in some cases there was no proper limit to the biting power, the result being the imposition of unnecessary strains upon the lathe and upon the wheel-and-axle structure, and, in other cases, where eccentrically pivoted toothed blocks were employed, the automatic action would in some cases carry the pivoted blocks past the maximum point of biting and cause them to release their hold upon the work.

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

Figure 1 is the face elevation of a lathe driver exemplifying our invention; Fig. 2 a side elevation of the same, showing the driver secured to the face-plate partially appearing in radial section in the plane of line *b* of the other two figures; and Fig. 3 is a horizontal section in the plane of line *a* of the other two figures.

In the drawing:—1, indicates one of the usual face-plates of a tire-lathe: 2, one of the usual radial T-shaped slots in the face-plate: 3, a bracket secured to the face surface of the face-plate: 4, a rib on the back

of the bracket, this rib engaging the T-slot of the face-plate: 5, a bolt engaging the bracket and the T-slot of the face-plate and serving as means by which the bracket can be firmly secured to the face-plate in desired radial position thereon: 6, a slot in the outer end of the bracket, this slot extending parallel with the axis of the face-plate and extending substantially at right angles to the radius of the face-plate: 7, a carrying-block fitted to slide in the slot of the bracket, in a direction to and from the face-plate: 8, a set screw mounted in the rear portion of the bracket and adapted to serve in forcing block 7 in the direction away from the face-plate: 9, a nut screwed into the rear portion of the bracket and serving as a renewable removable nut for screw 8: 10, a gap in the face of carrying-block 7: 11, a toothed block fitted in the slot in the driver and in the gap in the carrying-block, the length of the toothed block being less than the length of the gap in the carrying-block: 12, the floor, so to call it, of the gap in the carrying-block, this floor being at an angle to the face of the face-plate, the direction of the angle being such that, as the driver advances in the direction of the arrows upon Figs. 1 and 3, the gap will be shallowest at its trailing end; the rear surface of the toothed block being made to correspond with the inclined floor of the gap: 13, a spring carried by the carrying-block and engaging the toothed block and tending to urge the toothed block to the deeper end of the gap in the carrying-block: and 14, a pin carried by the carrying-block and freely engaged by the toothed block, the spring surrounding this pin.

The new drivers are employed in the manner usual with lathe drivers of the Teas class, that is to say, each face-plate of the lathe will be provided with a plurality of drivers, preferably four, so adjusted radially in the face-plates that the toothed blocks will engage outer faces of the tires, after which, by means of the screws, the toothed blocks are forced into indenting engagement with the tire, the lathe being then started at its work. The strain of the driving, when the driver is moving in the direction of the arrows of Figs. 1 and 3, cause the toothed blocks to retreat on the inclined floors of the gaps of the carrying-blocks, thus increasing the penetration of the teeth

into the tire. Experience having determined about how deep the penetration into the tire should be for proper driving, the slope of the gap-floors is made accordingly, the preference being that when the desired degree of driving penetration of the teeth shall have been effected by the sliding of the toothed blocks the blocks will reach the trailing ends of the gaps in the carrying-blocks and be stopped by the trailing end-walls of the gaps. Pin 14 is to be so loosely or eccentrically engaged by the toothed block as not to interfere with the movement of the block endwise in the gap, and the purpose of the spring is to return the toothed block to the deep end of the gap when the driving strain has been taken off. When the carrying-block is removed from the bracket then the pin and spring and toothed block may be readily separated.

We claim:—

1. A lathe driver comprising, a bracket adapted to be secured to a face-plate and provided with a socket, a carrying-block mounted to slide in said socket to and from the face plate and provided with a gap having a floor inclined to the face-plate, means for forcing the carrying-block in the direction away from the face-plate, and a toothed block adapted to slide in said gap and having its rear portion engaging said inclined floor, combined substantially as set forth.

2. A lathe driver comprising, a bracket adapted to be secured to a face-plate and provided with a socket, a carrying-block mounted to slide in said socket to and from the face-plate and provided with a gap having a floor inclined to the face-plate, means for forcing the carrying-block in the direction away from the face-plate, a toothed block adapted to slide in said gap and having its rear portion engaging said inclined

floor, and a stop to limit the sliding of the toothed block upon the inclined floor, combined substantially as set forth.

3. A lathe driver comprising:—a bracket adapted to be secured to a face-plate and provided with a socket, a carrying-block mounted to slide in said socket to and from the face-plate and provided with a gap having a floor inclined to the face-plate, means for forcing the carrying-block in the direction away from the face-plate, a toothed block adapted to slide in said gap and having its rear portion engaging said inclined floor, and a spring coöperating with the carrying-block and toothed block and acting to press the toothed block to the deeper end of said gap, combined substantially as set forth.

4. A lathe driver comprising:—a bracket adapted to be secured to a face-plate and provided with a socket, a carrying-block mounted to slide in said socket to and from the face-plate and provided with a gap having a floor inclined to the face-plate, means for forcing the carrying-block in the direction away from the face-plate, a toothed block adapted to slide in said gap and having its rear portion engaging said inclined floor, a pin supported by the end walls of said gap and passing freely through said toothed block, and a spring surrounding said pin and coöperating with the toothed block and one of the end walls of said gap, combined substantially as set forth.

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