G. E. GREENLEAF & F. S. THOMPSON.

TAIL STOCK CLAMP.

APPLICATION FILED APR. 6, 1911.

1,006,205. Patented Oct. 17, 1911.

2 SHEETS—SHEET 1.

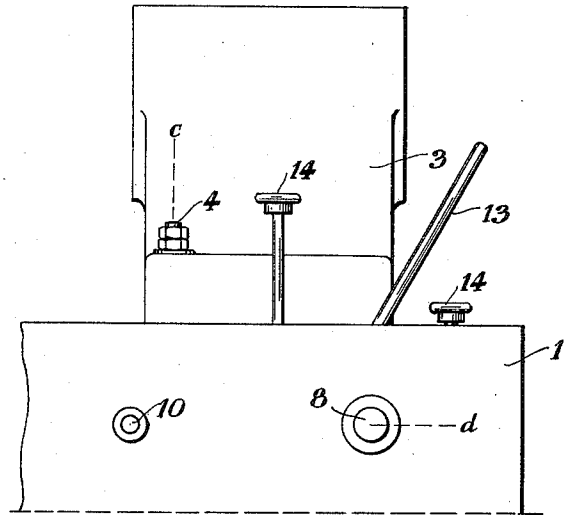

Fig. 1

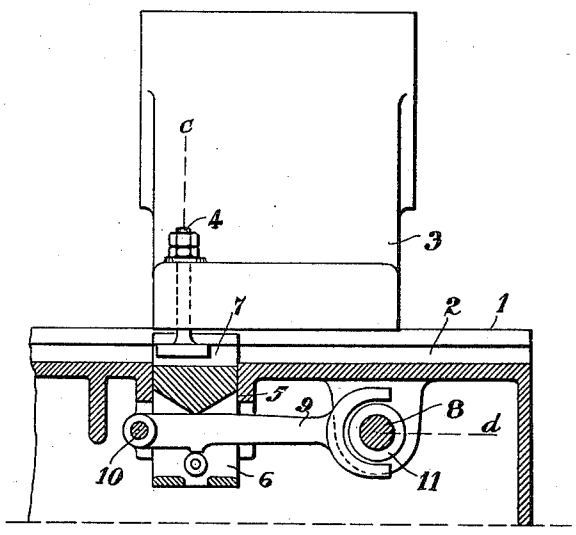

Fig. 2

Witnesses

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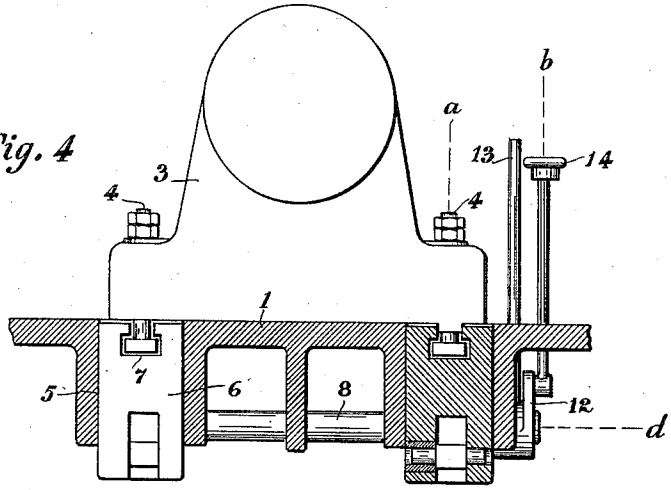
2 SHEETS—SHEET 2.

Fig. 4



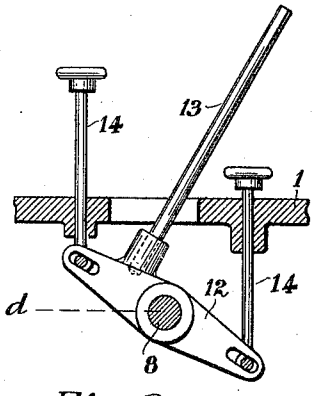


Fig. 3

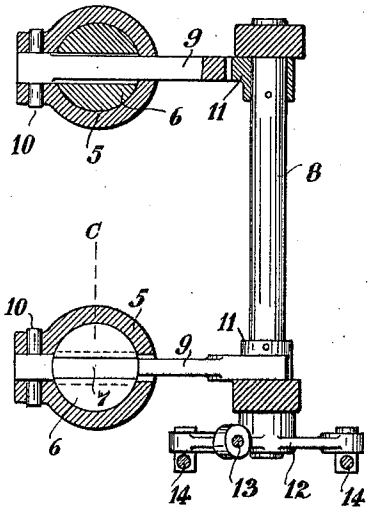


Fig. 5

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UNITED STATES PATENT OFFICE

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TAIL-STOCK CLAMP.

1,006,205. Specification of Letters Patent. **Patented Oct. 17, 1911.**

Application filed April 5, 1911. Serial No. 619,072.

To all whom it may concern:

Be it known that we, GEORGE EDWARD GREENLEAF and FREDERICK SAMUEL THOMPSON, citizens of the United States, residing at Plainfield, Union county, New Jersey, have invented certain new and useful Improvements in Tail-Stock Clamps, of which the following is a specification.

There is a class of lathes, generally employed for the turning of car wheels while on their axles, in which the tailstock requires a limited amount of shifting motion on the bed of the lathe, the tailstock having a substantially invariable working position upon the bed.

The present invention relates to an improved means for clamping the tailstock of such lathes to the lathe-bed.

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

Figure 1 is a side elevation of the end of a lathe-bed and of a tailstock provided with clamping mechanism exemplifying the present invention: Fig. 2 a vertical longitudinal section of the same in the plane of line *a* Fig. 4: Fig. 3 a vertical longitudinal section in the plane of line *b* Fig. 4: Fig. 4 a vertical transverse section in the plane of line *c* Figs. 1, 2 and 5: and Fig. 5 a horizontal section in the plane of line *d* Figs. 1, 2, 3 and 4.

In the drawings:—1, indicates the bed of the lathe: 2, longitudinal tee-slots therein: 3, the tailstock adapted to be shifted endwise of the bed: 4, a bolt depending from each side of the base of the tailstock, these bolts having heads freely engaging the tee-slots in the bed: 5, vertical sockets extending down through the top of the bed one immediately below each of the bolts when the tailstock is in adjusted working position upon the bed: 6, a clamping plug vertically movable in each of the sockets: 7, a tee-slot in the top of each of the plugs in alinement with the tee-slots in the bed: 8, a shaft journaled across the lathe-bed near the plugs: 9, a lever passing through each plug in a direction parallel with the lathe-bed, the plugs being recessed to permit the passage of the levers, and the bodies of the levers having upward and downward engagement with the plugs so that the plugs will rise and fall as the levers oscillate: 10, fixed pivots supported by the bed at the heels of the levers: 11, a pair of eccentrics fast on shaft 8, each of these eccentrics being engaged by the forked free end of one of the levers: 12, a double-armed lever fast on shaft 8: 13, a hand-lever socketed into the double-armed levers: and 14, a pair of vertical pedal rods having their lower ends pivoted to the opposite ends of the double-armed lever.

By operating the hand-lever or the pedals the eccentrics may be turned to move the plugs up or down. Bolts 4 are to be so adjusted, with reference to the tee-slots in the bed, that they will have no clamping effect in those slots or interfere with the endwise shifting of the tailstock upon the bed. In a certain position of the eccentrics, their idle position, the slots in the plugs are in such close alinement with the slots in the bed that the heads of the bolts may pass freely into and out of the plugs. By shifting the tailstock to working position, which brings the heads of the bolts into the slots of the plugs, and by then actuating the hand-lever or the pedals the eccentrics may be turned so as to depress the free ends of the levers and draw the plugs downward, thereby drawing upon the bolts and clamping the tailstock firmly to the bed. The clamping of the tailstock or the releasing of it, may be effected in an instant by a simple actuation of the hand-lever or one of the pedals.

It is to be understood that the particular construction set forth is merely a single exemplification of our invention which manifestly lends itself to various modifications in detail. For instance, the bolts depending from the tailstock are simply typical of means for providing the tailstock with members to be downwardly engaged by clamping devices carried by the bed of the lathe, and the vertically adjustable tee-slotted plugs with their accessories are simply typical of members adapted for clamping engagement with the members carried by the tailstock.

We claim:—

1. A stock clamp comprising, in combination with a lathe bed having a vertically movable portion, members carried by the stock for engaging the movable portion of the lathe bed, and means for depressing said movable portion.

2. A stock clamp comprising in combina-

tion with a lathe bed having a vertically movable portion, members carried by the stock for engaging the movable portion of the lathe bed, means for vertically adjusting said members and means for depressing said movable portion.

3. A tailstock clamp comprising, in combination with a lathe bed having vertical sockets therein and vertically adjustable plugs in each of said sockets, members carried by the socket for engaging said plugs, and means for vertically adjusting said plugs.

4. A tailstock clamp comprising, a lathe-bed provided with longitudinal slots, a tailstock, bolts depending from the tailstock and adapted to traverse said slots, vertical sockets disposed in the line of said slots and adapted to be passed over by said bolts, plugs mounted for vertical adjustment in said sockets and provided with slots adapted to have hooking engagement with said bolts, and means for vertically adjusting said plugs, combined substantially as set forth.

5. A tailstock clamp comprising, bolts depending from the tailstock, sockets in the lathe-bed adapted to be passed over by said bolts, plugs mounted for vertical adjustment in said sockets and slotted to have hooking engagement with said bolts, a shaft mounted across the lathe-bed, eccentrics on said shaft, levers pivoted to the lathe-bed and engaging said plugs and eccentrics, and means for turning said shaft, combined substantially as set forth.

6. A tailstock clamp comprising, bolts depending from the tailstock, sockets in the lathe-bed adapted to be passed over by said bolts, plugs mounted for vertical adjustment in said sockets and slotted to have hooking engagement with said bolts, a shaft mounted across the lathe-bed, eccentrics on said shaft, levers pivoted to the lathe-bed and engaging said plugs and eccentrics, and a lever connected with said shaft to serve in turning it, combined substantially as set forth.

7. A tailstock clamp comprising, bolts depending from the tailstock, sockets in the lathe-bed adapted to be passed over by said bolts, plugs mounted for vertical adjustment in said sockets and slotted to have hooking engagement with said bolts, a shaft mounted across the lathe-bed, eccentrics on said shaft, levers pivoted to the lathe-bed and engaging said plugs and eccentrics, a lever connected with said shaft to serve in turning it, and pedal mechanism connected with said last-mentioned lever, combined substantially as set forth.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."