

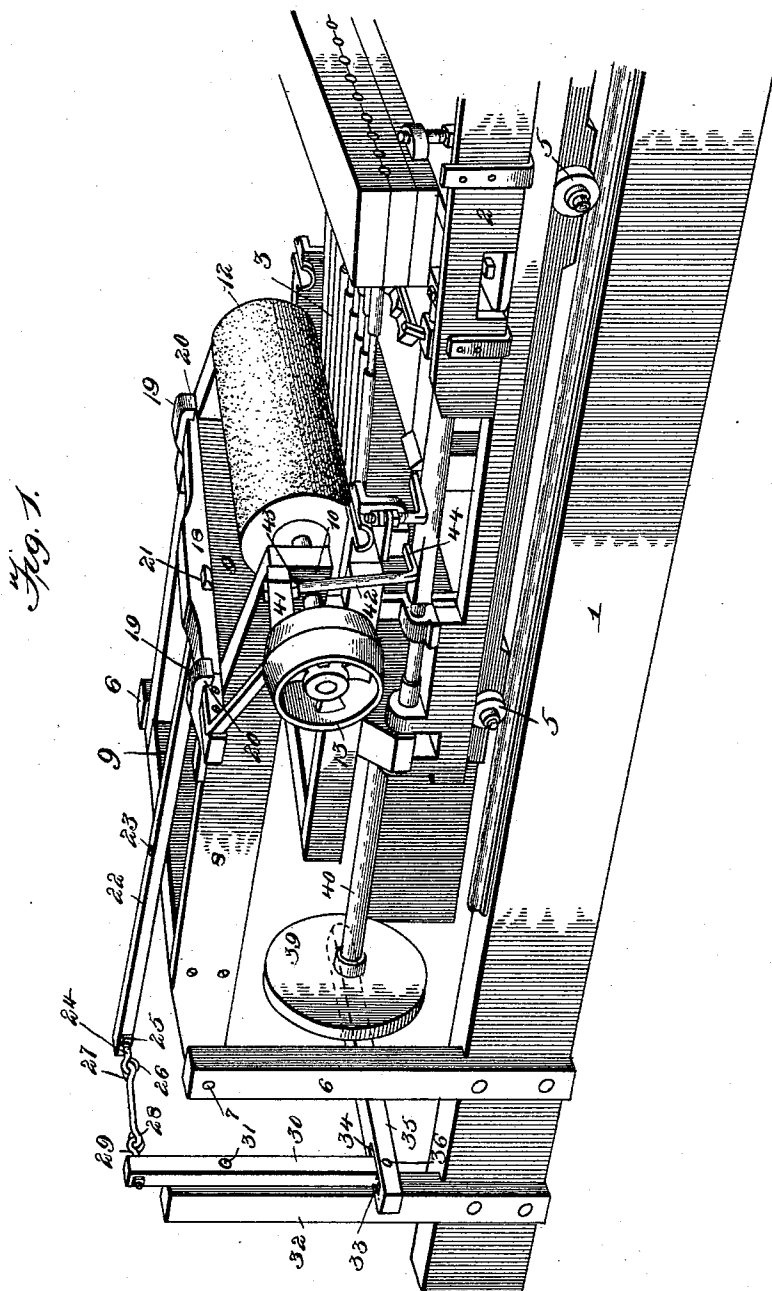
(No Model.)

2 Sheets—Sheet 1.

W. H. JOSLIN.
POLISHING DEVICE FOR SPOKE LATHES.

No. 530,110.

Patented Dec. 4, 1894.



Inventor

William H. Joslin,

By his Attorneys.

Witnesses

John C. Shaw.
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UNITED STATES PATENT OFFICE.

WILLIAM H. JOSLIN, OF JAMAICA, VERMONT, ASSIGNOR OF ONE-HALF TO
H. A. MCLEAN, OF SAME PLACE.

POLISHING DEVICE FOR SPOKE-LATHES.

SPECIFICATION forming part of Letters Patent No. 530,110, dated December 4, 1894.

Application filed July 17, 1894. Serial No. 517,813. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. JOSLIN, a citizen of the United States, residing at Jamaica, in the county of Windham and State of Vermont, have invented a new and useful Polishing Device for Spoke-Lathes, of which the following is a specification.

My invention relates to spoke-lathes, and particularly to an attachment adapted to be applied to a lathe of ordinary construction, the object in view being to provide means for giving a longitudinally reciprocatory movement to the polishing or finishing roll to increase the efficiency of its operation.

Further objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings:—Figure 1 is a perspective view of a polishing attachment embodying my invention applied in the operative position to a spoke-lathe to show the manner of using the same in connection therewith. Fig. 2 is a plan view of the same. Fig. 3 is a detail view in perspective of the polishing roll and contiguous connections. Fig. 4 is a similar view of the means whereby the rotary motion of the usual carriage feeding screw is converted into a reciprocatory motion to actuate the roll.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

In the drawings, Figs. 1 and 2, I have shown a portion of the framework of an ordinary spoke-lathe, only such parts of the lathe being illustrated as are necessary to give an accurate conception of the manner of arranging the apparatus embodying my invention.

1 indicates the bed of the lathe; 2, the carriage upon which the spokes 3 are arranged and carried during the turning operation, said carriage being provided with the usual wheels 5, which are mounted upon a track 4, the carriage receiving its longitudinal movement by the ordinary driving mechanism, of which only the longitudinal feed-shaft 40 is illustrated.

Rising from opposite side-beams of the bed 1 are the standards 6 provided at their upper

ends with bearings in which are mounted the extremities of the transverse shaft 7, and fixed to this shaft is a pivotal framework having the side-beams 8 connected at their front and rear ends with the cross-beams 9. The front ends of the beams 8 are provided with bearing-boxes 10, in which are mounted the trunnions 11 of the sanding or polishing roll 12, one of said trunnions 11 being extended beyond the box 10 in which it is journaled and being fitted with a pulley 13, which is formed with a central circumferential rib adapted to prevent lateral displacement of the belt, not shown, by which motion is communicated from any suitable motor to the roll. The pulley 13 is provided with a collar 14 having a groove 15, in which the fork 16 of an arm 17 is fitted, whereby movement of said arm transverse to the length of the machine will impart an axial or sliding movement to the roll 12 without interfering with the rotation of said roll.

The arm 17 is secured to one end of a transverse reciprocatory bar 18, preferably mounted upon the upper side of the forward cross-beam 9 of the pivotal frame, and is held from displacement by means of guide-plates 19 having overhanging portions 20, which engage the front edge of said bar 18. Formed in the under side of the bar 18 and at its center is a notch 21 for the reception of the forward end of a lever 22, thereby forming a loose connection between said lever and the bar, whereby an oscillatory movement of the lever will impart a directly reciprocatory movement to the bar 18 without causing straining of the joint between said members. The lever 22 is pivoted at an intermediate point by means of a pin 23 to the rear cross-beam 9 of the pivotal frame, and the rear arm of said lever is connected at its extremity to the upper and shorter arm by an approximately vertical connecting lever 30. The connection between said levers 22 and 30 comprises an adjustable bolt 24 engaging a perforation in the lever 22 and held in place by means of adjusting nuts 25, which are threaded upon the bolt upon opposite sides of said lever, and a link 28 which connects said bolt 24 to an eye 29 at the extremity of the lever 30. Said link 28 is provided with

an eye 27 to engage a similar eye 26 on the bolt 24.

Motion is communicated to the above described mechanism from the above mentioned feed-shaft 40 of the lathe proper by means of a disk 39 fixed to said feed-shaft and carrying a crank-pin 38, which is connected by the pitman 35 to the lower arm of the lever 30. Said pitman is provided with a longitudinal slot 34, in which fits a stud or reduced portion 33 of the lever 30, said stud and the pitman 35 being provided with registering perforations in which is fitted the fulcrum pin 36. The lever 30 is supported by and pivotally connected to a standard 32 by means of a pivot-pin 31, said standard rising from one of the side-beams of the bed 1.

From the above description it will be seen that in operation the rotation of the shaft 40 by the intermediate connections above described, communicates a reciprocatory motion to the bar 18, and the arm 17 communicates said motion of the bar 18 to the spindle of the polishing-roll 12, whereby said roll is reciprocated longitudinally during its rotation in contact with the surfaces of the spokes which are being dressed or finished. Lost motion in the connections between the feed-shaft 40 and the bar 18 may be compensated by means of the adjustable bolt 24.

Fixed to the front ends of the side beams 8 of the pivotal frame are blocks 41, which support rods 42 provided at their lower ends with laterally extending feet 44 adapted to rest upon the bed 1 when the carriage 2 is withdrawn, and to rest upon the carriage when the latter is in operative position, as shown in Fig. 1. The rods 42 are held in place in the blocks 41 by means of nuts 43, which are threaded on the rods respectively in contact with the upper and lower surfaces of said blocks.

The above described connection between the levers 22 and 30 provides for relative adjustment of such parts to vary the position, longitudinally, of the polishing roll, and also provides means for compensating for contraction and expansion.

It will be understood that the above described attachment may be used in connection with any ordinary spoke lathe and may be adapted for use in connection with any lathe having the general features of construction above indicated without involving more than mechanical skill in such adaptation, and as various changes in the form, proportion, and minor details of construction may be resorted to without departing from the spirit of the invention, I reserve the right to make

such alterations as are necessary to adapt the apparatus for use in connection with various forms of spoke-lathes, provided such changes are within the scope of the claims.

Having described my invention, what I claim is—

1. The combination with a spoke-lathe, of a pivotal frame, a polishing roll carried by said frame and mounted for rotary and reciprocatory movements, means for imparting a rotary movement to the roll, a slidable bar, connections between said bar and the roller, whereby the longitudinal reciprocation of the former is communicated to the latter, a lever fulcrumed upon the pivotal frame and loosely connected at one end to the slidable bar, a second lever fulcrumed upon a standard rising from the frame of the spoke-lathe, an adjustable connection between the contiguous arms of said levers, and means for operating the second lever, substantially as specified.

2. The combination with a spoke-lathe, of a pivotal frame, a sanding or polishing roll mounted thereon and capable of longitudinal reciprocation, means for imparting a rotary motion to the roll, an intermediately pivoted lever 22 fulcrumed upon the pivotal frame, connections between one arm of said lever and the roll whereby the oscillation of the lever causes a reciprocation of the roll, a connecting lever 30 fulcrumed upon a standard rising from the frame of the lathe, a flexible connection between the levers 22 and 30 comprising a bolt carried by one of the levers, an eye fixed to the other lever, and a link connecting said bolt and eye, and means for imparting motion to the lever 30, substantially as specified.

3. The combination with a spoke-lathe, of a pivotal frame, a sanding or polishing roll mounted upon said frame and capable of longitudinal reciprocation, means for imparting rotary motion to the roll, a reciprocating bar operatively connected with the roll to communicate reciprocatory movement thereto, means for operating said bar, and supporting devices for the free end of the pivotal frame consisting of rods attached thereto and provided with feet adapted to bear upon the bed or carriage of the lathe, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM H. JOSLIN.

Witnesses:

HENRY B. HOWARD,
JOHN C. ROBINSON.