

C. D. FISCHER, JR.
LATHE.

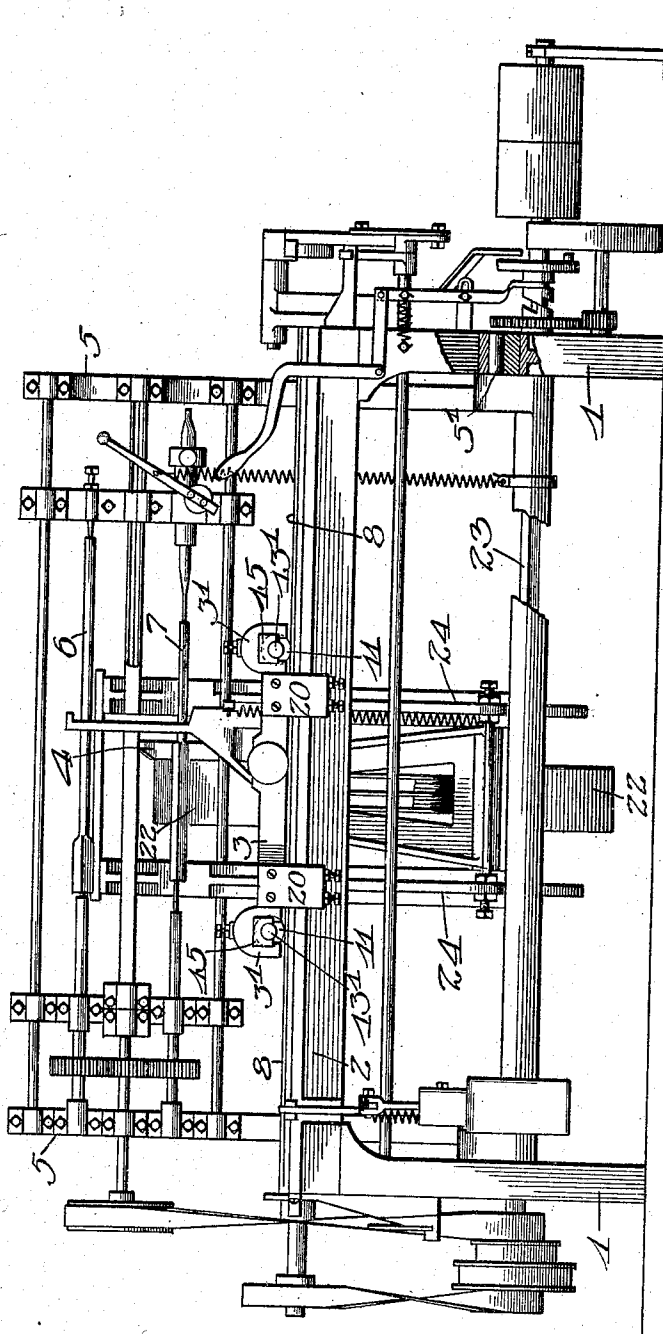
APPLICATION FILED SEPT. 12, 1907.

941,701.

Patented Nov. 30, 1909.

3 SHEETS—SHEET 1.

Fig. 1.



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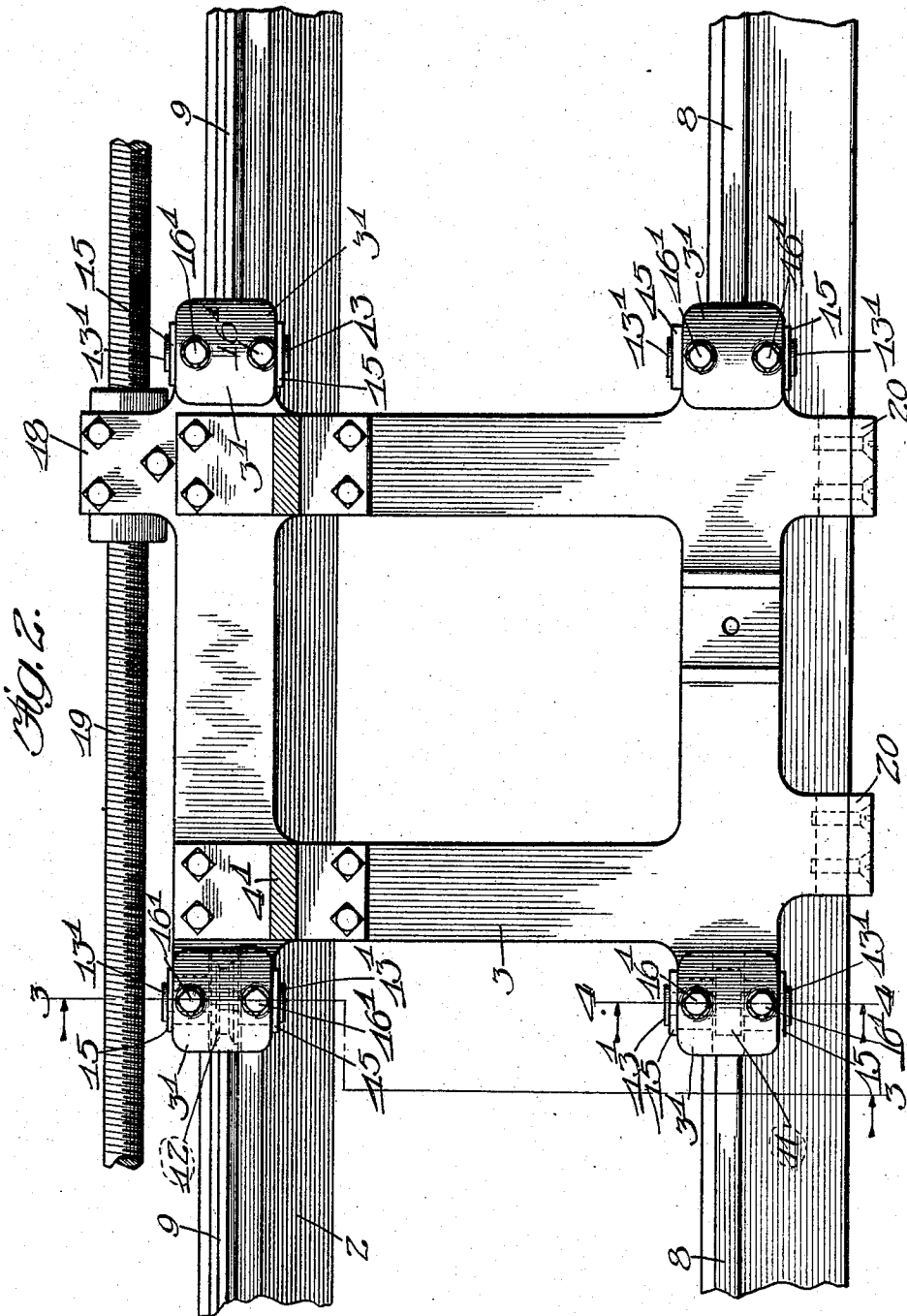
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3 SHEETS—SHEET 2.



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3 SHEETS—SHEET 3.

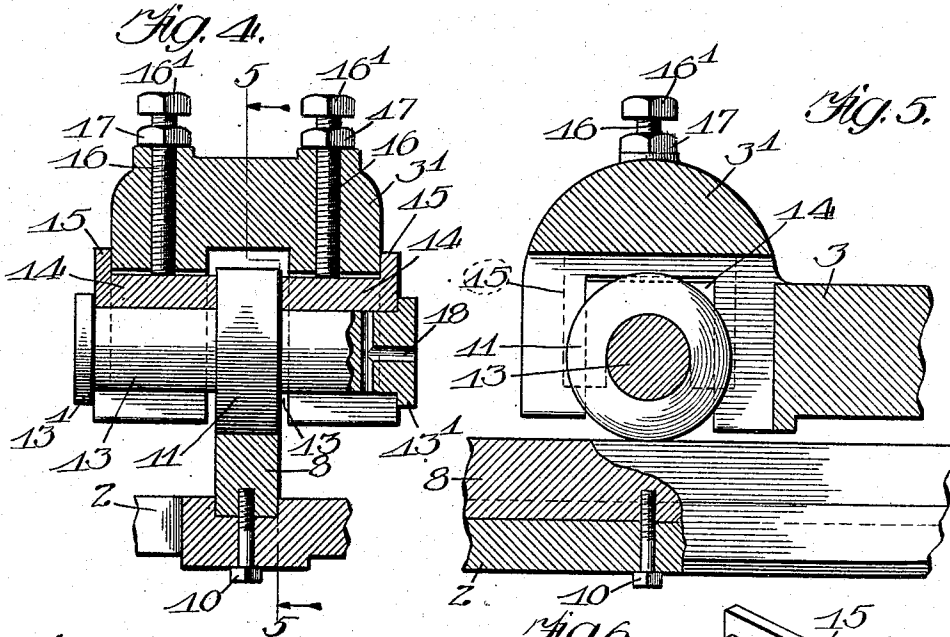
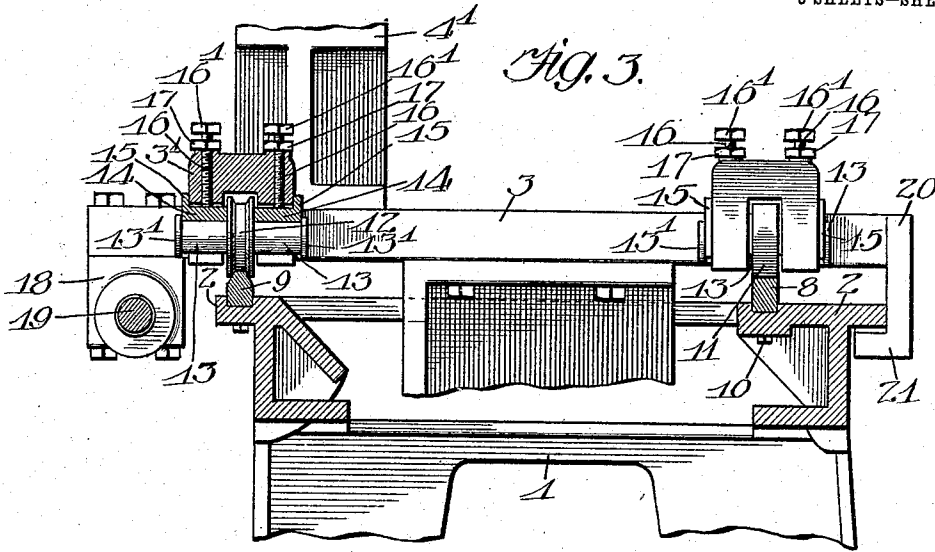


Fig. 8.

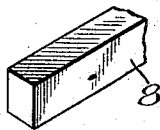


Fig. 7.

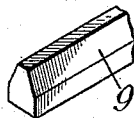
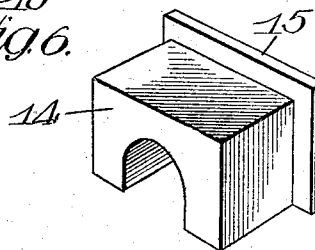


Fig. 6.



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UNITED STATES PATENT OFFICE.

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LATHE.

941,701.

Specification of Letters Patent.

Patented Nov. 30, 1909.

Application filed September 12, 1907. Serial No. 392,485.

To all whom it may concern:

Be it known that I, CARL D. FISCHER, JR., a citizen of the United States, residing at Wapakoneta, in the county of Auglaize and State of Ohio, have invented certain new and useful Improvements in Lathes, of which the following is a description.

My invention relates to that class of device known as lathes and particularly spoke-lathes, in which a spoke or the like is turned to conform to a suitable pattern, and has for its objects the production of a more simple, efficient, durable and satisfactory device of the kind described. In lathes of this kind, to obtain satisfactory results, it is necessary to keep the carriage or frame which carries the cutter head, in proper adjustment with the means for operating the carriage, the frame which supports the spoke and pattern and the shafting or other means for operating the cutter head. To accomplish this end, in my preferred form of device, I provide rolls or their equivalent which support the carriage upon the bed of the lathe and which are so arranged that the position of the carriage may be adjusted by adjusting the position of the rolls relatively to the carriage.

To this end my invention consists in the novel arrangement, construction and combination of parts herein shown and described and more particularly pointed out in the claim.

In the drawings wherein like reference characters indicate like or corresponding parts, Figure 1 is a front elevation of a complete spoke-lathe provided with my improved form of adjustable cutter head carriage. Fig. 2 is a top elevation of the cutter head carriage, with the cutter head removed. Fig. 3 is a transverse vertical section of the same taken on line 3—3 of Fig. 2. Fig. 4 is a sectional view of the roll and bearings taken on line 4—4 of Fig. 2. Fig. 5 is a sectional view taken on line 5—5 of Fig. 4. Fig. 6 is a perspective view of the preferred form of bearing boxes or saddle blocks. Fig. 7 is a perspective view of the preferred form of back rail or track, and Fig. 8 is a perspective view of the preferred form of front rail or track.

Referring to the drawings in which my preferred form of carriage is shown on a spoke-lathe, 1 is a supporting frame and 2 the bed therefor, on which travels the carriage 3 which carries the cutter head 4. The frame 5 which is called a vibrating

frame and is pivoted to the frame 1 as shown at 5¹, carries the spindles which support the pattern 6 and the work to be turned 7. The cutter head 4 is driven through the shaft 23 through the belt 22 or its equivalent, the carriage 3 carrying the cutter head and the downwardly extending frame 24 along the shaft 23. Any suitable or preferred arrangement for driving the cutter head and operating the vibrating frame 5 with the work 7 and pattern 6, may be employed.

As is shown, the carriage preferably travels upon tracks or ways 8 and 9 provided upon the bed 2 of the frame 1. These tracks may be made integral with the bed if desired but it is found more satisfactory to make one or both of them separate therefrom and secure them to the bed 2, preferably in a groove therein, by means of cap screws 10 or their equivalents. When made separate they are preferably made of harder material than the bed so that the wear may be less. Should they wear unevenly, they may, when made removable as shown be taken from the bed in a thin cut taken from the top of the rail which is worn.

The carriage 4 may be adjustably supported on the tracks or ways in any preferred way or manner as on bearing or sliding plates, rolls or their equivalents. As shown the carriage is provided with supporting rolls 11, 11 and 12, 12 arranged to travel upon the tracks 8 and 9 on the bed 2. A flat rail 8 and a flat roll 11 are preferably used on the front of the lathe bed and a V-shaped rail 9 and grooved roll 12 on the rear of the same. The rolls 11, 12, etc., are provided with a pin or extended portion 13 which works in the bearings 14, the preferred way being to make the bearing boxes 14 or saddle blocks as they are called in two pieces one on each side of the roll. The bearing boxes 14 are made of brass or other suitable material. The set screws 16 or their equivalents for the purpose are used to adjust the position of the bearing boxes 14 relatively to the carriage. Lock nuts 17 or their equivalent may be employed to lock the screw 16. As the rails or tracks 8 and 9 or the rolls or their equivalents which travel thereon wear, the position of the rolls may be changed so that the carriage is kept in proper alinement with its driving means or screw shaft 19, and also in adjustment with

the vibrating frame 5 and the driving shaft 23 which drives the knives of the cutter head 24.

As is shown, the boxes or saddle blocks 14 are flanged as at 15 and pins 13 also capped or flanged as at 13¹ so that the boxes or saddle blocks are substantially vertically adjustable when retained in their proper places when inserted in their seats in the carriage.

10 In the preferred form of carriage shown, the same is extended to form brackets 3¹ in which the bearing boxes or saddle blocks and rolls are placed.

The number of rolls supporting the carriage may be as many as preferred or required, or a part may be adjustable and a part not. By supporting the carriage in this way it is obvious that the carriage supporting means may be adjusted where required, that is, for instance, in the preferred form of carriage, it is supported by four rolls any one of which may be adjusted as required independently of any of the others.

15 This independent adjustment is an important feature since by a slight adjustment the carriage will always rest on its four supports.

Having thus described my invention, it is obvious that various immaterial modifications may be made in the form, design or the arrangement shown within the scope of the

appended claim, without departing from the spirit of my invention, or that the same may be used on any machine or device to which it is applicable, hence I do not wish to be understood as limiting myself to the exact construction and combination shown.

What I claim as new and desire to secure by Letters Patent is,

In a lathe, the combination with a pair of track ways, of a carriage, a track wheel located at each corner of said carriage, each of said track wheels comprising a central body portion and a journal portion projecting from each side thereof, independent bearing blocks, one bearing upon each of said journal portions, said bearing blocks being vertically movable in the carriage and vertical adjusting screws threaded into the carriage and bearing upon said blocks, there being one of said screws for each of said blocks, said screws serving either to move the frame vertically with relation to the bearing blocks, or to adjust the track wheels angularly with relation to the carriage.

In testimony whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

CARL D. FISCHER, JR.

Witnesses:

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ETHEL SHAW.