G. F. Alny,

Spoke Lathe.

NO. 100,836. Patented Mar. 15. 1870

Assigned to Page, Gerritt & Co.

Fig. 1.

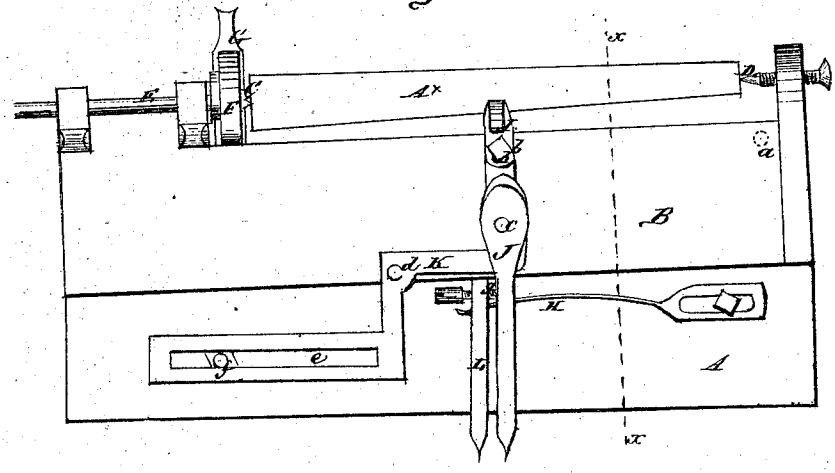


Fig. 2.

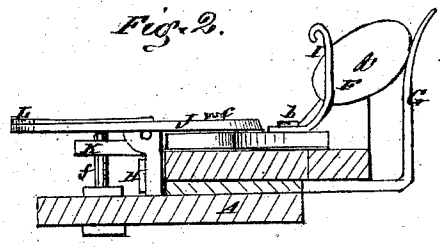
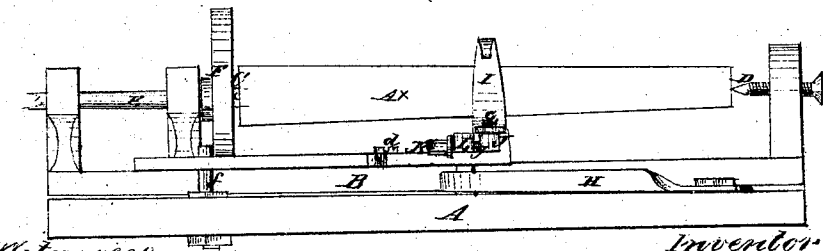


Fig. 3.



Witnesses
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GEORGE F. ALMY, OF TOLEDO, OHIO.

Letters Patent No. 100,836, *dated March* 15, 1870.

IMPROVEMENT IN SPOKE-LATHES.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, GEORGE F. ALMY, of Toledo, in the county of Lucas, and State of Ohio, have invented a new and improved Rest for Lathes for Turning Spokes; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings and to the letters of reference marked thereon making a part of this specification.

This invention relates to a new and useful attachment to be applied to lathes for turning spokes, and is designed to facilitate the turning of such articles, and to insure them being turned of uniform thickness and shape.

The invention consists in the adaptation of a vibrating bed to a lathe, arranged, applied, and operated in such a manner as to give, by its vibration, the proper shape to the spoke, said bed being provided with a rest, arranged and applied in such a manner that it will bear against the spoke about at its center, prevent all tremor or vibration of the same between its centers, and at the same time adapt itself to the movement of the vibrating bed, so as to have at all times, a proper bearing against the spoke, about at right angles to the same.

In the accompanying sheet of drawings—

Figure 1 is a plan or top view of my invention.

Figure 2, a transverse vertical section of the same, taken in the line *x x*, fig. 1.

Figure 3, a front view of the same.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the bed of a turning-lathe, or a portion thereof, which is fixed or has no movement or motion whatever, and

B represents a vibrating bed, which works on a pivot, *a*, near one end, as shown in fig. 2.

On this bed B the centers C D of the lathe are fixed, between which centers the spoke $A^{\times}$ to be turned is placed.

On the mandrel E of the center C there is keyed an oval or eccentric, F, which serves as a pattern for vibrating the bed B, and giving the desired shape to the spoke.

This oval or eccentric works against a bearing, G, attached to the fixed bed A of the lathe, the oval or eccentric giving the backward motion to the bed B, the return motion being given by a spring, H, attached to the fixed bed A.

By this arrangement it will be seen that the vibrations of the bed gradually diminish in width from the center C to the center D, and hence the spoke, in being turned, will gradually assume a less oval form from C to D, it being nearly or quite circular in its transverse section at D.

I represents a rest which is attached by a bolt, *b*, to the front end of a lever, J, the latter being secured by a pivot, *c*, to a bent arm, K, which is secured by a pin or pivot bolt, *d*, to the vibrating bed B.

The longer part of this arm K, which is beyond or to the left of the pin or pivot bolt *d*, is slotted longitudinally, as shown at *e*, and an upright pin, *f*, which is attached to the fixed bed A, and is adjustable, passes through the slot *e* in the arm K.

By this arrangement the rest, during the movement or vibrations of the bed B, is kept about at right angles with the spoke, against which it bears and prevents the spoke from trembling or vibrating, so that it will not be be turned unevenly or irregularly.

L is a handle, attached to the bed B, and having a screw, *g*, passing through it, to serve as a stop for the lever J, to which the rest is attached.

The chisel or cutter (not shown) is arranged so as to travel in a right line, and at such an angle with the axis of the spoke as to cut or turn the latter in taper form longitudinally.

An ordinary slide-rest may be used for this purpose.

The distinguishing features of this invention consist of the vibrating bed B, and the application or arrangement of the rest I, the former giving the oval form to the spoke in its transverse section, and the latter serving as an efficient bearing for the spoke, yielding or giving to the motion of the same in about a line at right angles to its axis, so as not to interfere with the oval shape being given it.

This invention may be applied to any turning-lathe, and at an inappreciable additional expense. The mandrel E may be rotated by a belt.

I do not confine myself to the oval pattern and spring for vibrating the bed B, for other means may be employed for that purpose.

I do not claim, broadly, a pivoted table carrying the spoke-centers, and an eccentric by means of which the table is vibrated, as I am aware that this is not new; but

Having thus described my invention,

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

1. The rest I and lever J, in combination with the pivoted angular lever K, slotted, as shown, adjustable pin *f*, and the arm L, with set-screw *g*, all constructed, arranged, and operating substantially as herein described.

2. The arrangement of the stationary table A, vibrating table B, with centers C D, mandrel E, and cam F, the arm G, spring H, rest I, levers J K, and arm L, with set-screw *g*, all constructed to operate as herein described.

The above specification of my invention signed by me this 13th day of August, 1869.

GEO. F. ALMY.

Witnesses:

DOUGLAS H. HINE,

A. W. FOWLER,